

A Role Playing Game set in a Post-Holocaust world

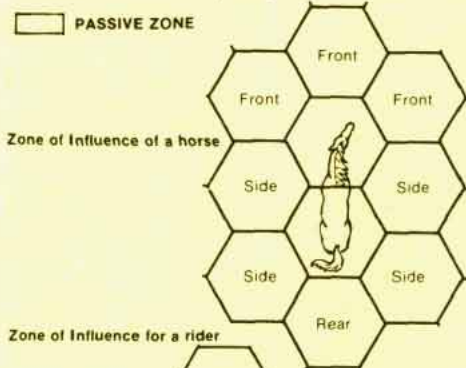
AFTERMATH

by Paul Hume and Robert Charrette



Fantasy Games Unlimited, Inc.

THE DAT DISPLAY



THE HORSE

The most common mount for a man is the horse. The statistics for an average horse are given here:

| | | | | | | | | |
|---------------|-----|------|--------|-----|--|-----|-----|-----|
| STR | DFT | SPD | HLH | BAP | MNA | PCA | GDA | DRT |
| 30 | 14 | 24 | 24 | 12 | 2 | 6 | 2 | 60 |
| Attack modes: | | WDM | Length | BCS | Notes | | | |
| Teeth | | 1.5L | S | 7 | minus 1 STR Group | | | |
| Hoof, unshod | | 1.5C | A | 10 | 2 attacks when used and a WDA equal to 3 | | | |
| Hoof, shod | | 1.7C | A | | | | | |

ATTRIBUTE GROUP CHART

| | | | | | | | | | |
|------------------|------|-----|------|-------|-------|-------|--------|--------|--------|
| Attribute Rating | 0 | 1-4 | 5-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 |
| Group Number | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Effect Die | none | 1D3 | 1D6 | 1D10 | 2D6 | 2D10 | 2D10+1 | 2D10+2 | 2D10+2 |

REACTION TABLE

| DIE RESULT (D100) | DESCRIPTION | VALUE NUMBER | NOTES |
|-------------------|-----------------------|--------------|--|
| 01-05 | Bad | -6 | This is a very hostile reaction. It usually indicates the initiation of action if the overall reaction is unfriendly. If the overall reaction is friendly, it tends to indicate a lack of interest in continuing to deal with the Player Characters. |
| 06-15 | Very Poor | -4 | This is a negative reaction. It can indicate growing hostility. |
| 16-30 | | -2 | |
| 31-45 | Negative Indifference | -1 | An undecided reaction with leanings to the negative. |
| 46-55 | | +0 | |
| 56-70 | Positive Indifference | +1 | An undecided reaction with leanings to the positive. |
| 71-85 | | +2 | |
| 86-95 | Very Good | +4 | This is a positive reaction. It indicates growing friendliness and a willingness to agree. |
| 96-00 | | +6 | |
| | Excellent | +6 | This is a very positive reaction. It tends to indicate willingness and helpfulness. As an initial reaction it may indicate aid is offered freely and before it is requested. |

ENCUMBRANCE VALUE CHART

| | | MASS | | | | | | |
|------|-------|------|------|------|------|------|------|--|
| BULK | VLt | Lt | Hvy | VHvy | MS1 | MS2 | MS3 | |
| VSm | 0.001 | 0.05 | 0.1 | 0.6 | 1.0 | 2.0 | 3.0 | |
| SM | 0.05 | 0.1 | 0.6 | 1.0 | 1.6 | 3.5 | 5.0 | |
| Med | 0.1 | 0.3 | 1.0 | 1.6 | 2.0 | 5.0 | 7.5 | |
| Lg | 0.3 | 0.6 | 1.5 | 2.0 | 3.5 | 7.0 | 10.0 | |
| VLg | 0.6 | 1.0 | 3.5 | 4.5 | 5.0 | 10.0 | 15.0 | |
| HG1 | 2 | 3.5 | 5.0 | 6.0 | 8.0 | 16.0 | 22.0 | |
| HG2 | 4 | 7.0 | 10.0 | 12.0 | 16.0 | 32.0 | 44.0 | |
| HG3 | 6 | 10.5 | 15.0 | 18.0 | 24.0 | 48.0 | 66.0 | |

BULK

VSm ... very small ... able to be hidden in a hand, such as a coin, gem, small jewelry, etc.

Sm ... small ... can be held and used with one hand and does not project far from the hand, such as knives, candles, clubs, lanterns, etc.

Med ... medium ... held and used in one hand but significantly larger than the hand, such as short swords, torches, etc.

Lg ... large ... usable in one hand and up to about a meter in length, such as swords, large tools, bundles, etc.

VLg ... very large ... able to be held or carried in one hand but usually requiring two hands to use properly, such as

HG ... huge ... greater than 6 feet long and bulky, usually requires two hands to carry

HG1: mattress, small giant, coffin, etc.

HG2: horses, carts, small car, etc. and so on.

MASS

VLt ... very light ... wood, paper, feathers, cloth, etc.

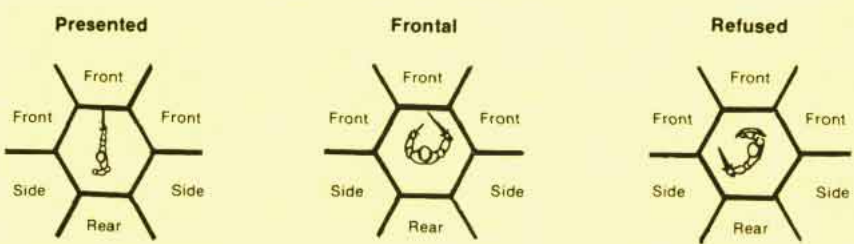
Lt ... light ... flesh, leather, water, heavy woods, etc.

Hvy ... heavy ... stone, gemstones, iron, brass, etc.

VHvy ... very heavy ... lead, silver, etc.

MS ... massive ... MS1: gold, platinum, etc. MS2: uranium, plutonium, etc. and so on

VARIATION IN CHARACTER STANCE DUE TO POSITIONING



ENCUMBRANCE STATUS

| Status | Deftness | Speed | BCS |
|---|----------|------------------|-----|
| Unencumbered up to 1/2 ENC CAP | *** | no modifications | *** |
| Partially Encumbered up to 3/4 ENC CAP | -25% | -25% | -1 |
| Fully Encumbered up to full ENC CAP | -50% | -50% | -2 |

A character may carry:

- 1 "thing" on his back.
- 1 "thing" up to Very Large in each hand.
- 1 "thing" slung over each shoulder.
- 10 "things" on a belt.

The sun hangs low on the horizon illuminating the ruins of civilization with a bloody light. Is it the sunset of the earth or the sunrise of a brave new world? You can decide as you boldly stride the rubble strewn streets of the

AFTERMATH!

The Game is for 2 to 6 players and a referee in search of a different kind of adventure. It is a role-playing excursion into a post-holocaust world.

The Players create characters, designed by themselves, to face the challenges and dangers of life after things fall apart.

The Referee is provided with everything he needs to detail the world in which the players will adventure.

Aftermath! is not a game for the faint at heart. Ruined cities, dread diseases, despair and broken dreams are a part of the characters' daily lives. Still hope survives, for mankind still survives. Rise up, meet the challenge and overcome!

Aftermath! contains:

- Basic Rules book with multiple examples and illustrations of play.
- Players' Handbook detailing construction of characters, equipment and life after the Ruin.
- Referee's Handbook detailing construction of the environment and running the game.
- Introductory Scenario to allow you to start play easily.

Aftermath! provides a solid basic play mechanic that has been over 2 years in playtesting. Rules are provided for modern firearms, NBC weapons and protections, mutations, survival, high technology and more. The game is structured to allow the referee to decide the nature of the holocaust that destroyed the world in which play will occur. *Aftermath!* is a step forward in the art of role-playing games.



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GILBERT, ARIZONA 85234



AFTERMATH

Book 1

BASIC RULES

for Role Playing Simulation

Designers: Bob Charrette
Paul Hume



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Special Thanks to Scott Bizar for having faith.



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Book 1

BASIC RULES

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Paul Hume

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The designers will attempt to answer any questions regarding the game. Please type the question allowing space for the answer on the same sheet and enclose a stamped, self-addressed envelope. Send the letter in care of Fantasy Games Unlimited.



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WHAT IS A FANTASY ROLE PLAYING GAME?

FOREWORD

You are reading the introduction to a rulebook for something called a Fantasy Role Playing Game. If you have never been involved in one of these Games before, it can seem confusing at first. The various rule books, the charts, maps, funny dice, just what are they for? How do you play this dumb game, anyway???

Role Playing Games are very different from almost every other type of game in the world. What we are going to examine here are the basics of how they are set up, played, and so on. In the rest of this book are articles giving more specific guidelines on how to play a Role Playing Game, with detailed illustrations of how the rules are applied.

FANTASY ROLE PLAYING GAME

First off, what do we mean by "Fantasy Role Playing Game?" Well, taken separately, the words themselves give us a clear picture of the term's meaning.

FANTASY: This implies that the Game deals with a world of high adventure, of heroes and villains, danger and treasure, brave warriors or explorers, cunning scientists, battle, victory and life, or the dusty death of defeat. The dull and workaday world, even on the cutthroat level of high finance or armies at war, is left behind. In a Fantasy Game, we are concerned with the individual hero, in an environment where great deeds must be performed daily.

Among the scores of Role Playing Games now on the market, rules can be found for Games set in milieus such as Sword and Sorcery adventure, interstellar travel and exploration, wild west "shoot-em-ups," the France of the Three Musketeers, Samurai Japan, and worlds that never have existed outside of the dreams of their designers. Almost any adventure setting desired can be found in a Role Playing Game somewhere. This broad scope is the reason the Role Playing Game hobby has grown so, since its inception some 10 years ago: it allows the players to actively take part in their fondest fictional adventures almost as if they were characters in their favorite book or film.

ROLE PLAYING: To be a player in a Role Playing Game, one plays a part just as an actor would. One has chosen a role in the Game-world and will operate in that environment **as if he were really the character involved!** This is the central concept in Role Playing Games—the Players do not move pieces around a game board, but react in the Game by describing and/or acting out the actions that the Characters they control are performing. In turn, everything that happens in the Game is described **as if it were really happening!** If, in the course of exploring a cave, the Characters find a dragon, Players are told this as if their eyes were actually beholding the beast.

There is a lot to say about the identification of the player (Joe Smith, gamer, who is playing this Game) and his Character (Roald the Bold, a brave warrior/wise magician/intrepid spaceman/vicious killer/etc.). Roald is a unique individual, with his own strengths and weaknesses, areas of expertise or ignorance, dreams, fears, and motivations. When Joe is playing, he must try to react to every situation as if he were Roald. We will be discussing the very special relationship between a player and his character in a later article in this book (On Being a Player, p.50).

GAME: The fantasy of the role playing has limits placed upon it, and thus we define the last term in "Fantasy Role Playing Game." It is a Game, with rules governing what players (or their characters) can and cannot do. The rules give the methods for deciding how successful a Character is when he fights, or attempts to be acrobatic, or does anything requiring a particular amount of skill or knowledge. They give the values by which a player knows how strong his character is, or how smart. Rules also deal with Things: weapons, armor, tools, magical items or scientific wonders, vehicles — how they work **in the game**. For these Games are modelled on a particular sort of reality, and thus all the devices and ideas one is likely to meet in that reality should be handled in the rules, so that players know what they can do with them.

The person who decides what will happen in the Game, according to the rules and his own imagination, is called a Gamesmaster. Every Role Playing Game will have at least one of these individuals running it, for reasons set forth throughout these books.

So we have a definition of a Fantasy Role Playing Game as a Game, having definite rules and structure, setting up an atmosphere of high adventure in a fantasy world, where players control single characters by playing out roles as those characters. That is the thumbnail view. Just how are people involved in this process? Read on.

WHO'S WHO IN THE ROLE PLAYING GAME?

There are several individuals involved in playing a Role Playing Game. Some are "real" (i.e. inhabitants of 20th Century Earth, having existence outside the Game), while others are not or at least do not exist outside the Game world.

THE GAMESMASTER

We have referred to this person before. Every Role Playing Game must have a Gamesmaster, also known as a Referee, Judge, etc. We will call him the Gamesmaster from now on.

In the last section, it was remarked that everything that happens in the Game is described to the Players as if it were really happening to them. Aha! Who do you think does the describing? Right—the Gamesmaster. Using the rules and a series of maps, notes, charts, and scenarios of his own design, the Gamesmaster is the one who lays out the Game before it is played. He is responsible for setting up everything that the Characters will encounter while playing, either in advance with loving detail, or at random during the course of play. When something develops in the course of the Game that the players should not know about, the Gamesmaster operates to keep it that way.

As for Role Playing, consider this: players need only act the parts of their individual characters. The Gamesmaster plays the role of **every other being** encountered in the Game. Some of these are not even human! In a typical, fast paced evening playing a Sword-and-Sorcery based Game, the Gamesmaster may be playing a wandering knight one moment and a raging dragon the next! The job of Gamesmaster is so important to Role Playing Games that a

separate article later in this book will go into the concept of being a Gamesmaster in detail. (On Being a Gamesmaster, p. 52).

PLAYER

As is already obvious, players are the flesh and blood people who sit around and play a Role Playing Game. They are able to participate in the Game by pretending to be, and controlling the actions of, one or more Characters, individuals who "live" in the World where the Game takes place.

A player has designed a Character for himself, sometimes using random numbers and sometimes allocating an assigned number of points, to develop a clear model of what this "alter ego" is like. The physical and mental ability of the Character, what skills he will have studied and how much time he has given to each of them, all of these are under the player's control. When the character is actively adventuring in the Game, the player will decide when he fights and when he flees, and is, usually, in full control of the character's actions for better or worse.

So it is up to the player to know how the rules work for those things he has designed his character to do (combat, magic, medicine, whatever). It is also best if the player can "think with the character's head." This means, look at a situation in the Game and react properly for the Character according to his personality and cultural background. A character who has dedicated himself to one set of ideals will hardly act in a way contrary to those beliefs just because the situation offers some benefit for so doing. A crude peasant is unlikely to leave behind a purse of gold in order to retrieve a rare artwork from a treasure trove. The player should work out the behavior pattern for a character and keep to it as much as possible.

CHARACTERS

Unlike the Gamesmaster and players, characters do not really exist. Any entity (man, manlike being, intelligent creature, animal, self-aware computer, spirit, you-name-it) that takes an active part in the Game is a character. Those designed by or under the control of a player are called Player Characters. All the rest, usually under the control of the Gamesmaster, are called Non-Player-Characters.

Taken all together, the Characters make up the cast of this great big dramatic event called a Role Playing Game. Some will be heroic, champions of "good," saving damsels, distressed communities, etc., as a matter of course. Others will be villains, dealing in destruction and casual death. Most will be a combination of both, as different conditions arise in play.

THE CAMPAIGN

A Campaign is the particular version of a Role Playing Game as it is played by a given Gamesmaster and group of players. No two sets of gamers will play in exactly the same way. Characters, especially Player Characters, are all different, and the adventures designed by one Gamesmaster will rarely resemble those set up by another.

It often amazes new gamers on the Role Playing scene that the same Game, identical rules, same setting, can be played in so many different ways. But this is part of that tremendous flexibility mentioned before, the ability of a good Role Playing Game to allow the participants to fulfil their special fantasy.

Of course, the main thrust in a Campaign is designed by the Gamesmaster. Using the rules, he will be the one to decide on the political climate of the countries in the Game-world, the locations of those mysterious sites where much adventure is to be found, as well as the specific kinds of risk

and reward that exist there, the laws, customs, religion, and all the factors that go into the fully designed Campaign to give it a feeling or reality that makes for enjoyable play.

Some Campaigns are small in scope, perhaps limited to a single piece of territory with a base for Characters to operate from as they carry out raids on some huge maze-like place of danger and treasure. Other campaigns cover whole continents, or planets. Some (and this is not limited to science fiction Games by any means) comprise many worlds in the Campaign-universe. The size and complexity of a Campaign is limited only by the imagination and energy of the Gamesmaster and the desire of the players for new worlds to explore.

The Game, as such, is the rules package, the system for playing. It is the Campaign that is actually enjoyed by the group, a never-ending story of heroic adventure. The books you have in your hands are written to allow you to join in those epics. The only thing it takes is some of your time and a lot of your imagination. We hope you will enjoy playing this Game, in your unique Campaign, as much as we have enjoyed writing it for you.

MEET THE GAME

In this Game you will find the following components:

- The rulesbooks, one of which you are reading now. They should be read carefully. Players (unless they are also acting as Gamesmaster in another campaign) should not read books specified as for the Gamesmaster. The Gamesmaster should, however, read all the material herein.

The information in each book is laid out to cover the main areas which make the Game special: cultural data, social institutions of the Campaign world, special skills in the Game, etc. There are also separate charts for quick reference on things like combat and weapons, general rules, etc.

- An introductory scenario, a fully designed adventure, taking place in one possible type of Campaign setting. This is provided to give the Gamesmaster an example of how to set up a scenario, and to allow play to begin sooner, if the Gamesmaster and players are anxious to get going. Again, players should not read the scenario package. If they know everything that is going to happen before they start to play, the whole atmosphere of the Game will suffer.

THE DICE

This game uses two kinds of dice as detailed below. Such dice should be available in your local gaming store or can be ordered direct from Fantasy Games Unlimited.

TYPES OF DICE

6-Sided Die: Called a D6. This is an everyday cubical die, numbered from 1 to 6.

20-Sided Die: Called a D20. It is numbered from 1 to 10 (or 1 to 20) and can be used for many types of die rolls.

All the dice rolling called for in a Role Playing Game can be very confusing for new gamers. Consider this: no matter how detailed the set-up for a given action by the character may be, eventually the question must be answered, "Did he succeed?" In our Games (and most others) this is determined by calculating a chance of success expressed as a number, and then rolling a die. If the score from the die roll is such that the rules say it means success (based on the calculated number) then all goes well. If it falls into the range ascribed to failure by the rules, then whatever was being tried did not work. See the definition of "Basic Chance of Success" on p. 11.

Many different ranges of numbers are used for determining probabilities in this Game. The die rolls used are always expressed as follows:

xDy In this expression the "x" stands for the number of dice thrown. The "y" stands for the type of dice used. "3D6" means you should roll three 6-sided dice, and total their scores to get your result. "xDy+z" means that the number "z" should be added to the total of "xDy" to get the result.

These rules will sometimes call for odd "types" of dice to be rolled, such as D3, D10, D20, and D100. All these can be generated by using a 6-sided and a 20-sided die, as follows:

- D3: Roll a D6. Divide the number rolled in half, rounding fractions up. This gives a result from 1 to 3.
- D6: Roll a D6.
- D10: Roll a D20. Read a "0" result as "10."
- D20: Roll a D20. To get a result from 1 to 20, you will need to distinguish between the lower range (1-10) and the upper (11-20). One way is to color one set of faces of the die (0-9) different from the other (so that, for instance, a "red 3" would be read as a "3," and a "black 3" would be read as "13"). Another way is to roll a "control die" (D6) with the D20. A result of 1-3 on the control die puts the D20 roll in the lower range; a result of 4-6 puts it in the upper range.
- D30: Roll a D20 and a control die. If the control die is a 1-2, the D20 result is read as 1-10; if the control die is 3-4, the D20 result is read as 11-20; if the control die is 5-6, the D20 result is read as 21-30.
- D100: Roll two D20, to get a result of 1-100. Multiply the roll of one D20 by 10, and add to it the roll of the second D20 to get your result. Read a result of "00" as "100." D20s of different colors are very helpful for this.

The D100 is a very important type of roll. With D100 ("percentage") rolls, you can easily determine probabilities that may not be specified in the rules. If you feel there is a 60% chance of something happening, roll D100. A result of "60" or less means it happens. A higher result means it does not.

We will go into dice in more detail later on in this book and in the others. One important thing to keep in mind:

A die roll made to see if something happens means it did occur if the result is less than or equal to the needed number. A result greater than the needed number means it did not occur.

If dice are not available, an ordinary deck of cards and a little ingenuity can be used to generate the various random numbers used in the game.

SOME CONVENTIONS USED IN THE TEXT

Often in the text, the formula for calculating some number will be followed by "(up)," "(down)" or "(nearest)." This means that the result obtained should be rounded, respectively, up to, down to, or to the nearest whole number.

Some rules will be identified by the word OPTION in the heading of the section. These rules are not necessary to the play of the game. Some are intended to provide greater detail or more "realism" to the game; others simply allow variety in the way certain game situations can be handled. The players and the Gamesmaster should agree on which options will be used in their campaign.

Although the masculine pronoun is used in the general text, it is not intended to indicate the characters are assumed or required to be male.

READING THE RULES

When reading these rules, you should not try to absorb everything at once. Skim the rules once to get a general idea of the system. Then read them thoroughly. It is not necessary to be fully conversant with all the details in order to start to play. Diseases and poisons, for example, might not come into play for many game sessions.

Players should remember to avoid any section of the rules or game components not labelled as being for the players' use. You will spoil your own fun and that of the other players if you read the material that is intended for the Gamesmaster.

Gamesmasters are advised to be familiar with the sections of the rules that cover the things that they have planned for the current adventure. Careful planning of adventures will allow the Gamesmaster to introduce various portions of the rules gradually, as play progresses. This will allow you as Gamesmaster to familiarize yourself with the details of each section. It will also allow you to begin play more quickly.

As you read through these rules, don't be upset if a term is presented without immediate explanation. The game mechanics are interlocked in such a fashion that sometimes a term must be used prior to the section in which it is fully explained. Don't worry—it will eventually be explained. Also, don't be put off by our extensive use of abbreviations and acronyms. As you become familiar with the system, they will become second nature.

Good Gaming!

DEFINING THE CHARACTER

In order to determine just what a character can and cannot do, and how good he is at doing it, the character will be endowed with certain Attributes, Talents, Abilities and Skills. The character will also possess quantified Physical Characteristics. These values allow the Gamesmaster to arbitrate game situations easily and consistently.

All characters have the same Attributes and Talents, but each character will have his own personal scores in each category. A character's Abilities are derived from his Attributes and, in some cases, from his Talents. Choice of a character's Skill's is, for the most part, left to the player. Initial scores in these Skills are based on the character's Attributes and Talents.

A character's numerical ratings in the above mentioned categories will be used to determine his success or failure when he attempts some action. The rating represents a number which the player, rolling the appropriate dice for the situation, must roll less than or equal to in order for his character to succeed. This basic number may be modified by the situation, in which case it is the modified number to which the dice roll is compared.

A character's Physical Characteristics are used primarily to add "color" to the character. If a player already "knows" what his character looks like, and it is agreeable to the Gamesmaster, he may choose ratings which fit his character as he conceives him.

All these ratings are entered on the Character Record Sheet (CRS) and kept handy for reference during play. This helps both the players and the Gamesmaster; the players have a better idea of their chances of success, and they can supply the Gamesmaster with the numbers he needs to determine the results of actions as they occur. We recommend that entries on the CRS be made in pencil, since values may alter during the course of play.

ATTRIBUTES

Attributes are the basic mental and physical components that make up the character. They define such things as how hard he hits, how fast he runs, how well he retains what he learns, how well he resists disease, and many other things. These rules use six Attributes: Wit (WT), Will (WL), Strength (STR), Deftness (DFT), Speed (SPD) and Health (HLH). The first two are Mental Attributes; the last four are Physical Attributes.

Normal human ratings range from 1 to 40. A character with a rating of 1 in an Attribute is severely handicapped in the areas that Attribute governs. With a rating of 40 he is, in that regard, a peak specimen of human development. The mythical average man would have a score of 10 to 12. A character with a rating less than 1 in an Attribute is totally non-functional in that area. A rating greater than 40 is not possible for a human without mechanical, chemical or supernatural aid.

When creating a character, a player will receive a certain number of points to allocate among the character's Attributes. He may distribute them among the six Attributes as he likes, so long as the character has no rating less than 1 or greater than 40 in any Attribute. He should then enter these ratings on his Character Record Sheet, in the Allocated column of the Attributes section.

As play proceeds, a character may improve the initial ratings of his Attributes, or suffer permanent Attribute losses. When this occurs, the player should enter the new rating in the Permanent column of the Attributes section. Otherwise, the Permanent is the same as the Allocated rating. For details on improving Attributes, see Character Improvement, p. 43.

During play, a character may experience a temporary alteration of an Attribute rating. The new, temporary rating should be entered on the Character Record Sheet, in the Effective column of the Attribute section. Otherwise, the Effective rating is the same as the Permanent rating. If any ratings were lowered by wounds, disease or other damage, the player can see how many points must be healed to restore his character's ratings to Permanent level. See Healing Attributes on page 37.

Ranges of Attribute ratings are arranged in Groups, as listed below. The Effect Die noted for each Group represents the effectiveness of proper application by a character of a Skill governed by that Attribute. Attribute Groups are also used to calculate other values relating to characters. These will be dealt with as they arise.

TEMPORARY ALTERATION OF ATTRIBUTES

Various situations that may arise in play call for temporary reductions, expressed in percentages, of a character's Attributes. This may be due to wounds, encumbrance, poisons, drugs or many other factors. Such reductions are usually made in two steps: 25 percent and 50 percent. Subtract the required percentage from the character's current Effective rating in the Attribute, to get the new Effective rating.

When a character moves from a state of lesser reduction to a greater reduction, the procedure is somewhat different. Subtract the lesser percentage from the greater percentage, and use the result as a percentage reduction.

For example, a character who is Wounded (25% reduction of Deftness and Speed Attributes) becomes Seriously Wounded (50% reduction of both Attributes). In this case subtract 25% (50%-25%) from the current (Wounded) Attribute rating to obtain the new Effective rating.

Of course, if an unwounded character becomes Seriously Wounded in one step, simply apply the 50% reduction.

If a reduction in Basic Chance of Success (BCS) is to be applied to a character who has already suffered some reduction in BCS, apply the new reduction directly.

Various categories of situations which can cause temporary alterations of Attribute ratings are treated

ATTRIBUTE GROUP CHART

| | | | | | | | | | |
|-------------------------|------|-----|------|-------|-------|-------|--------|--------|--------|
| Attribute Rating | 0 | 1-4 | 5-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 |
| Group Number | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Effect Die | none | 1D3 | 1D6 | 1D10 | 2D6 | 2D10 | 2D10+1 | 2D10+2 | 2D10+2 |

independently. Within a given category, follow the guidelines noted above. Details are given later in the rules.

meant that none of the characters could have discovered the hidden compartment.

WIT

The Wit Attribute is not a measure of the character's intelligence. The native "intelligence" of a character depends on that of the player. The player may decide that his character is smart or dumb, as he likes. Wit, however, has an important effect on the character's ability to learn. Wit is also a measure of the character's ability to discover "Hidden Things" and, in general, to observe and interpret things that are out of the ordinary.

LEARNING RATE

A character's Learning Rate is the base used to determine how much he may add to a Skill rating as a result of a learning session. Learning Rate is equal to the character's Wit Group. The specifics of learning are dealt with under Character Improvement, page 43.

DETECTING HIDDEN THINGS

When there is a Hidden Thing to discover, the Gamesmaster secretly rolls 1D20 and asks the players whose characters are in a position to discover the Hidden Thing for their Critical Saving Throw scores. The Gamesmaster may modify the score needed by a number related to the difficulty of discovering the Hidden Thing. Any character whose modified score equals or exceeds the Gamesmaster's die roll will have spotted the Hidden Thing. The Gamesmaster can then inform those players of what they have found and they may or may not have their characters reveal this knowledge to other characters who are present.

The die roll is made secretly so that the players will remain uncertain: is there nothing there, or is there something they failed to discover? The Gamesmaster should go through this procedure as a deception, at least as often as he uses it for actual Hidden Things.

If the secret die roll is a 20, the Gamesmaster should inform some or all of the players of the discovery of a false "Hidden Thing." The Gamesmaster is urged to be creative, and have fun, when his players discover things that are not there.

The adventurers (characters) are exploring a ruined castle and have gathered in what was once the study. The players decide to have their characters search the room for hidden compartments (there actually is one to be found, as the Gamesmaster knows). The Gamesmaster rolls 1D20, with a result of 20. Thinking quickly, he picks the number 3, and asks the players if any of their characters have a Wit Critical Saving Throw of 3 or higher. Several do (as the Gamesmaster already knew). He informs those players that their characters have discovered signs of a hidden compartment in a desk.

The players are now set up; they will probably waste quite a bit of time trying to force entry into the "hidden compartment." The Gamesmaster may let them try everything they can think of, until they give up in disgust; or he may allow an arbitrary length of time to pass—say five minutes—then tell the players they were wrong.

Undaunted, the characters continue to search the room. The Gamesmaster again rolls 1D20. This time the result is a 5. One of the characters has a Wit Critical Saving Throw of 5, and discovers an actual hidden compartment in a bookcase. Since the character with the Wit Critical Saving Throw of 5 had the highest Wit rating of the characters present, a secret die roll of 6 by the Gamesmaster would have

WILL

Will is a measure of the strength of a character's mind. This includes the character's drive and determination, and the strength of mental resistance his mind is capable of putting up. Things that can attack the Will of a character include the strange mental powers of mutants, magical powers, and the mind-numbing effects of certain chemical compounds. In general, Will can be regarded as the Mental equivalent of the Health Attribute.

STRENGTH

Strength is a measure of the sheer physical power of the character. This Attribute is particularly important in determining with how much force he can wield a hand-held weapon. It also affects how much recoil from a gunpowder weapon he can sustain without suffering loss to his BCS in firing.

WEAPON DAMAGE

The character's Strength Group will determine the Effect Die to be rolled (see chart, p. 4). Since weapons are treated as mechanical devices, the result of the Effect Die Roll will be multiplied by the weapon's Damage Multiplier to yield the Damage Potential of the character's attack, if successful. Naturally, a character with a high Strength Group will tend to do more damage when he makes a successful attack.

WEAPONS USE

A character's Strength Group determines what kinds of weapons he may use when attacking with a Hand-to-Hand Combat Skill. All Hand-to-Hand weapons are rated by the Strength Group required to use them without difficulty. A character may freely use any Hand-to-Hand weapon rated equal to or less than his Strength Group. A character may not use a weapon whose rating exceeds his Strength Group by 2 or more.

If a character uses a weapon with a rating 1 greater than his Strength Group, he must use the Effect Die listed for the Group 1 lower than his actual Group.

If a weapon noted as a 1-1/2H (a "hand-and-a-half" type weapon) or 2H (a two-handed weapon) is used one-handed, its rating goes up by 1. That is, a character would need to be in a Strength Group 1 higher to use such a weapon one-handed than he would to use it normally.

When a character is using the Two Weapon Combat Skill, and the rating of one weapon exceeds, or that of both equals, his Strength Group, then the effective rating of each weapon is increased by 1.

The penalties noted in the preceding two paragraphs are cumulative. Note that a character using the Two Weapon Combat Skill may find, due to cumulative increases in weapon ratings, that he is totally unable to use one weapon.

Jo the Strong is a character with a Strength of 35. He is thus in Strength Group 5, and his normal Effect Die will be 2D10. He wishes to use a two-handed sword with a Strength Rating of 5. He may do so freely, if he wields it with two hands. If he tries to swing it one-handed, its effective Strength Rating is raised to 6. Jo can use it this way, but his Effect Die will be that of Strength Group 4 or 2D6.

If Jo's Strength were less than 31 he would be in a Strength Group lower than 5, and he would be completely unable to use the sword one-handed.

Sal of the Sharp Blade prefers to fight with a weapon in either hand. She has a Strength of 15, putting her in Strength Group 3. If she tries to use two weapons, each with a Strength Rating of 3, each weapons would have its effective Strength Rating raised to 4. She would be able to wield them, but her Effect Die would be that of Strength Group 2 — 1D6.

If she uses one weapon with a rating of 3 and one with a rating of 2, she will incur no penalties, and use her normal Effect Die, 1D10.

If she foolishly tried to use a 1-1/2H weapon with a rating of 3 in one hand and a weapon with a rating of 2 in the other, the latter will not be affected, but the former will have its rating increased by 1 for being used with one hand, and again increased by 1 for being used with one hand, and again by 1 because it then exceeds her Strength Group. This gives the weapon a rating of 5, 2 greater than her Strength Group. She discovers that she cannot use the 1-1/2H weapon at all, when using the Two Weapon Combat Skill.

DEFTNESS

Deftness is a measure of a character's manual dexterity and reaction time. It is used to determine how often a character may act in a given situation, and whether he can complete a task requiring dexterity.

MAXIMUM NUMBER OF ACTIONS

The Maximum Number of Actions (MNA) refers to the number of Actions (see Detailed Action Time, p 20) that the character may initiate and complete in a Combat Turn.

Maximum Number of Actions = Deftness Group.

SPEED

Speed is a measure of a character's agility and rapidity of action. It is used to determine when a character may act in a given situation. Speed also determines the character's rate of travel.

BASE ACTION PHASE

The Base Action Phase is the first point in a Combat Turn in which a character may initiate an Action. The Base Action Phase (BAP) is equal to half the character's Speed (down).

HEALTH

Health is a measure of a character's constitution, resistance to disease and recuperative powers.

HEALING RATE

Healing Rate is the basic amount of damage, expressed in points, that a character can heal in a period of time. Applications of Healing Rate are explained in Damage, Health and Healing, p 36.

Healing Rate equals Health Group.

SAVING THROWS

When a player wants his character to perform an action which lies in the province of an Attribute, or when the rules call for it, the Gamesmaster will ask the player to make a Saving Throw (ST). This may be an Attribute Saving Throw (AST) or a Critical Saving Throw (CST). The CST is used

when the action to be attempted is very difficult. The number needed for a successful Saving Throw should be calculated for each Attribute, and entered on the Character Record Sheet.

Saving Throw numbers are always calculated using the character's effective Attribute rating.

Attribute Saving Throw (AST) equals Effective Attribute rating/2 (down)

Critical Saving Throw (CST) equals Effective Attribute rating/3 (nearest)

Unless the rules specify otherwise (and even then, if he chooses) the choice of requiring an AST or a CST is left to the Gamesmaster. He should base his decision on the difficulty of the situation or the action attempted. On occasion, at the Gamesmaster's discretion, modifiers can be added to or subtracted from the number needed for a successful Saving Throw.

To determine if a Saving Throw is successful, the player must calculate the number needed, add or subtract any modifiers, and roll 1D20. If the result is greater than the number needed, the character has failed his Saving Throw and must face the consequences.

A die roll of 1 signifies greater success than was hoped for, and a roll of 20 signifies a disastrous failure. The exact results of such "critical" success or failure are left to the creativity of the Gamesmaster.

When characters are making Saving Throws in particularly stressful situations, the Gamesmaster may levy a "charge" in subdual points (see p. 29) for each attempt, whether or not it succeeds. This prevents characters from throwing themselves at locked doors all day—eventually they will batter themselves senseless, if the door is stronger than they can overcome, and even eventual success would have its price. A die roll of 20 would call for double subdual damage, or perhaps for a point of lethal damage in addition to the subdual damage. The Gamesmaster must decide whether to exact such penalties, and to what extent.

Elsie Smith, survivor of the Ruin, is fleeing for her life through rubble streets. She is desperate. The Gamesmaster tells Elsie's player to make a Wit CST. The roll succeeds. The Gamesmaster announces that Elsie has spotted a fire escape in an alley. The player has Elsie move into the alley and make a jump for the ladder. The Gamesmaster requires a Deftness AST for Elsie to make a successful grab at it. Elsie's player rolls a 1 on the D20. The Gamesmaster decides that Elsie has not only grabbed the ladder but has swung her body weight in such a way that the rusted ladder has come free and Elsie may climb it on the next Combat Turn. If non-critical success had been indicated by the die roll, the Gamesmaster might have required Elsie's player to roll a Strength AST to unstick the rusty ladder.

As Elsie climbs the fire escape, she hears the groan of tortured metal. The player, realizing that the fire escape may collapse, says that Elsie is hastening to find a way off the fire escape. Since the player recognized the danger, the Gamesmaster requires a Speed AST (rather than a CST) for Elsie to clear the collapsing fire escape. Again the die roll is in Elsie's favor, and she enters the building just as the fire escape crashed down into a pile of twisted metal.

Elsie lands in a heap as she leaps through the window. Dust billows about her as she rises in the deserted room. The Gamesmaster tells Elsie's player to make a Health AST. Fearful that Elsie may

have encountered a dangerous biological agent, the player makes the die roll. This time the result is greater than the success score for Elsie's Saving Throw. The Gamesmaster thanks the player and asks for Elsie's next actions. This request for a Saving Throw was a deception—there is no dangerous biological agent in the room. The Gamesmaster is following the Golden Rule: Keep 'em guessing. The players never feel entirely safe, never know when danger is lurking around the corner.

Ignoring the clue (the unsound fire escape) to the less than perfect structural integrity of the building, Elsie enters the corridor outside the room and runs toward the stairwell. The Gamesmaster, having previously determined that the floor of this corridor would give way under a person's weight, announces that Elsie has fallen through. Since she had no warning, the Gamesmaster requires a Speed CST, and because she was moving at full speed, subtracts 2 from the score needed to succeed. Not surprisingly, the die roll indicates that Elsie failed to grab onto anything that could have arrested her fall. The Gamesmaster requires a Health AST for Elsie to remain conscious when she hits the floor below (adding 1 to the score needed, since she will land in a large pile of windblown leaves). Elsie's luck takes a turn for the better; she is conscious. A quick check for damage done by the fall shows that Elsie has suffered 4 points of Subdual Damage, with no critical effects.

OPTION

An alternate method for modifying difficulty:

The Gamesmaster may assign a die with a greater or lesser range than 1D20 to be used for the Saving Throw, instead of modifying the number needed for success. If he wishes to increase difficulty, for example, he might require the Saving Throw to be rolled on 1D30 instead of 1D20.

TALENTS

Talents are a measure of the character's aptitude and raw ability in the areas specified. Talents can modify the character's Learning Rate and enable him to learn by the successful application of his Skills. For specifics on these functions, see Character Improvement, p. 43.

A Talent has a maximum score of 20 and no minimum natural score. A score of less than 1 indicates that the character has no native aptitude at all in that area. A score greater than 10 indicates significant aptitude.

PSYCHOLOGICAL PROFILE

Each character will have a "psychological profile" when he is created. The method is detailed in Book 2. This profile gives the base starting values for the character in each Talent. The player will then roll 2D6 + 15. The result is a number of points which he may allocate among the various Talents. No initial score may be lowered in order to add points to another Talent. No final score may exceed 20. Any Talent score may be left at its initial value, even if that value is negative.

John Smith, player, is creating a character. He wishes the character to be a fighter, who is at home in the outdoors. After determining his character's psychological profile, he finds that the character's Talent scores are: Charismatic -2; Combative -2; Communicative +1; Esthetic 0; Mechanical +1; Natural +2; Scientific +1.

John rolls 2D6 + 15. The roll is 8, so he has 23 points to allocate among his character's Talents.

In keeping with his plans for the character, he adds 13 points to Combative to raise it to +11, and 9 points to Neutral to raise it to +11 as well. He adds the remaining point to Esthetic, raising it to 1. This will allow the character to Learn-by-doing with a Skill whose Governing Talent is Esthetic.

John's character, whom he now nicknames "The Hunter," has some special abilities. Due to his Combative Talent score, he has an 11% chance to gauge his opponent's skill with a Weapon. He can also estimate compass direction with an 11% chance of success, because of his Natural Talent score. Because of the nature of the Combative Talent, The Hunter will have a base BCS of 2 (11 divided by 5, down) in any weapon form.

THE BASIC TALENTS

The seven basic Talents, and the general areas governed by each are:

- Charismatic: Basic persuasiveness, and the ability to lead others.
- Combative: Aggressiveness, the "will to win," and raw fighting ability.
- Communicative: Facility with languages, and the general ability to communicate an idea.
- Esthetic: Appreciation and performance of artistic endeavors.
- Mechanical: Affinity for technology and its products.
- Natural: Affinity for the natural environment.
- Scientific: Capacity for reasoned analysis, preception of cause and effect.

RAW TALENT USE

In the absence of a character trained in a required Skill, the Gamesmaster may allow the character with the highest score in that Skill's Governing Talent to try to use the Skill. His score in the Governing Talent is used to determine his Basic Chance of Success (BCS). The BCS, of course, may be modified according to the difficulty of the situation. If the required Skill has a Prerequisite Skill in which the character has no score, then his Governing Talent score is effectively halved for purposes of computing the BCS. The Gamesmaster should require a character using raw Talent to perform a task to use more game time than would a character using the appropriate Skill. If the character succeeds by using raw Talent, he is then able to learn from it in the usual fashion.

Situations may arise in which the Gamesmaster decides that a required Saving Throw is more in the province of a Talent than of an Attribute. In such a case the player should roll 1D20, a roll less than or equal to his character's score in the appropriate Talent indicating success. As usual, a roll of 20 denotes failure, even if the character's Talent score is 20.

Quill, a medical technician, is trapped in a decompressing space station. All doors have been sealed, and he is on the wrong side of the door to the escape craft hanger. He has no electronic skills at all, and must short circuit the door's mechanism in order to escape. However, he does have a BCS of 18 in High Technology Use Skill, and a Mechanical Talent of 15. The Gamesmaster decrees that Quill can open the door if he makes both a successful roll for his High Technology Use Skill and a raw Talent roll using his Mechanical Talent. The player rolls 5 on 1D20—Quill is halfway there. He has popped the panel over the wires and identified the ones he thinks control the door. The player now rolls 1D20

against his raw Mechanical Talent. The result is 3, and he breathes a sigh of relief. But the Gamesmaster has decided that the attempt will cause Quill to be hit with 2 units of electrical charge. As Quill crosses the wires, sparks fly and he is knocked back across the chamber. Fortunately, he was wearing insulated gloves, which eliminate one of the units of charge. The Gamesmaster checks for damage, rolling 4 on 1D10. He tells the player that Quill has taken 4 points of Subdual Damage. Quill picks himself up, shakes his head to clear it, and bolts through the open door to the escape craft.

SPECIAL TALENT ABILITIES

When a character has a Talent score greater than 10, he is assumed to have a Special Talent Ability related to that Talent. In general, his percentage chance to use the special ability is equal to his score in the Talent. Only one attempt to use a special ability may be made in any one situation.

As usual, a die roll in the range 96-00 denotes failure, and probably an unexpected backfiring of the attempt.

The special abilities associated with each Talent are:

Charismatic: The character may add his Talent score divided by 5 (down) to NPC reaction rolls, provided he can communicate with the NPC he is trying to influence; or he may choose to subtract from the reaction roll. Note that this special ability does not require a D100 roll.

Combative: The character may attempt to "gauge" his opponent—discover his opponent's Skill score with the weapon he is using. He may make only one attempt per opponent.

Communicative: The character may attempt to pick up the general sense of something spoken in a language he does not understand. Alternatively, he may attempt to convey a general concept to another character or NPC. Note that specific detail cannot be conveyed across a language barrier.

Esthetic: The character may attempt to "compose" on the spot. It must be in an artistic form that he knows—that is, he must have a score in the Skill governing that form.

Mechanical: The character may attempt to estimate the mechanical complexity of a technological artifact (e.g. a lock) or the structural soundness of a construct (e.g. a door).

Natural: The character may attempt to use his sense of direction to estimate compass directions, or avoid becoming lost. Note that once a character has failed in such an attempt, he will be unable to do it successfully until he has reoriented himself by some indicator such as a compass, the sun or a familiar star field.

Scientific: The character has an analytical ability with which he may attempt to solve conceptual problems such as codes and riddles.

If a character qualifies for special abilities in more than one area he will receive all appropriate abilities. In addition, some Talents in combination yield additional abilities. The percent chance of success for these combination abilities is the average of the Talent scores in the areas in question. Remember that both of the Talents involved must have a score that exceeds 10.

The Charismatic Talent interacts with three of the other Talents to yield a combination ability. These Talents are Communicative, Esthetic and Natural. The effects of the combination ability for each are listed below:

Charismatic plus

Communicative: The character, upon successfully communicating with the personage being swayed, will get him to react as desired. Note: This represents persuasive argument. It is not a form of mind control. A character could only be persuaded to suicide if he were already in a self-destructive frame of mind.

Esthetic: The character, upon successfully performing with his artistic Skill, can implant simple ideas, emotions and sentiments in those who are affected by the artist's work.

Natural: The character is responsive to animals. He may calm or excite them and get them to do simple things within their limitations. Note: This does not allow the character to stop an animal's attack once begun, although he might dissuade it from attacking as long as none harm it. Also he can not communicate with animals as if they had human intelligence.

ADDITIONAL TALENT BENEFITS

Some of the Talents have additional benefits. These are peculiar to the Talent involved and any character with a positive score receives such benefits. The specifics are listed below:

Combative: The character may use his Talent score as a Skill score in any Combat Skill in which his score is less than his Talent score. From this a Basic Chance of Success may be calculated and to the Basic Chance modifications due to the situation and the weapons in use will be added. Note: This may not be used with averaging Combat Skills if at least one of the scores to be averaged exceeds the Talent score.

Mechanical: The character may substitute his Talent as a Basic Chance of Success for the Skill of Technology Use. This Skill is basic familiarity with tools, devices and simple machines.

Scientific: The character may use his Talent score/5, down as a Basic Chance of Success modification, positive or negative at whim, when dealing with games of "chance" which involves shifting odds, such as card games.

ABILITIES

Each character has certain Abilities which are derived from a combination of his Attributes. They are aspects of quantifying the character before play begins. Once the values have been calculated, they should be entered in the proper place on the Character Record Sheet. Each of these Abilities will be introduced and explained below.

If a character's Ability values should be altered in the middle of a turn in Detailed Action Time, the new values will not be applied until the bookkeeping phase of that turn.

FREELY IMPROVABLE SKILLS

A character may designate a number of Skills equal to the combined score of his current Wit and Will as Freely Improvable Skills. Whenever a character is studying a Skill which is not one of his designated Freely Improvable Skills, he is suffering a Hindrance to learning which will reduce the number of points he may add to his score as a result of that Study period.

The Skills in which a character receives initial scores are not necessarily counted against this number. If the player doubles the initial score of a character's Skill, that Skill is assumed to be one of the character's Freely Improvable Skills. If more Skills than are "allowed" by the quota are doubled, the player may decide which are to be considered Freely Improvable Skills.

Skills will be added to the character's quota as they are studied. It is not permissible, before the character has reached his quota, to claim a new Skill, or a Skill which the character improves for the first time, is not a Freely Improvable Skill. It is to be counted against the quota. All Freely Improvable Skills should be marked as such on the Character Record Sheet by underlining, circling or some other method agreeable to the players and the Gamesmaster.

Should a character's Wit or Will change permanently, his Freely Improvable Skills quota will alter to reflect the new values. If it goes up, the character will add the next Skills studied to the list of Freely Improvable Skills. If it goes down, the player may choose which Skills will no longer be considered Freely Improvable. Should his total subsequently go up, the character will regain those removed from the list before designating other Skills as Freely Improvable.

DAMAGE RESISTANCE TOTAL

The Damage Resistance Total (DRT) of a character is equal to his Permanent Health plus $\frac{1}{2}$ Permanent Strength plus $\frac{1}{2}$ Permanent Will. This is a measure of how much damage, inflicted upon him by chance or his enemies, he is able to take before he collapses.

Damage done to the character is measured in "points." Any points of damage the character receives are totaled together to give a current damage total. When the current total of damage points exceeds one half of the Damage Resistance Total, the character is considered Wounded. He will suffer a 25% loss to Deftness and Speed. This will change the effective values of those two Attributes and alter such things as the character's Base Action Phase, Maximum number of Actions, Combat Dodge Ability and Phases Consumed in Action. Additionally, the character will suffer a -2 modification to all Basic Chances of Success. When the current total of damage points exceeds 75% of the Damage Resistance Total, the character is considered Seriously Wounded. He suffers a 50% loss to Deftness and Speed and suffers the attendant problems. He also receives a -4 modification to all Basic Chances of Success. These modifications remain in force until the character is healed of the damage taken. See Health and Healing on page 36.

COMBAT DODGE ABILITY

The Combat Dodge Ability (CDA) is the character's capacity to move his body out of harm's way while in combat. This is his basic defense factor. It is subtracted from his opponent's Basic Chance of Success. The base value of the Combat Dodge Ability is given below although the actual value may vary according to the situation. (See the Target Movement Rules in Book 2.)

Combat Dodge Ability equals
(Effective Deftness plus Effective Speed)/20, nearest

PHASES CONSUMED IN ACTION

This is a measure of how long, in relative terms, that it takes

a character to perform a simple function. The specific applications of this value are dealt with in the section on Detailed Action Time on page 20.

Phases Consumed in Action equals
Base Action Phase/Maximum Number of Actions, down

ENCUMBRANCE CAPACITY

The Encumbrance Capacity (ENC CAP) is a measure of how much the character can wear, carry and use without getting in his own way. A character whose Encumbrance total is less than or equal to his CAP/2, nearest is considered to be Unencumbered and receives no modifications.

A character whose Encumbrance Total is greater than CAP/2 and less than or equal to $(3 \times \text{ENC CAP})/4$ nearest, is considered to be Partially Encumbered. This character will have his effective Deftness and Speed lowered by 25% and will suffer a Basic Chance of Success modification of -1 to all endeavors requiring physical exertion.

A character whose Encumbrance Total is greater than $(3 \times \text{ENC CAP})/4$ is considered to be Fully Encumbered. In this state, effective Deftness and Speed will be lowered by 50% and he will have a modification of -2 instead of -1 for physical endeavors.

A character may not have an Encumbrance total that exceeds his Encumbrance Capacity.

A character may lift up to 150% of his Encumbrance Capacity for a very short time only. A Strength Critical Saving Throw which is required to be made on each Combat Turn is a good way of determining how long a character can lift such a weight. The Gamesmaster is urged to levy subdual points for actions of this kind. One point per turn for each 10% over the character's Encumbrance Capacity is a good scale.

A character may shift, without lifting, an Encumbrance Total equal to twice his Encumbrance Capacity. It is suggested that this kind of action be subject to the same penalties and limitations as the rule for lifting above.

The concepts of Encumbrance are dealt with in the section on page 14.

Encumbrance Capacity equals
 $3 \text{ plus Strength Group plus Deftness Group}$
These values are taken from the Permanent values of the character's Attributes.

OFF-HAND DEXTERITY

Characters are assumed to favor one hand with regard to manual dexterity. For convenience, the Gamesmaster may wish to assume that the character's favored hand is the same as the player's favored hand, unless the player specifies otherwise before the character enters play. All Skills using the hands will be assumed to be using the favored hand in their primary applications. Should the character be brought to the point where he must attempt to utilize such a Skill and his favored hand is disabled or absent, he will have to average his Basic Chance of Success in that Skill with his Off-hand Dexterity score. The Off-hand Dexterity score will never raise the Basic Chance of Success above the value the character would have if he were performing normally with the Skill.

Off-hand Dexterity can be increased as detailed in the section on Character Improvement on page 43. The initial value is based on the character's Attributes and a random factor. This value is calculated from the Allocated Attribute scores and will not be affected by changing the Attribute scores.

Off-hand Dexterity equals
(Wit plus Will plus Deftness)/6, nearest plus 2D3

Kelson is left handed and has a Pistol Combat Skill with a BCS of 12. He has been wounded in the left arm and cannot use it. Groggily, he picks up his

pistol with his right hand. Fortunately, he has increased his Off-hand Dexterity to 17. Averaging his Pistol BCS and his Off-hand Dexterity score will yield 14.5. This is rounded down to 14. Since the Off-hand Dexterity score cannot increase the BCS of the Skill being used, it is reduced to 12 which happens to be his normal base BCS.

If Kelson's scores had been reversed (his Pistol BCS 17 and his Off-hand Dexterity score 12), averaging would have yielded 14.5 which would have been rounded to 14 to give the base BCS for using the pistol with his off-hand.

For Size, Bulk and Looks, roll separately using 1D100. The resulting number and description from the Physical Aspects Chart should be recorded on the Character Record Sheet.

The descriptions for Size and Bulk should be cross-indexed on the Personal Encumbrance Table and the number found there entered as the character's Personal Encumbrance.

The Physical Characteristics of Size and Bulk are important in determining if the character can wear scrounged clothing or scavenged armor. The Personal Encumbrance is used in calculations for Bash attacks and other things where mass is important.

PHYSICAL CHARACTERISTICS

The quantification of the physical aspects of the character is on a completely random basis, unlike the Attributes, Talents and Abilities. As a result, any player who can present a convincing case to the Gamesmaster as to why the character he is playing should have certain specified statistics should be allowed to use those statistics rather than rolling randomly to determine them.

RECOGNITION FACTOR

The Recognition Factor is used by the Gamesmaster to determine if the Player Characters are recognized, for good or ill, by the Non-Player Characters with whom they interact. The Player Character's base factor is the sum of the Recognition factors he receives for Size, Bulk and Looks. This is modified by the Gamesmaster for such things as distinctive clothing, identifying marks, reputation and whether the character announces his name.

| PHYSICAL ASPECTS CHART | | | | | | |
|------------------------|---------------|---------------|--|-------------------|-------------------|---------------------------|
| Die Roll (1D100) | Description | | | Recognition Value | Equivalent Height | Average Weight for Height |
| | Size & Bulk | Looks | | | | |
| 01 | Very Low | Ugly | | 3 | under 5'4" | 71-100 lb. |
| 02-05 | Low | Homely | | 2 | 5'4"-5'5" | 101-120 lb. |
| 06-26 | Below Average | Mediocre | | 1 | 5'6"-5'7" | 121-140 lb. |
| 27-74 | Average | Average | | 0 | 5'8"-5'10" | 141-160 lb. |
| 75-95 | Above Average | Above Average | | 1 | 5'11"-6' | 161-180 lb. |
| 96-99 | High | Comely | | 2 | 6'1"-6'2" | 181-200 lb. |
| 100 | Very High | Handsome | | 3 | over 6'2" | 201-230 lb. |

To find weight for a character with non-average up or down Bulk move a number of steps, as appropriate, equal to the Recognition value for Bulk.

| PERSONAL ENCUMBRANCE CHART | | | | | | | |
|----------------------------|----------|-----|---------------|---------|---------------|------|-----------|
| SIZE | BULK | | | | | | |
| | Very Low | Low | Below Average | Average | Above Average | High | Very High |
| Very Low | 3.0 | 3.1 | 3.3 | 3.5 | 3.7 | 3.9 | 4.0 |
| Low | 3.1 | 3.3 | 3.5 | 3.7 | 3.9 | 4.0 | 4.1 |
| Below Average | 3.3 | 3.5 | 3.7 | 3.9 | 4.0 | 4.1 | 4.3 |
| Average | 3.5 | 3.7 | 3.9 | 4.0 | 4.1 | 4.3 | 4.5 |
| Above Average | 3.7 | 3.9 | 4.0 | 4.1 | 4.3 | 4.5 | 4.7 |
| High | 3.9 | 4.0 | 4.1 | 4.3 | 4.5 | 4.7 | 4.9 |
| Very High | 4.0 | 4.1 | 4.3 | 4.5 | 4.7 | 4.9 | 5.0 |

OPTION

To Personal Encumbrance add (Strength -10) x .1.

SKILLS

A major aspect in the quantification of the character is the concept of Skills. Functions of import to the game that do not involve the simple exercise of body or mind by the character are governed by Skills. The Skill score is a quantification of the character's expertise and ability in a given area. The character's score in a Skill represents his basic competency in the area or areas covered by the Skill. This is hard-won, ingrained knowledge and is not to be gained from casual instruction or undisciplined study.

If a character does not have the Skill required to perform a function, he is usually thrown back on his Talents or Attributes. These are a poor substitute for rigorously acquired expertise. Though a character's initial scores in the Skills with which he begins the game are based on appropriate Attributes and Talents, he can improve the scores by diligent study and significant, successful application of those Skills.

Certain Skills cover things that anyone can do. This does not mean that a character who does not have a score in that Skill can not perform in that area. It does mean that when the situation is such that a character has difficulty performing in the area governed by the Skill, a character without a score in the Skill will almost certainly fail. For example, anyone can ride a horse, but a character who does not have a score in Beast Riding Skill will probably fall off if the horse gallops and will almost certainly fall off if the beast bucks.

The very choice of initial Skills often defines the character's past and his chances in the future. In this fashion, the player may tailor his character to suit whatever conceptions he has about that character.

Skills, as presented in Book 2, are given in a particular format. The name of the Skill is followed by the calculation for the initial score. The first Attribute in the formula is the Governing Attribute and the first Talent is the Governing Talent. These come into play with regard to character improvement. If the Skill is a Combat Skill, the Positioning of a character using the Skill is placed in parentheses after the name of the Skill. The initial score formula is followed by a number indicating the Format of the Skill. If the Skill requires any prerequisite Skills, they are listed in parentheses under the Skill name. A description and pertinent rules concerning the Skill will follow.

FORMATS

Skills are presented in three basic formats. Most Skills are in the first format which is the simplest. All other non-combat Skills are in the second format. The third format is reserved for Combat Skills.

Format 1: The values for the score in this format range from 0 to 100.

Format 2: The principal values range from 0 to 100 but the Skill has a secondary area of expertise which has a value equal to one half the principal score. This secondary area may be improved independently of the principal area. Once it is raised independently, it essentially becomes a separate Skill of format 1 and the principal area does the same.

Format 3: This type of Skill acts as a format 1 Skill, but there is a second range of value beyond the score of 100. This range goes from 101-200. Score in the second range can not be accumulated until the score in the first range equals 100.

Lockpicking Skill is a Format 1 Skill. The score ranges from 0 to 100. The BCS is the score divided by 5, rounded down. The Average BCS is the normal BCS divided by 2 rounded down.

Stealth Skill is a Format 2 Skill. The score ranges from 0 to 100. The Skill has Rural and Urban areas of expertise. If a character's principal area of expertise is Rural, his BCS when using Stealth Skill in a rural environment will be the score/5, down. When in a urban environment, the BCS will be the score/10, down. The character may at any time elect to treat the Urban area as a separate Skill and any improvements to the score (which will start at one half the score in the principal area) will be separate. Once the areas are separated into Skills, they will become as Format 1 Skills except that the two Stealth Skills will only count as one Skill with regard to the character's Freely Improvable Skills.

Single Weapon Combat Skill is a Format 3 Skill. The score range is from 1 to 200. The normal BCS for use of the Skill is the score in the first 100 points divided by 5 and rounded down. The average BCS is total score divided by 10, rounded down. The BCS derived from the second 100 points in the Control Throw. The score in the 100 points divided by 20 and rounded down is the number of contiguous Locations by which the target Location may be altered. This function is not allowed when an Average BCS is being used.

Thus, a character with a Lockpicking Skill score of 48 has a BCS of 9. A character with a Stealth Skill score of 48 and a principal area of Rural has a BCS of 9 in a rural environment and a BCS of 4 in an urban environment. A character with a Single Weapon Skill score of 148 has a BCS of 20, an Average BCS of 14, a Control Throw of 9 and a Location alteration of 2.

BASIC CHANCE OF SUCCESS

The Basic Chance of Success (BCS) is determined by dividing the character's score in the Skill to be used by 5 and rounding down. This will yield a number from 0 to 20. The number yielded by the calculation is considered the Base BCS. This will be modified by various factors to give the Adjusted BCS. It is this number that the player must roll less than or equal to on 1D20 in order for the character to be successful in using that Skill.

When dealing with Format 3 Skills only the first 100 points generate the Basic Chance of Success to average with the Averaging Skill BCS for the modified BCS. The Control Throw BCS is also averaged in the same way. To determine the character's ability to "aim," average his normal number of alterations to the Location with the score in the Averaging Skill divided by 20 and round down. As with normal averaging, this will not increase the character's "aim" ability. Averaging is always rounded down.

The use of the Basic Chance of Success in combat is dealt with at length in the section on Detailed Action Time on page 20. From the rules players can see how the concept of BCS works and can extrapolate its use for situations not specifically covered.

A player can be asked to make a BCS roll for his character when the character is attempting to do something within the province of one of his Skills or when he is "searching his memory" for some piece of information relating to the field in which the Skill is used.

EFFECT NUMBERS

In order to gauge the results of an application of some Skills, an Effect Number is used. The Effect Number is the difference between the Basic Chance of Success die roll

result and the modified Basic Chance of Success. This number is then used in a way which will be specified with the description of the Skill that uses an Effect Number.

AVERAGING SKILLS

Some Skills are designated as Averaging Skills. This means that a character attempting to utilize another Skill while operating in the province of an Averaging Skill will use a modified Basic Chance of Success. The scores that the character has in the Skill he is attempting to use and in the Averaging Skill are added together. They are then divided by 5 and rounded down to yield the modified BCS. This BCS may not exceed the normal BCS of the Skill that the character is attempting to use, although it may exceed the normal BCS of the Averaging Skill unless the Averaging Skill is a Combat Skill.

When dealing with a Combat Skill as the Skill that the character is attempting to use, any BCS after averaging that exceeds 20 becomes the character's modified Control Throw. This will also affect his "aim." A simple rule is that he will have 1 point of Location modification for each 4 points of modified Control Throw.

Beast Riding Skill is designated as an Averaging Skill. This means that when a character wishes to use another Skill such as Single Weapon Combat while mounted on a horse, he must average his scores in Single Weapon Combat and Beast Riding Skills.

"Hawk" Jensen has a score in Single Weapon Combat of 62 (BCS equals 12) and in Beast Riding of 94 (BCS equals 18). His opponent, Jake the Shiv, has values of 152 (BCS equals 20; Control Throw equals 10; Aim, equals 2) and 40 (BCS equals 8), respectively. Hawk would have an effective score to determine his BCS of 156/2 or 76. This yields a BCS of 13. This is greater than his normal BCS with Single Weapon Combat of 12. Therefore his modified BCS is lowered to 12. He is at no disadvantage for being mounted. Jake's average score is 192/2 or 96 yielding a BCS of 19. This leaves Jake still superior to Hawk in Combat Skill but Jake has lost his Control Throw and his Aim.

If Jake's Beast Riding Skill had been 66, his averaged score would have been 218/2 or 109. This would have given him a BCS of 20, a Control Throw of 1, but still no aim. If he had been a superb horseman with a score of 100, his averaged score would have been 252/2 or 126 yielding a BCS of 20, a Control Throw of 5 and an Aim of 1.

RAW TALENT VERSUS TRAINED SKILL

As noted in the section on Talents, if a character does not have a score in a Skill that he wishes to perform, he may use his score in the Governing Talent for that Skill as if it were his score in the Skill. To that Basic Chance of Success that is derived from that number, he may add any inherent BCS modifications that arise due to the tools required to perform the Skill. The most common kind of inherent modification comes from the use of a gun.

Once the character's score in the Skill is such that the Basic Chance of Success exceeds the Basic Chance of Success that he would have by using the BCS generated by the Governing Talent and any inherent BCS modifications, he must use the BCS generated from his score in the Skill. He will no longer receive any inherent BCS modifications. They are only compensations for a person untrained in the proper use of such things.

Jo the Strong does not have Rifle Combat Skill but his Combatative Talent is 20. He finds himself in a firefight with a carbine in his hands. The carbine has

an inherent BCS modification of plus 3. His Basic Chance of Success derived from his Talent score is 4. Thus Jo's base BCS with the carbine is 7. This will be modified by Restrictions, Distractions, and other Situational Modifiers as would any normal Basic Chance of Success.

When Jo finally gets to learn Rifle Combat Skill and his score exceeds 35 which gives a BCS of 7, he will be using the Basic Chance of Success generated from the Skill score. He will no longer receive the benefit of inherent modification for the carbine. Until then however, his BCS will be 7 due to Talent and the weapon. This can be thought of as sort of a minimum base BCS built from the character's raw ability and the ease of use and quality of the tool in use.

PREREQUISITES TO SKILLS

Some Skills are designated as requiring a Prerequisite Skill. This means that a character must have a score of at least 25 in the Skill or Skills specified as being prerequisite to the Skill he wishes to learn before he can acquire a score in that Skill.

COMBAT SKILLS

There are several things peculiar to Combat Skills and so they are dealt with in this section. Combat Skill will, when in use, result in the character having a certain positioning. This is used as a modification to the exact Location of a hit in combat. It is particularly pertinent in determining which arm or leg is hit. Also, Combat Skills have chances for Aim and Control Throws arising from the second range of score.

POSITIONING DUE TO SKILL IN USE

Each Combat Skill will be specified as frontal, presented or refused. Frontal positioning indicates a 50-50 chance of either side of the character being hit when struck through a Front or Rear hex. A 70% chance of hitting the side that the attack is coming from occurs when the strike is made from a Side hex.

Presented and refused each have a 70% chance of striking the weaponed or non-weaponed side respectively when the attack is made through a Front hex. An attack from a Side Hex has a 50% chance of striking either side of the character when successful. An attack from a Rear hex reverses the probability of the Front hex attack. That is an attack against a character in Presented positioning has a 70% chance of striking the non-weaponed side and against the character in Refused positioning it has a 70% chance of striking the weaponed side.

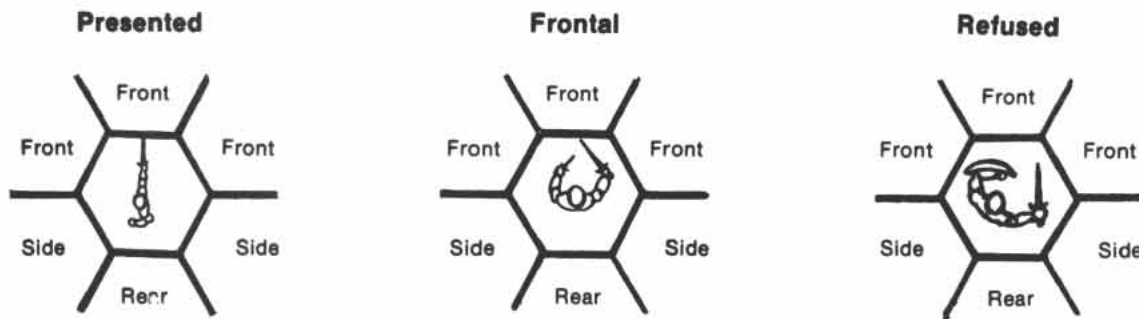
A character with Presented positioning is attempting to keep his body in profile to his opponent with his primary weapon between him and his opponent. A character will hold his primary weapon in his favored hand unless otherwise specified. This side is considered the weaponed side. The other side is referred to as the non-weaponed side.

A character with Refused positioning is also attempting to keep his body in profile to his opponent but he holds the weapon in his favored hand away from his opponent with his body between it and his opponent. A character using this positioning usually has something else to interpose between his body and his opponent such as a shield.

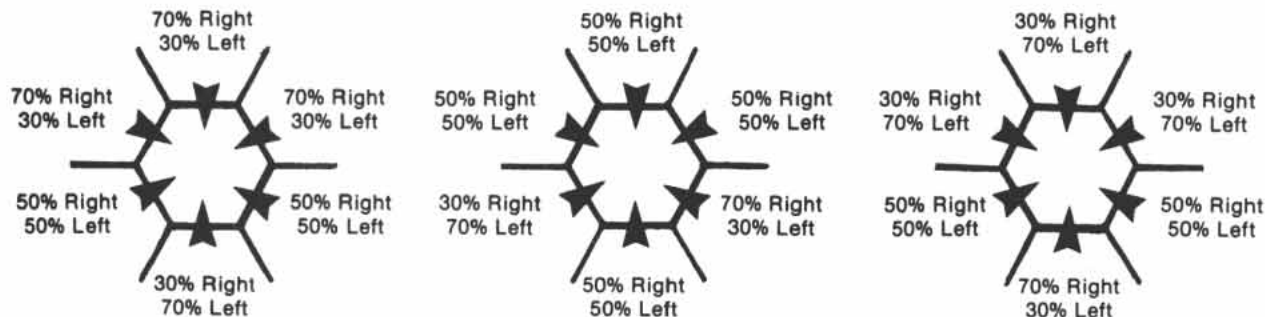
PRIMARY AND SECONDARY ATTACKS

Some weapons are noted as being capable of secondary attacks. The use of such an option is left to the player controlling the character. It is not required. If it is to be used, the attempt to make a secondary attack must be specified to the Gamesmaster when the character is initiating his Attack Action. During the phases that pass while the character is

VARIATION IN CHARACTER STANCE DUE TO POSITIONING



Percentage Breakdown of exact hit Location for attack coming from surrounding hexes



conducting the Attack Action, he is considered to be without benefit of his normal Weapon Defense Ability. The secondary attack will have an effective score, to convert to Basic Chance of Success, of one half the total score in that Combat Skill. For example a character with a score of 150 would derive the BCS and Aim for a primary attack from a score of 150 and a secondary attack from a score of 75.

WEAPONS DEFENSE ABILITY IN COMBAT

A character using a Hand-to-hand Combat Skill has a Weapon Defense Ability (WDA) against opponents using Hand-to-hand Combat Skills to attack him. The value for this Ability is subtracted from the opponent's Basic Chance of Success. When a character using a Missile Combat Skill is engaged by an opponent using a Hand-to-hand Combat Skill, he may use a skilled or unskilled unarmed-combat Combat Skill to generate a Weapon Defense Ability. When doing this the character will suffer a negative modification to his own Basic Chance of Success when he resolves his missile attack. This modification will be equal to the Weapon Defense Ability used by the character with the missile weapon.

The Weapon Defense Ability is calculated from the first one hundred points of score in the Combat Skill. It can easily be different for each Hand-to-hand Combat Skill that the character has score in. It is equal to the score in the Skill (first 100 points only) divided by 20 and rounded to the nearest.

AIM WITH A COMBAT SKILL

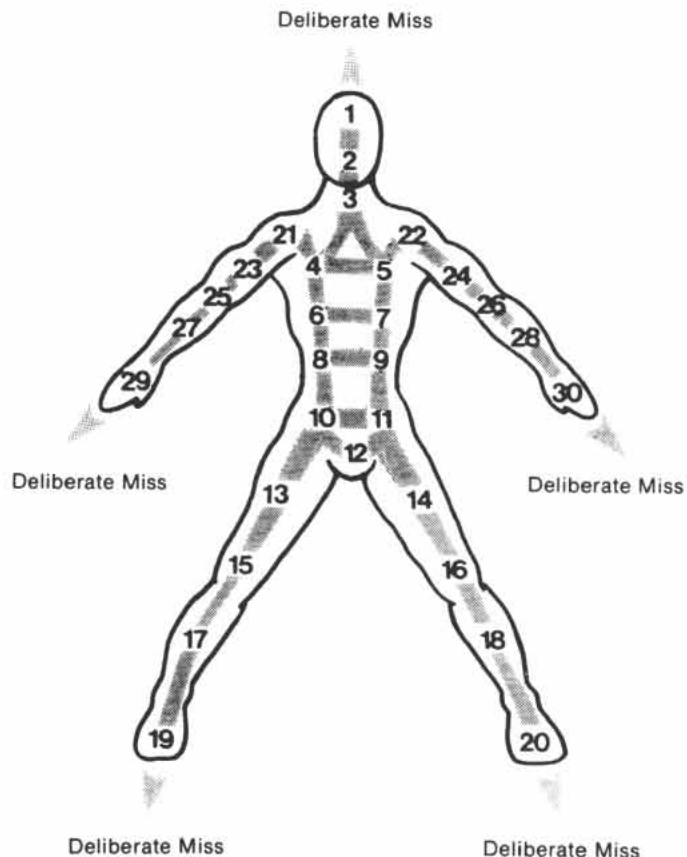
When a character had gained enough skill in a Combat Skill he will begin to be able to "aim." For each point of Aim, the Location of a hit on the body map may be altered by one Location. These must be contiguous Locations and follow the transference lines on the accompanying diagram. The use of Aim points is not required and, if used, all need not be expended. Aim points are not cumulative from attack to attack.

Aim is calculated similarly to Weapon Defense Ability except that the second 100 points of the score in the Combat Skill are used. That is,

Aim Points equal (Score-100)/20, down.

ALTERATIONS DUE TO AIM

The Dot Pattern connects contiguous Locations on the Body Map.



CONTROL THROWS DURING COMBAT

When a character in combat rolls a 20, he is subject to a Critical Miss. However, the player may attempt to make a Control Throw for his character to avoid the effects of the Critical Miss. If the throw is made, there will be no Critical Effects to the miss. If not, the Gamesmaster will roll on the Critical Miss Effects Table to see what has happened to the hapless character.

Control Throw equals
 $(\text{Score}-100)/5$, down and is treated as if it were a normal BCS.

When used with Missile Combat Skills this Control Throw indicates that the character has been careful before hand and has not used inferior or defective equipment or ammunition. In such cases treat as a normal miss. With such things as bullets, have the player remove an additional round from the character's total of ammunition since the Control Throw indicates that the round in question was discarded as defective.

THE THRUST IN COMBAT

Any weapon classified as capable of a thrust may be used to deliver one. The player must specify that the character is using a thrust before the attack is resolved. A thrust will add 1 to the Basic Chance of Success but will lower the effective Strength Group by 1 for purposes of determining the Effect Die. A thrust has a percentage chance of achieving a special effect equal to the Damage Potential. If this occurs it is treated as a Missile Special Effect.

ENCUMBRANCE

The encumbrance system is a way of measuring how much of a load the character is carrying and how the distribution of that load will affect the character when he attempts to perform various actions while carrying the load. Each character has an Encumbrance Capacity which is the maximum value of Encumbrance (ENC) that the character may carry on any kind of a sustained basis. The Encumbrance value of any item is rated on an abstract scale which compares the bulkiness of an object to its mass. A simplistic expression of this is presented in the Encumbrance Value Chart below. This chart will yield a rough figure for the object being considered which may then be adjusted by the Gamesmaster as he feels proper to reflect the Encumbrance value of the item. In general, an item designed to be handled or stored conveniently will have a lower ENC value than an item of the same mass and bulk which has many protrusions or is of an awkward shape. Representative examples of each bulk and mass classification are given following the chart.

For items which are presented in the weapons, armor or equipment lists, we will give a specific ENC value. These values can be used by a Gamesmaster as a guideline in tailoring specific Encumbrance values for items which are introduced to the campaign.

DISTRIBUTION OF ENCUMBRANCE

A character has a limited amount of space over which he may distribute a load upon his person. This is broken down

ENCUMBRANCE VALUE CHART

| BULK | MASS | | | | | | |
|------|-------|------|------|------|------|------|------|
| | VLt | Lt | Hvy | VHvy | MS1 | MS2 | MS3 |
| VSm | 0.001 | 0.05 | 0.1 | 0.6 | 1.0 | 2.0 | 3.0 |
| SM | 0.05 | 0.1 | 0.6 | 1.0 | 1.6 | 3.5 | 5.0 |
| Med | 0.1 | 0.3 | 1.0 | 1.6 | 2.0 | 5.0 | 7.5 |
| Lg | 0.3 | 0.6 | 1.5 | 2.0 | 3.5 | 7.0 | 10.0 |
| VLg | 0.6 | 1.0 | 3.5 | 4.5 | 5.0 | 10.0 | 15.0 |
| HG1 | 2 | 3.5 | 5.0 | 6.0 | 8.0 | 16.0 | 22.0 |
| HG2 | 4 | 7.0 | 10.0 | 12.0 | 16.0 | 32.0 | 44.0 |
| HG3 | 6 | 10.5 | 15.0 | 18.0 | 24.0 | 48.0 | 66.0 |

BULK

VSm very small... able to be hidden in a hand, such as a coin, gem, small jewelry, etc.

Sm small can be held and used with one hand and does not project far from the hand, such as knives, candles, clubs, lanterns, etc.

Med medium held and used in one hand but significantly larger than the hand, such as short swords, torches, etc.

Lg large usable in one hand and up to about a meter in length, such as swords, large tools, bundles, etc.

VLg very large ... able to be held or carried in one hand but usually requiring two hands to use properly, such as

staves, longbows, polearms, crossbows, rifles, etc.

HG huge greater than 6 feet long and bulky, usually requires two hands to carry
 HG1: mattress, small giant, coffin, etc.
 HG2: horses, carts, small car, etc. and so on.

MASS

VLt very light..... wood, paper, feathers, cloth, etc.

Lt light flesh, leather, water, heavy woods, etc.

Hvy heavy stone, gemstones, iron, brass, etc.

VHvy very heavy ... lead, silver, etc.

MS massive MS1: gold, platinum, etc.
 MS2: uranium, plutonium, etc. and so on

into areas such as his hands, his back, at his belt and slung from his side. The character may wear or carry containers at these locations which will hold other items. Each container will be rated according to the maximum ENC value it will hold and the maximum bulk grouping which will fit into the container's opening. Once an item is placed into a container its effective ENC will be halved. This half value is what is assessed against the character's Encumbrance Capacity. However, the item's full ENC value is what is assessed against the container's maximum capacity. Containers such as backpacks, when worn properly merely occupy space and do not count against the total Encumbrance value that the character is carrying.

A character may carry:

- 1 "thing" on his back.
- 1 "thing" up to Very Large in each hand.
- 1 "thing" slung over each shoulder.
- 10 "things" on a belt.

It should be noted that a "thing" may actually occupy more than one position on a belt. For example, a tool kit designed for belt wear is only one "thing" for determining its ENC value but it will take up about 5 places on a belt.

Armor and clothing that is worn should have the total ENC value of each garment or item calculated and the total of the ENC value for all the garments and items is the ENC value that will be assessed against the character's Encumbrance Capacity. Any garments or items of armor that are carried rather than worn will have their ENC values doubled.

ENCUMBRANCE STATUS

Once a player has calculated his character's Encumbrance Capacity and the Encumbrance Total of all gear carried and worn, the character's encumbrance status may be determined. The requirements for each status and its effects are listed in the table below.

| Status | Deftness | Speed | BCS |
|---|--------------------------|-------|-----|
| Unencumbered up to 1/2 ENC CAP | *** no modifications *** | | |
| Partially Encumbered up to 3/4 ENC CAP | -25% | -25% | -1 |
| Fully Encumbered up to full ENC CAP | -50% | -50% | -2 |

As with other percentage modifications to Attribute scores the percentage is taken from the effective score. The BCS modification applies only to Skills which require physical exertion or the exercise of dexterity. They do not apply to any Skills which are cerebral in nature.

Yusof Strongarm is getting ready to go adventuring and is packing up his gear. Into a pack (ENC CAP 10) go: a bag with field rations (10 at 0.1 each), a bag with 10 bandages (0.05 each) and 5 units of medical supplies (.1 each), a bag with a hammer (.6) and 5 iron spikes (.4 each), and a full 5 liter water skin (1). This has a total Encumbrance value of 5.6. He shrugs the pack into place on his back. Once there it will add 2.8 to his Encumbrance Total.

The value for the clothes and armor that he is wearing is 0.17. This brings his Encumbrance Total to 2.97.

Yusof belts on his sword (.7) and stuffs a pistol (.3) into his belt. He slings a coil of rope (1) over his right shoulder and a shoulder bag over the left. The bag contains 10 spare rounds for the pistol (.01 each) and a repair kit for the gun (.5). In the bag, they have an effective Encumbrance of .3. This new gear raises his Total by 2.3 to 5.27.

He then takes up a quarterstaff in his right hand for an additional Encumbrance of 1. The final Encumbrance Total is 6.27.

Yusof has a Strength Group of 4 and a Deftness Group of 2. This gives him an Encumbrance Capacity of (3 x 4) + 2 or 14.. Thus, load he is carrying will put him at Partially Encumbered status. If he rids himself of the staff before going into action, he will be in Unencumbered status.

ACCESS TO STORED ITEMS

In order to get an item which has been stored in a container, the character must get access to the container, open it and sort the desired item out from the other items in the container. The time taken in doing this can be of serious importance if this is being done in the middle of a desperate situation. The player should state that the character is beginning to get an item and inform the Gamesmaster of where it is kept. The character will then be engaged in the process for a number of Actions. The exact number should be known only to the Gamesmaster. The will announce to the player that he has found the item sought at the end of the Action on which it is "found."

To determine which item the desired one will be when items in a container are gone through, the Gamesmaster will roll a die with a range equal to the number of "things" in the container. If the number of "things" is not equal to one of the standard ranges, the Gamesmaster should roll the die with the next largest range and reroll if the result is outside the range determined by the number of "things." The result of the die roll will indicate which item the desired one will be. A character may sort through a number of "things" equal to his Deftness group in each Action.

The method of closure used on the container may also affect the time involved. A container that is unsealed or closed only by a snap or velcro-type seal will not add to the time involved. A button or buckle will add 1 Action for each button or buckle involved. If the container is closed by being tied, it will add 3 Actions.

OPTION

A character may cut the overall time down by making a Deftness Saving Throw. The results of the throw are kept secret by the Gamesmaster since it will affect when the character finds the sought after item. If the die roll result is in the character's Ability Saving Throw range, the time will be cut by 1/3, rounded to the nearest Action. If the result is in the character's Critical Saving Throw range the time will be cut in half, rounded to the nearest.

Yusof of the previous example is in Detailed Action Time and finds that he needs some of his medical supplies. With his Deftness Group of 2, he will have two Actions per Combat Turn. He will spend the first turn taking off his pack, since it requires two Actions to do so. The backpack is held closed by two buckles so it will take Yusof another turn to open the pack. Because all the items in the pack are in separate bags, the Gamesmaster rules that there are 4 "things" in the pack. The Gamesmaster rolls 1D4 (Roll 1D6 and ignore results over 4) and the result is 3. Since Yusof's Deftness Group is 3, he will get the right bag on the first action of sorting. Because there are two bandages to each unit of supplies, there is a 1 in 3 chance that each "thing" gone through in the small bag will be a unit of supplies. Yusof can check up to 3 "things" per Action. The Gamesmaster starts rolling 1D3 for each item sorted. The second die roll is a 1 so the "thing" is a unit of supplies. The total number of Actions would be six. Yusof is in a hurry so the player elects to attempt a Saving Throw to cut the time. The Gamesmaster rolls 1D20. The die result

falls in Yusof's Ability Saving Throw range. This means that the time in terms of numbers of Actions will be cut in half, to three. The Gamesmaster will announce that Yusof has a unit of supplies in his hands at the end of the third Action from the time that the player announced that Yusof was beginning the attempt. If interrupted, Yusof would have to pick up the process again from where he left off. A new calculation of the time required should be made.

PERSONAL MASS

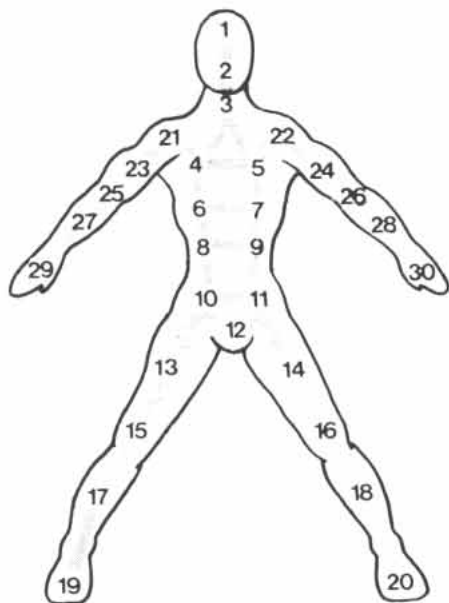
A character's mass must be known to determine the Encumbrance Total for any mount the character may ride and for calculations involving Bash effects. Personal Mass is equal to the character's Personal Encumbrance plus one third his Encumbrance Total, rounded down.

A character who is charging will increase his Personal Mass by 50%. An unconscious character will have his Personal Encumbrance increased by 50% before the Personal Mass calculation. A struggling character trying to avoid being carried off will have twice his normal Personal Encumbrance for purposes of making the Personal Mass calculation.

LOCATION AND ARMOR

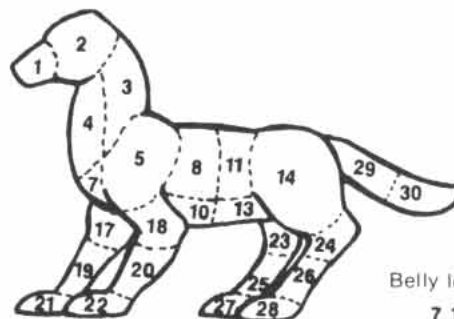
This system has the human body divided into 30 areas. Each is referred to as a Location (LOC). When a character is successfully attacked, 1D100 will be rolled to see where the attack landed on the Location map. Generally, a level on the body will be indicated. A die roll of 20 indicates LOC 4/5. If the character struck is presenting either his front or back to the direction of the attack there is a 50% chance that LOC 4 will be struck, and, if Loc 4 is not indicated, then Loc 5 is struck. When the character is facing in such a direction that one side of his body is closer to the direction of the attack, there is a 70% chance that the side facing the direction of the attack will be the one that is struck. In the case above, if the attack had been coming from the character's left side, there would have been a 70% chance that LOC 5 would receive the attack. If the die roll was greater than 70 on 1D100 than LOC 4 would have been the target.

BIPEDAL HIT LOCATION MAP

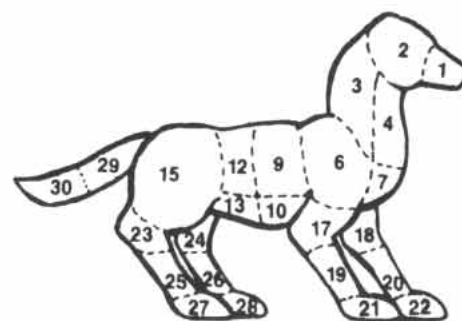


A quadrupedal body is also represented by 30 Locations but in a different fashion. When a level on the body is indicated the third LOC listed represents the underbelly of the animal. The percentage determinations for the exact Location works in much the same way as for bipedal forms. The specifics along with the Hit Location Tables are presented on page 28.

QUADRUPEDAL HIT LOCATION MAP



Belly locations are
7, 10, 13, 16



Once the exact Location of the strike from a successful attack is known, the protection on that Location must be checked. This protection may be from hide, clothing or armor. It will be rated for an Armor Value or AV. This Armor Value will be subtracted from the Damage Potential derived from the attack to determine the actual damage done to the character receiving the attack.

Armor and clothing materials are rated for their Armor Value as well as their ENC for each point that they cover. From these values the protection of the garment and its total ENC value can be calculated. This has already been done for items in the lists of standard gear. It is important that armor and clothing be treated as garments and not just isolated pieces.

Only the best Armor Value that a character has covering a given Location is used to subtract from the Damage Potential. However the total ENC value for all items worn is assessed against the character's Encumbrance Total.

OPTION

ENHANCED ARMOR VALUES

Under this Option a character receives the Armor Value of additional layers worn on top of or underneath his best armor. He does not, however, receive the full value. Each extra layer will have an Armor Value equal to its normal value divided by 4, rounded down. The character is still subject to the full encumbrance values of the extra layers.

This Option is a more accurate reflection of reality but tends to make the game less "sporting." It is only recommended for detail fanatics who wish even more calculations.

ARMOR FORMATS

Each of the various types of armor that a character can wear is specified as having a format. These formats are Rigid (R); Semi-Rigid (SR); Flexible, Hard (FH); Flexible, Soft (FS) and Flexible, Quilted (FQ). The format of an armor is important for determining its use when an armor is reinforced and when the character is subject to damage due to constriction.

REINFORCING ARMOR

All Flexible, Quilted materials may be "quilted" to yield a more protective armor. This increases the Armor Value by 1 and doubles the ENC value for each Location the garment covers. This process may be done properly by any character with Tailor Skill. To indicate that the armor has been treated in this fashion the designation 'Q-' is placed in front of the code for that type of armor. Thus Heavy Cloth with a designation of HC, a format of Flexible, Quilted and an ENC value of .0008 per Location would, when quilted have a designation of Q-HC, the same format and an ENC value of .0016 per Location covered. It would also have its Armor Value increased from 2 to 3.

All Flexible, Soft and Flexible, Quilted materials may be Reinforced. The Reinforcing will raise the Armor Value by one third the Armor Value of the Rigid format reinforcing material rounded to the nearest. The ENC value per Location will be raised by the ENC value of the Rigid format material. The format of the resultant armor will be Flexible, Hard. A given armor may only be Reinforced once, although a Flexible, Quilted material may be both Quilted and Reinforced. If the example above were to be Reinforced with bronze studs (Designation: BP; Format: R; ENC: .06), its new designation would be R(BP)-Q-HC. Its new Armor Value would be $3 + (6/3)$ or $3 + 2$ or 5 and its ENC value per Location would be $.0016 + .06$ or $.0616$. Any character with Armorer Skill may Reinforce armor.

Only those armor materials dealt with above may be reinforced in any way.

LEATHER AND HIDES AS ARMOR

Any character with Leatherworker Skill can properly cure a hide to yield the standard Armor Value for the type of hide being worked. These values are specified in the Armor Materials Listing in Book 2. A character who fails his Basic Chance of Success roll or one who does not have Leatherworker Skill will get a badly cured version of the hide that will have an Armor Value of 1 less than normal. It can not be later hardened.

Any leather that is of Flexible, Soft format may be Hardened by a character with Leatherworker Skill to increase the Armor Value by 1. This will add 'H-' to the materials designation and change its format to Flexible, Hard. It will not alter its ENC value per Location. A material may not be Reinforced after it is Hardened nor may it be Hardened after it is Reinforced.

IMPROVISING ARMOR MATERIALS

Any character may improvise armor. A character with Armorer Skill who does not have the proper facilities will only be Improvising. Improvised armor will only have one half of its normal Armor Value. This rule is designed to deal with things that were not originally meant to be used as armor being pressed into service by a character who is without useful armor.

USE OF ARMOR TO PREVENT DAMAGE

Against most forms of attack, the Armor Value of the material covering the Location which is hit will be subtracted from the Damage Potential. In the case of constriction attack, the format of the material will affect its Armor Value. A Rigid format material will have an effective Armor Value of twice its normal value until this doubled value is exceeded by the Damage Potential on one phase. At this point, the armor Value will be effectively 0 since the material is considered crushed beyond use. A character will receive an additional amount of points of Subdual damage equal to the normal Armor Value of the Material when the material is removed. This must be done before any healing can be done to the injured area.

Semi-Rigid, Flexible Hard, and all Reinforced materials will have their normal Armor Value against the first constriction. On successive turns their value will be reduced by half, rounded down, until the source of the constriction is removed. A second constriction on the same Location allows the process to begin again.

All other formats of armor materials provide no protection against constriction at all. They have an effective Armor Value of 0.

AVERAGE ARMOR VALUE

The Average Armor Value is used to defend against attacks upon the character made by multiple small objects such as occur with fragmentation type effects. It is also the basic rating of the character in the Tactical Combat System.

Average Armor Value is calculated by summing the best Armor Value on each Location, dividing the result by 30 and rounding to the nearest.

Yusof of the two previous examples is wearing armor and clothing of the following characteristics:

| Item | Location Coverage | Code | Armor Value | Total ENC |
|---------------------------|-------------------|------|-------------|-----------|
| Steel helmet | 1 | SP | 9 | .07 |
| Clothing | 4-18 & 21-28 | HC | 2 | .01 |
| Heavy Leather Torso Armor | 4-12 | HL | 4 | .07 |
| Light Leather Calf Boots | 17-20 | LL | 3 | .02 |

This yields a total Encumbrance value of .17

To determine the Average Armor Value only the best armor on each Location is considered. On Location 1, there is 9. On Locations 2 and 3, there is 0. On Locations 4 to 12, there is 4. On Locations 13 to 16, there is 2. On Locations 17 to 20, there is 3. On Locations 21 to 28, there is 2. On Locations 29 and 30, there is 0.

This gives one Location with 9, nine Locations with 4, four Locations with 3, twelve Locations with 2 and four Locations with 0. The total of the Armor Values is $9 + (9 \times 4) + (4 \times 3) + (12 \times 2) + (4 \times 0)$ or $9 + 36 + 12 + 24 + 0$ or 81. This is divided by 30 to give 2.7. This is rounded to the nearest to give an Average Armor Value of 3.

OPTION

DESTRUCTION OF ARMOR

If the Damage Potential or BDG of an attack exceeds the armor Value by three times its value the armor on that Location is considered destroyed starting on the next phase. After combat a character with an appropriate Skill for working the material may restore it to one half Armor Value until repairs can be made to restore it to full value.

TIME AND MOVEMENT

Once the characters' adventuring careers have begun, time in the game will pass at different rates. The time scale in use in any particular instance depends on several things. How the characters are travelling, what they are trying to do and what is happening around them all have bearing on the time scale to be used. The Gamesmaster will make the decision as to which scale is to be used. He will then ask for appropriate responses from the players with regard to their characters' actions and intents. The scales for the passage of time in the game which are defined here are: Strategic, Tactical, Detailed Action Time, Real Time and Down Time.

STRATEGIC TIME SCALE

Strategic time scale is usually used when the characters are doing long distance travelling. A day is divided into two Strategic Turns, one for the day and one for the night. The characters are assumed to travel during one of the turns and rest during the other. If the players wish to have their characters travel for more than one consecutive Strategic Turn, they will be subject to the Forced March rules on page 19.

During each Strategic Turn the Gamesmaster will make a check to see if the characters have an Encounter. The procedure for this is presented in Book 3. If the characters do indeed have an Encounter, the Gamesmaster will probably switch to one of the other time scales in order to resolve the interaction between the characters and whatever or whoever they have encountered.

As the characters travel, the Gamesmaster should describe to the players the nature of the terrain through which the characters are travelling. This would include the nature of the vegetation, any significant geographical features and any man-made structures. If a location or a feature is well hidden or off the direct route that the characters are following, the Gamesmaster may wish to roll 1D20 to see if the travellers will discover the "Hidden Thing."

Locations that are preplanned by the Gamesmaster may well have guards, outposts or some kind of outlying group that might interact with a traveling group of adventurers when they draw near. The Gamesmaster should make a special encounter check for this. Such things may lead the characters onto an unplanned adventure, unplanned by them that is.

TACTICAL TIME SCALE

Tactical time scale is most flexible with regard to the length of a Tactical Turn. The exact length of a Tactical Turn is left to the Gamesmaster's discretion and can vary from one turn to the next. It is intended that the Tactical scale cover time periods ranging from 10 minutes to 1 hour.

Tactical scale should have the length of its turn reflect the complication of the action to be resolved. The more complicated it is, the shorter the period should be. Thus, when characters are travelling through something like a ruined city in which the Gamesmaster has located several prepared areas but has not mapped the whole city in close detail, a turn of an hour's length would be appropriate. When the characters reach one of the pre-designed areas, the time scale should be altered to turns lasting 10 or 20 minutes.

A variation on Tactical time scale is used with the Tactical Combat rules and is presented with those rules in Book 3.

DETAILED ACTION TIME SCALE

Detailed Action time scale is used when determining the results of such intricate interactions as combat, death traps, confrontations, etc. Since the most common use of Detailed Action Time (DAT) is combat, a turn is referred to as a Combat Turn. The actual time represented by a Combat Turn is about 6 seconds. Each Combat Turn is divided up into Action Phases. This is done to break down the complex interpenetration of complicated actions occurring almost simultaneously into sort of a "slow motion" where each action can be considered and resolved in the light of the other actions taking place around it. The specifics of Detailed Action Time are involved and are treated in their own section on page 20.

REAL TIME SCALE

Real Time scale is a variation of Detailed Action Time in that it is a short time scale and is used to handle short, complicated interactions such as conversations or unusual actions not accounted for in the standard rules. When Real Time is invoked, it is the players rather than the characters who are consuming the time in the game. That is to say, that however long it takes players to complete their conversation or whatever, is how long it will take the characters to finish the same conversation. Naturally, things will continue to happen around the characters. If something that would impinge upon the senses of the characters happens, the Gamesmaster should inform the players of this at the point it happens as if the characters noticed it while they were performing their actions.

The Real Time scale is where much of the role playing in a Role Playing Game comes from. Here players frequently act as their characters in a literal sense. Some players even develop accents or characteristic methods of speech so the other players will know when it is the character speaking instead of the player.

DOWN TIME SCALE

Unlike the other time scales, Down Time is not used during an adventure. It is used between adventures. The game time consumed can vary from days to weeks to months to years. This is the time scale to be used when the characters are Studying, Researching, Rebuilding, etc.

The Gamesmaster, unless specifically requested by the players, should always allow the characters to have some Down Time between adventures. During Down Time, the usual hazards of the town, ruins, or wilderness are considerably reduced or, if the Gamesmaster is in a good mood, nonexistent. When a regular campaign is being run, a good scale to use is a week of actual time between gaming sessions corresponds to a month of game time. This allows a greater flow of time in the game and players can thus see their successful characters live out a lifetime in something less than the players' own lifetimes.

As noted above the flow of time in Down Time Scale is flexible and the Gamesmaster may wish to vary the Down Time between adventures to be more suitable to the campaign or the particular series of adventures that the characters have embarked upon. When the time in this scale extends much beyond a month and the players wish to have their characters engaged in constant Study or Research, the

Gamesmaster should take human nature into account. Characters will get bored or exasperated with what they are doing and will not apply themselves fully. In this fashion, not all the time will be available for the characters to increase their Skills or build things. Sometimes, even a character will need a vacation from the constant hard schedule that a player will outline for him. The Gamesmaster might require the character to make a Will Saving Throw, at various intervals, in order for the character to remain dedicated to the player's regimen of studies or other procedures.

During some adventures the gaming session will end before the particular scenario is completed. In such cases, it is best to "freeze" the action in place. The positions of all characters should be carefully noted along with what they were doing when the action was "frozen." At the next game session the action may be resumed where it left off at the last session. When this occurs frequently, the Gamesmaster may wish to allow a longer than usual period when next he allows Down Time.

COMBINING TIME SCALES

There will come times in the course of a campaign when the Gamesmaster will find that a combination of more than one time scale will prove a superior way to handle a situation. A fight that uses missile weapons at ranges over 50 meters is a good example. Characters can still resolve their actions as if they were in Detailed Action Time for purposes of what they can do and when they can do it. For movement if characters are trying to close the distance between the hostile groups, the use of Tactical Scale movement is recommended. The Gamesmaster may keep track of such actions by noting the positions of all involved parties on his Tactical Scale map and only shift to the Detailed Action Time Display when the opponents are about 20 meters apart.

Often when doing this, the Gamesmaster may wish to represent each party as if they were on the DAT Display and use a Tactical Display where each hex is 10 meters (or some other appropriate number). A marker on the Tactical Display would be used to indicate each of the Tactical Display hexes that has one or more characters in it. This technique aids the players' grasp of the tactical situation. It is recommended when feasible.

MOVEMENT IN TACTICAL OR STRATEGIC TRAVEL

Each character will have a movement rate for a day's travel. This rate assumes ten hours of travel and includes proper rest breaks. A character wishing to exceed these rates is subject to the Forced March rules. The basic rates are subject to modifiers due to terrain and weather conditions.

A character's basic traveling rate is equal to 10 plus his effective Speed in kilometers. This is for one day's travel. For the hourly rate, simply divide by 10.

When calculating the modified travel rate, all the percentages in the chart below should be treated as decimals and multiplied consecutively by the basic travel rate.

J.J. Jones is travelling through hills (x .5) on a Good Road (x 1.0) on the second day after a Light Snow (x .75). With a Speed of 32, her daily travel rate is 42 kilometers and her hourly rate is 4.2 kilometers. A day's travel under the conditions above, therefore, will be $42 \times .5 \times 1.0 \times .75$ or 15.75, rounded to 16 kilometers that day. This also means her hourly rate will be 1.6 kilometers an hour.

MOVEMENT MODIFIERS CHART

| | |
|--|------|
| On Good Road | 200% |
| On Poor Road | 100% |
| On Ruined Road | 50% |
| In Ruined City | 25% |
| In Built-up Area | 50% |
| In Open Terrain | 100% |
| In Rough or Impeding Terrain | 75% |
| In Woods, Hills or Desert | 50% |
| In Forest, Swamp, Jungle, or Mountains | 25% |
| At Night without light | 25% |
| At Night with Dim light | 50% |
| At Night with Good light | 75% |
| In Light Rain or Fog | 75% |
| In Heavy Rain or Fog or Light Snow | 50% |
| In Dense Fog or Heavy Snow | 25% |

On Day After

| |
|---|
| Heavy Rain (day 1) ... 75% (day 2) ... 100% |
| Light Snow (day 1) ... 50% (day 2) ... 75% |
| Heavy Snow (day 1) .. 25% (day 3) ... 75% |
| (day 2) .. 50% (day 4) ... 100% |
| Prolonged Snow: for each additional day of snow add 1 day at the worst penalty |

For calculation purposes remember that 75% is equal to .75, 100% is equal to 1.0, etc.

FORCED MARCH

Forced March entails the character pushing himself beyond the pace assumed in the travel rules. This can be done in one of two ways: the Fast March or the Long March. If either form is attempted on a second consecutive day, a Health Ability Saving Throw is required for it to be used. On the third day, a Health Critical Saving Throw is required. On following days, a Health Critical Saving Throw at one half the normal value is required. If the Saving Throw is not made, no Forced March is allowed on that day. Normal travel is allowed. After one day at normal pace, the ability to Force march is regained.

THE FAST MARCH

This form allows the character to move at double the base hourly rate. The doubled base rate is still subject to terrain modifiers. The maximum number of hours during which the character may move at this rate is equal to the character's Healing Rate. Each hour, or fraction thereof, that the character is moving at this rate beyond the safe limit will do 2D10 of Subdual Damage to the character. This damage is treated like normal subdual damage and may be recovered from in the usual fashion. (See Damage and Healing on page 36.) This damage may lower the base movement rate. Once the character has passed out from the strain of the Fast March, he may not use Forced March for the rest of the day.

THE LONG MARCH

This form allows the character to continue moving at his normal base rate for more than the normal 10 hours. The maximum number of safe hours that he may do this is equal to his Healing Rate. Each hour, or fraction thereof, beyond the safe limit does 2D10 of subdual damage as in Fast March.

DETAILED ACTION TIME

The scale of play known as Detailed Action Time (DAT) is used for situations where the specific actions of the characters and the time that it takes to resolve such actions are followed in close detail. The most common use of this scale is combat. Therefore one turn in this scale is known as a Combat Turn. One Combat Turn approximates 6 seconds of real time. Each Combat Turn is broken down into a variable number of Action Phases. Each action taken during a Combat Turn will occur on a particular Action Phase. During the Combat Turn the Gamesmaster will count down from the highest numbered Action Phase in which one of the involved characters may act. When the countdown reaches the phase in which a character may act, the controlling player must inform the Gamesmaster of the character's actions. Action Phase 0 is the bookkeeping phase and NO characters may act in this phase.

Various Abilities are involved in the character's execution of actions under the rules of Detailed Action Time. These Abilities are recounted here along with their specific applications.

- Base Action Phase (BAP) equals Speed/2, Down. This is the highest-numbered phase in the Combat Turn in which the character may initiate actions in accordance to the Movement and Action rules. The character with the highest BAP in a given Detailed Action Time determines the starting point of the countdown. That point is equal to the character's BAP.
- Phases Consumed in Action (PCA) equals BAP/MNA, down. This is the number of phases that it takes the character to perform an Action during Detailed Action Time. If the numbers of phases left in a Combat Turn is less than the character's PCA, then the character may not initiate an Action during that Combat Turn. The character may, however, move in accordance with the Movement rules for the rest of that Combat Turn.
- Maximum Number of Actions (MNA) equals Deftness Group. This is the greatest number of Actions that the character may initiate and complete in a Combat Turn. A character with an MNA of 0 takes two Combat Turns to complete an action. He has a PCA of 2 x BAP.
- Base Movement Allowance (BMA). This is an ability which is inherent in the species of the character. The BMA of a human is 1. If MNA is equal to 0, then BMA is equal to .5. If a species has a BMA which is different from human BMA, it will be given in the listing of the statistics of that species. The Base Movement Allowance is the distance the character may cover in one phase of normal movement. This movement is measured in meters.

If a character is crawling (moving while in a prone or kneeling position) he will have an effective Base Movement Allowance of one-half his normal value. The "run" increase to BMA is not allowed.

When a character on a Detailed Action Time Display (see below) is moving at less than 1 meter per phase, the marker should not be moved from one 1 meter hex to another until the character has accumulated sufficient movement to account for the 1 meter change on the Display. It is the responsibility of the controlling player to keep track of all partial movements of this nature.

EFFECTS OF PRE-EMPTION & SURPRISE

If a character initiates an Action and thereby causes the Gamesmaster to declare that Detailed Action Time is necessary, the Gamesmaster may decide that the character has "pre-empted" the other characters involved. This means that the countdown of the Action Phases for the first Combat Turn of the Detailed Action Time will begin on the Base Action Phase of the character who initiated the Action which caused Detailed Action Time to begin. Any characters who have higher Base Action Phases are treated as if they had done nothing until this point in the countdown. This situation prevails only on the first Combat Turn. All subsequent turns begin, as usual, at the Base Action Phase of the character with the highest BAP.

When a character is in a position to surprise another character and thereby initiate Detailed Action Time, the controlling player may choose the Action Phase on which the countdown will begin in the first turn of Detailed Action Time. Once the phase is chosen the Combat Turn proceeds as if a character had pre-empted the situation and the pre-empting character's Base Action Phase was the phase chosen by the player whose character has achieved surprise.

A surprised character may only use his Weapon Defense Ability if the phase of initiation is higher than the surprised character's Phases Consumed in Action number and the character makes a Speed Ability Saving Throw.

Crafty Old Sam is hiding in the shadows of an alley waiting for a victim. A figure appears and begins to move down the alley. Sam elects to let him pass and then jump out to attack. The player of Sam states that Sam will initiate this action on Action Phase 5 which is Sam's Base Action Phase. The Gamesmaster begins the countdown at 5. Sam's intended victim has BAP of 7 and MNA of 1. Thus, his PCA is 7 and there are not enough phases left in the Combat Turn for the character to get his Weapon Defense Ability into play. Since Same began an Attack Action on 5, the victim is in engaged status. He must make a Deftness Ability Saving Throw in order to turn and face Sam. The Gamesmaster rolls 1D20 and the result is 17. This is well out of range for the character. On Action Phase 1 Sam will resolve his Attack action with the positive modification of 10 for attacking from a Rear hex. The victim can only subtract his Combat Dodge Ability from Sam's adjusted BCS.

On Phase 4 however, footsteps are heard in the alley. Two men begin to run towards Sam. They had been following the man who Sam is attacking. The Gamesmaster had secretly made a Wit Critical Saving Throw to see if Sam would discover the "Hidden Thing" of the two men. He did not. They could see Sam begin the attack on phase 5. Phase 4

was the first phase on which they could act in response to Sam's actions. By moving, they are using the rest of the Combat Turn to close the distance between themselves and the fight. Having started 10 meters from Sam on phase 4 they will be 3 meters away on phases 1. They will move 1 meter on Phase 4 and 2 meters per phase for 3 phases. Sam had better kill the first man when he resolves his Attack Action or he is in big trouble.

If a character should achieve complete surprise or execute a proper ambush, he should be allowed to perform at least one Action or move for a number of phases equal to his Phases Consumed in Action number. This would be followed by the normal Combat Turn routine with the countdown begun at its normal place.

This procedure represents the initiative gained by the ambushing character and his ability to take advantage of the situation. If desired by the Gamesmaster, this method may be used instead of the one given above.

THE DETAILED ACTION TIME DISPLAY

In order to keep track of the position of characters during Detailed Action Time, the players should use a DAT display. This will consist of a hexagonal gridded sheet on which markers representing the characters are placed. The Display should also contain indications of features of significance to the characters, such as walls, doors, furniture, treacherous footing, etc. These indications can be in the form of additional markers or may be drawn onto the Display or a clear sheet covering the hex grid.

All characters should be represented by markers which may be moved on the Display. Anything small enough to fit in the hexes will do. We have found that miniature figures, painted to indicate the character depicted, add to identification with the character and to the general fun of play. If figures are not available a cardboard square marked to indicate which character it depicts is the second best choice. Remember that all markers used to represent characters must be able to denote which of the surrounding hexes is the character's central Front hex.

The recommended ground scale for the Display is 1 hex equal to 1 meter.

Sample Character Marker



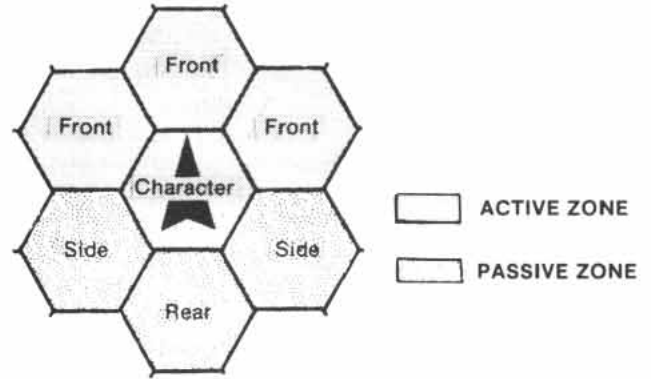
THE CHARACTER ON THE DAT DISPLAY

Under normal circumstances a character on the DAT Display will occupy one hex and be able to exert influence on the six hexes immediately surrounding the hex he occupies. If the character is utilizing a Long or Extra-Long Hand-to-hand weapons, an additional ring of hexes around the standard Influence Zone must be considered. Those objects classed as Restrictions which are present in these zones will hinder the character in executing a successful attack. A character's Active Zone is considered to be the hex he occupies and any Front of Long Front hexes. A character's Passive Zone is any Rear, Side and Long Side hexes. The importance of these zones and the impact of the character's positioning on any combat in which he is involved will be dealt with in the appropriate sections.

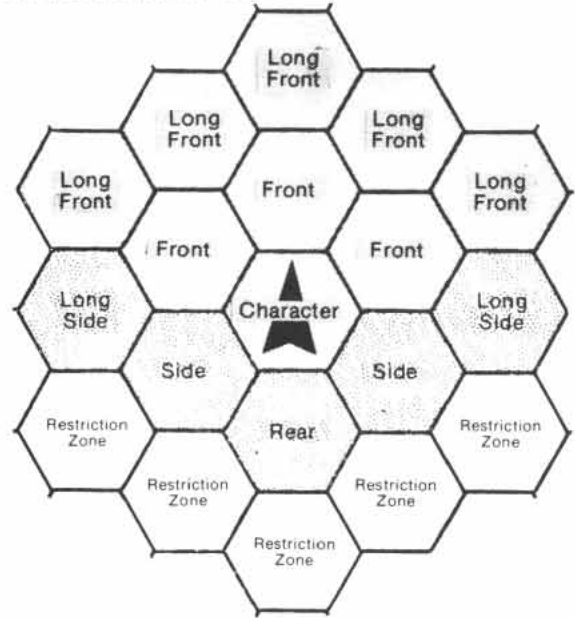
Up to two active characters may occupy the same hex. Each will act as a Restriction to the other. Any other character making an attack into or through that hex has an even chance of striking either character. The one struck should be determined randomly.

A character in a horizontal position, for whatever reason, will occupy two hexes on the DAT Display. If he is conscious he will still have a Zone of Influence but it will be modified as shown in the accompanying illustration.

CHARACTER WITH A SHORT OR AVERAGE WEAPON



CHARACTER WITH A LONG OR EXTRA LONG WEAPON



CHARACTER IN A HORIZONTAL POSITION



**POSITION ON DAT DISPLAY
MODIFICATION TABLE**

**MODIFICATION
TO STRENGTH GROUP
Target In**

| WEAPON LENGTH | Character hex | Front, Side Rear hex | Long Front, Long Side hex |
|---------------|---------------|----------------------|---------------------------|
| Extra-Long | -1 | 0 | 0* |
| Long | -1 | 0 | -1* |
| Average | 0 | 0 | Not Allowed |
| Short | 1 | 0 | Not Allowed |

* No secondary strike allowed.

Non-human species might not occupy the DAT Display in the same way as a human would. Variations will be indicated where the statistics for the species are presented.

EXAMPLE OF LONG AND EXTRA-LONG WEAPON RESTRICTIONS

Character A

- Own hex Restrictions (1)
- Total Surrounding Restrictions (5)
- Restrictions on Long weapon ($1 + 5/2 = 4$)
- Restrictions on Extra-Long weapon ($1 + 5 = 6$)

Character B

- Own hex Restrictions (2)
- Total Surrounding Restrictions (6)
- Restrictions on Long Weapons ($2 + 6/2 = 5$)
- Restrictions on Extra-Long Weapons ($1 + 5 = 6$)

RESTRICTIONS AND DISTRACTIONS

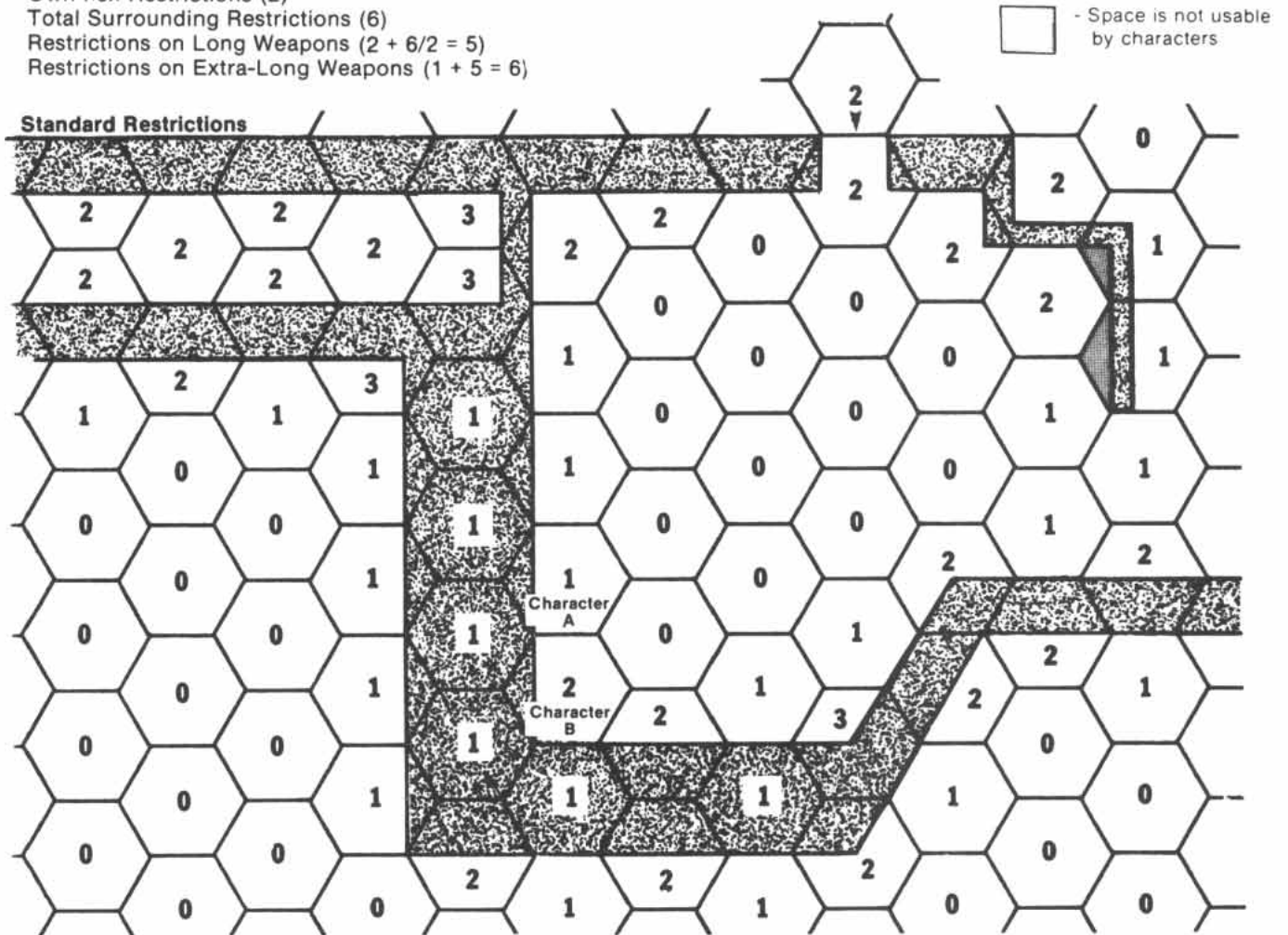
The various components of the environment which will affect a character's Basic Chance of Success in combat are divided into the non-mobile, physical Restrictions and the mobile or non-physical Distractions. The former always apply while some of the latter may be voluntarily ignored.

The accompanying diagram illustrates the Restrictions imposed on a character in a given hex if he is using a Short or Average length weapon. These restrictions are only those posed by walls and doors. If the character were using a Long weapon, he would be subject to the restrictions of the space he occupies plus one-half of the total of restrictions in the hexes immediately surrounding him. In these circumstances, a hex which has no available floor space counts as 1 Restriction. A character using an Extra-Long weapon is subject to the Restrictions of the space he occupies plus the total of Restrictions in the hexes immediately surrounding him.

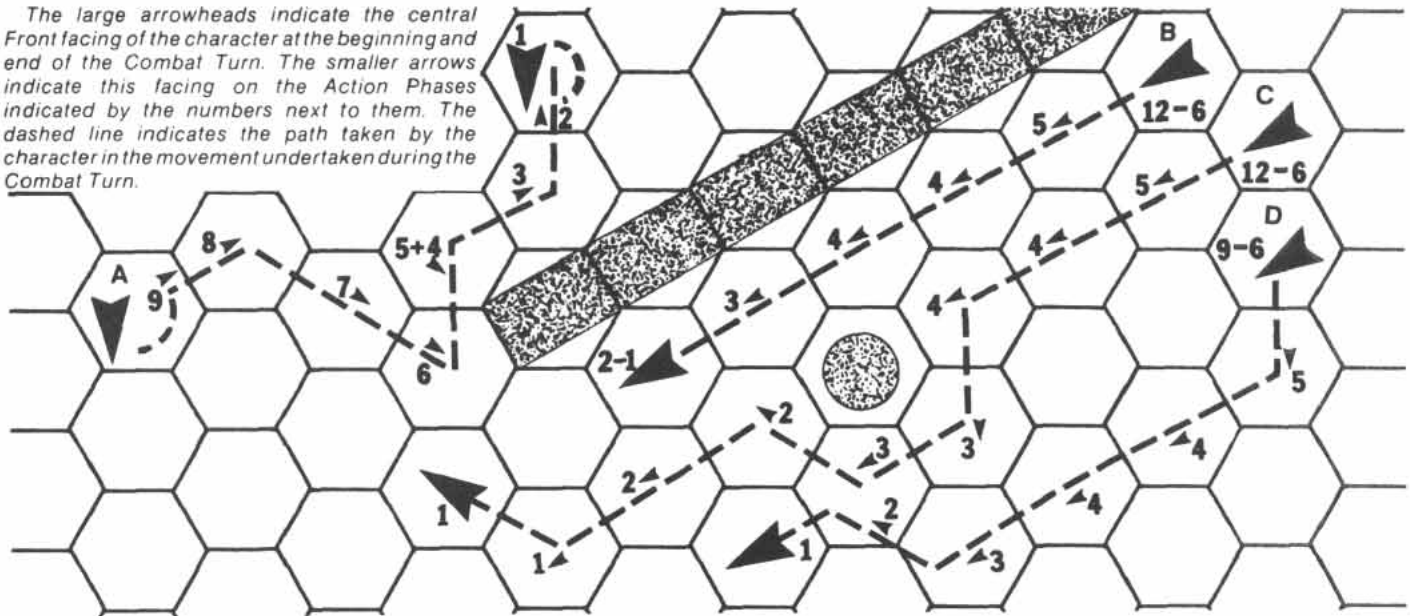
Other Restrictions are counted if they are present in the character's zone of influence. Any solid object with a height of .5 to 1.5 meters can be considered a Restriction. Each hex occupied by an object such as a table, chair or pillar has an additional Restriction of 1.

Dead or unconscious bodies in the character's own hex count as 1 Restriction each. Bodies may be stacked up to three high in an adjacent hex before becoming a Restriction.

The main source of Distractions is the occupation of hexes in a character's Zone of Influence by friendly characters or friendly characters within 1 hex of the line of fire. Each hex so occupied counts as 1 Distraction. This type of Distraction



The large arrowheads indicate the central Front facing of the character at the beginning and end of the Combat Turn. The smaller arrows indicate this facing on the Action Phases indicated by the numbers next to them. The dashed line indicates the path taken by the character in the movement undertaken during the Combat Turn.



Characters B, C, and D are waiting for their opponent. Character A, to show himself. Characters B and C have a BAP of 12 and Characters A and D have a BAP of 9. Characters B and C make no movement on Action Phases 12 through 10. On Phase 9 Character A begins movement by turning in place by 120 degrees. The other characters continue to wait until Character A becomes visible to them. On Phases 8, 7, and 6 Character A moves forward to the edge of the wall. He is now visible to the other characters and they will react by moving toward him on the next phase.

On Phase 5 Character A begins to move to his left Side hex while "dodging" to make himself less vulnerable to missile fire. This will take two phases and will be completed on Phase 4. Characters B and C begin to move toward the edge of the wall. Character D moves out his left Front facing to gain room for the maneuvering to come. On Phase 4 Characters B, C, and D all accelerate to "run."

On Phase 3 Character A moves along the side of the wall away from his opponents. Character B decelerates to avoid running past the edge of the wall where his opponent might be waiting in ambush

for him. Character C continues around the column at a run. Character D decelerates to avoid a collision with Character C on the following phase.

On Phase 2 Character A moves away from the wall to have room to use weapons. Character B moves to a halt near the edge of the wall. While Character C continues his run around the column, Character D follows at a cautious walk.

Phase 1 finds Character A turning to face the direction from which he expects his enemies to come. Character B is waiting by the edge of the wall, not wishing to advance without enough phases left in the Combat Turn to perform a Combat Action and not wishing to move into a space where a hidden opponent might get a free attack. Character C continues his run to swing wide of the edge of the wall to avoid an attack by being too far from a hidden enemy at the edge. Since he has run on Phase 1, Character C must move on his first available phase of the next Combat Turn. Character D continues to move slowly ahead. At the end of the Combat Turn, Character C has passed into Character A's line of sight.

may be voluntarily ignored; by doing so the character will receive no negative modifications to his Basic Chance of Success. This course can be dangerous. If such Distractions are ignored, a Critical Miss, which would normally have had no effect, will automatically strike one of the friendlies. The exact target should be determined randomly and damage done should be calculated as for a normal successful attack. If a normal miss occurs, the number of friendlies ignored is the chance in 10 that the character must execute an attack against one of the friendlies who is determined at random. This attack is a "free attack" and is subject to all normal positional and situational modifiers.

Other Distractions are highly variable. They should be adjudicated by the Gamesmaster. He should decide if they are present, what value they have, whether they can be ignored and, if so, the consequences of ignoring them. Examples of Distractions include objects flying at a character, things hampering a fighter by crawling on him or things grasping a character.

MOVEMENT

The basic rule of movement in Detailed Action Time is that a character may move a distance equal to his Base Movement Allowance on each Action Phase in the countdown beginning with his own Base Action Phase. This movement is through one of the hex sides between the hex the character is in and one of his Front Hexes. Once the character has entered a new hex his facing will be adjusted so that the hex he has just vacated will be his Rear hex. This means that a character with a Base Action Phase of 12 and a

Base Movement allowance of 1 can move 12 hexes in a Combat Turn.

A Character may change his facing by spending one Action Phase doing so. When this is done while in Engaged Status, the character must make a Deftness Ability Saving Throw or suffer a "free attack."

A character has the option of "running" while moving on an Action Phase. This means that he will be able to travel twice his Base Movement Allowance in a given Action Phase. If a character elects to "run" at any point in the Combat Turn, he will be subject to the rules governing the stopping of forward motion given in section on page 24.

In order to be able to "run" the character must have moved either at "walk" (normal BMA) or a "dodge" on the previous Action Phase.

Additionally a character may opt to "dodge." This will add to his defensive capacity with regard to missile weapons but will reduce his Base Movement Allowance by one-half. A character may "dodge" while using normal movement or while "running."

A character may move sideways or backwards. When doing this the figure on the display is placed in the Side or Rear hex at the direction of the controlling player, but the relative facing of the character is not changed. Each time in one turn that the character's accumulated movement in a sideways and/or backwards fashion exceeds his Combat Dodge Ability (explained in the section on combat) he must make a Deftness Ability Saving Throw or fall. This accumulated distance is in hexes covered and is only accumulated through each separate Combat Turn.

A character performing an Action may move 1 meter in any direction without being subject to falling. It should be noted that this one meter of movement is all the movement that the character is allowed to make during the phases in which he performs the Action. This one meter of movement may be taken on any one phase of the phases during which the character is performing the Action and allows a sixty degree change of facing. Specific Actions may have variations on these general rules.

CONTINUITY OF MOTION

Any character who moves on Action Phase 1 of a Combat Turn will be considered "in motion" on his Base Action Phase of the following Combat Turn. This is primarily of concern for stopping of forward motion and for missile fire directed at the character before his Base Action Phase.

A character who completes a Combat Action on Action Phase 1 of a Combat Turn is considered in motion for purposes of any missile fire directed at him before his Base Action Phase. Note that this means that a character performing a Combat Action such as Attack or Defend is always considered in motion with regard to missile fire directed at him.

STOPPING FORWARD MOTION

Once a character has exceeded normal movement speed or has begun "dodging," he is subject to the following conditions. He must continue moving for the distances and times as required in the table below. This movement is mandatory and must be made into a Front hex. Obstacles in the character's path may have a deleterious effect on the character.

A character who makes a Speed Ability Saving Throw will reduce the additional movement required by one category. A character riding an animal must make his Beast Riding Basic Chance of Success roll AND the animal must make its Saving Throw in order to reduce the requirement by one category.

A character must stop his forward motion before initiating an Action. The one meter of movement allowed during an Action may not be used to stop forward motion. A character who is at the last stage of stopping and makes his Saving Throw may move a meter and initiate an Action.

STOPPING FORWARD MOTION TABLE

Category 3:

achieved by running for a full Combat Turn or Charging. Character must move on a number of phases equal to his PCA at his normal BMA after which he will be at category 2. All movement must be out of the central Front hex.

Category 2:

achieved by moving at a dodge-run or by reduction from above. Character must move one phase at his normal BMA after which he will be at Category 1. All movement must be out a Front hex.

Category 1:

achieved by moving at a dodge or a run or by reduction from above. Character must move for one phase at his normal BMA after which he will be at Category 0. All movement must be out a Front hex.

Category 0:

achieved by moving at a walk or by reduction from above. Character is subject to normal rules for movement in DAT.

CHARGING

In order to be eligible for charging benefits, the character or his mount must have moved for a minimum number of phases equal to 10 minus his Speed Group at a "run." This movement must be essentially in a straight line but the Gamesmaster may, at his discretion, allow deviations in the path due to circumstances such as a character attempting to charge to the intersection with the path of another character. Naturally such intent must be made known to the Gamesmaster, although he may or may not reveal it to the second character. (Is he watching the first character or is he too busy running?)

Obstacles in the way of a charging character will be subject to a Bash (see page 31). A successful Bash against the charger or an unsuccessful Bash against the obstacle will break the charge and subject the charger to the rules for stopping forward motion. Each such successive result will reduce the stopping category by 1. If the charger wishes to continue to charge he must satisfy the conditions for a charge as if he were starting all over again. If the obstacle to the charging character is a weapons set against the charge and the character controlling the set weapon makes his BCS roll for the weapon Skill, the weapon will have its chances for a special effect doubled and the charger will be subject to a Bash with a chance in twenty equal to his own effective Mass. If the set weapon has a longer effective length than the charger's weapon, this will occur before the charger can attack. If not, the charger's attack will be resolved first.

MOVEMENT THROUGH OCCUPIED HEXES

Normal movement through an occupied hex may be opposed or unopposed. Any attempt to move through an occupied hex at greater than normal movement speed is automatically opposed. If the movement is opposed, use the Deliberate Knockdown rules on page 31. The opposing character gets the normal chances at a "free attack" as explained in the sections on Entering and Leaving the Zone of Influence. If the movement is unopposed, both characters are required to make a Deftness Ability Saving Throw. Success means that the character making his roll has no problems. Failure indicates that the character is prevented from moving or initiating an Action for a number of phases equal to his Phases Consumed in Action number. Critical failure indicates a fall by the character rolling the twenty and a second Saving Throw is required of the other character.

TREACHEROUS GROUND & MOVEMENT

A character moving on Treacherous Ground using "dodge," "run," or "dodge-run" type movements puts himself in danger of slipping. The former two options each give the character a 1 in 20 chance while the "dodge-run" option yields a 2 in 20 chance. For each phase spent in this motion the chance of a slip is increased by the basic chance. Thus, after three phases at a "dodge-run" a character has a 6 in 20 chance of slipping. The die roll for a slip is made on each phase.

Once a slip is indicated, the character must make a Speed Ability Saving Throw to avoid a fall. If the Saving Throw is made, the character is automatically considered to be "dodging" on the next phase and he will move one meter. This is involuntary movement and no actions may be attempted. If this causes the character to enter an enemy's Zone of Influence, the enemy will be allowed a free attack. The involuntary movement does not require a check for slipping.

When the character has had a Saving Throw to make and is able to continue movement, the chance of slipping is reduced to the basic chance and will be increased again if the character had just started movement.

Albert is running on Treacherous Ground. On his Base Action Phase of 10, he starts. A die roll of 4 on 1D20: no slip. On phase 9, his chance is 2 in 20 for a slip. The die roll is 1. He makes his Speed AST. On phase 8 he involuntarily moves forward 1 meter. On phase 7 he continues to run. His chance of slipping has been reduced to 1 in 20. The die roll is 12 so he is safe. On phase 6 he changes pace to a dodge-run. His chance of slipping is 3 in 20 and a die roll of 16 leaves him safe. He continues on phase 5 and the chance is up to 5 in 20. A die roll of 4 indicates a slip. This time he fails his Speed AST and falls. He must make a Health Saving Throw. The die result is in his Ability Saving Throw range so he will be Dazed until phase 5 on the next Combat Turn. His phases Consumed in Action number is 5 so he can not execute an Alter Position Action to get up this Turn. He decides to crawl forward for the rest of the turn. This does not require any checks for slipping but his Base Movement Allowance is reduced to .5. During the next four phases he will cover 2 meters.

CLIMBING IN DETAILED ACTION TIME

Under some circumstances it will be important to know how fast a character can climb a given distance. The effects of climbing, broken down by the method of climbing or the surface being climbed, are given in the table below. As a general rule, a character may not "run" while climbing although he may "dodge."

Sheer or almost sheer surfaces require Climbing Skill to negotiate. The Gamesmaster should roll at the beginning of the character's movement. If the character does not make his BCS roll, he will slip at some point in the turn. The Gamesmaster can roll a die with a range equal to the character's Base Action Phase to determine which phase of the turn the slippage will occur. If the character's Base Action Phase does not fit in one of the ranges normally covered by a die, the Gamesmaster should use the next highest range and reroll if the result falls outside the range under consideration.

If the character is operating under safety precautions when the slippage occurs, they will take effect. Characters who are roped to a secure position in the climbing surface will not fall further than the length of rope attached. Characters roped together when one falls will have to make a Strength Ability Saving Throw to keep their grip when the character on the rope next to them falls. This Saving Throw will be reduced if the total mass of falling character(s) exceeds their own Mass. The extent of the reduction is left to the Gamesmaster.

A character climbing by rope or ladder will have a chance to make a Deftness Ability Saving Throw to grab the ladder again. The character who is successful in doing this will lose one meter of height and be unable to perform any other Actions till the end of the Combat Turn or for a number of phases equal to his PCA number, whichever is shorter.

CLIMBING MOVEMENT TABLE

| Method or Surface | BMA | Notes |
|-------------------------|-----|---|
| Simple rope | .1 | Maximum height in meters equal to Strength CST plus Strength Group Effect Die roll. Requires two hands. No other Actions allowed. |
| Knotted rope | .1 | As above but substitute AST for CST. BCS modification of 2 while on ladder. |
| Ladder | .25 | Treacherous Ground. |
| Stairs | .5 | Treacherous Ground. "Running" allowed. |

A character able to engage in combat while climbing must average his BCS in the Combat Skill in use with his BCS in Climbing Skill to get an effective BCS. This will then be subject to normal Restrictions, Distractions, Situational and Combat modifiers.

ENTERING THE ZONE OF INFLUENCE

A character entering any hex of the Active or Passive Zones of a hostile character who is capable of attacking is subject to a "free attack." Characters who are stunned, unconscious or otherwise physically incapable of attacking are not allowed "free attacks." Actions normally preventing an attack by the character still allow him to make a "free attack." Additionally, a character who enters that hostile character's Active Zone must cease movement for that Combat Turn. A character entering these Zones under the influence of the rules for stopping forward motion may be subject to multiple "free attacks" for each hex entered but he is not subject to the rule requiring cessation of movement. (He is not really in control, so he cannot stop when he enters the danger area, unlike the rational man assumed by the basic rule.)

There are ways of avoiding "free attacks" and moving within a hostile character's Active and Passive Zones, but they are not accomplished using the standard rules of movement. As explained in the section on Performing Actions, a character may make a one meter move while performing an Action. This one meter move, which is the only movement allowed during a number of phases equal to the character's Phases Consumed in Action number, may be referred to as a Combat Move. If the character entering a hostile character's Active or Passive Zone is making a Combat Move, he is not subject to a "free attack." By making Combat Moves, the character may move through the hexes of the hostile character's Active and Passive Zones without incurring a "free attack." The character may continue to move in this fashion as long as there are sufficient phases remaining in the Combat Turn for him to perform Actions.

ENGAGED STATUS

A character who is in the Active Zone of a hostile character who is capable of attack, is in Engaged status. It is important to note that some Actions can not be undertaken while Engaged. Others will require a Saving Throw to complete. Still others, particularly actual combat Actions, are under no penalty.

PERFORMING ACTIONS

When the character wishes to do something other than simply move during the Combat turn, he must perform an Action. Simple Actions require a number of Action Phases to complete equal to the character's Phases Consumed in Action number. If there are insufficient Action Phases Consumed in Action number. If there are insufficient Action Phases left in the Combat Turn for the character to complete the Action, it may not be initiated in that Combat Turn. More complex Actions will require the character to continue performing the Action at successive opportunities which may go on for several Combat Turns before enough time has been spent to resolve the Action.

The basic rule for resolution of an Action is that it will be rolled for on the last of the Action Phases consumed by its performance. An Action initiated on Action Phase 7 by a character with a PCA of 3 will be resolved on Action Phase 5. The same character can not initiate an Action after Action Phase 3, although he could still move subject to normal movement rules.

A character performing most Actions is allowed a one meter move. This move may be in any direction and may involve a facing change of 60 degrees. When in, entering, or leaving the Active or Passive Zone of a hostile character, this movement is known as a Combat Move. This may take place

on any phase during which the Action is performed. Certain Actions allow no movement and these will be specified as they arise.

The resolution of an Action usually requires the rolling of a Basic Chance of Success die roll, if a Skill is in use, or of a Saving Throw, if an Attribute is being put to use.

SIMPLE ACTIONS

Most of the simple Actions are involved with combat, while more complex ones are usually not directly related to combat.

Attack — This Action is used for armed and unarmed Hand-to-hand combat utilizing an appropriate Skill for the character. This Action may only be initiated if an opponent is already in range or the character's Combat Move will bring the opponent into range when initiating the attack. If the opponent leaves the Zone of Influence of the character before the attack is resolved and the character cannot move to keep the opponent in his Zone, the attack is resolved on the phase on which the opponent moves. The character may not move or initiate another action until the usual Phase.

Defend — This Action allows the character to increase his Weapon Defense Ability to 150% of its normal value for the duration of the Action. No attack allowed.

Fire Weapon — This Action is required when using missile of any kind if negative modifiers due to motion are to be avoided. Muscle-powered weapons resolve at the end of the Action, and single-shot non-muscle-powered weapons in the middle, although the character may not move or initiate another action until the usual phase. Multiple shots are spaced as evenly as possible through the available phases used by the Action. In these cases, fractional values should be rounded down. This Action requires a Deftness Ability Saving Throw while Engaged.

Reload Weapon — The number of times this Action must be performed before the weapon is ready to fire again will vary by weapon type. This Action requires a Deftness Ability Saving Throw while Engaged.

Exchange Weapons — This Action covers the return of a weapon to its holster, sheath, or carrying place and the drawing of a new one. Some pieces of equipment (shields, polearms, etc.) may require longer and this is adjudicated by the Gamesmaster. A weapon can be voluntarily dropped without difficulty in the space of an Action. This Action requires a Deftness Ability Saving Throw while Engaged.

Survey and Command - This Action allows the character to observe what is going on around him. Normally a character will observe only what is in front of him. This Action also allows the character to make a short coherent statement to other characters without using the normal rules for communication in Detailed Action Time. This Action may not be performed while Engaged.

Jump — This Action allows the character to execute a jump under the following restriction: To qualify for a running version of a jump the character must satisfy the conditions of charging. The character does not get the normal one meter move associated with an Action. The character may add the result of a Strength Group Effect Die roll to his Current Strength for the distance calculation if he makes a Strength Critical Saving Throw.

Vertical, standing $STR\ AST / (6 \times Mass)$, up

Vertical, running $STR / (9 \times Mass)$, up

These distances are in meters above the character's head.

Broad, standing $STR\ AST / Mass$, up

Broad, running $STR / mass$, up

These distances are in meters.

The Gamesmaster can calculate the distance covered during each phase in the character's Action by dividing the total distance covered by the character's PCA number. Players should be required to commit their characters to jumping before they roll the Critical Saving Throw to see if they will get any extra distance.

Alter Postion — This Action is performed when a character changes position from prone, kneeling or sitting to standing. It is also used when a character changes position from standing to prone and used thus eliminates the necessity for the character to a Saving Throw against winding himself. A character not using this Action to go prone is subject to the rules for falling. No movement on the DAT Display is allowed. The character is assumed to stand in the hex in which his feet are located. During the phases in which the Action is performed a character is considered moving for the purposes of any missile weapons targeted at him. This Action requires a Speed Ability Saving Throw if utilized while Engaged.

Perform a Function — This Action allows the character to apply any Skill other than a Combat Skill. As with Reloading, the number of times the Action must be applied will vary. This should be adjudicated by the Gamesmaster.

Reloading, drawing or sheathing a weapon, and such other simple functions as are allowed by the Gamesmaster may be attempted while moving instead of using an Action to perform them. At the phase on which the character would have resolved the Action, the character must make a Deftness Saving Throw in order to be successful. The level of the Saving Throw and any modifiers to it are at the discretion of the Gamesmaster.

THE LAST SHOP OPTION

If a character who has a loaded and ready missile weapon finds that he is going to be put in Engaged status by another character before his Base Action Phase, the missile-armed character may elect to fire using the last shot option when the character who is closing in on him enters the Point Blank range for the weapon. This shot will be resolved at that point. The character who elects this option will thereby already be committing himself to a Fire Weapon Action as the next Action he undertakes. He must begin it on his Base Action Phase. He essentially does nothing because his Action has already "occurred." The missile firing character will receive a modification to his BCS equal to the difference between the phase that the shot is resolved on and his Base Action Phase.

The last shot option does not apply to characters who initiate a Fire Weapon Action and who will be Engaged before their shot is resolved. If they are in Engaged status by the time the phase for resolution arrives in the countdown, a Deftness Ability Saving Throw is required for the character to be able to get off the shot. If the character's planning allowed an enemy to get that close at that point in time, the character must pay the price.

FIRING WHILE MOVING

Characters using guns and crossbows are allowed to fire while moving. Shots are spaced as if the character had used a Fire Weapon Action. All shots are subject to the hip fire penalty and an additional penalty based on movement. For specifics see the Gun rules in Book 2.

COMMUNICATION IN DAT

Once DAT is begun characters must utilize appropriate Actions to communicate information among themselves. To simulate the confusion and independent action common to people in stress situations the Gamesmaster should rigidly enforce these communication limitations. It gives a more

realistic result than allowing the players ten minutes to coordinate actions which will be happening in a game time frame of six seconds. Such attempts on the players' part should result in the tactical discussion by the players being taken out of DAT and put into Real Time where such discussion timed and added to the game time that the players are consuming.

The Survey and Command Action allows the greatest freedom of communication. The player should be allowed to communicate a coherent sentence. Most other Actions will allow a character to communicate one word per phase. When the character is, in one phase, moving distances greater than his base BMA much more than one or two words should not be allowed for each PCA period of phases. The player may state whether such communications are shouted, spoken or whispered. The Gamesmaster should be careful to take into account prevailing conditions and how they will affect the stated communication. Gunfire in a confined space is notorious for putting a damper on polite conversation.

COMBAT PROCEDURE

The basic procedure for Combat is straightforward. The attacking character's Basic Chance of Success in the Combat Skill that is being applied is modified by Restrictions, Distractions, Situational Modifiers and the opponent's Defensive Ability. The player then rolls 1D20. If the number falls in the modified range the opponent has been hit. If not, he has been missed. Once the opponent is hit the player determines his Damage Potential while the Gamesmaster determines the Location of the hit. The Armor Value of the protection that the opponent is wearing is subtracted from the character's Damage Potential and the result is the damage applied to the opponent.

A die roll of 1 always hits except in the case of the "hopeless" attack. A die roll of 20 always misses. Under most circumstances these die rolls indicate a Critical Hit and a Critical Miss, respectively.

A flowchart of the combat procedures is provided in Appendix 2.

CONDUCTING AN ATTACK

To conduct an attack the player states to the Gamesmaster what Combat Skill the character is using and whether any secondary strikes will be attempted. This is done when the character initiates the attack. The primary strike (the only one if there is no secondary strike) uses the full Basic Chance of Success (BCS) and the secondary strike uses the average BCS.

This is the Base BCS.

The Base BCS is then modified by the Restrictions due to positioning on the DAT Display. It is further modified by any Distractions present. The above can be determined by the player. The player and Gamesmaster jointly determine if there are any situational Modifiers. This is done jointly because while some of the modifiers will be perfectly obvious, there may be modifiers, known to the Gamesmaster, of which the character is unaware. The Gamesmaster will then subtract the Overall Defense Ability of the defender. This yields the Adjusted BCS which is the number which the player must roll less than or equal to on 1D20 in order to hit the defender.

SITUATIONAL MODIFIERS

These Situational Modifiers are given as a guideline for the Gamesmaster in determining what kind of modifications should be made. It would be impossible to list all the potential situations that characters can get themselves into in the course of an adventure. It is up to the Gamesmaster, in the end, to determine what Situational Modifiers apply and their value. Discretion is advised.

SITUATION MODIFIER TABLE

HAND-TO-HAND COMBAT

| SITUATION | BCS |
|---|-----|
| Each Distraction..... | -1 |
| Each Restriction..... | -1 |
| Target is prone..... | +2 |
| Attacker is prone..... | -10 |
| Target is sitting or kneeling..... | +2 |
| Attacker is sitting or kneeling..... | -5 |
| Attacking to a Side or Long Side hex..... | -5 |
| Attacking from a Side or Long Side hex..... | +5 |
| Attacking to a Rear hex..... | -10 |
| Attacking from a Rear hex..... | +10 |
| Attacking from a superior position such as a table or stairs, etc..... | +1 |
| Attacking from an inferior position such as the reverse of the above..... | -1 |
| In Dim light*..... | -3 |
| In Poor light*..... | -5 |
| In Darkness or Partially blind*..... | -9 |
| Totally blind*..... | -12 |
| Attacker is over 50% wounded*..... | -2 |
| Attacker is over 75% wounded*..... | -4 |

*These also apply when using missile weapons.

MISSILE WEAPONS

| Situation | BCS |
|--|-------------------|
| Hip fire..... | use Average BCS |
| Damaged in that Combat Turn..... | -(damage taken/2) |
| Firing a gun in each hand..... | -1 to all shots |
| Surprised..... | -2 |
| Shooting at a newly acquired target..... | -2 |
| In firing stance..... | +1 |
| Braided weapon (requires firing stance)..... | +1 |
| Sighted in (requires stance)..... | +1 |
| Shooting out a side hex..... | -2 |
| Shooting out a Rear hex..... | -4 |

THE "HOPELESS" ATTACK — ADJUSTED BCS LESS THAN 1

With an Adjusted BCS less than 1, the player must roll a 1 on 1D20 to have a chance to hit. If he does roll a 1, he must roll 1D20 again. If the second die roll is less than or equal to his Base BCS, he will hit his target. A 1 on the second die roll will indicate a Critical Hit.

ADJUSTED BCS EQUAL TO 1

In this case, a die roll of 1 on 1D20 requires a second roll of 1D20. If the second die roll is less than or equal to the character's Base BCS, a Critical Hit is scored. Otherwise the hit is only a normal hit.

ADJUSTED BCS GREATER THAN 1

This is the standard case. A die roll of 1 indicates a Critical Hit. A die roll less than or equal to the Adjusted BCS indicates a hit on the defender. Any other roll indicates failure to strike the defender. A die roll of 20 indicates a Critical Miss.

RESULTS OF A HIT

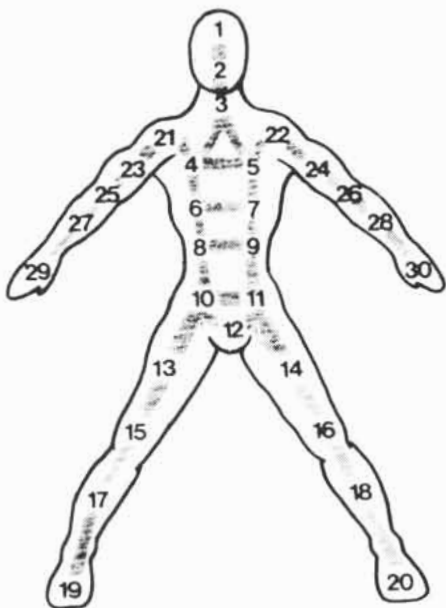
Once the player has made the appropriate die roll and the Gamesmaster has announced that a hit has been made, the Gamesmaster will determine the Location of the hit by rolling 1D100 and consulting the table and Location maps below.

If the Location indicated by the die roll is considered to have a covering barrier between the attacker and it, the attack must penetrate the barrier before any results can be applied to the target. The effects of barriers on a gun's Bullet Damage Group and the effective Strength Group for other

HIT LOCATION TABLES

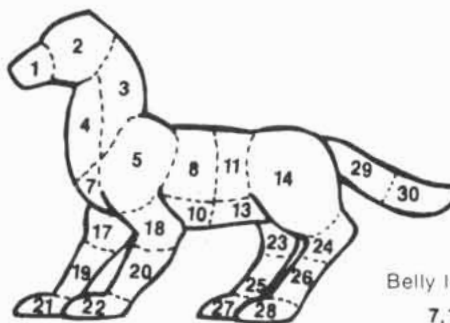
BIPEDAL

| D100 | LOC |
|-------|-------|
| 1-4 | 1 |
| 5-8 | 2 |
| 9-11 | 3 |
| 12-20 | 4/5 |
| 21-29 | 6/7 |
| 30-38 | 8/9 |
| 39-47 | 10/11 |
| 48-53 | 12 |
| 54-59 | 21/22 |
| 60-65 | 23/24 |
| 66-69 | 25/26 |
| 70-74 | 27/28 |
| 75-80 | 29/30 |
| 81-86 | 13/14 |
| 87-93 | 15/16 |
| 94-98 | 17/18 |
| 99-00 | 19/20 |

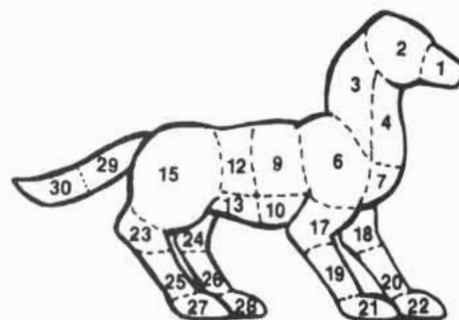


QUADRUPEDAL

| D100 | LOC |
|-------|----------|
| 1-4 | 1 |
| 5-12 | 2 |
| 13-20 | 3/4 |
| 21-28 | 5/6/7 |
| 29-36 | 18/17 |
| 37-44 | 20/19 |
| 45-48 | 22/21 |
| 49-56 | 8/9/10 |
| 57-64 | 11/12/13 |
| 65-72 | 14/15/16 |
| 73-80 | 24/23 |
| 81-88 | 26/25 |
| 89-92 | 28/27 |
| 93-96 | 29 |
| 97-00 | 30 |



Belly locations are
7, 10, 13, 16



MODIFICATIONS

| | |
|----------------------|----|
| Bipedal | |
| from above | -5 |
| from below | +5 |
| Quadrupedal | |
| from the front | -5 |
| from the rear | +5 |

These values may be altered by the Gamesmaster as he sees fit. A long quadruped might have a modification of 10 rather than 5.

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Where the location result gives more than one possibility for the exact result, 1D100 is rolled and the table below is consulted to give the exact location.

Attack from Front or Rear
X/Y 50% either location
X/Y/Z 1-40/41-80/81-00

Attack from Side
X/ 1-70 nearest side
Y 71-00 furthest side
X/ 1-60 nearest side
Y/ 61-70 furthest side
Z 71-00 underbelly

If the target is using a presented or refused positioning, treat attacks from the side as attacks from the front or rear and vice versa.

missile weapons and Hand-to-hand weapons are given on the section on Barriers on page 46. These modifications must be made before the Damage Potential may be determined.

DAMAGE POTENTIAL

Once it has been established that a hit has been made, the player may determine the character's Damage Potential for that hit. If it is a Critical Hit, the normal Damage Potential is altered. The exact changes are dealt with in the section on Critical Hits.

The calculation of the Damage Potential will vary by the weapon system in use.

- Hand-to-hand weapons — Each such weapon is rated for a Weapon Damage Multiplier (WDM). Each character has an Effect Die in accordance with his effective Strength Group. The character's Effect Die is rolled and the resulting number is multiplied by the Weapon Damage Multiplier. The result of this calculation is the Damage Potential.
- Guns — Each round fired from a gun is rated for a Bullet Damage Group (BDG). The BDG of each round striking the same Location on the same Action Phase is totaled. This number is divided by 10. The resultant number when rounded up yields the number of D10's of damage and the number rounded to the nearest is the addition to the number of points of Damage Potential rolled on those D10's.

Damage Potential equals
(BDG/10, up) in D10's + (BDG/10, nearest)
in points of damage

- Muscle powered missile weapons — Each kind of weapon in this category varies and the specifics are given with the description of the Skill required to use the weapon. Basically, the Damage Potential is calculated as for Hand-to-hand weapons but Strength Group is modified for range rather than for position on the DAT Display.

It is important to note that if the adjusted Damage Potential does not exceed the Armor Value of the target Location, there is no Critical Effect due to a Critical Hit or a Missile Special Effect.

DAMAGE DONE

Once the Damage Potential and the hit Location is known, the actual damage done can be calculated. The Armor Value that the target of the hit has at the Location hit is subtracted from the Damage Potential to yield the Damage Done.

SYSTEM SHOCK

If the Damage Done exceeds the Shock Factor (SF) of the recipient, he is subject to a check for System Shock. To avoid System Shock, the character must make a Health Ability Saving Throw. If he fails he will fall unconscious for a number of Combat Turns equal to 50 -Health of the character.

The Shock Factor for humans is set at 10. Player Characters and Personality Non-Player Characters may add their Healing Rate to their Shock Factor. The Shock Factor for non-human species is given with their other statistics.

TYPES OF DAMAGE

Each type of weapon or damage-causing attack is rated for the type of damage caused. If there is no specification then the damage done is assumed to be Lethal.

- Lethal (L) — This is the type of damage done by edged and pointed weapons. Most weapons in this classification may be used to produce Crushing type damage when used with the "flat." When this is done the normal Weapon Damage Multiplier is halved.

- Subdual (S) — This type of damage is not immediately lethal in effect.
- Crushing (C) — This type of damage is done by weapons which rely on smashing power to cause damage. The actual Damage Done is 3 points of Subdual and 1 point of Lethal for every 4 points inflicted. That is, every fourth point inflicted is Lethal while the rest is Subdual.
- Combination (B) — This type of damage is done by massive weapons which has some edges or points such as spiked maces. The Damage Done is divided evenly between Subdual and Lethal. That is, every second point inflicted is Lethal while the rest is Subdual. Odd points are thus Subdual.

The effects of injury and the healing of damage are dealt with in the appropriate sections starting on page 36.

A fifth type of damage known as Critical Damage may result from a Critical Hit. This indicates immediate disabling damage. It is not added into the current total of damage.

IMPALEMENT

All thrusts have a chance of Impalement. The percentage chance is equal to the Damage Potential. If Impalement occurs the Gamesmaster will treat it as if a Missile Special Effect had occurred. See below.

MISSILE SPECIAL EFFECTS

Whenever a character is struck by a missile weapon there is a chance of a Missile Special Effect occurring. The percent chance of an occurrence is equal to the adjusted bullet Damage Group if the weapon is a gun and it is equal to the Damage Potential if the weapon is a muscle powered missile weapon. If the number rolled on 1D100 is less than or equal to the required number, then a Missile Special Effect will occur and the table below should be consulted.

Modifications to the Adjusted BDG in order to determine whether Missile Special Effects occur may arise due to the ammunition in use. Similar modifications may apply to muscle powered missile weapons. Such modifications will be presented with the description of the ammunition or weapon.

MISSILE SPECIAL EFFECTS TABLE

| D100 | RESULT |
|-------|--|
| 1-20 | No special effect |
| 21-30 | Flesh wound: damage is adjusted to 1 point and this only if the Armor Value on the target location is exceeded. |
| 31-45 | Minor wound: 1 point of damage caused. This supercedes any normal results. This effect on a Critical Hit results in normal damage. |
| 46-65 | Normal damage and Stopping. |
| 66-75 | As 46-65 plus a Daze effect (see Critical Hit Effect Explanations). |
| 76-85 | As 66-75 plus a Stun effect (see Critical Hit Effect Explanations). |
| 86-95 | As 76-85 plus a roll on the Critical Effect Table. |
| 96-00 | As 86-95 but add 30 to the roll on the Critical Effects Table. |

STOPPING

The effect number for Stopping is equal to the Adjusted BDG (used to determine if a Special Effect would occur) or the Damage Potential for muscle powered missile weapons and Impalements divided by the Mass of the target.

- IF >1 Knock back for 2D3 meters. A Deftness Ability Saving Throw is required to prevent being knocked down. Each two meters of knock back will drop a target one category for purposes of stopping forward motion.

- IF > 5 As above but a Critical Saving Throw is required for the character to keep his feet.
- IF > 10 As above but knock down is automatic.
- IF < 1 The % chance of getting a result as if the effect number were equal to 1 is the Adjusted BDG (used to determine if Missile Special Effects would occur) divided by the Mass of the target multiplied by 100.

CRITICAL HITS

When a Critical Hit has occurred the Gamesmaster will roll on the appropriate Critical Hit Enhancement Table to determine the increase to the Damage Potential.

CRITICAL HIT ENHANCEMENT TABLES

HAND-TO-HAND AND MUSCLE POWERED MISSILE WEAPONS

| D20 | Enhancement |
|-------|-------------|
| 1-9 | +1 to WDM |
| 10-15 | +2 to WDM |
| 16-19 | +3 to WDM |
| 20 | +4 to WDM |

GUNS

| | |
|--------|--|
| Pistol | + 1D10 to BDG |
| Rifle | + 2D10 to BDG |
| Burst | all rounds hit plus the effect of 1D3 additional rounds. |

Once the Damage Done is calculated, the Gamesmaster will roll on the Critical Effect Table if the Damage Potential has exceeded the Armor Value of the hit location. The Gamesmaster should add the Damage Done to the D100 that is rolled to determine Critical Effect.

CRITICAL EFFECT TABLE

D100 EFFECT

- 1-30 No special effect.
- 31-55 Daze.
- 56-75 Stun.
- 76-87 Disable.
- 88-95 Trauma.
- 96-00 Lethal.

DAZE—The character's BCS and ODA are at 1/2 value until after the Action Phase on the next Combat Turn which has the same number as the phase on which the effect occurred.

STUN — As above but the character may not initiate any attacks or fire any weapons. Additionally the character's Deftness and Speed are reduced to 1/2 value for that time period and the character will be treated as Dazed for the following Combat Turn.

DISABLE — This is a numbing effect. If received in a limb, the character will lose the use of that limb for the rest of the combat. Health Ability Saving Throws may be made each hour of game time in order to regain use of the limb.

If received in the head, neck or body the character must make Health Saving Throw. Failure indicates a System Shock. A save in the Ability range means the character will be Stunned for the rest of the combat. A save in the Critical range means that the character will be Dazed for the rest of the combat. A Health Ability Saving Throw can be attempted each hour of game time in order to eliminate these effects.

TRAUMA — The Damage Done is Critical Damage. The also receives one half the Damage Done as regular Lethal damage. A Health Ability Saving Throw is required or the character also receives a Disable Effect.

The Critical Damage is also the percent chance of a Sever Effect. Severs to the head or neck are Death Blows. All other Severs will cause the character to bleed to death in a number of Combat Turns equal to the character's Health Group plus 1D6 unless cauterized or bandaged with a First Aid Skill BCS roll. Cauterization will

automatically put the character into System Shock. A Health Ability Saving Throw is required for the character to survive the cauterization.

Sever results due to things which do not cut are considered to have broken the bone. If the character fails a Health Ability Saving Throw, the result will be a compound fracture and he will be subject to bleeding to death, as if a normal Sever result had occurred.

LETHAL —To head, neck or torso: Death
To a limb: Automatic Sever

Player Characters and Personality Non-Player Characters are allowed a Health Ability Saving Throw to lower the Effect to the next less lethal category.

CRITICAL MISSES

When the die roll for any attack is 20, there is a chance of a Critical Miss. The Gamesmaster will request that the player make a Control Throw for the character to avoid a Critical Miss. If the Adjusted BCS of the attack exceeded 20, the number required for the Control Throw may be increased by the Adjusted BCS minus 20 at the discretion of the Gamesmaster. Such circumstances will, at least with Hand-to-hand and muscle powered missile weapons, allow a Control Throw for a character who would not normally have one. If the character fails the Control Throw, the appropriate Critical Effect Table should be consulted.

If a character is ignoring the distraction of friendly characters, in his Zone of Influence if using Hand-to-hand weapons or in the line of fire if using missile weapons, the result that normally indicates no Critical Effect means that he has automatically scored a successful hit on one of the friendly characters who qualified as a Distraction. The character to be struck should be determined at random.

CRITICAL MISS EFFECTS TABLES

ARMED COMBAT

D100 RESULT

- 1-10 No effect.
- 11-40 Character is Dazed.
- 41-70 Character is Stunned.
- 71-80 Character falls.
- 81-90 Weapon breaks.
- 91-00 Character drops weapon.

UNARMED COMBAT/NATURAL ATTACK

D100 RESULT

- 1-10 No effect.
- 11-40 Character is Dazed.
- 41-70 Character is Stunned.
- 71-80 Mode of attack (hand, foot, jaws, etc.) receives a Disable result with 1D6 of Critical Damage.
- 81-00 Character falls.

BOW AND CROSSBOW

D100 RESULT

- 1-10 No effect.
- 11-40 String breaks.
- 41-80 Arrow breaks.
- 81-00 Bow breaks.

FIREARMS, BLACK POWDER

D100 RESULT

- 1-10 No effect.
- 11-40 Primer flash. Primer is expended but the round is still good.
- 41-70 Main load is a dud. Primer and powder for round are expended. Gun must be reloaded.

- 71-85 Cook-off. Appears to be a dud round. It will go off on the bookkeeping phase. There is a 50% chance of it going off if there is an attempt to remove it before Action Phase 0. If it goes off, treat as if it were a chamber explosion as below.
- 86-95 Chamber explosion. Burst effect of BDG of the round/30, nearest. Burst effect minus the Durability of the weapon is the number of D10s of Lethal Damage done to the character's Location that is nearest to the breech of the gun. If the number of D10s is less than 1, reduce the Durability of the gun by 1 and treat as if the main load was a dud. If the number is greater than or equal to 1 (the chamber actually does explode), the gun is Disrepaired with a chance (equal to the number of D10s) in 6 of it being Junked.
- 96-00 Chamber explosion as above but burst effect is BDG of the round/20, nearest.

FIREARMS, MODERN

D100 RESULT

- 1-10 No effect.
- 11-40 Dud round. Autoloaders and autoweapons require 1 Action to manually clear the round. Other types clear with the next round, no special action is necessary.
- 41-70 Jammed round. Requires 2 Actions to clear manually. A weapon with an extractor will clear in 1 Action.
- 71-85 Cook-off. See Black Powder firearms.
- 86-95 Chamber explosion. Burst effect is BDG of the round/30, nearest.
- 96-00 Chamber explosion. Burst effect of the round is BDG/20, nearest.

GENERAL NOTES ON COMBAT PROCEDURE

The preceding provides a basic guide to the procedure for combat. Certain details involving particular weapon systems are presented in the section where the weapon is discussed. This has been done to maintain the flow of the explanation of combat in general and to keep pertinent information that is peculiar to a given weapon system in one easy-to-reference place. Players are strongly encouraged to be familiar with the mechanics covering the weapon systems that they choose for their characters as this will make the Gamesmaster's job easier. Fledgling Gamesmasters should also be advised not to have non-player characters using weapon systems that the Gamesmaster is not ready to handle. It will slow play tremendously.

Other details of certain forms of combat, as well as combat and movement in other environments, are also dealt with in separate sections for similar reasons. These include such things as horses and mounted combat, swimming and in or under water combat, and specific sections dealing with optional additions to Detailed Action Time combat.

OPTION

"THE CLASH OF WEAPONS"

This section deals with the circumstances arising when an attack fails to strike the opponent himself and is only stopped by his skill with the weapon system he is using to defend himself. The basic mechanic works as follows: the last thing to be subtracted from the attacker's Base BCS is the opponent's Weapon Defense Ability. If the player's die roll is such that, if the Weapon Defense Ability had not been subtracted from the Base BCS to give the Adjusted BCS, it would have indicated a hit, it means that the opponent used

his weapon system to stop the attack. The significance of this will vary due to the weapon system actually used for defense. A character using Weapon and Shield Skill will have the shield struck in these circumstances. A character using a Skill involving a weapon will have the weapon struck. A character with two weapons will have the secondary weapon struck. A character using a Skill without a weapon will take the blow on the forearm (usually of his offhand arm).

WEAPONS — The difference between the weapons Survival Values is the chance in twenty that the weaker weapon will break. A character may continue to defend with a broken weapon but his Weapon Defense Ability will be halved, rounded down. Attacks with a broken weapon are not allowed.

A weapon's Survival Value is the sum of two factors. One is based on the weapon's size and the other on its construction. The second is a number equal to the Armor Value of Plate in the corresponding material. Wood has a value of 3 and reinforcing it with metal will increase its value according to the normal reinforcing rules for armor. The factor based on size can be gotten from the accompanying table.

| Weapon Size | Factor |
|-------------|--------|
| Close | 0 |
| Average | 1 |
| Long | 2 |
| Extra Long | 3 |

SHIELDS — If a shield is struck by a missile weapon, the shield user must make a Dexterity Ability Saving Throw or the weapon will become lodged in the shield and add to the Encumbrance of the shield. Bullets will reduce a shield by one class if the Effective BDG exceeds the overall Barrier Effect of the shield by three times its value. Muscle powered missile weapons and Hand-to-hand weapons will reduce a shield by one class if the Damage Potential, when generated as if a hit had been scored, is greater than the overall Barrier Effect of the shield.

THE BODY — If the striking weapon's Survival Value exceeds the Armor Value on the Location of the block the target character will receive the difference in Lethal damage.

Missile weapons are only germane to shields as they cannot be defended against by Weapon Defense Ability. Some shields do have an add to the Overall Defensive Ability and this addition functions as Weapon Defense Ability under these circumstances.

BASHING

When a greater effective mass strikes a lesser, a Bash may occur. This can occur from a large animal striking a human, a human striking a smaller animal, a charging horseman striking or overrunning an opponent, etc. The chance in 20 of a Bash occurring is equal to the larger effective mass minus the smaller. If the Bash occurs, this same difference is used as an effect number and the Bashed character is treated as if he had received Stopping from a Missile Special Effect.

OPTION SPECIAL EFFECT

In human to human combat, the Gamesmaster may allow a Bash to occur if the character has successfully hit his opponent and the attacker's Mass plus his weapon's Size Factor (see above) exceeds his opponent's Mass. The difference would be the chance in twenty of a Bash occurring.

DELIBERATE KNOCKDOWN

A character may deliberately attempt to knockdown another character. This is accomplished by moving into the hex occupied by the second character and comparing the

Strength Group Effect Die rolls of both characters. The character with the greater effective Mass may add the difference in the masses to his die roll. The difference in the modified die roll results is treated as an Effect Number and the lower rolling character receives a Stopping Result. If the Effect Number is 0 then the characters are occupying the same hex. Each will be unable to perform an Action for a number of phases equal to his Phases Consumed in Action number or until the end of the Combat Turn whichever is shorter.

In any case, if the second character was in the process of performing an action, he will resolve that Action at the usual time with a negative BCS modification equal to the Effective Mass of the character attempting to knock him down.

GRAPPLING

Grappling is a form of rough and tumble, close-in fighting. A character does not need to exercise a Skill in order to Grapple. A Deftness Ability Saving Throw is required to perform a Grapple. If the player rolls a 1 when making the die roll, he may choose the general location of the Grapple. If the Grapple attempt fails, the player must make another Ability Saving Throw; this time using Speed; to avoid having the character fall down. If the player rolls a 20 on the Grapple attempt, the character automatically falls down.

When a Grapple attempt is successful, the Gamesmaster will roll for Hit Location as if a normal hit had been scored. The exact Location and the General Location are both of import. That is the head, neck, torso, right or left arm and the right or left leg is of significance, as well as the exact Location on the body map.

A Grapple to the arm will allow an attempt to disarm the target. The Grappler will roll the Effect Die for his effective Strength Group. The target's Armor Value on the exact Location is subtracted from the die roll. The result is the chance in 20 that the target must make a Strength Ability Saving Throw in order to retain his grip on whatever he is holding in his hand. If the target makes his Saving Throw, the grapple is not broken and the Grappler may roll his Effect Die again at the end of his next Action unless he initiates a new attempt to Grapple in the hope of getting a Grapple on a more useful Location or he initiates some other Action.

A Grapple to the leg indicates a takedown attempt. Each character will roll their Effect Die. If the Grappler rolls higher, the target will fall down. If the target rolls higher, there is no effect. If both roll the same number, each must roll a Speed Ability Saving Throw to avoid falling down. The Grappler is not considered to have maintained a hold on the target at the end of a takedown attempt regardless of its results. He must initiate a new attempt to Grapple on his next Action, if he wishes to continue in his efforts to subdue his opponent by Grappling with him.

A Grapple to the head, neck or torso indicates a hug or choke. A torso Location result will cover both of the Locations level of the body map. For example, a Location to point 4 will cover both 4 and 5. The attack will be against the less effective armor covering the Locations attacked. This kind of Grapple is a constriction attack and armor defends according to the rules on page 17. Any damage done is subdual. The Grappler is assumed to keep his hold on the target unless it is broken or he voluntarily relinquishes it in order to seek a new grip or perform some other Action. As long as the Grapple is maintained, the Grappler may roll his Effect Die at the end of each Action.

A character who has an arm Grappled may not use that arm to perform an Action. That is he may not strike the Grappler with it or use a Skill or weapon requiring two hands. A character whose head, neck or torso is subject to a Grapple may not move.

When a character is considered Grappled he has several options:

- He may execute an Action in an attempt to break the hold of the Grappler. On the last phase of the Action, the character must make a Strength Ability Saving Throw in order to break the Grappler's hold. When his is done the Grappler must make a Strength Ability Saving Throw himself to maintain the hold. If the Grappler fails the Strength Saving Throw, he must make a Speed Ability Saving Throw to avoid falling down. If the Grappler releases his hold before the victim's resolution phase arrives, the victim may abort the attempt to break the hold, as it is unnecessary, and he may initiate an Action on the phase that the Grappler releases the hold.
- He may make an attempt to break the hold using Brawling Combat Skill at full BCS. This will only break the hold. It will not cause damage.
- He may make an attack to cause normal damage using Brawling Combat Skill at -5 to the BCS.
- He may attack the Grappler using another Combat Skill. The BCS receives a penalty of 50% or -5, whichever is greater, plus any situational modifiers. A character attempting to use a Missile Combat Skill also receives this modification to the Deftness Ability Saving Throw required to fire while in Engaged status.

When one character has a hold on another, either may opt to fall down at the start of any Action. This will automatically bring the other character down as well. Each character must have 1D6 rolled for him. The higher roll indicates that the corresponding character has landed on top. In the case of a tie, the character who initiated the fall will be on top. The character on top adds the difference in the Mass of the two characters to the number needed for his Saving Throw (See Falls in Detailed Action Time, below) while the character on the bottom will subtract the difference from the number needed.

FALLS IN DETAILED ACTION TIME

Whenever a character alters position from more or less vertical to horizontal without taking an Action to do so, a Health Saving Throw must be made. If the die result falls in the character's Critical Saving Throw range there will be no effect. If it falls in the character's Ability Saving Throw range, the character will be Dazed for one Combat Turn. A Critical failure, a die roll of 20, indicates that the character has lost consciousness. He will remain unconscious until the controlling player rolls a successful Health Ability Saving Throw for the character. This may be attempted on the bookkeeping phase of each Combat Turn, beginning on the turn after the one on which the character lost consciousness. Upon waking up, the character will be Dazed for one Combat Turn.

Whenever a character falls more than 2 meters, he will be subject to potentially more serious effects. For each 2 meters of fall the character will receive 1D10 of subdual damage. The number of meters fallen is chance in 20 of a Critical Effect occurring. When rolling on the Critical Hit Effects Table, one half of the distance fallen in meters, rounded down, is added to the 1D100. If the Critical Effect is Location dependant 1D100 should be rolled and the Hit Location Table consulted. At his discretion, the Gamesmaster may add to or subtract from the die roll depending on whether the character is falling head or feet first.

EFFECTS OF WATER ON MOVEMENT AND COMBAT

There are three general situations where water will have effects on movement and combat. These occur when the character is ON the water in some form of boat, when the

character is actually IN the water, and when the character is UNDER the water.

ON THE WATER

A character on the water will be on some form of "platform" which can range from a raft to a large ocean going ship. Whether the roll of the waves has any effect will depend on the roughness of the water and the size of the "platform." As this is highly variable, it is left to the Gamesmaster to decide if the situation will call for the following rules to be applied.

When the "platform" is affected by the water on which it rides, characters must make a Seamanship Skill roll on each Combat Turn if the effect on the "platform" is significant. With less significant effects, a longer time period may be allowed between rolls. A character may substitute a Natural Talent roll if he has no score in Seamanship Skill or his Talent score exceeds his Seamanship BCS. Once the roll is successfully made, the character will suffer no ill effects for that time period.

Failure to make the roll will cause the character's effective Deftness and Speed scores to be dropped by 25%. Critical failure will drop them by 50%. In both cases, all footing will be considered Treacherous Ground.

Any character without Seamanship Skill will be subject to seasickness when the "platform" is affected by water. A Health Saving Throw must be made. If the die roll is in the Critical Saving Throw range, the character will feel no effects. If it is in the Ability Saving Throw range, he will have his effective Wit, Will, Deftness and Speed Attributes reduced by 25%. All of his Basic Chances of Success will be reduced by 2. If the die roll indicates failure, those Attributes listed above will be reduced by 50% and all BCSs will receive a -4 modification. A critical failure will indicate that the character is overcome by sickness for the duration of the period in which the "platform" is affected.

Whenever the "platform" is affected and the character wishes to exercise any Skill requiring physical exertion, the character's Basic Chance of Success in that Skill should be averaged with his BCS in Seamanship Skill to get a base BCS. The averaged BCS is not allowed to exceed the character's base BCS in the Skill he is attempting to utilize. If the character's Natural Talent score exceeds his Seamanship BCS he may use the Talent score to average with the Skill BCS to give the base BCS.

IN THE WATER

Movement in water will be affected by the relative depth of the water. A check of the table below will give the depth groupings for water and the effect on the Base Movement Allowance.

| Depth | BMA | notes |
|-----------|---------------------|-----------------------|
| to ankles | 1 | Treacherous Ground |
| to knees | 0.5 | Treacherous Ground |
| to waist | 0.25 | Treacherous Ground |
| to chest | 0.1 | Treacherous Ground |
| over head | character must swim | or character may swim |

Swimming must be performed for an Action. A character may make one 60 degree change of facing during each Action. A character without Swimming Skill will have a Base Movement Allowance of 0.1 but must still roll 1D20 for each Action spent swimming. A result of 20 indicates that the character has "gone under." A character with Swimming Skill will have a Base Movement Allowance of 0.25. If, when he rolls 1D20 during the Action spent swimming, the result is within his Basic Chance of Success, his Base Movement Allowance will be 0.5. A die roll of 20 will call for the character to roll 1D20 again. If the roll exceeds the character's Basic Chance of Success in Swimming Skill or is 20 again, the character has "gone under."

Any attacks made using a weapon in a strike attack form will reduce the character's effective Strength by 25% for purposes of determining the Effect Die.

GOING UNDER

Whenever a character has "gone under," he must make a Health Ability Saving Throw or take 2D6 points of subdual damage from swallowing water. A character who exceeds his Damage Resistance Total in this fashion will become unconscious. If a character's die result is 20, he will immediately become unconscious. Once unconscious, the character will receive 2D6 additional points of damage each Combat Turn. When this additional damage exceeds the value of the character's Damage Resistance Total, the character has drowned.

FLOATING

The time period for checks to see if a character has remained afloat will vary due to water conditions. This is left for the Gamesmaster to adjudicate. To prevent "going under," the character must make a Swimming Skill BCS or a Critical Saving Throw based on the average of the character's effective Strength and effective Health. The character may use whichever value will give him the best chance. A full life jacket will add 12 to the score needed, a life vest or ring will add 10 and other objects such as inflated bladders, drums or wreckage will add 5.

UNDER THE WATER

Movement under the water is the same as for movement in the water. Naturally, if the character has some sort of air supply, it will not matter if he "goes under." This does not refer to holding one's breath. A character may hold his breath for a number of Combat Turns equal to:

$$6 \times \text{Health Group} + \text{Effect Die for Will Group}$$

The die roll for the Will Group should be made by the Gamesmaster and not revealed to the player. A character who is active while holding his breath will use up his stored oxygen at the rate of 2 Combat Turns for each Combat turn that he is active.

Jan is moving through a submerged tunnel system. She has a Health Group of 3 and a Will Group of 2. This means she can hold her breath for a minimum of 19 Combat Turns while inactive and a minimum of 9 while active. Secretly the Gamesmaster rolls 1D3 for her when she submerges. The result is 2. He now knows her maximum time is 20 Combat Turns.

Jan swims through a tunnel for 8 Combat Turns. This puts her at the end of the tunnel. A check for discovery of Hidden Things expends 1 Turn at inactive rate. The roll is successful and reveals a guard pacing the shore. Jan has now been holding her breath for an effective time of 17 Combat Turns. The player decides that Jan will stay under hoping that the guard will leave before she runs out of breath. By doing this she risks unconsciousness and possible drowning. Two more Combat Turns pass before the guard leaves. On the next Turn Jan surfaces, lungs aching and panting for breath.

Under water a character's effective Strength when using a thrusting weapon will be reduced 25%. If he is using a weapon with a strike attack form his effective Strength will be reduced 50%. Hand held weapons will have modifications to the Basic Chance of Success dependent on the attack form and the size of the weapon. These are listed in the table below. The modifications for thrust attacks replace the normal thrust BCS modifications.

| Weapon Length | Strike BCS mod. | Thrust BCS mod. |
|---------------|-----------------|-----------------|
| short | -1 | +2 |
| average | -2 | +1 |
| long | -4 | +0 |
| extra long | -8 | -1 |

OTHER NOTES ON WATER

Visibility in the water varies tremendous according to the clarity of the water, motion conditions and the amount of light available. The Gamesmaster should decide on what the visibility will be when the characters enter the water. It will rarely be above thirty meters and will frequently be less than 4. A character without a face mask or goggles would have about one half the vision range of a character who is equipped with such devices.

Sound travels extremely well in water at a speed of 1.5 kilometers per second. Gamesmaster should take this into account when handling adventures under water.

For game purposes, objects with a negative bouyancy will sink at a rate of 3 meters per Combat Turn. A character with neutral bouyancy (properly weighted for under water work) can move freely in either the vertical or horizontal plane. A character with positive bouyancy (unencumbered) moves horizontally at normal rates and will rise 2 meters per Combat Turn.

Against missile weapons, water will act as a barrier. Each meter of water will add one range step to a muscle powered missile weapon. The air-water interface and the first meter of water will reduce a bullet's BDG by 10. Each successive meter of water will reduce the BDG further by 5.

COMBAT ON A MOVING VEHICLE

The effect on attempts to use a Combat Skill while on board a moving vehicle is straight forward. The character receives a negative modifier to his Basic Chance of Success equal to the number of meters, round up, that the vehicle moves in the phase of resolution.

THE CHARACTER AND HIS MOUNT

Being mounted will alter some of the ways a character may act and interact during Detailed Action Time. As long as a character is in control of his mount, his Base Action Phase will determine when the mount will move unless the mount's Base Action Phase is lower. In that case, movement will begin on the mount's Base Action Phase although the character on the animal may initiate an Action on his own Base Action Phase.

If the mount is out of control it will act as if it had no rider except for the effects of the rider's weight. The mount is then in the control of the Gamesmaster and he will move it on the DAT Display.

A rider is assumed to be in control until a situation arises to test his control. This may arise from such things as gunfire, the sudden appearance of something, injury to the mount or anything else the Gamesmaster decrees. If the rider makes his Beast Riding BCS roll he will retain control for that Combat Turn. If he fails the roll, the mount will be treated as uncontrolled beginning on the next Action Phase. The rider must spend an Action to regain control. A successful Beast Riding BCS roll at the end of any Action in which the character is attempting to regain control will return the mount to a controlled state beginning on the next Action Phase. The rider must now deal with the animal at its current speed and direction. The Gamesmaster may apply modifiers to the Basic Chances of Success based on his evaluation of the situation and the reaction of the mount.

A rider initiating an Attack Action while moving will resolve the attack when he passes his Target. He is still constrained to wait the requisite number of Action Phases before

initiating another Action. Whenever a character attempts to use a Combat Skill while mounted, he must average his score in the Combat Skill with his score in Beast Riding Skill. This will allow him to determine his modified BCS for the Attack according to the rules presented on page 11. This modified BCS is still subject to Restriction, Distraction, Situational Modifiers and the opponent's defense.

While mounted a rider's Combat Dodge Ability is altered. He will have the Combat Dodge Ability value of the mount plus one-half of his own normal value rounded down. His Weapon Defense Ability will be based on his averaged score.

A rider/mount combination moving at a Base Movement Allowance greater than 1 will not be halted by an enemy's Active Zone. Only 1 free attack per opponent is allowed in 1 Action Phase even if the path taken by the mount goes through more than one of the hexes in the opponent's Zone of Influence.

THE HORSE

The most common mount for a man is the horse. The statistics for an average horse are given here:

| STR | DFT | SPD | HLH | BAP | MNA | PCA | CDA | DRT |
|---------------|-----|------|--------|-----|----------------------|-----|-----|-----|
| 30 | 14 | 24 | 24 | 12 | 2 | 6 | 2 | 60 |
| | | SF | ENC | CAP | MASS | | AV | |
| | | 12 | | 12 | 32 | | 3 | |
| Attack modes: | | WDM | Length | BCS | Notes | | | |
| Teeth | | 1.5L | S | 7 | minus 1 STR Group | | | |
| Hoof, unshod | | 1.5C | A | 10 | 2 attacks when used | | | |
| Hoof, shod | | 1.7C | A | | and a WDA equal to 3 | | | |

A horse has four gaits and each gait has its own Base Movement Allowance. The horse may change a gait to the next slower or faster one at the start of any Action. It must proceed at that speed until the next Action. At any gait with a Base Movement Allowance of greater than 1 only one facing change of 60 degrees per Action is allowed. At these gaits, the horse must move its Base Movement Allowance on each Action Phase. A Speed Ability Saving Throw by an uncontrolled horse will allow it to change to 2 gait classes slower if necessary. A Critical failure will result in the horse falling. When the horse is controlled, the rider's Beast Riding Skill BCS must first be made. A die roll of 1 for the Horse's Saving Throw or the rider's BCS will allow the gait to be reduced a step further.

| Gaits | Eff. Mass | | Notes |
|--------|-----------|-------|---|
| | BMA | Mod. | |
| Walk | 1 | x .25 | May start and stop on any phase |
| Trot | 2 | x .5 | 2 in 10 chance of slipping per Action on Treacherous ground |
| Canter | 4 | x 1 | 4 in 10 chance as above |
| Gallop | 6 | x 1.5 | 6 in 10 chance as above |

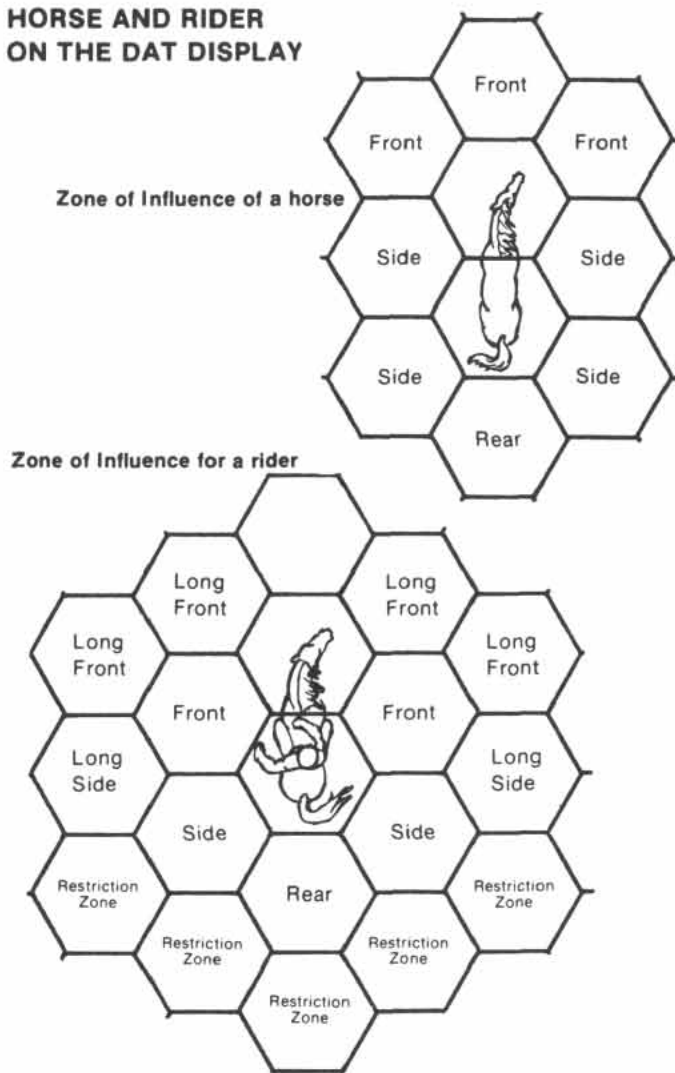
A horse's effective Combat Dodge Ability for purposes of incoming missile fire is his BMA times his normal CDA. A horse must be moving at a Walk gait before initiating an Attack Action. Fire directed at the rider suffers the same penalty.

HORSE AND RIDER IN DAT DISPLAY

A horse (for that matter, any animal with a body length between 1 and 2 meters) will occupy two hexes on the DAT Display. When moving forward the front half of the horse will occupy the new hex and the back half will occupy the hex vacated by the front half. The Zone of Influence for a horse is shown in the accompanying illustration.

For purposes of portrayal on the DAT Display, a rider is considered to be in the back hex of his mount. The modifications to his Zone of Influence are shown in the accompanying illustration.

HORSE AND RIDER ON THE DAT DISPLAY



MOUNTED MOVEMENT THROUGH AN OCCUPIED HEX

A rider/mount combination moving through an occupied hex requires a check for Bash to be made. The mount will be reduced to the next lower gait for the rest of its Action. If the Bash goes against it, it will be reduced 1 gait category per 2 meters of Stopping effect. It need not worry about being knocked over until its gait has been reduced to a Walk.

A footman receiving a Bash from a rider/mount combination may be trampled. The Effect Number of the Bash is the chance in 20 that the footman will receive damage as if he had received attacks from two hooves. For this type of attack use the mount's effective Mass as if it were the Strength used to determine the Effect Die.

JUMPING ON HORSEBACK

If the rider makes his Beast Riding BCS, he can cause his mount to jump over an obstacle. The horse must be moving at a gait faster than a Walk. The total distance of the jump (vertical, both up and down, and horizontal) is the Effect Die roll in meters for an effective Strength equal to the horse's Strength minus the Encumbrance Total it is carrying.

For each meter of height that an obstacle has, the horizontal distance required to make the jump is two meters greater than the width of the obstacle. The total additional length is split evenly on either side of the obstacle. Thus an obstacle that is two meters high and two long will require a horizontal jump of six meters and a vertical jump of two

meters for a total jump of eight meters. Thus the horse will leave the group two meters in front of the obstacle and land two meters beyond it.

The failed BCS to get the horse to jump will result in the horse independently attempting to decelerate as much as possible to avoid hitting the obstacle. If the horse can slow to a Walk, it will stop on the next Action Phase and the rider must make a Beast Riding BCS to retain his seat. A Critical Miss on the rider's attempt to get the horse to jump will result in the horse crashing into the obstacle. Solid obstacles will cause a number of D10s of B type damage to the horse equal to its BMA when the jump was attempted. The rider will be thrown from the horse and is subject to damage as indicated below.

UNSEATING A RIDER

A rider may be unseated in a number of ways. Once unseated he is subject to damage due to falling. See page 32. The BMA of the horse at the time the rider is unseated is considered as the distance of the fall.

Any Critical Miss on an attempt to control a horse will result in the rider being unseated.

A successful Bash against the rider himself will require a Beast Riding BCS roll where failure will indicate that he has been unhorsed.

A successful Grapple to the legs of a rider will require a check as if the rider had been Bashed. Such Grappling attempts against mounted men are Critical Saving Throws instead of Ability Saving Throws and receive a negative modification equal to the mount's BMA at the time.

"Anchoring" a rider in any way will result in a check for unhorsing as explained below. A rider can be "anchored" by roping him, catching a part of his body, "clotheslining" him or any other method the Gamesmaster declares will have an equivalent effect. Once a rider has been "anchored," the effect will not be checked until the "anchoring" method has been made taut, for example, a rope stretched to its limit. If the rider has time he may attempt to remove the "anchor" sever it or direct his horse in such a way that the "anchor" will not become taut.

In order to see if the unhorsing occurs, each of the contestants will roll the Effect Die for its effective Strength Group. If the rider's roll is higher he will keep his seat. This means that the "anchor" has given way (a Grappling hold or tree limb) or broken (a rope). If the opponent's roll is higher, the rider is unhorsed and subject to the rules for being unseated. If a rider is "anchored" to a solid object (rather than having another character providing the base for the "anchor"), the Gamesmaster must assign a Strength Group for the object. This Strength Group will be the base from which the Effect Die will be determined rather than that of the character who attached the rider to the "anchor." Modifications to the basic strength Groups are given below.

When a rider has been attached to an object, the die rolls will not be made until the mount has travelled sufficient distance to stretch the attaching method taut. If the rider has time he may attempt to remove the attaching method, sever it or direct his horse in such a way that the distance will not become sufficient for the attaching method to become taut.

| Situation | Modification |
|--------------------------------|---------------------------|
| character braced and ready | +1 Group to the character |
| rider without saddle at Walk | -1 Group to rider |
| rider without saddle at Trot | -2 Groups to rider |
| rider without saddle at Canter | -3 Groups to rider |
| rider without saddle at Gallop | -4 Groups to rider |
| horse at Canter, rider saddled | +1 Group to rider |
| horse at Gallop, rider saddled | +2 Groups to rider |
| rider in high cantled saddle | +1 Group to rider |

DAMAGE, HEALTH AND HEALING

As noted in the section on Detailed Action Time, a character can be dealt damage points of lethal, subdual or critical nature. The number of points taken of the first two kinds is compared to the character's Damage Resistance Total to gauge how injured the character is in relation to his normal healthy state. When the total of this representation of injury exceed certain levels the character will register this by a decrease in efficiency.

Lethal damage represents serious injuries which take time for the body to heal. Subdual damage represents less serious injuries that have immediate effects but are compensated for by the body in relatively short order. Critical damage represents very serious damage that prevents the character from utilizing the part of the body that receives such damage. Each type of damage heals differently in the game.

When a character takes damage in the game, the Gamesmaster will specify how much damage is taken and what type of damage it is. The player should enter the amount in the corresponding section of the Character Record Sheet. If the character has already taken some damage, the new damage should be added to the amount already taken.

When the total amount of lethal and subdual damage taken by a character exceeds one half of his Damage Resistance Total, he is considered Wounded. His effective Dexterity and Speed will be reduced by 25% and all applications of Skills will have a modification of -2 to the Basic Chance of Success. When the total of lethal and subdual damage exceeds three quarters of his Damage Resistance Total, the character will be considered Seriously Wounded. His Dexterity and Speed will be reduced by 50% and all BCS will have a modification of -4. It should be remembered that the effects of being Seriously Wounded are not cumulative with the effects of being Wounded. They replace those effects. When the total of damage taken exceeds the character's Damage Resistance Total, he is out of the fight.

If the attack which raised the character's current damage total above the Damage Resistance Total was subdual damage, the character is unconscious. If the attack continues to do subdual damage to the character, he will die when the additional damage exceeds twice his Damage Resistance Total. Such damage can come from continual beating by an attacker or prolonged exposure to electrical current or other sources as decided by the Gamesmaster. If it was lethal damage and the Damage Resistance Total was exceeded by greater than the character's Healing Rate, the character is dead. If the difference between the character's current damage total and his Damage Resistance Total is less than or equal to his Healing Rate, the character is unconscious and comatose.

Critical damage to a location will prevent a character from using that part of his body. Critical damage to the head, neck or body will render the character comatose. When the critical damage is healed the character will regain the use of that body part, or become conscious as appropriate.

HEALING DAMAGE

Subdual damage heals fairly quickly. A character may subtract a number of points equal to his Healing Rate from the total of subdual damage points taken for each ten minutes of game time spent in complete rest. If the character is active the recovery period will be 1 hour instead of 10

minutes. If the character was beyond his Damage Resistance Total when he started healing, he will become conscious when the current damage total is less than his Damage Resistance Total.

The period of healing for lethal damage is one day. For convenience in playing the game, all healing of lethal and critical damage is done at dawn. A character will subtract the points healed from the total of lethal or critical damage taken. The base number of points that a character will heal in a day is equal to his Healing Rate. This number may be increased or decreased according to the character's activities, the care the character receives and the surroundings in which the character finds himself.

The period and modifications for healing critical damage are the same as for lethal damage. However, if a character is suffering from critical and lethal damage, his healing rate will be adjusted by all the appropriate factors. The adjusted Healing Rate will be split in half. One half will be subtracted from the total of lethal damage and one half will be subtracted from the total of critical damage. Odd points are lost.

Broken bones and severed stumps will take time to heal. This time is independent of any other healing that takes place. A character trying to be active during this healing time will be greatly hampered. The exact problems he will suffer is left to the Gamesmaster. The time required to heal such an injury is 100 days minus 1 day for each point of Health score the character has at the start of the healing process. An Advanced Medical Skill BCS roll is required to set broken bones correctly. Healing time will be dated from the day the bones are set. If they must be reset the healing time will start all over from the beginning. Stumps resulting from a Sever result must have an Advanced Medical Skill BCS roll applied to them if they are to later accept prosthetic devices.

MODIFICATIONS TO HEALING RATE:

| | |
|---|----|
| Patient is in the field, complete rest | 0 |
| Patient is in the field, active up to one half day | -1 |
| Patient is in the field, active for full day | -2 |
| Patient engages in active combat that day | -1 |
| Patient is in restful surroundings | +1 |
| Patient receives good physical care (food, rest, etc.) | +1 |
| Patient receives medical care (character attending makes BCS roll) | +1 |
| Patient receives good medical care (hospital) | +1 |

Martin the Traveller has a DRT of 24 and a Healing Rate of 3. He has been injured in a fight. He has taken 12 points of lethal damage, 4 points of subdual damage and 4 points of critical damage to his left arm. He decides to rest after the fight. After 20 minutes the subdual damage will be "healed." Looking around he decides that the climate would be healthier elsewhere. He heads for the nearest town. He travels for a full day and is jumped by a brigand at sunset. He kills the felon and miraculously escapes further injury. Having traveled at full movement he gets -2 to his Healing Rate. The -1 for having engaged in combat reduces his Rate to 0. He will not heal that day.

The Traveller decides to spend a day resting to get some strength back. He avoids all encounters that day. He therefore gets his full healing rate. He

divides this between the lethal and critical damage with the extra point being lost. He now has 11 points of lethal and 3 points of critical damage.

After a half days travel, Martin finds himself at a small farmhouse. He persuades the family to let him stay the night. Later that afternoon, a wandering physician arrives. The doctor makes his First Aid Skill BCS roll so Martin adds +1 to his Healing Rate. The half day's travel costs him 1 but the restful surroundings of the cottage cancel that with +1. The net gain of 1 allows him to reduce the total of lethal damage to 9 and the critical damage to 1.

IMMEDIATE FIRST AID

Immediately after a combat, characters may receive first aid. Each of the measures listed below will allow a character to immediately subtract one point of lethal damage from the current total. If not applied in the space of time immediately after the combat, no effect will be gained. These measures include:

- Character makes BCS roll with First Aid Skill (die roll equals 1: 2 points)
- Patient is bandaged (requires bandage materials)
- Patient is given 1 unit of medical supplies (non-cumulative)

RESTORATION OF LOST ATTRIBUTE POINTS

If the character has lost Attribute points due to some form of attack, he may regain them at a rate equal to one half his Healing Rate, rounded down, per week. His Healing Rate for this purpose is subject to similar modifications to those received when healing lethal or critical damage. In this case, though, the period is a week instead of a day for each modification and the appropriate medical care is Therapy Skill, not First Aid Skill. All modifications are made to the character's Healing Rate before it is halved. By this method a character may not regain Attribute points lost due to aging.

RESTORING A CHARACTER TO CONSCIOUSNESS

If a character is unconscious due to System Shock, a Critical Effect result of having his Damage Resistance Total exceeded by a subdual attack, he may be restored to consciousness by another character who makes his BCS roll for Advanced Medical Skill. If the character is unconscious due to being in a comatose state, the reason for the coma must be eliminated first. If coma was caused by critical damage to the head, neck or body, the critical damage must first be healed. If it is due to the character's Damage Resistance Total being exceeded by lethal damage, the character's current damage total must be lowered to within his Damage Resistance Total.

INFECTION

A character may be subject to infection if Lethal or Critical damage has been caused to him by the bite of a predator or scavenger, an attack with a dirty or rusty weapon or, if the character does not keep himself decently clean (for example, sleeps in his armor for days on end), any weapon that breaks the skin.

Once the character is exposed to an opportunity for infection to set in, the Gamesmaster will make a secret Health Ability Saving Throw for the character. This throw should be made at the next time that healing would be calculated. If the throw is failed, the wound has become infected. The character may not heal as long as he is subject to the infection.

Infection may be avoided by the application of a unit of medical supplies when first aid is supplied. This unit is over and above any applied for first aid healing. Also, any character applying a BCS roll to the infected character while utilizing Pathology Skill will eliminate the infection. The attempt to apply Pathology Skill may only be made once per patient for each infection possibility.

Once the character is infected, recognizable symptoms will appear at the next time healing would be calculated. On each successive day, the character may attempt Health Ability Saving Throws to throw off the infection. The character will heal normally on the day after the infection is thrown off.

OPTION

If, in a character's Health Ability Saving Throws to eliminate an infection, a 20 should be thrown, gangrene will set in. Gangrene negates the character's ability to make Health Saving Throws. Gangrene has an initial Virulence Group of 1 which will increase by 1 Group each day. Each day the Gamesmaster will roll the Effect Die for the current Virulence Group of the Gangrene. When the total of the Effect Die rolls exceeds the character's Damage Resistance Total, the character is dead.

Each day a character with Pathology Skill may attempt to halt the progress of the disease. His Basic Chance of Success will be halved if he does not expend a number of units of medical supplies equal to the current Virulence Group of the Gangrene. In addition the base BCS will receive a negative modification equal to the current Virulence Group of the Gangrene.

Treat the accumulated results of the Effect die rolls of the Gangrene as critical damage for purposes of healing if the disease is thrown off.

DISEASES

Diseases can be broken down into three basic formats: acute, episodic and chronic. In game formula they will be coded (-), (+) and (0) respectively.

Each time an acute disease has an effect, whether its first effect of at the end of a Cycle, it will subtract the result of its Effect Die from its target Attribute. The character must then function at the reduced value of the Attribute. When the disease reduces the target Attribute to zero or below, the Crisis stage is reached.

When dealing with an episodic disease, a count of the cumulative result of the Effect Die rolls is kept. When the total exceeds the Critical Saving Throw range in the target Attribute, the Attribute will be reduced by 25% till the disease achieves its next stage. When the total exceeds the Ability Saving Throw range, the target Attribute will be reduced to 50% for the duration of the disease. At the end of each Cycle of the disease, the character is allowed to make an Ability Saving Throw with the target Attribute to avoid specific episode effects. A specific episode automatically occurs when the disease first takes effect. When the total of the Effect Die rolls exceeds the score in the target Attribute, the Crisis state occurs.

A chronic disease will have its effect at the end of the Incubation Period. This effect will remain until the character throws off the disease or the time limit on the duration of the disease runs out. If a target Attribute is specified, it will be decreased by the Effect Die roll for the duration of the disease. The Attribute will return to normal at the end of the disease.

If a disease has more than one main target, each will be treated independently. The Crisis stage will occur when the first Attribute satisfies the conditions for its occurrence.

Diseases may also have specific symptoms which will have an effect on the character. If a disease has such symptoms they will be listed after the formulaic expression of the

disease. Such symptoms last for the duration of the disease but may be temporarily alleviated by the application of symptomatic drugs.

Each strain of a disease will be rated for its Virulence Group. This is a measure of how strong the disease is as well as how dangerous it is. At the end of each Cycle of an acute or episodic disease, the Gamesmaster will roll the Effect Die for the Virulence Group of the disease. This will be the progress made by the disease for that cycle.

A disease has an Incubation Period. This is the time between exposure to the source of the disease and the first appearance of symptoms. This will vary by strain. The time period of the Incubation Period will be reduced by the Virulence Group. This reduction will be in whatever units of time in which the Incubation Period is expressed. At the end of the Incubation Period the disease will make its first attack.

The Vector of a disease is a description of the method by which the character can catch the disease. If the character has protection from the Vector, he can not contract the disease. The Vectors and their descriptions follow:

Aerosol — The infection is airborne. Any character within a number of meters equal to the Virulence Group who breathes the air is subject to Infection.

Subcutaneous — The infection must be gotten under the character's skin by such means as an animal bite, wound, injection, etc.

Gastric — The source of infection must be taken internally through such things as contaminated food or drink.

Dermal — Simple skin contact is required. A garment that protects a character from the initial source of infection may later cause the character to be subject to infection if it carries contamination from the original contact.

Within these rules a disease will be described in the following method:

Vector - Format - Target - Incubation Period -
Virulence Group - Cycle time

This will be followed by any special notes including any symptoms or specifics regarding the "episode" of an episodic disease.

Abbreviations in use will include the standard abbreviations for Attributes and time. Vector will be abbreviated as the first letter of its name. Thus, an acute disease with an Aerosol Vector that attacks the Wit of a character and has an Incubation Period of 12 hours, a Cycle of 3 hours and a Virulence Group of 4 would be abbreviated as:

A - (-) - WT - 12 hr. - 4 - 3 hr.

If the disease were episodic and the episode was a fit of paranoid delusion it would be:

A - (+) - WT - 12 hr. - 4 - 3 hr. - paranoid delusion episode

If the disease were chronic it would be:

A - (0) - WT - 12 hr. - 4 - 0

Since more than one disease may have the same game formula, each disease should be specified by name. This allows one to distinguish between an antibiotic tailored for a specific disease and an antibiotic that only corresponds on all principal factors. Specific diseases will be presented in Book 3.

DISEASE SYMPTOMS

This section presents typical disease symptoms and the effects on the character with the disease. Not all diseases will have symptoms as severe as these. Many diseases will have these type of symptoms but their effects will not be great enough to warrant an effect on the character.

Attribute Disfunction — The specified Attribute has its effective Group lowered by the total advance divided by 10, rounded down.

Dizziness — When the disease's advance is greater than the character's Health CST, treat all of the character's

movement as if he were on Treacherous Ground. If the terrain is truly Treacherous Ground, double his chances of slipping. When the advance exceeds his Health AST, subtract the Virulence Group of the disease from the number needed to make any Saving Throws involving the character's sense of balance such as those required for keeping one's feet, catching things, dodging, etc.

Dystopia — When the advance is greater than the character's Health CST, the effective Light level for that character is reduced by one step. That is Good light becomes Dim, Dim becomes Poor, etc. When the advance exceeds his Health AST, the reduction is two steps.

Fainting — Faints are treated as System Shock. A character who fails a Physical Attribute Saving Throw is subject to a check for Fainting. He must make a Health Ability Saving Throw to avoid Fainting. The number needed for the Saving Throw is reduced by the Virulence Group of the disease. Continued exertion may also cause the character to check for Fainting. The character's Health Group is the number of Combat Turns he may engage in strenuous activities such as combat, running, climbing, etc., before he must make a Health AST as above. If he does not Faint when he checks for it he may continue to exert himself for the same time period before he must check again.

Lesions — The day's advance of the disease is the chance in 10 of lesions developing on a random Location. Any damage taken on that Location will expose the character to Infection.

Nausea — Exertion as described in fainting or a successful attack on Locations 6 through 12 will require a Health AST to avoid a fit. The character experiencing a fit of vomiting will be unable to perform any Action for a full Combat Turn. He will remain incapacitated until he makes a Health AST. Attempts to throw off the fit may be made on the bookkeeping phase of the Combat Turn.

Pain — The disease's advance for that day acts as a negative modifier to all BCS rolls attempted by the character. One half the value of the advance is subtracted from the number needed for any Saving Throws.

Paralysis — The specified extremity will take critical damage equal to the day's advance of the disease.

Puerpera — The character's blood is slow to clot, though not so bad as a case of haemophilia would make it. But he will tend to bleed from open wounds and to suffer severe bruising from non-cutting blows. When Lethal damage is taken, after the combat in which it was taken is over, and any medical attention is given to the character that falls in the classification of immediate first aid, total up the character's current Lethal Damage total and calculate a Group from the total. Roll the effect die for this Group and add that to the character's total damage tally as Lethal damage. In the event that this drives him below 0, he will become comatose. Under no circumstances will the additional damage kill him. If it reduces his DRT to the death point, it stops there, and no extra damage for puerpera is assessed. The character is comatose from blood loss.

When Subdual Damage from any blow is taken to the limbs, the total Subdual Damage done is the percent chance that the limb will suffer a Disable result, as described in Critical Effects. The character will lose the use of the limb until a Health AST is made, rolling hourly. Blows to the body or head will not have any appreciable effect on the puerpera symptom, in terms of Subdual damage's effects.

Rheumatoid Condition — The effects of this symptom vary by the location affected. If it affects the legs, the character's Base Movement Allowance will be halved when the disease's advance is greater than his Health CST. It will be reduced to one quarter of its normal value when advance exceeds Health AST. If it affects arms, torso or head, when the advance exceeds the Health CST all attacks that the character makes out of his Side hexes are treated as attacks out Rear hexes and the Front hexes are treated as Side hexes. When the advance passes his Health AST, attacks out any of his hexes are treated as Rear hexes. If it affects the hands, the character's Deftness Group will be reduced by the total advance divided by 10, round down, for determining the effects of all operations requiring manual dexterity such as lockpicking, crafts, etc.

Tinnitus — The day's advance of the disease is the number of distractions the character receives due to ringing in his ears. Any Saving Throws utilizing his sense of hearing will also receive this negative modification.

Ulceration — The day's advance of the disease is the chance in 10 that the character will develop ulcers on a Location. This should be determined by making a Hit Location roll. If the character receives any damage to an ulcerated Location he must check for System Shock. The character is also exposed to Infection, see page 37.

Weakness — When the disease's advance is greater than the character's Health CST his effective Strength, Deftness and Speed are reduced 25% and he receives -1 to all physical BCS rolls. When the advance is greater than his Health AST, the penalty to those Attributes is 50% and -2 on physical BCS rolls.

DEALING WITH DISEASE

When a character is first exposed to a disease, a Health Ability Saving Throw must be made. The number required for success will be modified downwards by the Virulence Group of the disease. If the throw is successful, the character has avoided contracting the disease. No further checks are necessary while he is in the vicinity of the source of infection. If the character should leave the area and return on another day he would be subject to possible infection again.

Once the disease has been contracted, the victim has an opportunity during the incubation period to throw off the disease before any ill effects occur. This attempt requires that a character make a successful Basic Chance of Success roll using Pathology Skill. This Basic Chance of Success receives a negative modification, to the number needed, equal to the Virulence Group of the disease. Once the Pathology Skill BCS is successful the victim is allowed to make a Health Ability Saving Throw to rid himself of the disease.

Alternatively, application of a broad-band antibiotic or a specific antibiotic for the disease will allow the victim to make the second Health Ability Saving Throw. The exact drug used will add its efficiency against the disease to the number required for a successful Saving Throw. If a drug is applied by a character who makes a successful BCS roll using Pathology Skill, the strength of the drug will be added to the number required for the patient's Saving Throw.

Only one attempt to throw off the disease may be made during the Incubation Period.

At the end of the Incubation Period the first effects of the disease will appear. If the disease has no Cycle, these effects will remain in force until the character makes a Health Saving Throw against the disease or the disease runs its course. A Saving Throw against the disease may be made at the beginning of each day. Once the disease is no longer active

in the character's system, the effects of the disease will disappear or he will be able to start healing the effects. The exact result will be dependant on the exact disease.

If the disease has a Cycle, the character is allowed to make a Health Saving Throw at the end of the Cycle time before the disease's advance is determined. If the die roll is in the range for a Critical Saving Throw, the disease is thrown off. If the die roll is in the range for an Ability Saving Throw, the disease is being held in check by the character's immunoresponse system and it makes no advance for that Cycle. Once the disease is thrown off, the character may go about the business of recovering from the disease.

When a victim is making his Saving Throw at the beginning of a day or at the end of a Cycle, he will receive modifications to the number needed for a successful Saving Throw as follows:

- if a character makes a Pathology Skill BCS roll, modified as usual by the disease's Virulence Group, a plus 1 is received.
- if a broad-band antibiotic is administered, a plus equal to its strength is received.
- if a specific antibiotic is administered, a plus equal to the specific's efficiency against the disease is received.
- if the character is wounded (greater than 50% of DRT), a minus 1 is received.
- if the character is seriously wounded (greater than 75% of DRT), a minus 2 is received.

These modifications affect both the Critical and Ability Saving Throw Ranges.

CRISIS POINT OF THE DISEASE

When an acute disease has reduced its main target to zero or below, when an episodic disease has a cumulative total of its Effect Die rolls that exceeds the character's score in the disease's main target, or when a disease reaches a specified stage with a chronic disease, the patient has reached the Crisis point of the disease. The character is allowed a last Saving Throw to eliminate the disease. This will be a Health Critical Saving Throw. No modifications are allowed. If the character fails this throw, he has died of the disease. If the throw is successful, the character may begin the process of recovery.

DOCTORS AND DISEASE

Once a patient is evidencing the symptoms of a disease, a character with Pathology Skill may attempt to diagnose the disease by making a Basic Chance of Success roll. This will allow the player to know the formula, in game terms, for the disease. This is important in choosing a specific antibiotic, if one is to be used.

Other specific uses of Pathology Skill with regard to disease have been dealt with above. In brief, a successful Basic Chance of Success roll will allow a character a Saving Throw during the Incubation Period or modify the number required for a Saving Throw that the character normally makes in the course of the disease.

Valeria, in her career as a wandering adventurer, has been in many places. She has also caught many diseases. Early on she caught a stomach bug fitting the description: G - (0) - STR - 4 hr. - 2-0 - 48 hr. The inn she was staying at had bad food that night. With a Health of 15 and a die roll of 1D20 of 16, she failed her Ability Saving Throw to avoid catching the disease. After 4 hours the disease made its first attack. The Gamesmaster rolled 1D6 with a result of 5. This was from the Virulence Group of the disease being 2 and having an Effect Die of 1D6. Thus her Strength is reduced by 5 for the duration of the disease which will be 48 hours. After 24 hours, that is 1 day, she again fails her Health AST with a die roll of

12. She has no need to roll at the end of the next 24 hour period since the disease will have run its course and will cease. Her Strength may then be healed to its normal level.

Several months later, Valeria was bitten by a dog which was foaming at the mouth. Again she failed her initial Saving Throw to avoid the disease. Fortunately for her, a companion had Pathology Skill with a BCS of 12. The Virulence Group of the disease was 4 which reduced his BCS to 8. A die roll of 4 on 1D20 allowed her to make another Saving Throw during the Incubation Period. This time the die roll was a 7. She just barely avoided coming down with the disease. This disease had the formula:

S - (+) - WL - 3 hr. - 4 - 4hr. - homicidal mania episode.

Let us look into an alternate universe where Valeria's companion did not make his BCS roll. Three hours after infection, the Gamesmaster rolls 2D6 as the Effect Die for the disease since it has a Virulence Group of 4. The result is 3. Valeria has a Will of 23 (CST equals 8; AST equals 11). Symptoms appear which indicate that Valeria has caught a disease, but no specific effects appear because the cumulative total of Effect Die rolls is less than her Will CST. She does however have an episode of homicidal mania. After subduing Valeria, her companion attempts to diagnose the disease by making a Pathology Skill BCS roll. The die result is 7. This indicates success, so the player controlling the companion is given the formula for the disease. He does not have any specific antibiotics to use against the disease. Before the next Cycle of the disease, he attempts another Pathology Skill BCS roll to help Valeria throw off the disease. He also gives her a broad-band antibiotic. The BCS die roll is a 3, so Valeria will add 1 for that and 1 for the broad-band antibiotic to the range of her CST and AST. This means her effective scores for this Cycle are CST equals 7 and AST equals 9 instead of 5 and 7 respectively. The die roll is 8 indicating that the disease has been held in check and will not advance at this point. Valeria fails her Will AST and has another fit but she is restrained and harms no one.

At the next Cycle, the companion fails his BCS roll and has run out of broad-band antibiotic. The die roll of Valeria's Health Saving Throw is again an 8 but this time it indicates failure. The die roll for the disease is 9 bringing the total to 13. Valeria gets to make her Will AST before the effects of the disease's advance take effect. her roll is a 2 meaning that she will not have a fit this time. Because the disease's advance has exceeded her Will AST value, her effective score in the Target Attribute of Will is reduced by 50% to 12 making her new CST equal 4 and AST equal 6. Remember that the disease's advance is compared to the permanent value of the Attribute.

On the third Cycle, Valeria gets a 2 for her Health Saving Throw. She has thrown off the disease. Her Will returns to normal but the damage she took while being subdued by her companions must be healed.

Two years later, while poking her nose where it didn't belong, Valeria picked up another bug, and as usual didn't make her Health AST to avoid infection. This one was: D - (-) - DFT - 12 hr. - 3 - 12 hr. At the end of the Incubation Period, the first Effect Die roll for the disease was 5 on 2D10. Valeria's Deftness score was immediately reduced by 5. Twelve hours

later, she again failed her Saving Throw and the Effect Die result was 3. Her Deftness was reduced by 3 more points. This brought her Deftness to zero. She went immediately into Crisis. The die roll for her last attempt to rid herself of the disease before it killed her was a 4. It was well within the Critical Saving Throw range as required. Valeria survived the disease but would be quite a while recovering the lost points of Deftness.

ANTIBIOTICS AND DISEASE

Various cultures will have remedies, processes, and/or drugs which will aid a person who is fighting a disease. To simplify matters for the game, we will refer to such things as antibiotics. A broad-band antibiotic is designed to fight a disease by fighting its symptoms and bolstering the body's natural defenses. A specific antibiotic is more or less tailored to the disease and fights the disease directly.

A broad-band antibiotic will be rated for its strength. This is the amount it will raise the Saving Throw of the patient receiving it.

A specific antibiotic will also be rated for strength. It will, however raise the number needed for a successful throw on the patient's part by its efficiency. The efficiency of a specific antibiotic is the result of the multiplication of its strength times its correspondance factor. The correspondance factor is determined by comparing the formula for the antibiotic to the formula for the disease. The antibiotic is rated for Format, Target, Vector and each specific secondary characteristic such as the nature of an episode. The correspondance factor is the nature of these that the antibiotic has in common with the disease.

Any antibiotic specified as being tailored to cure a specific disease will, upon being administered to the patient, cure the disease at that point. The character will be at the recovery stage of the disease. A tailored antibiotic will generally also cure any side effects of a disease.

The formula format for an antibiotic follows exactly that of a disease to facilitate comparison.

For this example let us refer back to the previous one and the second disease which has a formula of S - (+) - WL - 3 hr. - 4 - 4 hr. - homicidal mania episode. Consider Valeria's companion who had diagnosed the disease. Suppose he had the following specific antibiotic to give to Valeria instead of the broad-band antibiotic: S - (-) - WL - homicidal mania episode. It corresponds to the disease on three points. It would add 3 instead of the 1 added by the broad-band antibiotic. This would have raised Valeria's effective Saving Throw ranges to CST equals 9 and AST equals 11. The die roll of 8 would have meant that she threw off the disease at that point and would not have had the second fit of homicidal mania.

RECOVERY FROM DISEASE

When a character throws off a disease or survives a disease because it has run its course, he will receive 1D10 of subdual damage for each Virulence Group of the disease. This is curable in the normal fashion, see page 36. The character is also able to begin the process of healing any Attribute points lost due to the disease. This process is dealt with on page 37.

If the disease was specified to have had side effects, the character will of course be suffering from them. Whether such side effects can be healed will depend on their nature. The process for healing reversable side effects will be detailed in the description of that disease that causes them.

OPTION

IMMUNITY FROM DISEASE

Any character who has once had a specific strain of an acute or episodic disease will be immune to that strain in the future. In game terms, this means that a character who has made his Saving Throw after the first effects of the disease have evidenced themselves will automatically make his Health Ability Saving Throw when exposed to the same strain of the disease.

The bookkeeping of which strains the character has had is the responsibility of the player. When the character is exposed to a disease, the player should inform the Gamesmaster of the strains to which the character is immune. The Gamesmaster will take this information into account but should have the player roll a Saving Throw for the character anyway, since even an immune character has no natural automatic way of recognizing a strain of disease.

POISONS

Poisons function much like diseases since they have characteristics that resemble Vector, Incubation Period, Virulence Group, and Cycle Time. The effects that a poison has will depend on its type and whether it has any side effects. The three general types of poisons are lethal, narcotic and depressant.

The Vector of a poison is the same as that of a disease. That is, it may be Aerosol, Subcutaneous, Gastric or Dermal. This is the method by which the poison is introduced into the character's system.

Once the poison has been introduced to the character's system, there will be a period of time until it first shows its effects. During this time attempts may be made to remove the poison from the character's system. The exact requirements and procedures will depend on the Vector as follows:

Aerosol — Application of an antidote is the only way to halt this type of poison before it takes effect.

Subcutaneous — A successful application of First Aid Skill will remove the poison before it causes harm.

Gastric — The proper aid to apply can be one of two kinds, induced vomiting or dilution. A successful BCS roll utilizing Advanced Medical Skill will determine which is appropriate. In either case, a First Aid Skill BCS will apply the required aid. In the former case, the recipient will be incapacitated until he makes a Health Ability Saving Throw. Attempts may be made on the bookkeeping phase of each Combat Turn. In the latter case, a number of units of the correct substance (water, acid, base, etc.) equal to the strength of the poison is required. If an insufficient number is available, the number used will reduce the strength of the poison by the number administered. Application of the wrong aid will reduce the recipient's required Saving Throw to cancel the effects of the poison from the Ability to the Critical range.

Dermal — The proper aid to apply may be one of two kinds, flushing or treatment. A successful BCS roll utilizing Advanced Medical Skill will determine which is appropriate. In the former case application of one liter of solvent (such as water) per Location covered by the poison for each Strength point that the poison has is required. If insufficient water is available, the water that is applied will reduce the strength of the poison by one point for each unit amount applied. In the latter case, an Advanced Medical Skill BCS and the application of a number of medical supplies equal to the strength of the poison is required. If the BCS is made and an insufficient number of units of medical supplies is applied, the poison's strength will be

reduced by the number of units of supplies that are applied. In either case, the application of the wrong kind of aid will have no effect on the action of the poison.

At the end of the Incubation Period, the character must make a Health Ability Saving Throw, assuming the poison has not been counteracted. If the Saving Throw is made, the poison will have no effect. If it is failed, the poison will begin to take effect. The strength of the poison works as the Virulence Group of a disease. It is used as a Group rating to determine an Effect Die. The proper die is rolled by the Gamesmaster and the result is noted.

The main Target of all poisons is the character's Health. When the cumulative total of the Effect Die rolls exceeds the character's Critical Saving Throw range, first stage effects occur. When the cumulative total exceeds the Ability Saving Throw range, second stage effects occur. When the cumulative total exceeds the character's Health score the Crisis stage occurs. The effects at each stage for each kind of poison are dealt with later in this section.

At the end of the Cycle Time for the poison, the character is allowed to make a Health Saving Throw. If the die roll is in the Critical Saving Throw range the strength of the poison will be reduced by one Group and no die roll will be made for the poison that Cycle. If the die roll is in the Ability Saving Throw range, no die roll will be made for the poison on that Cycle. This process will continue until the character has reduced the effective strength of the poison to zero or the poison has had its Crisis stage effects.

Additional doses of a poison will act to restore the strength of the poison to its strongest level. They will not increase it beyond the maximum for its current form and strength. Additional doses do not, however, have to go through the Incubation Period.

EFFECTS OF POISONS

If a specific poison is listed as having side effects or "episodes" they will occur at the times and have the effects that are detailed in the description of the poison. The general effects of each kind of poison are presented below:

Lethal

First Stage — The Attributes specified as targets of the poison are reduced by 25%. All BCS rolls are -1.

Second Stage — The target Attributes are reduced by 50%. All BCS rolls are -2.

Crisis Stage — The character is allowed one last Health Critical Saving Throw. Failure indicates death. Success leaves the character comatose. After recovering consciousness the character will have the target Attributes reduced by the strength of the poison. This damage may be healed following the rules on page 37.

Narcotic

First Stage — The character's Wit, Dexterity and Speed are reduced by 25%. All BCS rolls are at -2.

Second Stage — The character's Wit, Dexterity and Speed are reduced by 50%. All BCS rolls are at -4.

Crisis Stage — The character is rendered unconscious. This state will naturally last for a number of hours equal to the strength of the poison.

Depressant

First and Second Stage — as with Narcotic.

Crisis Stage — Character retains reduced values of the affected Attributes. All BCS rolls are at half value. This condition will last for a period of hours equal to the strength of the poison.

Any character surviving the Crisis stage of a poison will have symptoms equivalent to the second stage effects of a narcotic poison at the end of the time period of the Crisis

stage effects. This will last for a number of hours equal to the strength of the poison or until the character makes a Health Ability Saving Throw. This may be attempted once per hour. The character will then evidence symptoms equivalent to first stage narcotic poisoning for a number of hours equal to the strength of the poison or until a Health Ability Saving Throw is made. At this time the character will return to his normal condition barring any side effects or damage caused by the poison.

TREATMENT OF POISONING

If a character is poisoned, treatment may be applied to counteract or remove the poison as specified in the description on the Vectors of poisons earlier in this section. Once the Gamesmaster has made the first Effect Die roll for the poison, the only treatment allowed is for the symptoms by the use of drugs or some other method that will negate the effects of the poison at that level. The poison will continue to work its insidious way in the character's system. Only by making Saving Throws can the character rid his system of poison unless a specific antidote is available.

Specific antidotes work with poisons exactly as specific antibiotics work with diseases. The points of correspondance are Attributes attacked (all must correspond to count as one factor), Type, Vector and any specific side effects. A tailored antidote will negate the poison after completion of its own Incubation Period. See page 40 for the mechanics of antibiotics. Antidote formulae follow the same format as poison formulae.

ENCODING A POISON

The procedure for encoding the game formula for a poison works much the same as the process for the game formula of a disease. The basic format is:

Vector - Type - Attribute(s) attacked - Incubation
Period - Strength - Cycle Time - notes.

The code for the type is the first letter of its name. Thus, a fast acting Dermal nerve poison might have a formula as follows:

D, dilution (water) - L - DFT, SPD - 1 Combat Turn -
2 - 1 Combat Turn - Survivors have 1 Distraction
Factor under stress due to nervous twitching.

Specific poisons will be detailed later for the Gamesmaster.

Jaxom is moving through the forest. Suddenly he feels a sharp sting and looks down to see a blowgun dart imbedded in his arm. It is dipped in the following poison: S - L - DFT, SPD - 0 - 3 - 1/2 Combat turn. The Incubation Period is 0 so there is no time to provide treatment for the poison. At the start of this action Jaxom has a Health of 12, a Dexterity of 22 and a Speed of 15. Jaxom's Health Ability Saving Throw attempt yields a die roll result of 7 which is one above the necessary score. The poison will have its first effects on the bookkeeping phase of that Combat Turn. The first Effect Die roll is a 6 which exceeds Jaxom's Health CST value. At this point his Dexterity and Speed will be reduced by 25% and all his BCS rolls have a -1 modifier. Since the poison has a Cycle Time of 1/2 of a Combat Turn, it has an assumed Base Action Phase of 20 and will do its insidious work on phases 11 and 1 until it kills him or is negated.

Jaxom's next Health Saving Throw, done on next Combat Turn is a 3 which will reduce the strength of the poison to 2 and prevent it from having further effects at this time. On phase 6, which is Jaxom's current Base Action Phase since the action of the poison has reduced his Speed to 12, he initiates a Survey and Command Action to discover where his assailant is and to warn his companions. But on phase 4, another dart thuds home. Jaxom's Saving Throw fails again restoring the strength of poison active in his system to 3. On phase 1, Jaxom will make a Health Saving Throw and fail. The poison's Effect Die roll is a 4 which brings the total to 10. This exceeds the AST range and the poison has its second stage effects. His Dexterity drops to 8 and his Speed to 11.

For the next two Combat Turns, Jaxom makes his Health Saving Throws in the AST range. This halts the advance of the poison but does not reduce its effects. On the next roll he fails his Saving Throw and the Effect Die roll for the poison is 4. This brings the total to 14 (which exceeds his Health score) and the Crisis stage begins immediately.

Jaxom makes his Health Critical Saving Throw. He is comatose. When he finally recovers consciousness, he will be under the second stage effects of a narcotic poison for up to 3 hours and then will evidence first stage effects for up to an additional 3 hours. His Dexterity and Speed will be reduced by 3 until healed.

CHARACTER IMPROVEMENT

As the game progresses, the player will wish to see his character improve his abilities, his chances of success and, in short, his ability to survive. Since this system contains no artificial "level" increments as a measure of a character's abilities, the character must be improved in other ways. Diligent study, rigorous training and learning through practical experience are all valid ways for the character to improve.

The process of improvement may be rapid or slow depending on the situation surrounding the improvement and the character himself.

IMPROVING SKILLS

A character may improve his score in a Skill in one of two ways. These are Study and Learning-by-doing. In both processes, it is the score in the Skill, not the Basic Chance of Success that is raised by the amount indicated. The Basic Chance of Success will increase when the character's score is raised sufficiently that a new calculation of the BCS yields a higher number. Remember that a character has one point of Basic Chance of Success for every five points of Skill score.

A Skill score may not be increased over the maximum score. Any extra points are lost. When a character reaches a score of 100 (BCS 20) in most Skills, he has learned what their is to know in that Skill. He is assumed to be an effective master of the Skill. A die roll of 20 when making a Basic Chance of Success roll will still indicate failure but in most cases the failure will not have critical effects. When using a Combat Skill which has a maximum score of 200 (though the BCS maximum is still 20) a die roll of 20 will indicate that critical effects occur if the character cannot make a Control Throw (the BCS of the second 100 points). A character with a score of 200 in a Combat Skill will still feel critical effects if the die roll on the Control Throw is a 20.

LEARNING-BY-DOING

When the character has successfully utilized a Skill, he may attempt to Learn-by-doing. It is the responsibility of the Gamesmaster to decide if a Skill use during the game makes the character eligible for the attempt. The general requirement the use of the Skill significantly advances the position of the characters in the game situation. Thus a character who spends his time between adventures rolling his BCS in Lockpicking Skill is ineligible since there is no pressure on him, no significant need for locks to be picked and he is facing no new challenges. The character is effectively conducting Solo Study as detailed later in this section.

A character is allowed to attempt to Learn-by-doing for each eligible Skill used successfully in a Detailed Action Time situation. Multiple successes in one Skill during a given DAT situation will not allow more than one attempt to Learn-by-doing.

To be able to Learn-by-doing the character must have a score greater than zero in the Governing Talent for the Skill. The Governing Talent is the first Talent listed in the calculation for the initial score in the Skill.

In order to successfully Learn-by-doing, the character must roll less than or equal to his score in that Governing Talent on 1D20. If he does so, he may add one to his score in that Skill.

When a character is using two Skills averaged together to gain his Basic Chance of Success, if he succeeds and is allowed to Learn-by-doing, he may choose which of the two he will attempt to Learn-by-doing with. Multiple successes with the averaged BCS will not allow him to attempt to Learn-by-doing with both of the Skills involved.

Jus Dogslayer is proceeding through a occupied building. He picks the lock to the cellar stairs. Check for Learning-by-doing. He then locks the door behind him and proceeds down the stairs. Out of the dark, a figure attacks him. Drawing his sword and knife, Jus fights using Two Weapon form of HTH Combat Skill. Just as he slays this man, another comes at him. Jus wounds the second man with his knife, just before having it knocked from his hand. Now Jus fights on using Single Weapon form of HTH Combat Skill. He dispatches his opponent.

At this point, Jus, having used Two Weapon Skill successfully against both opponents, can check for Learning-by-doing for that Skill. Although he fought two opponents, it was during the same Detailed Action Time. He may also check for Learning-by-doing with regard to Single Weapon Skill since he used that Skill successfully against the second man.

Jus now hears more men approaching and opts for the better part of valor. He uses his Stealth Skill to move silently back up the stairs. Check for Learning-by-doing because noise would attract attention to Jus.

Upon reaching the top of the stairs, Jus finds that the door has been modified so that a key is needed from either side and he, not noticing this, (he failed his Wit CST to notice this "Hidden Thing") had set the mechanism to lock behind himself. He hurriedly picks the lock again. Check for Learning-by-doing since the time pressure that Jus is under constitutes a valid execution of his Skill. Jus closes the door behind him as he heads for the wide open spaces outside the building.

Let us consider the same character exploring the building when there is nothing behind the door. In this case, the Gamesmaster knows before hand that there is nothing in the cellar. He has also decided that anyone who picks the lock to get into the cellar can obviously pick to lock to get out and so a successful BCS roll to open the lock the first time means that the character will automatically succeed the second time. He does not tell this to the player and will still make him roll the second time to maintain suspense.

Jus arrives and picks the lock. The Gamesmaster with an abstracted comment about waiting to see if Jus will survive puts off temporarily the player's Learning-by-doing roll. Jus then using his Stealth Skill successfully reaches the bottom of the stairs and finds the cellar empty. Since there was nothing to sneak up on, his successful use of Stealth was not pertinent and he may not Learn-by-doing. Jus retraces his path to the door and finds himself locked in. Attempting to use his Picklock Skill to open it, the die result is 20. The Gamesmaster knows

that the lock has been picked since that result was predetermined but he informs the player that "you don't seem to have picked it." The player in his frustration has Jus kick the door which amazingly (to him) comes open. The player is now allowed by the Gamesmaster to roll for Learning-by-doing for the lockpicking attempt.

STUDY AND SKILL IMPROVEMENT

The character's score in a Skill represents hard won and ingrained knowledge and/or abilities that the character has acquired. Thus, the skill represented by a Skill score is not gained by simple demonstration, casual reading or occasional practice. The character must diligently apply himself in order to make any significant gains in Skill score.

Study turns are stated to be of a week's duration. The Gamesmaster is free to alter the time period, but the Learning Rate of any characters involved should be altered to reflect the difference. The basic increase to a character's Skill score after a Study period of one week will be equal to his Learning Rate. This Learning Rate (his Wit Group) will be altered by various factors. These are presented in the Table of Learning Rate Modifications.

To his basic Learning rate, the character will add the value of any Learning Aids that are applicable. This number will be divided by the sum of the values of all the Learning Hindrances that apply. The result is the adjusted Learning Rate which is the number of points that will be added to the character's score in the Skill being Studied.

Any fractions that occur due to Learning Hindrances are retained during the period of Study. They are lost at the end of that period. Thus a character who has a month to Study and an Adjusted Learning Rate of 1.7, will after four weeks, add four times the weekly rate or 6.8. Since the Gamesmaster has an adventure planned for the character, he is allowed no more Study time and the .8 is dropped from the amount that the character will add to his Skill score.

During a Study period, the only major functions (Research, Rebuilding, Using Influence are all major functions) the character may perform are related to learning. A character may Study two Skills, Study one Skill and Teach another or Teach two Skills. When a character is Studying two Skills during one Study period his base Learning Rate is Wit Group/2, nearest.

A Teacher may be any character, whether controlled by a player or the Gamesmaster, who has a Communicative Talent greater than zero. An ordinary Teacher has a higher score in the Skill being taught than any of the students. The score of the students may not exceed the Teacher's score while they are Studying under him. An Expert Teacher will have the maximum score in the Skill to be taught. A Gifted Teacher has a Communicative Talent greater than 10.

Some Skills require proper facilities in order to be learned at the normal rate. Combat Skills require the weapons to be used. Knowledge-based Skills require reference books. Equipment-utilizing Skills require the equipment that will be utilized. The absence of such things will act as a Learning Hindrance. It is up to the Gamesmaster to decide if proper facilities are available when characters are attempting to study a Skill.

When a character is Studying a firearm Skill, an expenditure of ammunition is required to prevent a Learning Hindrance. The additional expenditure of another unit of ammunition will act as a Learning Aid. Only one Learning Aid may be gained in this way during a Study week. The unit of ammunition will vary according to the firearm Skill being Studied. For non-automatic weapons five rounds are required to make a unit. Automatic weapons will multiply this figure by the average burst size of the weapon used to Study with. Heavy weapons require a three round expenditure.

TABLE OF LEARNING RATE MODIFICATIONS

| LEARNING AIDS | VALUE |
|---|-------|
| Expert Teacher | 1 |
| Gifted Teacher | 1 |
| Character's Governing Talent is greater than 10 | 1 |
| Character is Studying a language in current local use | 1 |
| Character is Studying a firearm Skill & expends one unit of ammunition over the required amount | 1* |
| LEARNING HINDRANCES | |
| Solo Study (no teacher available) | 2 |
| Proper facilities unavailable | 2 |
| Character is studying an ancient language no longer in use | 2 |
| Character's Governing Talent for the Skill being Studied is less than 1 | 2 |
| Character is acting as a Teacher during the Study period | 3 |
| The Skill being Studied is not a Freely Improvable Skill for the character | 2 |
| Character is Wounded for at least part of the week | 2 |
| Character is Seriously Wounded for at least part of the week | 3 |
| Character does not have the required score in a Prerequisite Skill | ** |
| Character does not make unit expenditure of ammunition while studying a firearm Skill | 2 |
| Optional Learning Hindrances | |
| Current Skill score greater than 50 | 2 |
| Current Skill score greater than 75 | 3 |

* Once per week only.
** Study not allowed.

OPTION

INITIAL SCORE IN NEW SKILL

When a character Studies a new Skill and has a month's worth of Study period all together, he may acquire an initial score in the Skill rather than the value that would accrue through normal Study. Each Hindrance that applies will reduce the initial value by half. If the character would gain a higher score by using normal methods of Study, he may do so.

OPTION

IMPROVEMENT OF ATTRIBUTES THROUGH LEARNING

Each time a character achieves another point of BCS, he may add .05 to the Governing Attribute. No value is received for the fractional scores until a full Attribute point is accumulated.

The Governing Attribute for a Skill is the one that appears first in the calculation for the initial score in that Skill.

It does not matter if the score sufficient for the increase in the character's Basic Chance of Success is the result of Learning-by-doing or Study.

OPTION

INCREASE OF TALENTS THROUGH LEARNING

Each time a character reaches maximum score in a Skill, he has a chance of increasing his score in the Governing Talent. To do this he must roll 1D100 and consult the Reaction Table presented in Appendix 1 of this Book. If the

die roll indicates a "Good" or "Excellent" reaction the character will increase his score in the Governing Attribute by one point.

Harmon has decided he will Study Lockpicking Skill for the next four weeks. His current score is 32 and BCS is 6. Harmon's Learning Rate is 3. He is still mending from his last adventure and is Wounded during the first week which gives him a Hindrance of 2. Fortunately he was able to find a teacher. For the first week, his score is increased by 3/2 or 1.5. The second week he is no longer Wounded since he has fully healed in the previous week. This removes the Hindrance and the accumulated increase to his score is 1.5 plus the Learning Rate for the second week of 3 for a total of 4.5. The next two weeks pass in a similar fashion, adding a further 6 points for a final total of 10.5 points. Since the time allocated to study is over, the decimal is rounded down to 10 points. His score in Lockpicking Skill is now 42.

If the Option for improvement of attributes is in effect, Harmon will add .1 to the governing Attribute of Deftness since he has increased his BCS by 2. (2 x .5 equal .1).

Later that year, Harmon acts as a Teacher for Sam in Lockpicking Skill. Sam's Learning Rate is 3 and he is only studying with Harmon. Harmon is also studying with a Gifted Expert Teacher in Safecracking Skill in which Harmon already has a score of 88.

Sam's Mechanical Talent is 11 and, since it is the Governing Talent for Lockpicking Skill, he receives a plus one to his Learning Rate. He is not suffering under any Hindrances and thus has a Learning Rate adjusted to 4 points per week. At the end of four weeks he would have a score of 16. If the initial score for a month's study Option is in effect, Sam's initial score would be Deftness + Wit + Mechanical. In Sam's case, this would give him 10 + 15 + 11 or 36. He would be allowed to have a score of 36. If Harmon had not improved his score earlier that year, Sam would have been limited to 32 points since that was the score of his Teacher.

Harmon, because he is Teaching and Studying at the same time, will have a Hindrance with a value of 3. His base Rate is 3. The Gifted Expert Teacher adds 2 to the base. Since the Learning Rate plus the value of any Aids is divided by the value of any hindrances to give the adjusted Rate, Harmon will have an adjusted Learning Rate of (3 + 2)/3 or 1.7. After four weeks, this totals to a score increase of 6.8, rounded down to 6. His score is increased to 94. If the Attribute increase Option is in effect, Harmon will increase the Governing Attribute of Deftness by .05.

If Harmon had not been acting as a Teacher during those four weeks his Learning rate would have effectively been 5 and in four weeks he would have accumulated 20 points. This would have made his score 108. Since Safecracking Skill is a format 1 Skill, its maximum score is 100. Harmon would not even have had to spend the fourth week studying Safecracking Skill. He could have Studied something else and still perfected his skill. If the Option for improving Talents is in effect, Harmon would have a chance to improve the Governing Talent for Safecracking Skill which is Mechanical. Harmon's player would roll 1D100 and consult the Reaction Table. A die roll of 97 would be an "Excellent" result and Harmon could add one to his Mechanical Talent.

IMPROVING ATTRIBUTE SCORES

Attribute scores can be improved by diligent work over a Study period of one month. At the end of this period, the character will increase his score in the Attribute chosen by one point. Once a character passes certain breakpoints in the aging process, a die roll on the Reaction Table will be required. The number needed will depend on the character's age. The age to be considered here is the character's effective age. Use the Table below:

| Character's effective age | required to gain the point |
|---------------------------|----------------------------|
| under 40 | automatic |
| 40 to 49 | "Mediocre" result |
| 50 to 59 | "Good" result |
| 60 to 69 | "Excellent" result |
| 70 or older | die roll of 100 |

Supervision of the character's regimen by a character (it may be himself) with Therapy Skill will allow a character under the age of 40 a chance at a second point of increase. The character with Therapy Skill must make his BCS roll and the character in training must roll on the Reaction Table as if he were 40 years old and attempting to gain his Attribute point.

If the character is already 40 or older, a successful utilization of Therapy Skill will add the Effect Number (the die roll subtraction from the BCS) to the die roll on the Reaction Table.

Various drugs, herbal preparations and similar items or processes can have an effect on attempts to gain Attribute Points. These effects will be detailed when the specific item or process is presented.

EFFECTS OF AGE ON ATTRIBUTES

At the age of 40 characters begin to show the effects of aging. Once a character reaches 40, he will no longer automatically gain a point when he works to improve an Attribute. At four year intervals beyond that, until he reaches 80, at which time the intervals are reduced to two years, he will undergo a round of aging. The effects are detailed below:

| Age | Effects |
|------------------|---|
| 44, 48, 52, 56 | +2 to each Mental Attribute; -1 to each Physical Attribute. |
| 60, 64, 68 | -2 to each Physical Attribute; a Reaction roll is made and the results are interpreted as follows: worse than "Bad" -4 to Mental Attributes "Bad" -2 to Mental Attributes "Poor" -1 to Mental Attributes "Mediocre" no change to Mental Attributes "Good" +1 to Mental Attributes "Excellent" +2 to Mental Attributes |
| 72, 76 | -4 to Physical Attributes; a Reaction roll is made as above to determine the effects on Mental Attributes, a -10 modification is made to the die roll. |
| 80, 82, 84, etc. | -6 to the Physical Attributes; a Reaction Roll is made as above but a -20 modification is made to the die roll. |

Modifiers to the Attribute scores are made to each of the Attributes of that type. If any Attribute is reduced to zero or below by the effects of aging, the character is considered to have died from old age.

IMPROVING OFF-HAND DEXTERITY

Off-hand Dexterity is treated as if it were a Physical Attribute for purposes of improvement and aging effects.

QUANTIFYING THE ENVIRONMENT

There are various factors present in the adventure environment that have to be quantified to deal with in terms of the game. These include barriers to the passage of a character or his projectiles, tools and their effects, and the dangers of such things as acid and fire. Each of these will be dealt with in this section. Any non-living thing that acts can be rated as having a BAP, an MNA and a PCA. This covers such things as elevator doors, strobe lights, falling bricks, etc. Such things can be designed by the Gamesmaster to suit the situation.

BARRIERS

Various materials are rated for a Barrier Factor. This number represents the barrier effect of 1 inch of the material. To determine the value of a barrier of something like a wall or a door, determine the materials that compose it and their thicknesses. Multiply each thickness by the Barrier Factor of the material and sum the results for all the materials involved. This will yield the overall barrier effect of the wall or door.

Any gunshots that hit a barrier will have their Bullet Damage Group reduced by the overall barrier effect. If the Bullet Damage Group is reduced to zero or below the bullet will not penetrate the barrier. If it is not reduced to zero, any target struck will only receive the effect of the reduced Bullet Damage Group.

A muscle powered missile weapon will have its effective Strength Group reduced by 1 for each 5 points of Barrier Factor. This works in a fashion similar to the range effects on such weapons.

Hand-to-hand weapons which strike a barrier must succeed in penetrating a barrier. When the barrier is struck the damage done by the attack is assessed against the Barrier Factor. Any points in excess of the Factor may be applied as Damage Potential to a Location on the other side of the Barrier.

Fire against target behind an opaque barrier will be considered as if the firer were blind. Target behind a translucent barrier or targets whose position is essentially known (i.e., behind a firing port) will cause the firer to have a modification as if he were partially blind.

Some materials are considered capable of completely stopping projectile fire short of heavy weapons. These materials are identified by a * in front of the Barrier Factor. The Barrier Factor for these materials is used for rating the strength of the material's resistance to attempts to break it down, dig through it or penetrate it with heavy weapons fire. Some of the materials listed below may not be present in a particular campaign but are listed here for convenience of reference.

When dealing with the demolition of a barrier to allow the characters access to the other side, the elimination of barrier points equal to the strength for the appropriate thickness of the material is considered to open a one meter by one meter space. A five or ten minute Tactical Turn is suggested. Some materials such as stone or metal, will not be penetrated by characters without the proper tools. Gamesmasters are advised to use their discretion.

DOORS AND LOCKS

A door is considered to have a basic barrier effect equal to the Barrier Factor of the material times the thickness of the door. This has no effect if the door is opened. If the door is secured in some fashion, this barrier effect plus the barrier effect derived from the means by which the door is secured must be overcome in order to open the door.

Breaking in the door is accomplished by having characters roll Strength Ability Saving Throws. Up to two characters can attack a normal sized door at once. When a character is successful, he will roll his normal Effect Die. The results of the die roll are subtracted from the door's barrier effect. A character who rolls a one will add one to his Strength Group to determine the Effect Die for this attack only. A character who makes this type of attack against a door will take one point of subdual damage. A die roll of 20 will cause the character 1D6 of subdual damage. When the total of the Effect Die rolls exceeds the barrier effect of the door it has been broken down.

Such attacks may be directed at the means of securing the door, if it is known and the die roll for the character's attack falls in his Critical Saving Throw range. If the die roll falls in the Ability Saving Throw range, the overall barrier effect is attacked instead. Should the barrier effect of the securing method be overcome before the overall barrier effect is reduced, the method of securing the door (lock, crossbar, wedged chair, etc.) will be presumed defeated and the door may be opened.

Locks are rated in three ways: by type, complexity, and barrier strength. The type of lock will indicate what Skill the character will need to overcome it. The complexity represents the amount of difficulty the character will have in overcoming it. The barrier strength is the amount of barrier effect the lock will have when used to secure a door.

Standard locks that open with a key require Lockpicking Skill to overcome. The complexity of the lock will be subtracted from the Character's Basic Chance of Success. Each time the character makes a successful BCS roll, he will roll the Effect Die for his Deftness Group. This is the amount

BARRIER FACTOR OF MATERIALS

| Material | Barrier Factor per inch |
|-------------------------------|-------------------------|
| Glass | 5 |
| Glass, safety | 20 |
| Glass, shatter resistant | 25 |
| Heavy Leather | 20 |
| Light Leather | 15 |
| Metal, veneer | 20 |
| Metal, light | 30 |
| Metal, heavy | 40 |
| Metal, hardened or structural | *60 |
| Plastic, light | 5 |
| Plastic, medium | 10 |
| Plastic, heavy | 20 |
| Plastic, structural | *40 |
| Sand | 8 |
| Soil | variable 8 to 20 |
| Stone | *30 |
| Wicker | 10 |
| Wood, veneer | 5 |
| Wood, solid | 10 |
| Wood, plywood | 20 |

of the lock's barrier strength that is reduced. When the barrier strength is reduced to zero or below the lock will be open.

Combination locks require Safecracking Skill. One successful BCS roll is required for each digit in the combination. The complexity of the lock is subtracted from the character's Basic Chance of Success. Once each number of the combination has been derived, the lock is open. No barrier effect need be overcome.

Specialized forms of locks may be present in the campaign. These will be presented along with the skills needed to overcome them later in the rules. For now a simplified selection of sample locking mechanisms is presented below.

The time involved in attempts to break down a door or pick a lock will be highly variable. It is left to the Gamesmaster to decide just how long an attempt will take. In general, the time required to make an attempt to bash a door will be less than the time required to attempt to pick the lock. Only a few seconds are required to hurl yourself at a door but five minutes spent working at picking a lock which is not particularly complex is not unusual.

TOOLS AND THEIR USE

In general tools are designed to make a person's work easier. The use of the proper tools in any of the operations mentioned above will enable the character to have a greater effect against the barrier impeding him. Levers, such as crowbars, will act as multipliers of a character's Effect Die roll when attacking the barrier effect of a door. Lockpicking tools can give a modification to the BCS and act as a multiplier to the Effect Die roll of a character picking a lock. A device to increase the hearing of a character engaged in opening a combination lock will increase his Basic Chance of Success. A shovel will act as a multiplier to the Effect Die roll for a character who is digging in the earth. The exact effects of the tools that are available will be given in the equipment lists in Book 2.

The characters have found a one half inch thick door of oak. It is closed and locked. Unknown to them the door is also barred on the other side by an inch thick iron rod. The door is a heavy wood (Barrier Factor of 10) and is one half inch thick for a barrier effect of 1/2 times the base Factor. This yields a value of 5. The bar is of a heavy metal and is one inch thick and so will add its Barrier Factor to the overall effect. This is 40 and so the total barrier effect is 50.

Harmon the Picklock attempts to open the lock using Lockpicking Skill. His BCS is 8, the complexity of the lock is 0 and will have no effect on Harmon's BCS. The die roll is a 10. So the

Gamesmaster declares that after five minutes Harmon still has not opened the lock. Harmon tries again. This time the die roll is 4. Harmon will roll the Effect Die for his Deftness Group. Since his Group is 3, Harmon will roll 1D10. The result is 1. He is using high quality professional lockpicks and these will multiply his result by 2. This gives an accumulated effect of 2. The lock is still not open but it is on its way. If the characters attempt to bust through the door at this point the lock will still add its full value to the barrier effect. Harmon continues. A die roll of 7 indicates success again. The Effect Die result is a 6 this time and the multiplier of the tools is not even needed. The lock is open. Harmon smiles and turns the handle. The smile fades when he discovers that the door will not open. They must resort to bashing the door down to get through.

The door has its overall barrier effect reduced by the value of the lock to 45. Jo (STR equals 32) and Sal (STR equals 15) attempt to bash the door. Each rolls a Strength AST. The die rolls are 12 and 3 respectively. Both have succeeded. Each rolls the Effect Die for the proper Strength Group, 2D6 and 1D10 respectively. The results are 10 and 5 for a total reduction to the barrier effect of 15. The door is still in place. Again they try and again they succeed. This time the Effect Die rolls are 8 and 4. The barrier effect has been reduced to 18. A third attempt has Jo succeeding and rolling an Effect Die result of 9. Sal rolls a 20 on the Saving Throw and takes 1D6 of subdual damage. The barrier has been reduced to 9 points. They try again. This time Jo misses his Strength Saving Throw. Sal however rolls a 1. This allows her to raise her effective Strength Group by 1 for determining the Effect Die. For this attempt she will roll 1D10 instead of 1D6. The die result is 9 and the door is burst open. Since they have made four attempts, each character is given 4 points of subdual by the Gamesmaster. Sal, having rolled a 20, takes an additional 1D6 of subdual damage points.

If the characters had elected to fire a bullet through the door, the BDG of the round would have only been reduced by the barrier effect of the door itself (5).

FIRE AND ITS EFFECTS

The rules concerning fire will deal primarily with its use as a weapon. Fire is rated as having a strength group based on its initial temperature range at first exposure. From this strength group rating, an Effect Die will be derived in the usual fashion. A low temperature flame, such as an alcohol flame, has a rating of 2. A normal fire has a rating of 3. While a high temperature flame (temperature greater than 200 degrees Centigrade) has a rating of 4. Simple application of a

SAMPLE LOCKING MECHANISMS

| Mechanism | Skill needed | Complexity | Barrier Strength |
|--|--------------|------------|------------------------------------|
| small key lock | Lockpicking | 0 | 5 |
| standard key lock | Lockpicking | 1-3 | 10 |
| heavy key lock | Lockpicking | 1-6 | 20 |
| 3 digit combination | Safecracking | 0-5 | 10 |
| 3 digit heavy combination | Safecracking | 1-5 | 20 |
| 4 digit combination | Safecracking | 1-10 | 20 |
| bank vault | Safecracking | 11-16 | 50-200 |
| digits in combination locks can vary greatly | | | |
| wedged chair | none allowed | --- | 10 |
| crossbar | none allowed | --- | varies by size and material of bar |
| rusted mechanism | none allowed | --- | 5 |

flame will cause no significant effects unless the Armor Value on the target Location is exceeded by the Effect Die roll. Then the effects will vary by the type of material involved. Continued exposure will have varied effects depending on the type of protection being worn. The result of a Critical Hit by a character armed with a fire weapon will be that the target Location will be subject to the rules for continued exposure beginning on the bookkeeping phase of that Combat Turn. Damage by fire is lethal damage.

FIRE AND ARMOR MATERIALS

For the purposes of how they are affected by fire all armor materials are broken down into groups. The basic two are Non-metallic and Metallic. Some campaigns may have other classes of material such as Plastic, Magical, etc. The reaction of such types of materials will be presented along with the other specifics regarding the particular type of material.

Non-metallic materials will stop damage from an applied flame in the usual fashion. If however, the Damage Done by the flame attack is greater than twice the Armor Value of the material, it is considered destroyed beginning on the next phase. If the *rating* of the flame exceeds the Armor Value on the Location, the character is considered to have caught fire and will be subject to the rules for continued exposure.

For each turn of continued exposure, the fire will increase its strength rating by one before determining its Effect Die. Armor will not protect a character who has caught fire. A character may extinguish the flame by falling to the ground and rolling about. This requires a full Combat Turn of activity. A character will reduce the rating of the flame by his Maximum Number of Actions. If he begins the process in the middle of a Combat Turn, the reduction will be equal to the number of Actions the character could still perform in that Turn. This reduction of the fire's rating takes place before the fire's rating is increased for that Turn. Once the rating is reduced to zero or below the fire is considered out. If a character is ignited in more than one Location, only the strongest flame need be extinguished although both will cause damage to the character. Any characters aiding a victim who is on fire will add to the chances of extinguishing it. Their ability to reduce the fire's strength is the same as if they were trying to put out a fire on themselves. Any character attempting to aid a burning character will be subject to an attack by the fire at one less strength rating if the fire is not out at the end of any turn on which the helping character is involved in the process.

Once the fire is out, all non-metallic materials will have their Armor Values reduced by the highest strength rating the fire achieved.

Metallic materials will resist the effects of an applied flame as they would any normal attack. They will not ignite nor will they be destroyed by the flame.

On continued exposure to fire, they will provide protection from damage until such time as the Effect Die roll of the flame exceeds the Armor Value. After that point, metallic material will provide no protection from fire damage until it is cooled. Once the fire is extinguished (see above) the material will continue to cause damage as if the fire was continuing at its greatest strength. On each turn starting with the bookkeeping phase of the turn on which the fire was extinguished, the strength rating will be reduced by 1 and the correct Effect Die roll will be made. When the fire's strength is reduced to zero the armor is considered cooled off. Cooling agents such as water may be used to hasten the rate of cooling. The exact effects are left to the discretion of the Gamesmaster. After the fire is out and the metal has cooled, all Armor Values will be reduced by the greatest strength rating achieved by the fire.

If the character's whole body is exposed to flame the Average Armor Value is used to defend against the fire. His

armor material is considered to be of the type that covers the greatest number of Locations.

FIRE AND BARRIERS

Fire will attack barriers that are composed of combustible materials. On each turn of continued exposure of the barrier the fire's rating will be increased by one Group. When the cumulative total of the Effect Die rolls exceeds the barrier effect, the barrier will have burned down. The fire will continue to burn on successive turns with its rating being reduced by one Group each turn until it reaches zero, at which time the fire will extinguish due to lack of fuel. It is suggested that a Gamesmaster use a Tactical Turn of 10 minutes in calculating the effects of fire used against barriers.

SMOKE AND ITS EFFECTS

Smoke will affect visibility and act as a narcotic poison with a serious effect at the Crisis stage. The rating of the density of the smoke is left to the Gamesmaster as the variables due to air flow, materials being burned, concentration, etc. are highly dependent on the situation.

A density of one yields Dim Light conditions; two yields Poor Light; three yields Darkness; and four results in effective blindness. If light conditions are already less than perfect, they will be reduced further by the number of steps equal to the smoke density.

Smoke, as a narcotic poison, has an Aerosol Vector. Its strength is equal to its density. It has an Incubation Period of a number of Combat Turns equal to the character's Health Critical Saving Throw minus the density of the smoke. No specific Attributes are attacked. The Cycle time is one Combat turn. Once the character reaches the Crisis stage, the poison will continue to attack by causing subdual damage to the character equal to the result of the Effect Die roll. When the cumulative total of these subdual points exceeds the character's Damage Resistance Total the character will die of smoke inhalation. Removal of the character from the smoke will halt the process at whatever stage it is in. A Health Ability Saving Throw, attemptable each Combat Turn, will allow the character to throw off the effects except for any subdual points received after the Crisis point. This subdual damage may be healed in the normal way.

ACID AND ITS EFFECTS

These rules deal with the effects of a strong acid, or for that matter a strong base, on a character/or his clothing and armor. Acids are rated for their strength and have the equivalent of an Incubation Period.

When a character gets acid on his person, it will have no effect until the end of the "Incubation Period." Once that period is over, the Gamesmaster will roll the Effect Die for the Group corresponding to the acid's current strength. The die result will indicate a reduction in the Armor Value of the material covering the target Location. Once the Armor Value is reduced to zero, the character will take any further points as lethal damage. The armor is permanently destroyed. The acid will continue to attack in this fashion on the bookkeeping phase of each Combat Turn. After each attack the strength of the acid is reduced by 1. When the acid has a strength of zero the attacks will stop.

At any time, the application of a base will reduce the strength of the acid by its own strength rating.

If a character is struck in Location 2 by acid, some special effects may occur. If the character has no protection from the fumes, he will be subject also to an attack of the acid as a Lethal, Aerosol Vectored poison. This poison will have no Incubation Period, a strength equal to the strength of the

acid minus one and a Cycle Time of one Combat Turn. The poison has no target Attributes. See the section on poisons on page 41 for the mechanics of dealing with poison. A character will be partially blinded during the period that the poison is active in his system.

If the character takes damage to Location 2, he will be subject to a roll on the Acid Special Effects Table. Any damage done to that Location will be added to the result of the roll of 1D100 and the result checked on the Table.

ACID SPECIAL EFFECTS TABLE

D100 Special Effect

- 01-30 No serious effect
- 31-60 Extensive scarring. Decrease the character's Looks category by the strength of the acid when it began its attack.
- 61-70 Character's sense of smell is impaired.
- 71-80 Character's sense of taste is impaired. Character will also have a speech problem.
- 81-90 Character is blinded in one eye.
- 91-95 Character is blinded in both eyes.
- 96-00 Roll twice for effects ignoring die rolls over 95.

It is left to the Gamesmaster to adjudicate the result in subsequent adventures of the character's impairment in smell, taste, hearing or speech. Other effects are self explanatory. In all cases, the character will be left with sufficient scars to be considered a distinguishing mark.

SPLASHING RESULTS

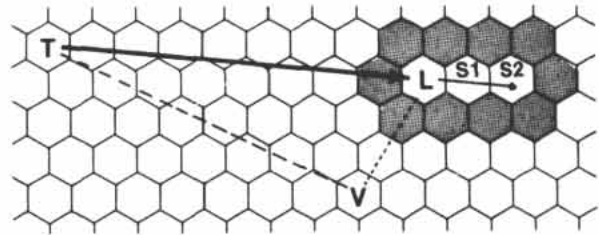
When a character is hit by a flask of acid, flaming oil or some other such nasty thing, it will affect the target Location and 0-2 contiguous Locations. The number of Locations is determined by rolling 1D3 and subtracting 1. The exact Locations are to be determined by the Gamesmaster according to the circumstances and the position of the character being struck.

When such nasties impact on the ground they will affect the target hex and 0-2 additional hexes. The first additional hex will be in the line of the throw. There is a 50% chance that the second will also be in the line of the throw. Otherwise it will be adjacent to the first hex of splash. See illustration. Such things will spread further on the next Combat Turn unless eliminated by dousing or counteracting. The second turn spread will be to all hexes contiguous to the original hexes and have a rating for strength equal to the nasty's current strength minus 1. If this reduces the strength to zero there is no spreading effect.

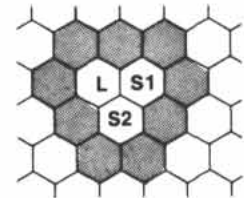
EXAMPLES OF SPLASH AND SPREAD RESULTS

- T - Thrower
- V - Target
- L - Landing hex due to miss
- - Line of trajectory
- S1 - First hex of Splash
- S2 - Second hex of Splash
- - hexes of spread on each Combat Turn

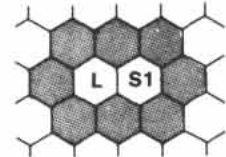
2 HEX SPLASH IN LINE OF THROW



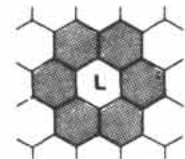
2 HEX SPLASH WITH SECOND NOT IN LINE OF THROW



1 HEX SPLASH



0 HEX SPLASH



ON BEING A PLAYER

Your old buddy, Joe Gamesmaster has invited you over one evening for a session of something called a "Role Playing Game" Whassa Role Playing Game? When you get there, Fred and Charley are sitting on the sofa, talking about last week, when they opened the door and killed 4 or 6, nowaittaminnit, did they say ORCS? Joe is sitting in a corner, half buried behind a wall of papers, charts, graphs, and assorted stuff, punching his calculator and fiddling with some little plastic doodads that look like weird dice (at least he is rolling them and looking at numbers on their sides). Of course, he always was into weird cults. Maybe this is a new religious kick. What you don't see, and this puzzles you, is a board, darts, hockey sticks, a catcher's mitt, or anything else to give you a clue as to just what kind of game a "Role Playing" is. You may, at this point, be justified in whimpering, "NOW what have I gotten myself into?"

Well, it actually isn't as bad as that. First thing, if Joe is a hardshell Gamesmaster, he probably has explained what Role Playing is until you're ready to slug him. In any case, he probably filled you in over the phone, and you know how such games work, to a degree. If not, then read the introduction to Role Playing in this book, page 1. What we are going to look at with a bit more detail here is just what your job is, as a Player in an on-going Campaign.

READ THE GAME

It is probably a good start to skim through the rules, if you haven't done so yet. You probably can't read the whole thing yet, as parts of the Game are "For Gamesmasters Only!" Pay particularly close attention to rules on how to design a Player Character, because that is your first big job in any Role Playing Game.

BEING BORN

Ideally, the Gamesmaster should hold a special "Character Design" session before presenting the Players with their first adventure, or "Scenario." At this point, he and his Players go over the basic rules, clear up any overall questions on procedure, and design at least one Character for every Player. It is probably advisable that each Player have two Characters to start with, so that a "sad mishap" part of the way through the first scenario will not leave the Player with nothing to do for the rest of the evening. On the other hand, it may be desirable to limit the first adventure to one Character per Player.

This will permit the participants to concentrate on properly handling their figures without trying to keep both Characters going at the same time. The final say on the "Character to Player" ratio for a given adventure is the Gamesmaster's.

The first step in building a Character is quantifying his physical and mental traits. This usually includes such characteristics as physical strength, reaction speed, intellect, and so on. Some games assign a random score, rolled on dice, to these areas. Other, including this one, give Players a basic number of points which they may allocate among the Character's traits pretty much as they please.

The idea behind this system is to permit the Player to build what he conceives to be the "ideal" hero. It will soon become apparent that you cannot make the Character above the average in one area without putting some other Attribute below the norm. See page 4 of this book for the detailed rules on designing these physical and Mental "Attributes."

In designing your early Characters, it will be wise to try and foresee just what abilities a high score will "buy" you, not to mention what a low score will do to your Character's survival potential. It is unlikely that you will come anywhere near an optimum design in the early stages. Of course, it can be interesting to construct a Character who is markedly low in some areas, with near-superhuman scores in others, just to see how far he gets. If the Gamesmaster permits multiple Characters on one Adventure, fascinating results can be obtained by designing a team: two Characters who between them comprise a mix of high scores, in the tradition of Fritz Leiber's Fafhrd and the Grey Mouser.

After setting the basic Attributes, most Games, including ours, will derive certain secondary traits from these scores. We call these "Abilities." Again, the Player should familiarize himself with just what these Abilities control in play, so that he can fiddle them into acceptable shape. Discovering that you really murdered some Ability score may cause you to go back and adjust the Attribute allocation. This is perfectly legitimate at this stage of the game.

In our Game system, the next stage is the generating of the "Talents," inherent aptitudes on the part of the Character. The rules governing Talents are on page 7 of this book, but as stated there, the manner in which the scores are generated are Campaign dependent, to be found in Book 2. The Gamesmaster may have altered this system to fit his particular Campaign, and this should be checked first. Again, as you allocate the Talent scores, try and foresee how they will affect the Character you want to portray. A hardened warrior will, or should have, a significant Combatative score. The scholar will have a high score in Scientific and Communicative talent, and so on.

The basic process of "being born" as a Character covers all of this preliminary allocation of scores to the Attributes and Talents, and the derivation of the dependent Abilities. It provides a rough picture of the physical and mental nature of the Character.

GROWING UP

The next step in Character design takes the Player through what we call the "Pre-Adventure" period. This can be fairly detailed, providing for the social standing of the Character, his early training in schools or military service, or what have you. Or it may be an abstract, generating a given number of years, and the things acquired in those years, which the Player may turn into Skills, knowledge, and cash. Again, the final form is Campaign dependent, and options should be checked with the Gamesmaster.

Opportunities will exist to improve the Attributes, and to acquire Skills. See page 11 of this book for a description of skills and how they work. It is at this point that the Player needs to really think out the question of what he feels this Character is like: what personal goals has he set for himself, what were his formative years like? Should he concentrate on the Combat Skills, having the Character begin to acquire mastery of the arms of his culture? Or is the Character more studious, a scholar of the mysteries of nature, science, and philosophy? has he studied the arts of the thief, mastering locks and stealth, or, if the Campaign admits of such arts, the dark knowledge of the occult? In other Games, the usual technique is to have the Player assign his Character a profession, which defines the Skills available to him. We offer

the ability to pick freely what areas your Character can enter, and in the future, if he lives, he can branch out into other, unconnected, fields of endeavor.

Upon finishing the Pre-Adventure, the Character is fully designed on the outside. He will have achieved his fullest development in his inherent and acquired capabilities, and can only go further after entering the danger fraught world of an adventurer. There will remain only one step more.

GETTING YOUR HEAD ON

As mentioned on page 2, it is the view of the authors that enjoyable Role Playing implies that the Player tries to think like the Character while playing, reacting to events as he would. To do this consistently, implies that the Player has put some thought into the psychology of his Character.

Now, from the design of Attributes and Talents, along with such ancillary data as physical appearance and size, the Player has a decent picture of what the Character looks like. From the Pre-Adventure, he knows what areas the Character has studied, what abilities he has specialized in. As stated earlier, the hinge-pin of all these earlier decisions is the question "what do you want the Character to be able to do?" Putting all these factors together, the Player can begin to move in on the concept of what kind of person his Character is.

The usual pattern we have seen in playtesting indicates that, at first, Characters tend to be very like the Player who design them. But soon, for various reasons, there will spring up a crop of Characters with unique personalities, sometimes diametrically opposed to the Players own values. One of our playtesters has a Character of long-standing, initially a fairly benign if not overly brave type, who committed an act of cowardice in a tight spot. Surviving the ordeal by these means, he has since developed a number of curious traits by betraying his initial principles, and now is quite powerful, but at the cost of his humanity. The Character in question now is motivated by a series of values foreign to the Player who designed him, and is tormented by the conflict between what he was and what he is. The psychological price of his achievements in terms of inherent human characteristics has generated some actions in play which revolt the other participants. But the adventures of this figure are fascinating, and his saga is not dull. If his dilemma does not destroy him, his future promises to be equally interesting.

Now that case evolved as a Character found his original values unstable in the face of stress. Since then, Players have reported equally interesting results to be obtained by designing Characters who are, from the outset, completely unlike themselves, even Characters whom they find unsympathetic, but who fit a heroic image that interests the Player. This is an attitude that should be encouraged. If Role Playing Games have a value beyond sheer entertainment, then it is in this: Players are given some insight into the workings of human psychology under stress, and hopefully come from the experience with a better and more tolerant understanding of how they and their fellows respond to such stimuli.

So it would seem that the effort to take a half hour or so and work out the basic values for the Characters is well worth while. And even if the Campaign situation is best served by betraying those values, the Player will find it more enjoyable to try and work out a solution in a manner suitable to the

Character's personality than one which merely follows the dictates of expedience. The Gamesmaster should reward such consistency of Play in subtle but suitable ways.

BEING A HERO

One thing about Role Playing Games that can confuse the new Player is the fact that the Games never end, there is not real way to lose, except to die, and no final winner, except those who survive. Sometimes even a Character's death can be a victory, if it is heroic.

It is necessary to understand that the essence of Role Playing is autobiographical. Players and Gamesmaster are combining to "write" the life history of the Characters, who are presumed to be heroic in stature. A biography may be episodic, with the high points of the subject's career providing plateaus in the storyline, but the book never ends until the subject is dead. In a full Campaign, where Players have other Characters operating, the loss of one particular figure ends *his* story, but there are others ready to fill the gap, with ongoing sagas of their own, and the overall flow of things is not interrupted.

In order for the Characters to develop along these heroic lines, it will be best form the Campaign to all *epic* scope. Not that it need encompass huge territories or immense conflicts, but the challenges to the heroes must allow them to face and overcome greater-than-normal challenges, just as their training gives them greater than normal potential. A reading of heroic literature will provide the Gamesmaster and Players with a view of what this entails. We might suggest:

- The *Iliad* and *Odyssey* of Homer
- Malory's *Morte D'Arthur*, and the related Arthurian works of de Troyes and the trouveres, and von Eschenbach and the minnesaenger.
- Modern heroic fantasy, in all its legions, led by Robert E. Howard, Poul Anderson, "Alan Burt Akers," Michael Moorcock, Fritz Leiber, Roger Zelazny, et al.

All of these, and other works, illustrate the concept of the hero in a vital and entertaining manner, and the sensitive reader will come away with a powerful impetus in his playing style, with the all-important realization that death only hurts a little, and glory lives on forever.

It is easy to slip into a one-dimensional value system in a Role Playing Game. The term "hero" embraces the "Bad Guys" as well as the Good. The latter can be narrow-minded, callous, self-righteous and vindictive. Galahad, in the various Grail legends, is such a one at times. "Villains," contrariwise, can be generous, brave, noble, merciful to foes, honest and honorable. Observe the traitor, Lord Gro, and even his necromantic master, King Gorice of Witchland, in Eddison's *The Worm Ourobouros*. The greatness of heroes is proved only when they fight equally great villains.

So let the Players demand the utmost of the Gamesmaster in the challenges they face, and as long as he keeps the abilities of the Player-Character in mind, let the Gamesmaster in kind. Apply courage, cunning, and honor in equal parts when playing, according to your Character and the Campaign, and even if you lose, you will win the Game. Because played in this light, you will find it an exhilarating and cathartic exercise in imagination and vicarious excitement. And that is how to really win in Role Playing: ENJOY!

ON BEING A GAMESMASTER

To a new Gamesmaster (and often to an old one) the demands of the job can make the strongest quail. To be in sole charge of the way a given group plays the Game, tormented by doubts as to whether one is doing it "right," whether the Players are enjoying it and what to do for the next Adventure. It's enough to give you gray hairs!

Any Role Playing Game depends in large measure on the Gamesmaster. The rules cannot be written to cover every case in detail, and they should not be. The flexibility to meet any demands placed upon the Game system by the requirements of the Players and Gamesmaster is what gives a Game its attraction. For the rest, lots of notepaper, a good imagination (with some cribbing from genre literature), and patience all stand the Gamesmaster in good stead.

This overview of the Gamesmaster's task is broken down into three broad areas:

Before Play: The work involved in setting up the Campaign. Planning individual scenarios for Adventures.

During Play: Running a playing session. Fairness doctrines. Secrets and mysterious events. Running Non-Player Characters properly.

After Play: Effects of successful Players on the Campaign. The "Experience" question. Housecleaning the Campaign.

We will be dealing in generalities in this Section. Specific cues to Gamesmasters for this particular Game will be found in Book 3. Our goal here is to help the Gamesmaster get a handle on how to organize his work with this (or any other) Game, to set up a working Campaign with the minimum of wasted effort or frustration.

BEFORE PLAY

Let's assume you have never run a role Playing Game before. You have a nice, new Game, not an hour out of the store, box just opened in front of you. Now what?

READING IT

Quite seriously, the first thing to do is read it. Start with whatever book is labelled #1 and skim through the whole thing, all the books in order. Don't try to bash your memory into retaining all the details at this point. Try and get an overall picture of the following:

- What kind of fantasy setting(s) is/are appropriate for this Game?
- Does it lack anything I really want to see done?
- How do individual Characters work in the system?
- Does it offer any helpful hints to the Gamesmaster in the rules?

Now, you probably would not have bought the Game unless you wanted to run a Campaign based on what it simulates. But you won't really know how it operates until you have completed this first read-through. If you have bought something suitable for Musketeers in the hopes of using it to set up a Wild West Campaign, you missed something somewhere.

If the Game has the potential to do what you want, then you are halfway home. Next we look at what specific rules it has, what it might have left out, and what rules you don't care for (too sketchy, too complex, boring etc.). If the rules do not cover something you wanted in the Campaign, then you will

need to look elsewhere, either by combining two rule systems or else designing the rules yourself. Many Gamesmasters find this latter course more rewarding.

Pay attention to the way Characters are designed and operated in the Game. These figures, after all, are the principle medium by which you and your Players will interact. The first thing you will have to help Players do is design at least one Character, and you will also need to prepare your own Characters to people the Campaign's various locales before actually playing.

Now re-read the basic rules for common actions in the Game: such activities as fighting, movement, acquiring and using Skills, etc. The contents of this Book will provide that information for this Game. You should know how such things work in some detail, so that a Character can have a fight or cross the street without your needing to look it up in the rules.

But do not let this proviso override common sense. *Never hesitate to call a halt in play to look up some rule you are unsure of.* The little time lost then will save a lot of time (and emotion) later on when someone questions the events of 10 minutes ago as being different in the rules. Another suggestion: *Always let players know in advance if the basic rules for the game have been changed to some variant system.* This does not mean you should tell them that a weapon or trap not documented in the rulesbooks is lurking around the corner. That is part of your Campaign and the Players can only find out about it by experience. But if you have designed an alternate method of Combat, the Players MUST know how it operates if they are to use it properly.

Lastly, re-read this type of article, aimed directly at giving the Gamesmaster a grasp of how to operate. If you disagree with some suggestion, ignore it. Also read examples of play, especially those written to show what the action looks like from the Gamesmaster's point of view.

PLANNING THE CAMPAIGN

Once you have a grasp of the rules, it is time to start considering the Campaign you intend to build.

This is the very heart of being a Gamesmaster: creating the fantasy "Campaign" wherein the Player-Characters will vie for heroic honors.

First, consider the overall "color" of the Campaign. This is in many ways a question of period. In some Campaigns, Gamesmasters have decreed a great mix of cultures, but many prefer their Campaign to center around a specific time in Earthly history (or the history of their particular world) if only to keep the possibilities of the Campaign a little more under control.

Decide roughly in what period your Campaign is set, this will provide many leads as to details of dress, weaponry, armor, and what Skills and equipment are available to the Characters. The next step is to outline the society in which the Characters live. If your Campaign is indeed on Earth, and in a historical period, a bit research in popular histories or even well-written historical novels will provide all the background you are likely to need. If you are designing an "alternate" Earth, or a fictional world, you can construct the culture to fit your needs. If you are designing a Campaign to fit a particular fictional world from your favorite books, the source works will provide the atmosphere you want.

Slavish concern for historical accuracy is not necessary. If you want to build a Campaign on Earth history, do not feel

you must be absolutely faithful to what was. Often, greater pleasure may be derived in a Campaign based on what *should have been*. The classic example is King Arthur's Britain, which should, historically, be set in a Romanized Celtic society around the 7th century. However, most Role Playing Games for Arthurian England are set in the high medieval (14th century) which was the environment used by Malory in his *Morte d'Arthur*.

What is good enough for literature is surely good enough for gaming purposes.

THE SCENARIO

Once you have the background for the Campaign, which can be as diverse or as limited as you wish although having capacity for expansion as the Campaign proceeds, it is time to turn to the first in a series of design tasks: the scenario.

A scenario is the outline of an Adventure in which a group of Player-Characters are going to try and accomplish some goal. This can be fairly open or very specific. The Classic Example of the open scenario consists of sending the party into an elaborate "Place of Mystery," (a haunted castle, lost city, derelict starship, or some other place of treasure and danger) to try and survive while they loot the place. Such scenarios are useful, since once the initial design work on the place is finished, it can be used over and over, until looted out. The problem with open scenarios is that if they are *all* the Players can tackle, the Campaign tends to get into a rut.

Specific scenarios might be described as "missions." The Player-Characters have some task to perform. Rescuing the kidnapped princess, bearing the vital dispatches to General Garcia, running Damnation Alley with a truckload of anti-plague serum, are classic literary examples of specific scenarios. The advantage is that such adventures give the Players a definite goal to achieve, and permit the Gamesmaster to write a somewhat more detailed storyline. Their main disadvantage is that once accomplished, the scenario cannot be tackled again by the same players.

DURING PLAY

Once the Gamesmaster has a comfortable degree of familiarity with the rules and has prepared a scenario (or decided to use the starting scenario enclosed with this Game), then he is ready to invite the Players over for a session.

It is advisable to get your Players together prior to this first adventuring session in order to go through designing a Player-Character, to get the Characters outfitted, to orient Players to your Campaign's history and culture, and to answer questions about the gaming process. If the Players have not bought copies of the Game, they will need to read this book and also Book 2, as well as any other reference materials aimed at the Players. *Under no circumstances should players read Book 3 or other material marked as sacred to the Gamesmaster!* They may have read these materials on their own, if they also own copies of the Game, but this should *not* happen during playing time. If something occurs to allow Players direct reference to some information in Book 3, or other such restricted material, the Gamesmaster can either read it to them, jot down a note, or allow them to look up the particular reference.

So, Characters ready and armed with knowledge of their World, the Players wait for the scenario to begin. This can be accomplished in an infinite number of ways. Gamesmasters have been known to offer the opportunity to undertake a scenario as a commission from mysterious, cloaked figures, or by shanghaiing the Player Characters onto a ship which eventually runs aground on a certain uncharted isle, or otherwise contriving to put the adventure in their path, or conversely, put the Characters in the adventure's path.

Sometimes the Players miss the clues and walk right by the opening of the scenario. A creative way to nudge them into

the correct approach can usually be improvised. Failing that, the Gamesmaster always has the option of pointing out the error to the Players. Again, some Players take one look at the horrifying prospect presented by the scenario's beginning and decide they want no part of it. This can cause problems, and often occurs early on in a Campaign, before the Gamesmaster and Players are at home with each other. This leads us to the whole question of Player enjoyment.

ENJOYING THINGS

There are no compelling reasons for playing games if the participants do not enjoy themselves. We will not presume to try and define just what appeals to you in Role Playing. The attractions are so varied that it is not really material what turns you on to them. What *is* germane is the need for empathy among the gamers. If the Players really loathe some type of situation, it behooves the Gamesmaster to think long and hard about using that element of the Game in his Campaign. If the Players are eager to tackle some particular type of adventure, then the Gamesmaster is well advised to quietly draw up a scenario along those lines.

But Players should not dictate the course of the Campaign. That is the Gamesmaster's domain, and the fun he has planning things is the recompense he receives in lieu of the swashbuckling his Players get to indulge in. If the Gamesmaster plunges the Campaign world into a war, or interdicts travel in certain areas, it is improper for the Players to gripe at him for it. And, just as their Characters may decry fate to no avail, so shall Player complaints about such matters come to naught.

The touchiest situation in Player-Gamesmaster relations arises when the Players can justly complain that the Gamesmaster is being unfair. Not in the sense that "Fate" is unfair when random events plague their Characters, but that the Gamesmaster is deliberately fudging things so that the Characters lose (i.e. die during adventures). The converse is equally ugly: when the Gamesmaster suspects or proves that somebody among the Players is deliberately cheating.

The former situation can be due to oversight by the Gamesmaster ("Come to think of it, that really was too rough") or a common point of view in Role Playing which we feel is not conducive to enjoyable gaming: when the Gamesmaster feels he is *competing* with Players, and "wins" if he can kill off as many Characters as possible. The Gamesmaster should preserve a detached view of the Campaign's progress. What good the Players have accomplished should be rewarded. If they have accomplished something particularly dumb, it should be its own punishment with no extra salt rubbed into the wounds by the Gamesmaster.

When Players are deliberately cheating, the rest of the group must exercise its best judgement. If the offender shows no signs of correcting his behaviour, then he must obviously be barred from further play. Be careful not to jump to the conclusion that someone is trying to pull a fast one when it may be that he is misunderstanding the rules. When something happens in play that should *not* have occurred under the rules, the Gamesmaster and Players should calmly examine the result. If it is possible to roll the action back to the point where the error occurred and pick it up from there, this is the best solution. If such a decision will adversely affect the session's play, it is probably best to let things stand. Patience and rational discussion will serve all concerned much better than unfounded accusations. This is a GAME: that implies that it is not worth playing if the rules are not followed, but likewise should preclude severe emotional upsets if things do not always go smoothly. In any case: The Gamesmaster has the FINAL word in resolving all questions of procedure during play.

RUNNING THE SESSION

There can be no hard-and-fast rules for the Gamesmaster in the details of running a playing session. Campaign activities will bear the imprint of his own personality modified by the Players who interact with it.

The usual manner in which a session in a Role Playing Game runs is as follows: The Players choose their Characters for the scenario to be played. This may be a fairly free choice, especially in the early days of the Campaign, or may be restricted by who is "in town" at that point in the Campaign's calendar, or "Time Line." The decision may also be controlled by the past history of the Character(s) involved. In any case, the Players select the Characters suited to the scenario and attend to any outfitting they need and can afford. This is also the time when the Gamesmaster will need to start filling them in on advance information (if any) for that scenario.

Once these preliminaries are completed, the adventure begins to move. The Players know their Characters are pushing beyond the boundaries of safety and civilization and into the realm of imminent danger and fantastic encounters. The gloves come off.

The progress of the adventure is conducted by *telling* each other what is happening. The Gamesmaster tells the Players what is happening around their Characters, and the Players respond by telling the Gamesmaster what their Characters are doing as a result. Players can ask questions, seeking further information about their surrounding or the events confronting them. The Gamesmaster can answer with more detail, relevant clues, irrelevant facts that are indeed evident but have no bearing on anything important. Players cannot ask for information beyond the reach of their Character's senses or knowledge. A classic example is along the lines of:

GAMESMASTER: You enter the building and find yourself facing a solidly closed door.

PLAYER: is there anything on the other side?

GAMESMASTER: (With a secret smile) You tell me.

The Player cannot get an answer until his Character has opened the door and looked inside. Then and only then can he ask if he sees the ravaging Siberian Tiger waiting there. The traditional "Listening at the Door" ploy which might also be used at this point will succeed or fail according to the Tiger's behavior, the door's construction, and the doctrine of Hidden Things, explained on page 5 of this book. The Gamesmaster will be the one who determines if anything was heard, and if so, what.

Play continues in this form until the session is over. Basically, *nothing that is not stated verbally or in writing is assumed to have happened in the campaign.* This requires a good deal of honesty and a fair memory on the part of both Players and Gamesmaster. Characters who, moments before, were stated to be holding a flashlight in one hand and turning a doorknob with the other cannot have a gun in their third hand (?) ready to shoot the critter on the other side of that door as soon as it opens (unless they DO have a third hand). On the other hand (fourth hand?), the Gamesmaster must try and note the things the Players are doing that will affect their vision of things, possibly in ways that the Characters are not even aware of. Assumptions in either case can be dangerous and it is really better to ask just what is going on if doubt exists. As the Campaign proceeds, Players and Gamesmasters will tend to evolve their own conventions for calling their actions. Newcomers to a group should be briefed on such conventions, or they will tend to get confused.

THE OTHER GUYS (OR GIRLS)

The "Stars" of the Campaign are, of course, the Player-Characters. They are the bozos out to carve themselves a rep. If they succeed, they will start getting recognition. But not

everyone in your Game world is going to be a Player-Character. There are also the NON-Player-Characters, the "Other Guys."

The Gamesmaster plays all the Characters in the Campaign not under Player control. Ideally, he will be able to speak/act "in character" for at least the major members of his "cast." There are several levels of complexity involved with Non-Player-Characters. At the bottom of the list are what we call Extras. These are the non-combatants. When one of them gets in harm's way, he is usually doomed. Next are those we call Rabble. Rabble are slightly more resistant to getting offed than Extras. It is usually not necessary for the Gamesmaster to get too involved with characterizations for these types of Non-Player-Characters, as they do not last long enough to develop well. To be brutally frank, their main purpose is to get killed fighting with Player-Characters, or by valiantly joining them against a common foe.

Other Non-Player-Characters function exactly as do Player-Characters. In general, the better developed such a Character is, the more detail the Gamesmaster will have designed for his personality and background. At the top of the list one finds the "Personality" Non-Player-Characters. These are the big-time operators designed by the Gamesmaster to fill particular niches in a given scenario or the Campaign world in general. This bunch includes the great heroes of the Campaign, the ones who have already achieved the heights the Player-Character are after. Of course, the Personality figures also include the Bad Guys, against whom most Player-Characters will find themselves opposed in the scenarios. (Just reverse certain words in the preceding two sentences if you are dealing with Player-Villains).

But besides other human beings, the Gamesmaster will be simulating the behavior of animals and creatures falling into the twilight zone category of "monsters." In Book 3 we have provided data in the sections cataloging the non-human Characters as to their general personality traits (if any trend exists), special fighting tactics (how is a lion likely to fight in close quarters?) and other general guides. The Gamesmaster should familiarize himself with these.

In general, the same remarks made about Player consistency in portraying their Characters should be observed by the Gamesmaster.

AFTER PLAY

The last section of this article will try and give an overview of the Gamesmaster's job in keeping the Campaign going outside of the actual playing time. The care and feeding of Characters as they increase their abilities, the "Happening World" the Characters live in, the retooling of scenarios in the wake of an invasion by Player-Characters, these will all be touched in the other rulebooks of the set.

KEEPING YOUR BALANCE

Role Playing Games, unlike most other recreations, do not really end. The results of one playing session will permanently affect all subsequent sessions. The main thrust of the Game is biographical, a dramatic creation of the adventurous life of the Player-Character. As Players tackle the really BIG adventures, gaining resources with each one, their actions will start to impact the status of the Campaign as a whole. The Gamesmaster monitors this activity and may exert some control over it as he deems necessary.

For example, on an adventure to some remote place of mystery, a Player-Character finds and retrieves a nearly invincible weapon. Consider: now the Player will not be vulnerable to any challenge resolved by combat. "WOW, Great," says he! After his 50th easy victory of so, both Player and Gamesmaster will note the loss of a certain charm in the Game. It becomes a sure thing, and what before was a

gamble in the face of death becomes mindless murder. The killing machine the Character has become mows down all opposition.

No problem, you may think! Just design some special creature that will be on a par with the Character's ability. Then some other poor shmoe runs into the beastie and dies without a chance. Sorta rough.

The above illustration is one of the commoner problems encountered when dealing with Game Balance. As Characters start out in the Campaign, they are not usually equipped with the best they can get. They are not as proficient in their Skills as they might be. They are, in short, easy prey for a really hefty challenge. The early scenarios should reflect this. But as they advance, the Characters will become an altogether tougher proposition and their challenges should increase proportionately. But, there is a point of diminishing returns in all this. Eventually the escalation will either find a new equilibrium (sort of an optimum "Level of heroism") of a type suitable for the Campaign milieu. Or the insane "arms race" will continue, until human capability and valor are incapable of meeting the test. The Gamesmaster must exercise all his judgement and ingenuity to help his Campaign progress smoothly to the fully energized, stable level of heroism, and prevent the runaway development of "invincible" Characters and "unbeatable" Monsters to fight them.

There will always remain certain areas which are not resolvable by unaided human power. But these are the extremes on the scale. The vast bulk of scenarios will deal with things much closer to its center. Like most other potential trouble spots in the group relationships, this can be resolved by talking about it. If the Players feel threatened by the scenario, not because they are in danger (which is the whole idea) but because they feel they *cannot* win (i.e. survive), it behooves the Gamesmaster to make sure he has built an adventure resolvable by good play, or at least brave play, rather than a pure deathtrap with no option at all.

The exception is the scenario which has been "advertised" as a real stinker. If the Players undertook it *knowing it to be very lethal*, then second thoughts are no good. One may be sure the Characters are having them too, but it is a little late for that.

IT'S A BIG, WIDE, WONDERFUL WORLD

When you stop to consider it, Player adventurers are very small potatoes as far as most of the inhabitants of the Campaign are concerned. Oh sure, the ones directly concerned are convinced of the importance of all these shenanigans, but what does the larcenous activity of a bunch or avaricious mercenaries have to do with the price of potatoes on market day? Not a great deal.

As your Campaign grows in scope, the events in its history will assume a life of their own, far removed from the events of the scenarios. Nations will go to war (possibly offering employment as soldiers or spies to the Player-Characters. Plagues will ravage certain areas, closing them to free passage. Religious movements, piracy on the coasts, barbarian raids, a multitude of things will testify to the world outside of the adventurer's experience. Hopefully, they will want to be a part of this "Happening World" and become involved in the pulsing heart of affairs in your world. If not, then do not try to force them into the public eye. Not every Cimmerian is born to be a King!

The nature of the "Happening World" is up to the Gamesmaster and his imagination. Major news from distant places can be a superlative means of signalling to the Players that the territory in question is now available for travellers and teeming with fresh opportunities for glory and loot. In many cases, you will also need to work out at least a vague history for the Campaign. How else can one explain how things came to be as they are? The more your Campaign encompasses, the greater the need for a vital, living world to hold it, with its own stream of events. The values it can add to the Campaign are incalculable.

HOUSECLEANING

There comes a sad time in every Gamesmaster's career, and usually it is an early experience, when the first adventure set in his carefully constructed Place of Mystery has ended and he must assess the damage. A skillful (or lucky) group of Players can go through the most exquisitely planned labyrinth like army ants, disabling traps, slaying guards, extracting valuables, busting in barriers, scribbling on the walls, littering, you name it.

Now you had figured the Place to be good for half a dozen expeditions, but the shape it is in now, a three-year-old with a slingshot could knock it over. What do you do?

Your options will vary according to your Campaign. If the Place has any sort of residents, with some access to maintenance gear, they could conceivably reset traps and fix doors, move treasure and post new guards. Invaders who rashly re-visit human establishments will usually find things considerably tightened up since their last raid. If the main villain of the scenario avoided death or capture, he will probably abandon the stronghold if it cannot be re-fortified. Surely he will remember the strangers who wiped out his holding! Likewise, loot missed the first time around will probably not be there if all the defenses have been wiped out. There are jackals who follow the tracks of the Player's "lions." Specific details will depend solely on the Gamesmaster's wit and whim. They will often tie in to the "Happenings" described above.

The same philosophy applies to the more public activities of the Player-Characters. Many cultures have laws regarding such lighthearted pastimes as duels to the death, and Players who flout such conventions too often or too openly risk legal sanctions. Again, this is entirely Campaign dependent. Players often seem to forget that the Barbarian societies (so-called) are usually more rigorous in the adherence to custom in such matters than many more civilized ones. Depending on your world's view of such matters, it may be sheer folly for Player-Characters to try and behave in a town the way they would on an expedition. Some fascinating possibilities are inherent in this concept and a wise Gamesmaster will exploit them fully.

L'ENVOI

General discussion of the Gamesmaster's task could go on indefinitely. Put two of this breed down in a corner somewhere to see a convincing example of verbal "perpetual motion." The main precept to remember is this:

You will make errors early on in the Campaign. At times you will have no idea what to do next. It is a big headache of a job. But as things progress, you will find new ideas and fresh insights into the Game process coming to you. It can only get more interesting. It is your world! Go to it.

APPENDIX 1

REACTION TABLE

| DIE RESULT (D100) | DESCRIPTION | VALUE NUMBER | NOTES | |
|-------------------|-------------|-----------------------|--|---|
| 01-05 | Bad | -6 | This is a very hostile reaction. It usually indicates the initiation of action if the overall reaction is unfriendly. If the overall reaction is friendly, it tends to indicate a lack of interest in continuing to deal with the Player Characters. | |
| 06-15 | Poor { | Very Poor | -4 | This is a negative reaction. It can indicate growing hostility. |
| 16-30 | | Poor | -2 | This is a negative reaction. It signals a deteriorating relationship. |
| 31-45 | Mediocre { | Negative Indifference | -1 | An undecided reaction with leanings to the negative. |
| 46-55 | | Indifference | +0 | This reaction indicates no leanings in one direction or the other. In negotiations, it might call for a period to consider the situation. |
| 56-70 | | Positive Indifference | +1 | An undecided reaction with leanings to the positive. |
| 71-85 | Good { | Good | +2 | This is a positive reaction. It can signal an improving relationship. |
| 86-95 | | Very Good | +4 | This is a positive reaction. It indicates growing friendliness and a willingness to agree. |
| 96-00 | Excellent | +6 | This is a very positive reaction. It tends to indicate willingness and helpfulness. As an initial reaction it may indicate aid is offered freely and before it is requested. | |

The reaction table is used as a guideline to the reactions of non-player characters whose reactions are not already predicated situation. The Gamesmaster may also use it to give a finer gradation to the reactions of those non-player characters whose general reactions are already assured by the situation.

The descriptions of the results of the die roll are given in general to allow the Gamesmaster the freedom to tailor a response to the particular situation in the game. Due to the nature of dice, a reaction may swing from one end of the spectrum to the other. If the Gamesmaster feels that a particular result is wholly unsuitable, he should feel free to reroll until he gets a result that he feels is appropriate.

In many cases, a roll on the table to give the general tone of the non-player character's reaction to the Player Characters, or to the situation, makes interpretation of later rolls easier. An overall reaction of Excellent will probably not lead to an attack with a result of bad unless the non-player character has in some way been betrayed by the Player Characters.

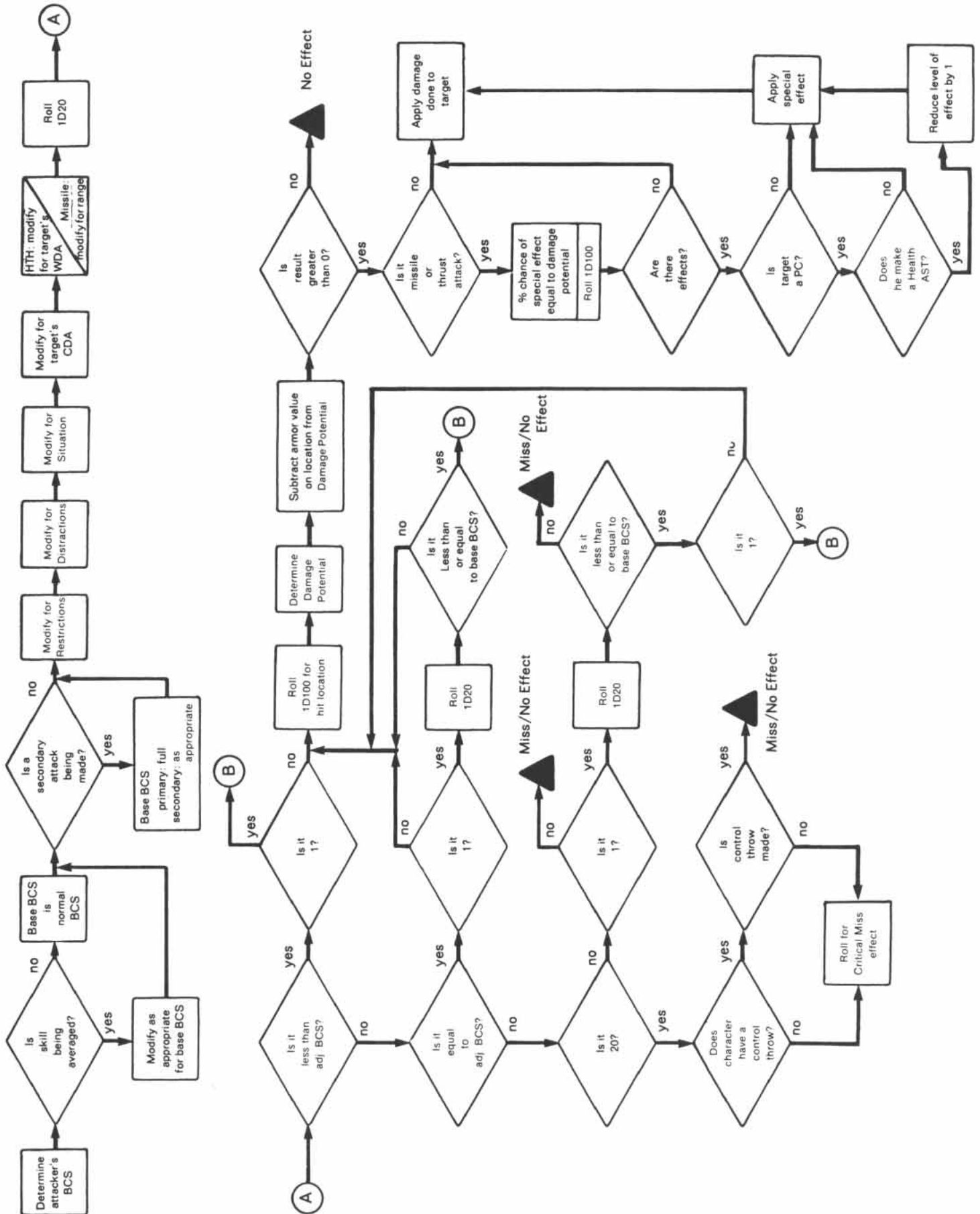
The Gamesmaster may feel that the situation surrounding an offer should have an effect on the reaction due to its nature. In such

cases the Gamesmaster should assign a value to it and add or subtract the value from the die roll to give the result.

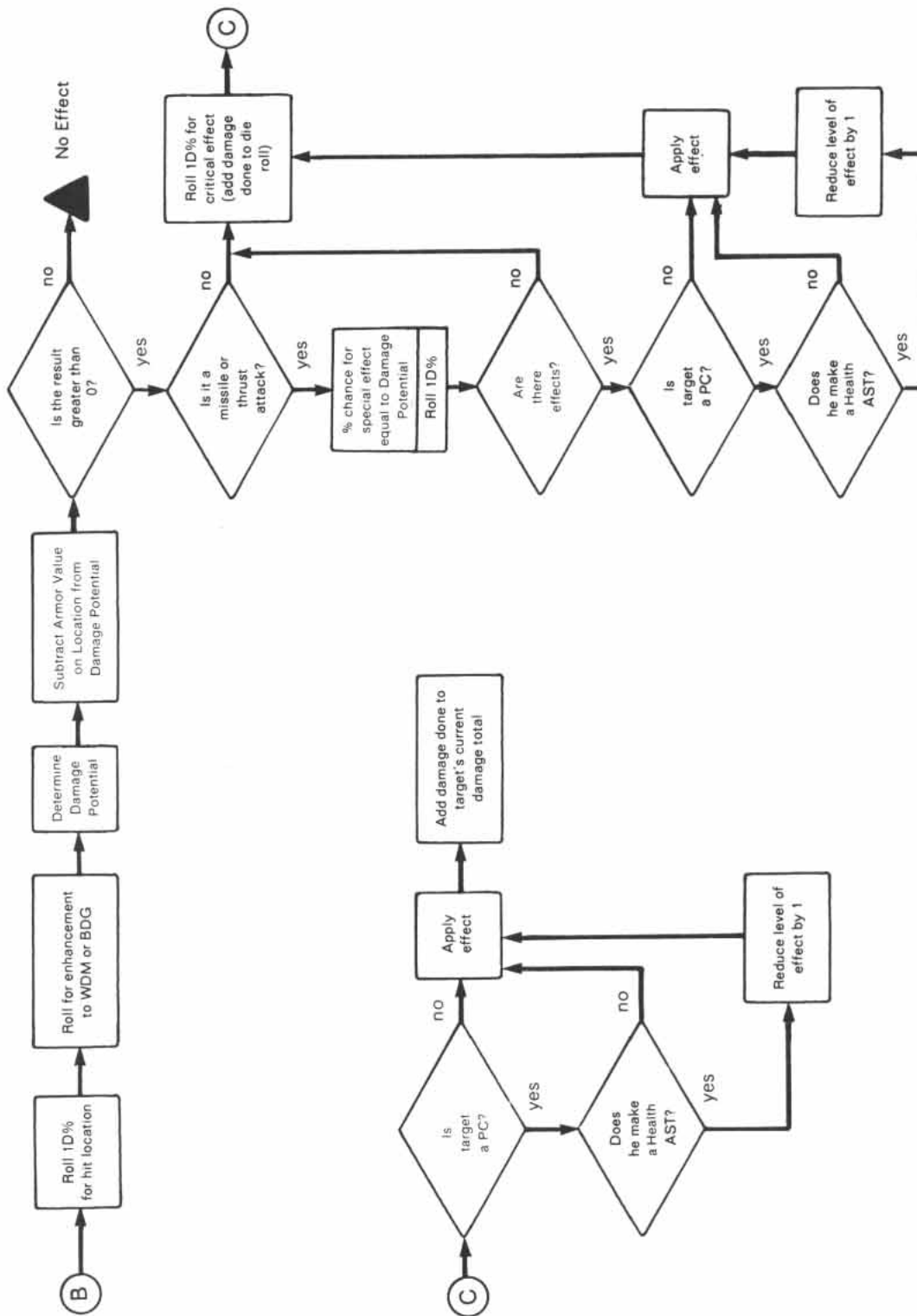
In all cases it should be remembered that this table is a guideline only and should not be used slavishly at the expense of good role-playing or the progress of an interesting adventure.

A Gamesmaster can also use the table in another way when he is at a loss for a way to determine a result of a deliberate action or a chance happening. By treating the dice as a sort of oracle, the Gamesmaster may phrase a question which can essentially be answered yes or no. The result of the die roll will indicate a positive or negative response. An indifferent response might require the dice to be rerolled. For example, the Gamesmaster might ask: "Did the character's portable lantern get broken by his fall down the stairs?" A result of "Good" would indicate that it was broken. An "Excellent" result might mean it was smashed beyond repair. A "Poor" result might indicate that it survived the fall but its durability is reduced, while a "Bad" result would mean that it was not even scratched. If the fall was a particularly long one the Gamesmaster might have added the length in meters to the die roll.

APPENDIX 2 Combat Procedure Flowchart



Combat Procedure Flowchart (continued)





AFTERMATH

Book 2

SURVIVORS OF THE AFTERMATH

**A Player's Handbook
for a Post-Holocaust World**

**Designers: Paul Hume
Bob Charrette**



**P.O. BOX 1082
GILBERT, ARIZONA 85234**



AFTERMATH

Book 2

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for a Post-Holocaust World

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The designers will attempt to answer any questions regarding the game. Please type the question allowing space for the answer on the same sheet and enclose a stamped, self-addressed envelope. Send the letter in care of Fantasy Games Unlimited.



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INTRODUCTION

This is the first book of the rules as they specifically relate to an **Aftermath!** campaign. This book deals with the creation of characters, the Skills available to them, and rules for dealing with life after the Ruin.

Detailed character creation and the equipment available are based on certain premises. These are that civilization continued to develop until sometime in the late twentieth or early twenty-first century. Things then began to fall apart or were ripped asunder. The time is now about twenty years after the collapse of organized society as we would come to know it. The nature of the collapse is left unspecified. This is the Gamesmaster's province and should be specific to his campaign.

If the Gamesmaster does not wish to accept the basic premise as detailed above, modifications should be made to the character generation system and the level of equipment available. The game as designed can be used to simulate a wide variety of ruined worlds and can be set in the recent past, the present, or the near, or even far, future.

CHARACTER GENERATION

In this section of the rules we deal with the generation of characters intended for play in an **Aftermath!** campaign. The various steps in this process are presented in the order in which they should be performed. Each section is accompanied by a reproduction of the part of the Character Record Sheet on which the pertinent information is recorded.

The specifics noted for characters in this generation process apply to a campaign set approximately twenty years after the final collapse of civilization. If the Gamesmaster wishes to set the campaign at another point, various things should be altered. These include initial Skills available, origins for the different age groups, initial equipment availability, the chance of a character being a mutant and possibly even the age groupings.

If the Gamesmaster so desires, he is operating within his authority to specify that a beginning character is in a specific Age Group, has specific origins, and has access to a limited array of Skills and/or equipment. This is usually done when the Gamesmaster has a specific place of origin for the characters in his campaign or a player is replacing a lost character in the middle of an adventure.

AGE GROUP

Each player should roll 1D20 to determine his character's Age Group. If a player strongly desires to play a character in a given Age Group, the Gamesmaster may allow this without recourse to a random die roll.

The results of the die roll are checked on the table below.

| AGE GROUP TABLE | | |
|-----------------|-----------|----------|
| D20 | Age Group | Base Age |
| 1-5 | 0 | 13 |
| 6-10 | 1 | 22 |
| 11-14 | 2 | 31 |
| 15-17 | 3 | 40 |
| 18-19 | 4 | 49 |
| 20 | 5 | 58 |

The player may determine the character's actual age by adding the results of 2D5 to the base age. This information is entered on the Character Record Sheet.

The character's Age Group will affect much of the rest of the generation process. Each Age Group will receive certain initial skills and other benefits and/or detriments. Each Age Group is dealt with separately below.

Group 0—Character receives an initial score in Post-Ruin Culture and 1 non-Firearm Combat Skill of the player's choice. The character also receives 2D5 Attribute Increase Points. (These are dealt with later.) The character has a 2 in 6 chance of being "Changed". The player must check on the Origins Table on page 2.

Group 1—The character receives an initial score in Post-Ruin Culture, 1 non-Firearm Combat Skill, and the player's choice of Literacy or Technology Use. The character receives 2D5 Attribute Increase Points. The character has a 1 in 6 chance of being "Changed". The player must check on the Origins Table on page 2.

Group 2—The character receives initial scores in Literacy, Technology Use, and 1 non-Firearm Combat Skill of the player's choice. The character also receives a score in Culture but the player may specify whether the prime area is Pre- or Post-Ruin. The player must check the Development Point Table on page 2.

Group 3—The character receives an initial score in Pre-Ruin Culture and the player's choice of any 2 non-Firearm Combat Skills or 1 Firearm Skill. The character also receives doubled initial scores in Literacy and Technology Use. The player must check the Development Point Table on page 2. The character may suffer aging effects. (These will be dealt with later.)

Group 4—The character receives doubled initial scores in Literacy, Technology Use, Pre-Ruin Culture, and the

player's choice of 1 **Firearm Combat Skill**. The player must check the Development Point Table on page 2. The character will suffer aging effects.

Group 5—The character receives initial scores as Age Group 4 plus an initial score in a Survival Skill. The player must check the Development Point Table on page 2. The character will suffer aging effects.

All characters will receive an initial score in **Brawling Combat Skill** and in 1 **Survival Skill**.

Specific Skills received should be noted in the Skills section of the Character Record Sheet. Any Attribute Increase Points should be noted to one side of the Attribute section on the CRS.

| Age Group Size | Base Age Bulk | Actual Age Looks |
|----------------|---------------|------------------|
|----------------|---------------|------------------|

ORIGINS FOR CHARACTERS IN GROUPS 0 AND 1

The specific source of training and knowledge available to a character in his formative years will modify what Skills are allowed to him. To determine the character's origins roll 1D10, add the character's Age Group to the result and consult the table below.

ORIGINS TABLE (D10)

Die Roll

- 1-2 "Wild" upbringing; the character has primarily been on his own for most of his life. He has had no formal or rigorous training. The character may not begin with any Technical or High Tech Skills
- 3-4 Tribal upbringing; the character has been raised in a group reduced to a tribal level of society. The character may not begin with any High Tech Skills and Technical Skills have doubled cost for him.
- 5-6 Adopted by an older survivor; the character has been raised by a foster or real parent or pair in relative seclusion. His only source of learning was his "parent(s)" and experience. There is a 20% chance that any Technical Skill desired by the player for the character is unavailable to him. There is a 40% chance of unavailability with regard to High Tech Skills.
- 7-10 Community upbringing; the character was raised in a community of survivors. The player will have free choice of Skills following the standard rules unless the Gamesmaster has prepared a list of Skills available to the community. This information can be noted on the back of the Character Record Sheet.

DEVELOPMENT POINTS

Each character will have some Development Points. These can be used in two ways. They can be used as Skill Points to "buy" Skills or they can be used as Attribute Increase Points to "buy" increases to the character's Attribute scores.

Each character receives a number of Development Points equal to his base age. These may be split as the player desires between Skill Points and Attribute Increase Points.

Characters in Age Groups 2 through 5 should roll 1D10, add their Age Group to the result and consult the Development Point Table below.

When the division of the total Development Points is made, the total Attribute Increase Points and the total Skill Points should be noted in the margin of the Character Record Sheet.

DEVELOPMENT POINT TABLE (D10)

Die Roll

- 1-3 No increase in points.
- 4-6 Receive 2D3 Attribute Increase Points.
- 7-9 Receive 2D5 Development Points.
- 10-12 Receive 1D5 Development Points and 1D3 Attribute Increase Points.
- 13-15 Receive 2D5 Development Points and 2D3 Attribute Increase Points.

PSYCHOLOGICAL PROFILE AND TALENTS

The psychological profile of the character gives an initial value to each of his Talents. These initial values may be altered following the rules given in Book 1. For each Talent, the player should roll 1D10, consult the table below and enter the result in the Allocated column of the section for Talents on the Character Record Sheet.

The player will then roll 2D6 and add the result to 15. This is the number of Talent Points which he may allocate among the character's Talents. Remember that no score may exceed 20. The adjusted scores for the Talents should be entered on the Character Record Sheet.

Any changes after this point will be entered in the Current Column. If no change is made the Allocated value is the Current value.

PSYCHOLOGICAL PROFILE TABLE (D10)

Die Roll Talent Initial Rating

| | |
|-----|----|
| 1 | -2 |
| 2-3 | -1 |
| 4-6 | 0 |
| 7-8 | 1 |
| 9 | 2 |
| 10 | 3 |

Talents (15 + 2D6 = ___ points to allocate)

| | Base | Allocated | Current |
|---------------|------|-----------|---------|
| Charismatic | — | — | — |
| Combative | — | — | — |
| Communicative | — | — | — |
| Esthetic | — | — | — |
| Mechanical | — | — | — |
| Natural | — | — | — |
| Scientific | — | — | — |

INITIAL ATTRIBUTE VALUES

The beginning character in *Aftermath!* receives 75 points to allocate among his Attributes. These are distributed as the player desires among the six Attributes. No score may be less than 1 or more than 40. When the player has decided on the distribution of these points, they should be entered in the Allocated column in the Attribute section of the Character Record Sheet.

| Attribute | Allocated |
|-----------|-----------|
| WT | |
| WL | |
| STR | |
| DFT | |
| SPD | |
| HLH | |

SKILLS DETERMINATION

At this point the player should decide what Skills the character will possess. Skills are "bought" using Skill points. The "cost" in Skill Points for each Skill is given along with the Skill and its initial score in Appendix 2. A character with insufficient Skill Points to pay the "cost" of the Skill may not begin with that Skill.

A Skill may be "bought" at twice the normal "cost" in order for the character to receive a doubled initial score in that Skill. This is the maximum initial score that a character may have.

Some Skills have Prerequisite Skills. The character must have all Prerequisite Skills with a minimum score of 25 in each if he is to acquire the Skill which has such prerequisites. A character who does not have the Prerequisite Skills or whose score in the Prerequisite Skills is less than 25 is not allowed to begin play with the Skill in question.

The values used for any calculations of an initial score in a Skill are taken from the character's Allocated Attribute scores and the Allocated Talent scores.

The name of each Skill and the character's initial score in it should be entered on the Character Record Sheet in the section for Skills.

| Skills | SCORE | BCS |
|--------------------|-------|-----|
| Off-hand Dexterity | | |
| Brawling | | |
| Survival | | |

ALTERATIONS TO ATTRIBUTES

Attribute scores may be altered before play in any of three ways. These alterations can be due to aging effects, "Changed" status or Attribute Increase Points.

The effects of aging are given in Book 1 on page 45. The character is assumed to undergo the effects of each break-point up to and including his current actual age.

"Changed" status may or may not affect Attributes depending on the nature of the mutation. This information will be provided by the Gamesmaster. He has the rules concerning mutants in Book 3 and will inform the player of the nature of the character's mutation and its effects on the character.

Attribute Increase Points are the voluntary method of Attribute increase before the beginning of play. The total number of Attribute Increase Points is the number of D3s that the player may roll. The sum of these die rolls is the number of points that the player may distribute among the character's Attributes. These increases may be used to counteract the effects of age or mutation or to enhance such of those effects as the player considers beneficial.

When these modifications have been made, the new Attribute scores are entered in the Permanent column of the Character Record Sheet. Any subsequent changes to the Attribute scores which are not specified as permanent changes will be entered in the Current column. If no such change has occurred, the Current score will be the Permanent score.

| Attribute | Allocated | Permanent | Current |
|-----------|-----------|-----------|---------|
| WT | | | |
| WL | | | |
| STR | | | |
| DFT | | | |
| SPD | | | |
| HLH | | | |

PHYSICAL CHARACTERISTICS

The player will roll 1D100 for each of the following characteristics: Size, Bulk and Looks. The category for each is entered on the Character Record Sheet and the total of the recognition factors for each characteristic is entered as the Base Recognition Factor.

The player may cross-index the character's Size and Bulk groupings on the Personal Encumbrance Chart to determine this value. It should also be entered on the Character Record Sheet.

The necessary Table and Chart are found in Book 1 on page 10.

| Age Group | Base Age | Actual Age | Recog. Factor |
|-----------|----------|------------|---------------|
| Size | Bulk | Looks | Personal ENC |

BASIC CLOTHING

Each character will begin with some basic clothing. To determine what the character begins with, the player should roll 1D10, add the character's Age Group and consult the table below.

| BASIC CLOTHING TABLE | | | | | |
|----------------------|-----------------|------------|------|-----------|----------------------|
| Die Roll (D10) | Item | Coverage | Code | Total ENC | Armor Value/Location |
| 1 | Shorts | 10-12 | HC | .003 | 2 |
| | Sandals | 17-20 | LH | .016 | 2 |
| | Shirt | 4-9,21-22 | LC | .004 | 1 |
| 2-5 | Pants | 10-18 | HC | .009 | 2 |
| | Sneakers | 19-20 | HC | .002 | 2 |
| | Shirt | 4-9,21-28 | HC | .014 | 2 |
| 6-10 | Fatigue Pants | 10-18 | HC | .009 | 2 |
| | Combat Boots | 17-20 | LL | .016 | 3 |
| | Shirt | 4-9,21-28 | LC | .007 | 1 |
| | Field Jacket | 4-11,21-28 | HC | .016 | 2 |
| 11-13 | As 6-10 plus | | | | |
| | Hat | 1 | HC | .001 | 2 |
| | Gloves | 29-30 | LL | .008 | 3 |
| 14-15 | As 11-13 except | | | | |
| | Pants | | PC | .0135 | 3 |
| | Boots | | SY | .04 | 5 |
| | Jacket | | PC | .024 | 3 |
| | plus Steel pot | 1 | SP | .07 | 9 |

FINAL CALCULATIONS

Having determined the equipment received by the character, the player must make the final calculations of various numbers and enter them on the Character Record Sheet.

The Encumbrance Total for the character is made from the ENC carried and the ENC worn. This is checked against the character's Encumbrance Capacity to see if he is Partially or Fully Encumbered. If he is, it will affect his Current score in the Deftness and Speed Attributes.

Ability scores should be calculated according to the appropriate formulas. Remember that some of these may change if the character's Attribute scores change.

The Basic Chance of Success for each of the character's Skills should be calculated now. Having these numbers pre-calculated will save time during actual play.

After conferring with the Gamesmaster the player will be able to enter the character's base Recognition Factor on the Character Record Sheet.

| | | |
|-------------|-------|-------|
| ENC Carried | Worn | Total |
| _____ | _____ | _____ |
| | | = |
| | | _____ |

| |
|--|
| Encumbrance |
| Maximum value carried with status |
| unencumbered partially Enc. fully Enc. |
| _____ |

| | |
|---|---|
| Learning rate (WT Group) | Healing Rate (HLH Group) |
| Freely Improvable Skills (WT & WL) | Shock Factor (10+ Healing Rate) |
| STR Group | Damage Resistance Total (HLH + STR + WL) |
| Maximum Number of Actions (DFTGrp) | |
| Base Action Phase (SPD -AST) | |
| Phases Consumed in Action (IBAP/MANA, d) | |
| Combat Dodge Ability (DFT & SPD)/20.n | |

| | | | |
|-----------|----------|------------|---------------|
| Age Group | Base Age | Actual Age | Recog. Factor |
| Size | Bulk | Looks | Personal ENC |

NOTES ON CHARACTER GENERATION

All through the process the player should give thought to the character that he is creating. The values of the various numbers can be used to reflect the player's conception of this character. Beyond the areas covered on the Character Record Sheet, the player should give thought to the character's mental processes, likes, dislikes, fears, goals and dreams. All these things would affect how the character will react in a situation. Knowing these things and having the character act according to them is the essence of role-playing. The game rules provide a clear picture of the character's appearance and abilities. It is up to the player to provide the view of the character's nature.

At this point the character is ready for play. The rest of this book presents rule sections concerning various aspects of the campaign world and the things in it.

SAMPLE CHARACTER

Jack Smith is creating a character for an *Aftermath!* campaign. He envisions a man who longs for the lost technology and strives to retain it whenever possible.

A result of a D20 die roll is 11, indicating an Age Group of 2. This gives the character a base Age of 31. A die roll of 2D5 gives a result of 6, which when added to the Base Age gives an Actual Age of 37.

Being of Age Group 2, the character will receive initial scores in the Skills of Literacy and Technology Use. Jack decides that Post-Ruin Culture is most appropriate to the character. For his non-Small Arms Combat Skill he chooses Archery.

He also will receive an initial score in Brawling Combat Skill and one Survival Skill. He chooses Survival in the Urban Environment.

The next step is to determine the character's Psychological Profile. Jack rolls for the Talents in order. Each D10 is rolled and the results are checked on the Psychological Profile Table. The results are entered on the CRS. Jack determines the number of points he has to allocate among the Talents. The roll of 2D6 yields a 7 for a total of 22 points. These are distributed among the Talents and the addition is done to the values as shown on the CRS reproduction.

The 75 points are distributed among the Attributes. These are recorded in the Allocated column of the Attribute section.

Jack is using 6 of his Development Points as Attribute Increase Points. The rest are used to "purchase" Skills. He "buys" the Skills listed on the CRS. All are at base cost since Jack has decided that the character is a jack-of-all-trades but not a master of any and has not sought to double any of his initial scores.

Having bought the Skills, he now determines his initial scores in them using the formulas presented with the Skills.

Once the initial Skills are determined, Jack rolls 6D3. He had used 6 Development Points as Attribute Increase Points. Each one of these Points is worth 1D3 of Attribute Points. The result of the roll is 13. Jack adds 6 to Wit, 1 to Will, 4 to Deftness and 2 to Health. These modified scores and the unchanged scores for Strength and Speed are entered in the Permanent column.

The character is too old to be "Changed" and too young to experience aging effects. Thus no further modifications are made to his Attributes.

The character's Physical Characteristics are now determined by rolling 1D100 for Size, Bulk and Looks. The die rolls are 25, 51 and 64, yielding results of Below Average, Average and Average, respectively. Cross-indexing Size and Bulk on the Personal Encumbrance Chart shows that the character has a base Personal Encumbrance of 3.9. The Strength modification to this is $(8/10) \times .1$ or .08, for a final Personal Encumbrance of 3.98.

The base clothing die roll is a 2 to which is added the character's Age Group of 2. This gives an initial clothing of shirt, pants and sneakers.

The character has his base Age times 2 in Barter Points with which to "buy" armor. This gives him 31×2 or 62. Jack buys a helm of Plated Macroplast at a cost of 24 Barter Points. He buys a Synthiplast gorget for 5 Points and body protection of Plasticloth for 33 Points. This totals to 62 Points exactly. In keeping with his conception of the character, Jack has bought only plastic armor and clothing although he could have gotten materials with a higher Armor Value if he had "purchased" metallic or non-metallic armor.

Jack's Skill choice gives him only 5 Skills which may start with initial equipment. For Brawling Skill the result of his Utility Number roll is a U-3 so he will start with Brass Knuckles. The number for his bow is U-2. The result of the called-for roll of 2D3 is a 4. 4×10 yields a 40-Pound Pull bow. The character will start with 3D6 arrows. The die roll is 10, so he puts the arrows in his quiver. The Utility Number roll for the arrows gives a U-3 which is standard construction arrows. Jack decides that 5 of the arrows will be Target Arrows and 5 will be Hunting Arrows.

SKILLS

Characters will have the Skills chosen for them by their players. These will allow the characters to function in the game environment. Besides the basic functioning of Skills as explained in Book 1 some Skills can be used to perform tasks.

TASKS

A Task is a job involving a Skill which can not be resolved by a simple die roll in Detailed Action Time. A given Task is rated for a Task Value (the number of Task Points required to complete it) and a Task Period at the end of which a character accumulates Task Points.

At the end of a Task Period, the length of which is determined by the Gamesmaster, a character will make a BCS roll for the Skill Involved. A successful roll will allow the character to roll the Effect Die for a specified Attribute, usually Deftness or Wit. A critical success (die roll of 1 when the BCS is greater than 1) raises the character's Attribute Group by 1 for that die roll. This die roll result is the base number of Task Points that the character will finish in that Task Period. Failure on the BCS roll will mean that no progress is made during that Period towards finishing the Task. A critical failure (a die roll of 20) will result in the total of finished Task Points being reduced. The base reduction is determined in the same way as the base progress is determined.

If a Skill requires tools, equipment or facilities, they will be rated for their Efficiency Factor. This Factor will be multiplied by .1 times the Effect Number (the difference between the die roll and the character's BCS). The modified Efficiency Factor is multiplied by the base Task Points finished. These are added to the total finished if the BCS roll was successful and subtracted if the result was a critical failure.

With some Skills, units of supplies are necessary to produce the finished product. For these the type of material required will be specified. Some Skills will result in a smaller number of units of finished product than of initial material. The method for calculating the percentage of original material turned into product will be given with the Skill Description. In these cases round fractions down.

Occasionally one Skill is needed to determine what is to be done and another is used to do it. A BCS roll is made with the first Skill, with success meaning that the character knows what to do. Failure means he does not know what to do and critical failure means he thinks he knows what to do. In the latter case, performance of the task will proceed normally but the end product will be wrong. Such boondoggles waste time and materials and, in some cases, can be downright dangerous.

For the most part the formulation of the difficulty of a Task is left to the Gamesmaster. He has the final say as to the number of Task Points required to finish the Task and the length of the Task Period. Some guidelines are given in the Skill descriptions where the products are not so variable as to be beyond space limitations. A Task with a short Period but a high number of Task Points may be as difficult and time consuming as one with a longer Period but a lower number of Task Points. The Gamesmaster may make a Task more difficult by imposing a negative modification to the BCS. This can be done to reflect the character dealing with an obscure or unusual or very difficult application of the Skill.

SKILL DESCRIPTION

The Skills presented in this section are a cross-section of skills available to a character in *Aftermath!* world. The Gamesmaster may add additional Skills or eliminate some that are presented here in order to tailor the game to his own campaign. Players should always check on the availability of Skills with the Gamesmaster.

Skills are presented as follows: The name of the Skill; the Positioning if a Combat Skill; a letter code; the initial score for the Skill; and a number indicating the Format on the first line. If the Skill is Format 2, the number will be followed by the names of the areas the Skill is broken down into. The second line will contain in parentheses any prerequisite Skills required by the Skill. Following this will be the description of the Skill.

Once a player is generally familiar with what the Skills can do he can consult the Skills Listing in Appendix 2 when constructing a character. This listing does not contain descriptions but does contain the cost of a Skill in Skill Points.

LETTER CODES FOR NOTES

A—This Skill has an Averaging function.

T—This Skill always requires tools or some other equipment to be used in its primary form.

S—This Skill sometimes requires tools or some other equipment in order to be used in its primary form.

E—A character with this Skill may start with some initial equipment pertinent to the Skill.

COMBAT SKILLS

HAND TO HAND^E

Brawling (Frontal)^S STR + DFT + Combative 3

This is unskilled, knock-down and drag-out style fighting. The fighter may strike with a hand and receive a secondary strike or he may strike with a foot and make only the one attack. Hand attacks receive -5 to the Hit Location roll and are considered Short length weapons. Foot attacks receive +5 to the Location roll, are considered Average length weapons, and add the Mass of the fighter to his Strength for determining the Effect Die to be rolled for a successful attack.

The fighter has a Weapons Damage Multiplier of 1 plus the Armor Value of the Location with which he strikes divided by 30, rounded to the nearest. Damage done is 75% subdual (C type) except on Critical Hits when it is 50% subdual (B type). For details of the effects of blows on armor see Unarmed Combat Skill.

Brawling Skill covers the use of improvised weapons such as bottles, broken bottles, chairs, table legs, etc. The fighter uses an Average BCS in these cases to resolve his attack. When the ravening hordes are closing in and there is no better option, a fighter may utilize a rifle or pistol butt as an "improvised" weapons and attack with an Average BCS using Brawling Skill.

Fencing (Presented)^T SPD + DFT + Combative 3

This Skill is a refined form of Single Weapon Skill. Its difference from that Skill lies in the Positioning used and the Attributes involved. Fencing Skill operates as a normal HTH Combat Skill.

Flexible Weapon (Frontal)^T DFT + STR + Combative 3

This Skill governs the use of flexible and jointed weapons. Some of these weapons are capable of a special form of attack called Entanglement. It must be stated which type of attack is being made before the attack is resolved.

In all cases an Entanglement attack may also do some subdual damage. The user of the weapon makes his Effect Die roll in the usual fashion but the effects of the armor on the Location struck are affected by its Format. R format armor will stop all of the damage; SR type will reduce the damage by its normal Armor Value; and all other formats will reduce the damage by one-half their normal Values rounded nearest.

Some of the effects of an Entanglement attack are dependent on the Location struck. The Effect Number of the successful attack is cross-indexed with the Location on the chart below to get the special result of the Entanglement attack. A Critical hit will add 10 to the Effect Number.

Once a flexible weapon user has gotten an Entanglement effect, he may attempt to maintain his hold on the target. This requires a matching of Deftness Effect Group Die rolls. If the user's is higher he maintains the hold, and, if the Target's is higher, the user must attempt to get a new grip for his next

Action or do something else. If a hold is maintained the target is limited to 1 meter moves for each Action even if he is performing none. That is, he may not move freely. The user will roll his BCS at the end of his Action. This BCS is his base BCS and will determine the Effect Number to be used for the results of this Action's attack.

A target may break a hold by attacking the weapon to destroy it (treat the weapon as having the user's Overall Defense Ability); making a Strength Ability Saving Throw with a free hand to rip the weapon free; or incapacitating or killing the user.

Knife (Frontal)^T DFT + SPD + Combative 3

This Skill is also a specialized form of Single Weapon Skill. It governs the specialized use of short, edged weapons which are held in one hand, such as knives, daggers, broken bottles, razors and short bayonets.

Due to the training in this Skill, there is no penalty when using the Off-hand to make an attack. This is not a Two Weapon Skill, however, so a character attempting to fight with two knives is subject to the rules for two weapon combat.

ENTANGLEMENT EFFECT CHART

| Effect Number | Head & Neck Loc 1-3 | Torso ¹ Loc 4-12 | Leg Loc 13-20 | Arm ² Loc 21-30 |
|---------------|-------------------------------|--------------------------------|--|--|
| 0-1 | Distraction | No Effect | Distraction | Distraction |
| 2-3 | Multiple Distraction | Distraction | Abort Action | Abort Action |
| 4-6 | As 2-3 plus Check for Daze | Multiple Distraction | Dazed | Dazed |
| 7-9 | As 2-3 plus Dazed | As 4-6 plus Check for Daze | Knocked over | Stunned |
| 10 & Up | Stunned | As 4-6 plus Dazed | Knocked over plus check for Fall results | As 7-9 plus Check for Knocked Over |

Distraction The target receives 1 Distraction to all BCS for a Combat Turn.

Multiple Distractions The target receives the user's Deftness Group in Distractions for a Combat Turn.

Check for Daze The target compares his Health Group Effect Die roll to the user's Strength Group Effect Die roll. If it is higher there is no effect other than the Distractions. Otherwise he is Dazed as well.

Dazed The effect is the same as the critical effect Daze.

Stunned The effect functions as the critical effect Stun except that the target functions normally on the next Combat Turn.

Abort Action The target must abort any Action in progress that is not resolving on the Action Phase on which the Entanglement attack is resolved. If able under the normal rules for initiation of Actions, the target may reinitiate his Action on the next Action Phase.

Knocked Over The target is knocked from his feet and is subject to the rules for falling. The target's lower half is in the hex he had been occupying and his upper half is in the one most directly away from the weapon user.

Knocked Over plus As above plus the target is at least Dazed.

Check for Knocked Over The target and user compare Strength Group Effect Die rolls. If the user's is higher the target is Knocked Over.

¹In order to achieve an effect against one of these Locations the flexible weapon must at least be of Long length. When one of these Locations is hit by such a weapon, the target and the user should compare Deftness Group Effect Die rolls. If the user's is higher he gets to make a second BCS roll subject to all the modifiers present for the first one. If the roll is successful he will also have scored an

Entanglement effect on an arm. A critical hit will get both arms.

²If one of these Locations is hit on a man in Stance with a missile weapon all benefits of Stance are lost. He is treated as if he were Engaged for purposes of getting off a shot and all fire is treated as Hip fire.

Some of the weapons governed by this Skill allow the fighter to make a second attack without forfeiting his Weapons Defense Ability. If the fighter chooses to make a third attack with such a weapon in one Attack Action, he will forfeit his WDA for the number of phases required to complete the Action.

Longsword (Frontal)^T STR + DFT + Combative 3

This Skill governs the use of two-handed edged weapons such as longswords and greatswords. Non-edged weapons such as pipes and staves may also be used but suffer a modification to the BCS of (user's point of "aim" minus 6). Such weapons will have a secondary strike only if they normally do and they are not Extra Long in length.

This Skill allows a specialized secondary strike with some weapons. The fighter must declare that a secondary strike will be made. He will lose the benefit of his Weapons Defense Ability during that Action. If the first attack misses he may immediately roll for a second attack using an Average BCS. If the first attack hits, no secondary strike is made.

This Skill allows a fighter to use a sword that is normally one-handed if the handgrip is long enough to get two hands on it. When using such a weapon with Longsword Skill he will increase the weapon's WDM by his Strength Group divided by 10.

Nunchaku (Frontal)^T DFT + STR + Combative 3

This Skill governs the use of the Nunchaku, a short flail. The user of Nunchaku Skill is trained to use either one or two weapons.

Use of two weapons is subject to Strength Rating limitations. Each nunchaku is capable of a secondary strike. Use of the secondary strike when using a single nunchaku costs the character the loss of his Weapons Defense Ability for that Action. With two nunchaku in use, the Weapons Defense Ability is not lost unless both are used to make secondary strikes.

Nunchaku may be used in the same fashion as Tonfa with regard to Unarmed Combat Skill Grapples and Counters. The WDM of a nunchaku in this use is 1.5.

Polearm (Frontal)^T STR + DFT + Combative 3

This Skill governs the use of hafted weapons requiring two hands such as halberds, spears, rifle and bayonet combinations, etc. Such weapons are usually allowed a secondary strike known as a butt stroke. Secondary strikes of this type are not allowed to be made into Long Front or Long Side hexes. The butt stroke has a WDM of 1 and does C type damage.

Sai (Frontal)^T DFT + STR + Combative 3

This Skill governs the use of the Sai, a dagger-shaped, non-edged steel rod. This weapon is pointed at the tip and has two long tines curving down from the hilt along the blades. The Sai may be used to Strike doing C type damage with a WDM of 1.7. It may also be used to Thrust with a WDM of 1.2 doing Lethal damage.

The user of the Sai Skill is trained to use one of two of the weapons and the BCS of the second Sai is subject to averaging with the character's Off-hand Dexterity score. When using one weapon a secondary attack is allowed only when making a Strike attack. Secondary attacks when using two Sai follow the rules for Two Weapon Skill.

When utilizing a Defend Option a character with Sai Skill may either gain the increase in Overall Defense Ability or retain his normal value and gain a special ability. This ability allows the user to attempt to disarm an opponent attack him with a Hand-to-hand weapon. If the attack made by his opponent would have hit the Sai user if he had had no Overall

Defense Ability, the Sai user may exercise this ability. Each character will roll his Strength Group Effect Die. If the Sai user's result is higher, the opponent is disarmed and the weapon will land 1D3 meters away in a random direction.

If using the Option "Clash of Weapons," whenever the circumstances arises that a clash is called for, the Sai user may attempt to disarm his opponent. Failure to disarm his will subject the Sai to chances of being broken.

Single Weapon (Frontal) STR + DFT + Combative 3

This Skill governs the use of one handed weapons in combat. Any weapon designated as one-handed may be used. The user usually has his off-hand empty.

Two Weapon (Frontal)^T STR + DFT + Combative 3

The user of this Skill holds a one-handed weapon in each of his hands. The weapons allowable due to weight and wieldiness are dependant on the character's Strength as detailed on page 5 in Book 1.

With this Skill a second, not secondary, attack is allowed. The fighter will lose the benefit of his WDA during the Attack Action. The first attack is assumed to be made with the weapon in the favored hand. It receives a -1 to the BCS. The second attack is assumed to be made with the weapon in the off-hand. The BCS is averaged with the character's Off-hand Dexterity and receives a modification of -1 before any other modifiers are applied.

When not using it to attack the fighter is assumed to be using the weapon in the off-hand for parrying.

Tonfa (Frontal)^T DFT + STR + Combative 3

This Skill governs the use of the Tonfa, a weapon resembling a billy club with a short handle, at a right angle to the shaft, at one end. The user of this Skill is trained in using one or two of the weapons. When using two Tonfa, the standard rules for Two Weapon Skill apply. As this is a specialized Skill, the character may not use other weapons in the manner of Two Weapon Skill unless he has that Skill.

Besides making normal weapon attacks, the character with Tonfa Skill may use it in another fashion. The score in the Skill is averaged with the character's score in Unarmed Combat Skill. This allows the character to perform Unarmed Grapples as presented in Unarmed Combat Skill. When using one Tonfa in this fashion the character's WDM for the Grapple is increased by 1. This technique uses one Tonfa and a free hand. This averaged BCS also allows the character to attempt Counters in defending against attacks using Unarmed Combat Skill.

Unarmed Combat (Character's option)^S DFT + SPD + Combative 3

This Skill represents a no-holds-barred conglomeration of modern martial arts techniques. There are three different techniques available to the character using this Skill: Striking, Throwing and Grappling. Both of the character's hands must be free to use the latter two techniques. When fighting an opponent who is using Unarmed Combat Skill or Brawling Skill, a character does not receive the Situational Modifier penalties for attacking to a Side or Rear hex or those for prone or kneeling position.

STRIKING TECHNIQUES

These attacks are made with the hands or feet. They normally do C type damage but, on a Critical Hit, they will do B type.

HANDBLOWS: One handblow may be made with each Hand in an Action. The second blow is averaged with the Off-hand Dexterity score and causes the character to lose his Weapon Defense Ability for that Action. When only one hand is used for striking, the character is assumed to be parrying with his other forearm, or hand. Handblows are treated as Short length weapons. They have a WDM of 1 + (AV on the hand/20) or 1 +

("Aim" score in Unarmed Combat/10), whichever is greater. A handblow receives +5 to the Hit Location roll.

KICKS: Normally one kick per Action is made but the character may elect to make a second attack in the same fashion as is done with Longsword Skill. Even with a single kick the character's Weapon Defense Ability is halved and rounded to the nearest. Kicks are dealt with as Average length weapons and their WDM is calculated as for handblows. For purposes of determining the Damage Potential a character using a kick will have his effective Strength increased by 1 Group. If a kick is parried (a miss falling into the range of the target's Weapon Defense Ability), the attacker must make a Speed Ability Saving Throw or fall down. Kicks receive a -5 to the Hit Location roll.

BLOWS AGAINST ARMOR: Rigid armor halves the Damage Potential of handblows and kicks and makes all damage received subdual only. Other armors act normally. If the Armor Value of the Location struck exceeds the Armor Value on the attacking character's hand or foot, the attacker will take the difference between them in subdual damage. A character with Unarmed Combat Skill has a minimum AV of 1 + his "Aim" score in the Skill for the purpose of comparing these Armor Values only. It does not act as armor against incoming attacks.

LEAPING KICKS: This is a specific tactic. It must be declared when the Action is initiated. The character may execute any Jumping Action available to him at that time. He will resolve a single kick at the end of the Jump Action. The character has a Combat Dodge Ability of 1 greater than his normal value and no Weapons Defense Ability. Against missile fire he has twice his normal CDA. He will resolve the kick using an average BCS in Unarmed Combat Skill and will receive a negative modifier of -1 for ever 2 meters or fraction thereof traveled in the Jump. If the target moves before the Jump would be resolved, it will be resolved in the standard fashion of missile attacks whose target disappears before resolution. A successful attack gives the character a +2 (1 for Jumping and 1 for kicking) to his effective Strength Group for determining his Damage Potential. If the leaping kick misses the character must make a Speed Critical Saving Throw to avoid falling. If the kick is parried or a Critical Miss occurs the character will definitely fall.

THROWING TECHNIQUES

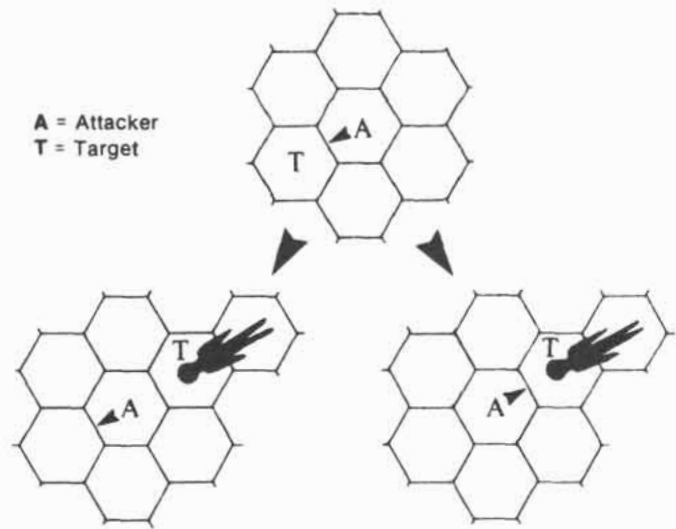
A character may attempt to throw an opponent in his own hex or any of the adjacent hexes. He receives a +1 to his BCS when the opponent is in the same hex. Only one throw attack may be made in an Action.

A Hit Location of the head, neck, torso or arms, (LOC 1-12 and 21-30) indicates a full throw where the opponent is lifted bodily and thrown to the ground. Normally he will land 180 degrees away from the hex which he just vacated. His upper half will be in the hex nearest the thrower. The thrower may change this hex by 60 degrees per point of "Aim." The thrower has the option of maintaining his facing or turning to face the hex into which the opponent was thrown.

The thrower also has the option of keeping or releasing his grip. If he keeps it, a Deftness Ability Saving Throw will allow him to make an immediate "free attack" using Grappling Technique. If he releases his grip, a Strength Ability Saving Throw will allow him to hurl his opponent 1 meter through the air before he lands.

If a thrown character is made to occupy a hex which already has a character in it, they are treated as if the thrown Character was attempting a Deliberate Knockdown of the other character except that the thrower's Strength is the one used to make the Effect Die roll. See Book 1, page 31.

A Hit Location to the legs (LOC 13-20) indicates a "foot



Facing of Thrower and position of victim.

sweep" resulting in a fall for the opponent. He falls away from the attacker. The thrower may attempt a Grappling Technique "free attack" with a Deftness Ability Saving Throw. Treat as a thrown character if the hex into which he falls is occupied.

The full result of an effective throw does not occur simply with a successful BCS roll. The Effect Number must be determined and compared with the table below. Note that an Effect Number of at least 4 is required for the opponent to be actually thrown. A Critical Hit will add 10 to the Effect Number. Treat the plus with Critical Hits as the WDM for any subdual damage incurred by the thrown character. Critical Effects of Sever are treated as broken bones.

BREAKFALLS: A thrown character who has Unarmed Combat Skill may attempt to use that skill to lessen the effects of a throw. The character will make a BCS roll using an average BCS. If successful he will reduce the thrower's Effect Number by the Effect Number that he has just generated. If this reduces the thrower's Effect Number below 0 then the character scheduled to be thrown will receive no effects from the attacker's actions.

UNARMED COMBAT THROW TABLE

| Effect Number | Outcome of Throw |
|---------------|--|
| 0-1 | The throw is incomplete. Target must abort any Action in progress that does not resolve that Action Phase. If able under the normal rules for initiation of Actions, he may reinitiate the Action on the next Phase. |
| 2-3 | Target is treated as Dazed (see Book 1, page 30) for a full Combat Turn. He remains on his feet. |
| 4-6 | Target is actually thrown. He will be prone on the next Action Phase. He is also subject to the results of an Effect Number of 0 or 1 and must make the usual Saving Throw to avoid the effects of a fall (see Book 1, page 32). |
| 7-9 | As 4-6 above and the thrown character will take subdual damage equal to the thrower's Strength Group Effect Die roll. Armor will not reduce this damage but each level of Blast Buffering will eliminate 5 points of it. |
| 10+ | As 7-9 above plus the victim must make an immediate Health Ability Saving Throw or succumb to System Shock. Blast Buffering will add twice its level to the number needed. |

GRAPPLING TECHNIQUES

These techniques represent cunning grips on limbs, chokes designed to render an opponent unconscious or simple pinning holds. They are intended to disable or subdue an opponent. Normally they may only be used against a prone enemy or one in the same hex.

Against a prone opponent the character may perform a Change Position Action as part of an Unarmed Combat Grappling Attack Action. The attack is resolved at the end of the Action. If the character has succeeded with a Deftness AST following a successful throw, he is assumed to have done this as his "free attack."

If the character makes his Unarmed Combat BCS roll when using Grappling Technique, the hold is in effect and will remain so without necessity for further BCS rolls until the character releases the hold or his opponent breaks it. Damage is resolved at the end of the Action during which he maintains that grip. Damage done by Grappling Techniques is 50% subdual and 50% "pseudo-damage" which is only accumulated to determine when a Grapple is complete.

The Hit Location indicates the type of technique being applied. A Hit Location to a limb (LOC 13-30) indicates a Limblock. One to the torso (LOC 10-12) indicates a Pin and one to the head or neck (LOC 1-3) indicates a Choke.

LIMBLOCKS: Limblocks do damage with a WDM equal to 1 + the character's total score in the Skill divided by 20 and rounded to the nearest tenth. The victim is unable to move except at the grappler's whim. If the Limblock is on an arm, the grappler may force the victim to move at a maximum rate of a walk. If the Limblock is on a leg the victim will be held motionless. This mastery is achieved when the total damage done by the Limblock exceeds the victim's Strength. The victim of a successful Armlock must release anything held in that hand.

If he wishes the grappler may attempt to disable the limb when voluntarily releasing a Limblock. He rolls a Strength Saving Throw. If the result is in his Critical Saving Throw range, the limb is broken. If it is in his Ability Saving Throw range, the limb will take critical damage. If the throw is in neither range the limb receives damage which will disable it but the damage will heal as if it were subdual damage. A critical failure means that the victim receives no damage from the attempt at all. The damage done by such a technique is determined by the grappler's Strength Group Effect Die roll. Such a release requires an Action to perform.

PINS: A Pin result against a non-prone opponent is treated as a miss! A successful Pin means that the opponent is held motionless on the ground by the grappler. To be successful the accumulated damage must exceed the victim's Strength. Once successful the accumulated damage must exceed the victim's Strength. Once successful, the grappler may only continue to hold his victim motionless or try to shift his grip. Shifting grip requires a new BCS roll. The grappler will receive an extra point of Aim even if he normally has none. If the new BCS roll fails, the Pin is lost and the opponent is free. Unless he has Unarmed Combat Skill (when he will add his WDA) the victim will only have his Combat Dodge Ability to oppose the BCS of an attempt by a grappler to shift his grip.

CHOKES: Chokes are treated as Pins with the following exceptions. The accumulated damage is measured against the victim's Health. When his Health is exceeded he will be unconscious as if he had succumbed to System Shock. If the Choke is maintained past this point, all damage done will be subdual. For each successive Action of Choking the grappler will now increase his effective Strength group by 1 for determining damage. He will eventually kill the victim by "subduing him to death" (see Book 1, page 36).

Rigid armor will prevent a Choke from being successful and Semi-Rigid armor will subtract its Armor Value from damage done. Other armor Formats have no effect on a Choke.

DEFENDING AGAINST GRAPPLING TECHNIQUES

Once the opponent has established a Grappling hold, a character may only attempt to get free. He may not use a Grappled limb. If the hold is a Pin or a Choke, he is treated as if he were one step more encumbered. If this makes him more than Fully Encumbered he will lose an additional 25% from his Deftness and Speed and his BCS roll will have a modifier of -8 to the score needed for success. The character has the following options:

- Assuming the correct limbs are free, he may make an attack with any available Hand-to-hand Combat Skill at a penalty to the BCS of 50% or -5 whichever is greater. For Effect Die determination his Strength Group will be reduced by 1 in addition to any modifications due to weapon length.
- He may attempt to make a successful average BCS with his Brawling Skill. This will break the hold but will cause no damage to the grappler.
- He may attempt to make a successful Unarmed Combat Skill BCS roll. This will break the hold but cause no damage. If the result is a Critical Hit, he is allowed an immediate "free attack" with that Skill.

Situational modifiers due to positioning do not apply in these attempts and the grappler has his full Overall Defense Ability.

OPTION

COUNTERS IN UNARMED COMBAT

When a character using Unarmed Combat Skill is attacked and the opponent's attack fails in the range of the character's Weapon Defense Ability, the character is allowed a "free attack" against the attacker. He may use any Technique but the type must be declared before the BCS is rolled. The "free attack" is subject to the normal modifiers.

If the character using Unarmed Combat Skill is utilizing a Defend Action, any attack which misses will allow the character to make a "free attack" on his opponent.

Weapon and Shield (Refused)^T STR + DFT + Combatative 3

The user of this Skill holds a one-handed weapon in his favored hand and has a shield on his off-hand arm. The character is treated as if he were using two weapons in terms of weapons and shields allowable due to weight and wieldiness. Use twice the Shield's ENC value as a weapon's Strength Rating for this purpose.

A secondary attack is allowed using the shield. It is subject to the usual rules for such attacks. The WDM for a shield used in this way is the Shield Factor divided by 10. Damage is C type.

Large shields add to a character's Overall Defense Ability in Hand-to-Hand combat and all shields add to the Overall Defense Ability against any missile attacks coming in through the character's Front hexes.

A shield is struck by an attack when the attack is successful and the Hit Location is covered by the shield or when the die roll for an unsuccessful attack is in the range protected by the shield. The range protected by the shield is equal to any additions the shield gives to the character's overall Defense Ability and, in the case of a Hand-to-Hand attack, the character's Weapon Defense Ability.

A missile attack that falls into the range protected by the shield still has a 50% chance of attacking the character. It does the missile weapon will still be reduced by the Minimum Barrier Effect of the shield. Roll for Hit Location normally.

A shield struck in a successful attack must be penetrated before any damage can be applied to penetrating the armor

of the target. Bullets will have their BDG reduced by the minimum Barrier Effect of the shield. This yields the effective BDG used to determine the die to be rolled for the Damage Potential. Arrows and crossbow bolts will have their effective Strength Group reduced by 1 for every 10 points or portion thereof of Barrier Effect. Other muscle powered missile weapons and Hand-to-Hand weapons have their normal Damage Potential determined. From this is subtracted the minimum Barrier Effect of the shield. The result is the effective Damage Potential which may then be applied to the target. Any time that the normal Damage Potential of a successful attack exceeds the overall Barrier Effect of the shield that shield is reduced to the next lower class.

A shield struck by an unsuccessful attack will be attacked. Bullets will reduce the shield by one class if their effective BDG upon striking the shield exceeds the overall Barrier Effect of the shield by 3 times its value. Arrows and crossbow bolts will not reduce the shield but will stick in the shield and add their ENC value to the shield's value. Other muscle powered missile weapons will attack the shield as Hand-to-Hand weapons do and will stick in the shield to add their ENC value if the shield user does not make a Deftness Ability Saving Throw to dislodge them. Hand-to-Hand weapons will reduce the shield class by one if damage done is twice the minimum Barrier Effect of the Shield.

It requires 1 Action to remove a shield and 2 Actions to put on, sling or unsling a shield.

Consider Kelly and his old police shield. The shield is Class 4 and is made of one-half inch of heavy plastic. The upper third is clear. The Barrier Value of the plastic is 20.

Minimum Barrier Effect is 1/2 times 20 or 10. Overall Barrier Effect is the Class (4) divided by 2 times the Minimum Barrier Effect (10) for a value of 20. The ENC Value is the Overall Barrier Effect (20) times the shield's factor (15 for Class 4) times the thickness (.5 inch) times a constant (.005 for plastics) yielding a value of .75 ENC.

Kelly's Skill score in Weapon and Shield is 80 giving him a Weapon Defense Ability of 4. When he

is attacked in Hand-to-Hand combat, he will add this Weapon Defense Ability to his Combat Dodge Ability to get his Overall Defense Ability. Since he is using a Class 4 shield he will add an additional 1 to this for a total Overall Defense Ability of 7. (His Combat Dodge Ability is 2).

An opponent's attack could miss him totally, strike him cleanly, strike the shield, or hit him on a portion of his arm covered by the shield. If his opponent's Basic Chance of Success were 15 it would be determined like this:

- *Die roll less than or equal to 15 minus 7 (that is BCS minus ODA) means Kelly has been successfully struck. Hit Location is rolled for normally. If the Hit Location die roll indicates that the attack is to be resolved against one of the Locations stated as being covered by the shield (see chart on this page) the shield itself must be penetrated as well as any armor on that Location before damage is assessed against Kelly.*
- *Die roll between or including 11 and 15 (that is the range covered by Kelly's WDA and any pluses to ODA given by the shield) means that the shield itself has been struck. Damage against it is assessed as indicated above.*
- *Any other die roll indicates a clean miss. Note that results of 9 or 10 are misses due to Kelly's CDA.*

Missile attacks against a character carrying a shield are resolved in a similar fashion. Of course the character may not apply his Weapon Defense Ability against a missile attack but his Combat Dodge Ability may be enhanced by the type of movement in which he is engaged. Any attack die roll falling in the range "protected" by the shield's plus to the Overall Defense Ability is considered to attack the shield. Thus, in Kelly's case, against an opponent with a BCS of 15, the shield adds 4 to his ODA. Any attack die roll from 12 to 15 would attack the shield.



Basic Statistics on Shields:

| Class | + to ODA vs. missiles | + to ODA in HTH Combat | Factor | Locations Covered | Description |
|-------|-----------------------|------------------------|--------|--------------------|-------------|
| 1 | 1 | 0 | 2 | 30 | Very Small |
| 2 | 2 | 0 | 5 | 28, 30 | Small |
| 3 | 3 | 0 | 10 | 26, 28, 30 | Medium |
| 4 | 4 | 1 | 15 | 24, 26, 28, 30 | Large |
| 5 | 5 | 2 | 25 | 22, 24, 26, 28, 30 | Very Large |

Minimum Barrier Effect = (Barrier value of material x thickness)

Overall Barrier Effect = (Class/2, up) x (minimum Barrier Effect)

ENC value = (overall Barrier Effect x Factor x thickness x K)

K = .005 for plastics; .02 for metals; and .01 for other materials.

MUSCLE POWERED MISSILE WEAPONS^{E,T}

Archery (Refused) DFT + WT + Combative 3

This Skill governs the use of a bow of any sort. The Basic Chance of Success is modified by the strength of the bow, the range of the target, the type of arrow being fired, and the situation. Bows have no Weapon Damage Multiplier. This is dependant on the type of arrow fired. The Strength Group used to determine the Effect Die rolled is also range dependent. The percentage chance of an arrow hit achieving a Missile Special Effect is equal to the Damage Potential.

Bows are rated by their Pound Pull. This will determine their Range Factor, Durability and Encumbrance value.

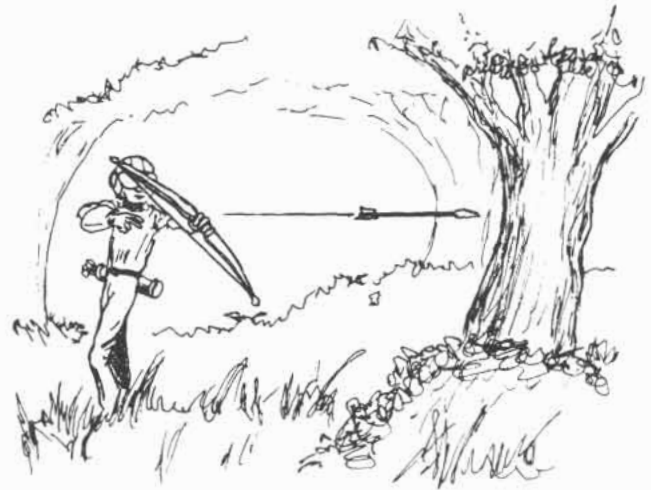
Range Factor (RF) = Pound Pull/10, rounded nearest.

Durability (or DUR) = Range Factor/2, rounded nearest.

Encumbrance (or ENC) = Range Factor/10, rounded nearest tenth.

Thus, a bow with an 80 Pound Pull has a Range Factor of 8, a Durability of 4 and an Encumbrance of .8.

How far a bow will throw an arrow, how clean the shot will be and how long the bow takes to draw will be dependent on the character attempting to use the bow.



Strength of Bow versus User Strength:

| Bow Range Factor greater than or equal to | results in | BCS mod. | Actions to Reload |
|---|------------|----------|-----------------------|
| 4 x STR Grp | | | unusable by character |
| 3 x STR Grp | | -4 | 2 |
| 2 x STR Grp | | -2 | 1 |
| 1 x STR Grp | | +0 | 0 |

Thus an 80 Pound Pull bow is unusable by a character with a Strength Group of 1 or 2. A character with a Strength Group of 3 or 4 may use the bow with a BCS modification of -2 and one Action must be spent in loading and drawing the bow before it may be fired. A character with a Strength Group of 5 would fire the bow with no modifications due to the strength of the bow and could fire an arrow on each of his Actions.

An arrow may be held nocked and ready to fire for a number of Actions equal to the user's Strength Group.

Range Modifications for Bows

| Category | Distance in meters | BCS mod. | Eff STR Grp for Effect Die |
|-------------|--------------------|----------|----------------------------|
| Point Blank | 5 | +1 | +1* |
| Effective | RF x STR Grp | +0 | +0 |
| Long | 5 x RF x STR Grp | -1 | -1 |
| Maximum | 10 x RF x STR Grp | -2 | -2 |
| Extreme | 20 x RF x STR Grp | -5 | -3 |

*Modification to Weapon Damage Multiplier of .1 x STR Grp.

Should a character's Effective Range be less than 5 meters, 5 meters becomes the upper limit on his Effective Range and the value calculated for his Effective Range becomes his Point Blank Range.

Modifications due to arrows

| In use: | BCS mod. | WDM |
|------------------------------|----------------|----------|
| Target arrow | +0 | 1.8 |
| Armor piercing arrow | +1 | 1.5 |
| Hunting arrow | -1 | 2 |
| Barbed arrow | -2 | 2.5 |
| Improvised head | as appropriate | ½ normal |
| Improvised shaft | -1 | |
| Improvised fletching | -2 | |
| Aluminum or Fiberglass shaft | +1 | |

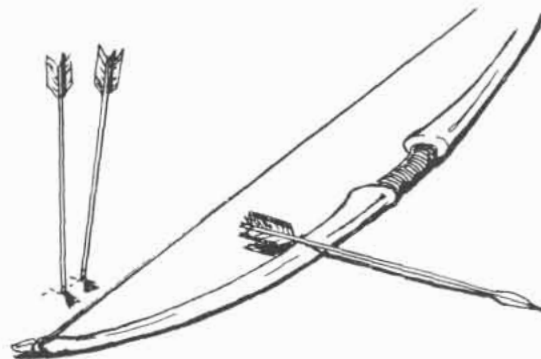
Modifications due to situation

| Situation | BCS mod. |
|----------------------|----------|
| Archer's ring | +1 |
| No "bracer" | -1 |
| Interfering clothing | -2 |
| Sights in use | +1 |

OPTION

Wind Effects to archery

| | |
|-----------|--|
| Head Wind | -1 to STR Grp for range calculations |
| Tail Wind | +1 to STR Grp for range calculations |
| Crosswind | -1 to BCS for each 5 knots of wind speed |



Blowgun (Frontal) HLH + WT + Combative 3

A blowgun is a delivery system for darts carrying some kind of drug. Dart damage is calculated for penetration purposes only. Darts will never damage shields. The Effect Die for determining the penetration is based on the user's Health Group. The die result is multiplied by the WDM of the dart. If the result is greater than or equal to the Armor Value on the Location hit, the substance of the dart will be introduced to the target's system.

Range Modifications

| Category | Distance in meters | BCS Mod. | Eff. HLH Grp for Effect Die |
|-------------|--------------------|----------|-----------------------------|
| Point Blank | 2 meters | +1 | +1 |
| Effective | HLH CST | +0 | +0 |
| Long | HLH AST | -1 | -1 |
| Maximum | HLH | -3 | -2 |

If a character's Effective range is less than 2 meters, 2 meters becomes his effective range and the calculated value becomes his Point Blank range.

Modifications due to darts

| In use: | BCS Mod. | WDM |
|--------------------|----------|-----|
| improvised | -2 | 0.8 |
| fire hardened wood | -1 | 1.0 |
| metal | +0 | 1.3 |

Modifications due to wind

| | |
|----------|--------------------------------|
| Light | -1 |
| Moderate | -3 |
| Strong | -6 |
| Gusty | doubled strength value of wind |

Bola (Frontal) DFT + WT + Combative 3

This weapon system requires 1 Action to prepare and a minimum of 1 Action to windup to toss. For each additional Action spent in windup the range groupings will be modified by a multiplier of .5 per Action to a maximum of 3. Thus, after 4 additional Actions of windup the upper limits of all range groupings will be multiplied by 2.

Use of this weapon requires a clear area around the character. The minimum radius of clear space is 1 meter. Each additional Action of windup will increase this radius by .5 meters. Any obstruction that occurs during the windup will abort the attack with the bola. The object or character that aborted the attack will receive a Strike attack from the bola.

A character may maintain a bola in windup for a number of Combat Turns equal to his Strength. A character maintaining a windup may only move 1 meter per Action.

This weapon has two forms of attack and the form in use must be specified before the attack is resolved. Strike is an attack to damage. The Gamesmaster, using a flat curve, will determine how many of the balls in the bola strike. Each ball has a WDM of 1.5C and an ENC value of .2. The Effect die is rolled separately for each ball that strikes. Capture is an attack which does not directly damage. Again the Gamesmaster determines how many of the balls actually affect the target. The total number striking is multiplied by .5 to get the WDM to be multiplied by the Effect Die roll. This will yield an Effect Number for use with the Entanglement Attack rules given with Flexible Weapon Skill.

The Damage Potential is the percentage chance of a missile special effect occurring. A Flesh Wound result for a Capture attack requires the target to make a Speed Ability Saving Throw to avoid a fall.

Range Modifications

| Category | | BCS Mod. | Eff. STR Grp for Effect Die |
|-------------|---------|----------|-----------------------------|
| Point Blank | STR CST | +0 | +0 |
| Effective | STR AST | -1 | +0 |
| Long | STR | -2 | -1 |
| Maximum | 2 x STR | -4 | -2 |

If the character's calculated range lies within the radius of his windup, he may not attack at that range grouping.

Crossbow (Frontal) DFT + WT + Combative 3

This skill governs the use of all crossbow type weapons. The Basic Chance of Success is modified by the range to the target, the type of bolt being fired, and the situation. The Weapon Damage Multiplier is, like bows, dependent on the type of bolt being fired. Unlike bows, the range and damage done is based on the weapon rather than the character using it. Crossbows have a recoil effect which may affect the user's chance of hitting his target. The percentage chance of a bolt hit achieving a Missile Special Effect is equal to the Damage Potential.

Crossbows are rated by their Pound Pull as are bows. The Pound Pull/2, nearest is used for crossbows as the user's Strength is used with bows, to determine ranges and the effective Strength Group for Effect Die determination. Thus, a crossbow with a Pound Pull of 120 would have a "Strength" of 60 and a Strength Group of 7 with an Effect Die of 2D10+2. This Strength Group would be used to make the range calculations and would receive the modifications due to range for determining the Effect Die to be rolled.

The Range Factor, Durability and Encumbrance values for a crossbow are calculated in a fashion similar to that done for bows.

Range Factor = Pound Pull/10, rounded nearest tenth

Durability = Range Factor/3, nearest

Encumbrance = Range Factor/5, nearest tenth

Thus, a crossbow with a Pound Pull of 120 has a Range Factor of 12, a Durability of 4, and an Encumbrance of 2.4.

The recoil effect of a crossbow will give the user a negative modification to his BCS. If the recoil effect calculation yields a negative number there will be no effect to the user's BCS. It does not give a positive modification.

Recoil Effect = (RF/2, nearest) - Strength Group

For determination of effects to BCS and for the Weapon Damage Multiplier to use, bolts function in all ways as do arrows.

A crossbow's Point Blank range is 10 meters, not 5 as with a bow.

Unlike a blow, a crossbow must be cocked. Once cocked, it may be carried loaded and ready to fire. A crossbow requires a number of Strength Points equal to its Pound Pull in order to be cocked. For each Action spent cocking the crossbow, a character may apply his Strength in Strength Points toward cocking the crossbow. If the crossbow's Pound Pull is greater than or equal to 4 times the user's Strength, the user will be unable to cock the crossbow without the aid of a mechanical device. If the mechanical aid is incorporated into the crossbow, it will take one additional Action before the weapon is reloaded. If the aid is separate, two additional Actions will be required. If the multiplier for a separate mechanical aid does not put the character's Strength into the range where he would be allowed to cock the weapon if that were his natural Strength, that crossbow may not be cocked and a more powerful aid or a stronger character is required.

Mechanical aids:

| | | |
|-----------|-------------|-------|
| separate: | Belt hook | x 1.5 |
| | Goat's foot | x 2 |
| built in: | Cranechin | x 1.8 |
| | Windlass | x 2 |

Crossbows have an inherent BCS Modification of +3. As with all inherent BCS modifications, once the character's BCS in the governing Skill exceeds the sum of his Combative Talent and the Inherent Modifications the modification is no longer used.

A character in Stance with a crossbow may sight in.

Sling (Frontal) DFT + WT + Combative 3

The sling is a simple "sling of David." The rules governing its range and the increase of range by longer windup are the

same as for Bola Skill. The WDM that the sling imparts to its bullet will depend on the number of turns spent in windup. A character has an effective upper limit on the number of turns spent in windup of his Strength Group. This is for purposes of determining the WDM only. It does not apply to range.

Actions in windup 1 2 3 4-5 6-7
 WDM C type damage: .5 1 1.5 2 2.5

Improvised bullets such as pebbles will give a -2 modification to the Basic Chance of Success.

The percentage chance of a missile special effect is equal to the Damage Potential.

Slingshot (Frontal) DFT + WT + Combative 3

Slingshots are rated for Elasticity. The effective Elasticity of a slingshot is the actual elasticity or the user's Strength Group, whichever is lower. The upper limit on the range groupings is multiplied by the effective Elasticity.

Range Modifications

| | Distance in meters | BCS Mod. | Eff. STR Grp. for Effect Die |
|-------------|--------------------|----------|------------------------------|
| Point Blank | 3 | +1 | +1 |
| Effective | 5 | +0 | +0 |
| Long | 10 | -1 | +0 |
| Extreme | 15 | -2 | -1 |
| Maximum | 20 | -4 | -2 |

The WDM of the slingshot is equal to the effective Elasticity divided by 2. The damage is C type. BCS modifications for ammunition are the same as for slings.

The percentage chance of a missile special effect is equal to the Damage Potential.

Throwing (Frontal) DFT + WT + Combative 3

This Skill represents a trained ability to throw weapons. It is required for the successful throwing of such things as knives, small axes and spears but such things as rocks, hand grenades, and chairs may be thrown without recourse to this Skill. In the latter case, a character with the Skill is more likely to hit his target than one without it.

To be thrown without penalty, the Strength Rating of the weapon must be less than the Strength Group of the character. For each point over this number there is one penalty shift on the range table. The BCS modification, the Strength Group modification and the throw required for Deftness are shifted to the next most difficult category for each penalty shift. Distances do not alter. Thus, a character attempting to throw a weapon with a Strength Rating of 5 while he has a Strength group of 3 will receive a penalty shift of two. If the target were 6 meters away (within his normal Long range) he would have the BCS and Strength Group modifications as if it were two range steps further away (Maximum range).

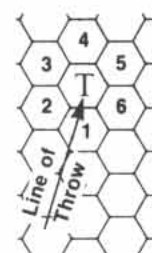
| Throwing Range Modifications | | | STR Grp. mod. | DFT throw required if not using Skill |
|------------------------------|--------------------|----------|---------------|---------------------------------------|
| Category | Distance in meters | BCS mod. | | |
| Point Blank | 2 | +1 | +1 | 2 x AST |
| Effective | STR CST | +0 | +0 | AST |
| Long | STR AST | -1 | +0 | CST |
| Extreme | STR | -2 | -1 | CST/4, down |
| Maximum | 2 x STR | -4 | -2 | 1 |
| — — — penalty shift value | | -8 | -3 | 1 followed by CST |
| | | -16 | -4 | 1 followed by 1 |
| | | | | will not hit |

When throwing heavy, non-aerodynamic objects reduce all ranges by 75%.

The percentage chance of a missile special effect with a thrown, non-explosive weapon is equal to the Damage Potential.

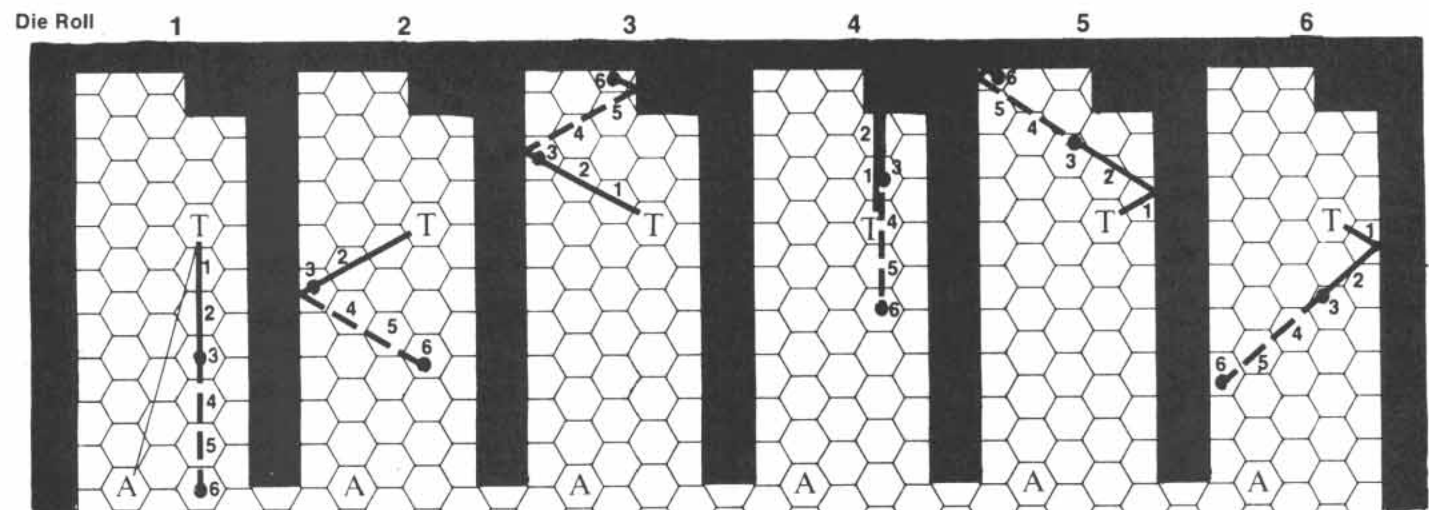
A character may utilize his throwing Skill BCS of his Deftness in making a throw, whichever will give him the best chance of success.

When a character fails to hit his target with a throw, the object thrown is subject to landing somewhere else. This is particularly pertinent when the character is tossing hand grenades. An object which misses will fall 2D3 meters from the target in a direction randomly determined by 1D6. The hex in the target's Zone of Influence that is intersected by the line drawn between the center of the thrower's hex and the center of the target's hex is considered to be 1 and the numbering proceeds clockwise from there. For simplicity, treat the object as if it were travelling from the target's hex to determine the destination hex. If the object encounters an obstacle before it has covered the required distance from the result of a throw of 2D3 (a Critical miss will double this distance), it will bounce according to the laws of physics. That is, its angle of reflection will be equal to its angle of incidence. This is a guideline for handling misses. It should not be used if the results yield patent absurdities. The Gamesmaster is advised to follow the spirit and intention of the rule rather than being slave to its letter.



Determination of Direction

Example assumes a missed BCS roll by the attacker (A is using Throwing Skill to hit target T). The margin of miss is 3 meters (from 2D3). The path to determine where the weapon falls is indicated by the solid line. A critical miss, doubling the margin of miss, is indicated by the dashed line.



SMALL ARMS

The details of the use of firearms are given in the section on guns on page 24. It is noted here that a character possessing the skill to fire a given format of gun such as a pistol may fire any loaded and ready pistol. The Skills are separated into Modern and Primitive to deal with the preparation before firing, drill while firing and basic maintenance after firing. The Skill can also be used as a measure of the character's ability to recognize specific weapons covered by the Skill.

Pistol, Modern

(standard: Presented) DFT + WT + Combative 3

Pistol, Primitive same as Pistol, Modern

Rifle, Modern (Refused) DFT + WT + Combative 3

Rifle, Primitive same as Rifle, Modern

SUPPORT WEAPONS

Autoweapon^A DFT + WT + Combative 1

This Skill is dealt with in more detail in the section on guns. It is primarily designed to deal with fixed mount automatic weapons. It also is used to average with the appropriate modern Firearm Skill if the character is using a weapon which has automatic or burst fire capability and is operating it in such a mode.

Breech Loading Artillery DFT + WT + Combative 1

This Skill covers serving as a member of a gun crew for a modern style breech loading artillery piece. As with many of the Support weapon Skills it has little place in the standard rules which are designed for man-to-man conflict but is included in the Skills listing as a guideline.

Direct Fire Cannon DFT + WT + Combative 1

This Skill is intended to cover such weapons as recoilless rifles, anti-tank artillery and tank main guns.

Grenade Launcher^A DFT + WT + Combative 1

This Skill covers the use of such weapons as the M-79 grenade launcher and also has an averaging function with such things as rifle grenades. When a miss occurs with one of these weapons use the procedure for a miss with a thrown weapon but the destination hex will be 2D10 meters away from the target hex instead of 2D3.

Missile Launcher WT + DFT + Combative 1
(Technology Use)

This Skill covers the launching and subsequent control of non-portable missile systems whether for surface-to-surface or surface-to-air systems.

Mortar DFT + WT + Combative 1

This Skill covers serving as a member of a mortar crew.

Muzzle Loading Artillery DFT + WT + Combative 1

This Skill covers serving as a crew member for a primitive cannon.

Primitive Seige Engine WT + DFT + Combative 1

This Skill governs the design and employment of such seige engines as catapults, rams, onagers, etc.

Rocket Launcher DFT + WT + Combative 1

This Skill covers the use of man-portable rocket and missile systems such as bazookas, LAWs and other portable anti-tank or anti-aircraft guided missiles.

NON-TECHNICAL PHYSICAL SKILLS

Beast Riding^A

This Skill governs the riding and controlling of horses.

Bicycle Riding^{T,A} DFT + STR + Mechanical 1

Allows operation and minor repair of bicycles, tricycles, and mopeds. A character making his Bicycle Riding BCS when under fire may add his Skill score divided by 20 and rounded down to the Combat Dodge Ability acquired for the speed of the vehicle.

Boating^T STR + WT + Natural 1

This Skill governs the running of small sail or oar powered vessels. It also serves to allow a character to function as a crew member on a large vessel of the type covered.

Climbing^S STR + DFT + Natural 1

This Skill governs the climbing of sheer surfaces or man-made edifices. The rate of climb is the result of a Deftness Group Effect Die roll multiplied by a factor representing the difficulty of the surface. This factor is at the discretion of the Gamesmaster. A Critical Failure on the Basic Chance of Success roll indicates a fall. A normal miss requires another BCS roll with another miss indicating a fall. A successful roll indicates no progress.

When climbing natural formations Climbing Skill is also useful.

Various pieces of equipment can be useful in aiding the BCS roll, increasing the distance climbed or preventing falls.

See also Climbing in Detailed Action Time on page 25 of Book 1.

Fishing^S DFT + WT + Natural 2(Trap/Hook)

This Skill allows the character to acquire food from the water. The character must be using some form of equipment and will use his BCS for the type in use. If using a net he would use his Trapping BCS.

The character will acquire a number of man-days of rations equal to the result of an Effect Die roll times a multiplier representing the abundance of fish in the area. This factor is at the Gamesmaster's decree. With Trap form, use character's Wit Group and with Hook form use his Deftness Group to determine the Effect Die to be rolled.

Acquiring these rations will take the whole day. Any travel done that day will reduce the character's base BCS to one half. More than a half day's travel will prevent him from practicing this Skill.

When Trapping a plus 1 will be added to the multiplier for each set trap. When using Hooking methods, a failure indicates the loss of 1D6 hooks while a successful roll means the loss of only 1D3 minus 1.

Gambling^{S,E} DFT + WT + Charismatic 1

This Skill can provide a source of income to the character if he is successful. The Effect Number of the character's roll indicates the multiplier to the base bet if he should win. If he fails his BCS roll the difference between the die roll and his BCS is the multiplier to the base bet used to determine his losses. The character's opponent will also make a Gambling BCS roll. If he makes it the Effect Number will be subtracted from the character's BCS before he rolls. If the opponent fails his roll, the difference between the roll and the BCS will be added to the Player Character's BCS before he rolls.

Initial equipment for this Skill will be dice or playing cards at the player's option.

Handicraft (specify)^S DFT + WT + Talent 1

This is a grouping of Skills rather than a single Skill. A character will have a specified handicraft such as rope making, basket weaving, pottery making, etc. A character may have more than one Handicraft Skill. The Gamesmaster will adjudicate which Talent is the Governing Talent for a particular Handicraft.

Any initial equipment would depend on the Handicraft in question and it is left for the Gamesmaster to decide what if anything would be received.

Seamanship^A HLH + DFT + Natural 1

This Skill represents the character's "sea-legs" and his general knowledge of the sea and its ways. For details of the effects of this Skill in Detailed Action Time see Effects of Water on Movement and Combat on page 32 of Book 1.

Survival (specify)^S HLH + WL + Natural 1

This Skill represents a character's basic capability to fend

for himself in a specified environment such as Rural, Urban, Artic, Desert, or Oceanic environments. A successful BCS roll will allow a character to gather enough food for a day in the environment where his Survival Skill operates. A die roll of 1 allows a Wit Group Effect Die roll to determine the number of man-days of rations acquired.

This Skill can also allow a character to recognize danger in the environment if a successful BCS roll is made.

Swimming^A HLH + STR + Natural 1

Any character may play in the water but this Skill is used to forestall drowning and to swim in dangerous waters. Details of the effects of Swimming Skill on movement in the water are given on page 32 of Book 1.

Combat Skills used while in the water are usually averaged with the character's Swimming Skill.

Tracking WT + Natural + Natural 1

This Skill allows a character to follow a trail. A BCS roll must be made at each decision point (anywhere the trail may lead in more than one direction). The older the trail is, the harder it will be to follow. The exact difficulty is left to the Gamesmaster. A basic difficulty might be -1 to the base BCS for every 3 hours that have passed since the trail was made.

Trails can also be obscured using this Skill. A successful BCS allows the character to roll the Effect Die for his Wit Group. This result is the negative modifier to the BCS of anyone trying to use Tracking Skill to follow the trail.

Hunting^S DFT + WT + Natural 2(Trap/Shoot)

In form this Skill operates exactly like Fishing Skill except that it operates in a non-watery environment.

When using Shooting, 1D6 rounds will be expended for each BCS roll whether or not it is successful. If the missile weapon in use has reusable ammunition, the character may recover a number of rounds equal to his Wit Group Effect Die Roll.

Search WT + WT + Natural 2(Urban/Rural)

This Skill represents a practiced ability to locate something significant. It is used for locating a useful item in a pile of junk, ascertaining the structural soundness of something like a staircase or a log over a chasm, and discovering things which have been hidden.

In general, one character will lead a search and his BCS will be modified by the number of other characters who are under his direction.

The Gamesmaster will decide if a particular application of the Skill requires Urban or Rural form.

Stealth DFT + WT + Natural 2(Urban/Rural)

This Skill allows the character to move and/or perform actions quietly. Outside of Detailed Action Time, a character may move a distance in meters equal to his Base Action Phase before having to check his Stealth BCS again. In Detailed Action Time, the checks are made on each Combat Turn.



The Gamesmaster should make the Stealth BCS rolls as the character would only know he was discovered if any noise he made had been heard. A failed BCS means that the noise made by the character is a "Hidden Thing." A Critical Failure requires a second BCS roll. Success this time means that the "Hidden Thing" is discovered on an Ability Saving Throw instead of a Critical Saving Throw and failure indicates that the character has been heard.

NON-TECHNICAL KNOWLEDGES

Advanced Farming^T WT + DFT + Natural 1
(Dirt Farming)

This is a reconstructionist Skill dealing with proper farm planning and scientific methods of maximizing production. A successful roll will increase the crop yield multiplier by .1 times the Effect Number. A failure will decrease the multiplier by the Effect Number. Critical failure results in the loss of the crop.

Soil analysis equipment, almanacs and weather forecasts, chemical fertilizers, etc., are needed to perform with this Skill.

Bowyer^T DFT + WT + Mechanical 1

This Skill allows a character to produce arrows and bows. With the proper materials and equipment, the character may, in a day, produce arrows or work on a bow. The character can produce a number of arrows equal to his Deftness Group Effect Die roll. The production work on a bow will take a number of days equal to 15 minus his Deftness Group Effect Die Roll. In the case of a bow using wood in its construction, the wood must be cured and prepared. This process will take 2D6 weeks but does not require the constant supervision of the Bowyer.

A unit of arrow type material (whether for heads, shafts, or fletching) will serve for 10 arrows. The tools needed for this Skill are found in a Tool Kit 1. A simple knife is sufficient but will triple all working times.

Carpentry^T DFT + WT + Mechanical 1

Using various tools with this Skill, the character may build various things of wood. A job should be rated by the Gamesmaster as to how many units of material it will take, its Task Value and Period.

This Skill utilizes the basic Task mechanic. Finished Task Points are based on the character's Deftness.

Commerce^A WL + WT + Charismatic 1

This Skill is used in the barter process in attempts to get a better "price," for either the good offered or those sought. It is averaged with the character's best Skill governing the use of the item sought or offered. In this case of averaging, the modified BCS may not exceed the BCS in Commerce although it may exceed that in the other Skill. Any Skill that deals with the item being bartered may be used to average with Commerce. For details of the barter process and the appropriate uses of the Commerce Skill see page 51.

Culture

WT + Communicative + Esthetic 2(Pre-/Post-Ruin)

This Skill represents the character's familiarity with the popular culture. It covers such things as slang, social conventions, general knowledge of local groups, etc. In its Pre-Ruin form it is also concerned with history and general knowledge of the situations and circumstances prevailing at the time of the Ruin. In campaigns set long after the Ruin, the Gamesmaster may declare Post-Ruin culture as the Skill available to all characters and treat Pre-Ruin Culture as a harder-to-obtain Skill that is really History. He may also, in such circumstances, create another Skill of Legendry which deals with the popular notions of what it was like "back then." Such a Skill would be more easily attainable than History.

Dirt Farming^T HLH + DFT + Natural 1

This Skill allows a character to raise a crop. Hoes, plows, gathering equipment and seeds are needed. The basic yield is the character's Wit Group Effect Die roll divided by 2 and rounded to the nearest tenth. This is multiplied by the units of seed in cultivation to get the units of crop.

Fermentation^T WT + Natural + Natural 1

This Skill allows a character to produce such things as beers, wines, and meads. The Effect Die roll of the Group for the character's combined Wit and Deftness times 10 is the percentage of the starting materials that is transformed into liters of potable product (to a maximum of 100%). The maximum percentage of alcohol present is equal to the Effect Number. This may be reduced to any level below the maximum that the character desires.

A character may work with a number of units of raw materials (yeast, water, and fermentable material) equal to his Deftness times 2. Exercising this Skill is usually done in weekly turns. The character may perform other long-term actions during the week but he will be Hindered by his activity using this Skill.

Foreign Language (specify) WT + WL + Communicative 1

This is the ability to speak a foreign language. The exact language must be specified. Literacy in the language is a separate Skill.

Interrogation^S WL + WT + Charismatic 1

This Skill allows a character to interrogate another to get information from him. The Gamesmaster will present the interrogator with conclusions drawn from the information gotten from the subject. A Critical Miss will result in incorrect conclusions being drawn.

For each period of interrogation, the interrogating character will roll the Effect Die for the Group of the sum of his Wit and Will. This will give a base number of "interrogation points." The subject will make a Will Saving Throw. A critical save (die roll of 1) means that he will never break in this interrogation although the Gamesmaster need not inform the players of that fact. A roll in his Critical Saving Throw range will divide the base number of "interrogation points" by 3, round down, and a roll in the Ability Saving Throw range will divide them by 2, round down. When the total of "interrogation points" exceed the subject's Will Attribute score he has "broken" and will tell the interrogator what he can. If the subject's Will Saving Throw is a 20 at any point, he is considered to have broken in that session.

Application of sophisticated methods of physical or psychological torture will act as multipliers to the base "interrogation points." The exact value of such things is left to the fiendish imagination of the Gamesmaster. Alternatively, they may make the interrogation period shorter, or make it both shorter and more effective.

A basic interrogation period of 1 hour is recommended as a starting point.

Leatherworking^T DFT + WT + Esthetic 1

Leatherworking Skill allows a character to produce well-tanned hides with a successful BCS roll. A failed roll results in poorly-tanned hides. The character may make hides into garments. This requires 1 unit of hide per Location to be covered and has a Task Value equal to the Armor Value on one Location times the number of Locations to be covered.

The process of Hardening leather takes a week. A character with Leatherworking Skill may supervise the Hardening of a number of garment equal to his Wit Group.

Literacy (specify) WT + WT + Communicative 1

This Skill governs the reading and writing of a language. When using a book the character must make a Literacy BCS roll to receive any benefits. The language(s) in which the character is literate must be specified.

Masonry^S DFT + DFT + Mechanical 1

This Skill allows the character to perform such tasks as bricklaying. The Gamesmaster will assign a Task Value and the character may perform it following the basic Task rules.

This Skill may also be used to gauge the strength of a wall or man-made edifice.

Nutritionist WT + Scientific + Natural 1

This Skill allows a character to determine the edibility of foodstuffs. This allows contaminated food to be avoided.

Repair, Muscle powered vehicles DFT + WT + Mechanical 1 (Carpentry)

This Skill represents the character's knowledge of such things as carts, sledges, wagons, and other such conveyances. A BCS roll is made to determine the job to be done, which is then accomplished with Carpentry Skill.

Salvage Food WT + DFT + Scientific 1 (Nutritionist)

This Skill allows a character to salvage a portion of contaminated foodstuffs. A successful BCS roll allows the character to make a Wit Group Effect Die roll. This result is multiplied by 5 to give the percentage of the food that is salvaged.

Tactics WT + Combative + Communicative 1

This Skill allows a character to make observations of the tactical situation, causing the Gamesmaster to give the player information regarding the situation that the player has not figured out for himself. Such things as where the leader is, the possible presence of snipers or flanking forces, the implications of an observed move on the part of an enemy, etc., can be learned. The exact knowledge given out is at the discretion of the Gamesmaster and should be considered carefully.

Tailor^T DFT + DFT + Esthetic 1

This Skill allows a character to produce garments in Flexible, Quiltable materials. Garment production follows that presented with Leatherworking Skill.

Weaver/Spinner^T DFT + WT + Esthetic 1

With this Skill a character can produce fabric from raw materials. The raw materials are rated by the Gamesmaster in units which will provide a unit of fabric that may then be used with Tailor Skill.

TECHNICAL PHYSICAL SKILLS**Automobile Driving^T** DFT + WT + Mechanical 1 (Technology Use)

This Skill governs the operation of cars and trucks.

Basic Research^S WT + WT + Scientific 1

This Skill represents the character's ability to get information from research materials. It is a basic Skill required for some sciences. In cultures with computer storage of such materials, the additional use of Technology Use will allow a character access to such materials.

Heavy Equipment Driving^T DFT + WT + Mechanical 1 (Technology Use)

This Skill governs the operation of such things as bulldozers, cranes, and other earthmovers. It also governs the driving of military vehicles such as tanks and armored personnel carriers.

Lab Technique^T DFT + WT + Mechanical 1 (Technology Use)

This Skill represents the character's ability to perform functions in a laboratory environment. It is used to perform tasks which require chemical synthesis or analysis.

This Skill is required for many advanced scientific knowledges.

Lockpicking^{T,E} DFT + WT + Mechanical 1

The name of this Skill explains its nature. The rules for locks and lockpicking are found in Book 1 on page 46.

Magnalock Penetration^{T,E} DFT + WT + Mechanical 1
(Technology Use)

Magnalocks are locks using "card-keys." They require power to be operative. If they are operative, a character with this Skill, who also has a magnatuner, can attempt to open them. They operate like combination locks (as presented on page 46 in Book 1) in that they have "numbers" in the "combination" which must be separately achieved.

Motorcycle Driving^{T,A} DFT + WT + Mechanical 1
(Technology Use)

This Skill governs the control of motorcycles. It can also be used for controlling mopeds.

Powerboat Pilot^T DFT + WT + Mechanical 1
(Technology Use)

This Skill governs the control of motor-powered small craft.

Technology Use^S DFT + WT + Mechanical 1

This is a basic Skill required for most technical Skills. It represents the character's ability to deal with mechanical contrivances and the rationale behind them. For example, to operate an elevator correctly a character would require Technology Use Skill.

TECHNICAL KNOWLEDGES

Aerial Recon Interpretation^S WT + Scientific + Esthetic 1
(Technology Use, Basic Research, and Mathematics)

A successful use of this Skill allows correct interpretation of aerial reconnaissance photographs and other similar intelligence materials.

Advanced Medical^S WT + DFT + Scientific 1
(Lab Technique and First Aid)

Many of the applications of this Skill are given in the sections on damage and healing in the first book.

Architecture^S WT + Scientific + Mechanical 1
(Technology Use, Basic Research, and Mathematics)

Besides allowing a character to perform the Task of designing structures, this Skill allows a character to gauge the structural soundness of a man-made construction.

Armorer^T DFT + WT + Mechanical 1
(Blacksmithing for metal armors/Plastics Forming for plastic armors)

This Skill allows the character with the proper tools to produce armor in the same way that a character with Leatherworking Skill produces garments, except that his score in Armorer Skill is averaged with his score in the Skill governing the material being worked in order to determine the character's BCS for performing the Task. This BCS is not to exceed the lower of the two normal Basic Chances of Success.

This Skill requires a "forge" and the proper tools for working the materials involved.

Automobile Mechanic^T DFT + WT + Mechanical 1
(Technology Use)

This Skill allows a character to make repairs on cars, trucks, motorcycles and other land vehicles. Repairs are treated as a Task. Details of Repairing vehicles are found in the section on Vehicles on page 62.

Blacksmithing^T DFT + WT + Mechanical 1
(Technology Use)

This Skill allows the character to make useful items out of metal. Each item is treated as a Task and the Gamesmaster must decide on the required amount of raw material and the number of Task Points involved.

This Skill is also a basic requirement if a character wishes to make metal armor although the actual Task is accomplished using an averaged BCS.

Practice of this Skill requires a forge and blacksmithing tools.

Botany^S WT + Scientific + Natural 2(Pre-/Post-Ruin)

This Skill allows the character to recognize plant life. If the plants involved have specific functions in the game, the Gamesmaster would inform the player of the nature of those functions.

Chemistry^S WT + Scientific + Mechanical 1

This Skill is a basic science required for the basic performance with Skills requiring chemical knowledge.

Computer Science^S
(Technology Use) WT + Scientific + Mechanical
2(Programming/System Design)

Each of the areas of this Skill works differently.

For each 20 points of Programming the character acquires 1 computer language. A character must know the correct language for a program in order to apply Programming Skill. Either a character knows a language or he does not. Variations on a language are treated as negative modifiers to his BCS roll. Computer languages are numbered 1 to 5 for convenience. Any Gamesmaster wishing to get into more specific detail is encouraged to do so, but he should remember that some of his players may not have the same expertise with modern computers that he does.

With Programming, a character may write new programs for a computer as a Task. Cracking a computer's security is a lengthy Task and should have increased turn lengths on the order of a week per turn, as opposed to a normal Programming turn of a day.

System Design is the Skill used to coordinate the programming of a computer with the various peripheral devices which will execute the program and perform the functions called for in the program. The proper design for integrating all this is treated as a Task.

Decontamination^S WT + DFT + Scientific 1
(Lab Technique)

This Skill represents the character's ability to cope with decontamination of persons and things with regard to nuclear, biological, or chemical contaminants. Proper technique may require equipment. A successful BCS roll will mean that the character knows the proper technique. A second roll, and the proper supplies or equipment, are necessary to complete the process.

Defusing Explosives^{A,S} DFT + WT + Mechanical 1
(Technology Use)

The name of this Skill is self-explanatory. To perform with it, a character must average his score in this Skill with the score in the Skill governing the type of explosive to be defused in order to determine his BCS. At the Gamesmaster's decree the Task of defusing an explosive device may require tools. The Task Periods may be as short as 1 Combat Turn.

A failure will mean the device will explode at its planned time. A Critical failure will cause it to explode immediately. A character with a BCS of 20 will avoid the critical failure if he can make a Deftness Critical Saving Throw.

Demolitions^{A,T} DFT + WT + Mechanical 1
(Technology Use)

This Skill governs the placement and use of explosive substances. A character will average his score with his score in the Explosives Skill governing the type of explosives in use. Details of use of this Skill are given in the section on explosive devices on page 44.

Distillation^T WT + Mechanical + Scientific 1
(Technology Use)

This Skill allows the character to distill alcohol, either for consumption by humans or for vehicles. The percentage of starting materials turned into liters of usable alcohol is the sum of the character's Wit Group and Deftness Group Effect Die rolls multiplied by the Efficiency Factor of the still. A character may work with a number of units of raw materials equal to his Deftness plus his Wit. Exercising of this Skill is usually done in weekly turns. This Skill requires the character's full attention.

A home-made still built by a character with Distillation Skill will have an efficiency factor of .1 times the sum of that character's Effect Die rolls for his Wit and Deftness Groups. No still will give more than a 90% efficiency.

Electrician^S DFT + WT + Mechanical 1
(Technology Use)

A character with this Skill may perform electrical repairs and rework circuits. Such attempts are Tasks and will be treated as such. Some operations will require tools but the simple tracing of a circuit will not. This Skill does not include the design of new electrical circuits, although it will allow a character to build a new one from a circuit diagram and the proper materials.

Encryption WT + Scientific + Esthetic 1
(Basic Research)

Decoding and encoding messages are Tasks. Decoding requires a successful BCS roll to achieve the character's Wit Group Effect Die roll in Task Points finished. Critical success indicates the code is broken and critical failure seems to indicate the same thing but the message will be read incorrectly. Encoding does not require a BCS roll but the character still requires time to perform the Task.

A code will subtract its Difficulty from the BCS roll of any character trying to break it. A character can produce a code as a Task. In weekly turns, the character may finish a number of Task Points equal to his Wit Group Effect Die roll. For every 20 points thus accumulated, the character will give the code a difficulty of 1. The maximum difficulty that a character may give to the code is equal to twice his Wit Group.

Firearms Repair, Modern^T DFT + WT + Mechanical 1
(Firearms Repair, Primitive and Machining)

This Skill allows a character to restore Durability to firearms given time, equipment, and parts. It also allows a character to lay down specifications for parts of firearms to be produced using other Skills such as Machining.

Each point of Durability requires a unit of parts, a Tool Kit 2 and the accomplishment of 10 Task Points.

Firearms Repair, Primitive^T DFT + WT + Mechanical 1
(Blacksmithing or Machining)

This Skill functions as the Modern form except that it is used for "primitive" firearms.

First Aid^{S,E} WT + DFT + Scientific 1

This Skill covers basic medical treatment on an immediate level. Specific applications are given in the section on damage and healing in Book 1.

Handloading^T DFT + WT + Mechanical 1
(Technology Use)

This Skill allows a character to reload spent centerfire cartridges when he has the tools, supplies, and time necessary.

Handloading Kits are classified as pistol, rifle, or shotgun. They are also rated for an Efficiency Factor. Cartridges and bullets are specific to a given caliber. Primers are interchangeable and powder is allocated according to the BDG. For each reloading period of an hour, a character may assemble a base number of rounds equal to his Deftness Group Effect Die roll. This base number is multiplied by the modified Efficiency Factor of the Handloading Kit to give the

maximum number of rounds that may be reloaded in that period. A single round requires 1 primer, 1 cartridge of a specific caliber, 1 bullet compatible with the cartridge, and a number of "grains" of powder equal to the BDG of that caliber.

A round may be loaded with twice the normal powder to achieve a Hi-V round.

The Efficiency Factor of the Handloading Kit will be altered by the results of the character's BCS roll. If successful, the Effect Number times .1 will be added to the Factor and, if unsuccessful, the Effect Number times .1 will be subtracted from it. A Critical failure means that the expected number of rounds are completed but, when fired, they will automatically indicate a Critical Miss. Control Throws will be applicable at that point.

Internal Combustion Engine^S
(Physics and Mathematics) WT + Scientific + Mechanical 1

This Skill represents the character's facility with understanding and designing internal combustion engines. Design is, of course, a Task and weekly turns are usual. This is not a repair Skill.

Machining^T DFT + WT + Mechanical 1
(Technology Use)

This Skill is a metal-working Skill allowing a character to produce metal artifacts when using at least a Tool Kit 2. Each artifact will be rated by the Gamesmaster as a Task.

This Skill can also govern woodworking with power tools.

Marine Mechanic^T DFT + WT + Mechanical 1
(Technology Use)

This Skill functions as does Automobile Mechanic except that it deals with vehicles which move on the water.

Mathematics^S WT + Scientific + Communicative 1

This is a basic scientific Skill and is also required if a character is to perform mathematical computations.

Mechanically Generated Power^S
(Technology Use and Physics) WT + Mechanical + Scientific 1

This Skill represents the character's understanding and familiarity with such things as windmills, waterwheels, and other devices used to gain mechanical advantage. It also covers his ability to design such devices.

Operational Command
(Tactics) WT + Combative + Scientific 1

This Skill is used by the commander of a side in Tactical Level Combat as explained in Book 3. It represents the ability to command large groups of men in military endeavors.

Pathology^S WT + WT + Scientific 1
(Chemistry and Advanced Medical)

This is the medical Skill which deals with diseases. Details are given in the section dealing with diseases in Book 1.

Pharmacy^S WT + DFT + Scientific 1
(Chemistry and Lab Technique)

This Skill represents the character's knowledge of the techniques necessary to produce particular drugs. A successful BCS means that he has remembered the technique correctly. Critical failure means that he only believes that he has, and the end product will be something else entirely.

The actual production of a drug requires the exercise of Lab Technique Skill. Each drug should be rated as a Task and Task Periods are usually a day. Once the Task is finished, the number of units of drug will be determined. A potential unit of drug will consume a number of units of chemical supplies. The maximum number of potential units controllable by a character is equal to his Wit Group times the Efficiency Factor of the Lab, round nearest. The

percentage of potential units of drug that are actually made into usable drug is equal to the character's Wit Group Effect Die roll multiplied by 10 and then multiplied by the modified Efficiency Factor of the Lab in use. The maximum conversion rate is 90%. Any fractional units are lost. The Efficiency Factor of the Lab is modified by the character's Pharmacy BCS roll's Effect Number in the usual fashion. This roll is separate from the roll to determine if he knows the correct technique.

If any of the Lab Technique rolls should be a 20, the resultant drugs will actually be poisons. The formula is left to the Gamesmaster but it is suggested that it reflect the formula or effects of the drug that was supposedly being synthesized. A Pharmacy BCS roll, modified by the Effect Number from the roll which produced the poison, will detect it at the end of the process.

Physics^S WT + Mechanical + Scientific 1
(Mathematics)

A basic scientific Skill required for advanced techniques.

Plastics Forming^T DFT + WT + Mechanical 1
(Technology Use)

This Skill allows a character with the tools and units of plastic stock to produce artifacts of plastic. Each artifact will be rated by the Gamesmaster as a Task for the amount of raw material to be consumed, time period required, and number of Task Points.

Practice of this Skill requires the use of a Plastics Forming Kit. Such Kits will be rated for weight of plastics that they can deal with and for the type of forming that may be done with them.

Radio Communications^S WT + DFT + Mechanical 1
(Technology Use)

This Skill represents the character's understanding of the principals and mechanics of radio communication and the devices used in it. Electrician Skill is required to make repairs or build such devices but a character with Electrician Skill must follow the directions of a character with this Skill to do so.

Design of radio communications is a Task that is governed by this Skill.

Simple Explosives^S DFT + WT + Mechanical 1
(Chemistry and Lab Technique)

This Skill functions with respect to producing "simple" explosives such as TNT, nitroglycerine, blasting caps, etc., as Pharmacy Skill does with respect to drugs.

Initial critical failure on the Simple Explosive BCS roll will result in an inert substance. The explosive's equivalent of a poison is an unstable substance which will explode at the end of the manufacturing process. The Simple Explosives BCS roll to identify such a failure may be made before the explosion, allowing the character to abort the process with only the loss of time and materials.

This Skill also represents the character's ability to assemble simple detonation devices and the proper placement of explosives of the type covered by the Skill.

Strategic Command WT + Scientific + Combative 1
(Operational Command)

This Skill is a higher powered version of Operational Command Skill. It is called into play when the Gamesmaster wishes to resolve the results of a whole series of Tactical Level Battles forming a military campaign in short order. If he is using the military campaign rules presented in Book 3, this Skill has a different function which is explained in detail there. Simply put, it may affect the "size" of the forces involved.

Telegraphy^S DFT + WT + Mechanical 1
(Technology Use)

This Skill functions as does Radio Communications Skill,

except that its area of expertise deals with telegraph communications.

Telephone Communications^S WT + DFT + Mechanical 1
(Technology Use)

This Skill functions as does Radio Communications Skill, except that its area of expertise deals with telephone communications.

Television Communications^S WT + DFT + Mechanical 1
(Technology Use)

This Skill functions as does Radio Communications Skill, except that its area of expertise deals with television communications.

Therapy^S WT + DFT + Scientific 1
(Advanced Medical)

This advanced medical Skill deals with restoration of lost Attribute points and maintenance of current scores. Details of applications of this Skill are given in Book 1 in the sections on damage and healing and in the section on the effects of aging.

Weaponsmithing^T DFT + WT + Mechanical 1
(Blacksmithing or Machining for metal; Machining or Carpentry for wood)

This Skill is the weapon-producing counterpart of Armorer Skill. The prerequisite Skill will depend on the type of weapon to be made. The Task Value of a weapon is its basic WDM times its Survival Value and the basic Task Period is a day.

When a weapon has a wooden shaft and a metal head, each part must be made separately and not necessarily by the same character. The Task Value of the head is twice the WDM and the Value of the shaft is twice the Survival Value.

A die roll of 1 during the process will add .1 times the character's Deftness Group to the WDM or subtract that value from the ENC Value at the weaponsmith's choice. A die roll of 20 will both add to the ENC value and subtract from the WDM a number equal to .1 times the Effect Number.

Machining metal for an edged surface (a weapon which does L type damage) will reduce the WDM by .1 times (6 minus the character's score in Machining divided by 20 and rounded down).

The character's score in Weaponsmithing Skill is averaged with his score in the Skill covering the material being worked on to determine the character's BCS for performing the Task.

The tools required for this Skill are those required for the Skill being used on the particular material.

Zoology^S WT + Scientific + Natural 2(Pre-/Post-Ruin)

This Skill is the counterpart of Botany Skill. It deals with the character's knowledge of animals. A successful BCS roll would allow the player to view the entry for the animal in Book 3, if it is a standard one, or the entry in the Gamesmaster's notebook, if it is one he has added to the list.

HIGH TECHNOLOGY PHYSICAL SKILLS

(All these Skills require Technology Use)

Aviation Mechanic^T DFT + WT + Mechanical 1
(High Technology Use)

This Skill is the counterpart to Automobile Mechanic but is used for aircraft.

High Technology Use^S DFT + WT + Mechanical 1

This Skill allows the character to deal with highly technological devices that are not covered by a specific Skill. In some cases, it will also allow him to use devices that are covered under a particular Skill, although he will not have the facility with them nor will they have the versatility normally accruing to them that a character with the proper Skill will have. This latter case applies to ECM devices, control boards, and other equipment.

Pilot, Fixed Wing^T DFT + WT + Mechanical 1

This Skill governs the operation and control of fixed-wing aircraft.

Pilot, Submersible^T DFT + WT + Mechanical 1

This Skill governs the operation and control of small underwater vehicles such as mini-sub.

Pilot, Rotary Wing^T DFT + WT + Mechanical 1

This Skill governs the operation and control of rotary-winged aircraft such as helicopters.

Pilot, Spacecraft^T DFT + WT + Mechanical 1
(Zero-G Training and High Technology Use)

This Skill governs the operation and control of small to medium spacecraft such as the shuttle.

Pilot, Variable Wing^T DFT + WT + Mechanical 1

This Skill governs the operation and control of VTOL or STOL aircraft such as the Hawker Harrier.

Safecracking^{T,E} DFT + WT + Mechanical 1

This Skill governs the opening of combination locks without having the combination. Combination locks are dealt with on page 47 of Book 1.

SCUBA Diving^{A,T} DFT + WT + Mechanical 1

This Skill governs the use of underwater breathing apparatus. It may be used to substitute for Swimming Skill whenever it is called for in the rules for operating underwater in Detailed Action Time on page 33 in Book 1.

A diver may add a number of combat turns (equal to his score in the Skill divided by 20 and rounded down) to the maximum time he may hold his breath.

Zero-G Training^A SPD + DFT + Natural 1

This Skill is used in a zero-G environment in much the same way that Swimming Skill is used when the character is in water over his head. All physical Skills must be averaged with it to determine the base BCS, which in this case is never higher than the BCS in whichever Skill has the lower BCS.

HIGH TECHNOLOGY KNOWLEDGES^S

Complex Explosives DFT + WT + Mechanical 1
(Simple Explosives)

This Skill is an advanced form of Simple Explosives Skill and operates in the same way but deals with more advanced explosives such as plastic explosives and other such wonders of modern technology.

Computer Design WT + Scientific + Mechanical 1
(Computer Science, Mathematics, and High Technology Use)

This Skill allows the character to design computer hardware as a Task. Once designed, it must be built and powered before it can be operated. This Skill is also useful in figuring out a computer layout, if one should be found, and determining what would have to be done to get it functioning again.

ECM Operation^T DFT + WT + Mechanical 1
(High Technology Use)

This Skill allows a character who has access to Electronic Counter Measure equipment a chance to increase its efficiency by the Effect Number of his BCS roll. He may decrease it if his BCS roll fails.

Laser Technology WT + Scientific + Mechanical 1
(High Technology Use)

This Skill represents the character's understanding of laser technology for the purposes of working with it, repairing it or designing it. Any repair or construction work would be in the province of an appropriate Skill but the knowledge of what to solder where, for example, would come from this Skill. Designs or other working diagrams are a Task.

Plastic Synthesization^T WT + Scientific + Mechanical 1
(Chemistry and Lab Technique)

This Skill allows a character, with the proper equipment and the raw materials, to produce plastic stock. The process works as the production of drugs using Pharmacy Skill. The equivalent to the production of a poison is a useless batch which only costs time and raw materials. For a Lab, a Plastics Synthesization Kit is substituted. These are rated according to Efficiency Factor and type of production.

Power Generation, Electrical
(Physics, Mechanically Generated Power, and Electrician)
WT + Scientific + Mechanical 1

This Skill is concerned with the design and operation of power plants to generate electrical energy from fossil fuel or hydroelectric sources. Design of such plants is a very large Task.

Power Generation, Nuclear WT + Scientific + Mechanical 1
(Power Generation Electrical)

This Skill is similar to the one above but deals with nuclear energy sources.

Power Generation, Solar WT + Scientific + Mechanical 1
(Physics and High Technology Use)

This Skill is similar to those above but deals with solar energy sources.

Production of Fuel, Hydride^T WT + Scientific + Mechanical 1
(Chemistry and Lab Technique)

This Skill allows a character, with the proper equipment and the raw materials, to produce metallic hydrides which release hydrogen to be burned as fuel in certain engines. This process works as the production of drugs using Pharmacy Skill. The equivalent of a poison is a lab explosion with a blast effect equal to the Effect Number of the roll which produced it. This explosion will, in any case, destroy that batch and the raw materials involved. The total damage done is the percent chance that the Lab will be totally destroyed. If it is not destroyed it will be Disrepaired (40% chance) or Junked (the other 60%).

Production of Fuel, Petroleum^T
(Chemistry and Lab Technique)

WT + Scientific + Mechanical 1
This Skill allows a character, with the proper equipment and the raw materials, to produce fuel petroleum. This process works as the production of drugs with Pharmacy Skill. The equivalent of a poison is a lab explosion as detailed above.



FIREARMS

Characters may well be said to live (and die) by the Gun. Current estimates place millions of weapons and billions of rounds in this country alone. With modern storage techniques, guns and ammo broken out of factory packaging will almost certainly work as well 20-30 years after manufacture as they do fresh from the maker.

Gamers with firearms experience will find some rules here that they disagree with (if we may judge by the response from our playtesters). As always, the Gamesmaster may certainly choose to modify the rules for his campaign in any way he sees fit. We would like to point out that more "authentic" gun rules may be difficult for Players who do not share his experience with such weapons, and counsel prudence in any such expansions.

This chapter is divided into several sections:

- A brief introduction to the workings of modern firearms. Rules for the operation of guns.
- Rules for ammunition and gunshop effects.
- Other firearms (machine guns, black powder weapons, heavy weapons, mortars, etc.).

Appendices appear at the end of Book 3, containing examples of real weapons translated into **Aftermath!** terms and a Gun List for the Gamesmaster's use.

HOW GUNS WORK

This section is primarily intended for those who require an overview of how firearms function, and to provide readers with the underlying rationale behind the **Aftermath!** gun rules.

A firearm is any weapon using the force generated by igniting gunpowder to fire a projectile. This definition covers everything from early cannon-locks to M-16, from derringers to howitzers.

The firearms we will be concentrating on in this section and the weapons most often used in **Aftermath!** are classified as SMALL ARMS. By this we mean weapons which are designed to be carried easily and used by a single character. Heavier weapons, such as machine guns, mortars, bazookas, etc., are classified as SUPPORT WEAPONS, and are discussed on page 37.

There are two primary forms of Small Arms: Pistols and Long Guns, the latter also called Shoulder Arms. The Revolver is the commonest example of the Pistol, and the Rifle is the obvious example of the Long Gun. The only real effect these classifications have in the game is the question of which Skill is used to fire the weapon in combat: PISTOL Skill applies to Pistols, and RIFLE Skill to Long Guns.

A Pistol is defined as being small enough to fire easily in one hand, although two may be required in the case of very long ones. Their other distinguishing feature is the fact that they are held by a pistol grip, or butt, having no shoulder stock.

Long Guns are usually possessed of barrels over 18" (50cm) and are fitted with a Shoulder Stock. This latter feature is their main distinguishing mark. They are generally heavier and fire more powerful ammo than Pistols, with greater range, accuracy and hitting power.

PHYSICAL SPECIFICATIONS

In these rules we will be quantifying a number of physical characteristics of "real" weapons for purposes of constructing a game model.

BARREL LENGTH

Up to a given length, the longer a barrel is, the faster its bullet will travel. Longer weapons are more accurate (as a rule) than shorter ones. This is one reason why rifles have greater range than pistols, and fire with more power. But of course, the longer a barrel is, the bulkier the weapon will be, making for higher Encumbrance, and requiring two hands to fire properly.

The standard abbreviation for "Barrel Length" is BBL. The standard BBL values are as follows:

PISTOLS

- Snub-nosed (SNUB): BBL less than 3" (7.62cm).
- Short (SHT): BBL 3-4" (7.62-10.16cm)
- Standard (STD): BBL 4-7" (10.16-17.78cm)
- Long (LNG): BBL 10-12" (17.78-25.3cm)
- Extra Long (XLNG): BBL 10-12" (25.4-30.48cm)
- "Pistol Carbine" BBL 12" (30.48cm) or more

All of the Pistol sizes are fired using PISTOL Skill; however it requires TWO hands to properly handle any weapon with a "Pistol Carbine" BBL.

Long guns will rarely run shorter than about 16" in length.

LONG GUNS

- Carbine: Any Long Gun with a BBL of 20" (50.8cm) or less
- Rifle: Any Long Gun with a BBL of over 20" (50.8cm)

Also included in this class are Shotguns and certain automatic weapons, called Sub-Machine guns. It requires two hands to properly fire any Long Gun.

In keeping the playing record of any firearm, the class of BBL must be noted, as it will be referred to often.

ENCUMBRANCE

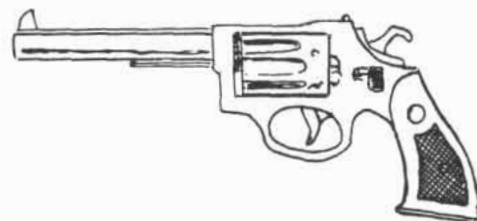
The Encumbrance of a gun is drawn from the weapon's size and the weight of the "real" model being adapted to the game system.

A Base ENC is assigned to the form of the weapon, to which its "real" weight in kg/10 is added.

- Pistol SNUB or SHT: Base ENC equals .2
- Pistol STD or LNG: Base ENC equals .3
- Pistol XLNG: Base ENC equals .5
- "Pistol Carbine" or Carbine: Base ENC equals .7
- Rifle: Base ENC equals 1
- Shotgun: Base ENC equals 1.2
- Riot Gun (Sawed-off Shotgun): Base ENC equals .8

Eg. the M-1 Garand Rifle of WWII is a BIG gun. Weighing in at 4.4 kg (9.5 lb.) it will have an ENC of 1 (Base ENC for Rifles) plus .4, or 1.4.

Contrariwise, a little 32 ACP caliber autoloading pistol, a "Saturday Night Special," weighing barely 10 oz., has an ENC of .24.



357 Magnum

GUN ACTION

The Gun Action is the internal mechanism of the weapon, controlling how often it fires, the manner in which it clears the spent cartridge casing, prepares a new cartridge, cocks, and fires again.

There are three major classes of Gun Action:

SINGLE SHOT ACTIONS: The weapon requires manual action by the firer to prepare for each shot. The principal forms of Single Shot Actions are as follows:

Single Shot (SS): The weapon only holds one cartridge at a time. After it is fired, the gun must be reloaded.

Single Action (SA): The weapon must be manually cocked after each shot. This type of Action is usually found in the "six-shooters" of the Old West, although modern replicas of these guns may also be made with Single Action mechanisms.

Bolt Action (BA): Usually found only in rifles, a bolt mounted at the back of the barrel must be worked manually to eject the spent shell, chamber a new one for firing, and cock the weapon.

Lever Action (LA): The famous Winchester carbine is the classic example of a Lever Action rifle. A lever mounted around the gun's trigger must be pumped to perform the "eject-chamber-cock" cycle needed for the next shot.

Pump Action (PA): This is also called "Slide Action," or even "Trombone Action." A sliding sleeve is mounted along the bottom of the gunstock, along the barrel. The firer must pump this forward and then back in order to eject, chamber, and cock the weapon.

MULTI-SHOT ACTIONS: These firearms are designed so that all the user needs to do for his next shot is pull the trigger. The principal forms are:

Double Action (DA): Found only in revolvers, as a rule; the trigger pull also cocks the weapon and turns the cylinder to present the fresh cartridge for firing.

Autoloading (AL): Also called "Semi-Automatic." This type of weapon is often referred to as an "Automatic," but this is a misnomer. An automatic weapon fires a continuous stream of bullets as long as the trigger is held down. See below for more details. The classic AL pistol is the Army Colt 45 M1911A1. In rifles, the M1 Garand of the WWII infantryman stands out in one's memory. Autoloaders carry their ammo in a spring-fed "clip." When the gun fires, part of the force generated is channelled to throw the weapon's bolt, ejecting the old cartridge. The clip's spring then snaps a new one in place. Meanwhile, the bolt is recovering from the effects of the last shot, but instead of coming back to the fully closed position, it stops in the cocked position. All this takes mere fractions of a second, with the result that all the firer is aware of is that each time he pulls the trigger, the gun will fire.

AUTOMATIC WEAPONS: As stated above, the term "Automatic" refers to weapons capable of fire which continues as long as the trigger is depressed. There are two forms of Automatic Gun Action found in Small Arms.

Full Automatic (FA): The weapon fires "Bursts" of bullets, instead of single rounds as non-automatic guns do. Such Bursts can be long or short, but generally Small Arms cannot be built durable enough to allow unlimited autofire. The longer a Burst is maintained, the greater the chance that the weapon will jam, as some element of its mechanism falls out of synch with the murderous rhythm of the discharge.

Auto-Burst (AB): The Autoburst feature is a recent development in firearms design. Military doctrine has long maintained that the maximum efficiency of automatic fire

in close combat is achieved by firing short bursts of 3-4 rounds each. However, under stress, many a dogface will clamp down on his trigger, spraying bullets wildly and emptying his clip to no profit. Thus, many new assault rifles and sub-machine guns incorporate an intermediate setting between AL fire (semi-automatic) and FA, or Full Automatic. This is the Auto-Burst. The weapon will fire a set number of rounds (usually 3) every time the trigger is pulled. This permits the use of automatic weapons without wasting shots or causing unforeseen jamming.

It should be mentioned that automatic fire can be found as a Gun Action in several different forms of gun. Modern military rifles and carbines generally have autofire capability. There are also the Sub-Machine Guns, or "SMG," which come in two sizes. The larger is classed as a Carbine, the smaller as an XLNG Pistol.

As noted in the description of Autoweapon Skill (p. 17) the user of a weapon firing FA or AB must average that Skill with the one governing the use of that size/shape of gun. Thus, firing a Pistol form SMG would require averaging Autoweapon and Pistol Skills. The use of a larger SMG, or an automatic Carbine or Rifle, averages the Rifle Skill with Autoweapon.

Feature

Folding Stock

Many SMG and some other weapons have this Feature, a shoulder stock which can be removed or folded out of the way. When this stock is extended, the weapon is fired using Rifle Skill in combination with Autoweapon to derive the BCS. When the stock is folded up, the Skill used is Pistol.

AMMUNITION

In discussing the specifications of a gun, only two aspects of the ammunition it fires need be taken into account: WHAT does the weapon fire, and HOW is it loaded?

Further discussion of ammunition and its effect will be found in the section entitled "Bullets and Ballistics" (p. 34).

CALIBER

The question "What does the gun fire" relates to the particular cartridge it is designed to use as ammunition. As a rule, if a gun is made to use one type of cartridge, it cannot fire any other round at all. Trying that will only get you an exploding weapon in your hands. Most unpleasant.

Many people are aware that cartridges are measured by their "Caliber." Most also know that Caliber is a measure of the bullet's diameter either in inches or in millimeters. Giving things a bit of thought, it becomes apparent that a ".45 Caliber" slug cannot be 45 inches across, and the reason why it is properly written as ".45" becomes clear. But what most people do not know, unless they are familiar with guns to some extent, is that there are about 3 different kinds of ".45 Caliber" ammunition in existence, none of which are interchangeable. Likewise, such arcane facts as the similarity between NATO's 7.62mm cartridge and the .308 Winchester load (they are the same) are not in everybody's general body of knowledge.

It is not enough to call a gun "a 45." If one speaks of a "45 Automatic," then it is a safe bet that the ammunition in question is .45 ACP (for "Automatic Colt Pistol"), the round designed by Colt Firearms for use with that weapon. But a "38 Revolver" might load any one of several cartridges; which is the proper type of .38 caliber ammo?

It must be clearly understood when describing a gun just what exact ammo it can use.

BALL AND SHOT

There are two types of Small Arms ammunition to be considered. The usual type referred to by such terms as "cartridge" or "round" is called Ball Ammunition. This is a metal bullet encased in a brass jacket, or "case." But there is

another form of ammunition, equally common: the Shot Shell. Such shells are fired by Shotguns and contain either a single heavy "slug" or numerous small pellets of lead or steel "shot" enclosed in a paper or shell.

The section of page 34 will describe the two forms of ammo. What is important to remember here is that Shotguns cannot fire Ball Ammo.

MAGAZINES

"Magazine" refers to the part of the gun in which the ammo is carried for firing. In some firearms, this is an integral part of the weapon's structure. In others, a removable "clip" is used. The particular type of magazine is very important in at least one common situation in **Aftermath!**: reloading an empty weapon in the middle of a fight.

INTEGRAL MAGAZINES

Also called "Non-detachable" magazines. These are all of a piece with the gun itself.

Swing-out Cylinder (Swing-Cyl): Found only in revolvers. The cylinder swings out at the touch of a small release. Empty cases are ejected in the same motion. New rounds are loaded in by hand, or in a group if using a "Quick Reload" device, a small spring clip holding a full load of ammo. The cylinder is then snapped closed and the gun is ready to fire.

Snap-out Cylinder (Snap-Cyl): Again found only in revolvers. Very similar to Swing-Cyl weapons, except that the cylinder is removed completely, instead of swinging out on a non-detachable axle. Thus, it is possible to carry a spare cylinder already loaded, eliminating the need to reload rounds into the removed one.

Portal Cylinder (Port-Cyl): Found only in replicas of "Old West" revolvers. The cylinder does not come out. Spent rounds are removed and new ones loaded through a small "portal" mounted to the right of the gun's trigger. This is the slowest reloading revolver in the system.

Portal Magazine (Port-Mag): Formally known as the "Non-Detachable Staggered Box Magazine." This is a standard magazine found in rifles that don't use clips. It is loaded through a small portal mounted under the gunstock, in front of the trigger guard. The usual capacity is 5 rounds of standard ammo or 3 of Magnum ammo.

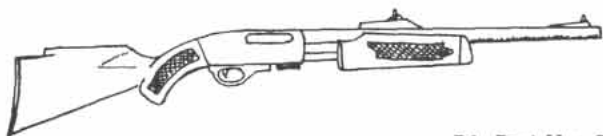
Tubular Magazine (Tub-Mag): Similar to Port-Mag, but rounds are loaded in through a side port, being held in a long, tubular magazine mounted under the barrel. Almost exclusively found in lever-action weapons and Shotguns.

Falling Block (Fall-Block): A breech-loading system found in many Single Shot pistols and rifles. A small lever rolls out the firing chamber, the round is inserted, the gun is closed, and is ready to fire.

Break Loading (Break): Found mostly in Single Shot or Double Barrelled Shotguns, and in some Single Shot ball firing weapons. The gun is "broken," hinged between stock and receiver, to open up and eject the spent casing. A new round is inserted, the gun is closed, and ready to fire.

DETACHABLE MAGAZINES

There are only two real types to consider. The box clip, described briefly in the outline of Autoloading Action, and the "stripper" clip, a metal or plastic spring enclosing the weapon's load, which is inserted in one movement into the gun.



PA, Port-Mag Rifle

Box Magazine (Box): The true "Clip." A small metal box, holding a variable number of rounds. When reloading the weapon, the old clip is simply removed and a new one inserted. The first round must then be chambered manually, and the Gun Action takes over from there as described in Autoloader Action. This is the fastest reloading weapon in the system, but has the disadvantage that the clips are not usually interchangeable. That is, the clip from your Detonics Snub-Nosed 45 Autoloader will not serve to load your Colt Combat Commander, although both weapons are clip-fed autoloaders using 45 ACP ammo.

Stripper Clip (Strip): Also known as the "en bloc" clip. The best example of a Strip weapon is the M1 Garand rifle, which loads an 8 shot Stripper Clip of 30-06 ammo. Most Strip loading weapons eject the empty Stripper when the last round in it is fired. As with Box Magazines, the Stripper for weapon A will rarely fit weapon B, even when Calibers and capacities are the same.

In recording the magazine statistics on a given weapon, the capacity of the magazine must be noted. Most guns allow the option of carrying "a round in the chamber." I.e., in an autoloading pistol with a 7 round clip, an eighth round may be carried already in the firing chamber, ready to fire. BUT—this may lead to accidental discharge of the weapon if it is dropped or struck! The Gamesmaster may apply his discretion in such matters. If the question arises, 1D6 should be rolled. If the score rolled is greater than or equal to the gun's DUR, it goes off. If the safety of the gun is on, add 1 to the effective DUR.

An autoloading or automatic weapon which does NOT have a round in the chamber is not ready to fire. In such a case, the action must be worked once, manually, to chamber that first round and cock the weapon. Thereafter, fired rounds will provide the impetus needed to cycle the gun for its next shot.

OTHER FACTORS

There are several miscellaneous factors in firearms design under the headings of Durability and Features.

DURABILITY

This is an abstract figure from 1 to 5, expressing the weapon's overall quality and strength of construction. It has many applications under the rules to follow. Under some circumstances the weapon's Durability (or DUR) may be reduced. When the DUR falls below 1, the weapon is in a state of Disrepair, and must be worked on by a Gunsmith under the proper circumstances if it is to function again.

The general meaning of a DUR value can vary, reflecting the initial quality of craftsmanship that went into the gun, or conversely the lack thereof, or simply the shape it is in after years of hard use (or abuse). The base DUR score is like a character's DRT. While it may be reduced, the proper action will restore it. The Gamesmaster may exercise his discretion in decreeing that such damage be comes permanent if not tended to within a given time.

DUR values as we see them may be categorized as follows:

- 0 Broken. Gun will not work. Repairs required.
- 1 Low-quality weapons, especially handguns. The cheap "Saturday Night Special" type of gun. Antique arms that have not been maintained well also fall into this category.
- 2 Cheap weapons, or very much abused ones. "Dime Store" sporting arms, inexpensive replicas, mass-produced pistols, again of the "Saturday Night Special" variety.

- 3 Average quality for pistols, and for inexpensive but serviceable rifles and shotguns.
- 4 High quality sporting arms, older military weapons.
- 5 Custom made firearms, competition class handguns, and top-quality military weapons comprise this elite of the gun world.

These are arbitrary guidelines and Gamesmasters expanding the gun inventory in their campaigns will have to make "judgement calls" on the DUR in most cases. One possible rule-of-thumb is to base one's assigned Durability values on the market price of the gun being used for the game model. But this can lead to low scores for well-made but inexpensive models, not uncommon in the firearms market.

FEATURES

Throughout this chapter, various devices which will enhance the use of firearms are inserted under the heading of *Features*. Features are elements in the design of a weapon allowing better aim, faster fire, more flexible use, etc.

When a Feature directly affects the application of a rule, it is inserted following that rule in the text. A full list of Features, including some not found in the rest of the text, appears in Appendix 6.

THE GUN RULES

Having established the basic qualities of firearms, we here give the specific rules governing their use in play. This includes those factors determined by the weapon itself and those depending on the human firing it.

RANGE

Range is a function of the size and type of gun being used. The range to the target affects the firer's chance to hit and the damage potential of the bullet.

The following Table gives the Range Steps for each class of firearm. There are six Range Steps to be considered in the system:

- Point Blank Range (PBR)
- Short Range (SHT)
- Effective Range (EFF)
- Long Range (LNG)
- Extreme Range (EXT)
- Maximum Range (MAX)

Also given are the Modifiers to the Basic Chance of Success and Bullet Damage Group for shots fired at these Ranges.

Feature

Match Weapons

A Feature available on some firearms will be Match quality. These weapons are designed for use in international competition and have incredible accuracy. Weapons having this Feature add 50% to the distance defining their Range Steps.

Eg., a Match Rated LNG Pistol will have the following Range Steps: PBR 7.5, SHT 15, EFF 60, LNG 90, EXT 180, MAX 360.

Match Weapons also have an Inherent Accuracy bonus of 1 in the hands of unSkilled users (see p.31 for the Inherent Accuracy rules).

RATE OF FIRE

The Rate of Fire is directly based on the Gun Action used. It defines the number of Shots that the character may fire in a single Action, as defined in Book 1 on p. 25. If a gun has a Rate of 1 Shot per Action and is being used by a character with an MNA of 3, he may fire up to 3 shots per Combat Turn, if all he does is fire the gun.

Range Table

| Weapon | PBR | SHT | EFF | LNG | EXT | MAX |
|------------------|---------|--------|--------|-----------|-----------|-----------|
| Pistols | | | | | | |
| BBL : SNUB | 2 | 10 | 15 | 25 | 50 | 100 |
| : SHT | 4 | 10 | 20 | 30 | 60 | 120 |
| : STD | 5 | 10 | 30 | 50 | 100 | 200 |
| : LNG | 5 | 10 | 40 | 60 | 120 | 240 |
| : XLNG | 5 | 20 | 60 | 80 | 160 | 320 |
| Long Guns | | | | | | |
| Carbine | 10 | 25 | 50 | 250 | 500 | 1000 |
| Rifle | 10 | 30 | 100 | 500 | 1000 | 2000 |
| Autofire | | | | | | |
| Carbine | 10 | 15 | 25 | 125 | 250 | 500 |
| Rifle | 10 | 20 | 50 | 250 | 500 | 1000 |
| SMG* | 5 | 10 | 20 | 40 | 80 | 160 |
| Shotguns | | | | | | |
| Slug Load | 10 | 20 | 50 | 100 | 200 | 400 |
| Shot Load | | | | | | |
| Full Choke | 10 | 25 | 30 | 60 | 100 | 150 |
| Modified Choke | 5 | 20 | 30 | 40 | 80 | 120 |
| Open Choke | 5 | 10 | 20 | 30 | 60 | 90 |
| Riot Gun | 5 | 10 | 15 | 20 | 30 | 50 |
| BCS Modifiers | plus 1 | plus 1 | plus 0 | minus 1 | minus 2 | minus 5 |
| BDG Modifiers | plus 10 | plus 0 | plus 0 | minus 10% | minus 25% | minus 50% |

To use the Range Table, simply note the range to the target in meters on the combat display. Locate the Range Step under which this figure falls on the Table. This is the Range Step for that shot.

* Unless weapon is specified as having another barrel length.

Gun Actions and Rates

| Gun Action | Shots per Action |
|------------|---|
| SS | 1 Shot and reload for next shot |
| SA | 1 Shot per Action |
| BA | 1 Shot per Action |
| LA | 1 Shot per Action |
| PA | 1 Shot per Action |
| DA | 1 or 2 Shots per Action. Firer's choice |
| AL | 1, 2, or 3 Shots per Action. Firer's choice |
| FA | Variable number of Bursts* per Action |
| AB | 1, 2, or 3 Bursts* per Action |

* In automatic fire, Bursts are fired rather than individual rounds as with other Gun Actions. The majority of weapons fire Bursts of 3 rounds each. Some of the new "super-automatic" guns fire Bursts of 6. See Autofire rules below for details.

SHOT SPACING

Firing a gun is an Action, and thus will consume a PCA as set down in the basic Combat rules. The exact Action Phase on which shots are resolved will depend on the firer's PCA and the number of shots he is firing in that Action.

Firing 1 Shot (or Burst): Firer will initiate Action on the first Action Phase of his PCA. The Shot is resolved (ie., a hit rolled for) on the middle Action Phase. The firer recovers from the shooting routine on the last Action Phase of the Action.

Firer has BAP of 10 and PCA of 5. His first act in the Combat Turn is firing a gun. He initiates Action on Action Phase 10. He resolves the Shot on Action Phase 8. He completes the routine on Action Phase 6.

Firing 2 Shots: Firer will initiate Action on first Action Phase. He resolves first shot on his middle Action Phase. He resolves second Shot and ends the firing routine on his last Action Phase. Our example from above would open fire on Action Phase 10, resolve first Shot on Action Phase 8, resolve second Shot and end Action on Action Phase 6.

Firing 3 Shots: Action is initiated and first Shot is resolved on first Action Phase. Second shot is resolved on middle Action Phase. Third Shot is resolved and routine ended on last Action Phase. The example character would resolve Shots on Action Phase 10, 8, and 6 if firing 3 Shots.

ODD SHOTS

This rule is used when

- Firing more than 3 Shots. This can occur using FA Rate of Fire, or a non-automatic weapon equipped with the Hair Trigger Feature (see below).
- Character is firing more Shots than he has PCA. Eg., a character with PCA of 2 firing 3 Shots from an Autoloading weapon.

Shots may be "left over" in the spacing formula when all available Action Phases have been allocated. Such Shots are

defined as "Odd Shots." The first "Odd Shot" fired in a given Action is resolved on the last Action Phase, along with the Shot normally fired then. Separate BCS rolls are made for both of them, but their recoil effects will penalize both rolls. If there is a second "Odd Shot," resolve it in this manner but on the middle Action Phase. If there is a third "Odd Shot," resolve it on the first Action. Repeat this process until all "Odd Shots" have been given an Action Phase on which they will be resolved.

OPTION

Squeeze Off Shots

The tradition of the "dead eye" marksman includes the ability to slo-o-owly squeeze off shots, for significant increases in aim. The Gamesmaster may allow this to be done in the following manner.

The firer takes TWO Actions to complete a firing routine. In effect, he doubles his PCA. For example, a character with an MNA of 2 and BAP of 10 has two Actions available per Combat Turn, with a PCA of 5. If he elects to "squeeze off" a routine of 3 Shots, firing semi-automatic, he will initiate the routine on Action Phase 10 and resolve his first Shot, resolve his second Shot on Phase 5, and his third on Action Phase 1. In other words, he will fire as if his PCA were doubled, for a score of 10!

Characters with an MNA of 1 must spread this option out over two Combat Turns. The real slowpokes, with an MNA of 0, would require 4 Combat Turns to squeeze off a firing routine.

The character *must* be in Full Stance (see below) to Squeeze Off shots.

Squeezing off your shots will add the Dexterity score to the firer's Skill Score with the weapon. If this increases the first 100 points only, the BCS to hit benefits. If the second 100 points of Skill are raised, the Location alteration is improved. If the bonus increases the Skill beyond 200, this is allowed, being reflected by greater-than-normal Location movement. Skill increase in the first 100 points does not improve Control die rolls!

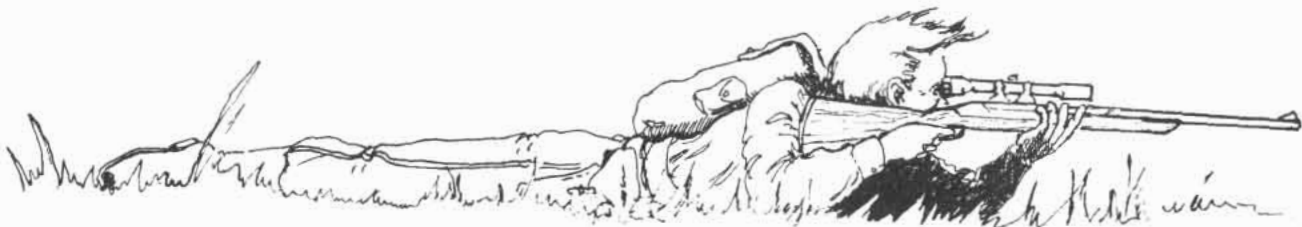
Two points to clarify in the above rules are:

Shot: The term "Shot" refers to the normal discharge of the weapon. This may be a single Round, as with non-automatic weapons, a Burst of rounds, when firing automatic, a blast of shot from a shotgun, or the beam from an energy weapon, if your campaign uses such devices. Other meanings include rifle grenades, mortar shells, 40mm grenades from a launcher—in short, any projectile launched from a firearm.

"MIDDLE" Action Phase: There may be some confusion as to the exact Action Phase which falls in the middle of an Action. If the PCA is *odd*, the *middle* Action Phase falls directly in the center of the sequence. It is a number of phases into the PCA equal to $PCA/2$, up.

If the PCA is *even*, the *middle* Action Phase falls in the Action a number of Action Phase equal to $(PCA/2) + 1$.

Thus, two characters start an action on Action Phase 10. The first has a PCA of 5, the other a PCA of 4. The first character will reach his *middle* Action Phase on Action



Phase 8, since $5/2$ equals 2.5 which rounds up to 3. Counting from the phase of initiation, as is always done in **Aftermath!** combat, the sequence runs 10 (initiate)-9-8 (third Action Phase in the sequence)-7-6 (fifth Action Phase in sequence, thus ending the routine).

For the second character, with the PCA of 4, the *middle* Action Phase falls on Action Phase 8 also, since $(4/2)$ plus 1 equals 2 plus 1, or 3. The countdown is the same as for the first character.

Feature

Hair Triggers

Hair Triggers are adjusted to allow ultra-rapid fire, with the mechanism of the Gun Action similarly treated for fast shot recycling. It increases the Rate of Fire by 1 Shot per Action. SS weapons do not have Hair Triggers.

AUTOFIRE

Full Automatic fire from small arms has several unique rules attached to it. In firing any other weapon, 1 Shot discharges 1 bullet (or charge of shot, if using a shotgun). Firing on automatic, a weapon will discharge a set number of Rounds per Burst. As stated, the usual number is 3 rounds.

This has two major effects. First, the recoil of firing the weapon is equal to the number of Rounds per Burst times the ammo's base BDG. Second, the damage potential of the Burst will vary. A die of the type appropriate to the number of Rounds per Burst is rolled, a D3 for a gun firing 3 per Burst, a D6 for weapons firing 6 per Burst. The indicated number of rounds will hit the target *on the same location*, adding their individual BDG to get the total. This can make even the low-power slugs from some automatics quite lethal.

Remember to deduct all the rounds in the Burst from the weapon's magazine load, even if all do not hit the target. Likewise, Recoil for Bursts is calculated on the basis of how many rounds are fired, not how many hit.

OPTION

Full Automatic Jamming

When firing FA, there is no strict limit to the number of Bursts which may be fired in an Action as such. The limit comes from the tendency of automatic weapons to jam during sustained fire. A single Burst can always be fired with no fear of this happening (hence the development of Auto-Bursts to circumvent the problem in later designs). But if more Bursts are fired in an Action, the chances mount rapidly.

The tendency to jam is limited by the gun's Durability. If firing multiple Bursts, roll dice of the type appropriate to the Rounds per Burst for the gun, 1 such die per DUR point. For a gun firing 3 Rounds per Burst, with a DUR of 3, 3D3 would be rolled. The number rolled indicates the round which will jam after the first Burst. A score of 3 would indicate a jam on the third round of the second Burst fired that Action. If two Bursts were indeed fired, the second would jam. If the score had been 4, indicating a jam on the first round in the third Burst, and only two Bursts were actually fired, then no jam would occur.

OPTION

Fumbling Bursts

One of the problems with FA fire is that the firer needs to exercise great control to stop shooting when he wants to. The high rate of fire may cause shots to be wasted. To simulate this, the Gamesmaster may require those using FA to make a Deftness AST. If the Saving Throw fails, then roll a die appropriate to the Rounds per Burst, and the indicated number of extra rounds were fired. As such shots are not well-controlled by the firer, they *will not* hit any target, and if

the Optional Jamming Rule above is used, they may well cause the weapon to jam.

DUDS AND JAMS

In the course of time, any gun will jam. In the world of hap-hazard weapon care and old ammo of **Aftermath!** this occurs more frequently than today. A "dud" bullet or a jam will affect different Gun Actions in different ways.

SS, SA, BA, LA, PA, and DA weapons: Treat "duds" (rounds that do not go off) as if the weapon had fired. In other words, the dud does not impede the weapons next shot.

AL, FA, and AB weapons: Duds must be cleared manually, working the action by hand, which takes an Action. If firing FA or AB, a dud in mid-Burst aborts the rest of the Burst. The maximum number of Rounds in that Burst which can hit the target is the number that actually fired.

When the weapon actually jams, it requires a full Action to clear it. Then treat weapon as if it had a dud. I.e., all Single Shot Actions, and DA weapons, can fire with no delay, but autoloading and automatic weapons must be manually chambered.

Feature

Autoextractor

This Feature is a small lever operating a plunger inside the gun. It will allow jams to be cleared by the end of the Action in which they occur. It causes jams to be treated as if they were simply duds.



RELOADING TIME

Digger popped his head up from behind the embankment. BLAM! Another ghoul hit the dust. From several locations, return fire kicked up dust as the cannibals tried to bag their "meat." Digger drew a bead on one of his hunters. CLICK! Click?

*Digger's continued career in **Aftermath!** has just become dependent on one vital question: can he reload his piece before the ghouls turn him into cold cuts? The time this is going to take depends on his native speed and the type of magazine his gun has.*

In any situation such as this, the first thing that must be asked is, does the character have more ammo, ready to load, in an accessible place? A glance at the rules for pawing through your backpack or pockets shows the unwisdom of storing spare loads there, unless you carry nothing but fresh cartridges in that locale. The wisest course is an ammo pouch, or bandolier, which will allow you to flip open the container and pull out your rounds without fumbling past all the other junk stored there.

Once you have the cartridges ready to go, the rest depends on your gun.

LOOSE ROUNDS

If the weapon does not use a clip, stripper, or similar device allowing the new ammo to be placed inside in one mass, then the Loose Round Rule applies. In one Action, the character can handle a number of rounds equal to his Deftness Group. This handling can consist of taking out a spent round or putting in a new one.

RELOADING TIMETABLES

The timetables for reloading the magazines described earlier are as follows:

Swing-Cyl or Snap-Cyl:

1 Action to break open cylinder. Empties are ejected in same motion.

Load new rounds under Loose Round Rule. If using a Quick Reload Device or a spare, reloaded Snap-Cyl, then it requires only 1 Action to insert this.

1 Action to close cylinder, Gun is now ready to fire.

Port-Cyl

Old rounds must be removed and new rounds loaded using Loose Round Rule. If weapon not fully reloaded, 1 Action required to be sure to get fresh cartridge under hammer for firing. Chance of blowing this and getting a spent round (i.e., a dud) in the first position is the number of such rounds left in a gun or less on a D6.

Port-Mag or Port-Tub

Load using Loose Round Rule. No empties to worry about, as these have been ejected during firing.

Falling Block

1 Action to open Gun Action, ejecting empty casing.

1 Action to load new round in.

1 Action to close weapon. Gun is now ready to fire.

Break

1 Action to open gun. Empties are ejected by this movement.

Load using Loose Round Rule.

1 Action to close gun. Gun is now ready to fire.

Box

1 Action to remove old magazine.

1 Action to insert fresh clip and chamber first round if this is desired at that time. If round not chambered during the reload, it will take a separate Action to do so later on.

Once first round is chambered, gun is ready to fire.

Note: If it is necessary to reload the clip itself during Detailed Action Time, this is done using the Loose Round Rule.

Strip

1 Action to load in new Stripper (empty clip was ejected on last shot).

1 Action to chamber first round for firing.

Gun is ready to fire when round is chambered.

Note: Reloading the Stripper clip itself is handled the same way as reloading empty Box clips: use the Loose Round Rule.

OPTION

Quick Close Rule

In the Action in which the last round is reloaded, with

weapons requiring closing, the character may attempt to do so at once. This requires a Speed AST at a penalty equal to the number of rounds handled that Action. If made, the weapon is closed by the end of that Action. If failed, the weapon must be closed as the next Action.

OPTION

Quick Chamber Rule

Likewise, in a weapon requiring chambering, the character may attempt to do this in the Action in which the last round was reloaded. The same rules apply as those governing the Quick Close. If the Quick Close option has been used in that Action already by the character, a Speed CST is needed, at the same penalty as always for the number of rounds handled. This rule can also be used in the event of trying to properly align the cylinder on a partially reloaded revolver.

FIRING THE WEAPON

We have now developed a fairly comprehensive system for determining how guns work. Let us examine how they are used.

WHO CAN FIRE A GUN?

As all character actions are controlled by the possession of the appropriate Skills, you may be sure the question will arise of what happens when someone with no Gun Skill picks up a firearm in combat, or more confusingly, how well a character who is a deadly Pistol shot handles a Rifle, when he has never fired one before in his (game) life.

ANYONE can fire a gun which is in a Ready state. He may not be much of a shot, but he can use it in combat to some degree. Doing other things to the gun (reloading it, maintaining it, etc.) requires some knowledge of how it works, i.e., a score in the appropriate Skill; but even here, the character's common sense can replace acquired ability.

READY WEAPONS

A "Ready" weapon is defined as a gun which is:

- Loaded, with a round in the chamber for firing, cocked, and with the safety off. In other words, if the trigger is pulled, the gun will fire.
- In the firer's hands, properly held for use. A character carrying a Rifle in one hand and a flashlight in the other does *not* have a Ready weapon, as he needs both hands to fire the gun. A Pistol that has just been used to conk a guard over the head is not being held ready to fire. Obviously, holstered or slung weapons are not ready. It will normally require 1 Action to ready such a weapon.

If the gun is carried in a closed holster (strapped or buttoned down flap) or in any other kind of container, this must be opened and the gun found according to the normal rules for such activity.

OPTION

Quick Draws

Pistols or Rifles can be drawn and fired in the same Action in certain cases. The former weapon must be in an open holster, or in the carrier's belt. Long Guns cannot be "drawn" if they are slung over the carrier's back or shoulder, but if they are being carried, the option may be tried.

A Pistol can be "Quick Drawn" from a holster if the user makes a Deftness AST. From the belt or waistband a CST is needed. The use of special, "fast draw" holsters will add a bonus to the score needed. The Gamesmaster may impose penalties if the circumstances warrant.

"Quick Draws" with Long Guns require a Deftness CST.

If the Fast Draw Saving Throw is made then a single shot may be fired at the end of the Action. All other modifiers apply and such shots are always assumed to be Hip Fire (see p. 31).

The Gamesmaster may feel free to introduce a Quick Draw Skill, if he finds it appropriate to his campaign. The use of the

Skill instead of the Saving Throw would allow the weapon to be brought to the Present Stance, rather than Hip Fire. See the rules on Firing Stance for an explanation of this difference.

HANDLING UNFAMILIAR WEAPONS

There are two major points to deal with here: firing them, and minor operational points, lumped under the term "servicing."

As with any unfamiliar weapons form, the base BCS is derived from the user's Combative Talent. This is used as an inherent Skill score, so that a character with a 20 will have a BCS of 4 in any weapons form he tries to use. However, guns do a lot of the work for you in combat. Even a novice knows that if you point it at the target and pull the trigger, it will shoot at that target.

Therefore, firearms have an Inherent Accuracy which is added to the Talent-based BCS of the inexperienced user. It is based on the overall class of weapon and its BBL.

If the user's own BCS in the weapon, based on a Gun Skill, exceeds the score derived from his Combative Talent and the Inherent Accuracy, then it is used instead of that score. Inherent Accuracy is effective only for those who are NOT trained in using the weapon!

As regards "Servicing" the weapon, when dealing with Small Arms, if the user is confronted with some simple act, say reloading the weapon, he must make a Wit CST to figure out what is needed, and all steps in the procedure take twice as long as normal. Say an unskilled character is trying to reload a Box magazine. It will be borne in upon him that it is empty when it refuses to fire. He must try to make a Wit CST to figure out how to reload it. He takes 1 Action per attempt, succeeding on his second try. At double the normal value, it will take 2 Actions to remove the old clip and 2 more to fumble in the new magazine.

The Gamesmaster may modify these restrictions to fit the case. A well-trained Pistol user will probably know how to service a Rifle in most cases, but will still do so slowly.

The rules on "Servicing" weapons apply to all characters who have less than 5 points (a BCS of 1) in the relevant Skill.

FIRING STANCE

There are three basic Stances for use when firing. They are as much a matter of mental focus as of physical placement, being linked to the degree of concentration and control the firer is bringing to bear on his shot. The Stances are:

Full Stance: Or just "Stance" for convenience. The braced position allowing the firer maximum control of his aim.

Present Stance: Also called "Presented" or just "Present" (as in "Present Arms," not "Birthday Present"). The basic firing posture, allowing some freedom of movement.

Hip Fire: A loose stance, allowing full movement, but lacking a good deal of control over the weapon.

In the main, characters can adopt any Stance they choose no matter what is going on, as long as they restrict their actions to those permitted that Stance. If, for example, a character is running down the street while firing, he can only be using Hip Fire, as only that Stance allows such movement. A character with a ready weapon who fires without announcing any special change in his Stance, is assumed to be in Present, as that is the best Stance for such shooting. Full Stance cannot be assumed without conscious effort and the Gamesmaster need not allow its benefits (or restrictions) to those who have not announced that they are using it. If a character has been using a Stance, and then does something which is not permitted to that Stance, the Gamesmaster may automatically require that he adjust his Stance to the optimum one permitting such action.

Full Stance

The firer assumes a posture as if he were firing on a target range, instead of in the middle of a hot firefight. It requires 1

INHERENT ACCURACY TABLE

| Weapon Used | Size | Inherent Accuracy |
|-------------|---------|-------------------|
| Pistol: | SNUB | -1 |
| | SHT | +0 |
| | STD | +1 |
| | LNG | +2 |
| | XLNG | +2 |
| Long Guns: | Carbine | +3 |
| | Rifle | +4 |
| Shotgun: | Slug | +3 |
| | Shot | +4 |

Autofire: Using a weapon for automatic fire reduces the Inherent Accuracy normally accorded the weapon by 2. For each full Burst fired, add 1 to the Inherent Accuracy.
Match Weapons: If the Feature is used, then Match Weapons add 1 to the normal Inherent Accuracy of the weapon.

Action to assume Full Stance, and the firer must refrain from shooting during this Action. He must be in Present Stance (see below) when starting the Action. Full Stance has the following advantages:

- A plus 1 to the BCS is received.
- Allows the use of certain modifiers (Sighting, Bracing Weapon, Squeeze Off, etc.) which are only allowed while in Stance.

Restrictions on Full Stance are:

- Shots may only be fired out of the character's Front Hexes. No movement of any sort is permitted, including the Combat Move.
- The firer may *not* speak, or otherwise concentrate on anything except his shot.

Present Stance

Any character who is not moving, is not Surprised, and has a Ready gun, may assume Present Stance at will. No modifiers apply to Present for good or ill, as it is assumed to be the basic firing position, neither below average like Hip Fire, nor above average like Full Stance.

Advantages are:

- Fire permitted out of Side Hexes as well as Front
- Normal rules governing communication in Detailed Action Time apply

Disadvantages are:

- Only the Combat Move is permitted.
- Certain modifiers requiring Full Stance are not allowed.

Hip Fire

As the name implies, the weapon is held low, braced against the body for support, rather than high enough to allow even a minimal sighting technique to be used. Hip Fire is assumed when no other circumstances cover the conditions under which the gun is fired.

Advantages of Hip Fire are:

- Character may perform any movement: Walk, Run, Dodge, Change Position, you name it.
- Fire is permitted out of any facing: Front, Side, or Rear.

Disadvantages are:

- Use Average BCS to resolve Hip Fire shooting.
- Further restrictions available to modifiers for firer.

WEAPON MODIFIERS

Several of the weapon design factors discussed previously have direct bearing on the BCS when firing the weapon.

Range

The Range Step affects the BCS as follows:

| | |
|-----|------------------|
| PBR | plus 2 to BCS |
| SHT | plus 1 to BCS |
| EFF | no effect on BCS |
| LNG | minus 1 to BCS |
| EXT | minus 2 to BCS |
| MAX | minus 5 to BCS |

Feature

Telescopic Sights

The use of Telescopic Sights will serve to reduce the effective Range as far as its effects on BCS go. Effects on Bullet Damage Group are *not* modified. Simply divide the actual Range of sighted shots by the magnifying power of the scope. The resulting figure is the effective Range, used to determine the Range Step to be used.

Recoil

All cartridges are rated as to their Bullet Damage Group (BDG) and, besides indicated how much damage they can do to a target, this BDG also determines the recoil suffered by the firer.

To measure the Recoil penalty (if any) proceed as follows:

- Take BDG/10, up. This is the Recoil base.
- From this base, subtract either the character's Strength Group or his Location alteration score with that firearm, whichever is higher. If this sum is positive, subtract it from the firer's BCS as a penalty. If it is negative, it has no effect on the BCS one way or another.

If multiple rounds are fired in the same Action Phase, as occurs when firing Bursts or resolving Odd Shots, then the BDGs of all rounds fired in that Action Phase are added together for calculating Recoil, and all resolutions rolled that phase will be affected by any penalties accrued.

Armed with a 45 ACP autoloading pistol, Marsha is pumping out 3 shots at a charging Master Rat. Her PCA is 2, starting on Action Phase 3, so she will resolve her first shot on Action Phase 3, and her last two shots on Action Phase 2, under the Odd Shot Rule.

45 ACP has a BDG of 11, so its Recoil base is 2. Marsha has a Strength Group of 2, and is a good shot, with 2 points of Location in Pistol Skill. So either way, she can reduce Recoil by 2. Therefore, her first shot is at no penalty due to Recoil.

On Action Phase 2, however, Marsha is resolving two shots, each with a BDG of 11. Thus, the Recoil base for her shots on Action Phase 2 is equal to 22/10, up, or 3. Subtracting her relevant scores, the difference is 1. Marsha gets -1 on both of these shots fired on Action Phase 2, as she cannot completely control the bucking pistol.

Feature

Recoil Reduction

There are a variety of Features to be found in firearms which have the express purpose of reducing the effects of Recoil. On Long guns, the simplest form known is simply a pad, fitted to the butt of the stock. Other firearms use carefully crafted weighting in the barrel, special vents that release some of the force of the propellant explosion, and so on.

Weapons equipped with Recoil Reduction other than a Pad will be noted as having 1, 2, or 3 factor. That is, they reduce the Recoil base by that number.

Recoil Pads always reduce Recoil base by 1.

Features Enhancing BCS

Among the features which may directly affect the BCS, we find:

"Tunable" Guns: Certain firearms are designed to allow the user to "tune" the gun's handling characteristics, stock length, balance, trigger pull, and so on, to conform to his optimum physical specifications.

It requires a week's study time, expending rounds as required for normal learning, but otherwise free of either hindrances or bonuses, to tune the gun. No Skill points are gained for this week's study. Once the gun is tuned, it will add 1 to that user's BCS, but will penalize other users by -1. If someone else acquires the gun, he may retune it by the same process.

"Handed" Pistol Grips: Customized grips can be mounted on Pistols, or in some models are included, which are specially formed to allow a very firm, comfortable, and precise hold on the gun. Such grips are "handed," i.e., shaped for the left or right hand specially. Using such a Pistol in the correct hand adds 1 to the BCS. Using such a Pistol in the wrong hand gives a -2 to the BCS.

FIRER ACTIONS

The firer will often be in a position to improve or worsen his BCS by certain actions during his firing routine. Some of these are things the character must perform deliberately, others are natural by-products of specific events.

Brace Weapon

The firer may assume a Brace with the weapon if he is in Full Stance. Both hands must be used, whether firing Pistol or Long Gun. With the former, both hands are used to hold the butt, as in standard police firing stance for handgun use.

With a Long Gun, the Brace also requires that the weapon be equipped with a sling, or carrying strap. This is wrapped around the forearm of the hand supporting the forward gunstock, under the barrel.

It requires 1 Action without firing to assume a Brace, and the firer must be in Full Stance before commencing the Action.

Feature

Swivel Sling

The sling on a Long Gun can be mounted with universally jointed swivels. These speed up the Bracing process so that it may be performed in the same Action as the one in which the firer assumes Full Stance.

Rest Weapon

The firer rests the weapon on a stable, horizontal surface. This surface must be at a level between the firer's sternum (Loc 6-7) and face (Loc 2). The firer must be in Full Stance but may not Brace the weapon if using the Rest option.

Firer Movement

It is generally agreed that firing a gun on the run is tricky! The rules reflect this.

As stated in the rules on Firing Stance, Present Stance allows the firer to make only a 1 meter Combat Move during his firing Action. Any greater degree of movement automatically drops the firer into Hip Fire. The Gamesmaster should enforce this rigorously.

Besides limiting Firing Stances, any movement reduces the BCS directly as follows:

Combat Move (1m): -1 to BCS

Walking: Use Hip Fire and -2 to BCS

Running: Use Hip Fire and -4 to BCS

Dodging: Use Hip Fire and double penalty for basic movement being used

Changing Position: Kneeling down, standing up, "hitting the deck," etc. A flat -10 to the BCS. If the move is being performed in 1 Action Phase, i.e., the character is doing so

without taking an Action, the Gamesmaster may require him to avoid the Fall effects before allowing him to even try to shoot. Also, remember that the gun may be dropped if the faller is stunned, or may go off unintentionally if it was ready to fire.

The question will arise regarding fire during an Action in which the character is using different rates of speed. This is not easy to define completely and each group will, to some extent, have to work out its own conventions. According to ours, unless the character has started his Firing Action in Hip Fire, he is not allowed to make a move greater than 1 meter. In Hip Fire, his BCS penalty for a given Action Phase of resolution is based on the highest rate of movement achieved in the Action up to that point. This prevents walking for 3 Action Phases, then stopping on the phase of resolution to avoid the BCS penalty.

If Slimy Sammy initiates a 3 Shot firing routine in Hip Fire, standing still for the first Action Phase, when he resolves his first Shot, he receives no special penalty. On the next Action Phase, he walks a meter, and does likewise on the Action Phase after that, when he resolves his second Shot. He has moved more than 1 meter, and is walking, so he takes a -2 to the BCS. Under a hail of returning fire, he breaks into a run for the next Action Phase, which continues into the last Action Phase in his Action, so that he fires that Shot at -4. Had he started dodging the bullets, his last shot would have suffered -8 (double the running penalty). Had he stopped for the last Action Phase, to return fire while standing still, he would still have suffered -2, since his fastest movement during the Action was still a Walk.

Firing From Cover

If the firer has grabbed some cover, and is trying to keep its protection while shooting, he may be presumed to be somewhat distracted from making his best shot.

Firing from Cover entails two types of restriction. First, a flat penalty to the BCS of -5. If the Gamesmaster wants to make this a sliding scale, the penalty may be (number of Locs covered)/6, down.

On a more complex front, assuming Cover will dictate a number of restrictions to the firer's activities:

Firing over cover: The firer must be exposed from his sternum (Locs 6-7) to his Face (Loc 2). If firing a Pistol, the whole of the Firing Arm is exposed. If firing a Long Gun, all of both Arms is exposed.

Firing around cover: The side of the body holding the gun is exposed. This is all of the head and throat (Locs 1-3) and the leg and hip on that side (unless lower cover there offers protection). If firing a Pistol, only the Firing Arm and its side of the torso are exposed. If firing a Long Gun, both Arms and all of the chest and abdomen are exposed (Locs 4-7).

Kneeling and prone position: A character standing behind a 1-meter wall is covered only from the groin down (Locs 12-20). If he kneels behind such a wall, he is covered to the sternum. The Gamesmaster must apply judgement to the exact levels of protection offered. He will find a "Random Cover" table in Book 3 on page 20. This will offer a sampling of the available cover to be found in a given area.

Firing from a Kneeling position is principally of use in firing over some low cover while maximizing protection.

Firing from a Prone position will expose the shooter's head, neck, and chest (Locs 1-5), the Firing Arm(s), and anything else the Gamesmaster rules to be exposed, to the attacker's angle of fire. It is generally worse than useless against fire from superior height. Its primary purpose is for maximum protection in firing around corners (as it

removes the lower body from the field of returning fire) and when firing down at a target and over some cover, such as the edge of a roof. Again, the Gamesmaster will modify the effects of Prone firing to reflect the angles of fire involved.

The position used, standing, kneeling, or prone, has no direct effect on the BCS. It merely provides a means of maximizing the protection of available cover, which can effect the BCS.

One Hand/Two Hand-Offhand:

There are several possible ways that the hand used to hold the gun, or the number of hands used, will affect play.

Normal Pistol use requires only the gun hand to be free, unless the Brace Weapon modifier is being used by the character. If firing a Pistol with a BBL of the "Pistol Carbine" size, both hands are needed.

Firing a Long Gun with one hand is not easy! For a Rifle or a full-sized shotgun, a sling *must* be attached to the gun, which the character must wrap around the forearm of his firing hand.

This takes 1 Action if his other hand is free to help. If it is not, a Deftness AST is required.

Firing a "Two Handed" gun with only one hand will have the following effects:

- Only Hip Fire may be used.
- A penalty to the BCS is suffered. This equals (2 x ENC of gun) rounding fractions up.
- All recoil values are doubled.
- And if firing any weapon with the character's off-hand, the Off Hand Dexterity Rule is enforced!

Surprise and New Targets: While Surprised, characters can at best get off shots from Hip Fire. Only when they have had a chance to react to the situation can they upgrade their stance to Present.

A similar situation will occur when a firer opens fire on a given target. It will require 1 Action to "draw a bead" on that target, although this may be done while firing, or changing Stance, or what have you. Put simply, for the first Action in which firer is concentrating on a given target, his BCA will get a -2. Thereafter, this penalty will vanish until the firer switches to another target, or loses contact with the old one. It is possible to "draw a bead" on a given spot, which will allow penalty-free fire at new targets entering that area. The Gamesmaster should require some exactness in such a case. One cannot draw a bead on a football stadium. One can do so on a door or window, a small area of floor, a manhole, etc.

Sighted Fire: As stated, a character in Full Stance may take an Action to Sight his shot. This is possible on any gun having Iron Sights or other forms of sighting mechanism, but not on those without sights. Sighted Fire derives from any bonuses, Features, or Options inherent in the particular type of sights on the gun.

Spraying Autofire: The Bursts of automatic weapons need not be directed solely at one target. The firer may spray, or "hose down," an area, or split fire among multiple targets. The total number of hexes separating his targets is added up, including those containing figures. All figures in the affected area are subject to fire. A separate BCS is rolled for each vulnerable figure. The BCS for each target is divided by the total number of hexes covered by the spray. Likewise, the BDG impacting a given target is divided by the number of hexes in the target area. It may be convenient for the Gamesmaster to require that all targets of spraying fire be within a 20-meter area, and to adjudicate that spray fire may never hit more characters than the number of rounds that

were fired. On the positive side, the BCS penalty should be reduced in firing into a press, where characters are packed closely together.

Luther is being charged by mad dogs from two doors, three meters apart. Assuming no other modifiers apply to his BCS of 16, his spray attack will be resolved as follows:

Total area covered is two meter-wide doors and 3 meters of intervening space. 5 meters.

His BCS vs. the two Dogs is 16/5, for an effective 3 (round down). Their CDAs while charging will reduce this to less than 1, to be resolved as described in Book 1.

By sheer good luck, he hits one of the Dogs! Rolling the number of hits, he scores a 2. He is firing rounds with a BDG of 11, so the normal total that would affect the Dog is 22. Dividing this by 5, we get 4. His effective BDG against one mutt is only 4, probably only a wound. Meanwhile, the foaming jaws of the unscathed animal are snapping at his jugular!

TARGET ACTIONS

While the firer is doing his best to maximize his chance of hitting the targets, most targets (if of the fragile, organic kind) will be doing something to mess him up.

Target Movement

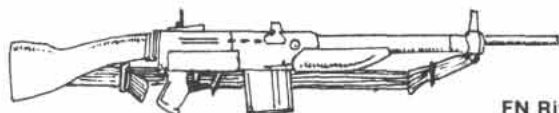
The movement rate of the target at the Action Phase when a shot is resolved will determine this modifier. It is always expressed as a multiple of the target's CDA, as follows:

- Target not moving, in combat, or taking Combat Move: CDA x 1
- Target Walking: CDA x 2
- Target Running: CDA x 3
- Target Dodging: Increase multiplier by 1
- Target Falling (Changing Position Downwards): CDA x 3

Target Cover

This does not often affect the BCS. Cover defends against gunfire by stopping bullets (one hopes). But there is a class of cover classified as "Visual Cover."

Visual Cover will effectively reduce the visual contact that the firer has with the target, with effects according to the prevailing light conditions. This type of cover is usually gotten from heavy brush, loose rubble, etc. It will rarely offer Barrier protection against bullets. What it does do is reduce the "Light" for the firer by a number of steps. These combine with prevailing visual conditions to determine the effective eye contact for the shot. For example, Visual Cover with a rating of 1 would have the same effect on a shot in Good Light as the firer would suffer in Dim Light. If it is dusk, when prevailing light is Dim, the Target is in Poor Light. And so on. The firer can offset this cover by making his Wit ST. If his die roll is in the AST range, it reduces the rating of the Visual Cover by 1. A CST reduces it by 2. A Critical Save negates it altogether. Targets moving in Visual Cover reduce its effect on their behalf by 1 per level of movement used (i.e., -1 for a Walk, -2 for a Run). If they use Stealth successfully, this is negated. Target firing from Visual Cover will be spotted by any observer who makes a Wit AST on a D10!



FN Rifle (FA)

BULLETS AND BALLISTICS

Having established a pretty extensive picture of how the gun gets its projectile to the target, let us now turn to the projectiles themselves: the ammunition.

MODERN CARTRIDGES

A cartridge, or round, is made up of the following components:

Case: A brass cylinder, closed at the bottom, into which all the other parts fit snugly.

Primer: The igniter for the main powder charge. A small amount of fulminating powder, i.e., powder which goes off if struck.

Charge: The charge of gunpowder which provides the propellant and gases for the shot.

Slug: Also called the bullet. The actual projectile fired from the gun.

Shot shell differs somewhat in construction, although it is quite similar in most respects. The Case is of laminated cardboard or plastic. The Primer fulfills the same function as it does in Ball Ammo rounds, as does the Charge. Instead of a single slug, the Shot Shell will have either a mass of "shot" or one very big "rifled slug." The differences in Range and hitting power of these loads are discussed at the appropriate points throughout these rules.

Shot Shell is measured not in Caliber, by inches or millimeters, but by "Gauge," an antiquated measure dating from the days of muzzle-loading weapons. A "12-Gauge" shotgun has a barrel of such dimensions that 12 lead balls of the same diameter would weigh one pound.

TYPES OF ROUNDS

Specifications for cartridges vary widely according to size (Caliber), bullet weight and shape, type of primer used (Centerfire or Rimfire), etc.

CALIBER

This has been partially discussed on p. 25. In discussing Caliber as a quality of the cartridge, the salient points to keep in mind are these:

- Caliber is measured in fractions of an inch (as in .45 ACP) or in millimeters (as in 7.62mm NATO).
- In general, the bigger the caliber, the more powerful the ammo. There are some notable exceptions, as you will see.
- Different rounds are not interchangeable! 38 Short is not the same as 38 Special. 9mm Short and 9mm Parabellum do not go into the same gun. Again, there are exceptions. Some weapons are specially designed to fire more than one type of ammo. Some ammo is used interchangeably between Pistols and Long Guns.

CENTERFIRE OR RIMFIRE

The two forms of primer used in modern cartridges are:

Rimfire: The primer is contained in a soft rim around the base of the casing. This is struck at the bottom of its circumference by the pin, igniting the primer which in turn sets off the main charge.

Centerfire: The primer is contained in a small cap, in the center of the casing's bottom. The firing pin on CF-loading guns is set to strike here.

Rimfire ammo comprises the immensely popular .22 caliber ammo, generally low-power but the commonest single caliber in the world today. Not much of a manstopper, but you will find weapons loading the RF 22 in any sporting goods store. Rimfire ammo WILL interchange between Pistols and Long Guns, and many weapons are made to accept ANY RF 22 cartridge: Short, Long, Long Rifle, etc.

Centerfire ammo is almost always more powerful than Rimfire. It is the standard round for hunting, police, and military weapons. Ranging from "popgun" loads for small Pistols up to the "cannons" used for big game, it is more versatile and certainly preferable in combat.

Centerfire ammo can also be "Reloaded." That is, used again. Cases can be cleaned, new charges and bullets inserted, and a new primer affixed, thus recycling the ammo. This is *not* possible with Rimfire ammo.

BDG (BULLET DAMAGE GROUP)

All cartridges have a rating called their BDG. This defines that round's damage potential in several specific areas:

DAMAGE CAPABILITY

The number of damage dice a round will do against the Armor Value of a struck target, and his DRT if it penetrates, is based on the BDG. The Damage Dice for a bullet strike are calculated as follows:

number of D10 of Damage equals BDG/10, up.

plus Damage Points equal BDG/10, nearest.

Thus, a bullet with BDG of 33 would do 4D10 plus 3 to a character it hits. 33/10 equals 3.3. Rounded up, this equals 4. Rounded to the nearest whole number, it is 3.

With a BDG of 35 or more, 4D10 plus 4 would be the bullet's Damage roll, as 35/10 is 3.5, which rounds nearest to 4.

MISSILE SPECIAL EFFECTS

The chance of Missile Special Effects occurring when a bullet hits the target is equal to the BDG of the round as a percentage. I.e., a round with BDG of 20 has a 20% chance of causing Missile Special Effects.

The rules governing Special Effects are in Book 1.

All BDG-based effects are subject to modifications which can raise or lower its effective value. See Ballistic Modifiers on page 36.

The following Table gives the Base BDG of all the ammo used in *Aftermath!* It is divided into several headings: Centerfire Pistol Ammunition (CF Ball Ammo primarily used in Pistols), Centerfire Long Gun Ammunition, Rimfire Ammunition, and Shot Shell.

You will note that the BDG for Shot Shells is given in a slightly different form than the Ball Ammo. The "Gauge" of the gun is cross-referenced with the size of Shot used in the shell. The figure on the matrix is the BDG in question. I.e., 00 Buckshot in a 12-Gauge Shell has a BDG of 32.

The "Slug" figure is the BDG for a rifled shotgun Slug fired from a weapon of that Gauge. Shot Shell slugs are treated as any other Ball ammo.

Caliber figures given that are just a number, like 222, 32-20, etc., are always to be read as Caliber *inches*. Only calibers given as "mm" are metric. Note that some rounds are widely used both in Europe and in the U.S., being measured in caliber inches here and in millimeters there. There is no difference between the metric and American measured

BASE BDG TABLE

| CENTERFIRE PISTOL AMMUNITION | | CENTERFIRE LONG GUN AMMUNITION | | SHOT SHELL AMMUNITION | | | | | | | |
|------------------------------|-----|--------------------------------|-----|--|---------------|----|----|----|----|------|----|
| Caliber | BDG | Caliber | BDG | Shot Size | Shotgun Gauge | 10 | 12 | 16 | 20 | .410 | 28 |
| 22 Jet | 4 | 22 Jet | 8 | 12-9* | | 12 | 10 | 8 | 6 | 4 | 2 |
| 221 Fireball | 8 | 222 | 13 | 8-5** | | 16 | 14 | 12 | 10 | 8 | 6 |
| 25 ACP (6.35mm) | 1 | 223 (5.56mm) | 20 | 4-BB** | | 20 | 18 | 18 | 16 | 16 | 14 |
| 256 Magnum | 10 | 222 Magnum | 14 | Buckshot | | | | | | | |
| 30 (7.65mm) | 6 | 22-250 | 18 | 4-3 Buck | | 22 | 18 | 18 | 18 | x | x |
| 32 Short | 2 | 243 | 21 | 2-1 Buck | | 28 | 24 | 22 | 20 | x | x |
| 32 Long | 4 | 6mm | 24 | 00 Buck | | 36 | 32 | 30 | x | x | x |
| 32 ACP | 5 | 25-06 | 25 | Slug | | x | 27 | 23 | 17 | 6 | x |
| 32-20 | 3 | 25-20 | 6 | * These are very light, small shot pellets, often referred to as "birdshot." Only any target massing over 2 Enc, they do B type damage (half lethal, half subdual). | | | | | | | |
| 357 Magnum | 11 | 25-35 | 15 | ** Again, these are fairly light loads. At any range beyond SHT, they also do B damage. | | | | | | | |
| 9mm Parabellum | 5 | 250 | 18 | x Indicates that no Shot Shell of that type is made for the Gauge in question. | | | | | | | |
| 9mm Short | 2 | 256 Magnum | 20 | Note that certain rounds appear on both the Centerfire Pistol and Centerfire Long Gun Tables. The are: 22 Jet, 32-20, 38-40, 44-40, and 44 Magnum. These are identical rounds, but are widely popular both as Pistol and as Long Gun loads. They are entered on each Table for easy reference. Some Players may favor using weapons which all chamber the same caliber, as such standardization can offset some of the problems in maintaining an ammo supply. | | | | | | | |
| 38 Long | 5 | 257 | 18 | The Encumbrance of cartridges is also based on their Caliber. All Pistol ammo of 30 or less, and all Rimfire ammo, has an ENC value of .01. Other Pistol ammo (32 Caliber or larger), Long Gun Ammo, and Shot Shell, has an ENC value of .02. | | | | | | | |
| 38 Special | 10 | 6.5mm Magnum | 25 | Caliber | BDG | | | | | | |
| 38 Short | 2 | 264 Magnum | 31 | 375 | 45 | | | | | | |
| 380 ACP | 5 | 270 | 28 | 358 | 28 | | | | | | |
| 38 SuperAuto | 6 | 280 | 28 | 38-40 | 8 | | | | | | |
| 38-40 | 4 | 284 | 28 | 44 Magnum | 42 | | | | | | |
| 41 Magnum | 16 | 7mm Mauser | 25 | 444 Marlin | 36 | | | | | | |
| 44 Special | 6 | 7mm Magnum | 36 | 44-40 | 12 | | | | | | |
| 44 Magnum | 21 | 30 Carbine | 12 | 45-70 Govt | 16 | | | | | | |
| 44-40 | 6 | 30-30 | 21 | 458 Magnum | 51 | | | | | | |
| 45 Long Colt | 6 | 30-06 | 26 | 460 Magnum | 81 | | | | | | |
| 45 ACP | 11 | 30-40 Krag | 24 | | | | | | | | |
| RIMFIRE AMMUNITION | | 300 Magnum | 38 | | | | | | | | |
| 22 Short | 1 | 303 | 23 | | | | | | | | |
| 22 Auto | 2 | 308 (7.62mm NATO) | 27 | | | | | | | | |
| 22 Long Rifle | 4 | 32 Special | 21 | | | | | | | | |
| 22 Stinger | 6 | 32 | 17 | | | | | | | | |
| 22 Long | 2 | 32-30 | 6 | | | | | | | | |
| 22 RF Magnum | 6 | 8mm Mauser | 25 | | | | | | | | |
| 5mm Magnum | 5 | 8mm Magnum | 40 | | | | | | | | |
| | | 338 Magnum | 41 | | | | | | | | |
| | | 35 | 20 | | | | | | | | |
| | | 350 Magnum | 35 | | | | | | | | |
| | | 351 | 15 | | | | | | | | |

rounds; they are identical e.g., .308-inch and 7.62mm NATO are the same cartridge.

BALLISTIC MODIFIERS

The BDG values given in the Table are the base values. This is the inherent BDG of a given round and is subject to modification before an effective BDG is applied to the target.

Ballistics, the study of projectile motion, is divided into three stages, which suit our needs here exactly. These are:

Internal Ballistics: The study of ballistic conditions pertaining from the moment the charge ignites until the bullet leaves the gun barrel.

External Ballistics: The study of the bullet's flight from the moment of leaving the barrel until a target is struck.

Terminal Ballistics: The study of ballistic conditions pertaining when the bullet hits the target.

At each stage of its flight, the bullet will be subject to different forces which may affect the BDG.

INTERNAL BALLISTIC MODIFIERS

The Base BDG is directly modified by Internal Ballistics. Only two factors come under this heading. One is due to the BBL of the gun. The other is obtained by using specially-made cartridges.

BBL

Modify the base BDG as shown:

Pistol SNUB: reduce BDG by 10%, rounding to nearest.

Pistol SHT or STD: No effect on BDG.

Pistol LNG or XLNG: Increase BDG by 10%, nearest.

"Pistol Carbine" or Carbine: The effect depends on the BDG Table used. Pistol rounds fired from Carbines have a BDG *increase* of 50%, nearest. Long Gun rounds fired from Carbines suffer a 25% BDG loss to the figures from *that* Table.

Rifle: The BDG from the Long Gun Table is the Base BDG for rounds fired from Rifles.

The general formula for adapting Pistol Ammunition to firing from Long Guns, or Long Gun Ammunition to fire from weapons shorter than a Rifle, is:

- Carbine BDG equals 1.5 x Pistol BDG
- Rifle BDG equals 2 x Pistol BDG
- Pistol BDG equals .5 x Long Gun BDG
- Carbine BDG equals .75 x Long Gun BDG

Shotgun Ballistics: The only distinction is between a normal shotgun BBL and a riot gun, or "sawed-off" shotgun. This is handled as if the normal gun is the Rifle and the shorter one the Carbine, from the rules given just above.

High-Power Ammo

Special ammunition exists, and is rather common in some cases, in which the powder charge has been increased to give the bullet a higher muzzle velocity. Such ammo receives a 50% increase to the base BDG given on the table.

The stress of firing this souped-up ammunition can be risky for the gun. The odds of a Critical Miss are increased by a number equal to 5 - DUR of weapon. In other words, firing a cheap pistol with DUR of 1 while using High-Power ammo increases the chance of a Critical Miss by 5 - 1, or 4.

Thus, while a normal Critical Miss occurs on a die roll of 20 on the BCS roll, in this case the Miss occurs on a die roll of 20 - 4 (or 16), or higher!

Feature

High-Power Firearms

These are simply firearms reinforced to allow use of High Power ammo without suffering the increased risk of a Critical Miss.

High-Power Shotshell: There is no danger of overloading a shotgun. Shells are physically incapable of fitting into a magazine for another Gauge or type of Shell. There are High-Power, or Magnum, Shot Shells. These run 3 inches in length rather than the normal 2.5 inches. Magnum Shot Shells are packed with more shot and more powder. They increase the base BDG by 50%.

EXTERNAL BALLISTIC MODIFIERS

There are two factors which influence External Ballistics: Range and Barriers.

Range and BDG

The Range Step will raise or lower the BDG. This is the Range Step directly from the Table. Use of Sights to reduce Range for BCS purposes will *not* affect the ballistics of the shot. Match Weapons do enjoy their Range modification in this connection. Range modifiers to BDG are:

PBR: plus 10 to effective BDG.

SHT or EFF: No modifications to BDG.

LNG: minus 10% to effective BDG.

EXT: minus 25% to effective BDG.

MAX: minus 50% to effective BDG.

Barriers and BDG

As specified in Book 1, a bullet penetrating a Barrier will have its BDG reduced by the Barrier value of the material in question. This reduces the effective BDG.

TERMINAL BALLISTIC MODIFIERS

These factors control the effective BDG at the moment of impact. It is this *final* value which is used to determine damage and Special Effects. There are several factors based on the type of bullet used, and of course the effects of a Critical Hit will increase the effective BDG, often drastically.

Critical Hits

Apart from their other effects, Critical Hits with a bullet will increase the effective BDG, varying by the type of weapon used:

Firing Pistol: Add D10 to the BDG.

Firing Long Gun: Add 2D10 to the BDG.

Autofire: All the shots in the Burst will hit their target, and their total BDG is increased as if a D3 *more* rounds impacted with them. E.g., a Critical Hit is scored with a SMG firing 9mm Parabellum. These have a base BDG of 5. Fired from a Pistol XLNG, the default BBL for SMG, they add 10%, for 5.5, or 6. The gun fires a Burst of 3 rounds. Thus, all 3 rounds hit, for an effective BDG of 18, and rolling a D3 for 2, 2 x 6 is added, or 12, for a total of 30, doing 3D10 plus 3.

Hollow-Point Bullets

These are specially-made bullets with hollowed, cupped, or flattened tips. There are also bullets designed to expand upon striking a target. All such bullets are designated as Hollow Points for convenience.

The effective BDG for Hollow Points is not affected for purposes of determining damage, but when checking for Missile Special Effects, *double* the effective BDG to derive the percentage chance.

When hitting a Barrier, the Barrier value is also doubled for the Hollow Point bullet. A 10-point Barrier would reduce the effective BDG of a Hollow Point by 20.

Jacketed Bullets

These are the direct opposites of Hollow Points. Coated with steel to allow maximum penetration, Jacketed rounds will suffer only half the Barrier value as a BDG reduction, but their chance of causing Special Effects is likewise halved.

Fragmenting Bullets

The very latest in lethality. These nasty little slugs are designed to fragment on hitting a target, propelling several slivers of metal in an expanding pattern through the wound.

The Special Effects probabilities of Fragmenting rounds are *not* altered. However, they will increase their Damage roll by a factor of 1.5. In effect, these bullets have a WDM of 1.5.

Fragmenting rounds suffer the same, doubled Barrier effects as Hollow Points.

Shot Shell Ballistics

The ballistic behavior of a charge of shot, rather than a single bullet, is what makes shotguns unique. As the pellets travel further, they spread out, exposing a wider area to attack, albeit with reduced damage potential.

The controlling factor in this slow spread is the "Choke" of the gun barrel. The tightest Choke is "Full," and an "Open" Choke is the loosest. The Choke is a tube implanted in the end of the barrel, usually permanently, that "chokes" or compresses the stream of shot leaving the gun.

LINE

Out to the end of SHT Range, the shot is in Line. It is a tightly compact mass, affecting only 1 possible target, and acting like Ball Ammo for game purposes.

SPREAD

From EFF through LNG Range Steps, the shot pattern spreads out, affecting a front 3 meters wide. This front moves along the line of fire, and each hex of it will menace the first target in that line. Thus, a Spread pattern of shot could hit one target at EFF Range, and still attack two others out to LNG Range, if they were also in the line of fire. Once the Attack has been resolved for a given hex of the Spread front, that particular hex's worth of shot is gone creating a sort of "shadow."

The BDG used against a target in one of these Spread hexes is the effective BDG of the Shot Shell divided by 3.

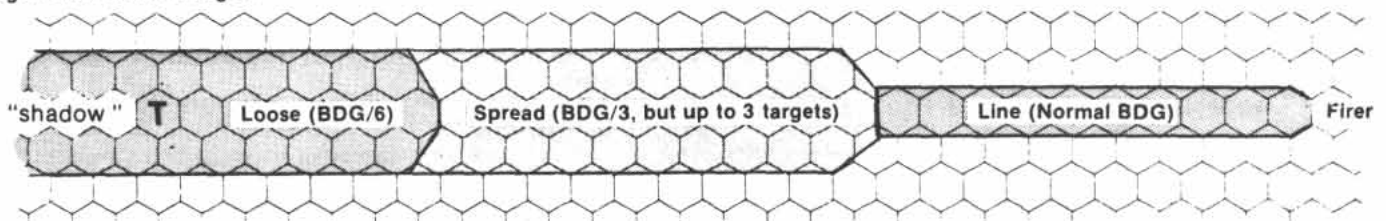
LOOSE

At EXT or MAX Range, the shot pattern is still moving in that 3-meter front, but has lost impetus and some of its pellets. Calculate the effective BDG of the shot, and divide by 6 for the final BDG used on a target.

Double Barreled Shotgun



Shotgun blast with a riot gun



OTHER FIREARMS

In previous sections we have dealt with the two main classes of Small Arms: those firing Ball Ammo and the shotguns. This covers about 80% of the weapons you will find in an average *Aftermath!* campaign. But it is not the whole ball game. There is considerable firepower, *heavy* firepower, available in the form of heavy machine guns, various gun-propelled grenades, mortars, and so on, which will be floating around a post-Ruin world. These are classified as Support Weapons in the Skill system.

Moving back through time, we also have Black Powder firearms to consider. There are a lot of advantages to a gun which uses good old smoky gunpowder, does not have many carefully crafted moving parts in it, and needs no fancy contained cartridges. Of course, your first shot had better count!

SUPPORT WEAPONS

The Gamesmaster will need to exercise discretion in using Support Weapons in the campaign. When directed against Player-Characters, they will tend to lead to a new character design session at the end of the adventure. Used by Player-Characters, they tend to take a lot of the challenge out of combat (by slaughtering the opponents at a range of, say, 1000 meters). We do not provide the same extensive data on Support Weapons as we have for Small Arms. The models given here will serve as guides to the Gamesmaster in adding other specimens to his campaign, should he wish to do so.

Many Support Weapons are capable of use against armored vehicles. For applications of firearms against vehicles, see the Vehicle rules starting on p. 57.

MACHINE GUNS

True Machine Guns differ from Sub-Machine Guns in several ways. They are not man-portable, requiring a mount of some kind (bipod, tripod, or vehicular). They are capable of sustained autofire, laying down a hail of bullets very effectively, even when the firer is spraying an area. They are deadly weapons in most tactical situations.

Light and Heavy MG

Machine Guns (abbreviated as MG) come in two sizes: Light (LMG) and Heavy (HMG). This is an overall measurement based on the Caliber of the MG and its ENC.

The commonest MG calibers are:

LMG: 30 Browning, 7.62 NATO, 5.56mm

HMG: 7.62 x 39mm, 20mm, 40 or 50 Caliber

The 7.62mm and 5.56mm rounds shown are the same as those listed in the Long Guns Ammunition Table. The others are used *only* in MGs. Their BDGs are:

MACHINE GUN AMMUNITION

| Caliber | BDG | Caliber | BDG |
|-------------|-----|-------------|-----|
| 30 Browning | 20 | 7.62 x 39mm | 35 |
| 7.62mm NATO | 27 | 40 Cal. | 60 |
| 5.56mm | 20 | 50 Cal. | 90 |
| | | 20mm | 100 |

The ENC value of an MG is determined by its weight in kilograms divided by 10.

Using MGs:

The Autoweapon Skill is used *alone* (no averaging with anything) to fire Machine Guns. This extends to servicing the weapon, aim, and control rolls.

Range

These are divided into LMG and HMG Range Steps

| | PBR | SHT | EFF | LNG | EXT | MAX |
|-----|-----|-----|-----|------|------|------|
| LMG | 50 | 125 | 250 | 500 | 1000 | 2000 |
| HMG | 50 | 250 | 500 | 1000 | 2000 | 4000 |

OPTION

Tracers

The use of Tracers, bullets loaded with a flare powder which causes them to show a thin path of flame, will increase the BCS of the firer by 1. Maximum efficiency suggested by military doctrine is achieved when every 10th round is Tracer. Less will *not* give the bonus. More will *not* increase it.

Rate of Fire

The MG can lay down heavy fire over an extended target area (that's what it's for). Built to take punishment, it is capable of sustained fire without the jamming that plagues Sub-Machine Guns.

All MGs have an assigned Rate of Fire, drawn from the Specifications of the "real" weapon. This determines the Machine Gun's Rate Factor and the number of rounds it fires in 1 Action.

| Actual Rate in Rounds per Minute | Rate Factor | Rounds Fired per Action |
|-------------------------------------|-------------|----------------------------|
| Under 500 RpM | D6 x .5 | 20 |
| 500-750 RpM | 2D3 x .5 | 30 |
| 751-1000 RpM | D10 x .5 | 40 |
| Over 1000 RpM | 2D5 x .5 | 50 |

The firer may elect to use any lower Rate he wishes, to conserve ammunition.

To determine the effects of a hit by an MG, calculate the effective BDG for 1 round of the ammo used, applying all relevant modifiers.

Roll for damage based on the effective BDG. Roll the dice indicated by the Rate Factor. Multiply the two scores. This is the damage done by the hit.

For Missile Special Effects, a number of rolls equal to the Rate Factor are made, using the effective BDG as the percentage chance. If the Rate Factor is fractional, the last such roll is at half value. If *any* of these rolls succeed, the target suffers Special Effects. For example, a hit from a LMG firing 5.56 ammo at a rate of 400 RpM is suffered. The damage roll for the round (BDG of 20) is made on 2D10, for a 12. The Rate Factor is 1D6 x .5. A 3 is rolled for a Rate Factor of 1.5.

The damage potential of the hit is 12 x 1.5 or 18. Two rolls are made for Missile Special Effects. The first is at full value (20%) and the second at half (10%).

Various modifiers may increase or decrease the Rate Factors beyond the ranges on the Table. The progressions in question are:

LOWER: D3 x .5, D2 x .5, 1 x .5

HIGHER: D12 x .5, 2D6 X .5, D20 x .5, 2D10 x .5

Modification beyond the extremes given is not possible.

Zones of Fire

To fire a Machine Gun, the firer follows this procedure.

Declare Rate of Fire: This may be any value from the Table

given, less than or equal to the gun's stated Rate. Values lower than the "Under 500" RpM may not be selected. The rounds fired in the Action will be as stated on the Table, *even if the effective Rate changes during the Action.*

Select a Target Hex: A given point on the DAT Display must be declared a Target Hex by the gunner. To zero in on the Target Hex requires an Autoweapon BCS, subject to all relevant modifiers *not* due to Target Action. The gun is aimed at a space, not at any particular occupant of that space.

The roll to hit the Target Hex is made on the first Action Phase of the gunner's Action. A miss means his fire is not on target. He may try again on each Action Phase of his PCA, but his effective Rate Factor will drop 1 step per retry. He may continue to roll for the Target Hex until his PCA runs out, his Rate Factor drops below the minimum permissible level, or he Critically Misses, which will also have its usual nasty effects. He may opt to abort the attempt at any time, which will still require him to refrain from other action until his PCA runs out, but will cut the ammo costs for the Action in half.

Declare Traverse: Once the Target Hex is hit, the gunner must declare if he is "Traversing" the MG, and if so, how much Traverse he is using. Traversing means moving the gun barrel in an arc, to cover more area around the Target Hex. The gunner has a good deal of freedom in how to go about this.

The basic "Lethal Zone" for an MG burst is a 1 x 3 meter area (1 hex wide by 3 long), centered on the Target Hex. The gunner may declare this basic Zone to consist of the Target Hex and any two contiguous hexes which are 180 degrees apart, so that the Lethal Zone is a line, 3 hexes long. This may lie at any angle to the line of fire and requires a Travers of 0 (ie., none).

For every additional Traverse declared, the gunner may lay down a second Lethal Zone, also 1 x 3 hexes, either joining the end of a second Zone to the end of another (creating a line of hexes with a length increasing by multiples of 3), or widening an existing Zone by 1 hex in any direction, as long as all three hexes of the second Zone are contiguous with all three hexes of the other.

Each additional Zone increases the Traverse by 1. The Traverse equals the number of steps the effective Rate Factor is reduced.

Hitting Targets: Any target in a Lethal Zone when the Target Hex is hit, or any target entering a Zone during the term of the gunner's Action, is exposed to an immediate attack by the gunner. If this occurs, the gunner rolls an Autoweapon BCS, subject to all relevant modifiers (Range, Visual Conditions, and Target Actions), to see if he hits the target. If he does, damage is rolled as described above.

A character who leaves one Zone to enter another is subject to attack again.

A vehicle subject to attack for entering a Zone which occupies two or more hexes simultaneously, is subject to a separate attack for each Zone occupied.

A target traveling into 2 or more Zones in a single Action Phase is likewise subject to a separate attack in each Zone in question.

MG Construction

As you may have gathered, Machine Guns are big, heavy, rugged weapons. But nothing is perfect and even the most durable weapon will tend to jam if firing at MG rates for long periods.

If the gun is fired for a consecutive series of Actions

greater than its durability, it may jam. A "rest" of 1 Combat Turn will drop the tally back to 0, at any time. (I.e., a weapon with DUR of 4 may be fired safely for 4 Actions, then not fired for a full Combat Turn, etc., and will not jam unless a Critical Miss says it does).

For every Action of firing after a rest is due, a D6 is rolled. If the die roll is greater than or equal to the DUR of the gun, it jams. Clear the jam as for any automatic Small Arms.

OPTION

Changeable Barrels

The working life of a Machine Gun is limited by the barrel, which has a distressing tendency to warp under the tremendous heat generated by sustained fire.

There are two ways to measure this operating lifespan. One deals with the immediate effects of overlong firing periods, and the other with the slow effects of even normal use.

In the first case, it posits that the gunner has been firing well past the period requiring a "rest" to avoid possible jams. If the DUR roll has been made for a number of firing Actions equal to the DUR value of the gun, then a failed roll will indicate barrel warpage, instead of a simple jam. I.e., an MG with a DUR of 4 has been fired for 8 consecutive Actions, without allowing a 1 Combat Turn rest. It has obviously had to make the DUR roll for the last 4 Actions, or it would have jammed. If this concentrated fire continues, and the DUR roll fails, the gun is kaput until a new barrel is mounted (an operation requiring 5 Actions if one has a new barrel handy).

Over the long term, a Machine Gun can fire a total number of rounds equal to its DUR times the Rounds fired per Action at its maximum Rate times 100.

For example, a Machine Gun with DUR of 4, a maximum RpM of 800, firing 40 rounds per Action, will have a minimum barrel life of 4 x 40 x 100 or 1600 rounds, or 400 Actions at maximum rate. This is probably too tedious to bother with unless it is desired to cut short the lifespan of an MG for some reason.

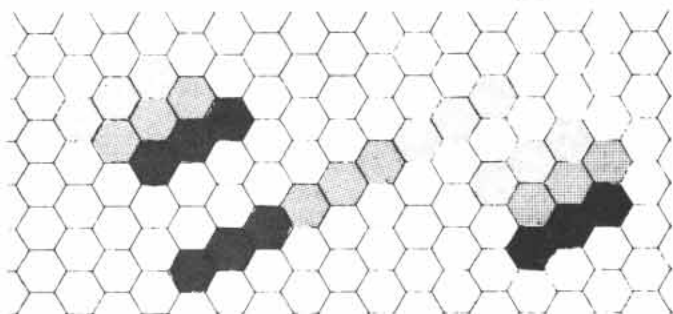
As MGs are always fired from some kind of mount, it is impossible to either assume Full Stance or drop to Hip Fire. If the gun is not properly mounted, it cannot be used. If it is, the rules governing Present Stance always apply, although the gunner cannot exercise the Combat Move option, since he must be positioned behind the gun.

Initial Machine Gun Lethal Zone



Examples of MG Lethal Zones

Traverse 0 Traverse 1 Traverse 2



Magazines

Most Machine Guns, designed to fire from a fixed position, with a two-man operating crew, do not limit their huge appetite for ammunition to simple clips or boxes. Ammo in long, linked belts feeds endlessly into the gun's receiver.

Belts are of the fabric or non-disintegrating type, or the metal, disintegrating link type. The former is a long canvas strip with loops for the cartridges. The latter is composed of individual metal clips, hooked together, which are ejected from the gun singly as it fires. Both are re-usable. If it really is necessary to try to reload or rebuild a belt in Detailed Action Time, use the Loose Rounds Rule. In a looser time frame, allow a character to reload his DFT Group x MNA x 20 rounds into a belt in 1 minute.

There are also various box magazines used on some lighter Machine Guns. Treat these as any other Box clip.

Reloading prepared magazines or belts into an MG is handled under the Box magazine rules for Small Arms.

In closing on Machine Guns, Appendix 1 of Book 3 includes a sample of some half-dozen current models, both U.S.-made and European. These should give the Gamesmaster enough help to add his own designs to the campaign.

MORTARS

Mortars are essentially big tubes, firing explosive shells in high, arcing trajectories (Indirect Fire) to drop onto a target area. The effects of Mortar Shells are given in the section on Explosives.

A Mortar gives a shell a fixed velocity. Aiming the weapon consists of angling the tube so that this velocity will propel the shell in an arc terminating at the desired point. Mortars range in size from man-portable weapons with roughly a 60mm diameter, up to wheel-mounted monsters, 120mm in diameter, requiring a vehicle or animal tow to move. All Mortars are fitted with a buttplate which rests on the ground, transmitting the recoil of the discharge directly to earth.

Encumbrance

There are three classes of Mortar: Light, Medium, and Heavy. Light and Medium Mortars will break down into three parts, Buttplate, Mount, and Tube, for man-carrying. Heavy Mortars will not.

Lt. Mortars: 60mm diameter. Tube ENC of 2. Mount ENC of 1. Buttplate ENC of 2. Total ENC assembled of 5. Shells ENC of .5.

Med. Mortars: 80mm diameter. Tube ENC of 4. Mount ENC of 2. Buttplate ENC of 3. Total ENC assembled of 9. Shells ENC of .7.

Hvy. Mortars: 120 mm diameter. They do not break down for carrying. ENC of 12-16. Shells ENC of 1.

Range

Mortars have a Minimum Range as well as a Maximum. The weapon's angle of fire can be varied only so much from a given position. Firing (or trying to) at shorter ranges than minimum can be suicidal, putting the mortar crew inside the lethal zone of their shells' explosions.

Lt. Mortar (60mm): Minimum Range: 75 meters. Maximum Range: 1500 meters.

Med. Mortar (80mm): Minimum Range: 100 m. Maximum Range: 3000 m.

Hvy. Mortar (120mm): Minimum Range: 150 m. Maximum Range: 6000 m.

As Mortars use Indirect Fire, they may shoot over obstacles between them and the target. Maximum height of such obstacles may not exceed (Maximum Range - Range to Target)/20. Firing a Medium Mortar at a target 1200 meters

away allows fire over an obstacle (3000-1200)/20 equals 1800/20, or 90, meters high.

Firing the Mortar

A Mortar is best handled with a crew of three characters. Each will use his Mortar Skill to fulfill his function to the maximum of efficiency. Crew members are:

Observer: Requires 1 Action to sight in on Target. If not equipped with optical gear (telescope, binoculars, etc.) capable of reducing effective Range from his position to target to 1000 meters or less, his BCS is halved. He must perform an Observe and Command Action after each shot, in order to try to use his BCS.

Gunner: Actually aims the Mortar. His BCS is used to determine the location of the hit. It requires 2 Actions to re-adjust the Mortar's settings.

Loader: Loads in the Mortar Shell, which automatically fires the weapon. His BCS is used to set shell for air burst, if desired. This increases the effective range of the Shell's fragmentation pattern (see Explosives). If BCS is made, Shell bursts in air. If not made, it bursts on the ground.

It requires 1 Action to load the Mortar. The weapon fires at the end of the Action.

The Loader's BCS is also used as a Control roll in the event of a Critical Miss on the Gunner's BCS roll.

You will note that one man may operate a Mortar, as he may fulfill all three Crew functions, but his rate of fire will be much slower than a fully-trained Crew's would be.

Hitting the Target

Mortar fire is directed at a Target Hex, like Machine Gun fire. Due to the nature of the Mortar's ballistics, the first shots directed at a given target are penalized, slowly approaching an optimum as the Observer's data is applied by the Gunner to bring Shells in on target.

In deploying the Mortar to fire a shot, calculate the range from Mortar to target. The initial penalty is the difference between this range and either the Maximum or the Minimum Range for the Mortar, whichever is less. Divide the difference by 100 and subtract that from the Gunner's BCS.

On subsequent shots at the same target, the Observer will try to use his BCS to reduce this penalty. If he makes it, reduce the penalty by his Wit Group. If he fails, reduce the penalty by 1. If his BCS roll scores a Critical Hit, eliminate the entire penalty. If it is a Critical Miss, increase the penalty by (6-Wit Group).

If the Mortar switches targets without altering its location, the penalty calculation is made anew. However, besides determining the difference between the new target's range, the Maximum, and the Minimum, the Gamesmaster should also determine the difference between the new target's range and the previous target's range. The new penalty is the least of these three possibilities.

At the end of the Loader's Action, the Gunner rolls his BCS to see where the Shell actually lands.

If BCS indicates a HIT: Determine Effect Number. Subtract this from penalty. If result is greater than 0, a precise hit has not occurred. Multiply difference by roll of 2D10, determine a vector with a D6. Shell actually fell in indicated spot. The near miss may do quite as well as a direct hit, this being in the nature of high explosive fragmentation shells.

If BCS indicates a MISS: Subtract effective BCS from score rolled. Add penalty (if any left). Multiply by roll of 2D10 as indicated above, determining direction with a D6. Again, a near miss may do the job quite satisfactorily, painful though this may be to the purist of mass destruction.

On a Critical Hit, the Shell lands exactly on the target. The Gunner has his choice of an Air Burst or normal hit for the

Shell. See the Explosives rules for a full description of this effect.

At any time, the Gunner may spend his 2 Actions to "lock on target." Thereafter, any Shells fired will land exactly where the shot before them did, until 1 Action is spent to "unlock" the adjusting mechanism.

Critical Misses

If the Loader did not make his Control throw, a Critical Miss (indicated by a 20 on the Gunner's BCS roll) is handled differently from Small Arms Criticals. A "No Effect" result means a dud Shell. It lands harmlessly in the indicated area. Any other result indicates a jammed Shell, lodged in the tube. This presents an effective Barrier value of 20 to attempts to remove it. Due to the awkward wedging of Shell in tube, a Strength CST is needed to try to extract it, rolling once per Action (only one character may work on the jam at one time).

Only on a roll of 100 when checking Critical Miss effects does the Shell blow up in the tube, exposing the crew to a blast with its effects reduced by half. Even with this reduction such a result is usually lethal.

RIFLE GRENADES

Rifle Grenades are explosive projectiles designed to be fired from a military rifle. Early models required special ammunition in the gun and bulky adapter mechanisms. Modern grenades dovetail with standard designs on most assault rifles and carbines to permit firing with no special operations required.

The effects of Rifle Grenades on a target area are discussed in the Explosives section. What concerns us here is *how* the projectiles are fired. A character's BCS for firing Rifle Grenades is determined by averaging Rifle and Grenade Launcher Skills.

Types of Rifle Grenades

We may break this down into several sub-categories. First, what is the propulsion system? There are two types: Ballistite and Live Ammo. They may be fired with an adapter or by a launcher.

BALLISTITE grenades require that a special, blank cartridge be chambered into the gun, usually necessitating the removal of the weapon's normal clip. This triggers the launching charge in the grenade. Ballistite rounds are thus cumbersome to use, but give the grenades designed to take them more range than the grenades launched using live ammo.

LIVE AMMO grenades require no special round for launching. The gun's normal load of Ball Ammo is sufficient to send them their merry way. They lack the range of Ballistite models.

ADAPTER grenades require that a special adapter mechanism be fitted to the gun. It is useless for normal fire while so configured. It is rare to find such grenades in modern weaponry. The two models used in **Aftermath!** are the US Army M-1 and M-14 Rifle Grenades, made for the famous weapons of WWII and Korea. They are exclusively Ballistite-launched weapons.

22mm **LAUNCHER** grenades are the modern form of the weapon. Almost all military rifles and carbines designed after 1960 have a 22mm Grenade Launcher built into the flash hider. This is an integral part of the gun. Any 22mm Rifle Grenade can be launched from a gun with this Feature. Some of the 22mm grenades use Ballistite, others Live Ammo.

Other than these operational questions, it will be necessary to keep track of what the grenade's function is. The commonest classes are:

HEAP: High Explosive Anti-Personnel. Powerful fragmentation grenades, like super hand grenades.

HEAT: High Explosive Anti-Tank. Tipped with shaped charges, these are used as infantry Support Weapons against armored vehicles.

WP: White Phosphorus incendiary grenades. The effects of WP weapons are described in Book 3, along with other incendiary weaponry.

Grenade Ranges

This varies among Ballistite-fired, Adapter-fired, and Live Ammo types.

| GRENADE TYPE | PBR | SHT | EFF | LNG | EXT | MAX |
|-----------------|-------|-----|-----|-----|-----|-----|
| Adapter | 20-30 | 50 | 75 | 100 | 200 | 300 |
| 22mm Ballistite | 20-30 | 75 | 100 | 300 | 500 | 700 |
| 22mm Live Ammo | 20-30 | 50 | 100 | 250 | 400 | 650 |

Note: Point Blank Range (PBR) for Rifle Grenades is rated as starting at 20 meters. This is because Rifle Grenades are fitted with safety devices which do not arm the grenade until it has traveled 20 meters from its firing point. Thus, shots at targets closer than 20 meters are not possible.

Hitting the Target

As with Mortars, the Rifle Grenade is aimed at a specific area, not an individual target. With a less pronounced arc of fire, they are not as difficult to aim, using the averaged scores in Rifle and Grenade Launcher Skills to derive the BCS. Shots are resolved as with normal gun fire, but *all* fire is from presented stance, and every shot is subject to a -2 penalty to cover the lower general accuracy of the Rifle Grenade.

Note that a Critical Miss on this shot does *not* mean that the grenade is faulty. It is handled as for any firearm and refers to the rifle's performance, not the grenade's. Treat "No Effect" results as dud rounds. When the firer recovers from the Critical effect, if the gun is ready to fire, he may try to launch the grenade again.

In the event of a normal miss, the Gamesmaster determines the result as with Mortar fire. Thus, "close enough" can be more than sufficient.

In the event of a Critical Hit, the firer may choose to make the grenade hit an Air Burst, with effects as described in the Explosives rules.

Rifle Grenade Timetable

The handling of the Rifle Grenade is cumbersome at best. The following "Manual of Arms" lists the steps required to load and fire such a projectile in order. Simply delete the steps that do not relate to the type of grenade being used to derive the particular timetable for you. The procedure is:

- 1 Action to clear magazine for Ballistite round.
- 1 Action to mount 22mm Grenade *or* 2 Actions to mount Adapter device.
- 1 Action to mount Adapter grenade.
- 1 Action to load Ballistite round.
- 1 Action to prepare to fire.
- 1 Action to fire.
- 1 Action to remove Adapter device.

Reloading another grenade would pick up at the "Mount Grenade" Action. Switching the rifle back to normal configuration requires the same number of steps it took to prepare the gun in the first place, plus however long it takes to reload, if a ballistite grenade was used.

GRENADE LAUNCHER

Unlike the Rifle Grenade, which is to an extent an attempt to turn rifles into Support Weapons, Grenade Launchers are special weapons designed to toss a 40mm projectile for a limited distance.

Types of Launchers

40mm Grenade Launchers come in three configurations.

The first is an integral part of an assault rifle, slung under the gun barrel. When using this type, the BCS is determined by averaging Grenade Launcher and Rifle scores.

Next we have a completely separate launcher, looking like a stubby shotgun. Such Grenade Launchers are usually fitted with shoulder stocks, but are fired using only the Grenade Launcher Skill.

The last type of launcher is a pistol-grip affair, but may be either fired mounted to an assault rifle or used on its own, albeit requiring two hands to steady. This last is the most modern design.

Also to be considered are those new launchers which carry a clip of 40mm grenades for a slow version of semi-automatic fire. The vast run of Grenade Launchers are single-shot weapons. They operate as Break Action weapons for reloading purposes.

The clip-fed Grenade Launchers carry a Box magazine of 4 grenades, firing 1 shot per Action.

Types of Grenades

Any 40mm Launcher will accommodate any 40mm grenade. The specific effects of the projectiles are described elsewhere, but in general terms they are:

HEAP: As Rifle Grenades. This is essentially a Hand Grenade. See the Explosives section.

WP: White Phosphorus. See Fire Weapons section.

CANISTER: A close combat round, essentially using the Launcher as a giant shotgun, firing a mass of fragments. See the Explosives section.

GAS: A gas shell is fired, which explodes in contact with the ground. See Gas rules in Book 3. The Tear Gas launchers used by police are generally 40mm Launchers.

Grenade Launcher Ranges

The Grenade Launcher is a limited weapon, compared to the mighty Mortars or lordly Rifle Grenades. It can put any of its loads *except* Canister out to distances as follows:

- PBR: 20-30 meters
- SHT: 50 meters
- EFF: 75 meters
- LNG: 125 meters
- EXT: 250 meters
- MAX: 500 meters

Canisters' hideous effect is limited to about a 30-meter maximum as described under Explosives.

Firing the Launcher

The appropriate Skill or averaged Skill is used. Treat this as Rifle Grenade use in all respects.

BLACK POWDER FIREARMS

From the heights of modern firepower, we now turn back to an altogether earlier form of weapon: the Black Powder or Muzzle-Loading weapon. While this class takes in every firearm from the early Renaissance to the late 19th century, we will confine our study to two of the most recent models: the flintlock and its more modern successor, the percussion cap firearm.

The Muzzle Loader is a very straightforward gun. A long, usually smoothbored barrel is solidly strapped to the gunstock, almost completely closed at the back end except for a small hole connecting to a priming pan. In the flintlock, this pan holds a small amount of loose gunpowder (Primer). In a percussion model, this has been replaced by a "nipple" over which a Percussion Cap is fitted. The explosive in this cap goes off on impact from the hammer, flashing a spark into the main powder charge in the gun barrel. *BANG!*

The Muzzle Loader recreates a giant model of the compact, self-contained cartridge of today. First, if recently fired, the barrel is *swabbed*, cleaning the remains of old

charges out. A new *charge* is then inserted and *rammed* in, packing it tightly. The *bullet* is then wrapped in a *wad*, and dropped in on top of the charge. Another wad is rammed tightly over it all, to seal the powder in and confine its burn, so as to build up the pressures needed to fire the weapon.

The gun is now loaded.

The *primer charge* or *percussion cap* is now placed on the pan, and the gun is cocked. It is not ready to fire, if nothing goes wrong.

MUZZLE LOADING TIMETABLE

The following "Manual of Arms" gives the Actions involved in preparing to fire a Muzzle Loader.

If weapon has been fired already, 1 Action to *swab*.

1 Action to load in *charge*. (3 Actions if charge is not premeasured)

1 Action to *ram* charge in tightly.

1 Action to wrap bullet in a *wad*.

1 Action to ram *bullet* into barrel.

1 Action to *wad* the whole thing.

1 Action to put rammer away (it may be dropped, of course).

1 Action to prepare *primer* or *percussion cap*.

1 Action to *prime* with a Cap or 2 Actions to *prime* with loose Powder.

1 Action to *cock*.

The gun is now, finally, ready to fire!!!

MUZZLE LOADER WEAPON SPECS

As with most firearms, these come in Pistol and Long Gun models. They are by no means as finicky about Caliber as their modern descendants, but still limit the size of Bullet that may be used *within* about a .05-inch range. We will be doing this marvelous class of weapon little justice in this abbreviated view, but will take the following Calibers in both sizes as the standard *Aftermath!* models: 45, 50, 65, 70. Due to the low muzzle velocity achieved by Black Powder fire, large slugs were the order of the day to achieve adequate stopping power with the *one* shot usually allowed hunter or soldier with these weapons.

Black Powder Ranges

The ranges are set by the overall size of the gun.

| | PBR | SHT | EFF | LNG | EXT | MAX |
|----------|-----|-----|-----|-----|-----|-----|
| Pistol | 5 | 10 | 15 | 30 | 60 | 90 |
| Long Gun | 10 | 20 | 50 | 100 | 150 | 200 |

Feature

Rifled Barrels

It was not until the 17th century that someone noticed that spinning projectiles hit harder and fly truer than those that do not spin. The way to get bullets to do this was by *rifling* the gun barrel, incising grooves in a long spiral along the inside to impart this spin to the projectile as it rushed up the tube.

Rifled gun barrels increase the range steps of the weapon by 50%, just as Match Quality weapons do with modern guns.

ENCUMBRANCE

Unquestionably, the old firearms bulk more than the sleek killers of today. In the absence of hard data on actual weights, assume standard Encumbrances for the weapons of .4 for all Pistols and 1.5 for all Long Guns.



Flintlock Rifle

BLACK POWDER BDG

The BDG for a bullet from a Muzzle Loader is dependent on the *Powder Charge* and the *Caliber*. The powder loaded into the gun is measured in "Drams" (of which there are 24 to the ounce). The Caliber is, of course, in fractions of an inch.

The base BDG for a given load in the gun is equal to 10 x (Charge in Drams) x (Caliber in inches). This is the BDG from Long Guns. Pistols halve this just as they do in modern guns.

Please remember that the Caliber value must be in *fractions* of an inch. For a .45 Caliber weapon, use *point 45* as a factor—45/100ths of an inch!

This is used as the base BCS, subject to all the usual Ballistic modifiers.

ABOUT POWDER CHARGES

It is unsafe just to stuff gunpowder into the gun until it is a veritable cannon. The upper limit on the number of charges is the Durability of the weapon. For every Dram over this limit that is loaded, increase the chance of a Critical Miss by 1. I.e., in a DUR-4 gun with 4 Drams of powder in the charge, the chance of a Critical Miss is on a natural die roll of 20, as always. Load 5 Drams in, and the Critical Miss occurs on a die roll of 19-20. Load in 6 Drams, and the chance is on a roll of 18-20; and so on.

OPTION

Charge Loading Rule

If desired, the Actions spent in loading a Charge can vary according to the size of the Charge. The maximum number of Drams that can be loaded in 1 Action is the user's Deftness Group. The use of pre-packaged paper cartridges allows the loading a 1 Cartridge in 1 Action, but only one such Cartridge may be in the gun at a time. A Cartridge contains a premeasured Charge and a prewrapped Bullet. bullet.

FLASHES IN THE PAN

Apart from the omnipresent danger of a Critical Miss, the Primer presents a question when firing Muzzle Loaders. Will it go off and trigger the main Charge?

Using loose powder as a primer gives a base 1 in 10 chance of a misfire. Add the roll of 1D6 to this if it is raining, and increase by 1D6 for every minute that the gun is out in the wet. Also, if the primer has not been changed in the last few hours, the Gamesmaster should feel free to roll 1D3 for an addition to this penalty.

Percussion Caps do not care if it is wet, or how long they are on the pan before firing. They have a flat 1 in 20 chance of misfiring, subject to no adds under most circumstances.

EXPLOSIVES

This Section deals with chemical explosives: dynamite, plastic explosive, blasting powders, and the weapons made from them: hand or rifle grenades, mortar shells, mines, etc. We do not discuss atomic explosives (Gamesmasters will find some ideas on nukes in Book 3, but frankly, they're not our thing).

These rules govern the use of explosives in two roles: anti-personnel (i.e. against characters) and demolition (i.e. against the Barrier value of structures). The use of explosives against Vehicles is specifically outlined at the end of the section.

RATING EXPLOSIVES

All explosive materials generate a concussion effect when detonated. This is called "Blast." It is effective against both characters and Barriers.

Most explosive weapons will produce a fragmentation effect as well. This is called "Frag" (for Fragmentation). It is produced by sheathing an explosive charge with a metal or plastic jacket, which is smashed into shards by the force of the explosion and hurled outwards like a hail of bullets.

In codifying explosives or explosive weapons, the format "NAME BLAST/FRAG" is used. "NAME" is the name of the material or the weapon. "BLAST" is its Blast rating. "FRAG" is its Frag rating.

An explosive will almost always produce Blast, but not necessarily Frag. Thus, an entry like "TNT 10" is assumed to mean a charge of TNT, or Dynamite, with a Blast of 10, but no Frag. The entry "Hand Grenade 5/5" would indicate a grenade with a Blast of 5 and a Frag of 5.

There are some exotic exceptions (see Claymore Mines later in this section), but they represent special cases.

BLAST EFFECTS

These operate on two fronts: against characters in range, and against structures and items either deliberately or incidentally exposed to significant Blast ratings.

BLAST VS. CHARACTERS

The base Blast rating of an explosion determines the maximum range at which it can affect a character. For every meter of distance between the center of the explosion (the hex in which it takes place) and the character, reduce the effective Blast by 1.

- All characters exposed to Blast suffer a Stopping Effect, as described in Missile Special Effects in Book 1, with a force equal to the effective Blast. This figure is divided by their personal Mass to derive the Effect Number of the Stopping Effect.
- Among other things, this Effect will hurl the character away from the center of the explosion for the indicated number of meters. If his path is blocked by a solid obstacle, before he has moved the indicated distance, then he will suffer a Fall result, hitting the obstacle as if he had fallen onto it from a height equal to the distance rolled for the Stopping Effect. Immediate check is made for Fall results. Should he survive these, he will usually have to save against falling down due to the Stopping Effect. This is carried out normally. Thus, a Blast can slap a character up against an object, simulating a Fall, and/or drop him to the

floor in a second Fall after he has bounced off the obstacle. See p. 32 in Book 1 for Fall effects.

- All characters exposed to Blast suffer Subdual Damage to their whole system (i.e., no Location is rolled for). They reduce this damage by their Average AV. The amount of Subdual Damage equals 2 x effective Blast.
- Blast may deafen characters with unprotected ears. The base chance of this occurring for a character is 2% x effective Blast. If this D100 roll indicates Deafening, the character must make a Health CST. Failure to make the Saving Throw will deafen the victim for (50 Combat Turns - Health Score). If Deafening affects a character already suffering such a result, the indicated time is added to the period he will remain deaf.

Jose spun around as a hissing, sparking something crashed through the window. A bundle of dynamite delivered by Air Mail, a present from his pursuers! He dove for the sputtering package of death, but a hail of rifle fire from outside drove him away from the window's line of sight. Desperately, he ran for the door, sickly aware that he would be too late. Suddenly, the world seemed to turn into a volcano, a nova, a thundering chaos of noise and pain. A giant bludgeon slammed into Jose's body, and everything went dark.

The above scene illustrates the effects of Blast on a character. Jose is some 10 meters away from a three-stick bundle of TNT. Each stick has a Blast of 10, for a total of 30. The effective Blast is thus 30 (the rated value of the explosive) minus 10 (Jose's distance in meters from the explosion) for a total of 20.

First, Jose is hit by a Stopping Effect of 20. His Mass is about 5, so the effect number is 20/5, or 4. This will toss him 2D3 meters away from the explosion's location, and requires a Deftness AST if he is to avoid a knockdown. Unfortunately, Jose got close enough to the door that the Blast will pitch him into it. The Gamesmaster rolled a 5 for the distance of the Stopping knock-back. Jose was only 2 meters from the door (so near, yet so far). He slams into the door as if he had fallen 5 meters. He rolls for Fall effects. There are none. He now rolls his Speed AST to stay on his feet after the Stopping Effect. He makes it! OK Jose!

However, the Blast also does Jose twice its effective value in Subdual Damage. This is 40 points (for an effective Blast of 20) and Jose is only in an Average AV of 4, for a total of 36. The poor slob must try to resist System Shock (if the whopping concussion has not simply blown his damage total past his DRT). Jose's system evinces its disgust at these outrages by refusing to succeed at a Health AST, and he goes down for the count. The only good thing about all this is that any Deafening results from the Blast will have worn off by the time Jose comes to.

DEFENSES AGAINST BLAST

Hard cover is good protection against Blast. If it is beyond the Blast's ability to knock down (see Demolition rules following) it will protect the character against all but the Deafening attack. It had better be solid, though, or the character may find himself buried under his cover.

If the character can put a 90 degree corner between himself and the explosion, the Blast will be cut in half. Each such turn halves the effective Blast yet again.

Crazy Isaiah bellows, "Seek Ye the Justice of the Lord, SINNERS!" and tosses a grenade down the corridor. Being crazy does not mean he's stupid, so Isaiah ducks back around a corner. The grenade goes off with a base Blast of 10. The blast front travels down the corridor to Isaiah's turnoff. It has an effective Blast of 6. But to Isaiah, flattened against the wall around that corner, the effective Blast is reduced to 3.

Certain forms of Integral Armor (Military and Police suits, protective coveralls for Disaster workers, racing drivers, etc.) will provide a protection called Blast Buffering.

When the wearer of Blast Buffered armor is hit by an explosive effect, the effective Blast is reduced by the value assigned to this Blast Buffering.

Character actions will not overly affect Blast. "Hitting the Deck" (changing position by the end of the Action Phase in which the explosion goes off) will serve to reduce the effective Blast by the character's CDA. He may expose himself to Fall results if he does not take a full Action to get down, of course. Characters trying this maneuver in the same Action Phase as the detonation must make a Speed AST to get the defensive bonus from it.

Soft Cover can also soak up some Blast, usually giving up the ghost in the process. Heavy draperies, piles of cloth, mattresses, loose boxes, etc., can reduce Blast for those sheltering behind them. The Gamesmaster will often have to assign some arbitrary value (roll 1D3 if you need a good range) to such protections.

And, of course, hurling your own body (or someone else's) across the explosive before it goes off to drastically reduce Blast (for everyone else).

The base Blast used in this case is divided by the Mass plus Average AV of the hero on top of it. But *he* will suffer *twice* the base Blast rating with no reductions, both as a Stopping Effect and in calculating the Subdual Damage. For example, jumping on top of a Grenade 10/5, the sacrifice character takes a Stopping Effect Number of 20, and 40 points of Subdual Damage. The Frag effect will probably finish him off, but that is discussed later. His armor and mass do not reduce this damage.

Using inanimate objects (mattresses, spare corpses, tarps, etc.) in this manner will only subtract their value from the base Blast rating (Yes, self-sacrificing heroes get a bonus toward saving their comrades).

DEMOLITION

Any structure or object exposed to a good-sized Blast is not going to benefit by it. But this can be glossed over by the Gamesmaster in normal play, when the bombs are flying for anti-personnel reasons, rather than working out the effects on every stick of furniture in the room. The Gamesmaster may destroy items in close range by fiat, and likewise decree any minor architectural changes wrought on the surroundings. Light doors, windows, etc., will probably go away. Heavier features will probably survive. If there is too much indiscriminate use of explosives in tottering buildings, the site of the explosions can conveniently be made to cave in, the chance in 20 being equal to the Base Blast Rating minus the building's Structural Stability rating, that the room in question has just dropped its ceiling in.

However, controlled use of explosives to demolish a particular barrier or structure is another thing entirely. While any dolt can charge up to a door, lay an armed grenade by it, and run like blazes for cover, it is not automatically going to remove the door for him.

DEMOLITION SKILL

The Demolition Skill described in part in the Skills section will simultaneously enhance the destructive power of a charge in a controlled manner (i.e., vs. the desired target only) and at the same time reduce its Blast effects on the area around the obstacle.

When a charge is set to knock over a Barrier, it will receive a multiplier to the effective Blast against that Barrier's value.

Unskilled Use

The character has not used Demolition Skill to set the charge. Just plopping a bundle of TNT down by a door falls into this category. The Blast directed at the Barrier is equal to the effective Blast multiplied by a factor equal to the roll on a D3 times .5.

Rocco runs up to a door, finds it locked, and being in a hurry, decides to blow it down. He arms a hand grenade with a Blast of 10, drops it by the obstruction, and runs like a bandit for cover. KA-BLAM! The grenade had rolled about 1 meter away, so the effective Blast for the door is 9. Rolling a D3, the Gamesmaster gets a 2. Thus, 2 x .5 equals 1, so the door takes 9 points of damage to its Barrier value. Even assuming it to be a flimsy wooden door with only 15 points to start with, it remains in place, leaving Rocco's path still obstructed.

Skilled Use

Under normal circumstances, small-scale demolition (i.e. doors, portions of walls, locked areas, rubble, etc.) requires 10 minutes' work to properly set the charge when using Demolition Skill. The Gamesmaster may require the possession of certain tools, such as drills, picks, shovels, or what have you, to make holes into which the explosives will be placed. Working without such tools will reduce the effective BCS for the Demolition worker. Also recall that the character must average his Demolition Skill with the Explosives Skill appropriate to the type of material being worked with. Explosives on the Table below are divided by the Skills governing their manufacture and use.

If the Demolition user makes his BCS (rolled when he triggers the charge) then the multiplier for Blast will be his Wit Group Effect Die roll but he will at least get to roll a D3, should he be afflicted with a Wit Group of 1. If the BCS fails, then use the die roll specified for Unskilled use. A Critical Hit increases the effective Group by 1. A Critical Miss indicates a bum charge, doing only *half* the base Blast value to the Barrier as damage.

Skilled Demolition work also can reduce "backblast" from a charge. This is simply the normal Blast effect occurring on the character's side of whatever he is trying to blow up. If the BCS is made, the base Blast for determining the effects on characters in range is divided by the Demolition worker's Effect Number. Roll a separate BCS for this, also at the time the charge is triggered.

OVERKILL

It is desirable to have some idea of just how much Barrier is being faced when setting a demolition charge. If the *base* Blast of the charge is more than twice the value of the Barrier, any Blast in excess of twice the Barrier value is called Overkill. Overkill may do just a bit more damage than anticipated.

It is difficult to give more than guidelines in how to handle this situation. All we can do is illustrate the way several particular cases might go, as a signpost to other solutions for the Gamesmaster.

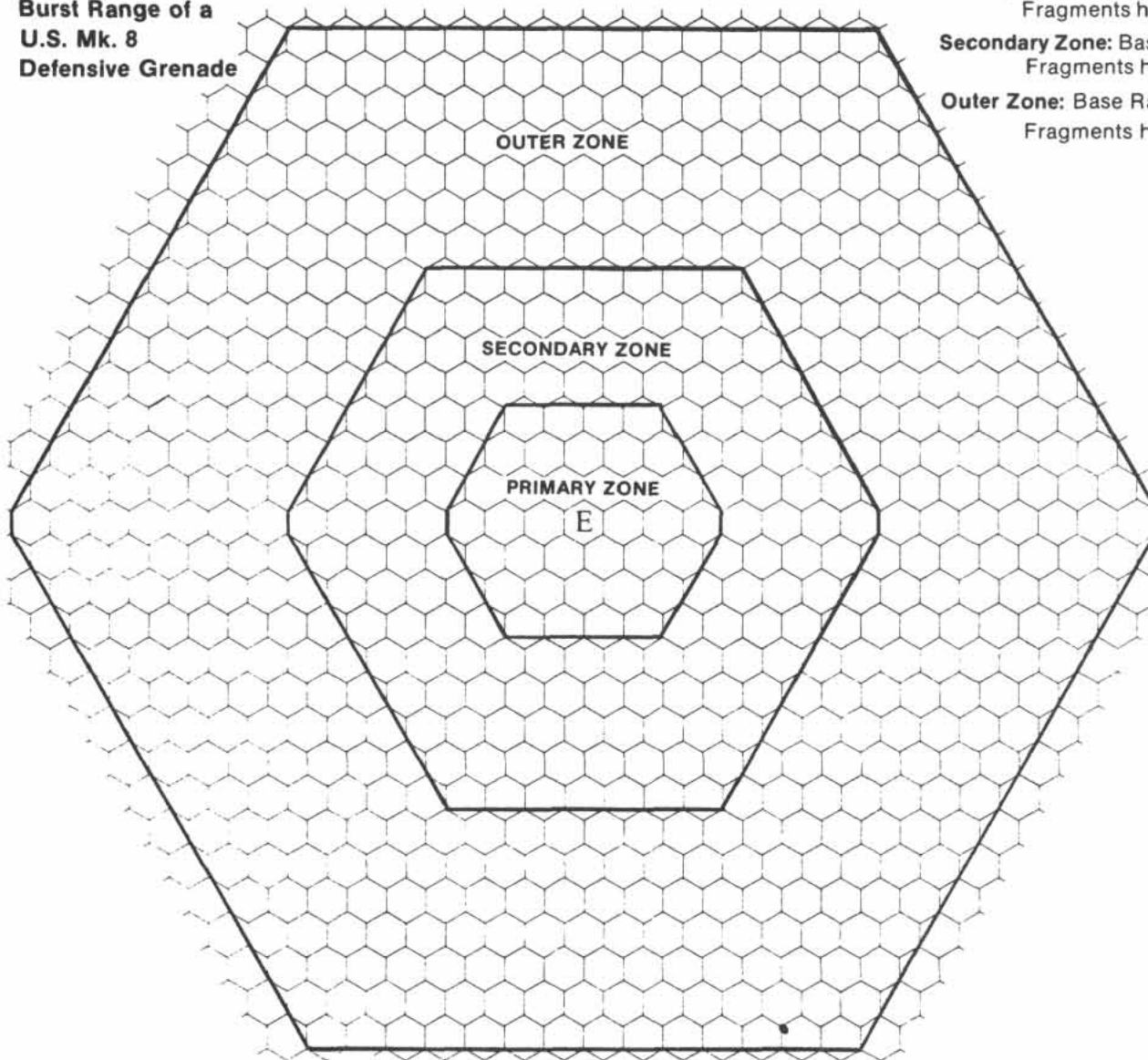
- Demolishing a doorway, wall, or other interior feature of a building: The amount of Overkill in the base Blast Factor is the chance in 20 of collapsing the roof of the room or building, for a radius around the center of the explosion equal to the base Blast rating (all of it) divided by the Structural Stability of the building. Only the Gamesmaster is

likely to know what the Stability actually is (from 1 to 10, with 1 meaning nearly gutted, 10 meaning no structural weakness). Using a charge with Blast of 50 to open a 20-Barrier-point door leaves an Overkill of 10. There is a 10 in 20 chance of bad results. The Gamesmaster rolls a 6 on a D20, indicating problems, and announces that the doorway previously closed by the door is now blocked by the room from upstairs (a 50-meter radius turned out to be more than enough, as the building had a stability of only 3, for a 16-meter collapsed area).

- Opening a safe, vault, or lockbox: The Overkill will directly attack the Barrier (or whatever) of every item in the container. This will certainly destroy any papers, machinery, electronic gear, or what have you. There is a percent chance equal to the Overkill that the container will simply be pulverized by the confined fury of the Blast.
- Blowing up a large section of ground: There is no real risk here unless working with an unstable formation (like trying to clear a blocked cave mouth). The Overkill result would be an avalanche proportionate to the magnitude of the overage.

It is to be hoped that these limited examples will be helpful to the Gamesmaster faced with adjudicating the outcome of overenthusiastic use of explosives.

**Burst Range of a
U.S. Mk. 8
Defensive Grenade**



FRAGMENTATION EFFECTS

Fragmentation is a purely anti-personnel effect, measured by a Frag rating. This number determines the damage potential of a Frag hit in the same way that BDG does for a bullet.

Frag rating is equal to the number of D10 of Lethal Damage done by a hit. A bonus is added to this die roll equal to the Frag rating. Thus, a Frag 5 weapon will do 5D10 plus 5 in Lethal Damage when it hits.

As with bullets a fragment may get Missile Special Effects when it hits. The effective chance of this is 10% x Frag rating. A hit from a Frag 5 weapon has a 50% chance of causing Missile Special Effects. *Note:* the effects of a single explosive will only get *one* Stopping Effect on a given target. The Stopping Effect for a fragment hit is *not* applied to those who have taken Stopping from the Blast.

When a character is within the range of a weapon's Frag effect, the Gamesmaster will roll a BCS for the fragment to see if it hits him. Normally, only one such attack is made on a target per explosion.

FRAGMENTATION RANGES

The base Range for fragmentation effects is determined by adding the Blast and Fragmentation ratings of the explosive. The specific ranges derived from this figure and their effects are as follows:

- Primary Zone:** Base Range/2, down. Fragments have BCS of 16.
- Secondary Zone:** Base Range. Fragments have BCS of 12.
- Outer Zone:** Base Range x 2. Fragments have BCS of 10.

Thus, if a Grenade 5/5 goes off, it has a Base Range of 5 plus 5, or 10. Its Primary Zone is 5 meters. Targets within that radius of the explosion must avoid a BCS of 16 to dodge fragments. Its Secondary Zone is between 5 and 10 meters. The BCS for fragments here is 12. The Outer Zone extends from 10 to 20 meters. Fragments here have a BCS of 10. All fragments have a Fragmentation rating of 5.

CRITICAL EFFECTS OF FRAG HITS

A Critical Hit by a Fragmentation weapon indicates that two fragments have hit the target. Roll location separately. Treat like simultaneous hits by bullets.

A Critical Miss on the Frag BCS (*not* the weapon's user's BCS) negates any other attacks the fragments have coming. If this occurs on the first such BCS roll, the weapon was a dud. It is thus advisable to roll for targets exposed to Frag effects in order of their nearness to the center of the explosion.

A grenade exposes Al, Charley, and Bob to Frag effects. Al is closest, then Bob, and Charley is farthest from the explosion's center. The BCS roll against Al is made first, and hits him. The roll against Bob is a 20, a Critical Miss. Therefore, no roll is made against Charley.

DEFENSE AGAINST FRAGMENTS

Defense from fragments is similar to that from bullets. But the target movement does *not* enhance the CDA. Cover is handled the same, and hitting the deck will double the CDA.

When a fragment hit is indicated, it will attack only one Location, and must overcome the Armor Value to do damage. The exception occurs when the explosion is in a confined space, such that the area is smaller than the weapon's Outer Zone. All those in the area will be attacked twice (i.e., two BCS rolls are made for fragment hits). Treat as separate attacks.

Diving onto the Grenade (or whatever) is enshrined in the heroic literature of modern combat. When someone pulls this stunt (Instant Medal of Honor in military slang), he is almost certainly dooming himself to save others. Such a character will take the full force of the grenade's Fragmentation rating, none of it traveling past his body. He will take double the damage rolled for the hit and defend against it with his Average AV. If the Gamesmaster wishes an alternate system, assume that a Critical Frag hit is sustained, treating it as a Critical bullet hit. Still use the Average AV for defense.

AIR BURSTS

Air Bursts, the detonation of Mortar Shells, Rifle Grenades, Artillery Shells, etc., at a given height above the ground, will double the Base Range of Fragmentation effects.

The Blast is treated normally, so that in general, an Air Burst sacrifices this effect for more penetrating fragment dispersal.

To determine the height of an Air Burst, the Gamesmaster will roll 2D10, add 5 meters to the result, and get the height in meters of the explosion's center.

CONFINED BURSTS

When the explosion of a fragmentation weapon occurs in an area which is smaller than the Outer Zone of the Fragmentation Range, then all characters exposed to it will be attacked by two fragments instead of one. Roll BCS separately for each such attack, using the BCS for the character's range from the explosion's center.

EXPLOSIVE MATERIALS & FUSES

We will separate the discussion of explosives and explosive weapons, since the former provide the basis for the

operation of the latter. All of the materials given here fall into two categories:

Industrial Explosives: Materials manufactured under fairly controlled conditions using a Lab. This class includes Dynamite, Plastique, and Blasting Powder.

Home-Cooked Explosives: Materials which can be made in any situation providing the necessary equipment and ingredients. Many of these can be and are manufactured more copiously or more efficiently under Industrial conditions. Others are purely improvisational but effective for all that.

EXPLOSIVES TABLE

| Name of Material | Blast Rating | Charge Size |
|----------------------------|--------------|----------------------------------|
| Simple Explosives: | | |
| Dynamite (or TNT) | 10 | 1 stick |
| Nitroglycerine | 15 | 1 deciliter (about 3 fl. oz.) |
| Nitrocellulose (Guncotton) | 10 | 1 kg |
| Black Powder (Gunpowder) | 5 | 1 kg |
| Ammonium Nitrate | 5 | 1 kg |
| Complex Explosives: | | |
| Plastique | Varies | 1 kg |
| Blasting Powder | 15 | 1 kg |
| Mercury Fulminate | | See Primers |

BLAST RATINGS

In general, if 1 unit of explosive produces a Blast of X, then 2 units produce a Blast of 2X.

Plastic Explosives

The Table ascribes a variable Blast to Plastic Explosive (or Plastique, as it is also known). This form of explosive is, after Dynamite, the most common Industrial Explosive used today. It is found in engineering and mining applications as well as military and intelligence uses. A given formula of Plastique is codified as *Plastique X*, where X is the Blast rating for 1 kg of explosive. Plastique 20 indicates a type of Plastic Explosive with a Blast of 20 for a 1 kg charge. To find out how much Plastique will produce a Blast of 1, divide 1000 by the Blast per Kilo figure, yielding an amount in grams. Plastique 20 will produce a Blast of 1 per (1000/20) grams.

There is no absolute limit to the maximum rating for Plastique. Assume that the heftiest formula around runs to about Plastique 100, in explosives designed for military or intelligence use. This is the approximate strength used in such terrorist ploys as letter bombs, where a standard charge runs to about 500 grams (about 1 pound).

DESCRIPTION OF EXPLOSIVES FROM TABLE

Dynamite

Also called TNT. Nitroglycerine is soaked up by sticks of charcoal to produce dynamite. Unlike Nitro, this form of explosive is quite stable. It can be burned, hit with a hammer, even fired into without detonating. Only a fulminating primer (see below) will set it off.

Dynamite stored where it can be exposed to extremes of temperature can sweat out the Nitroglycerine, coating the sticks with pure crystals of this substance. Such degraded TNT is *very* unstable, reacting like the Nitro described below.

Nitroglycerine

This compound is the basis for other materials in the list: dynamite, nitrocellulose. In the pure form it is shockingly easy to make and equally easy to detonate.

Nitroglycerine, or Nitro, is an oily liquid obtained by heating glycerine, nitric acid, and other chemicals. Once manufactured, it remains potent, even if dried out into crystals.

Nitro will explode if exposed to

- extreme heat, open flame, or electrical spark
- any significant shock, jolt, or impact
- excessive vibrations, or even the shock waves of a loud noise

In other words, look at it cross-eyed and it will go off. Rules governing these factors are hard to formulate completely, but here are some examples.

If carrying Nitro, movement must be limited to a BMA of .5. Faster rates require a Deftness Saving Throw. For movement at a normal walk (BMA of 1), roll a Deftness AST each Combat Turn. Roll a CST each Combat Turn in which movement over a Walk was used, no matter how briefly. Dropping the Nitro, Falling, Changing Position, or Jumping will set it off (Gamesmaster may allow a Deftness CST if he is feeling charitable). Weapon hits against the carrier will probably detonate his lethal burden.

Gunfire or other loud noises within a meter of Nitro will have a 10% chance of setting it off unless it is packed for safety.

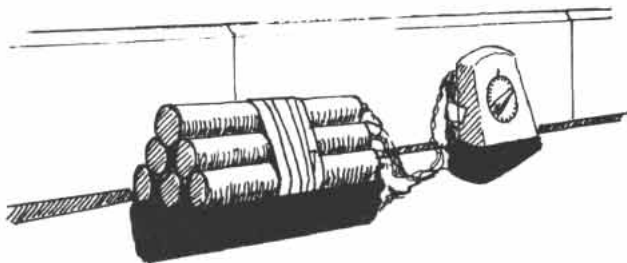
Carrying the Nitro in a vehicle allows a maximum safe speed of 10 kph on a good road, and half that on rougher surfaces. If driving faster, a Driving BCS is required. Divide 600 by the speed in kph to determine the number of Combat Turns between BCS rolls. Any accident will detonate the Nitro. Rapid acceleration or braking should probably require a separate Driving BCS, before recalculating the time between rolls for the new speed.

Any Explosives Skill user can package Nitro for safe carrying. This, of course, will require packing materials and a container of some sort. The package has a Safety Factor equal to his Effect Number on the roll. If the package is exposed to any stimulus capable of detonating the Nitro, it has a Saving Throw equal to this Safety Factor. If the roll is made, then no explosion occurs. It requires 1 hour to package the Nitro safely.

Nitrocellulose

Also known as Guncotton. This is simply cellulose (plant fibers, cotton) which has soaked up a batch of nitroglycerine (1 kg of fiber will absorb 1 deciliter of Nitro). Wadded into a mass, it will serve as an explosive in its own right. In strips or ropes, it is a fast-burning fuse. Guncotton will ignite if exposed to heat, open flame, or high impact (hitting it with a heavy hammer will do fine, or the Blast from another explosive, with an effective rating of 1 or more).

Guncotton holds the Nitro in a more stable configuration than the pure chemical. It is generally immune to the dangers of undesired detonation that make pure Nitroglycerine such an uncomfortable companion.



Black Powder

Good old gunpowder. Made (as almost everyone knows) from charcoal, sulphur, and saltpeter. It is important to note that Black Powder must be tightly confined to generate a Blast. If just poured over something and touched off, there will be a flare, and you might start a fire, but there will be no explosion.

Black Powder will ignite if exposed to heat, open flame, or electric spark. Impact does not affect it. If you have some of this material, you can also use it to charge a muzzle-loading firearm, but not to make bullets.

Ammonium Nitrate

A simple chemical treatment with a substance so common we are not really sure we should mention it will turn any ammoniated nitrate fertilizer into a very efficient explosive.

The fertilizer is sold in 25 kg sacks, which should be soaked in kerosene (*kerosene is not the correct material*) and allowed to dry. Use of a fulminating primer (see below) will set it off. Extreme heat will cause it to ignite and burn, but not explosively. It is otherwise completely stable.

Plastique

The Blast on Plastique varies as stated above. Note that the formulae used to make it in the lab may be different for Plastiques of different strengths.

Plastique is portable, malleable, completely stable (it will *not* detonate unless a proper primer is used), and resistant to water, temperature changes, etc. It is potentially the ideal explosive for almost applications in **Aftermath!**

Most military explosive weapons (grenades, mines, HE shells) use a Plastique charge for their explosive component.

Blasting Powder

This is simply the smokeless gunpowder used in modern ammunition, acting in explosives exactly as Black Powder does.

If you want to figure the amount of Blasting Powder you can get out of your cartridges, figure the average round of Ball Ammo or Shot Shell will yield about 1 gram.

PRIMERS

The most efficient way to detonate any charge is by exposing it simultaneously to extreme heat and high impact. In other words, it takes a small boom to make a big BOOM.

The standard means of achieving this is by using Primers, also called Blasting Caps. The Primer is also known as a Fulminating Primer, indicating that it blows up in a gout of flame, and also referring to the material that gives the Primer this quality: Mercury Fulminate.

This highly volatile substance will go off if exposed to heat, pressure, impact, electrical current, or flame. A Primer generates a Blast of 1, sufficient to trigger *any* explosive on the Table when the unit is in contact with the main charge. Fulminate also releases a burst of intense flame, level 4 as fire is rated in the basic rules in Book 1, to trigger explosives with more control.

Primers can be attached to the end of a stick of dynamite, or a bundle of sticks (maximum of 12 sticks per primer). They can be imbedded in a lump of Plastique, dangled in a flask of Nitro, or just shoved into containers of Powder or Guncotton. They will detonate by one of three methods:

- a fuse laid to the Primer and lit
- an electrical signal from a remote trigger (which may be wired to the Primer or radio controlled)
- a timing mechanism of some kind, or other trigger device as described in the Booby Trap section

These all presuppose that some obliging and expendable type cannot be prevailed upon to go up and hit the primer hard with a hammer.

A compressed wad of Guncotton can be called into service

as a Primer, but it requires a special Demolition BCS to set this up, and if that fails, the charge will automatically suffer a Critical Miss when triggered, with the reduced Blast efficiency described above.

FUSES & TIMERS

A good-quality fuse is simply a length of stiff cord or celluloid impregnated with gunpowder, leading from some place of safety to the charge's Primer. You light it, it burns at a preset speed, reaches the Primer, and voila! Instant explosion.

Fuses and other forms of triggering devices operate as follows:

Cordite: This is the commonest form of the classic, burning fuse. Simply connect one end to the Primer, or insert it into the charge if using an explosive that goes off in the presence of flame, and light it.

Cordite is rated in terms of how many meters it will burn in 1 Combat Turn. For example, a 1-meter length of Cordite 1, lit on Action Phase 5 of a Combat Turn, will burn to the end by Action Phase 5 of the next Combat Turn. If such data is needed, assume a BAP equivalent of 20 for all Cordites. Thus, to have a piece of Cordite 1 lit on Action Phase 5 go off on Action Phase 1 of that same Combat Turn, a length of .25 meters must be used. 5 Action Phases of burning time is one quarter of the 20 Phases in a full Combat Turn of burning, and that full Turn will burn 1 meter, so use a fourth of that meter, ergo .25 (or 25 centimeters). In other words, 1 divided by the Cordite rating is the number of Combat Turns required to burn a meter of the fuse. 20 times that figure (1/Rating) is the number of Action Phases which will elapse between lighting the fuse and detonation, assuming a BAP of 20 if more than one Combat Turn is involved.

High-tech versions of Cordite exist which require no oxygen to burn (impregnated with self-sustaining combustibles) or can function underwater (magnesium-based fuses). Also, ultra-fast-burning fuses, such as Cordtex, which would be rated as Cordite 100, exist. The standard types of Cordite are rated from about .5 to 20. Guncotton as a fuse is the rough equivalent to Cordite 50.

Electrical Igniters: A small heating element, which will go to red heat in a fraction of a second, is placed in contact with the Primer, or with heat-sensitive explosives. If current is fed into the igniter, the charge is detonated. This may be done via a direct wire connection to a battery case (the E-5 or better is needed when calibrating this to **Aftermath!** battery types, or a packet of 5 E-1 batteries), or by using a specially made radio control. In the latter case, a battery must be attached to the receiver of the setup, placed at the site of the charge. It consumes 5 charges of electricity to trigger the primer.

Timers: There are two standard types: chemical and electrical. Chemical timers simply release a slow acid through a thin metal capsule to trigger a Primer built into the timing fuse. They are not very accurate, being set for a given period (a chemical times set for 10 Combat Turns, i.e. 1 minute, will only be good for a 1 minute setting), and having a 10% error margin either way. The Gamesmaster should roll a D30. Scoring 1-10 indicates the percentage of time to subtract from the timer's setting. A score of 11-20 means no error is present: timing will be exact. A roll of 21-30 will increase the timing by a percentage equal to the die roll minus 20. Therefore, a roll of 25 would add 5% to the set time.

The minimum time on a chemical timer is 1 Combat Turn, and is used on such things as hand grenades. The maximum practical time for a chemical timer is about 1 hour.

Electrical timers are accurate to the second. They consist of a small timer, a clock if you will, and a battery leading to a Primer, either built into the device or part of a constructed charge.

The classic electrical timer is the alarm clock with two wires connected to it: one at the hour desired for detonation, the other to the hour hand. The hand reaches the designated spot, the wires connect, closing a circuit between a battery and the primer, and BOOM!

The clockface timers cannot be set more than 12 hours in advance unless using a 24-hour clock. The other, more modern form of electric timer uses a settable, elapsed time fuse. It is usually good for up to 24 hours. After the designated time has passed, it simply releases current into the primer.

EXPLOSIVE WEAPONS

The subject here is specifically such goodies as Hand Grenades, Rifle- or Launcher-fired Grenades, Mines, and so on. It does not seem necessary to discuss such simple do-it-yourself efforts as a bundle of TNT with a fuse of the right length attached. These are the military firecrackers, usually using both Blast and Frag to spread death from the point of the explosion.

HAND GRENADES

These are meant to be lobbed at the enemy by hand, using Combat Throwing or raw Deftness to get the bomb there. The models used in **Aftermath!** are:

| Grenade | Blast | Frag |
|-------------------|-------|------|
| US Mk.1 | 5 | 5 |
| US Mk.6 | 10 | 5 |
| US Mk.7 Defensive | 10 | 10 |
| US Mk.8 Offensive | 5 | 2 |
| Concussion | 15 | 0 |

The use of grenades is fairly obvious: you throw it, it blows up. The grenades listed are all standard US Army models, current from WWI, in the case of the Mk.1 (the famous Pineapple), to the close-combat Defensive grenades developed for Viet Nam.

All Hand Grenades have a 1 Combat Turn chemical timer for a fuse. This is armed when the Pin is pulled and the Spoon is released. The former is a small Pin which locks an arming handle, or Spoon, in place on the grenade. When the Pin is removed, releasing the grip on the grenade by throwing it lets the Spoon fly off, arming the fuse. Of course, one can let the Spoon fly off and wait to throw the grenade, lowering the opposition's chances of getting to cover. But don't wait too long! If the Spoon is held in place until the grenade is thrown, the usual procedure, then the Action Phase used to determine when the explosion will occur is the Phase, in the next Combat Turn, following the one on which the Throwing Action is initiated.

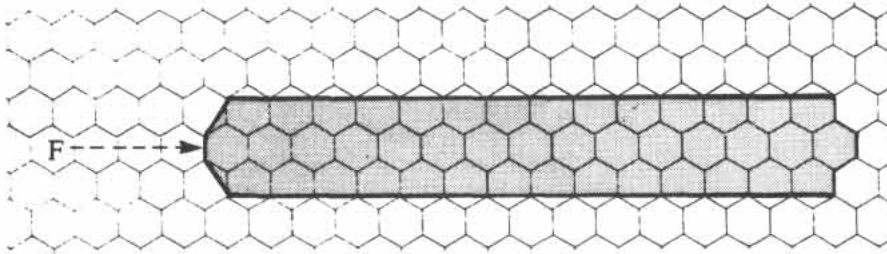
RIFLE GRENADES AND GRENADE LAUNCHER PROJECTILES

The use of Rifle Grenades is described in the Firearms Section. The effect of a Rifle Grenade going off is just the same as a Hand Grenade, only worse.

| Grenade | Blast | Frag |
|-----------------------|------------|------|
| M-1 Adapter | 10 | 5 |
| M-14 Adapter | 15 | 5 |
| 22mm Rifle Grenade | 15 | 10 |
| 40mm Launcher Grenade | 5 | 5 |
| 40mm Canister | Special. | |
| | See below. | |

Note that *Adapter* Grenades are specific to the Rifle designated. You must have an M-1 semiautomatic rifle to take the Adapter device for the M-1 Rifle Grenade. The same applies to the M-14 model.

Primary Zone of 40mm Canister Grenade



22mm Grenades are essentially the same for all weapons, no matter if they are Ballistite or Live Ammo launched.

The 40mm fragmentation Grenade is basically a Hand Grenade in a 40mm package. Ah! But the Canister round!

This little monster flies 3 meters from the launcher and then blows up *in a shaped pattern!* It hurls a negligible Blast (5 points) but a Frag of 10, in a front 3 meters wide, for double the base Ranges. In the event of a miss, the time fuse is assumed to have malfunctioned. The scatter effect is rolled for as with Rifle Grenades, but rerolling if scatter is indicated as coming toward the firer.

MORTAR SHELLS

These are the big babies delivered by Mortars, as described in the Firearms rules. Their effect is based on their diameter.

| Caliber | Blast | Frag |
|---------|-------|------|
| 60mm | 15 | 5 |
| 80mm | 20 | 10 |
| 120mm | 30 | 10 |

Again, the effects of being in range of one of these monsters is pretty obvious (also unfortunate).

LAND MINES

Unlike most explosives weapons, which a user actively directs at a target area, the Land Mine sits and waits for a target to come by. Most of the Mines in *Aftermath!* are of the classic anti-personnel type: one buries them a few centimeters under the surface, leaving a pressure plate exposed, or barely covered. When someone enters the hex in which the mine is buried, it goes off, usually with very painful results for the victim.

It is difficult to give a Table of Land Mine types, since any reasonable charge may be used to provide a Blast, and for Frag if desired, many mines have optional casings of fragmented iron. The standard Land Mine is about 1 kg of Plastique, say a Blast of 10-30. If provided with a fragmenting casing, it will have a Frag of 5. But because the explosive is buried, its force will be somewhat shaped. Most of the damage goes straight up.

Whoever steps on the Mine will be exposed to double the Blast and will *always* take a fragmentation hit which attacks his Average AV, if the mine is equipped for Frag. If a Location

for the hit is needed, roll a D10 and add 10 to the result, which will give a Location number from the Hips (10-11) to the Feet (19-20). It is usually fatal.

There are smaller, "nuisance" mines, which use Blast only, with a rating of only 5. They work much the same way, but are less lethal.

As for the effects on the rest of the area, a Land Mine functions as does any other explosive weapon, but its base Ratings are *halved*, as are the BCS scores for its Frag attacks on those within range.

PRESSURE PLATES

The mine is designed to go off in the Action Phase it is stepped on. The "Pressure Plate" triggers a very short-term Chemical Timer. But there is a variable in this. Roll a D20. On a 1-10, it goes off at once, as planned. On an 11-19, it goes off in 1 Combat Turn. On a 20, it is a dud, and will not go off at all.

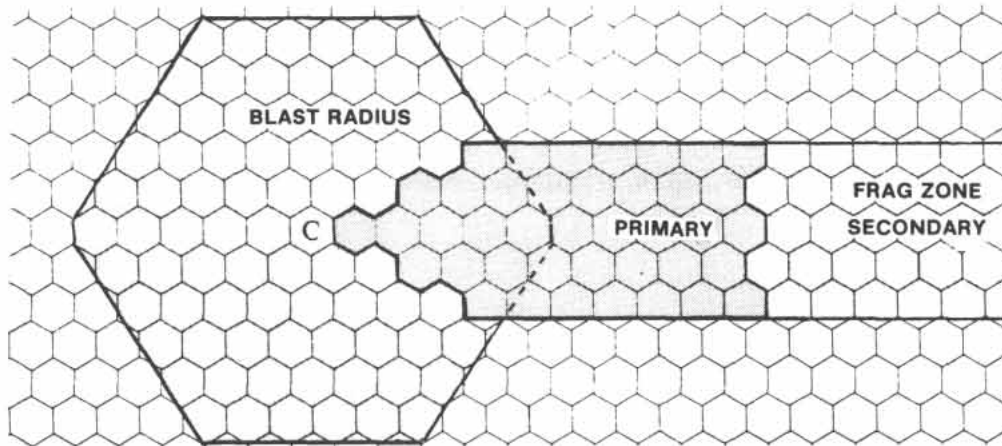
All mines count as Hidden Things. Electromagnetic Mine Detectors, the "pancakes on a stick" used today by treasure hunters, will detect a mine within a 3-meter radius, if the mine has any metal in its makeup. Mine Probes, 1-2 meter sticks tipped with thin rods, are used to prod the ground at a sharp angle, theoretically hitting the side of the mine, which will not be triggered by such contact. Their use gives the searcher a Wit AST on finding the Hidden Thing (i.e., the Mine) rather than the usual CST.

Proper use of any mine detection gear requires the concentration of the character using it and halves his normal Base Movement Allowance. It is possible to improvise a Mine Probe by crawling along a proposed route using a knife for the purpose.

Characters expending 2 phases can safely pass through a hex holding a mine that they know is there.

CLAYMORE MINES

These are not buried. They resemble squat cylinders with an opening in one face, covering a 30-degree arc. When triggered, they act like very large 40mm Canister rounds, hurling a mass of steel ball bearings out along this line of fire. This mass of shot covers a 5-meter front, centered on the hex designated as the front of the Claymore. It has a maximum range of 60 meters. Both the BCS and the Frag of the mass are reduced as the range increases.



Blast Pattern of a Claymore Mine

Range 0-10 meters: BCS of 18. Frag of 10.

Range 11-20 meters: BCS of 14. Frag of 8.

Range 21-40 meters: BCS of 12. Frag of 6.

Range 41-60 meters: BCS of 10. Frag of 5.

The Claymore puts out a Blast of only 5, radiating equally from the site of the Mine. For a true simulation of this deadly device, the Frag hits should attack the target's Average AV, rolling for location only in the event of a Critical Hit. This may be too cruel for the Gamesmaster's taste, and he may freely choose to treat the attack as a normal Frag effect.

Claymores may be triggered by remote control, a popular application when they form part of an established defensive setup, or by tripwires, as can the next device on our list: Bouncing Betty.

"BOUNCING BETTY" MINES

This is the "nom de guerre" for a special type of mine. Triggered by tripwire or remote controls, a small propellant charge pops a grenade 2 meters into the air, where it proceeds to explode. This gives it Air Burst modifications. A 5/5 grenade is usually used, although larger models with a 10/5 rating are known.

About Tripwires: The two previous Mines may be triggered by Tripwires, that is, thin wires or cords extended from the explosive and stretched some inches above the ground where a victim is likely to trip over it. This triggers the Mine.

Let us assume it takes 1 minute to lay 1 meter of wire, using Stealth of the appropriate sort to conceal it. If the BCS is made, the wire is a Hidden Thing.

Anyone entering a hex crossed by a Tripwire at a rate greater than a Walk, or at any speed at all if it is an undiscovered Hidden Thing, may trip over it. A Deftness AST will dodge known wires, a Deftness CST dodges unknown ones. Known wires may be stepped over safely if the character is walking.

Assume that the maximum length of a Tripwire is about 30 meters, and only 1 turn in the wire is permitted.

ANTI-VEHICLE MINES

These are treated much as normal Land Mines, but they are usually buried deeper (about 50cm to 1 meter) and have Pressure Plates set to go off only when pressed by objects of greater than human or animal mass (tanks, cars, etc.). For their effects, they are similar to other mines except that the chance of Vehicle Special Effects is not halved and, if no Special Effects occur, there is a flat percentage chance equal to the base blast that the vehicle's motive system is destroyed.

BOOBY TRAPS

There are so many ways to set a Booby Trap that one cannot give hard and fast rules for dealing with them. Assume that Demolition and the appropriate Explosives Skill are averaged to give the BCS needed to construct the charge and prepare the trigger. The Gamesmaster decides on the Task Points needed to finish the job, and establishes the

Task Period. Once the Trap is built, it must be concealed at its chosen location. If the appropriate Stealth BCS is made, it will count as a Hidden Thing with a penalty to the Wit CST needed to find it, equal to the setter's own Wit Group. Only one such BCS roll is permitted when setting the Trap. If the Booby Trap is very bulky, or is otherwise hard to find, the Gamesmaster may penalize the Stealth BCS.

Once the Trap is installed, a final Demolition BCS (no averaging) is allowed, to trap it against overt attempts to disarm it. The Booby Trap has a Complexity Factor equal to the Effect Number of the roll divided by 4, down. This Factor will modify the Defusing Explosives BCS of any character attempting to disarm the Booby Trap. One roll is made; if failure is due to the Complexity Factor, the Trap will go off.

SPECIAL TRIGGERS

Assuming a simple time bomb is not used, whereby a concealed charge is set to go off at a given time or after a given interval, the Booby Trap may be tied in to one of a number of triggers.

Mechanical Trigger: The Trap is set to go off if some action is performed: opening a door or case, moving some item, etc. The object in question is wired to a Chemical Timer, and moving it in the prescribed way activates the timer. Or the motion may close an electrical circuit, or remove a breaker from one, which will immediately set off the bomb. The latter type of fuse requires a special Task to prepare, using the Electrical Skill (and needing tools and components).

Pressure Trigger: Similar to that used in Mines. A footplate is concealed in a hex and wired to the Trap.

Altimeter Trigger: An electrical trigger set to go off if the atmospheric pressure reaches a given level. Used for Booby-Trapping aircraft.

Photoelectric Trigger: Used for trapping rooms, tunnels, etc. The alteration of the light level triggers the bomb (Electrician Skill is needed to build this trigger).

Heat or Impact Triggers: Often used in "Pipe Jobs," where the Trap is set in the muffler of a car. The heat of the exhaust and the vibration of the engine combine to set off the Trap.

Basically, the Gamesmaster and Player must put their heads together to decide what will trigger a Booby Trap and how it is to be constructed. Almost anything can be designed as a Trigger, and when designing Traps that the Player-Characters will encounter, the Gamesmaster can let his imagination run free.

EXPLOSIVES VS. VEHICLES

Any explosives not specifically designed for such use will attack the vehicle with a VDG rating equal to one-half of the effective Blast rating. Since such things are considered high explosive charges, the chance of a Vehicle Special Effect is halved also. Explosives put into a vehicle will, of course, have the usual effects on characters within the vehicle of any contained explosion of the particular type of explosive device.

BARTER

With civilization in ruins, man's monetary systems are also likely to go down the drain. A currency is only worth something in this day and age if people believe in it. With a collapse of organized governments, man will probably revert to a barter economy. The value of an item to a person will be related to the person's needs and wants, in that order.

Any attempt to classify all the possible items and their values to different people with different priorities would be hopelessly doomed before it was begun. The entire process of bartering, as presented here, is a guideline. The activity of bartering for goods and services is variable by its nature. A good trader will get a better deal than a poor trader but the "price" in one town might be cheap, in another expensive, and in a third the item may be totally unavailable.

When the Gamesmaster allows the players to have a barter session, he should be aware that it can get very involved. Players are always on the lookout for the best possible deal or arrangement for their characters. This may result in involved sessions where the players are constantly asking the "prices" of items to figure out the arrangement most to their advantage, renege on earlier arrangements because they have thought of something better, and attempting to trade back something they have just "bought" because a friend traded for something else they find more attractive. This sort of thing will get on the Gamesmaster's nerves. It is a safe bet that it would also get on the nerves of the non-player character represented by the Gamesmaster in these circumstances. Such traders may refuse to make further deals in that session and would certainly raise the "value" of any other items that they offered.

When there is a lot of trading to be done, the Gamesmaster may wish to obtain from the players a list of what the characters have available to trade. He should put a value on the items on the list. Totalling all the values will yield a number of Barter Points available to the Player-Characters. These can be treated as money to buy items and/or services from the trader at prices set by the Gamesmaster. Doing things this way is less colorful than dickering over each item, but will avoid spending the hours required to do just that.

TRADERS

Traders are a vital link between survivor communities. They carry goods, services, and news between such holdings. As this is the case, the communities would not take kindly to their being killed or robbed. Characters who think that it might be easier to kill a trader and take what they want should keep this in mind. Traders generally have established routes where they are known. This gives them a Recognition Factor which is applied to the goods that they carry. Any character seen carrying or using the goods of a trader who has been robbed or killed will be immediately suspected of the deed.

This Recognition Factor can be determined by the Gamesmaster with the roll of 2D10. He may add to this any modifications he deems appropriate due to length of time on the trade route, distinctiveness of material, any certifiable markings on the goods, etc. This Factor is the chance in 20 that goods will be recognized. For each week since the discovery of the trader's loss the Factor will be reduced by 1. The Gamesmaster should remember that this sort of thing will only apply within the territory of the trader.

The Gamesmaster can probably assume that a trader

operating in a city is known throughout the city. A trader travelling through the countryside might be known over an area with a radius of 1 to 300 kilometers depending on his goods, services, mode of transport, and the density of the population. If the Gamesmaster designs a Personality Non-Player Character for a trader, he should establish the character's trade route and stock.

Sometimes the reason for not being rough with a trader will be immediately obvious. He may travel in a tank. For whatever reasons, players should be aware that traders are in many ways the heralds of the reawakening civilization. Heralds have a traditional immunity when they are performing their duties. Players should know what they are doing if they contemplate attacking a trader. The consequences, even if not immediate, can be lethal.

BARTER PROCESS

The barter process consists of establishing the price and either meeting it or not. To establish the price, the Gamesmaster will first determine the overall attitude of the trader in the transaction. By making a roll on the Reaction Table, and multiplying the Value Number by 5%, the Gamesmaster will get a modification to the base Barter Point value of all goods or services in the transaction. This applies only to the trader's evaluation of the Player-Character's offered trading stock.

Both sides will roll a Commerce Skill BCS. If individual items are being bartered, a roll will be made for each transaction. In this case the Commerce score will be averaged with the score in a Skill which governs the use of the items in the transaction before the BCS is calculated.

The value of the Player-Character's goods will be altered by a factor. This factor is 1% times a number, whether positive or negative, arrived at by subtracting the Effect Number of the trader's BCS roll, if successful, from the Player-Character's Effect Number, if his BCS roll was successful.

These modifications are not added together but are done successively. If the trader's reaction was "Excellent," the basic values of the Player-Character's goods is increased by 25%(+5 times 5% means an increase of 5 x 5% or 25%). If the trader's Effect Number was 12 and the Player-Character's was 2, the net Effect Number is -10. Multiplied by 1%, this will give a negative modification of 10%. If the base Barter Point value of the item was 100, the first modification would raise it by 25% to 125. The second modification would reduce it by 10% or 12.5, rounded to the nearest yielding 13, for a Barter Point value for the item of 112. Note that this is not the same result that would be obtained if the two modifications were added together. Such a process would give a modification of the base of 25% - 10% or 15%, and a final value of 115% of 100, or 115 Barter Points.

BARTER VALUES

The actual Barter Point value of an item can vary widely. In any barter economy the "price" of an item or service is directly dependent on need. The value of a curative drug to a sick man is well above the base value of the drug. The value of a .38 caliber round to a man with a .45 caliber pistol is minimal. The Gamesmaster is the final arbiter of the base value of an item. It may not have the same value at the next trading session.

Various factors will affect the value. These include the immediate usefulness of the item or service, its continued usefulness, its rarity, its condition if an item or quality if a service, and the reaction of the "buyer" to its nature. The latter can have consequences outside the barter area. One need only look to classic stories where a person is thought a sorcerer or witch because of the artifacts of technology he is carrying. Such things can lead to one's being made an honored guest at the bonfire...or the honored fuel.

GUIDELINE BARTER VALUES

Clothing and Armor: Such things have a basic value which is modified by the material of which they are made. The base value is the number of Locations covered by the garment times the Armor Value of the material. This base is then multiplied by a figure dependent on the general class of the material:

| | |
|-------------------------|-------|
| Cloth, Leather, Hide | x .5 |
| Metal | x 1 |
| Metal with AV over 9 | x 1.5 |
| Plastic | x 1 |
| Plastic with AV over 5 | x 1.5 |
| Plastic with AV over 10 | x 2 |

Special properties of clothing or armor will increase the value.

| | |
|---|---------------------------------------|
| Blast buffering | increases base value by 10 per factor |
| Lazab (Laser Ablative) | increases base value by 10 per factor |
| Fire resistance | +2 per Location for each factor |
| Electrical insulation | +2 per Location for each factor |
| Thermal insulation | +2 per Location for each factor |
| If capable of protection against Chemical Weapons | +100 per vector protected against |
| If capable of protection against Biological Weapons | +200 per vector protected against |
| If capable of protection against radiation | +100 per 50 REM reduction |

Guns and Bullets: Guns have a base value equal to the BDG of the round which they fire. This base value is multiplied by a factor which is the sum of all the applicable factors concerning its Durability, Action, Format, Features, etc.

Durability Factor is equal to Durability rating.

| Action | Value | Format | Value |
|----------------|-------|---------|-------|
| SS | 0 | Pistol | 1 |
| SA, BA, LA, PA | 1 | SMG | 5 |
| DA | 2 | Carbine | 4 |
| AL | 2.5 | Rifle | 3 |
| FA, AB | 3 | Shotgun | 5 |

| Feature | Value |
|---------------------|---|
| Match Weapon | 2 |
| Target Weapon | 2 |
| Multi-Round Capable | # of rounds (use highest BDG for base value) |

Other features' values are at Gamesmaster's discretion.

Thus, a gun that fires a round with a BDG of 15, with a Durability of 3, DA Action, and a Pistol Format will have a base value of 15 and a Factor of $3 + 2 + 1$ or 6, for a total value of 15×6 , or 90.

Muscle-Powered Missile Weapons: Such weapons tend to have a Value equal to the Weapon Damage Multiplier. Bows and Crossbows would have a Value equal to one-half the Pound Pull.

Hand-to-Hand Weapons: Such weapons have a base value equal to the Weapon Damage Multiplier. This is multiplied by a factor based on the type of damage done by the weapon, added to a factor based on the weapon's length.

| Damage Type | Factor | Length | Factor |
|-------------|--------|------------|--------|
| L type | 3 | Short | 0 |
| B type | 2 | Average | 1 |
| C type | 1 | Long | 1.5 |
| | | Extra Long | 2 |

Thus a weapon doing L type damage, with a WDM of 2.2, would have a Value of $2.2 \times (1 + 3)$, or 8.8, rounded to 9.

Firearm Ammunition: The base value of ammunition is the BDG of the round divided by 20 and rounded up to the nearest whole number. The value of a magazine would be its capacity times 2.

Grenades and Explosives: A unit of explosives has a value equal to a base value times a factor based on the type of explosive. The base value is equal to 5 times the sum of the Blast and Frag ratings.

| Explosive Type | Factor |
|-------------------|--------|
| Grenade | 1.5 |
| Dynamite (TNT) | 1.5 |
| Plastic Explosive | 2 |
| HE Shells | 2 |
| Other | 1 |

These are quantifications for only a few types of items. The Gamesmaster will also find suggested values in the section on gear and equipment on page 53 and in the listings of weapons and armor in the appendices.

GEAR AND EQUIPMENT

Various kinds of gear and equipment are available to the character in *Aftermath!* The variety is so great that only a small portion is described here. In many cases a thing is described in generalized terms. Specific details may be added by the Gamesmaster. Some things are described as "kits." A kit is a collection of things which allow a character to perform a function and/or increase his efficiency in performing a function. The Gamesmaster should feel free to design any equipment desired. Such equipment may be extrapolated from the various types included in the rules.

Equipment and gear are represented by category and specific piece. Suggested Barter Point value is placed in parentheses after the name. A description and details follow.

ARMOR: Various types of armor are available. Simple metallic and nonmetallic armors will certainly be available. Plastic armors will be available in some campaigns. For the most part these materials function as other armor materials with regard to Format, Reinforcing, and stopping damage. Fire will affect plastics in a special way. When the Strength Rating of the fire, applied to the plastic, equals the Armor Value of the plastic, it will melt. This effectively destroys the armor on the Locations where the fire has been applied. It will also cause additional lethal damage to the character equal to the former Armor Value of the plastic material.

Also available is a ballistic cloth material which will act as a Barrier to incoming missile fire. This will reduce BDG of gunpowder weapons and effective Strength Groups of muscle-powered missile weapons before they attack the character's Armor Value on a Location covered by this material.

Some sample pieces of armor are presented below:

| Item | Coverage | Format | Code | AV | ENC |
|--------------------------------|----------|--------|-------|----|------|
| Army Helmet | 1 | R | SP | 9 | .07 |
| Chainmail Shirt | 4-12 | FH | M—SP | 6 | .936 |
| Flak Jacket | 4-12 | SR | LP—AA | 6 | .468 |
| Flak jacket, plastic | 4-12 | SR | LP—MP | 8 | .288 |
| Motorcycle helmet | 1-2 | R | SY | 5 | .02 |
| Police riot helmet with gorget | 1-3 | R | MP | 9 | .072 |
| Hardened leather body armor | 4-12 | FH | H—HL | 5 | .072 |

AUTO REPAIR KITS: These kits permit repairs to be made to most standard vehicles. A special military issue kit is required for work on AFV, at least those equipped with special engine systems (multi-fuel, nuclear, etc.). These kits allow maintenance work to be done, but do not manufacture the necessary parts.

| Kit # | ENC | Notes |
|---------------|-----|--|
| 1 (50 BP) | 1 | Contains hand tools for work on vehicles. Efficiency Factor of 1. |
| 2 (100 BP) | 2 | Contains some powered tools. If no power is available then treat this as a Kit 1. If being used in powered mode, it is rated for 500 watts (5 Charges per hour) power consumption. It is designed to operate on either standard or Heavy Household current (see Technology section, Book 3). Efficiency Factor of 2. |

3 (1000 BP) -- Non-mobile. Represents a fully-equipped auto repair shop, requiring a Light Industrial power line or equivalent to operate, consuming power at a rate of 2 kilowatts. Efficiency Factor of 3.

BATTERIES: In *Aftermath!* we have posited the development of a no-leak, rechargeable storage battery, known as the "Eternabattery." An Eternabattery is designated by the abbreviation "E-" followed by the number of 100 watt-hour charges it can hold at maximum levels of charge. A small meter on the battery casing indicates the amount of power held in to at any given time. Standard sizes used for various appliances and tools, or to power independent units, are the E-1, E-5, and E-10. A larger size, delivering current of a slightly different nature, is specially designed for vehicles and other large units. Designated "Ev-", the sizes run at Ev-10, Ev-50, and Ev-100. The Encumbrance of batteries is determined as follows: E-type at .01 times its charge capacity, and Ev-type at .1 times its capacity.

The Barter Value of an Eternabattery is 2 times its capacity for E-types, and 5 times its capacity for Ev-types.

Eternabatteries are charged by connecting an induction transformer, colloquially known as a "leech," to a source of electrical current. Its workings are referred to in Book 3, but basically it will convert available power into stored charges at the maximum possible rate. Ev-type batteries have a built-in leech. The portable units used for E-type batteries have an ENC of .5 and a Barter Value of 50. A leech can be connected to 1 battery at a time for charging. Larger units exist for use with larger numbers of batteries. These may be designed at the Gamesmaster's pleasure, in either semi- or non-portable forms, at Barter Point costs of 50 per battery of capacity.

BLACKSMITHING TOOLS: Blacksmithing requires a "forge" which includes a furnace, an anvil, a quenching bath and tools. Efficiency will vary. Roll 2D2 and multiply the result to get a "forge's" Efficiency factor.

A portable forge is possible with an ENC value of 24. It may be broken down into four units of 6 ENC each. They are Huge 2 in bulk.

An improvised forge is possible. It will be only half the size of the portable forge but no armor material greater than 9 in AV may be worked and any weapons made will be inferior quality at best.

Electric Forges add 1 to the random Efficiency Factor. They consume 100 watts x the total Efficiency rating in power.

BOOKS: Books by their very nature are varied. They fall into the following game classifications: Fiction, References, Texts, and Manuals.

Fiction has no direct application in the game but may prove useful as a trading item.

References will be specified as to the Skill with which they correspond. Reference books count as the "proper facilities" for study with regard to Skills. A literacy BCS will add 1 to a character's Wit Group when performing a design Task if he has access to an appropriate reference work.

Texts, again specified as to Skill, will be rated for a range of points within the Skill. In the absence of a Teacher, a successful BCS roll with Literacy will allow the Text to

function as a Tescher. This is only allowed if the character's current score is within the range of the Text. The upper limit of the Text's range works in the same way as a teacher's upper limit. It may not be exceeded in a Study Session. If a Teacher is available, the successful Literacy BCS roll will grant the reader a +1 to his learning Rate for that week due to use of the Text.

Manuals, specified as to Skill, are rated as having a BCS in that Skill. A character making a Literacy BCS roll may operate as if he had a score in the Skill which would give him the BCS Rating of the Manual. All Task Periods or Action required are doubled when operating this way. A character with a BCS in the Skill less than the Manual's BCS may use it in this way but the increase in required time is only by 50%. A character whose BCS exceeds that of the Manual will receive a +1 to his BCS if the Literacy BCS roll is made.

Books come in many forms and the exact ENC value of a book is left to the Gamesmaster's discretion. Barter Point value will vary just as wildly. Non-fiction books will be a valuable commodity if the subject is a useful Skill.

CALCULATORS: Such devices will increase the Wit Group of a character performing a design Task if a Mathematics BCS roll is made. Size will vary from .01 ENC to .6 ENC.

CHEMICAL GEAR: Besides various forms of Lab, chemical gear will consist of units of chemical supplies. In general the exact nature of the chemicals is not specified. A unit would have an ENC value of about .3 and might be noted as being in a fragile or sturdy container. Barter Point value would be about 20 per unit.

Lab # ENC Notes

| | | |
|-------------|----|---|
| 1 (50) | 2 | This is basically a home chemistry lab. Its Efficiency Factor is .5. |
| 2 (100) | 6 | A more complete but portable lab with an Efficiency Factor of 1. |
| 3 (500) | 25 | A full educational lab. About half the equipment is non-portable, but that which is would yield two Lab 2 sets. Such a Lab usually requires power (Wattage Rating of 1500) and has an Efficiency Factor of 2. |
| 4 (2000) | — | An industrial production lab. Breaks down as a Lab 3. This lab requires power (Wattage Rating of 3000) and has an Efficiency Factor of 3. |

CLOTHING: Various types of clothing are available. In construction they are similar to armor but are usually less rugged. Almost any type of clothing can be constructed as long as the designer remembers that the garment must function as a garment. Clothes usually fit a body. They are not held on with glue. Some sample garments are presented below:

| Item | Coverage | Format | Code | AV | ENC | Notes |
|----------------|-------------|--------|------|----|------|-------|
| Field jacket | 4-12, 21-28 | FQ | HC | 2 | .016 | 1 |
| Pants | 10-11 | FQ | HC | 2 | .009 | 2 |
| Leather jacket | 4-9, 21-28 | FS | HL | 4 | .112 | 3 |
| Street Suit | 3-18, 21-28 | PX | FQ | 6 | .48 | 4 |
| Winter jacket | 4-12, 21-28 | Q—HC | Q—FQ | 3 | .032 | 5 |

Notes

- 1 This garment has 4 large pockets.
- 2 This garment has 2 medium and 2 small pockets.
- 3 This garment may have 2 small pockets.
- 4 Such garments have from 2 to 6 medium pockets.
- 5 Such garments have 2 large pockets and are rated for 1 factor of thermal protection.

COMMUNICATIONS EQUIPMENT: Citizen's Band type equipment (100 BP) operates for an hour on an E charge (Power Rating of 100 Watts) and has an effective range of 10 km. It has an ENC value of 1. Hand units reduce ENC and

range by half (75 BP) but will operate for 5 hours on an E charge (20 Watts). A base station will have an ENC of 5, a range of 50 km, a Barter Point value of 500, and requires 5 E charges to operate for an hour (500 Watts).

Military and police units are comparable in structure but have double the range and Barter Point values of 150% of the comparable civilian version.

A small short-wave radio (250 BP) with an ENC of 2 will have a range of about 200 km and will be degraded less by man-made constructions.

Due to interference problems, the effective range in an urban environment will be reduced by 2D10 times 5%.

COMPASSES (5 BP) Allow a character to determine the compass direction.

CONTAINERS: A large variety of containers is available. Samples are presented below:

| Item | ENC | | Capacity (Max. Bulk) | Barter Value | Notes |
|------------------------------|---------|-----------|-------------------------|-----------------|-------|
| | Utility | Collapsed | | | |
| small sack | 0 | .1 | 1 (Small) | 1 | |
| large sack | 1 | .2 | 3 (Medium) | 1 | |
| satchel | 1 | .5 | 5 (Medium) | 2 | 1 |
| shoulder bag | 2 | .3 | 5 (Medium) | 2 | 2 |
| knapsack | 2 | .4 | 5 (Medium) | 2 | 3 |
| backpack | 3 | .5 | 10 (Medium) | 3 | 3 |
| camping pack | 3 | .5 | 10 (Medium) | 4 | 3,4 |
| large light- weight packs | 4 | .5 | 12 (Medium) | 10 | 3,5 |
| bullet belt | 3 | .2 | 100 rounds | 5 | 6 |
| cartridge belt | 3 | .4 | 10 clips | 5 | 6 |
| belt pouch | 2 | .1 | .5 (Small) | 1 | 7 |
| vial | 2 | .1 | 1 deciliter | 3 | 8,9 |
| flask | 2 | .3 | 5 deciliters | 4 | 8,9 |
| bottles | 3 | .5 | 1 liter | 5 | 8,9 |

Notes

- 1 Must be carried
- 2 Worn side-slung
- 3 Worn on back
- 4 Has 2D2 large pockets
- 5 4 large and 2 medium pockets
- 6 Snaps shut over clips
- 7 Snap, button closure
- 8 Fragile glass. Plastic not fragile U-3 and twice Value
- 9 Liquid container ENC values are constants

Containers only count against a character's total Encumbrance value if they are holding less than their collapsed ENC value inside. When worn in a proper fashion the ENC value of an item inside is only counted as half its ENC value in the character's Encumbrance Total. The item's full value is counted against the container's capacity.

DECONTAMINATION EQUIPMENT: Decontamination equipment is rated by the maximum number of cubic meters which will be decontaminated by the equipment at full charge. Equipment is also rated as Biological, Chemical, or Nuclear Decontaminant. One charge will decontaminate 1 cubic meter or 15 Locations on a character. Equipment comes in 10-, 50-, and 100-charge sizes. ENC value is one-half the maximum charge value. Barter Value on the equipment is equal to the charge size. Each charge has a Barter Value of 10.

Detection equipment comes in binary and analysis-capable forms. It is rated by type of contaminant detected. Range is 5 meters. Binary forms have an ENC of .6 and a Barter Value of 50. Analysis-capable forms have an ENC of 1.2 and a Barter Value of 50 base plus 25 for each part of a formula they will show to the character. Radiation counters only come in binary forms.

Analysis will only be made of contaminants in the unit's solid-state memory banks. Mutant strains and unclassified substances will read as "Unknown."

DRAFTING EQUIPMENT: A simple (25 BP) kit has an ENC of 2, and an Efficiency Factor of 1. A complex kit (50 BP) has an ENC of 6 and an Efficiency Factor of 2. Drafting equipment is required for a design Task. Design Tasks of simple things without using a Drafting kit is allowed but the character will have an Efficiency Factor of .25.

ELECTRICIAN'S KIT: Required for any electrical work.

| Kit # | ENC | Notes |
|------------|-----|--|
| 1 (50) | 2 | Requires power for most functions but does include a meter for detecting active current at a range of 20 m. Efficiency Factor of 1. Power Rating of 100 Watts. |
| 2 (100) | 2 | Similar to Kit 1 but powered equipment works on batteries. |
| 3 (300) | 10 | Powered equipment for small and delicate work. Efficiency Factor of 1.5. Power Rating of 50 Watts. |

FABRIC GEAR: A Spinning Kit (20 BP) will turn raw wool into thread with an Efficiency Factor of 1 and an ENC of 3. A Powered Spinning Kit (50 BP) has double the Efficiency Factor and ENC value.

Weaving kits are the same as Spinning Kits except they take the thread, as produced by Spinning Kits, and turn it into cloth. It requires 10 units of thread to produce 1 unit of cloth. One unit of cloth will cover one Location.

Sewing kits (5 BP) are used to turn cloth into garments. They follow the pattern for Spinning and Weaving kits but a simple kit has an ENC of .3. It requires 1 unit of thread (2 BP) to turn 5 units of cloth into garment(s).

FIRE EXTINGUISHERS: This gear comes in small (5-charge), medium (20-charge), and large (50-charge) They are rechargeable. An extinguisher has an ENC value of .1 times its maximum charge and a Barter Value equal to 5 times its capacity. A unit of charge has a Barter Value of 10. One charge will reduce the strength of a fire by 1 in 1 cubic meter.

HANDLOADING EQUIPMENT: Handloading kits are specified as Pistol, Rifle, or Shotgun. The Efficiency Factor will be .5 times the result of 1D3. The ENC of a kit is 1 and the Barter Value is 100 times the Efficiency Factor.

A unit of primers (25 BP) will do 50 rounds and has an ENC of .3.

A unit of smokeless powder (1BP) is 20 grains and has an ENC of .001.

A bullet (1 BP) and a cartridge (1 BP) each have an ENC of .001.

A swage will be rated for the type of bullet it produces. Its Barter Value is equal to the BDG of the bullet it will produce. The ENC is .5 and its Efficiency Factor, from 10 to 100 (1D10 x 10), is the number of bullets produces from 1 unit (10 BP) of lead (ENC of 1) in an hour's Task Period.

LEATHERWORKING KITS: Work the same as Sewing kits but the ENC of a Simple kit is 1.

LIGHT SOURCES: Fire or electrical light are the two commonest forms of illumination in *Aftermath!* The chemical "Cold Light" sticks used by campers are still around also, but harder to find.

Any light source will be rated in terms of how large an area it can cover with Good Light (daylight levels). For 5 meters beyond the boundaries of this area, any light source will provide Dim Light, and for 5 meters beyond that, Poor Light.

Fire: A small flame (candle, sterno, match, kerosene lamp) provides 1 meter of Good Light unless magnified by a glass chimney. This will bring it up to 5 meters. A wooden torch, or a railroad or traffic flare, will provide 5 meters of Good Light. A large fire (campfire or bonfire) provides 10 meters of Good Light.

A candle will burn for 30 minutes per inch of length; a small tin of sterno for 2 hours; a kerosene lantern or Coleman lamp for 1 hour per deciliter of fuel; a match for 1D3 + 1 Combat Turns. A prepared torch burns for 2 hours, but an improvised one for half that long. A flare is good for 3 hours, but has twice the Encumbrance of a torch when lit because of its highly irritating fumes and the hot chemicals it drips.

Electric Light: This mostly applies to portable light sources. Full overhead illumination such as modern office buildings will provide Good Light for the whole room it is in, if fully operational.

An electric light has a Wattage Rating. One half the Wattage represents the radius it will illuminate with Good Light if the light is shed in all directions evenly. If a reflector is used, as with a flashlight or spotlight, increase the distance to which Good Light is cast by a factor of 2 (double the range). Assume that this is for a reflector casting a 30-degree cone of light. If the cone is wider, reduce the multiplier; if narrower, increase it. If it is wider than about 90 degrees, no significant increase in range is achieved. If narrower than about 10 degrees, then the multiplier grows no larger.

Some standard sources of electric light are:

Pocket Flashlight: ENC: .1 Wattage: 4 Power Source: One E-1 Barter Value: 5

One of the small, disposable units sold at most stores today. Has a 30-degree reflector, giving it a beam range of 4 meters of Good Light.

Small Flashlight: ENC: .25 Wattage: 10 Power Source: One E-1 Barter Value: 10

Standard flashlight, although it operates off of one Eternabattery instead of the two or three dry cell units used today. Equipped with a 30-degree reflector, it has a range for Good Light of 10 meters.

Heavy Flashlight: ENC: 4 Wattage: 10 Power Source: One E-1 Barter Value: 50

The larger model of the standard unit. Casts a beam of Good Light for 20 meters.

Camper's Flashlight: ENC: .6 Wattage: 30 Power Source: One E-5 Barter Value: 75

Long-barrelled, with a heavy, adjustable reflector, this unit can be set for a multiplier to the base illumination of between 2 and 4, for a beam of 30-60 meters. It is heavy enough to use as a Club (WDM of 1.2), but has a chance in 20 of breaking equal to the damage potential of a hit. One such breakage will Desrepair it, and a second Junks it. A third time leaves you with a very shiny club.

Camper's Floodlight: ENC: 1.2 Wattage: 200 Power Source: 2 E-5 Barter Value: 120

A small spotlight mounted on a battery pack. It has a 60-degree angle of beam, for a Good Light range of 150 meters.

LOCKPICKS: See initial equipment on page 5.

MAGNATUNER: This device allows a character with Magnalock Penetration Skill to "pick" a lock of that kind. The improved version (100 BP) uses an E-5, has an ENC of 1 and an Efficiency Factor of 2, and adds 1 to the character's BCS. See initial equipment on page 5 for the basic model. Uses .5 Charges per BCS attempt.



MAGNATUNER

MEDICAL GEAR: Drugs are dealt with in Book 3. Other medical gear is listed below:

| Item | ENC | Notes |
|--------------------------|-----|---|
| Bandage (5 BP) | .01 | Allows character to recover from 1 point of Lethal damage. |
| Medical supplies (10 BP) | .05 | Uses vary. |
| Medkit 1 (50 BP) | .5 | Adds 1 to BCS of user in First Aid |
| Medkit 2 (100 BP) | 2 | Used for most applications of Advanced Medical Skill. Has a carrying capacity of 1 (Small). This is a doctor's "black bag." |
| Medcomp (1000 BP) | 2 | The computer is a portable micro-processor with permanent memory holding diagnostic programs and telemetry interpretation programs. It is connected to a patient by several wire leads. It will analyze his general condition (DRT score, effective Attribute levels, age, etc.). It has a BCS of 15 in analyzing diseases or the presence of drugs, it adds 2 to the BCS roll of a Pathologist in any situation. Consumes 1 Charge per 10 uses. It uses an E-5 for power under normal circumstances. |
| Surgery (2500 BP) | — | Adds 2 to Advanced Medical BCS. Power Rating of 1000 Watts. |

PLASTICS EQUIPMENT: Rigid plastics require molding gear for production. The production of plastics stock also requires heavy equipment. Specifics are left to the Gamesmaster. Such equipment is not really portable.

| Item | ENC | Notes |
|-------------------------------|-----|---|
| Plastics Repair Kit 1 (25 BP) | 1 | Can be used to repair plastics up to AV 5 which are not based on a Rigid Format. |
| Kit 2 (50 BP) | 1 | Can be used for plastics up to AV 9. |
| Kit 3 (100 BP) | 2 | Can be used for any plastics. |
| Repair charge (5 BP) | .05 | One charge will repair 1 Location by 1 point of AV. Thus it takes 5 charges to repair 1 Location that had AV 5. |

SHIELDS: These are dealt with in Appendix 5.

SURVIVAL GEAR: These are the components of a "survival kit."

| Item | ENC | Notes |
|-------------------------|-------|--|
| Match (1 BP) | .01/5 | Has 90% chance of igniting when struck. Requires an Action. |
| Flint & Steel (1 BP) | .01 | Has 40% chance of igniting tinder when struck. |
| Chalk (.01 BP) | .01 | |
| Snare (2 BP) | .05 | |
| Magnifying Lens (2 BP) | .01 | Will ignite tinder in 2D3 Combat Turns (usable on sunny day only). |
| "Space" Blanket (10 BP) | .1 | Used as a bed roll. Has a Thermal Factor of 2. |

TOOLS: Various Tool Kits are available.

| Item | ENC | Notes |
|-----------------|-----|---|
| Kit 1 (20 BP) | 1 | Hand tools of varying sorts. Efficiency Factor of 1. |
| Kit 2 (50 BP) | 2 | Kit 1 plus power hand tools. Efficiency Factor of 1.5. |
| Kit 3 (100 BP) | 2 | As Kit 2 but tools use E batteries at the rate of 5 Charges per hour of operation. |
| Kit 4 (1000 BP) | 5 | Heavy power tools as well as Kit 2. Efficiency Factor of 2. Power Rating of 6 1000 Watts. |

Tool kits are designed for working wood. When working metal reduce the Efficiency Factor by .5 unless the Kit specified as a metalworking kit.

UNDERWATER GEAR: Various kinds of gear can be used in and under the water. Some examples are listed below:

| Item | ENC | Notes |
|----------------------------|-----|---|
| Wet suit | .05 | Has Thermal Factor of 1. Covers 1 to 28. |
| SCUBA tank (100 BP) | 3 | Holds a half-hour of air. |
| Weight belt (25 BP) | 2 | Worn in place of normal belt. Allows character to adjust Encumbrance status to 1 step lower when in the water. |
| Flippers (10 BP) | .01 | Doubles Base Movement Allowance when swimming. Halves it on land. |
| Spear Gun (70 BP) | 1 | Similar to an elasticity-3 slingshot with a Strength of 30 behind it. It requires the application of 30 Strength points to cock it in the fashion of a crossbow. Ranges are as a slingshot but all BCS modifications are doubled. Underwater ranges are halved. The missile is treated as having a WDM of 1.5L. |
| Mask (20 BP) | .03 | Allow maximum visibility under water. |
| Depth gauge/watch (100 BP) | .01 | Allows the character to monitor his air supply and safe rate of ascent. |

WATCHES (50 BP): Allow characters to coordinate action when out of communication with each other. If a party out of communication is attempting to coordinate actions with another group, it will miss by the Effect Number gotten from a Wit CST of the leader of one of the parties. If the Effect Number is negative they will act before the other party. Each point of Effect Number indicates a 1 Combat Turn difference.



VEHICLES

The intention of this section is to provide guidelines for the inclusion of vehicles of varying sorts into the world of **Aftermath!** Vehicles, by their very nature, are difficult to deal with in the same scale that one is dealing with a single man. The Gamesmaster will probably find that he must use a combination of Detailed Action and Tactical Scales to handle situations involving vehicles.

Vehicles are only dealt with in general terms. The Gamesmaster is left to provide specific details of vehicles that he wishes to include in his campaign. Provided in Appendix 7 is a selection of some sample vehicles to give the Gamesmaster, or player, a better idea of the transition from the generalized guidelines presented in this section to the specifications for a particular vehicle.

The Gamesmaster is warned that these rules are not designed to handle situations with large numbers of vehicles. If he wishes to devise situations which will result in the use of large numbers, he is advised to work out a compromise between **Aftermath!** and some other rules designed to deal with the complex interactions of many vehicles. The rules as presented deal primarily with ground vehicles though adaptation to aircraft and boats is minimal.

QUANTIFYING VEHICLES

Each particular vehicle is described by a listing of its specifics in relation to certain categories. These categories include Durability, Structure, Area, Damage Resistance and Fuel System. Each of these categories will be dealt with in turn.

The Durability of a vehicle is a measure of its condition. Durability ratings run from 1 to 20. A vehicle with a Durability of 20 is in absolute top condition while a vehicle with a Durability of 1 is barely able to function. When a vehicle's Durability reaches 0, it is considered to be Disrepaired. If the vehicle's Durability reaches a negative value beyond its Structure rating it is considered Junked. Beyond twice its Structure rating, the vehicle is considered totally destroyed and is even useless for parts. Thus, a vehicle with a Structure rating of 2 is Disrepaired if its Durability rating is in the range from 0 to -2 and Junked if the rating is from -3 to -4. If the rating is -5 or less, the vehicle is totally destroyed.

The Durability will also affect the maximum speed that the vehicle is capable of achieving. The Durability rating times 10% (maximum value is 100%) is the percentage of the stated top speed after modification for Fuel System, that the vehicle, in its current state, is capable of reaching. Note that this speed is not the same as the Maximum Safe Speed.

The Basic Structure rating of a vehicle is based on the ruggedness of its construction. The values run from 1 to 5. Each general class of vehicle may have any rating assigned to it by the Gamesmaster that falls into the general range for that class.

STRUCTURE RATINGS

| General Vehicle Class | Rating |
|--|--------|
| Vehicles designed for road use | 1-2 |
| Vehicles designed for off-road use | 2-3 |
| Heavy-duty vehicles or light combat vehicles | 3-4 |
| Heavy combat vehicles | 4-5 |

The Area of a vehicle is the number of hexes on the DAT Display that are occupied by the representation of the vehicle. Thus, a vehicle that is 2 hexes wide and 3 hexes long has an Area of 6.

The Damage Resistance of a vehicle is based on its Structure and one half its Area. The product of these two numbers is the vehicle's Damage Resistance. Thus, a vehicle with a Structure rating of 2 and an Area of 6 would have a Damage Resistance of 2 x 3 or 6. When a vehicle is damaged in combat, each time the damage done to it reaches the value of the Damage Resistance, the vehicle will lose 1 point of Durability. Thus, our sample vehicle, if it took 4 points of damage, would lose 2 points of Durability. When it takes 4 more points of damage it will lose another point of Durability.

The type of Fuel System used by a vehicle will affect such things as its maximum speed and its efficiency in utilizing fuel. In the chart below are presented four Fuel Systems. The Velocity Efficiency is a percentage of the top speed specified for a vehicle using a Petroleum fuel. This percentage is taken of the top speed given for a Petroleum fueled version of a vehicle such as can be found in whatever reference source is being used by the Gamesmaster for his statistics on the vehicle. This yields the top speed for that version of the vehicle at its maximum Durability. The Mileage percentage is applied in a similar fashion to the statistics for a Petroleum Fueled base vehicle.

A model vehicle with a maximum speed of 120 kilometers per hour which gets 10 kilometers per liter (that's 72 mph and 25 mpg) is designed to use Electric power. It would have a maximum speed of 48 kph and get 5 kilometers out of 1 charge. If the model vehicle had run on diesel fuel the kilometers per charge figure would have been 4.5.

FUEL SYSTEMS

| System | Velocity Efficiency Kilometers per Hour | Mileage* Kilometers per Liter or per Charge |
|------------------------|--|---|
| Petroleum ¹ | 100% | 120% |
| Gasoline ¹ | 100% | 100% (85%) |
| Alcohol ² | 60% | 80% (70%) |
| Hydrogen ³ | 50% | 60% (50%) |
| Electric ⁴ | 40% | 50% (45%) |

Notes

¹ The availability of vehicles using these Fuel Systems may soon become limited in the real world. Their availability in a ruined world may be non-existent.

² This is a system burning ethyl alcohol as the combustible.

³ This system uses metallic hydrides to store hydrogen which is released as the combustible. It is stored as charges.

⁴ This system uses power stored in a battery. It is stored as charges.

*If the model vehicle operates on diesel fuel use the number in parentheses for calculation of the Mileage.



OPERATING A VEHICLE

A character driving a vehicle is committed to driving the vehicle for a whole Combat Turn. During that Combat Turn he will have his Base Action Phase altered to 20. This is the Base Action Phase of any vehicle. This BAP will be used to calculate the character's new Phases Consumed in Action Number which will be in effect as long as the character is driving the vehicle.

At the beginning of any of his Actions, all of which are Drive Vehicle, the character may alter the direction of the vehicle. The turning radius of a vehicle is one vehicle length per 10 kph of current speed. The Gamesmaster must use his discretion in applying this if the vehicle is being represented on a DAT Display. A Driving Skill BCS roll will alter the effective speed used in this calculation by the Effect Number, subtracting from it or adding to it according to the success of failure indicated by the roll.

The speed of a vehicle may be safely decreased by 5 kph per Action Phase. On the Action Phase that the driver declares that he is decelerating, the vehicle will move at the speed at which it had been travelling. At the end of that phase it will be moving at the new speed. On the following phase, it will move at its new speed. This process continues until the vehicle is at the speed desired by the driver or its speed is reduced to zero and it has come to a stop.

Eva is driving at 20 kph. A figure darts out in front of her about 12 meters down the road. Eva decelerates but does not slam on the brakes. Eva starts the deceleration on Action Phase 6 which is the first time she can react since she did not see the figure until Action Phase 7. For Phase 6, the vehicle is moving at 20 kph and will cover 1.6 meters. On Phase 5, it will be moving at 15 kph and cover 1.2 meters. On phase 4, the speed is 10 kph and the distance covered is .8 meters. Action Phase 3 will reduce the speed from its current 5 kph to 0 but the vehicle will cover an additional .4 meters. The vehicle will not be moving on Action Phase 2. The total distance covered since deceleration was started is 1.6 plus 1.2 plus .8 plus .4 equals 4 meters which is well short of the figure in the road.

As shown in the example, the distance traveled by a moving vehicle in one Action Phase is related to the speed at which it is traveling. The basic rule is that a vehicle will cover 1.6 meters per Combat Turn per kilometer/hour of speed. To find the distance covered in a single Action Phase at a given speed, divide the number obtained for the entire Combat Turn by 20.

A vehicle may accelerate at 1 kph per Action Phase. If the Gamesmaster wishes, he may designate a vehicle as having a higher or lower rate of acceleration. For convenience, the Gamesmaster may wish to only deal with speeds in 5 kph increments.

If a given movement calls for a fraction of a meter and there is doubt as to which hex of a DAT Display a vehicle will be in, round up to the nearest meter to avoid arguments. The table on this page gives calculated values for various speeds.

If a character wishes to decelerate at a rate faster than 5 kph per Action Phase he will find himself subject to the rules for Slamming on the Brakes.

If the weather conditions are less than optimal the safe rate of deceleration will be reduced. For example, in the rain the safe rate may only be 3 kph per Phase and on ice it might only be 1 kph per Action Phase.

KPH TO DAT MOVEMENT CONVERSION TABLE

| KPH | m/ct | m/AP | Rounded Value |
|-----|------|------|---------------|
| 120 | 192 | 9.6 | 10 |
| 115 | 184 | 9.2 | 9 |
| 110 | 176 | 8.8 | 9 |
| 105 | 168 | 8.4 | 8 |
| 100 | 160 | 8.0 | 8 |
| 95 | 152 | 7.6 | 8 |
| 90 | 144 | 7.2 | 7 |
| 85 | 136 | 6.8 | 7 |
| 80 | 128 | 6.4 | 6 |
| 75 | 120 | 6.0 | 6 |
| 70 | 112 | 5.6 | 6 |
| 65 | 104 | 5.2 | 5 |
| 60 | 96 | 4.8 | 5 |
| 55 | 88 | 4.4 | 4 |
| 50 | 80 | 4.0 | 4 |
| 45 | 72 | 3.6 | 4 |
| 40 | 64 | 3.2 | 3 |
| 35 | 56 | 2.8 | 3 |
| 30 | 48 | 2.4 | 2 |
| 25 | 40 | 2.0 | 2 |
| 20 | 32 | 1.6 | 2 |
| 15 | 24 | 1.2 | 1 |
| 10 | 16 | 0.8 | 1 |
| 5 | 8 | 0.4 | 1 |

MAXIMUM SAFE SPEEDS

A vehicle will have a Maximum Safe Speed depending on its exact type and the weather and terrain conditions. In some cases the base Safe Speed presented in the chart below will exceed the maximum speed of the vehicle. This is intentional. It represents the vehicle's ability to negotiate difficult conditions in relative safety.

To determine the vehicle's Maximum Safe Speed, multiply the vehicle type's base Safe Speed by the modifiers for terrain and weather conditions used for Tactical Scale movement. This is done in the same way Tactical Scale movement rates are calculated. The value thus determined is the Vehicle's Maximum Safe Speed for the prevailing conditions.

If a vehicle not rated as Off-road Capable is operating off-road, it will have its base Safe Speed halved before it is modified to yield Maximum Safe Speed.

VEHICLE TYPE SAFE SPEEDS

| Vehicle Type | Base Safe Speed (kph) |
|-----------------------------|-----------------------|
| Bicycle/Tricycle | 8 |
| Motorbike | 60 |
| Car, bus | 80 |
| Truck, Recreational Vehicle | 90 |
| Wheeled ATV | 100 |
| Tracked ATV | 120 |

TACTICAL TRAVEL

When vehicles are used for travel in Tactical Scale, the driver determines the speed at which the vehicle will travel. Consideration should be given to the terrain over which the travel is taking place, as this will affect the Maximum Safe Speed at which a vehicle can travel. The Gamesmaster may use the kph chosen by the driver to determine how far the characters will travel in an hour. If a sudden change in terrain occurs and the driver cannot slow the vehicle in time, an accident may occur. In an attempt to avoid an accident, the

driver may Slam on the Brakes. This is defined as deceleration of more than 5 kph for each meter between the point where the driver can react and the danger.

When Slamming on the Brakes the driver must make a Driving Skill BCS. For each 10 kph, or fraction thereof, over the speed which may be safely eliminated, the driver will receive a modification of -1 to his BCS. A successful BCS roll will allow a stop without incident. A failure will indicate an Accident.

Eva is travelling on a Good Road at 100 kph. Rounding a curve she sees that the bridge is out. She is, at present, 15 meters from the yawning chasm. She could safely cut her speed by 75 kph (15 meters at 5 kph per meter for 75 kph safe deceleration). This still leaves her travelling at 25 kph when she reaches the gap in the bridge. This gives her a -3 to her BCS (25kph/10kph for a modification of 2.5 or 3). With a BCS of 12 modified to 9, if she rolls a 9 or less, she will safely stop the vehicle. A roll of 10 or higher will indicate an Accident. This may or may not result in the vehicle hurtling over the edge depending on the type of Accident.

ACCIDENTS

Vehicle accidents can occur under any one of the circumstance listed below. The driver of a vehicle may make a Driving Skill BCS in an attempt to avoid the accident.

- Movement, when in Tactical Scale, at a speed which exceeds the maximum safe speed for the terrain and weather conditions. A Driving Skill BCS roll must be made each hour. The driver's BCS receives a modification of -1 for each 5 kph, or fraction thereof, in excess of the maximum safe speed.
- When the terrain or weather conditions change to lower the maximum safe speed and the driver does not alter his speed to a safe level. The check for an accident should be made when this occurs. The BCS receives modifications as above.
- Slamming on the Brakes and failing the BCS roll to stop safely.
- When the driver is attempting a high speed maneuver. This is defined as any maneuver at a speed which exceeds, in kph, the total of the driver's Deftness and Speed. The driver's BCS receives a modification of -1 for each 10 kph, or fraction thereof, by which the vehicle's speed exceeds that value.

ACCIDENT TYPE TABLE

Die

Result Type of Accident

- 01-20 The vehicle fishtails. No serious effect occurs. If the vehicle does not have an active driver, it is subject to further accident possibilities as outlined in the last of the accident causing circumstances listed above.
- 21-60 The vehicle stalls. It will lose all motive power and move in a straight line decelerating at 5 kph per meter moved. Slick surfaces would increase the distance to 1.5 meters and icy surfaces to 2 meters. The vehicle will lose 1D3 points of Durability.
- 61-85 The vehicle spins out. It will turn to face a random direction (roll 1D6 and treat the hex which it normally would have entered as 1 and number clockwise from there). The vehicle is then treated as if it had received a result as with a die roll of 21-60.
- 86-00 The vehicle crashes. See below.

- When the vehicle loses one or more Durability points. The BCS receives a negative modification equal to the Durability lost.
- When the driver takes any damage. The BCS receives a negative modification equal to the damage taken by the driver. Remember to include any BCS modifications due to the driver's condition if he is Wounded or Seriously Wounded.
- When the driver is killed or rendered unconscious. In this case, the speed in kph is the percentage chance of an Accident. This should be checked on each Action Phase and is cumulative. Thus, a vehicle travelling at 20 kph would have a 20% chance of an Accident on the first Action Phase on which it was uncontrolled and a 40% chance on the second.

Once it is determined that an Accident will occur, the Gamesmaster will roll 1D100 and consult the table below. If he deems it appropriate, the Gamesmaster may add or subtract a value to the die roll which he feels reflects the danger, or lack thereof, in the specific situation.

CRASHES

If a vehicle crashes, a Crash Factor will be calculated. This is important in determining the results of the crash.

The base Crash Factor is equal to the speed of the vehicle at the time of the crash in kph minus the current Durability of the vehicle times its Structure minus the driver's Skill score in Driving Skill divided by 10 and rounded to the nearest, if he makes his BCS roll. In pseudo-mathematical terms this is $[kph - (Durability \times Structure) - (Skill\ score/10, \text{nearest})]$.

The base Crash Factor is multiplied by the Terrain Danger Factor to yield the adjusted Crash Factor. If the terrain Danger Factor is 0 or less, the crash is reduced to the results equivalent to a die roll of 61-85 on the Accident Type Table. The Terrain Danger Factors are given on the chart below.

TERRAIN DANGER FACTORS

| | | | |
|-------------|-------------|----------|-------------|
| Good Road | 1D3 minus 2 | Hills | 1D10/2* |
| Poor Road | 1D2 minus 1 | Desert | 1D2 minus 1 |
| Ruins | 1D10/2* | Mountain | 2D6/2* |
| Open | 1D3 minus 2 | Marsh | 1D2 minus 1 |
| Scrub/Rough | 1D3 minus 1 | Swamp | 1D3 minus 1 |
| Woods | 1D6/2* | Forest | 1D10/2* |

*Retain fractions.

The effects of the crash on the vehicle and the passengers are based on the adjusted Crash Factor.

- The Durability of the vehicle is reduced by the Adjusted Crash Factor.
- The adjusted Crash Factor is the number of six sided dice of damage taken by the passengers. This is C type damage unless the vehicle's Durability has been reduced to 0 or less. If so, the damage is all lethal type damage.
- The adjusted Crash Factor is the percentage chance that the Fuel System will ignite if Petroleum, Hydrogen or Alcohol. If the Fuel System is Electric, the batteries will lose their charge. The adjusted Crash Factor becomes the chance in 20 that the batteries themselves will be ruined.

If the Fuel System is ignited, the vehicle will burn. The fire will reduce Durability at a rate dependent on its type. Once the vehicle is totally destroyed, it will explode at the bookkeeping phase of the following Combat Turn. If the vehicle was considered totally destroyed at the time of ignition, it is considered to have a "pseudo-Durability" that the fire will consume. This "pseudo-Durability" is equal to the result of 1D3.

Explosions of vehicles are created as if the vehicle were a grenade. Any character still within a vehicle which explodes will be killed.

DURABILITY CONSUMPTION RATES OF FIRE AND EXPLOSIVE RATING

| Fuel System | Rate | Explosive |
|-------------|--------------------------------|-----------|
| Petroleum | 1D3 per Combat Turn | 5/5 |
| Alcohol | 1D2 per Combat Turn | 2/3 |
| Hydrogen | 1D2 minus 1 per Combat Turn | 1/0 |

VEHICLE SAFETY DEVICES AND THEIR EFFECTS

Various safety devices can reduce the effects of a crash with regard to the passengers. Escaping from such devices requires a conscious character or undistracted aid from another character, if the one restrained by the device is unconscious.

SEAT BELTS cancel the effects of 1 point of adjusted Crash Factor. It requires a Deftness Ability Saving throw to release them in 1 Action Phase. Otherwise, the character will be free in 2 Action Phases.

A CRASH SUIT or BLAST BUFFERING will cancel the effects of 1 point of adjusted Crash Factor for each level of effect that the suit has.

CRASH BAGS will cancel the effects of 2D6 points of adjusted Crash Factor. They will deflate of their own accord in 3 Combat Turns. A character can escape in 1 Combat Turn with a Speed Critical Saving Throw. If the character's roll was in his Ability Saving Throw range, it will take 2 Combat Turns. Otherwise, he must wait until they deflate.

The AVERAGE ARMOR VALUE worn by a character will also have some effect. For each 2 points, round down, the effects of 1 point of adjusted Crash Factor will be cancelled.

FIRING ON VEHICLES

Sooner or later, vehicles will be fired on. The results of this fire will depend on what is being fired and the nature of the target. Vehicular targets are placed in one of two categories: Hard or Soft. Hard targets are those vehicles which are armored against incoming fire, such as tanks and other combat vehicles. Soft targets are all those other vehicles whose tasks generally involve more peaceful pursuits.

FIRING ON SOFT TARGETS

If a character is firing on a stationary target, he may choose which portion of the vehicle he is firing on. If it is a small part of the target such as a light, he should receive a significant negative modification to his BCS (about -10). A somewhat larger target such as a wheel or tire would have a smaller modifier (about -5). Gas tanks, as protected as they usually are, might require a Critical Hit. Other portions of a vehicle such as the driver's area (front seat, cab, etc.) and body (passenger seat, truck body, etc.) would not receive a

modification but would still be subject to a random determination as to whether the vehicle or a passenger is attacked.

To determine if a passenger is attacked, divide the number of characters in that portion of the vehicle by the result of multiplying .01 by the Area of the vehicle in that portion plus 1, rounded to the nearest.

Sepp is firing at a stationary compact car. It has an Area of 6, being 2 by 3 meters on the DAT display. He is firing at the front seat to try to get the driver. The Area of the front seat of the vehicle is 2. See the illustration. There are two men in the front seat. Thus, the calculated chance of attacking one of them is $2 / (.01 \times (2 \text{ plus } 1))$, nearest, or 66.6, or 67%. The Gamesmaster rolls 1D100 with a result of 35. Thus, one of the characters will be attacked. The Gamesmaster designates the driver as 1 and the other man as 2, and rolls 1D2 with a result of 2. The man next to the driver is hit.

Once a character has been hit, the Gamesmaster should determine where he has been hit. Incoming missile attacks will be impeded by the Barrier Effect of any portion of the vehicle that gets in the way. This is left up to the Gamesmaster to decide (what is in the way) as the styling and variations possible in vehicles create a range far to great to even attempt to catalog. A guideline of Barrier Values is presented below, along with an illustration of the cover provided to a character seated in an automobile.

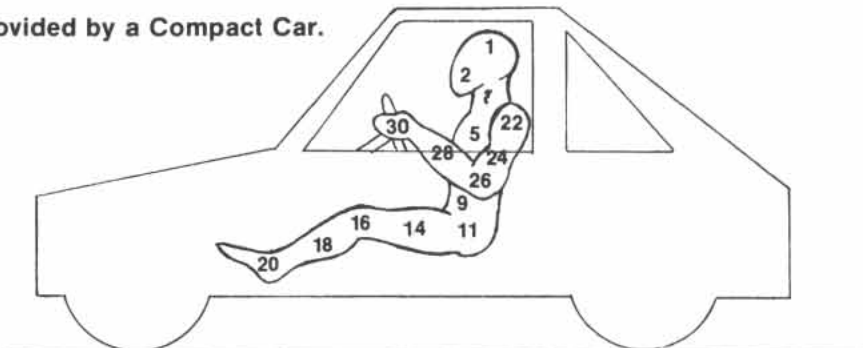
BARRIER EFFECTS OF VEHICLES

| Material | Barrier value |
|---|---------------|
| Safety Glass window | 10 |
| Light metal as in small cars | 20 |
| Medium metal as in average cars and light truck bodies | 30 |
| Heavy metal as in big cars and standard truck bodies | 40 |
| Engine blocks | 100 |

If there are no characters in the portion attacked or if the characters are missed, the vehicle itself will be attacked. The Barrier Values will have their effects on incoming missile fire and the damage done will be counted against the vehicle's Damage Resistance. As noted before, each time the Damage Resistance is exceeded the vehicle will lose 1 point of Durability.

A Critical Hit when firing at a vehicle will attack the vehicle. It will also call for a roll on the Vehicle Critical Hit Table.

Hypothetical "Cover" Provided by a Compact Car.



VEHICLE CRITICAL HIT TABLE (D100) (if moving, check for Accident)

| Die result | Effect |
|------------|--|
| 01-20 | No significant effects occur. |
| 21-60 | The vehicle receives an additional Durability loss of 1D6. |
| 61-00 | The vehicle receives the extra Durability loss as above and receives the appropriate additional effect: |
| 61-65 | Steering loss occurs. The vehicle cannot be controlled. If moving, treat as an unconscious or killed driver. |
| 66-70 | The brake system is shot away. The vehicle cannot be decelerated if moving. |
| 71-75 | The vehicle's electrical system is shot away. This will eliminate any lights the vehicle is using. |
| 76-80 | The driver is attacked. The firer will roll his base BCS. If the roll is successful, the driver receives a Critical Hit. If not, the driver receives a normal hit. |
| 81-85 | The vehicle's engine has been hit. Treat the vehicle as if it had received an Accident result of 21-60. It will not run until repaired. |
| 86-95 | The vehicle's motive system (tires or what have you) has been hit. It will not run properly until repaired. If the vehicle is moving, check again for an Accident and add 10 to the die roll. |
| 96-99 | The Fuel System is attacked. The damage done is the percentage chance that the fuel will ignite or the batteries will discharge. If the vehicle is moving, treat also as if it had received an Accident result of 21-60. |
| 00 | The damage done is the percentage chance of immediate explosion of the Fuel System. If the explosion does not occur the Fuel will ignite. Otherwise treat as 96-99 above. |

If the vehicle is moving, certain of the above situations are altered. A character may not choose the portions of the vehicle at which he will fire. The chance of a character in the vehicle being hit is calculated using the Area of the whole vehicle instead of just the Area of the portion in which he is located.

If moving, the vehicle itself will have a Combat Dodge Ability to be used against incoming fire. This CDA has a value of 1 for each 10 kph of speed, or fraction thereof, at which the vehicle is traveling when the fire is resolved. Additionally, a driver may maneuver to increase this if he makes a Driving Skill BCS roll. Remember that if the vehicle is moving at what are considered high speeds for the driver, there will be a check for an Accident. If the driver makes his BCS roll to make the dodging maneuver, he will add a number to the CDA equal to his Driving Skill score divided by 10 and rounded down.

FIRING ON HARD TARGETS

Fire on a hard target with small arms or muscle-powered missile weapons will have no appreciable effect. Guns and weapons capable of destroying a hard target are rated by their VDG, or Vehicle Damage Group.

The VDG will be reduced by the Vehicle Armor Value of the target in the same way that a barrier reduces BDG. The adjusted VDG is the percentage chance that Hard Target Special Effects will occur. If this happens, the Gamesmaster will consult the Hard Target Special Effects Chart. A Critical



Hit with a weapon rated for VDG will also cause this table to be checked.

The adjusted VDG divided by 10 and rounded to the nearest is the number of points of Durability lost by the vehicle. In addition, a vehicle will receive damage from the VDG in the same way that a character receives damage from BDG. That is, the VDG is divided by 10 and rounded up; that is the number of D10s that will be rolled. The VDG divided by 10 and rounded to the nearest is the number of additional points of damage that will be added to the result of the D10s rolled. If such damage indicates additional Durability loss, it occurs in the normal fashion.

If the vehicle loses Durability due to a hit of this sort, the number of Durability points lost is the number of D6s of C type damage taken by each member of the crew. The number is reduced in the same way as crash suits, blast buffering, and Average Armor Value reduce the effects of an adjusted Crash Factor.

The Durability Loss is also the chance in 20 that the Fuel System will ignite or lose charge. Some fighting vehicles will have fire control systems which will reduce the chance by their rating.

HARD TARGETS SPECIAL EFFECTS TABLE (D100)

| Die Result | Effect |
|------------|---|
| 01-20 | No significant effect occurs. |
| 21-35 | The shot was glancing. No direct Durability loss occurs and damage done to the vehicle is cut in half. If this still results in a Durability loss, the loss due to damage will occur. |
| 36-00 | System loss detailed by the breakdown below: |
| 36-45 | A system (at the Gamesmaster's discretion), other than one listed below, is knocked out. If no system is available, an additional loss of 1D6 Durability occurs. |
| 46-55 | Communications systems are knocked out. |
| 56-60 | The electrical system is knocked out. |
| 61-65 | The main armament is knocked out. |
| 66-75 | The motive system (treads, wheels, etc.) is knocked out. If moving, the vehicle will be treated as if it had received an Accident result of 21-60. |
| 76-80 | The power plant is knocked out. If moving, the vehicle will be treated as if it had received an Accident result of 21-60. |
| 81-85 | The ammunition is hit. The adjusted VDG is multiplied by 2 to get the percentage chance of immediate explosion. |
| 86-95 | The Fuel System is hit. The basic chance of ignition is doubled. |
| 96-00 | The vehicle's Fuel System is ignited or discharged. The adjusted VDG is the percentage chance of an immediate explosion. |

Explosions will add the explosive value of 1D10 rounds of the vehicle's ammunition to the "grenade" effect of the

vehicle's Fuel System. The blast value of 1 round is equal to the VDG of the round divided by 10 and rounded to the nearest.

Moving hard targets get the same Combat Dodge Ability as soft targets. The character firing on a hard target may never choose which portion of the vehicle he is firing upon. The only exception to this is fire directed at an exposed or partially exposed character such as a tank commander standing in the turret hatch. Even small arms can be used for this kind of attack. If the Hit Location roll indicated that the portion of the target that is hit is covered by the vehicle, the vehicle will be attacked instead. This means that small arms will have no effect.

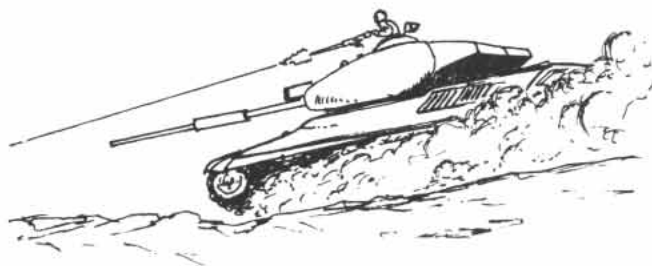
Weapons rated for VDG will always attack the vehicle. There is no need to check to see if a character is attacked. A successful attack on the vehicle that penetrates its armor will automatically attack the crew.

If a weapon rated for VDG fires on a soft target, treat the target as if it had a Vehicle Armor Value of 2.

Vehicle-level armor is rated on a scale similar to that used for the armor worn by the characters. Materials have the same rating but are much heavier, thicker, denser, etc. If non-VDG-rated weapons are used against them they have an effective Armor Value of 10 times the rating of the material when used by a character, and will act as a Barrier. As you will see, this effectively stops most rounds not rated as anti-vehicle.

REPAIRING VEHICLES

A character with the proper Repair Skill may repair vehicles. Each point of Durability is a Task. The Task Value is equal to the vehicle's Damage Resistance. It requires 1 unit of parts for each Durability point. A Disrepaired vehicle of the same type will yield 2D3 units and a Junked vehicle will yield 1D3 units. If a particular system has been destroyed, the Task Value is triple the Damage Resistance and it will require 2D6 units of specific parts in order to make the system function again. Repairing a system is a separate Task from repairing the vehicle's Durability. The Task Period is a day.



ANTI-VEHICLE AMMUNITION

Tank or APC rounds

| Round | VDG |
|------------|-----|
| 152mm HEAT | 51 |
| 120mm APDS | 55 |
| 105mm HEAT | 48 |
| 105mm APDS | 44 |
| 90mm HEAT | 42 |
| 30mm AP | 12 |
| 20mm AP | 9 |

Infantry weapons

| Recoilless Rifle Round | VDG |
|--------------------------|-------------------------|
| 106mm | 50 |
| 90mm | 40 |
| Machine gun with AP ammo | BDG x .01 x Rate Factor |
| LAW | 36 |
| 3.5" Bazooka | 33 |
| 40mm Grenade Launcher | 6 |

Artillery Rounds

| Round | VDG |
|------------|---|
| 105mm HEAT | 15 |
| Non-HEAT | Treat as explosions to exposed crew. Vehicle takes VDG hit of 1/2 explosion strength at its range from the ground zero. |
| Non-AP | |

HEAT receives -10 when rolling for Hard Target Special Effects.

HE/HESH (artillery rounds) receive a -20.

AP and APDS rounds lose 1 point of VDG per 100 meters of range. They add 5 under 100 meters and add 10 under 50 meters.

ANTI-TANK GUIDED MISSILES

| Type | VDG | Range (m) | | BCS modification of ranges to* | | | | | |
|------------|-----|-----------|------|--------------------------------|-------|-------|-------|------|---|
| | | Min. | Max. | 300m | 500m | 1000m | 1500m | Max. | |
| Cobra | 60 | 400 | 2000 | — | -8/-9 | -6/-8 | -2 | +0 | Into or through cover -50% of base BCS |
| Swingfire | 60 | 150 | 4000 | -8/-9 | -5/-6 | +0 | +0 | +0 | |
| TOW | 90 | 65 | 3000 | -2 | +0 | +0 | +0 | +0 | Into or through smoke -50% of base BCS |
| TOW(imp) | 90 | 65 | 4550 | -2 | +0 | +0 | +0 | +0 | |
| HOT | 90 | 75 | 4000 | -5 | -2 | +0 | +0 | -1 | Remote control unit in use -2 to BCS |
| Shillelagh | 90 | 800 | 5500 | — | — | +0 | +0 | -1 | |
| MILAN | 60 | 25 | 2000 | -5 | +0 | +0 | +0 | -1 | *stationary/moving |
| Dragon | 60 | 65 | 1000 | -2/-5 | +0/-2 | +0/-5 | — | — | |

SURVIVAL

In between fighting for their lives, characters in the *Aftermath* need to eat, just like everybody else. Besides fresh ammo, they need to procure clothes, shoes, and so on. How do they go about this?

EATING

The first thing to go in urban areas after a general collapse will be food. Unlike rural locales, which can become self-supporting in such matters, the city provides no arable acreage, at least not without some lengthy preparations.

The city survivor has several options:

- He can hunt. Since *Aftermath!* generally assumes a few decades between the Ruin and the start of play, there will be game present in the urban environment. And, as the inhabitants of any wartime city would tell you, some game abounds from the start.

"*Rattus Rattus Norvegicus*," the Black Norway Rat, is edible, even nourishing, and has long been known as a staple for starving civic populations. During the last year of WWII, the city of Berlin was almost 100% de-ratted, as the people eked out their sub-starvation level rations by hunting the grey residents of their sewers and walls. Man, backed into a survival corner, still seems able to make a "cornered rat" look like a day-old kitten when it comes to savage survival potential. Cats, dogs, pigeons, and the other passengers on the city's bounty would also become fair game.

- The average city can feed its full population for only a day or two on stored, preserved foods. But if war or disaster has eliminated most of that population, the situation is altered. As long as food stocks last, they will feed the survivors. In this as in much of *Aftermath!* we have made a basic assumption about packaging. We are not far from developing commercial packing techniques for edibles that will last indefinitely. Chemically inert plastic containers, 100% effective sterilization techniques for preserved food, freeze-drying, effective vacuum-packing, all would produce a stored treasury of foodstuffs that would be edible after centuries.

So, just as they search for guns, ammo, machinery, and so on, the characters can scavenge food, luxuries like tobacco and liquor, and such necessities as medical supplies and drugs. Positing that the increased need to save energy and prevent waste during the pre-Ruin years leads to a highly developed technology of storage and preservation, the extrapolation is not outrageous.

- Besides doctrinal Hunting and Fishing, using the appropriate Skills, or using Survival Skill to feed oneself on a day-to-day basis, the character may be able to eat such beings as come out on the short end of a fight. In the Animal descriptions in Book 3, we give figures as to the edible portions of the larger creatures that characters may encounter. That lion you shot in Central Park may also keep you fed for a couple of days.

In the country, the same options are available to the hungry character. The game is more plentiful, and there will be fewer stores of packaged foods to raid, unless one goes bandit, hitting farm communities for supplies. Fresh agricultural products and animal foods will be available in

the farming communities, but stop to consider this: Without access to high-technology agricultural materials and equipment, the average yield of crops and the raising of food beasts is going to decline. After the first few waves of starving city refugees hit the rural areas, the farmers are going to start meeting any strangers with rifles and shotguns.

QUANTIFYING THE DAY'S TAKE

A party of Characters running out of food may opt to hunt, fish (if a body of water is present), or forage for their food. This posits that they do not have an Encounter with anything edible. Their locale will affect the take on Hunting.

| Terrain Type | Hunting BCS Modifier | Effect Die Modifier |
|-------------------------------|----------------------|---------------------|
| City, ruined or built up | -3 | -1 Group |
| Open rural (Plains, Farmland) | -1 | No change |
| Forest, Woods, Foothills | +2 | +1 Group |
| Mountains, Desert | +1 | No change |

Fishing is unaffected by the type of environment. Lake, river, stream, or ocean, the differences tend to even out in the long run.

Foraging is campaign dependent. Book 3 covers the basic Foraging rules, and the Gamesmaster will set up the actual situations.

Of course, finding a community or even an individual or small group with food to spare can also feed the characters. Depending on their ethics, they may try to take the supplies or they may engage in a Bartering session, either of which is played out on the spot, rather than being handled on a fixed doctrinal basis. Small groups of wanderers are *not* likely to trade food, nor are communities that have to scrounge it themselves. Farming communities, or groups with *large* stockpiles of preserved goods, may very well be into trading food for other goods, if the characters comport themselves properly.

OPTION

Hunting Out an Area

The Gamesmaster may choose to decree that the area chosen for hunting operations will tend to get sparser if it is used constantly. For every day after their first that characters stay put in one locale, hunting, reduce the BCS used by 1D3. It will take a 10 km move to get into new territory, where the game has become less wary.

TYPES OF FOODSTUFFS

For purposes of calculating bulk, there are several broad classifications of edibles.

Natural Foods (1 BP/Ration): Enough to keep a man going for 1 day at full efficiency bulks 1 ENC. These are fresh (relatively) animal foods, grain or grain products, or vegetables.

Preserved Natural Foods (2 BP/Ration): Dried meat, vegetables, hard-breads (the jerky, gorp, and hardtack of the backpacker) run to .7 ENC per day's rations per man.

Packaged Foods (5 BP/ration): The standard food containers of the pre-Ruin. Canned or vacuum-packed goods. A day's rations bulks .5 ENC

Freeze-Dried Foods (10 BP/Ration): The LURPs of military issue, camper's foods, trail rations. Dried and packed in a vacuum at freezing temperatures, these will keep for up to 5 years with modern, imperfect packaging techniques. Picture their life-span with the posited super-packaging systems we spoke of. Requiring water and sometimes heat to be reconstituted, these compact rations Encumber one .3 per day's eating.

Super-K Rations (15 BP/Ration): The ultimate in preserved nutrition. Developed from formulae used in the space program, these squeeze-tube-held pastes provide a full day's rations from a quantity bulking only .25 ENC. They are not the most appetizing meal in the world, but then things are rough all over.

All of the above are assumed to provide a sufficiently balanced diet to prevent rickets, beriberi, scurvy, etc., etc. Gamesmasters with a more rigorous background in dietetics may provide for deficiency diseases, but frankly, the world of **Aftermath!** is hostile enough without that.

STARVATION

A character can go on half rations for a number of days equal to twice his Healing Rate before it really starts to slow him down. He can go without food for a period equal to the Healing Rate on the same terms. After that, he will start to starve.

Starvation acts like a Disease in some ways. It has a base "Virulence" of 1 on the first day after the safe period is over if on half rations. It has twice that if fasting completely. Each subsequent day of half-starving will add 1 to the "Virulence Group." If the character is not eating at all, each day *doubles* the Group. Starvation advances *up* HLH. When the advance exceeds the Health CST, the victim is in a permanent state of Partial Fatigue. When the AST is exceeded, this becomes Full Fatigue. When the Health is exceeded, the character passes out. He will die in a number of hours equal to his Health Group Effect Die roll.

Getting a day's rations into the victim will arrest the process at any time. For each day of proper eating, the character will reduce the Advance by his Healing Rate. Once it is restored to a point past his Health AST, the episode is over, the rest of the Advance simply goes away, and if necessary the character could go on short rations again.

Going off full rations before reaching this point starts the Advance from the point reached in the healing process, at whatever initial "Virulence" is appropriate for the new level of intake (i.e., half rations or no food).

During the "Incubation" period before Starvation starts its advance, should the character go from half rations to no food, his safe period becomes his Healing Rate. Should he do the reverse, his safe period would become twice his Healing Rate. If he suffers the reduction in period after he has been on short rations for more days than his Healing Rate, he starts to starve at once. If, during this time, he eats half-rations, then that day's "Virulence Group" is increased by 1 over the previous day's. If he fasts the next day, then the Group doubles, based on the adjusted Group.

Frank, with a Health of 30 (Healing Rate of 4), has three days' Rations. Sensing that things are getting tight, he parcels this out to last for 6 days, going on half rations. He was right: there is nothing to be found that is even remotely edible. On half rations, he can go for 8 days (2 x Healing Rate, which is 4). But on day 7 he can eat nothing (nothing is left), so he starts to starve then, as it

exceeds his safe period of total fasting. Since he is eating nothing, he suffers a Group 2 effect, taking a D6 of Advance up his Health. A 2 is rolled, so Frank is still unaffected (but very hungry). Three days later he is doing very poorly. Day 8 gave the Starvation a Group of 4 (twice the previous day's Group, a 2). He took 2D6 of Advance, scoring 8 for a total of 10. The next day, a Group of 8 hit him. He rolls a 5, the minimum possible score on 2D10+3, which slams him over his Health CST, and totals 15 points against his Health. Any more loss will put him into Full Fatigue. But he catches a rat, providing half a day's rations. So on day 10, the Group is only 1 higher than on day 9, for a Group of 9. Rolling 2D10+4, he takes an Advance of 10, totalling 25. He is Fully Fatigued but not dead yet. Desperately ploughing through a deserted, rubble-filled storefront, he finds a case of 12 packets of Packaged Food, each providing a day's ration. He starts eating again. He recovers 4 points of Advance per day, and will throw off the Starvation completely when he has reduced it past 10. This will take 4 days, since his Healing Rate is 4, and that takes the Advance back to 9 points, whereupon it goes away.

Close, but if the character can procure food, or be fed if he is unable to forage for himself, Starvation is quickly reduced.

Special medical preparations, using Advanced Medical Skill, can accelerate this process: a glucose drip bottle, feeding the character by intravenous needle, will add 1 to his Healing Rate when recovering from Starvation, and add 2 to it if the doctor makes his BCS in the Skill. High-energy foods will add 1 to the rate of recovery, as will certain drugs if they are used in conjunction with proper eating.

WATER

The need for Water is handled much like that for Food. At random, when characters state they are looking for water, the Gamesmaster may require that they spend an hour doing so. This requires no BCS or Saving Throw, but will allow them to find any local source of freely available water (or other liquid that will do the job). If this fails, there may yet be water available, but it is a Task requiring the use of the appropriate Survival Skill to find. The Gamesmaster will set the Task Points needed, and the Task Period is set by the terrain type. The chances of locating Water are given on the following Table.

| Terrain Type | Water Findable | | | Chance of Contamination |
|----------------------|----------------|-----------------------|----------|-------------------------|
| | Free Water | by Survival Skill BCS | No Water | |
| City (Intact) | 1-4 | 6-9 | 0 | 30% |
| City (Rubbled) | 1-3 | 4-8 | 9-0 | 50% |
| Open Rural | 1-6 | 7-0 | — | 05% |
| Forest, Woods, Hills | 1-7 | 8-0 | — | 10% |
| Desert | 1 | 2-6 | 7-0 | 10% |
| Swamp | 1-0 | — | — | 80% |

Free Water: Defined as a noticeable supply of apparently drinkable water.

Water Findable by Survival Skill: May require digging for a spring, locating an old cistern, finding a case of sealed water bottles, etc.

No Water: There is no water to find within a 5 km radius.

Contamination: Drunk without purification processes, the water will carry some disease. Boiling will allow a reroll of

the Chance percentage. If the die roll is greater than half the original percentage, the water has been purified (although characters will not know this without some testing gear).

The "Super Halzone" tablets in the Equipment section will eliminate *any* contamination.

Obviously, if the characters are next to a river or stream on the Game Map, they do not need to worry about finding water. The Gamesmaster can apply his judgement in the matter. If it has been raining for two days, there will be plentiful water available.

Assume that an unlimited supply of water exists when it can be found at all.

THIRST

Anyone with a background that includes getting lost in the wild will tell you—thirst kills you faster than hunger.

The minimum daily ration of water is 1 liter (1 quart) per day. If fresh food is plentifully available, we can assume that about half of that will be obtained from the water content of fruits and vegetables, or animals' juices. The Safe Period for Thirst is equal to the Healing Rate on less than full rations. It is only 1 day if no water is available. Thirst kills just as Starvation does, *but all values for its Advance are doubled*. In effect, Thirst is Starvation with a WDM of 2!

However, if a character at any point in dying of Thirst can get a liter of water into him, all effects of the Thirst are wiped out immediately.

ABOUT CANNIBALISM

We might as well get this problem out in the open. It is highly likely that humans driven to the wall by hunger in the collapse of their civilization will turn to cannibalism. It has happened in less widespread disaster situations, and there is no logical reason to suppose it won't happen in the Aftermath.

Players and Gamesmasters must discuss such things until a mutually satisfactory answer is found. In Playtesting, the universal response has been a preference for starvation. Several Players designed Characters who killed cannibals on sight, or upon first learning of their diet. The usual reason was a Character History that included losing loved ones to the roving "Ghoul" gangs, the slang nomenclature we used to designate cannibals.

Our own feeling is that the impact upon a human being who turns to eating his own kind for food will be such that he will tend to lose much of his humanity, becoming a predator by nature and a ravening threat to his fellows. The overall ethos of the survivor communes and wanderers in the playtest Campaign was that Ghouls, as their nickname implied, had become a form of monster, set in eternal enmity with the rest of the race.

In the Bibliography, we recommend several novels that deal with the cannibal problem in an aftermath. It is a central plot element in *Lucifer's Hammer*, by Larry Niven and Jerry Pournelle, and also appears in such works as *Some Will Not Die* by Algis Budrys, *A Canticle for Liebowitz* by Walter Miller, and numerous works of Post-Holocaust fiction.

On the pragmatic side, we give the nutritive values of human flesh on the Tables in Book 3. We would like to point out that the closer a food animal is to our own cell structure, the more likely its meat is to carry germs or parasites which

will infect us. Fish is quite safe for humans to eat raw: it is not at all like human tissue. Pork, a very close twin of our own structure, requires extensive cooking to eat safely. Therefore, human meat will be a risky dish for human consumption.

It is an ugly question, but it must be dealt with by each Campaign. Who goes Ghoul, and what does it cost him in mind and soul?

SURVIVAL SKILL

Whenever faced with a survival problem (this includes dead cities), the character can always be given a last-ditch solution by making his Survival Skill BCS. The Gamesmaster will be the final arbiter of what applications are permitted this Skill, but we offer these possibilities:

- Find 1 day's food of some sort.
- Find a liter of water somewhere.
- Survive the effects of exposure for 1 night.
- Get a fire started in 60 minutes - a Wit Group Effect Die roll.
- Get a compass bearing.
- Generate a signal visible/audible for a radius of kilometers equal to the Effect Die roll.

The ex-Boy Scouts or Green Berets among our readers will doubtless have other ideas along these lines. Only one attempt per day to accomplish one of these things is permitted, although each of them can be tried during that day. This is used when there has been no other means of doing the desired thing found: i.e., the Hunter who blows his Hunting BCS can still get enough to feed 1 man by making his Survival BCS. Whether he will share it with his buddies or gobble it down himself is up to the Player.

WEATHER

We do not deal with Weather much. Since the ideal *Aftermath!* campaign is in the Gamesmaster's home territory, he knows better than we what the climate is like. An all-embracing weather rule that fits the Middle Atlantic states, where we are writing this, will freeze characters in the ruins of Miami, but leave the survivors of the Fall of Toronto in shirt-sleeve comfort.

Unless you are in Death Valley, great heat is not really a problem. The blanket rules for hot climate can be summed up as requiring a Survival BCS each day, or else the character needs twice as much water that day.

Cold weather will not bother characters warmly dressed (quilted cloth over half their bodies, and at least light cloth everywhere else). Gamesmasters setting an adventure in arctic conditions can require special clothes, likewise those having characters assault mountain peaks. Characters not dressed for winter will suffer from Exposure. They are *always* Partially Fatigued when in the cold for over 10 minutes times Healing Rate. If forced to spend the night exposed to the elements, they must use Survival Skill to protect themselves, or risk catching Pneumonia, which is described in the Gamesmaster's rule book under Sample Diseases.

If Climate is a more central element of your Campaign, you will have to elaborate on these foundations for yourself.

PLAYER CHARACTERS AMONG THE RUINS

We have discussed the mechanics of designing a Player Character in some detail, and have directed general comment at less quantifiable aspects of such design: putting on the character's "mask," or "thinking with his head."

But what specific guidelines can we give you for running a character in *Aftermath!*, the game set in a world where all the old rules died with the civilization that spawned them. By now, it is probably crystal clear to most of you that an *Aftermath!* campaign can get pretty sickening, if you follow some of the implications of world collapse to their logical conclusions. How do you keep the campaign from degenerating into a mindless series of gunfights between ruthlessly amoral Player and Non-Player Characters?

It is all very well to say it is the Gamesmaster's job. But that poor jerk has an awful lot on his mind already, and in this area especially the full cooperation of the Players is necessary to keep things alive.

When the campaign is getting off the ground, perhaps after the first few scenarios, when people are getting comfortable with the rules, a session discussing the state of the world and looking at possible goals for Player Characters is in order. What is the known state of the country? Is Europe still alive, or Asia? Are the characters lone wolves, fighting just to survive, or are they part of a community, struggling to keep a spark of the old civilization burning, or to bring the seeds of a new tomorrow to fruition?

The answers to these questions provide the foundations for ongoing character motivation in the campaign. On a more personal level, Players should consider the following:

You were 24 years old when the Ruin fell, and slammed mankind back into a second Dark Age. Now you are going on 50. You used to think of yourself as a decent kind of person. Since things fell apart you have done some things to survive that don't bear thinking of. You face a giant dilemma every day you decide to stay alive: do you throw every ethic you ever held dear overboard, or is there some basic code of behavior that is going to keep you sane and human through all this?

We have seen "Oldsters," characters who were adult by the time of the Ruin, draw weapons on fellow Player Characters when confronted by some act their Players had decided was intolerable to the character.

Scene: A dark room, the inner chambers of a great museum, now a tomb dating back two and a half decades. A party of schoolchildren died here, caught by the disaster that killed a world. A group of people move carefully around the corner, holding makeshift torches. Two of the younger members see the tiny, half-mummified corpses. "Check 'em out for good stuff." The pair starts to move in. The snick of the safety catch seems awfully loud in the still, marble room. "I don't expect you fellas to understand this, but if you damn ghouls touch those kids, I'm going to kill you." The quiet conviction in the rasping, age-husky voice freezes the two in their tracks. "Aw, Chipper, you got some crazy ideas," complains one of them. But they back up, very slowly, and with their hands held well clear of their own holsters. They've seen the old man march a stream of slugs from that rifle up a man's chest and into his face, firing at 100 yards. He is barely 10 feet away. As the tension subsides, the party moves on. The glimmering torchlight fades, and the brief disturbance sinks into the uncomplaining forgetfulness that is the special hallmark of the dead.

The Player who built Chip, or "Chipper" as his associates call him, has built a solid, righteous southerner, holding on to his humanity in the savage world of the Ruin by dint of a basic code of ethics. Rolling the bodies of dead children violates that code, to the disgust of the characters with less restraint.

On the flip side, an interesting juxtaposition exists in the playtest campaign. One of Chip's current companions is Tater, who is a couple of years younger than the rifleman. Tater ran with the Pagans (an East Coast counterpart to Hell's Angels). He is a cycle freak, a graying biker in a world without cops. When things fell apart, we shudder to think of what Tater must have done. He is a vicious gangster. It is a safe bet that he lived by preying on those less lethal than himself. He appreciates the survival value of the group that operates about Chip, but our Gamesmaster suspicions see a showdown when the almost inevitable time comes that Tater tries to pull something that Chipper will not stand for.

These two cases sketch the process by which widely variant Player characters can evolve and interact in *Aftermath!* Initially, the Player who runs Chip decided to build a stereotypical redneck, charter member of the NRA, outdoorsman, aficionado of good homebrew. As Chip has developed through the scenarios, he has emerged as a rock solid survivor, staying alive as much by his cunning as a tactician as by his accuracy with a rifle, and emerging from the maelstrom of the Ruin with a deep-seated sense of decency that may get him killed but has saved an awful lot of lives along the way.

Tater has demonstrated a valuable lesson to the Players. He is an essentially sterile character, for all his ruthless survival talent, and the other Player characters, including some controlled by the same Player, trust him like lions trust jackals.

WHEN TIME IS OUT OF JOINT

While the main thrust of *Aftermath!* posits a campaign set 20-30 years after the Ruin, this is not a solid limit. We have experimented in the playtest with a "200 Years After" campaign. Lost is the sense of immediacy, and the simplicity of dealing with technological material when everyone is assumed to be moderately familiar with it. Some items, like firearms, will probably remain fairly common, although the Muzzle Loaders are likely to replace the modern weapons as they break down, and ammo runs out. But the products of industrial chemistry, the manufactured goods, and all the powered equipment, might slowly become the magic of the new primitives. While isolated enclaves may preserve the old knowledge, most communities will be in a state of neo-barbarism, poised at the beginning of the climb back to civilization.

The characterizations in such campaigns may operate on a different level than those in the "First Generation" system.

You are Vinz of Twobomz Valley. The raid on the Horz People was a great success and Rik, Warchief of the Horned Riders, the finest warrior-clan in all the Bul people, called you "Brave Lance!" But in the midst of all the fighting, your foolish mind, that got you all those beatings from Rojur when he tried to pound the sagas into you, kept asking, "Why do we always fight the other tribes?"

"It is hard to ask such questions. All men know we fight to keep the land that is ours. We fight because all who are not of our blood, our lineage, are enemies. So has it always been,

since the Blast came and made the World-As-It-Is. The Shamen say it, and they are wise and MUST be right!

"But when 'others' die, their blood is just the same as ours, although their skins are pale and mine is dark. Are they not then of our blood?"

"Why does my head hurt with asking things it cannot answer? I shall go upon a Travelling to the old, dead God-Cities, the places of Those-Who-Were-Before-The-Blast. Maybe there, I will find out why men must fight those who are strangers, and how it was in the Old Times. Surely THEY did not do such things."

"First Generation" campaigns lack something that is central to a setting in the farther future: legends.

The old legends are dead, buried in the rubble of the fallen civilization. The new legends are not yet formed, for the exploits of the Player-Characters are the proto-legends of the new world! This is the Age of Heroes which will fuel the campfire speech of the characters' great-grandchildren. Eminent scholars among their many-times-great-great grandchildren will seek the truth behind their myth of Chi-per, the Bul People's God of Righteousness and Justice, He Who Strikes the Hearts and Eyes of the Evil Ones.

The potential richness of the campaign is so great in both types of setting that whatever decision the Gamesmaster makes, we feel that Players will find many and varied origins which they may ascribe to their characters, promoting a realistic diversity in the personalities in the campaign.

Vinz demonstrates one particular approach to what we have perceived as the most rewarding motivation in an **Aftermath!** campaign: the promise of new birth.

THE CHARACTERS & THE PROMISE

In most Role Playing Games, the Player Character is as much the misfit as he is the hero. He has forsaken growing old by his hearth for the life of one driven by some consuming desire; glory, an ideal or crusade, revenge, wealth, whatever. The classic definition of the hero includes the willing acceptance of "moira," a Greek term roughly meaning "fate," "karma," or "doom." Young Achilles, offered a choice between a long, honorable, but uneventful life, and a short, glorious career, unhesitatingly chose the latter. In Homer's Iliad, he is the premier warrior of the Greeks, unstoppable in his rage, but foredoomed to die, his heroic invulnerability flawed at the "Achilles' Heel," where a poisoned arrow cuts short his glorious life.

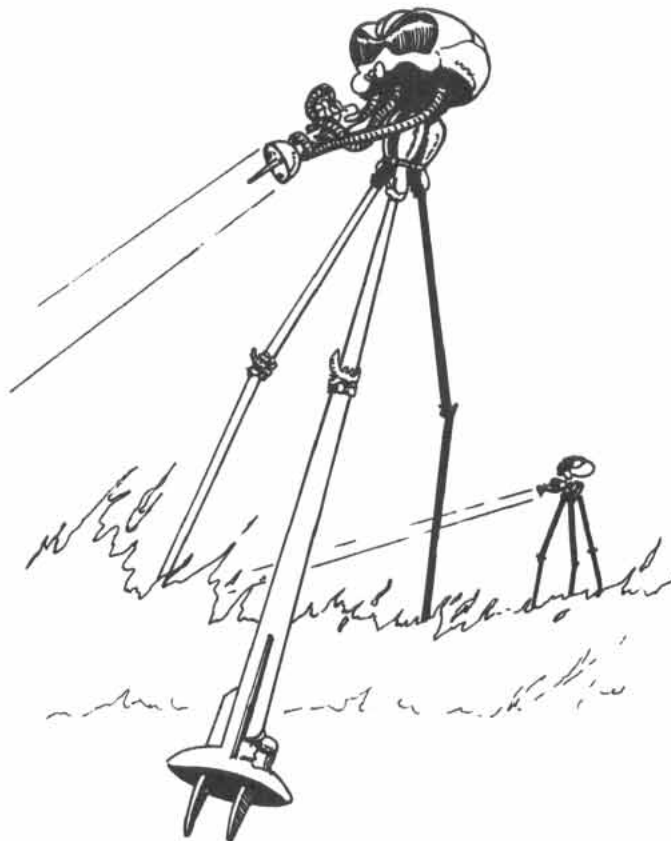
The majority of Player Characters in **Aftermath!** have tended to undertake the heartbreaking task of supporting the rebuilding of a new civilization on the ashes of the old. Frail scientists have mastered fighting skills to preserve their knowledge for the young ones in their group. The "Kids" often show a superstitious awe of this "Old Knowledge," and the foundations for Vinz's "Shamen" are laid. Even if they die without fulfilling their dream, the Promise is passed on, to slumber in embryo, until a young warrior asks how "Others" can be so different if they bleed the same blood as he himself does.

There are the flawed heroes too, Player or Non-Player Characters who failed to learn the lesson of the Ruin. They husband the resources of technology to rule by force, by inspiring superstitious fear of the "magic" of science. Ruthlessly they turn their knowledge into new ways to destroy, rather than a means of rebuilding the results of their civilization's own propensity for such abuse.

Currently, these positions are held by Non-Player Characters in the campaign, usually at enmity with the Players. But given time and resources, there are Player Characters who would overthrow them only to replace them with tyrannies of their own.

Other types of campaign may pose their own obstacles to the Promise. It is not necessarily going to be by our own efforts that the Ruin strikes. We may have "help."

You are Bill Ericson. Once, ten years or ten lifetimes ago, you were a salesman with a wife, a daughter, a few dreams. But that was before the Martians came back, just as they did around the turn of the century, the way Wells' history tells it. Only this time they won. The Earth is a shattered slave-planet, ruled by the octopoidal aliens and their human "Quislings." They took away all you had: a wife who burned in their heat ray three steps from the culvert that saved your life; a little girl who died asking for a drink of water that you didn't have, a little water to cool the fever born of the Mars-bred virus that was killing her. "If it is all I do before I join them, if there was any mercy left by God before he went away, just let me hurt the damned monsters once!" you cry.



There is nothing uplifting about Ericson's pain. It will torment the character as long as he cares to keep on living. But it is a driving force that can impel him to rise above the normal limits of human endeavor to drive the Martians from the planet, and echoed in the agony of spirit of a legion of those whose lives were blasted by the invasion, it welds a bond of action that is more frightening than all the polished drill of more conventional armies.

On the other side of the coin, imagine the potentials in playing a party of Quislings, out to extend the rule of their extraterrestrial masters. As with the despicable Tater, this choice may lead to things the Players might have preferred to leave undone. But again, the motivations and reactions of such characters provide a fascinating contrast for gamers who tire of the "Me Good Hero/Rotten Villain" roles that can stultify a Role Playing Game.

No matter what "period" of the Aftermath is chosen, and no matter what particular kind of Ruin caused it, the character's relationship to the Promise is a central pole of his personality. He may embrace it, oppose it, even twist it to his own ends, but he cannot ignore it.

PRACTICAL CONSIDERATIONS

We think enough grist has been provided for the mill in terms of things to consider in building the character's personality. Now how about *playing* the game?

The general caveats to gamers in Book 1 speak to the overall task. Familiarize yourself with the rules enough to be able to flow in a fight, or any other common situation, without constant hesitation or rule-questioning. If the Players find something really unplayable, offensive, or just loathesome for indefinable reasons, they should let the Gamesmaster know it. If they want to expand on some ideas, the same applies.

Remember several things:

- Nobody is an expert in everything. It is blatantly unfair and rude to snarl at the Gamesmaster or another Player because he makes a slip in working with some area you have expertise in. Expect the same courtesy from them that you give.
- Likewise, no simulation can cover every detail of a complex process, or foresee all the eventualities of a situation. The rules here are *our* approach to the problem. Our system is designed to allow the maximum flexibility in adapting the probabilities to fit the vicissitudes of real life. Take advantage of this by really playing the role, thinking terms of real actions, rather than trying to break everything down into the abstract math of scores and points. If you want to be a hero (and in this hobby, who doesn't?) then, by the glory, *be a hero!* Take risks, accept the challenge of the short life but the glorious one. You may not die in bed, but really, did you want to?
- A good test of the quality of play in a campaign is this: if you wrote out a log of an adventure in decent narrative form, would it make good adventure fiction? In some scenarios, admittedly, everything seems to go stale. The encounters fall into a rut, nobody can seem to stay in character, rules get blown, tempers fray, nothing happens or everything happens wrong. Take a deep

breath and chalk it up to experience. When it all goes right, just ask yourself this: how worried was I? When that last sword blow knocked me to within a hair of death, and then I had to beat that guard to the draw, did the gooseflesh rise, did the back of the neck chill at the vicarious breath of the dark angel? If you can say yes, even if only for a moment, then you should be enjoying the blazes out of things!

For the first, the very first little old character you build in *Aftermath!*, try this on for size.

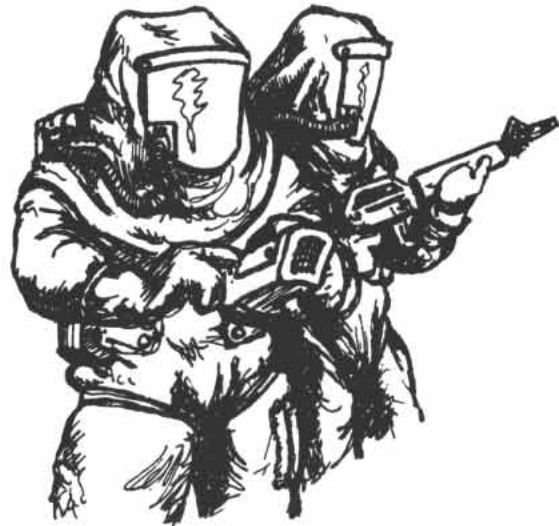
Assume civilization collapses tomorrow. Decide what *you* would do. What Attributes would you cultivate and what would you let go? What new Skills would you acquire and what old ones would you increase? Develop the basic character design along these lines. Then ask yourself how would you survive? What attitudes would you adopt? Do you just watch out for Number One, or are you willing to give your heart to the Promise? Could you go Ghoul in a final extremity, or would you kill cannibals on sight? Can you trust anyone? Or is the world forever a hostile environment? Put yourself in the character's shoes and *play your story in the Aftermath!*

We think you will be surprised by the intensity of identification this idealized self-character will get from you. The immediacy and impact of play is immeasurably increased. And if and when your luck runs out, or you make your last mistake, the impact of the loss is as thrilling as it is poignant. It hurts, but the final question is put to you: did he die accepting his "moira?" Was the hero true to the last? And if you have put yourself into the play wholeheartedly, then the answer you get back makes it all worthwhile.

The Gamesmaster's Book contains the various facets of different types of campaigns. He will inform you of the basic assumptions of your particular system. But without a creative response to equal his own labors, the thing will not take off. Meet him halfway, and the hours of enjoyment can be endless.

APENDIX 1 CHARACTER GENERATION CHECKLIST

1. Determine Age Group and note information due to it on CRS.
2. Determine actual age.
3. Determine psychological profile.
4. Distribute 15 + 2D6 points among the Talents.
5. Distribute 75 points among the Attributes.
6. Determine which Skills the character has for initial scores.
7. Determine the initial scores and Off-Hand Dexterity.
8. Apply the effects of Age, "Changed" status and Attribute Increase points.
9. Determine the character's Physical Characteristics.
10. Determine base clothing.
11. Determine the character's armor.
12. Determine the character's equipment.
13. Calculate Encumbrance Total.
14. Calculate Abilities, Basic Chance of Success scores and base Recognition Factor.
15. Inform the Gamesmaster that you are ready to play.



APPENDIX 2 SKILLS LIST

- ¹ May have initial equipment
² Always requires tools or weapons
³ Sometimes requires or uses tools or weapons
⁴ Has an "averaging" function

| SKILL | COST | INITIAL SCORE | FORMAT |
|--|------|------------------------|---------------|
| COMBAT SKILLS, HTH ^{1 2} | | | |
| Brawling ³ | 1 | STR + DFT + Combative | 3 |
| Fencing | 1 | SPD + DFT + Combative | 3 |
| Flexible Weapon | 1 | DFT + STR + Combative | 3 |
| Knife | 1 | DFT + SPD + Combative | 3 |
| Longsword | 1 | STR + DFT + Combative | 3 |
| Nunchaku | 1 | DFT + STR + Combative | 3 |
| Polearm | 1 | STR + DFT + Combative | 3 |
| Sai | 1 | DFT + STR + Combative | 3 |
| Single Weapon | 1 | STR + DFT + Combative | 3 |
| Tonfa | 1 | DFT + STR + Combative | 3 |
| Two Weapon | 1 | STR + DFT + Combative | 3 |
| Unarmed Combat ³ | 1 | DFT + SPD + Combative | 3 |
| Weapon and Shield | 1 | STR + DFT + Combative | 3 |
| MUSCLE POWERED MISSILE WEAPONS ^{1 2} | | | |
| Archery | 2 | DFT + WT + Combative | 3 |
| Blowgun | 2 | HLH + WT + Combative | 3 |
| Bola | 2 | DFT + WT + Combative | 3 |
| Crossbow | 2 | DFT + WT + Combative | 3 |
| Sling | 2 | DFT + WT + Combative | 3 |
| Slingshot | 2 | DFT + WT + Combative | 3 |
| Throwing | 2 | DFT + WT + Combative | 3 |
| SMALL ARMS ^{1 2} | | | |
| Pistol, Modern | 3 | DFT + WT + Combative | 3 |
| Pistol, Primitive | 3 | DFT + WT + Combative | 3 |
| Rifle, Modern | 3 | DFT + WT + Combative | 3 |
| Rifle, Primitive | 3 | DFT + WT + Combative | 3 |
| SUPPORT WEAPONS ² | | | |
| Autoweapon ⁴ | 4 | DFT + WT + Combative | 1 |
| Breach Loading Artillery | 4 | DFT + WT + Combative | 1 |
| Direct Fire Cannon | 4 | DFT + WT + Combative | 1 |
| Grenade Launcher ⁴ | 4 | DFT + WT + Combative | 1 |
| Missile Launcher (Technology Use) | 4 | DFT + WT + Combative | 1 |
| Mortar | 4 | DFT + WT + Combative | 1 |
| Muzzle Loading Artillery | 4 | DFT + WT + Combative | 1 |
| Primitive Seige Engines | 4 | DFT + WT + Combative | 1 |
| NON-TECHNICAL, PHYSICAL SKILLS | | | |
| Beast Riding ⁴ | 1 | WL + DFT + Nature | 1 |
| Bicycle Riding ^{2 4} | 1 | DFT + STR + Mechanical | 1 |
| Boating ³ | 1 | STR + WT + Natural | 1 |
| Climbing ³ | 1 | STR + DFT + Natural | 1 |
| Fishing ³ | 1 | DFT + WT + Natural | 2 (Trap/Hook) |
| Gambling ^{1 3} | 1 | DFT + WT + Charismatic | 1 |
| Handicraft (specify) ³ | 1 | DFT + WT + Talent | 1 |
| Seamanship ⁴ | 1 | HLH + DFT + Natural | 1 |
| Survival (specify) ³ | 1 | HLH + WL + Natural | 1 |

| SKILL | COST | INITIAL SCORE | FORMAT |
|--|------|-------------------------------|--------------------|
| Swimming ⁴ | 1 | HLH + STR + Natural | 1 |
| Tracking | 1 | WT + Natural + Natural | 2 (Urban/Rural) |
| Hunting ² | 1 | DFT + WT + Natural | 2 (Trap/Shoot) |
| Search | 1 | WT + WT + Natural | 2 (Urban/Rural) |
| Stealth | 1 | DFT + WT + Natural | 2 (Urban/Rural) |
| KNOWLEDGES | | | |
| Advanced Farming ² (Dirt Farming) | 2 | WT + DFT + Natural | 1 |
| Bowyer ² | 2 | DFT + WT + Mechanical | 1 |
| Carpentry ² | 1 | DFT + WT + Mechanical | 1 |
| Commerce ⁴ | 2 | WL + WT + Charismatic | 1 |
| Culture | 0 | WT + Communicative + Esthetic | 2 (Pre/Post Ruin) |
| Dirt Farming ² | 1 | HLH + DFT + Natural | 1 |
| Fermentation ² | 2 | WT + Natural + Natural | 1 |
| Foreign Language (specify) | 1 | WT + WL + Communicative | 2 (Spoken/Written) |
| Interrogation ³ | 3 | WL + WT + Charismatic | 1 |
| Leatherworking ² | 2 | DFT + WT + Esthetic | 1 |
| Literacy (specify) | 1 | WT + WT + Communicative | 1 |
| Masonry ³ | 1 | DFT + DFT + Mechanical | 1 |
| Nutritionist | 2 | WT + Scientific + Natural | 1 |
| Repair, Muscle powered vehicles (Carpentry) | 2 | DFT + WT + Mechanical | 1 |
| Salvage Food (Nutritionist) | 2 | WT + DFT + Scientific | 1 |
| Tactics | 2 | WT + Combative + Comm | 1 |
| Tailor ² | 1 | DFT + DFT + Esthetic | 1 |
| Weaver/Spinner ² | 1 | DFT + WT + Esthetic | 1 |
| TECHNICAL, PHYSICAL SKILLS | | | |
| Automobile Driving ² (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Basic Research ³ | 1 | WT + WT + Scientific | 1 |
| Heavy Equipment Driving ² (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Lab Technique ² (Technology Use) | 1 | DFT + WT + Mechanical | 1 |
| Lockpicking ^{1 2} | 2 | DFT + WT + Mechanical | 1 |
| Magnalock Penetration ^{1 2} (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Motorcycle Driving ^{2 4} (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Powerboat Pilot ² (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Technology Use ² | 1 | DFT + WT + Mechanical | 1 |

| SKILL | COST | INITIAL SCORE | FORMAT |
|---|------|------------------------------|--|
| KNOWLEDGES | | | |
| Aerial Recon Interpretation ^{3 2} (Technology Use and Basic Research and Mathematics) | 2 | WT + Scientific + Esthetic | 1 |
| Advanced Medical ³ (Lab Technique and First Aid) | 3 | WT + DFT + Scientific | 1 |
| Architecture ³ (Technology Use and Basic Research and Mathematics) | 3 | WT + Scientific + Mechanical | 1 |
| Armorer ² (Blacksmithing for metal/ Plastics for Forming plastic) | 3 | DFT + WT + Mechanical | 1 |
| Automobile Mechanic ² (Technology Use) | 3 | DFT + WT + Mechanical | 1 |
| Blacksmithing ² (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Botany ³ | 2 | WT + Scientific + Natural | 2 (Pre-/Post-Ruin) |
| Chemistry ³ | 2 | WT + Scientific + Mechanical | 1 |
| Computer Science ³ (Technology Use) | 2 | WT + Scientific + Mechanical | 2 (Programming/ System Design) |
| Decontamination ³ (Lab Technique) | 3 | WT + DFT + Scientific | 2 (Biological & Chemical/ Radioactive) |
| Defusing Explosives ^{3 4} (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Demolitions ^{2 4} (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Distillation ² (Technology Use) | 2 | WT + Mechanical + Scientific | 1 |
| Electrician ³ (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Encryption (Basic Research) | 2 | WT + Scientific + Esthetic | 1 |
| Firearms Repair, Modern ² (Firearms Repair, Primitive & Machining) | 1 | DFT + WT + Mechanical | 1 |
| Firearms Repair, Primitive ² (Blacksmithing or Machining) | 2 | DFT + WT + Mechanical | 1 |
| First Aid ^{1 3} | 2 | WT + DFT + Scientific | 1 |
| Handloading ² (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Internal Combustion Engine ³ (Physics & Mathematics) | 3 | WT + Scientific + Mechanical | 1 |
| Machining ² (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Marine Mechanic ² (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Mathematics ³ | 2 | WT + Scientific + Comm | 1 |
| Mechanically Generated Power ³ (Technology Use & Physics) | 2 | WT + Mechanical + Scientific | 1 |
| Operational Command (Tactics) | 2 | WT + Combative + Comm | 1 |
| Pathology ³ (Chemistry & Advanced Medical) | 3 | WT + WT + Scientific | 1 |
| Pharmacy ³ (Chemistry & Lab Technique) | 3 | WT + DFT + Scientific | 1 |
| Physics ³ (Mathematics) | 2 | WT + Mechanical + Scientific | 1 |
| Plastics Forming ² (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Radio Communications ³ (Technology Use) | 2 | WT + DFT + Mechanical | 1 |

| SKILL | COST | INITIAL SCORE | FORMAT |
|--|------|-----------------------------|-----------------------|
| Simple Explosives ³ (Chemistry & Lab Technique) | 2 | WT + DFT + Mechanical | 1 |
| Strategic Command (Operational Command) | 2 | WT + Scientific + Combative | 1 |
| Telegraphy ³ (Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Telephone Communications ^{3 3} (Technology Use) | 3 | WT + DFT + Mechanical | 1 |
| Television Communications ^{3 3} (Electrician) | 3 | WT + DFT + Mechanical | 1 |
| Therapy ³ (Advanced Medical) | 3 | WT + DFT + Scientific | 1 |
| Weaponsmithing ² (Blacksmithing, Machining or Carpentry—according to material) | 3 | DFT + WT + Mechanical | 1 |
| Zoology ³ | 2 | WT + Scientific + Natural | 2 (Pre-/Post-Ruin) |

HIGH TECHNOLOGY SKILLS²

(All require Technological Use)

PHYSICAL SKILLS

| | | | |
|---|---|-----------------------|---|
| High Technology Use ³ | 1 | DFT + WT + Mechanical | 1 |
| Pilot, Fixed Wing | 3 | DFT + WT + Mechanical | 1 |
| Pilot, Submersable | 3 | DFT + WT + Mechanical | 1 |
| Pilot, Rotary Wind | 3 | DFT + WT + Mechanical | 1 |
| Pilot, Spacecraft (Zero G Training & High Technology Use) | 4 | DFT + WT + Mechanical | 1 |
| Pilot, Variable Wing | 4 | DFT + WT + Mechanical | 1 |
| Safecracking ^{1 3} | 2 | DFT + WT + Mechanical | 1 |
| SCUBA Diving ⁴ | 2 | DFT + WT + Mechanical | 1 |
| Zero G Training ⁴ | 3 | SPD + DFT + Natural | 1 |
| Aviation Mechanic (High Technology Use) | 3 | DFT + WT + Mechanical | 1 |

KNOWLEDGES³

| | | | |
|---|---|------------------------------|---|
| Complex Explosives (Simple Explosives) | 2 | DFT + WT + Mechanical | 1 |
| Computer Design (Computer Science & Mathematics & High Technology Use) | 4 | WT + Scientific + Mechanical | 1 |
| ECM Operation ² (High Technology Use) | 2 | DFT + WT + Mechanical | 1 |
| Laser Technology (High Technology Use) | 4 | WT + Scientific + Mechanical | 1 |
| Plastic Synthesisation ² (Chemistry & Lab Technique) | 3 | WT + Scientific + Mechanical | 1 |
| Power Generation | | | |
| Electrical (Physics, Electrician & Mechanically Generated) | 3 | WT + Scientific + Mechanical | 1 |
| Nuclear (P.G., Electrical) | 4 | WT + Scientific + Mechanical | 1 |
| Solar (Physics & High Technolgy Use) | 3 | WT + Scientific + Mechanical | 1 |
| Production of Fuel ² | | | |
| Hydride (Chemistry & Lab Technique) | 4 | WT + Scientific + Mechanical | 1 |
| Petroleum (Chemistry & Lab Technique) | 4 | WT + Scientific + Mechanical | 1 |

APPENDIX 3 ARMOR MATERIALS LIST

| MATERIAL | CODE | FORMAT | ENC/LOC | ARMOR VALUE | BARTER VALUE PER LOCATION |
|---------------------------|-------|--------|---------|-------------|------------------------------|
| PLASTIC | | | | | |
| Plasteel | PS | R | .04 | 15 | 30 |
| Armorplast | AM | R | .036 | 13 | 26 |
| Plated Plasteel | LP-PS | SR | .052 | 13 | 26 |
| Denisplast | DP | R | .03 | 11 | 22 |
| Plated Armorplast | LP-AM | SR | .046 | 11 | 22 |
| Mesh Plasteel | M-PS | FH | .06 | 11 | 22 |
| Macroplast | MP | R | .024 | 9 | 14 |
| Plated Densiplast | LP-DP | SR | .04 | 9 | 14 |
| Mesh Armorplast | M-AM | FH | .054 | 9 | 14 |
| Plated Macroplast | LP-MP | SR | .032 | 8 | 12 |
| Mesh Densiplast | M-DP | FH | .046 | 8 | 12 |
| Plastex | PX | FQ | .02 | 6 | 9 |
| Mesh Macroplast | M-MP | FH | .036 | 6 | 9 |
| Synthiplast | SY | FQ | .01 | 5 | 5 |
| Plastihide | PH | FQ | .002 | 4 | 4 |
| Plasticloth | PC | FQ | .0015 | 3 | 3 |
| Heavy Plastisheet | HP | FQ | .001 | 2 | 2 |
| Light Plastisheet | LP | FQ | .0005 | 1 | 1 |
| NON-METALLIC | | | | | |
| Natural Armor Leather | AL | FH | .02 | 5 | 3 |
| Hardened Heavy Leather | H-HL | FH | .008 | 5 | 3 |
| Heavy Leather | HL | FS | .008 | 4 | 2 |
| Scaled Leather | SL | FH | .008 | 4 | 2 |
| Natural Armor Hide | AH | FS | .02 | 4 | 2 |
| Light Leather | LL | FS | .004 | 3 | 2 |
| Heavy Hide | HH | FS | .008 | 3 | 2 |
| Scaled Hide | SH | FS | .008 | 3 | 2 |
| Heavy Cloth | HC | FQ | .001 | 2 | 1 |
| Light Hide | LH | FS | .004 | 2 | 1 |
| Light Cloth | LC | FQ | .0005 | 1 | 0.5 |
| METALLIC | | | | | |
| Carballoy | CA | R | .072 | 14 | 21 |
| Plated Carballoy | LP-CA | SR | .08 | 13 | 20 |
| Macrosteel | MS | R | .07 | 12 | 18 |
| Mesh Carballoy | M-CA | FH | .09 | 11 | 17 |
| High Quality Steel | QS | R | .07 | 10 | 15 |
| Plated Macrosteel | LP-MS | SR | .092 | 10 | 15 |
| Steel | SP | R | .07 | 9 | 9 |
| Plated High Quality Steel | LP-QS | SR | .092 | 9 | 9 |
| Mesh Macrosteel | M-MS | FH | .104 | 9 | 9 |
| Light Ferrous Metal | FP | R | .06 | 8 | 8 |
| Plated Steel | LP-SP | SR | .092 | 8 | 8 |
| Aluminum Alloy | AA | R | .04 | 7 | 7 |
| Plated Ferrous Metal | LP-FP | SR | .078 | 7 | 7 |
| Mesh High Quality Steel | M-QS | FH | .104 | 7 | 7 |
| Bronze | BP | R | .06 | 6 | 6 |
| Plated Aluminum Alloy | LP-AA | SR | .052 | 6 | 6 |
| Mesh Steel | M-SP | FH | .104 | 6 | 6 |
| Mesh Ferrous Metal | M-FP | FH | .09 | 6 | 6 |
| Plated Bronze | LP-BP | SR | .078 | 5 | 5 |
| Mesh Aluminum Alloy | M-AA | FH | .06 | 5 | 5 |
| Mesh Bronze | M-BP | FH | .09 | 4 | 4 |

Ballistic Cloth

This material presents an effective barrier to bullets but still does not perform as well against hand held weapons. To determine the Ballistic Cloth's Armor Value when struck by a hand-held weapon, divide the Barrier Factor by 10 and round to the nearest whole number. If the character struck is wearing other armor that has a higher Armor Value than the Cloth, this other armor will be used to subtract from the Damage Potential.

| MATERIAL | CODE | FORMAT | ENC/LOC | ARMOR VALUE/ BARRIER FACTOR | BARTER VALUE PER LOCATION |
|------------|------|--------|---------|--------------------------------|------------------------------|
| Empilon | BC5 | FQ | .001 | 1/5 | 10 |
| Fabulon | BC10 | FQ | .002 | 1/10 | 15 |
| Armorlon | BC20 | FH | .01 | 2/20 | 25 |
| Hercuweave | BC35 | FH | .025 | 4/35 | 50 |

APPENDIX 4 WEAPONS LISTING

Each of the weapons listed is presented in an abbreviated format to save space. The meaning of each statistic and the abbreviations used are noted below. Some weapons will have additional notes regarding their nature or use. These will have footnotes to be found at the end of the listing.

Weapon: The name of the weapon is listed here.

Skills: The Skill(s) for using the weapon. Any weapon usable by Single Weapon Combat Skill may be used with Two Weapon or Weapon and Shield Combat Skills. Abbreviations used are:

| | |
|--------------------|---------------------|
| Single Weapon - SW | Longsword - LS |
| Knife - Kn | Brawling - Br |
| Throwing - Th | Nunchaku - Na |
| Polearm - Pl | Unarmed Combat - UC |

Flexible Weapon - FW

Utility: This is the Utility number value of the weapon.

STR: This is the Strength Rating of the weapon.

Hand: This is the number of hands normally used to control the weapon. 1 is a weapon used in one hand, 2 is a weapon requiring two hands to use properly, and 1½ is a weapon that may be used with one or two hands.

Sec.: This is an indication of whether the weapon allows a second strike or a secondary attack. N means none is allowed, S means a secondary attack is

allowed under the usual rules for such, and T means a second attack is allowed in a Single Action.

Surv.: This is the Survival Value of the weapon if the "Clash of Weapons" Option is in use.

Format: This details whether or not the weapon may be used to thrust. T means thrust only, S means a normal striking attack, and E means an Entangle attack allowed.

Length: This is the length category of the weapon. It will affect the Zone of Influence, the Strength Group used for the Effect Die and other things as described in Detailed Action Time.

S-Short

A-Average

L-Long

XL-Extra Long

ENC: This is the Encumbrance value of the weapon.

WDM: This is the Weapon Damage Multiplier of the weapon. It is followed by a letter indicating the kind of damage done.

L is all Lethal

C is 75% Subdual and 25% Lethal

D is 50% Subdual and 50% Lethal

| WEAPON | SKILLS | UTILITY | STR | HAND | SEC. | SURV. | FORMAT | LENGTH | ENC | WDM | BARTER VALUE |
|-------------------------------------|------------------|---------|-----|------|------|-----------------|--------|--------|------|--------------------|--------------|
| Ax, fire ⁶ | SW, Pl | 2 | 3 | 1½ | S | 6 | S | L | 1 | 1.8L | 5 |
| hatchet ^{5 6} | SW, Th | 1 | 1 | 1 | N | 4 | S | S | .4 | 1.1L | 3 |
| hand ^{5 13} | SW | 2 | 2 | 1 | N | 5 | S | A | .6 | 1.3L | 4 |
| lumber ⁶ | Pl | 2 | 4 | 2 | N | 7 | S | XL | 1.1 | 1.8L | 5 |
| Baseball bat ⁵ | SW, Pl | 1 | 2 | 1½ | N | 4 | S | A | 0.9 | 1.3C | - |
| Bat with nails ⁵ | SW, Pl | 1 | 2 | 1½ | N | 4 | S | A | 1 | 1.5B | - |
| Bayonet, short ^{4 13} | Kn | 2 | 1 | 1 | S | 9 | T | S | 0.3 | 1.3L | 7 |
| long ⁴ | Kn | 2 | 2 | 1 | N | 10 | S,T | A | 0.4 | 1.5L | 8 |
| Belt Buckle ^{5 12} | FW | 1 | 1 | 1 | N | 3 | E,S | A | - | 1.1B | - |
| Brass Knuckles ^{5 13} | Br | 3 | 1 | 1 | - | 6 | S | S | 0.1 | 1.3B | 2 |
| Chain ^{6 13} | FW | 2 | 3 | 1 | N | 10 | S,E | A | 1 | 1.5B | - |
| Club ^{5 13} | SW, Th | 1 | 1 | 1 | S | 3 | S | S | 0.5 | 1.1 (1)C | - |
| Cudgel ^{5 13} | SW | 2 | 2 | 1½ | N | S | A | S | 0.7 | 2C | - |
| Hammer ^{5 13} | SW | 1 | 2 | 1 | N | 4 | S | S | 0.5 | 1.2C | 2 |
| Knife, belt ^{5 12} | Kn, Th | 1 | 1 | 1 | S | 8 | S,T | S | 0.3 | 1.1L | 2 |
| bowie ^{5 13} | Kn, Th | 2 | 2 | 1 | S | 9 | S,T | S | 0.3 | 1.3(1.5)L | 5 |
| jack ^{5 12} | Kn, Th | 0 | 1 | 1 | T | 7 | S,T | S | 0.1 | 1L | 1 |
| Kukri ^{5 13} | Kn, Th | 2 | 2 | 1 | S | 9 | S | S | 0.3 | 1.5(1.3)L | 5 |
| switchblade ^{5 12} | Kn, Th | 1 | 1 | 1 | T | 7 | S,T | S | 0.2 | 1.2L | 3 |
| throwing ^{5 13} | Th | 2 | 1 | 1 | - | - | - | - | 0.2 | 1.5L | 5 |
| trench ^{3 6 7 13} | Kn | 3 | 2 | 1 | S | 9 | ST | S | 0.4 | 1.4L | 6 |
| Knife-spear ^{5 13} | Pl ² | 1 | 2 | 2 | S | 4 | T | XL | 1.1 | 1.5L | 3 |
| Nunchaku, wood ⁵ | Nn, Fw | 3 | 2 | 1 | S | 3 | S | S | 0.4 | 1.5C | 3 |
| metal ⁸ | Nn, Fw | 4 | 3 | 1 | S | 8 | S | S | 0.6 | 2C | 5 |
| Pipe Light ⁵ | SW | 1 | 2 | 1 | N | 7 | S | A | 1 | 1.6C | 1 |
| PI | Pl | 1 | 3 | 2 | S | 8 | S | L | 1.5 | 2C | 2 |
| heavy ⁶ | SW | 2 | 3 | 1 | N | 9 | S | A | 1.5 | 2C | 2 |
| PI | Pl | 2 | 4 | 2 | S | 10 | S | L | 1.7 | 2.3C | 3 |
| Pick ax ⁶ | Pl | 2 | 3 | 1½ | N | 5 | "T" | L | 1.1 | 1.5L | 5 |
| Pistol butt | Br, SW | - | 2 | 1 | N | - | S | S | - | 1 + (ENC of Gun) C | - |
| Pitchfork ^{5 13} | Pl | 2 | 2 | 2 | N | 5 | T | L | 1.2 | 1.3L ¹¹ | 4 |
| Rifle butt | Br, Pl | - | 2 | 2 | N | - | S | L | - | ENC of Gun | - |
| Rope | Sai | 3 | 3 | 1 | S | 9 | S,T | S | 0.4 | 1.7C/1.2L | 5 |
| Sai ⁸ | special | 1 | 2 | 1 | N | 2 | S | S | 0.3 | special | - |
| Sap | Th | 3 | 2 | 1 | - | - | - | - | 0.2 | 1.6L | 8 |
| Shuriken ^{6 10} | SW, Pl | 2 | 3 | 1½ | N | 6 | S | L | 1.5 | 2B | 4 |
| Sledge hammer ⁵ | Pl | 1 | 3 | 2 | S | 3 | S | XL | 1 | 1.8C | - |
| Staff, crude ^{5 13} | Pl | 2 | 3 | 2 | S | 4 | S,T | XL | 1 | 2C | 2 |
| hardened ^{5 13} | Pl | 2 | 3 | 2 | S | 4 | S,T | XL | 1 | 2C | 2 |
| Straight razor ^{5 12} | Kn | 1 | 1 | 1 | T | 3 | S | S | 0.2 | 1.2L | 1 |
| Sword, ceremonial ^{3 5 13} | SW | 2 | 2 | 1 | N | 8 | S,T | A | 0.8 | 1.7L | 9 |
| machete ⁶ | SW | 2 | 2 | 1 | N | 10 | S | A | 1 | 1.8L | 9 |
| saber ³ | SW | 3 | 2 | 1 | N | 10 | S,T | A | 0.9 | 1.8L | 9 |
| trench ^{3 6 7} | SW | 3 | 2 | 1 | N | 10 | S,T | A | 0.8 | 1.7L | 9 |
| Tonfa ⁶ | Tonfa | 4 | 2 | 1 | S | 3 | S | S | 0.6 | 1.3C | 6 |
| Whips | | | | | | | | | | | |
| Rope, hemp | FW | 1 | 2 | "2" | N | 6 ⁹ | E | XL | 1 | - | 0.5/m |
| nylon | FW | 2 | 2 | "2" | N | 10 ⁹ | E | XL | 0.8 | - | 1/m |
| cable | FW | 3 | 3 | "2" | N | 15 ⁹ | S,E | L | 1.2 | 0.8 | 1/m |
| weighted version | FW | +1 | +1 | "2" | N | - | +S | - | +0.3 | +1 | +1 |
| Whip, leather | FW ¹² | 2 | 2 | 1 | N | 4 | S,E | XL | 0.6 | 1.2 | 4 |
| steel tip version | FW ¹³ | 3 | 2 | 1 | N | 4 | S,E | XL | 0.6 | 1.5 | 5 |
| cable | FW ¹² | 3 | 3 | 1 | N | 10 | S,E | L | 0.8 | 1.7 | 6 |

IMPROVISED WEAPONS (Any improvised weapons may be thrown)

| | | | | | | | | | | | |
|--------------------------------|--------|---|---|---|---|----|-----|----|-----|------|---|
| Bottle, whole ^{5 12} | Br | 1 | 1 | 1 | N | 1 | S | S | 0.4 | 1.2 | 1 |
| broken ^{5 12} | Kn, Br | 1 | 1 | 1 | S | 1 | S,T | S | 0.3 | 1L | - |
| Chair, small ⁵ | Br | - | 2 | 2 | N | 3 | S | A | 2 | 2C | - |
| medium ⁶ | Br | - | 3 | 2 | N | 4 | S | A | 3 | 2.3C | - |
| large ⁶ | Br | - | 4 | 2 | N | 5 | S | L | 4.5 | 3C | - |
| Table, very small ³ | Br | - | 2 | 2 | N | 3 | S | A | 2 | 2C | - |
| small ⁶ | Br | - | 4 | 2 | N | 5 | S | XL | 4 | 2C | - |
| medium ⁶ | Br | - | 6 | 2 | N | 8 | S | XL | 7 | 2.5C | - |
| large ⁶ | Br | - | 7 | 2 | N | 10 | S | XL | 15 | 3C | - |

REPRODUCTION WEAPONS

| | | | | | | | | | | | |
|-----------------------------|-----------------|---|---|----|----------------|----|------------------|----|-----|--------------------|----|
| Ax, battle | SW, PI | 2 | 4 | 1½ | S ¹ | 8 | S,T | L | 1.2 | 2L | 10 |
| Dagger ^{6 13} | Kn | 2 | 2 | 1 | N | 9 | S,T | S | 0.5 | 1.4L | 7 |
| Main Gauche ^{6 12} | Kn | 3 | 2 | 1 | N | 9 | S,T | S | 0.7 | 1.4L | 8 |
| Flail, wood ^{5 13} | Fw | 3 | 3 | 2 | N | 6 | S | XL | 1.2 | 2.2C | 4 |
| metal | FW | 3 | 4 | 2 | N | 11 | S | XL | 1.5 | 2.4C | 6 |
| Mace, ball | SW | 2 | 2 | 1 | N | 8 | S | A | 0.9 | 1.7C | 4 |
| spiked | SW | 2 | 2 | 1 | N | 8 | S | A | 0.9 | 1.9B | 6 |
| Maul, ball | SW, PI | 2 | 3 | 1½ | S ¹ | 9 | S | L | 1.4 | 2C | 4 |
| spiked | SW, PI | 2 | 3 | 1½ | S ¹ | 9 | S | L | 1.4 | 2.2B | 6 |
| Polearm, halberd | PI | 3 | 4 | 2 | S | 9 | S,T | XL | 1.6 | 2.5L | 8 |
| glaive | PI | 3 | 4 | 2 | S | 9 | S | XL | 1.5 | 2.5L | 7 |
| Spear, boar | PI ² | 2 | 2 | 2 | S | 8 | T | XL | 1.2 | 1.5L | 5 |
| trident ¹³ | PI ² | 3 | 2 | 2 | S | 8 | T | XL | 1.3 | 1.5L ¹¹ | 8 |
| yari | PI ² | 3 | 2 | 2 | S | 8 | S,T | XL | 1.2 | 1.6L | 6 |
| Sword, broad | SW | 2 | 3 | 1 | N | 10 | S,T | A | 1 | 2L | 10 |
| great | LS | 3 | 5 | 2 | N | 12 | S,T | XL | 2 | 3L | 15 |
| katana | LS, SW | 3 | 3 | 1½ | S | 11 | S,T | L | 1.2 | 2.5L | 14 |
| long | LS, SW | 2 | 4 | 1½ | S | 11 | S,T | L | 1.5 | 2.5L | 12 |
| rapier | SW | 2 | 1 | 1 | N | 90 | S,T | A | 0.9 | 1.7L | 9 |
| tulwar | SW | 2 | 2 | 1 | N | 10 | S,T ⁴ | A | 0.9 | 1.9L | 10 |

¹ Second strike is only available when using Polearm Skill.

² May also be used with a shield but no second strike is allowed.

³ Has a hand guard with AV = 4, SR.

⁴ Used on rifle will add .3 to WDM but will not add to ENC of rifle. Polearm Skill required.

⁵ Weapon must check for breaking if used against Rigid armor greater than AV6 or Semi-rigid or Flexible, Hard armor greater than AV8. A die roll greater than or equal to the Survival Value on 1D20 indicates that the weapon has broken. Any damage done by that attack will be halved, as the final adjustment to the Damage Potential.

⁶ As note 5 but armor Values requiring check are 8 and 10 respectively.

⁷ Hand guard functions as Brass Knuckles.

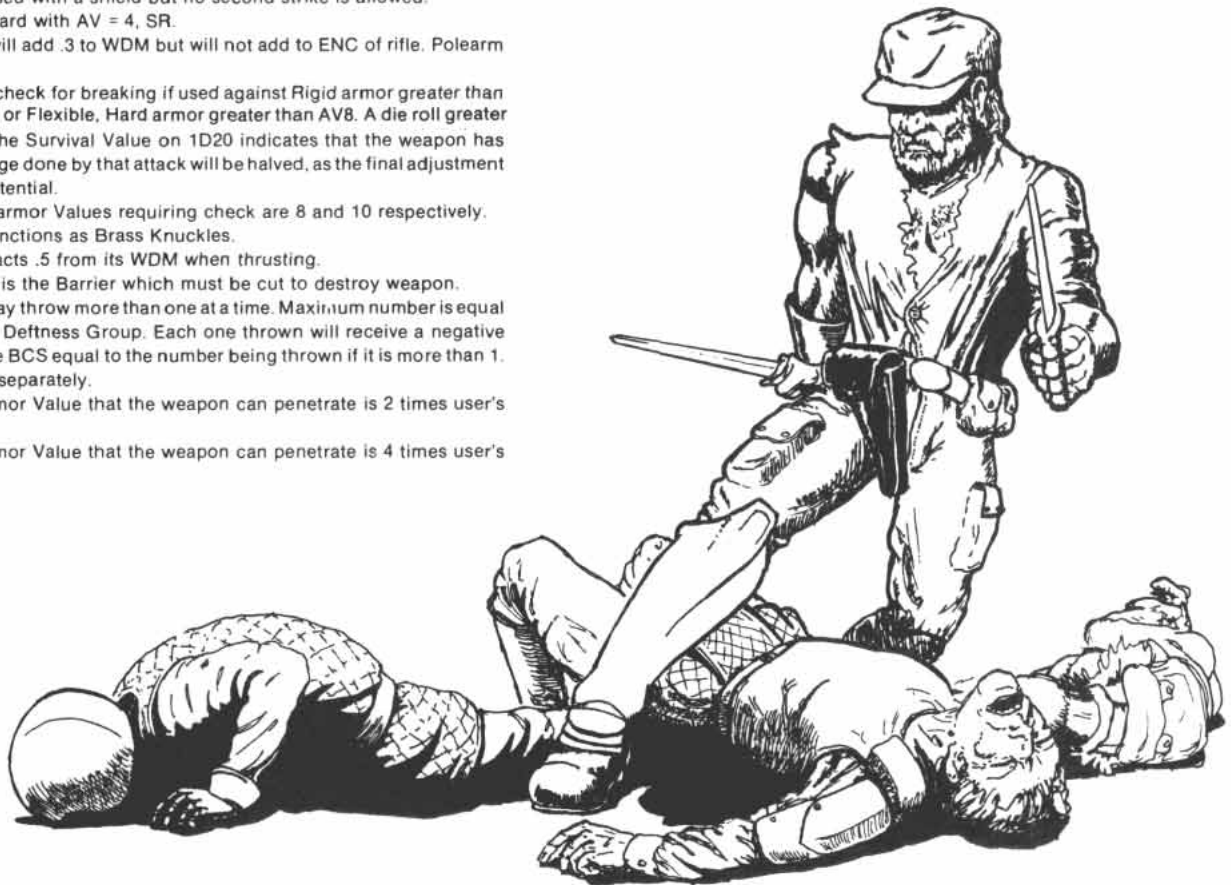
⁸ Weapon subtracts .5 from its WDM when thrusting.

⁹ Survival Value is the Barrier which must be cut to destroy weapon.

¹⁰ A character may throw more than one at a time. Maximum number is equal to the character's Dexterity Group. Each one thrown will receive a negative modification to the BCS equal to the number being thrown if it is more than 1. Each is rolled for separately.

¹² Maximum Armor Value that the weapon can penetrate is 2 times user's Strength Group.

¹³ Maximum Armor Value that the weapon can penetrate is 4 times user's Strength Group.



APPENDIX 5 SHIELDS

Shields may be made out of almost any material that a man can get his hands on. For convenience we list a variety of shields in the table below. FACINGS may be added to wooden shields. They add to the Barrier Effect (minimum and overall), ENC value and Barter Point value. If a player or the Gamesmaster finds he wishes to have a character who uses a shield not on the list, it may be constructed.

The minimum Barrier value is the BAR value of the material times its thickness.

The overall Barrier thickness is the shield Class divided by 2, rounded up, multiplied by the minimum Barrier value.

The ENC value is the overall Barrier value times the Shield Factor times the thickness times a constant. This constant is .005 for plastics, .02 for metals, and .01 for wood, wicker and leather.

To get an approximate Barrier value for armor materials, multiply the Armor value by 5.

The Barter Point value is one quarter the overall value times the Shield Class, nearest. Plastics are doubled, Wicker is halved.

| MATERIAL | CLASS | OVERALL BARRIER | ENC | BARRIER POINT VALUE |
|------------------------------------|------------|-----------------|-----------------|---------------------|
| ½" Wicker ¹ | 1 | 7 | 0.16 | 1 |
| | 2 | 7 | 0.4 | 2 |
| | 3 | 10 | 0.76 | 4 |
| | 4 | 10 | 1.12 | 5 |
| | 5 | 15 | 1.88 | 10 |
| ¼" Plywood ² | 1 | 5 | 0.06 | 1 |
| | 2 | 5 | 0.12 | 3 |
| | 3 | 10 | 0.50 | 8 |
| | 4 | 10 | 1.76 | 10 |
| | 5 | 15 | 1.88 | 14 |
| ½" Plywood ² | 1 | 10 | 0.2 | 2 |
| | 2 | 10 | 0.26 | 5 |
| | 3 | 20 | 1.00 | 15 |
| | 4 | 20 | 3.00 | 20 |
| | 5 | 30 | 5.50 | 38 |
| ¾" Plywood ² | 1 | 15 | 0.46 | 4 |
| | 2 | 15 | 1.12 | 8 |
| | 3 | 30 | 2.26 | 23 |
| | 4 | 30 | 3.38 | 30 |
| | 5 | 45 | 5.62 | 56 |
| ¼" Bronze | 1 | 8 | 0.16 | 2 |
| | 2 | 8 | 0.40 | 4 |
| | 3 | 16 | 1.60 | 12 |
| | 4 | 16 | 2.40 | 16 |
| ¼" Iron | 1 | 10 | 0.20 | 3 |
| | 2 | 10 | 0.50 | 5 |
| | 3 | 20 | 2.00 | 15 |
| Plastic Police Shield ⁴ | 2 | 11 | 0.14 | 11 |
| | 4 | 22 | 0.82 | 44 |
| Streetsign | 2 | 6 | 0.18 | 3 |
| | 3 | 12 | 0.80 | 9 |
| Trash can lid | | | | |
| Metal | 2 | 4 | 0.1 | 2 |
| Plastic | 2 | 3 | 0.02 | 3 |
| Furniture | varies | varies | varies by piece | |
| Small table | as Class 3 | ¾" Plywood | | |
| Stool | as Class 2 | ½ Plywood | | |
| Small chair | as Class 2 | ¾" Plywood | | |
| FACINGS ² | | | | |
| ¼" Leather | 1 | 5 | 0.08 | 1 |
| | 2 | 5 | 0.12 | 3 |
| | 3 | 10 | 0.50 | 8 |
| | 4 | 10 | 0.76 | 10 |
| | 5 | 15 | 1.88 | 19 |
| 1/10" Bronze | 1 | 3 | 0.2 | 1 |
| | 2 | 3 | 0.6 | 2 |
| | 3 | 6 | 0.24 | 5 |
| | 4 | 6 | 0.36 | 6 |
| | 5 | 9 | 0.9 | 11 |
| 1/10" Iron | 1 | 4 | 0.4 | 1 |
| | 2 | 4 | 0.08 | 2 |
| | 3 | 8 | 0.32 | 6 |
| | 4 | 8 | 0.48 | 8 |
| | 5 | 12 | 1.20 | 15 |

- ¹ Wicker will ignite if the Strength Rating of the fire or less is rolled on 1D6.
² Wood will ignite if the Strength Rating of the fire or less is rolled on 1D10.
³ Leather will ignite if the Strength Rating of the fire or less is rolled on 1D20.
⁴ These may be totally (60% chance) or partially clear.

APPENDIX 6 FIREARM FEATURES

In the firearm rules and the Gun List we have discussed Features here and there. When a Feature potentially affected a specific rule, it was spelled out on the spot. But the immense creativity of firearms designers has spawned numerous remarkable devices and processes in their search for increased lethality. There are some that require a section of their own.

About Sights

"If I can see it, I can hit it." This boast is often true for the shooter who has a decent set of sights on his gun. There are two kinds of sights: Iron Sights, referring to non-magnifying sights, used to indicate the precise direction of the gun's line-of-fire, and Telescopic Sights. There are also special sights permitting fire in the dark, by enhancing low light levels (Star-Light Scopes) or by using invisible frequencies in the spectrum, the Infra-Red Scope.

- * Iron Sights: As the name indicates, these are metal sights, usually an open notch at the back of the gun, and a corresponding bead, barleycorn, or other convex form at the front of the barrel. Ordinary Iron Sights are always present on a gun unless specifically noted otherwise in its Spec Sheet. They permit Sighted Fire as described in the firearms rules (Sighting Modifier).
- * Click Sights: Guns can be fitted with adjustable "Click" sights, set with a micrometer knob to compensate for windage and elevation. Such sights add +1 to the firer's BCS when using Sighted Fire.
- * Peep Sights: These sights use a small bead centered in the sighting aperture, to be lined up on the target's body. This will increase the Aim of the shot (Hit Location alteration) by +1, even if the firer has no Aim normally.
- * Match Sights: These precision instruments combine the features of Click and Peep Sights, allowing +1 to the BCS and to Aim when in Sighted Fire.
- * LED Sights: These can be used as normal Iron Sights during the day, and in light levels of Dim or better. If the light level is Poor or Dark, they have another effect. The sight consists of a small, LED (Light Emitting Diode) serving as the sight element on the front of the gun barrel. When firing from Full Stance in Poor Light, the user is only penalized as if for Dim Light. In Full Darkness, he is only penalized as if for Poor Light. If he wishes, he may assume normal, Sighted Fire and receives all the benefits normally accruing to such an Action. This is not permitted to Characters in bad light with normal Iron Sights. The LED Sight is powered for 1 year by an E-1.
- * Laser Sight: This device is an oblong box, about 3" wide by 8" long by 1" thick. (75mm x 200mm x 25mm). It will operate for 10 "shots" on 1 Charge of electricity. It can be charged with either an E-1 or E-5 and has an ENC value of .5. The Laser Sight projects a low power laser beam which appears as a bright red dot when it hits a solid object, and this dot is visible at ranges of up to 1500 meters.
 Used with a non-automatic weapon, it allows, in essence, two BCS rolls for the first shot in the firer's Action. The basis of aiming of the Laser Sight is the DFT AST of the firer, subject to no modifiers of any kind. If this is made, the 1st shot fired will automatically hit. If firing an automatic weapon with the Laser Sight, the first burst will hit if the AST is made. The firer must declare that he is using the Sight at the beginning of this Action, and will resolve the DFT AST when he resolved his first shot. If the Sight misses (i.e. AST fails) he still can fire normally at the target if he wishes.
 The laser dot is not visible in Good Light, unless the user is wearing special goggles. It is also not as useful in thick smoke or fog, its effective range being cut to 500 meters.
- * Star-Light Scope: These are Telescopic Sights with an extra bonus. They can utilize the lowest light levels to allow the user to see without difficulty. Unless the firer is in pitch blackness (say a completely lightless cave or basement) he will have no penalty to sighted fire using this device.

- **Infra-Red Scope:** Similar to the Star-Light Scope, but this sight uses the invisible frequency of the infra-red spectrum (heat waves) to "see," boosting them electronically into visible images. These are tricky to adjudicate. Any contrasting heat fields will stand out in high contrast: a man against the sky, or a building, for instance. On the other hand, a few meters of forest cover will effectively jam the scope's pickup. As a rule of thumb, I-R can locate living targets in a non-vegetable background no matter what the light level is. A fire or hot spotlight will tend to be as distracting to the I-R scope as it is to the naked eye, if the target is backed by it.

In general, think of objects emitting light in proportion to their body heat. If they are cold (concrete at night, for example) they are very dark. If animal life, they are slightly luminous. If very hot, they are very bright. Compare this image to the background of the target, and if they contrast by very much, then a clear sighting has been obtained.

As long as these conditions are satisfied, fire using an I-R scope is pretty much exempt from penalties for less-than-Good Light.

- **Telescopic Sights:** These are thoroughly described in the Firearms rules and the text at the end of the Gun List.

Features Described in the Firearm Rules in order of appearance:

- **Match Weapons:** Add 50% to the distance of their Range Steps.
- **Hair Trigger:** Allow an addition of 1 Shot/Action to maximum allowable Rate of Fire. Unless this is on a gun with an adjustable trigger, the presence of a Hair Trigger is always in force. The Gamesmaster should enforce a SPD AST upon Characters with Hair Trigger weapons who start to set up a shot and then try to abort it. If they miss the AST they must fire.
- **Autoextractor:** Weapons with an Autoextractor level will clear jams at the end of the firing Action in which they occurred. A separate Action to clear the jam is not required.
- **Recoil Reduction:** Ranging from a recoil pad on the buttplate of a Long Gun to fancy venting systems and brakes, Recoil Reduction systems reduce the penalty (if any) due to Recoil by their rated factor. A Recoil Pad always has Recoil Reduction of 1. Other systems are given a Rating in the Feature notes on their Spec Sheets.
- **Tunable Guns:** These firearms permit the user to adjust them to his personal anatomical and behavioural needs as a shooter. It requires 1 week of practice as if studying the Firearm, expending the minimum amount of ammo needed to learn without a Hindrance, to tune the gun. No skill points are acquired when this is done. At the end of that week, the gun will increase the user's BCS by +1, and reduce any other user's by 2, unless re-tuned to him.
- **Handed Guns:** In the rules, we refer only to Pistols but there are also "handed" Long Guns. Using a handed weapon in the correct hand gives +1 to BCS. using a handed gun in the other reduces BCS by 2. If the gun is also tunable, it must be of the same "handedness" as the user.
If a handed gun is found there is a 60% chance it will be a right hander's weapon and a 40% chance of a southpaw's shooting iron.
- **Swivel Swing:** This allows a Long Gun to be braced using the sling strap in the same Action the Firer assumes Stance. Normally, this requires a separate Action.
- **Hi-Power Firearms:** Or more formally, High Power Firearms. These weapons can fire High Power cartridges without risking the increased chance of a Critical Miss prescribed by the Firearms rules.

- **Rifled Barrels:** This is only a feature in dealing with Muzzle Loading weapons, as ALL modern guns are rifled. The use of rifling in a gun barrel will increase the weapon's Range Steps by 50%, just as Match Weapons do in the more advanced weapons.

Features NOT in the Firearm Rules

Some of these are given in the Features entries on the Gun List. Others are not all that common, but may be included at the Gamesmaster's option.

- **357 Magnum Cross Load:** Most 357 Magnum weapons can also use 38 Special.
- **44 Magnum Cross Load:** Most 44 Magnum weapons can also use 44 Special.
- **High Security Safety:** When the safety catch is engaged, the gun CANNOT fire. Use it as a hammer or to crack nuts: it will not go off.
- **Pistol Forearm Braces:** Lock the gun into the most favorable position for proper aim. If only 1 Shot per Action is fired from a gun so provided, it receives the same benefit as the Squeeze Off option gives: the firer adds his DFT to his weapon Skill score. If this brings his Aim past 5 then so be it.
- **Rotary Magazine:** This extremely sturdy magazine is almost failure proof. Add +3 to the Control BCS against Critical Misses when using weapons with this type of magazine.
- **No Iron Sights:** Or, no sights built into the gun. This is the case with many rifles. They cannot use sighted fire until Iron or other sights are installed on them.
- **Changeable Chokes:** Many shotguns may be provided with inset and changeable tubes which can be used to alter Choke without changing barrels.
- **Variable Choke:** A device is mounted on the end of the barrel which allows the Choke setting to be selected at will in 1 Action. This is usually a rotating sleeve.
- **Bipods:** These usually go on Military Issue weapons. A Prone firer assuming Full Stance (yes, it does sound odd) may assume the Rest Weapon modifier in the same Action.
- **Winter Triggers:** Outsize triggers, snapped on over the normal one, which protrude well below the trigger guard or snapdown trigger guards. This allows fire in mittens or bulky fingered gloves.

That about wraps up the main ones. Several unique Features are in the Gun List, but they are specific to the weapons involved, not something one could apply widely.

Adding Features

A skilled Gunsmith can modify firearms to include features they did not have when they came from the plant: Changed BBL, Recoil Reduction, re-mounted Iron Sights or a Scope Mount where one was not before, etc. The Gamesmaster must assign a base Task value to such jobs.

A rule of thumb is 10 points per point of BCS or other advantage gained by the Feature for the firer (use maximum possible values). The Task Period is based on the gun's DUR. Assume a base Period of 20 Hours, divided by the weapon's Durability score.

The workman must have the necessary parts and tools. One can hardly mount a Click Sight which one does not have on a gun when one has no tools with which to work.

APPENDIX 7 SAMPLE VEHICLES

The vehicles included in this appendix are not intended to be the only versions of the prototype vehicles that can be used in the game. Different versions or models will have varying statistics. These can be determined using the rules in the chapter on vehicles. Each vehicle in the appendix is given with the pertinent data. Following the list is a sample Vehicle Record Sheet which may be photocopied for use in your campaign.

Vehicle: Compact Car (1986)

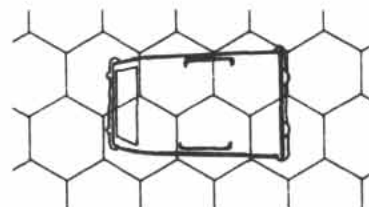
Classification: On-road Car Soft Target
Base Safe Speed: 80
Fuel System: Gas
Mileage: 20km/1
Capacity: 60 1
Structure: 1
Area: 2 x 3 = 6
Damage Resistance: 3

Maximum Speed: 100 kph

Safety Devices: Seat Belts; Crash Bags

Notes on Barrier Effects: Window: 10; Body: 20

Special Features: Carries 5 passengers (inc. driver); has a trunk (ENC Cap 15, up to Large)



Vehicle: Van (1990)

Classification: On-road Truck Soft Target

Base Safe Speed: 90 kph

Fuel System: Elec.

Mileage: 4 km/char.

Capacity: Ev-50

Structure: 1.5

Area: $2 \times 4 = 8$

Damage Resistance: 6

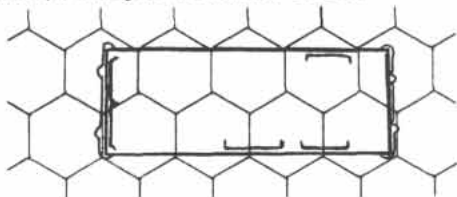
Maximum Speed: 58 kph

Safety Devices: Seat Belts for driver and passenger in front seats

Notes on Barrier Effects: Window 10; Body: 25

Special Features: Cargo area (ENC Cap 70, up to Huge 1) or 6 people, seated.

This is based on a gasoline powered van with a top speed of 144 kph that gets 7.6 km/liter of fuel.

**Vehicle: Jeep (military ¼ ton truck)**

Classification: Off-road Car Soft Target

Base Safe Speed: 80 kph

Fuel System: Gas

Mileage 6.9 km/1

Capacity: 50 1

Structure: 2

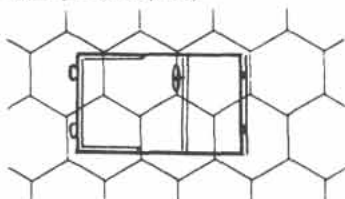
Area: $2 \times 3 = 6$

Damage Resistance: 3

Maximum Speed: 88 kph

Notes on Barrier Effects: Body: 25

Special Features: Carries driver, co-driver and 3 passengers of a cargo load (ENC Cap 33);

**Vehicle: M-113 Armored Personnel Carrier**

Classification: Heavy Combat

Base Safe Speed: 120 kph Hard Target

Fuel System: Diesel

Mileage: .5 km/1

Capacity: 960 1

Structure: 4

Area: $3 \times 4 = 12$

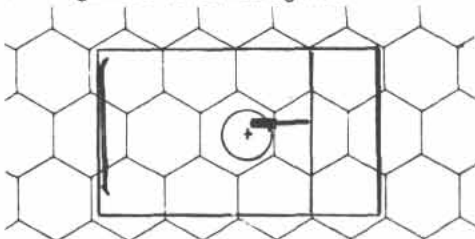
Damage Resistance: 24

Maximum Speed: 67 kph

Safety Devices: None

Notes on Barrier Effects: Vehicle Armor Value: 7; Barrier Value: 70

Special Features: Carries 13 troops (inc. driver); Standard armament is 2 Browning M2 .50 caliber machine guns; Carries up to 2000 rounds for the MGs; Military quality radio; can be sealed against biochemical agents.

**Vehicle: M60A3 Main Battle Tank**

Classification: Heavy Combat Hard Target

Base Safe Speed: 120 kph

Fuel System: Diesel

Mileage: .3 km/1

Capacity: 1400 1

Structure: 5

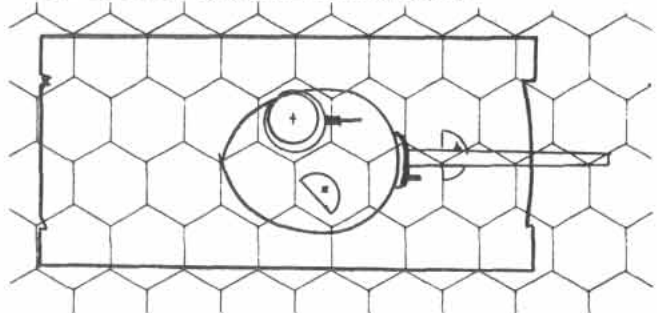
Area: $4 \times 7 = 28$

Damage Resistance: 70

Maximum Speed: 48 kph

Notes on Barrier Effects: Vehicle Armor Value: 10; impervious to small arms fire

Special Features: Crew of 4 (driver, gunner, loader and commander); 105mm Direct Fire Canon; Carries 63 rounds for main gun (APDS, HEAT, HE or WP); Coaxial 7.62mm MG (M60 MG equivalent); Carries 5.950 rounds for coaxial MG; One .50 caliber Browning M2 machine gun in commander's turret; Carries 900 rounds for commander's MG; IR main gun sight (effective to 2,000 meters); Turret turns at 120 degrees per Combat Turn (electrically powered); Military quality radio; Can be sealed against biochemical agents.

**Vehicle: Bicycle**

Classification: On-road Bicycle Soft Target

Base Safe Speed: 8

Fuel System: Muscle

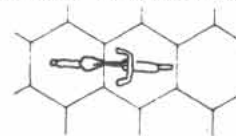
Structure: 1

Area: $.5 \times 2 = 1$

Damage Resistance: .5

Notes on Barrier Effects: None

Special Features: Maximum Speed is equal to one half the user's Speed in kph. It is able to be used for a number of Combat Turns equal to user's Strength Group times 2. Normal speed is equal to one quarter of the user's Speed in kph. It is able to be used for a number of hours equal to the user's Strength Group times 2. For each two hours spent pedalling the user will have his Speed reduced by 5. Speed is recovered by resting at the rate of 5 points per hour. This reduction is only in effect if the character moves at all in a turn.

**Vehicle: Rowboat**

Classification: Boat Soft Target

Fuel System: Muscle

Structure: 2

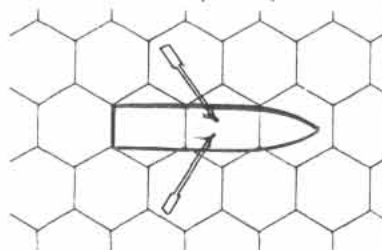
Area: $1 \times 3 = 3$

Damage Resistance: 3

Notes on Barrier Effects: Wood: 5

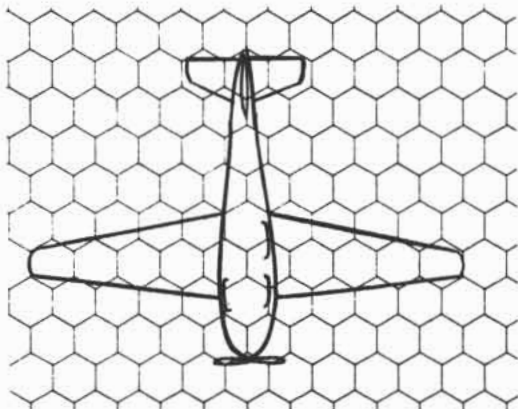
Special Features: Carries 3 persons; maximum ENC carried before sinking is 20

Moving: Maximum speed is equal to one half the rower's Strength in kph. It is able to be used for a number of Combat Turns equal to the rower's Strength Group. Normal speed is equal to one quarter of the rower's Strength in kph. It is able to be used for a number of hours equal to the rower's Strength Group. The rower will have his Strength reduced by 5 for each hour or fraction spent at rowing. This loss is recovered at the rate of 5 points per hour of rest.



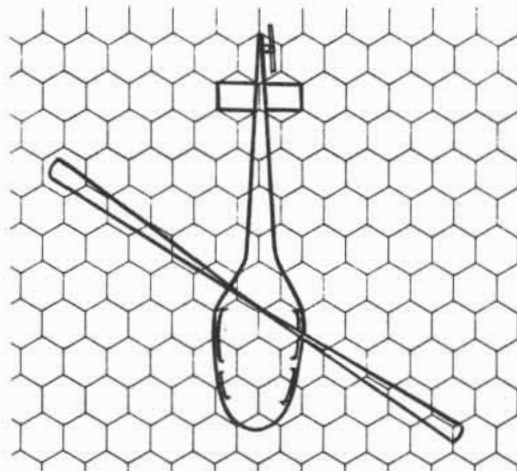
Vehicle: Single Engine Passenger Airplane

Classification: Aircraft Soft Target
 Base Safe Speed (taxi): 100 kph
 Fuels System: Aviation fuel
 Mileage 3 km/1
 Capacity: 500 1
 Structure: 3
 Area: $(1 \times 8) + (1 \times 10) = 18$
 Damage Resistance: 27
 Maximum Speed: 315 kph
 Minimum air speed: 50 kph
 Safety Devices: Seat belts
 Notes on Barrier Effects: Window: 10; Body: 16
 Special Features: Carries 6 passengers (inc. pilot); Has a
 baggage compartment (ENC Cap of 39, up to Large)



Vehicle: Industrial Passenger Helicopter

Classification: Aircraft Soft Target
 Fuel System: Aviation fuel
 Mileage: .5 km/1
 Capacity: 400 1
 Structure: 3
 Area: $(2 \times 3) + 7 = 13$
 Damage Resistance: 20
 Maximum Speed: 219 kph
 Safety Devices: Seat Belts
 Notes on Barrier Effects: Window: 10; Body: 16
 Special Features: Carries six passengers (inc. pilot); Has a
 baggage compartment (ENC Cap of 8.5, up to Large; Can take
 an optional external cargo sling allowing it to lift up to
 49 ENC more, up to Huge 1.



Aftermath! VEHICLE RECORD SHEET

Vehicle _____

Classification _____ Soft/Hard Target

Base Safe Speed _____

Fuel System _____ Mileage _____ Capacity _____

Structure _____ Area _____

Damage Resistance _____ Current Durability _____

Maximum Speed _____ Current Max. Speed _____

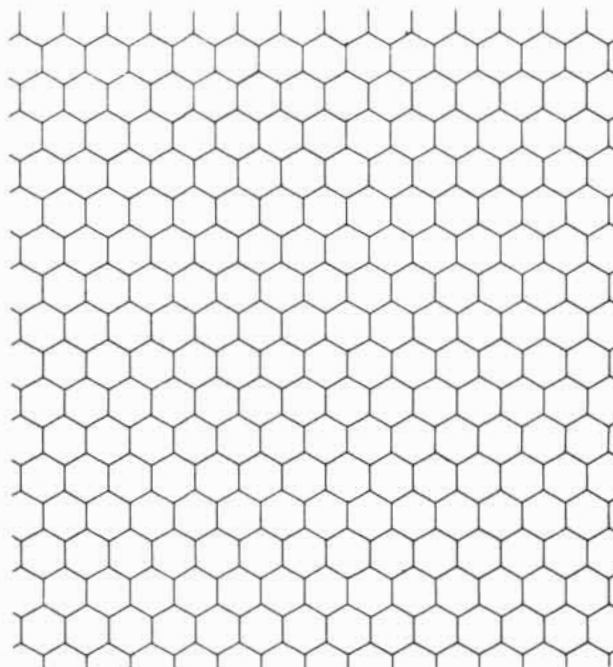
Damage taken not yet
 accounting for a Durability loss _____

Safety Devices _____

Notes on Barrier Effects _____

Special Features _____

Block out Areas of the Vehicle



APPENDIX 8 GLOSSARY

- A:** Code letter for a Disease, Poison, or other form of contaminant with an Aerosol Vector. *See Vector.*
- AFV:** Armored Fighting Vehicle. Generic term for any armored combat vehicle such as a tank, armored car, personnel carrier, etc.
- AP:** *See Action Phase.*
- AP 0:** Action Phase 0. The final Action Phase in a Combat turn. No character Actions or movement take place in AP 0. It is used for such bookkeeping as is needed in the campaign at that time (effects of drugs, acid, fire, etc.).
- APC:** Armored Personnel Carrier. A specific type of AFV.
- AST:** *See Attribute Saving Throw.*
- ATGM:** Standard military abbreviation for Anti-Tank Guided Missile. A projectile guided by radar, laser-display, wire, or other control, designed to be effective vs. hard targets (qv).
- ATV:** All Terrain Vehicle. A class of vehicle designed for use on or off the road in a variety of terrains and conditions. This class includes tracked vehicles, 4-wheel drive vehicles, and such advanced devices as Ground Effect vehicles, which use a cushion of compressed air as a means of locomotion.
- AV:** *See Armor Value.*
- Ability:** A score representing some physical or mental characteristic, directly derived from an Attribute or Attributes.
- Action:** Some option or action performed by a character. It requires a number of Action Phases equal to PCA to perform a simple Action.
- Action Phase:** A segment of a Combat Turn (qv). There is an indefinite number of Action Phases in each Combat Turn.
- Action Zone:** The Front facing hexes of a character on the Detailed Action Time Display. May vary in size according to the Length of the character's weapon.
- Adjusted BCS:** This number is derived by applying all relevant modifiers to a character's BCS. This is the score which is applied to the die roll to see if the action attempted succeeds or fails. If the score rolled is less than or equal to the Adjusted BCS, the attempt has been successful.
- Advance:** A measurement of the progress of a drug, disease, or other progressively worsening state or condition. Such Advances may be Up an Attribute or other score, achieving effects as they match given proportions of the total score, or Down, in which case the Advance represents a reduction of the score in question.
- Allocated Attribute Score:** The value of the Attributes as originally designed by the player.
- Armor Value:** A measure of the ability of a given material to stop harmful force from blows, missiles, heat, electrical current, etc. The Armor Value is subtracted from the Damage Potential (qv) of an attack striking the character on the Location covered by that armoring material.
- Attribute:** A number greater than 1, measuring a character's physical and mental capabilities. The usual range for human Attributes is from 1 to 40.
- Attribute Saving Throw:** (Abbr. AST) A Saving Throw calculated by dividing the relevant Attribute score by 2, round down. *See Saving Throw.*
- Autoloader:** A form of Gun Action, automatically ejecting spent cartridges and chambering new ones for firing. Also called semi-automatic.
- Average Armor Value:** An abstract figure representing the overall armor protection for a character. Calculate as follows: Total the best Armor Values on each Location of the Character and divide by 30, round nearest.
- Average BCS:** (maximum score possible/10) to derive this BCS. It is then subject to normal modifiers to derive the effective BCS for the Skill use in question. Average BCS is generally used in cases where the attempted task is more than usually difficult.
- B:** Code Letter (short for Both). Refers to weapons or attacks doing 50% Lethal and 50% Subdual Damage.
- BAP:** *See Base Action Phase.*
- BAR:** *See Barrier Value.*
- BBL:** Abbreviation of Barrel. Refers to the length of gun barrels.
- BCS:** *See Basic Chance of Success.*
- BDG:** *See Bullet Damage Group.*
- BMA:** *See Base Movement Allowance.*
- BP:** *See Barter Point.*
- Barrier Value:** A measurement of the resistance of materials to damage or force. This can be expressed as a figure per inch of thickness, as when calculating the Barrier's resistance to missiles, or a figure representing Task Points needed to force passage past the Barrier (a lock, bolted door, gate, cave-in, etc.).
- Barter Point:** A rough estimate of the trade value of some item or commodity. Barter Point values fluctuate according to the acumen of the traders, the condition of the goods, and the utility of the item for the would-be purchaser.
- Base Action Phase:** The number of the first Action Phase in a Combat Turn on which a character may initiate movement or Actions. It is equal to effective Speed/2, down.
- Base Movement Allowance:** The number of meters a character can move in one Action Phase at a Walking pace. For normal Humans, this is one.
- Base Safe Speed:** The maximum safe speed for a particular vehicle. The effective figure is modified by the terrain, weather, light, etc.
- Basic Chance of Success:** Abbreviated as BCS. This is determined by dividing the score in a Skill by 5, round down. It can never exceed 20 (but see also Effective BCS).
- Blast:** A measurement of the concussive force of an explosion.
- Bookkeeping Phase:** *see APO*
- Bullet Damage Group:** Measure the Damage Potential (qv) of firearm projectiles (i.e. bullets). This is equal to 1D10 per BDG/10, up, plus 1 point x BDG/10, nearest.
Also determines the percent chance of Missile Special Effects resulting from a bullet hit.
- C:** Code letter short for Crush. Refers to weapon or attack doing 25% Lethal and 75% Subdual Damage.
- CDA:** *See Combat Dodge Ability.*
- CRS:** *See Character Record Sheet.*
- CST:** *See Critical Saving Throw.*
- Carbine:** A Gun barrel length, applicable to Pistols or Long Guns. It denotes a BBL of more than twelve inches and less than twenty.
- Character:** Any being encountered in the game: humans, animals, monsters, robots, you name it. *See Player-Character, Non-Player Character, Personality Non-Player Character.*
- Character Record Sheet:** Annotated log sheet containing information on a character. It should include physical characteristics, Skills and other abilities, and a list of equipment. The Character Record Sheet (CRS) should be on hand for easy reference during play.
- Charge (Electric):** A measurement of electrical power, usually stored power equal to 100 watt-hours.
- Combat Dodge Ability:** Governs ability to evade attack (reducing attacker's BCS). Equal to effective (Speed plus Deftness)/20, nearest.
- Combat Turn:** The basic unit used to measure time in Detailed Action Time scale. 1 Combat Turn equals approx. 6 seconds. It does not necessarily involve actual fighting.
- Combative Talent:** One of the Talents, governing will-to-win and general aptitudes combat situations.
- Control BCS:** Some Skills, notably the Hand-to-Hand and Small Arms Skills, have a Control BCS derived from scores about 100 points. All Skills of Format 3 allow such BCS rolls in the event of a Critical Miss.

Countdown: The sequence of Action Phases in a Combat Turn, as called by the Gamesmaster. It begins with the number of the BAP of the character with the highest score in that Ability and proceeds down from that number to 0.

Critical Effect: The special effects, if any, suffered by a character who has taken damage from a Critical Hit. These are rolled for on the Critical Effects table.

Critical Hit: Occurs when a BCS, Saving Throw, or similar die roll on 1D20 scores a natural roll of one. Indicates that the action being attempted has achieved a more than ordinary degree of success. In a combat situation, the Damage Potential of the attack is increased and the target may suffer special effects (see *Critical Effects*).

Critical Miss: Occurs when a BCS, Saving Throw, etc. scores a die roll of a Natural 20. Indicates a more than usually inept failure, possibly with severe consequences. Some Skills allow a Control BCS attempt (qv).

Critical Saving Throw: A Saving Throw (qv) derived from an Attribute by the following formula: effective Attribute/3, nearest. Its use is similar to the AST, but is reserved for situations of greater peril or difficulty than normal.

Current Attribute Score: The value of an Attribute at a given point in the campaign, allowing for changes in the Allocated value due to Self Improvement, Age, etc.

DAT: See *Detailed Action Time*.

DFT: Standard abbreviation of the Deftness Attribute.

DP: See *Damage Potential*.

DRT: See *Damage Resistance Total*.

Damage: A figure generated by weapon blows, natural hazards, high falls, and other dangers to life and limb. There are several types of Damage: Lethal, Subdual, and Critical.

Damage Dice: Alternate term for the Effect Die of a character's Strength Group. See *Group*.

Damage Potential: Damage Potential measures the total damaging effect of a hit or other hazard before any of the target's defenses can reduce the damage that the target will actually suffer to his DRT. In hand-to-hand and muscle powered missile attacks, the Damage Potential equals the score rolled on the Damage Dice (qv) times the Weapon Damage Multiplier (qv) of the weapon used.

Damage Resistance Total: The amount of Damage (Lethal or Subdual) which a character can suffer before dying or losing consciousness. The DRT is the sum of the character's Health plus half his Strength plus half his Will in most cases, although some Non-Player-Characters have special formulae for determining DRT.

Detailed Action Time: A Time Scale used to keep track of action in *Aftermath!* Time in DAT is measured in six second Combat Turns (qv) and distance is measured on a 1 meter hexagonal grid display, call the DAT Display. DAT is invoked by the Gamesmaster in all situations in the campaign where activity must be kept track of in minute detail. The usual situations in question include combat, triggering traps, encounters, etc. It is not restricted to violent situations.

Durability: An abstract measure of the condition of an artifact (vehicle, tool, weapon). When Durability is below the normal value for an item, its functions are impaired. When the Durability is reduced below 1, the item ceases to function (Disrepair) and may be irreparably damaged (Junked).

Effective Attribute Score: The Current Attribute Score (qv) allowing for temporary alterations due to wounds, Encumbrance, diseases, poisons, etc. Used for calculating all Saving Throws or other Attributes based values at a given moment.

Encumbrance: A system measuring both the weight and bulk of objects for purposes of calculating carrying capacities in the campaign. These values are measured in ENC.

Encumbrance Capacity: Encumbrance Capacity measures a character's load bearing ability. The ENC CAP equals (2 + character's Strength Group) plus his Deftness Group. This is the maximum amount of Encumbrance he may carry.

Encumbrance Total: Also called Encumbrance Status. This is the amount of Encumbrance currently being carried by a character.

Engaged Status: A character who is in the Active Zone of a foe who is able to cause him harm. Generally refers to being in the range of a hand-to-hand attack by a conscious enemy. Engaged Status limits the movement of the character.

Fatigued: A condition applying to characters who have suffered an overexertion or debilitating disease or poison effect. Two levels of Fatigue exist: Partial and Full.

Freely Improvable Skills: The maximum number of Skills in which the character may study without a Hindrance (qv). The number of Freely Improvable Skills equals the sum of the Current Wit and Will.

Full Fatigue: A condition in which the sufferer's Effective values in Deftness and Speed are reduced by 50% and all BCS and Saving Throw scores receive a penalty of minus 2.

Fully Encumbered: A character with an Encumbrance Total exceeding 75% of his Encumbrance Capacity is Fully Encumbered. His Effective Deftness and Speed are reduced by 50% and all BCS and Saving Throw scores receive a penalty of minus 2.

GEV: Abbreviation of Ground Effect Vehicle. See *ATV*.

GPMG: Abbreviation of General Purpose Machine Gun. An intermediate level of weapon between Light and Heavy Machine Guns.

Gamesmaster: The campaign's referee. The final arbiter of all game matters.

Governing Attribute: An Attribute which comprises part of the Initial Score in a Skill. It is designated as the Governing Attribute, which has certain effects in Self Improvement.

Governing Talent: A Talent which comprises part of the initial score in a Skill. It is designated as the Governing Talent, which has certain effects on Self Improvement. The raw score in a Governing Talent may also, at the Gamesmaster's Discretion, be used as a score in any Skill it governs, in the absence of any character trained in that Skill.

Group: A central concept in the game mechanic! A Group is a figure generated from any number (usually an Attribute). The Group figure may be used itself to determine some event, or an Effect Die roll may be generated from it. The breakdown of numbers into Groups is:

| Number | 0 | 1-4 | 5-14 | 15-24 | 25-34 | 35-44 |
|--------|---|-----|------|-------|-------|-------|
| Group | 0 | 1 | 2 | 3 | 4 | 5 |

Effect Die None 1D3 1D6 1D10 2D6 2D10

A Group can be calculated by dividing the number by 10, adding one, and rounding to the nearest whole number. For Groups higher than 5, the Effect Die is 2D10 plus a figure equal to the Group minus 5. E.g., for a value of 77, the Group would be 9 and the Effect Die would therefore be 2D10 plus (9-5), or plus 4.

Gun Action: Generic term for the operating mechanism of a firearm. The Gun Action specifically controls the rate of fire, that is the number of shots a character can fire in a single Action during a Combat Turn.

HE: Standard abbreviation for High Explosive.

HEAP: Standard abbreviation for High Explosive Anti-Personnel, referring to explosive weapons designed for use against human (or at least living) targets.

HEAT: Standard abbreviation for High Explosive Anti-Tank, referring to Rifle Grenades and other man-portable weapons designed for use vs. AFVs.

HLH: Standard abbreviation of the Health Attribute.

HMG: Heavy Machine Gun.

HTH: Hand-to-Hand. May refer to a form of weapon or style of combat.

Hard Target: used in determining the effects of Vehicular Combat. Refers to an armored vehicle.

Healing Rate: The base figure governing the recovery of lost DRT of the reduction of other forms of damage. It is equal to the character's Health Group.

ICBM: For Inter-Continental Ballistic Missile. The most useful form of delivery for large tactical or strategic nuclear weapons. Not man-portable.

Incubation Period: The length of time between exposure to an infection, drug, or other poison or pathogen and the first onset of its effects.

L: A weapon or form of attack doing 100% of its damage as Lethal Damage.

LAW: For Light Anti-Tank Weapon. Refers to man-portable, single shot, disposable missile launchers, firing powerful HEAT rounds.

LMG: Standard abbreviation for Light Machine Gun.

LOC: Also spelled as Loc. *See Location.*

Lb.P.: *See Pound Pull.*

Learning Rate: The base figure governing the rate at which the character will gain Skill points in a period of study (usually measured in points per week). It is equal to the character's Wit Group.

Location: A portion of a character's body, designated on a Hit Location chart. Alternatively, the number of such parts that may be covered by some form of protection, clothing, or armor.

Long Gun: A firearm used with both hands, usually fired from the shoulder.

MNA: Standard abbreviation of Maximum Number of Actions.

Maximum Number of Actions: The greatest number of Actions a character may perform in a single Combat turn. The MNA is equal to the character's Dexterity Group.

NPC: *See Non-Player-Character.*

Non-Player-Character: A character in the campaign controlled by the Gamesmaster. An NPC need not be a human being. As a rule, all characters not created and controlled by Players are Non-Player-Characters.

ODA: *See Overall Defense Ability.*

Overall Defense Ability: The total defensive ability of a character under attack. It is the sum of his CDA and WDA (if applicable). The ODA is subtracted from the attacker's BCS to hit the target.

PC: *See Player-Character.*

PCA: *See Phases Consumed in Action.*

PNPC: *See Personality Non-Player-Character.*

Partial Fatigue: A condition in which the sufferer's Effective values in Dexterity and Speed are reduced by 25% and all BCS and Saving Throw scores receive a penalty of minus one.

Partially Encumbered: A character with an Encumbrance Total between 50-75% of his Encumbrance Capacity is Partially Encumbered. His Effective Dexterity and Speed are reduced by 25% and all BCS and Saving Throw scores receive a penalty of minus one.

Passive Zone: Refers to a character's Side and Rear hexes of the DAT display.

Personality Non-Player-Character: A Non-Player-Character with a fully designed history, psychology, motivation, etc. The major NPCs in the campaign. They may be of major status (known widely in the game world) or important only in a given scenario. They are not necessarily hostile to Player-Characters.

Phases Consumed in Action: The number of Action Phases it takes for a Character to perform an Action. The PCA equals BAP/MNA, down.

Pistol: A handgun. Specifically refers to firearms used with one hand.

Player-Character: A character designed and/or controlled by a Player. The Player-Characters are (at least theoretically) the "stars" of the campaign.

Pound Pull: A term indicating the spring-strength of a bow. The higher the Pound Pull, the greater the range potential of the weapon, but the higher the Strength needed to use it effectively.

RPG: Standard abbreviation for Role Playing Game.

Range Factor: A figure used in archery. It is equal to the Pound Pull/10, nearest.

Rep: A system for determining the reputation enjoyed by a given character in the campaign at large, and how likely he is to be recognized by strangers as a result of his deeds.

Reputation Zone: Area in which a character's Rep is generally known.

Restriction Zone: The area within which a character is subject to Restrictions in combat, based on the DAT Display.

Rifle: A Long Gun with a BBL of greater than twenty inches.

S: Code for weapon or attack doing 100% Subdual Damage. Such Damage is non-lethal except in large amounts, and is usually quickly healed.

SCUBA: Standard term for underwater breathing gear. Stands for Self Contained Underwater Breathing Apparatus.

SMG: Standard abbreviation for Sub-Machine Gun.

SPD: Standard abbreviation of the Speed Attribute.

STOL: Standard abbreviation for Short Take-Off and Landing. Refers to aircraft which require minimal runway space for taxiing for take off or braking after landing.

STR: Standard abbreviation of the Strength Attribute.

Shotgun: Usually a Long Gun. It fires a mass of small pellets (Shot) rather than a single bullet. Can also fire single, large caliber Slugs.

Soft Target: Used in determining the effects of Vehicular Combat. Refers to an unarmored vehicle.

Structural Stability: An abstract value applied to buildings and other structures. It measures their general condition and the danger of violent action while inside. The figure also serves to determine random accidents while traversing such buildings.

Talent: A score measuring the inherent capability of the character in some general area. The maximum score in a Talent for a normal human is 20. Scores above 10 represent significant Talent in that area.

Task: An activity or task to produce some product or change some condition. The Gamesmaster assigns a value in Task Points to the job and when the character(s) involved have generated that number of points, the Task is completed. A Task Period is also assigned, which governs how often they may generate more points on that Task.

Treacherous Ground: Any surface which does not provide sure footing for characters in motion upon it: ice, rubble, mud, etc.



Movement above a given rate on Treacherous Ground may cause the character to fall down.

Unencumbered: A character whose Encumbrance Status is less than or equal to 50% of his ENC CAP is unencumbered, unaffected by the burdens he is carrying.

Unengaged Status: A character who does not satisfy the requirements for Engaged Status is Unengaged.

Utility Number: An abstract figure used as a guide to assigning a value and level of usefulness to items found, bought, or otherwise obtained during the campaign. The higher the Utility Number, the more valuable or useful the item is.

VTOL: Standard abbreviation for Vertical Take-Off and Landing.

Refers to aircraft which can take off in a straight-up line, without taxiing.

WDA: See *Weapon Defense Ability*.

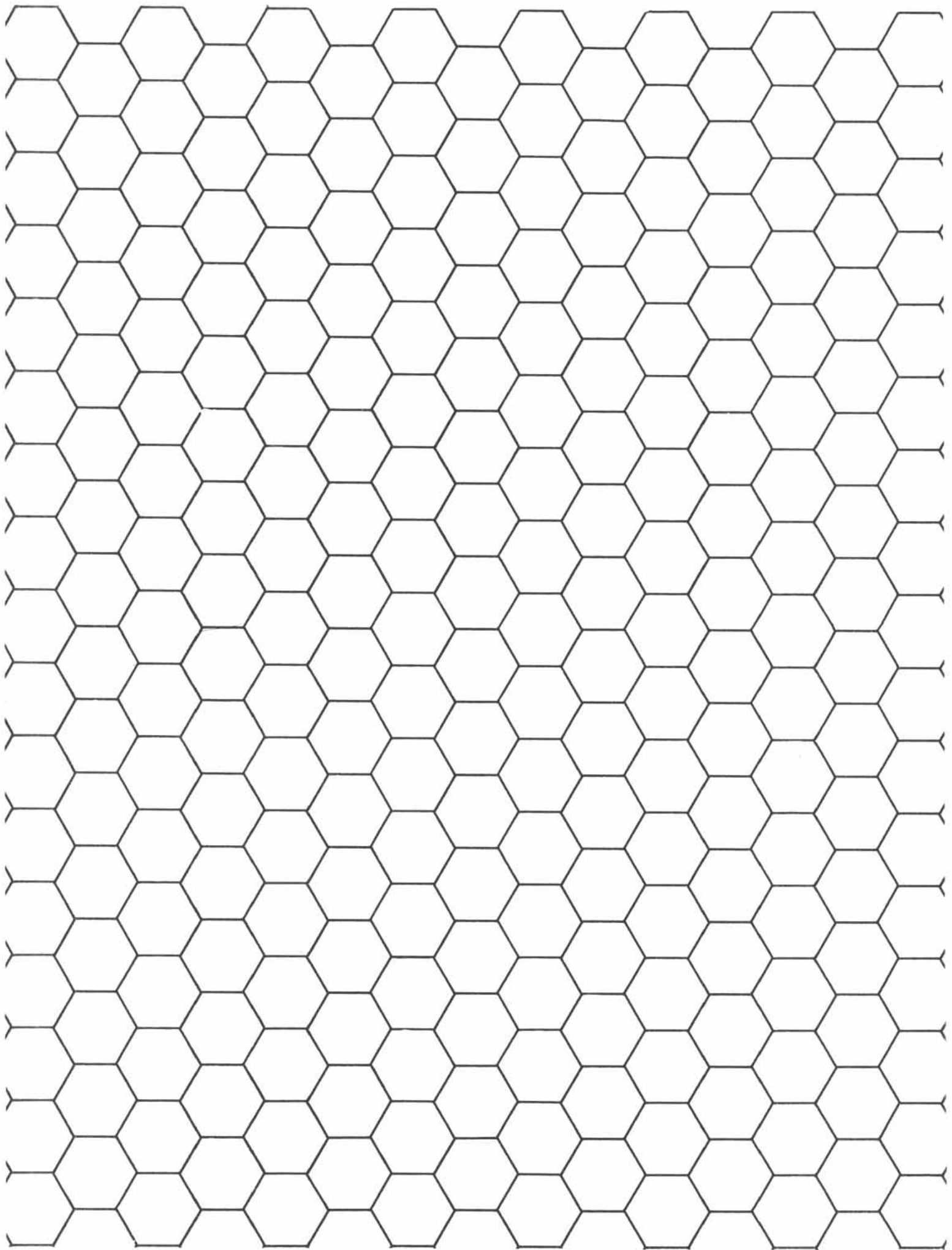
WDM: See *Weapon Damage Multiplier*.

WL: Standard abbreviation of the Wit Attribute.

Weapon Damage Multiplier: The value assigned a handweapon, or mechanical or muscle powered missile weapon, by which the character using it will multiply his damage die roll to determine his damage potential.

Weapon Defense Ability: Represents the ability to parry and dodge in HTH combat using a given Combat Skill. WDA is equal to the first 100 points of the Skill in use, divided by 20, nearest.

NOTES





AFTERMATH

Book 3

THE WORLD OF THE AFTERMATH

**A Gamesmaster's Guide
for a Post-Holocaust World**

**Designers: Paul Hume
Bob Charrette**



**P.O. BOX 1082
GILBERT, ARIZONA 85234**

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AFTERMATH

Book 3

THE WORLD OF THE AFTERMATH

A Gamesmaster's Guide
for a Post-Holocaust World

Designers: Paul Hume
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The designers will attempt to answer any questions regarding the game. Please type the question allowing space for the answer on the same sheet and enclose a stamped, self-addressed envelope. Send the letter in care of Fantasy Games Unlimited.



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Running an *Aftermath!* Campaign

Well, by now you have certainly come to the conclusion that you have an awful lot of work to do in running *Aftermath!* We have admittedly been pretty free in our use of such statements as "At the Gamesmaster's Discretion," or "The Gamesmaster Must Determine the Details for His Campaign." It would have streamlined your job a lot if we had decided to just publish one of our campaigns from the playtest instead of going into the means by which the design work is done. But that is not the intent of this game. Some playing groups will really get off on the idea of an "After the World Ends" game set only a few years into the *Aftermath!* Others will prefer the campaign which starts centuries later. The questions of how the Ruin came, just what it was, what level civilization reached before it ended, etc., all provide totally different worlds depending on the answer that fits your vision of the post-Ruin environment.

So this is a very free-form set of rules. If it pleases gamers, there will be campaign-oriented materials to follow, to buy or not as they prefer. All the information you need to set up a campaign is here, in this set. Everything else is just window dressing.

Confronted by all this data: gun rules, hand-to-hand combat systems, the specs on a hundred different factors in the game, it may be difficult to decide just where to start on your own campaign. We found that the essential foundation of any coherent campaign was the question "What was the Ruin?"

THIS IS THE WAY THE WORLD ENDS

There are numerous apocalypses in the literature dealing with post-Ruin survival (not all of them fiction by any means). The commonest of them all is war: man blowing himself back to the caves. The forces of nature are not far behind. Novels and speculative works of science have posited catastrophes based on climatic changes, hits by comets or asteroids, alterations in the conditions of space around Earth, oceanic changes, etc. Lately, the possibility has been raised, again by novelist and scientist alike, that we are polluting ourselves into a Ruin. And these represent only part of the list of possible endings to humanity's latest chapter in the roll call of fallen civilizations.

In any universal calamity, there will be three phases, of varying intensity and duration. Sometimes one will overlap another. In some cases, there will be no clear dividing line between phases. But they will always be present to some degree.

Pre-Ruin Unrest

The length of this phase directly depends upon the time between the first solid proof that the Ruin is coming and its actual occurrence. Threats of war, the sighting of an oncoming planetary collision, the beginning of the ultimate eco-catastrophe, all will trigger a social upheaval as people vent their fears and furies in a culture where the force of law is abrogated by the impending demise of the system that created it. Riots, huge migrations from danger areas in search (usually forlorn) of some safe place, outbreaks of impulse crimes on an unprecedented scale will plague the last days of man's culture. How effective a deterrent is the death penalty in a world where everyone lives under the same sentence? What will keep police or other safety workers on the job when all they are doing is keeping things tidy for the final break-up? There will be the men with duty as

their prime motivation, the ones who will stand to their station until the end. There will also be skeptics, the ones who do not believe all that hogwash, who will ignore the oncoming ending of things because they have common sense. But we do not think they will be enough to stem the tide.

The Pre-Ruin Unrest phase will lead to an increase of weapons and high-security sites in cities, as crime runs rampant. Depending on its length, the men of good will may also prepare in their way for the Ruin. Colonies in remote areas may be established. Such locales may be the cradles of the rebirth that we hope follows from any *Aftermath!* campaign. Here the old technology may be preserved, although in secret in those worlds where the mob blames science for the downfall of the world it knew. These are the priests and magicians of the generations to come, until the day mankind is ready again to share freely the knowledge of how things work.

Primary Kill

This is the actual Ruin itself. Whatever form it takes, we posit that it will wipe 90% or more of the population from the face of the globe, and directly or indirectly shatter the major edifices of man's culture into the bargain. The Ruin may be over in a matter of hours or it may drag on for years. But when it is over, the Earth will seem an alien and savage world.

Secondary Kill

When civilization collapses, think of what will go with it. The first to die will be those whose lives directly depend on its resources: diabetics, others on major medical support, city dwellers cut off from food and water, light and power, those who survive in remote areas only by virtue of supplies from more plentifully endowed markets. Famine will stalk our overpopulated nations as support from the agricultural powers is cut off. Plagues will sweep the survivors, no longer able to tap the mighty resources of modern hospitals, and living in the carnage following the Ruin. This wave of death and destruction is the Secondary Kill. It will probably slay 50% or more of those who lived through the Ruin. It will also complete the assassination of the works of mankind. Fires will tear through vast areas of the deserted cities. Battles for food and resources between groups of survivors will ravage the land. Earth as we know it, already a corpse, will be kicked to shreds by the final spasms of the Secondary Kill.

When it is done, the fall of civilization will be complete. From now on those who live at all will do so in the *Aftermath!*

THE DOGS OF WAR

First on our list of possible Ruins, we have the threat of one last, global war. For various reasons, we do not assume a strategic, nuclear spasm war to have occurred. If it did, there is no one left to play the game, right? But let us discuss the main possibilities.

We perceive the best war-based Ruins for a campaign to be either Conventional, Biochemical, or NBC (Nuclear, Biological, and Chemical).

Conventional

It is very unlikely that a conventional war could put modern civilization into an *Aftermath!* situation. It does just fine in the Secondary Kill, but the world today seems too large, too decentralized, for the limited capabilities of chemical explosives and mass armies to be enough to destroy it. Oh, such a global war could cause widespread suffering, local

collapses of order, but not a Ruin. This option is offered for those fans of H. G. Wells, Stanley Weinbaum, Edgar Rice Burroughs, et al. who foresaw, in the almost innocent days before there were atomic bombs, a massive conventional war which would shatter the structure of world society, hurling people back to a primitive level of culture within a few generations. While most of these visions foresaw the use of biological weapons as well, they were just the frosting on the cake, and had no lingering effects on the world of the Aftermath.

The heroes in these campaigns will, if they follow the pattern of the above-mentioned authors, be splendid specimens of WASP masculinity, who call their companions "Fellows," or even "Chaps." They may be members of civilized enclaves, exploring the ruined outer world, or simply members of primitive societies, driven by inner memories of a finer, nobler time. The advantage of such campaigns, once cleared of some of the more dated racial or sexual concepts of their authors, is that a clear-cut code of the Good Guys exists, so that an ethical standard can be maintained should the nihilistic possibilities of a more modern setting distress you. The disadvantage is that considerable research and retuning of the technology used in the rules will have to be done, to flavor the campaign with the usually unwieldy brand of "technology" foreseen by the writers who generated the source works for the campaign.

Biochemical War

Sometime in the late 20th century, the nations of the world finally came to an agreement regarding nuclear disarmament. To unbounded relief and rejoicing, the big bombs were dismantled, fired into space, or converted to peaceful uses. The era of world peace and safety was at hand! The first plague bombs fell about ten years later.

If we posit that nuclear conflict does not happen, the above scenario is a very real possibility. Nations that never could have mounted the expensive support needed for nuclear expansion can easily handle the modest bill for biological research. With recombinant DNA studies a reality today, any ethical cripple with a good research facility can produce a mutated virus or bacterium that modern medicine cannot recognize, and send it on its merry way via aerial sprays, small missiles, or even an agent with a flask of the culture in a briefcase. Release a few dozen rats carrying fleas infected with Bubonic Plague into New York's waterfront area, and in a week you will see that city tottering on the path to death, its populace fleeing madly out, some of them bound to be carriers. Now multiply that by several hundred seaports all over the world. In the middle ages, successive pandemics of plague reduced the population of Europe by up to 90% in some places. Overall, two persons in three had died when the Plague Years ended.

If a long period of building international tension, with a few brushfire wars that bear home the feeling that the end is in sight for modern civilization, is posited in the Pre-Ruin period, then a Phase of Unrest will begin the events of the campaign's history. After a few years of this initial death agony, the final war breaks out. Laboratory-spawned plagues will sweep the globe. As fast as medicine finds one cure, a dozen new pathogens are released from the military research centers, or, far more likely, spawned by unforeseen mutations in the old organisms. Genetically unstable, the virus that one nation meant as a non-lethal means of incapacitating an enemy force is suddenly transformed into a raging pestilence that strikes down friend and foe alike, ignoring vaccines prepared to deal with its original form.

Amidst the almost-deserted cities, riots break out. The scientists who "caused it all" are lynched in their hundreds. The madness spreads. He knows how machines work, so string him up. He was a politician, burn him! He knows how to read, kill him!!!

When it is all over, the world is fast sinking into the new dark age. Only God knows when it will rise again. The survivors move through a plague-blasted, germ-laden environment, seeking only one day of life at a time.



NBC War

This offers the Gamesmaster several handy options. If he wishes to avoid the potential complexities of having largely intact cities available for character exploration, he may posit that strategic nuclear strikes were made with arsenals reduced by partial disarmament treaties only on major military and civil targets. The rest of the destruction was biochemical. One campaign run independently of our main playtests used a unique variation on this theme.

The Player Characters were all members of one Community, moderately well-established in a large cavern system outside Washington, D.C. The War was 20 years ago. Nuclear strikes and biological contamination had turned the cities into hellholes of radiation and viral poisoning. But now, in the last few months, travelers are coming through who report that it is possible to trespass in the cities and survive, although hostile mutants, diseased bandit tribes, and the still-lethal pollutants in many areas makes it risky, to say the least. Characters are sent out to forage for desperately needed supplies in the ruins of the nation's capital. They find hair-raising adventures and much useful loot, although most of their finds must be turned over to the community. The dilemma they face is whether to return to the caverns from a given trip, or try to survive on their own with what they can get. It has its good points as a campaign, especially in the early stages, when the Gamesmaster can maintain pretty tight control over what is obtained by the characters, and what they can find in the city, as well as having well-defined lists of available Skills and resources in the community for learning or trade.

In many ways, the use of the NBC war is the best scenario for your campaign, always assuming that war was the manner of the Ruin in the first place.

THE HAMMER OF NATURE

Have you ever considered the possible results of a New Ice Age, one that starts tomorrow and is in full swing within a century? Contemplate the Pre-Ruin Unrest inherent in that situation! If we manage to melt the polar ice with a Greenhouse Effect, not much, say 5% in the next 50 years, with a little help from some theory that does not pan out (say using nuclear warheads to clear a trans-polar channel, or some equally harebrained scheme), do you care to picture the resulting rise in sea level and its effects on our society? Or just drop a decent-sized celestial traveler onto the Earth, or swing some massive cosmic hitchhiker through the system on a course too close for comfort. Bang! No more civilization.

The major attraction of this type of Ruin is also its major disadvantage: the world is reshaped by the catastrophe. Seas lie upon shorelines that do not now exist, at least not as waterfront properties. Cities are piles of rubble in the wake of earthquakes. Mountain ranges may change their addresses. The Gamesmaster must take a correcting pencil to his Atlas if he is going to play in this league. But, especially if setting the campaign in the far future (the "200 Years After" Campaign), when humanity is getting used to its remodelled domicile, the Gamesmaster can build fascinating histories of what had been just waiting for his Players to unravel their mysteries. Or picture the Players portraying the first few generations of survivors: "Well, I-66 should cross the Mississippi here, but there's this inland sea in the way..."

If the main attraction for you in running an *Aftermath!* campaign is confronting the 20th-century folk who are playing with the changes in 21st-century America, using their preconceptions about how it will be to surprise and challenge them, then such a Ruin may well serve your needs.

THE ALIENS

The less-likely campaign premises include at least one classic: Earth enslaved, a conquered world under the

uncaring heel of an alien invader. Humanity skulks in the ray-blasted, bomb-cratered ruins of its cities or the returning forests in the countryside, struggling to survive until it is strong enough to drive the overlords off the planet, making it free once more. The classic, albeit dated, work of fiction which deals with this idea is H.G. Wells' *War of the Worlds*. In one of our playtest campaigns, the basic premise of the Ruin was that the Martians, as Wells described them, returned. Finding humanity on the verge of world war, they fomented this divisiveness, stoking human passions to further the ends of their own gigantic and passionless intellects. When the nations had set each other reeling in a dozen brushfire wars, Martian missiles were launched from translunar orbit, striking at targets in both superpowers' territories. Each government assumed that the other was responsible. WWII broke out, but within days it was overshadowed by Planetary War II, as the great Martian landers touched down, disgorging the tripod battle machines familiar from Wells' history of the first conflict. With almost a century of continued research and development, the Martians possessed even more potent weapons than before. Their own experience of germ warfare, at the hands of Earth's biosphere in their former invasion, had led them to develop human-compatible bio-weapons of their own for this return match. Alien fevers scythed down the dazed survivors of the human war.

Now the planet is a wasteland, a wilderness. Martian centers dot the globe, each widely removed from the other. Between them, amidst the ruins, men fight to live, and await the day when they are strong enough to arise in rebellion against the masters.

Here and there, men have turned their coats with a completeness never before recorded in the annals of treason. The Hunters serve the Martians, Janisaries who carry out the missions the aliens do not wish to undertake themselves. Why "Hunters"? You will recall that Wells' history intimates that Martians are carnivores. He was right.

The alien conquest campaign may not appeal to everyone. Players have reported feeling intense helplessness when confronted with the monolithic power of the Martians. But it provides two important factors to the campaign: alien technology allows the Gamesmaster to introduce artifacts beyond our own ability to develop, and a single goal confronts those Players who have undertaken to follow the Promise of new birth: cast out the invader!

The Alien campaigns will require a bit of rule-writing by the Gamesmaster: what kind of alien is involved, their goals, how their devices work, and which ones, if any, can be taken over by humans. The Martian Campaign has evolved a whole series of designs for various models of the tripods, for example, each with its special strengths and weaknesses. We have found that the time invested in this activity will be amply repaid by a fast-moving, very unusual campaign.

A TWIST IN SPACE

Earth swims silently through the endless cosmos. Infinite in scope, can we say that its secrets will ever reveal themselves fully? Can we be sure that fate, or our own apercursive probings of those secrets, will not one day alter life on Earth into a new form, shattering the old life forever?

Should our world violently transmigrate into a new dimension or a twist in space, suffering outrageous stresses upon its very fabric, triggering quakes, storms, mountainous waves, this would in itself be a Ruin in the grand tradition. But as the battered survivors drag themselves out from beneath the rubble of their civilization, there are other changes to consider.

They share a world with the creatures of dream—or nightmare! Vampire shapes flit on bat wings through the night. Dragons dwell beneath the earth. The Little People are a folk-tale no more, but a living reality. Dormant within

humanity since the elder days, the forces we call magic are now there for those who would plumb their dark secrets. A force of enchantment is loose in the world and shall not be put back.

This may sound far-fetched, but at least one post-Ruin trilogy, Fred Saberhagen's *Changling Earth* books, (now collected as *Empire of the East*), is set in exactly this kind of world. The protagonists of this series use the forces of magic and the ancient, mysterious "technology" to combat the despotic Empire of the East.

Those of you who prefer the scintillating charms of a traditional fantasy campaign to the harder-edged world of a "realistic" *Aftermath!* game should consider the hours of fascinating play to be had by combining the two concepts. As with most of the more exotic scenarios, this will require some extra homework. An occult science will have to be designed or adapted from an existing Role Playing Game. Scores must be worked out for fantasy creatures, and their powers carefully quantified. The Gamesmaster will probably want to edit the technology available to the characters, so as to preserve a balance between the new magic and the old science. Each set of Skills should have areas of competence denied to the other, so that sorcerer and engineer alike have unique abilities, granting great power to the man who can combine knowledge in both fields.



As you can see, *Aftermath!* need not be limited to the modern survivor scabbling grimly through the ruins of his old world. The Gamesmaster can fit his campaign to his own view of what will provide an exciting game for the group under his guidance, mixing the concepts listed above and adding his own creative genius to the stew, stirring with patient testing, adding more spice of adventure, to deliver a finished dish to the table capable of pleasing the most demanding Role-Player's taste.

THE YEARS TO COME Long After the Ruin

Once the Gamesmaster has decided what the Ruin was, he must decide when it was! The standard period used for most *Aftermath!* designs in the basic rules posits what we call the "First Generation Campaign." This usually places the Ruin about 20 years or so in the past, so that older characters are yet living who remember the pre-Ruin world in all its glory. But the apocalyptic literary tradition abounds with works set generations after the Ruin they speak of. In the absence of organized centers preserving the old knowledge, or an environment where public avowal of such knowledge is tantamount to suicide, due to an anti-intellectual backlash ("It's the Scientists' fault! Let's kill 'em all!") then in only a few generations mankind could slip back into barbarism. We have spoken to this briefly in the Player Essay in Book 2. The Gamesmaster who undertakes such a campaign has extra work to do. He must decide how much of the ancient science is still known, and by whom. Do the normal cultures of the

campaign retain any knowledge of the old ways? Is electricity familiar, sacred, taboo, or forgotten? The more fragile devices of the pre-Ruin time will be mostly junk, unless newly retrieved from sealed and near-perfect storage. The cities will probably be places of awe, dangerous with outlaws, mutants, ancient contaminations, and the rest. If gunpowder is not a lost material, the best a character can hope to find of local manufacture will be a muzzle-loader. The "modern" firearms, and the ammunition for them, will be coveted prizes brought back by the adventurers who dare the old sites in search of treasure.

As the generations pass in the mutagen-filled post-Ruin environment, the Changed, human and otherwise, will have grown in power and development. Psionic abilities undreamt of will manifest themselves. Beasts will be altered in a hundred wonderful ways. To take only one example, the Master Rats will doubtless be well on their way to becoming a major competitor for Homo Sapiens's place in the sun. As uncontested rulers of the cities in some areas, they may be heir to more of the ancient technology than its blood descendants, living in tribal communities or crudely-walled cities on the distant plains.

The "200 Years After" Campaign permits many of the factors of a pure fantasy campaign (chivalric codes, heroic ideals, swashbuckling) to be combined with the technological wonders of *Aftermath!* The Gamesmaster may construct his game-civilization without reference to the culture that spawned it, for apart from certain old sayings and obscure name derivations, the primitive world of the campaign is created out of whole cloth.

The bibliography contains numerous listings of books set in such cultures, as it does works dealing with all the topics we have covered so far.

A description of a medium-sized "200 Years After" Community may help illuminate some aspects of such a campaign.

The Bul People: the Story

Living in the East Central portion of Twobomz Valley, an area bounded on all sides by high mountains or lethal "Blast Barrens," where the Demons of the Fawlout still seek the lives of men, the Bul People number about 2500. They are Masters of Trade among the Valley tribes in the fields of animal products from their great riding Buls (mutated cattle) and fine glass, produced from the silicates of the nearby desert. This latter technique is a closely-guarded secret of their Guildmen. Armed primarily with Lance, Bow, and Axe, the Warmen of the tribe are also noted for their skill with Musket and Pistol, but such weapons are not used in inter-tribal conflicts, being accounted as cowardly weapons for combat between warriors.

The Bul People worship a pantheon with several principal gods leading it: Volta, God of Lightning, whose priests have magics that sometimes make the old devices found by travelers work again; Telgraf, whose priests seem able to send news across the valley in hours, their temples being regarded as inviolate centers of information in all the tribal cities; Rengen, God of Protection, who warns of the presence of the Demons of the Fawlout. Those gaining the favor of the priests of this latter deity may be given amulets for use when penetrating the Blast Barrens in search of the old magic. These amulets scream when the Demons are near, warning the bearer to flee for his life lest they curse him with the Sickness.

Vinz, of the Bul People, is a young Warman, trained in the fighting and hunting arts of his people. He owns several pieces of the ancients' magical armor, heirlooms in his family, a fine WarBul for riding, and assorted handweapons. On the last tribal raid on their neighbors, he acquired a brace of flintlock postols, with powder and ball for over a dozen shots. He is a well-respected young fighter, but there is doubt about his sanity. He continually asks about things that

any well-balanced individual takes for granted. It comes as no surprise to the tribal elders, the Shamen, that Vinz has volunteered to be a Scout, one of those who search the Blast Barrens for old magic, to give the tribe more mana by the possessing of ancient artifacts. As his presence in the city is a worry to some of the more orthodox leaders, he will probably be allowed to undertake the task, but if there is indeed some hope that he will perish in the dangerous mission, he may not receive some of the special magics that will better his chances of survival.

The Real Story of the Bul People

The Bul People and their neighbors live in a valley formed by the tectonic activity triggered by nuclear warheads on local fault lines. This area was not exposed to direct attack nor to the weather patterns carrying deadly fallout. They are the descendants of survivors of an NBC war, reverted to a tribal society and generally low technology. They do possess gunpowder, and the knowledge of metallurgy to make muzzle-loading firearms, as well as good steel weapons and armor. Certain other skills (such as glassblowing) have also been preserved.

High technology is regarded as magical. The only places where some understanding of its operation survives are in the various temples (Volta, God of Lightning, is the "front" for a small Solar Screen power station; Telgraf's priesthood maintains working telecommunication between his temples; Rengen's cult sprang from a civil defense group who still have some geiger counters and nuclear decontamination gear). The priests use this knowledge to hold their positions of power, and do not react well to laymen's attempts to study the ancient skills.

Vinz is a misfit. A well-trained warrior, he has the itch to learn how things were before "The Blast" (Twobomz Valley's term for the Ruin). This does not endear him to the priesthood, who are overjoyed that he wants to go out into the radioactive hell beyond the valley's mouth. They will not aid him in his quest, and if he returns with too much knowledge, they may well try to cast him out or even kill him, as a "heretic."

The Gamesmaster in this campaign posited the following things:

- In the murderous competition for arable, radiation-free land after the war, the survivors combined into small groups, possibly several families that had lived close together before the Ruin. They gravitated to an area in the newly-formed valley, which must have been a hellishly hostile landscape in the first days of its existence, but one which was free of fallout or bio-contamination, dug in, and held off all outsiders. This tradition, that all strangers are dangerous because they compete for limited survival resources, has held to the campaign's time; hence the fierce raids on other tribes, and the equally fierce insularity opposed to intrusions.
- Since the early survivor groups, the proto-tribes, had almost no intercourse with other groups, only those skills which could be passed from one member of the group to another survived. This has led to small amounts of trade in recent years, the Bul People trading the glass which is their monopoly to, say, the Gorge Folk up the valley, who make the finest steel in the area.
- Mutations in the inbred tribes were strongly reinforced in the early generations, with the culling process ruthlessly applied by both men and nature to weed out the contra-survival changes. It would be quite normal for a group of strains to exist tied to certain bloodlines, so that a character's ancestry would determine what his chances of having a given mutation were. Vinz, for example, is of the Smits family line, with links to the Jonzon family. The Smits have a dominant trait of Night Eyes (an advanced

form of the Eye mutation, allowing full night vision without the attendant sensitivity to normal light), and the Jonzons have pure white hair. Vinz might have one or both of these traits, as well as any other Changes the campaign allows to characters.

Mutated humans living in savagery (Blast Demons, in the valley parlance) would pose a threat to the tribal cultures. Strange mutations among plants and animals could also make life somewhat exciting for travelers. But the genetic juggling following the war will also throw up a few blessings. The Buls from which Vinz's people take their name are huge cattle, with shaggy coats (Armor Value 5), great strength and endurance, and two wickedly sharp, hard horns, which act as lances in the full charge favored by the Warmen. These creatures provide food, clothing, fuel for fires, building materials, etc., to the tribe, as the buffalo did for the Plains Amerindian of the pre-settler Western U. S.

In beginning such a campaign, the Gamesmaster will do well to build one tribe (or other culture) in detail, assuming all Player Characters to be natives of that society. A small area should be mapped out, including one or more neighboring tribes, and several places of mystery or interest, such as a small ruined city from before the Ruin, an area haunted by bandits, a stretch of mutant jungle filled with strange creatures for the young heroes to hunt, and perhaps an ancient military base or other site of much "magic," where the characters can pit their wits and courage against the full might of the old technology, say under the control of some advanced security computer, with a few working robots ("Spirit Warmen") to make life interesting. As he feels ready to extend the campaign beyond the confines of this area, the Gamesmaster can start rumors of great adventures in more distant lands, send caravans from far-off places traveling through, entice the characters onto automated rapid-transit systems that "just happen" still to be working, etc.

Great care should be taken in the early days of the campaign to describe technological artifacts in terms that the characters would use. They will probably recognize a modern gun as a firearm if they have similar weapons themselves, but they would not necessarily recognize a mortar. Nor will they be adept at operating even familiar items at first. A "magic" rifle that fires many times is great in a fight, until you have to try to figure out how to reload. And what is the steel box with soft wheels for? If you have never seen an ignition key, how long do you think it will take to get a car started?

Such "research" should be assigned a Task Point value and a Task Period based on the number of potential false starts in solving the problem. If the device has a simple on/off button, it will not be too long a Task to figure out that if you push it, something will happen. If the control panel happens to belong to a 747, the Task Period could be weeks at a time, if it is not just impossible without some source of outside knowledge.

In the "200 Years After" campaign, knowledge is power in a very real sense. The Gamesmaster should be pretty generous with old books, active computerized "teaching machines," crazy old hermits with technological training, and so on. Mastery of the old knowledge should be difficult, but not impossible.

Hope for the Future

We discussed the "Promise" at some length in the Players' article in Book 2. The Gamesmaster must also come to terms with this idea. If Players are working along lines of reconstruction in the campaign, even if it is less organized than it might be, as will certainly be the case for early characters in a "200 Years After" campaign, it behooves the Gamesmaster to be somewhat supportive of their efforts. He should allow them to engage in such activities as locating

and occupying personal holdings, areas they can use as a base of operations, and around which they can potentially set up Communities.

The challenges in such activity will be many: food and water must be available for the group, the location must be defensible, skilled technicians must be enticed to join to support the artifacts used for power, medical facilities are needed, etc. This is something that can be gradual, an effort that the Player Characters must maintain over years of game time, if it is to have any lasting result. Since the Promise is the work of generations, it is not likely that a "dull" era of peace or new civilization will end the adventures of the campaign due to the characters' efforts. It is not the kind of result that is going to come about rapidly. Characters will fight and die for the Promise without ever seeing it happen. All they can try to do is give it a start. It took western civilization almost 300 years to start growing again after the Fall of Rome, a blow of much less earth-shattering consequences than the Ruin.

Gamesmasters who do not want to get into the full ramifications of such Player activity may wish to set up one or two centers of new growth that the characters may throw in their lots with. Since he is in full control of the progress of these enclaves, the Gamesmaster can set up raids by other groups, famines, plagues, etc., without automatically engaging the Players in such activities, as would be the case if the Players were in full control of the community. But Players who are prepared to do the logistic work in setting up a center should be allowed to do so. They must account for feeding their population, acquiring tools, weapons, medicine, etc., along lines laid down by the Gamesmaster, and be ready to do the bookkeeping for such expansion.

The driving force in bringing new characters, Non-Player Characters, into the community, will be the Charismatic Talent of some Player Character. Such a leader figure should be a person that people can follow, an organizer, someone to inspire his people. The Player should get some idea of what kind of experience the leader must have, if he is trying to build such a character, and he and the Gamesmaster should go over the idea in some detail. It should not be possible to start a character in this shape. He may be designed to have the right Attributes and Talents, but the Reputation and Skills that will fit him for the job must be acquired in the course of play, as are the resources necessary to establish the community.

As the group increases its numbers and wealth, it will become more and more noticeable to the human predators who haunt the ruins. Attacks by bandit groups, expansionist Communities, and plain old hordes of scavengers will become a problem. As the numbers and firepower involved increase, the size of the conflicts will grow into the Tactical Battle scale. The military leadership of the community must be quantified, and the Gamesmaster can fairly insist that the construction of the army and the handling of battles be done by the Players. Thus, the various Military Command Skills should not be neglected by those who would set up their own Communities.

It is hardly sporting to throw enormous forces of Non-Player soldiers at the new Community. The Gamesmaster should roll Reaction Dice to gauge the danger of the TSP of attackers' Force when compared to the Player-controlled Army, whether or not it is a Custom Army.

Communities in such campaigns as the Alien Conquest will also be in danger of attracting the attention of the invaders. This should be set up as a probability derived from the technological level of the community, its size, and the amount of overt action it takes against the aliens.

Character can fit into an existing community in various ways. Goals might be in complete agreement or diametrically opposed. Advancement within the community might come easily or be opposed. Sometimes the constraints placed on the Player Characters will be unacceptable to them.

Of course, Players may also be interested in setting up less-than-enlightened groups themselves. The methods they use to gain population or resources can extend with ease to robbery, "Troll" work, slavery, etc. This idea may not be appealing to some.

In operating the campaign, the Gamesmaster will soon find that some goal, some reason to survive, is a necessity. The Promise is the most viable of the many possibilities, and can itself take many forms. The footloose adventurers who want to know what there is to know in the new world fulfill the Promise as much as those who try to save only a few square miles of it from the darkness. Those who give their energies to fulfilling any ideal, noble or not, will find that it fuels their character motivations to an extent that simply trying to survive cannot. The Gamesmaster should encourage such play with scenarios designed to let characters follow through on their dreams, and by "writing" the plot of the campaign to tell stories with room for those goals in them.

PACING THINGS

The overall view of the campaign is one thing, but when it is boiled down into its basic components, any Role Playing Game consists of a series of discrete adventures, which will relate to an overall history according to the campaign's culture and the deeds of the Player Characters. These are the scenarios. At first they should be fairly short and to the point:

"There is a bunch of bandits holed up in the old warehouse on the south side of town."

"They say that old Army base has some good weapons still in it. If the Master Rats there haven't found them."

As the Players and Gamesmaster gain familiarity with the rules, and the driving concepts behind their campaign become less nebulous, the scope of the scenarios can expand:

"That bunch of goons you wiped out last month? They belonged to the Cartel, over in New Jarvis. They've put a price on your head."

"The Regis Commune is offering a reward for anyone who can supply them with Solar Screens."

"There is a trader caravan hiring guards to head out to the Lake Communities."

Such challenges can impel the characters to travel to the new locations the Gamesmaster has prepared, either because their current one is getting unhealthy, or because there are greener pastures in the new site. Of course, either the local threat or the distant attraction can be nonexistent, founded on the hyper-active rumor mill of the inhabitants of the Aftermath.

A scenario can be a straight challenge, or have a definite mission attached. In either case, risks overcome should carry proportionate rewards, although this is not an absolute rule. If you knock a 75-year-old guard over the head, he should not turn out to be protecting a year's supply of Polycellulac-4. If you have to fight your way through 50 heavily-armed fanatics, they would not have been defending 3 flat tires and a copy of *Newsweek*. In terms of loot, especially combat gear, keep in mind that winning the fight can indeed lead directly to commensurate reward. Unless you had to blow the opponent up to kill him, his armor and weapons will usually be intact. Stripping the fallen of their gear can swiftly enrich the characters beyond any need on the Gamesmaster's part to add more goodies to the pot. This can lead to further complications in itself. Lugging a small arsenal around for later barter will impede the characters considerably. They may have to face Hobson's Choice, leaving valuable goods lying around where they are certain to be snapped up by scavengers, or carrying them around so

that they are easy prey for robbery, as the characters stagger full-loaded around the hazard-infested Ruins. The need for a place to store or trade goods on an organized basis should motivate most Players to seek a Community or personal stronghold that will maintain fairly good relations on a constant basis, so that they can dispose of loot as it accumulates.

As characters increase in power (firepower or otherwise), it is important that the scenarios they face grow in complexity. Situations where guts and cleverness are more important than brute force are not difficult to contrive. Limited space, or foes who are resistant to gunfire, coupled with some kind of mystery, can pose a greater challenge that simply upping the ante in terms of how many guns they face in their next firefight.

THE UNEXPECTED

We will close by pointing out that the demands made upon the Gamesmaster's creative imagination are continuous in a Role Playing Game. Scenarios should not be different versions of the same basic plot, with new backgrounds; they should be entirely new experiences. The proliferation of strange new phenomena and creatures can aid in keeping the Players in a constant state of both curiosity and apprehension, as can new and weird physical locations. We give several interesting types of threat below, to spark the imagination of Gamesmasters in designing their own strange inhabitants for the Aftermath.

The Burning Ones

Mutated humans (?) who are impregnated with intense radiation. They evince no fixed purpose but are, as far as fragmentary studies by post-Ruin science can tell, dead creatures motivated by the impulses impregnating their nervous systems. They exhibit an uncanny ability to locate organic, animal life. They will attempt to eradicate the source of this attraction. Burning Ones are not possessed of DRT as such. They must be hacked to pieces to be stopped, and even then the tissues are still intensely "hot."

| WT | WL | STR | DFT | SPD | HLH |
|-----|-----|-----|-----|-----|-----|
| — | — | 30 | 10 | 10 | — |
| BAP | MNA | PCA | CDA | DRT | |
| 5 | 1 | 5 | 1 | — | |

They will bludgeon at a figure using Brawling, with a BCS of 10. They use no other weapons. The Burning Ones radiate a field of (1D100 x 10) + 500, or 510-1500, REM per Hour, to a distance of 10 meters. When struck on any Location of a limb and taking 10 points or more of Lethal Damage, the limb will be severed. The creature will only stop moving towards living things when both arms and legs are gone. Severing the neck will not reduce its insensate drive to move toward other beings, nor do its perceptions seem to require the use of its eyes. It will keep moving and attacking. The Burning Ones have a base BMA of 1, which is reduced by .25 per limb severed.

Characters have a 10% chance of being contaminated when they strike a Burning One. They will be exposed to 10% of its total REM per Hour score, until they have discarded the contaminated item or washed thoroughly in running water. Roll 1D100 when striking. A score of 01-50 means the weapon is contaminated; a 51-75 means a random Location has been spattered, contaminating the piece of armor covering the Location; 76 or higher, both the weapon and a random Location are spattered. Each item or location will carry a 10% charge of radiation, so that 3 such contaminations means that the character is exposed to 30% of the Burning One's total score of radioactivity.

Subdual Damage or missile damage of any kind (mechanical or firearms) does not affect Burning Ones. Lasers will slice them up as they can do to any target.

The Vampires

These mutants, altered by biological agents or radiants, are not the supernatural creatures their names would lead one to expect. They are gifted with extreme strength and fast reaction time. They have both the Eye and Ear mutations given in the Changed rules. Membranous growths along their sides allow them to glide, rather like flying squirrels, at an airborne BMA of about 3, losing 1D3 meters of altitude per 30 meters of distance covered (they can lose altitude faster if they desire).

They have extremely high DRT, and are immune to all known biological weapons and diseases. They wear little armor, since they cannot encumber their "wings," but will use helmets and can buckle protection over Locations 8-12, where the arrangement of the membranes allows some constriction.

| WT | WL | STR | DFT | SPD | HLH | | |
|-----|-----|-----|-----|-----|--------------|--|--|
| 15 | 15 | 60 | 25 | 30 | 50 | | |
| BAP | MNA | PCA | CDA | DRT | Shock Factor | | |
| 15 | 3 | 5 | 3 | 110 | 20 | | |

(The above statistics represent the "average" vampire. Add 1D10 or even 2D10 for "Leader" types among this race.)

The vampires are not a large group yet. Their infection may be passed on by their bite, as in the old legends, but this is a disease, formula 1—(+)—1 Day—3—3 Days. Its symptoms are Weakness, sensitivity to light (treat as an Eye once the Advance exceeds the Health AST), and coma once the Advance exceeds the Health CST. Crisis will cause death in the normal sense, but the body will regain consciousness as a Vampire-mutant 1D3 days after "death."

The victim who is killed by the vampire (or anyone else) before the disease runs its course is just dead. Since the Vampires are usually hungry, they do not often expand their race, preferring to finish the meal completely. They will seek to render their victim unconscious, or even dead if they can do it without wasting too much of his blood. When "dining" off a victim's veins, roll 1D100 to see how much of his blood they drain. The score rolled is the percentage of the victim's full DRT (not effective DRT) they will take. If losing that many points will kill him, the victim dies. If he survives, check to see if he is infected.

Most of the Vampires will use weapons doing Crush or Combination damage, to avoid too much blood loss in their victims. They do like Lasers, since these cauterize their wounds, avoiding the wastage of food.

Some Vampires see themselves as the "homo superior," the next step in man's evolution. These will tend to control their hunger better, in order to make more like themselves.

Gizmos

These are automated devices of any kind which have suffered program change or degradation. The Cybernetics section (p. 38) discusses the heavier forms of such machinery, with deliberately programmed changes. Gizmos are, say, automated vacuum cleaners, industrial size, which have become programmed to attack anything with dirty feet. At some 5-10 kph, they will zoom along a corridor to bash a newly arrived intruder with dusty boots.

Depending on the level of automation achieved in the pre-Ruin culture, Gizmos can be anything from televisions to buses, rampaging around the city or lying in wait for the unwary, only needing the strange trigger that the Gamesmaster has designated to send them into a weird attack on the characters. More than one character in the playtest has been knocked silly by a contrary, automatic door slamming shut in his face after opening invitingly.

The strange creatures listed above partake more of the nature of fantasy than of science fiction, and are included in these rules to reassure those who might otherwise hesitate to introduce such factors into their campaign.

If it reads well, *do it!*

CREATING THE ENVIRONMENT

The maintenance of the post-Ruin environment, the destroyed cities, the deserted countryside, are a major part of the Gamesmaster's job. If the characters are wandering and searching at random through the city, must he prepare maps of every block in detail? No, this kind of effort is only called for when an area contains some prepared adventure or place of interest. How then to measure the probabilities of finding some useful (or useless) item ready for salvage in a randomly-selected city block?

The City Map

A separate Scenario Pack is available from Fantasy Games Unlimited. It is a small city, "Littleton," mapped out to show principal communities, and locations known to contain features of interest. If the Gamesmaster is using the scenario city to start his campaign, he should divide the city into Commercial, Residential, and Industrial areas, noting the divisions carefully. Random search in a particular area will have particular results.

There will come a time when the Campaign outgrows Littleton. The Gamesmaster will know it has come when he feels ready to tackle a real city with the techniques used in his Littleton. The archetypical *Aftermath!* campaign is centered on the Gamesmaster's home city, or a city he knows well. This permits him to run a flowing, easy-playing session, and to bestow strange fates upon those places he dislikes. As he has 10-20 years of pre-Ruin development to build into the city, he can alter enough of it to prevent the players from knowing everything about the city's layout. He can introduce locations not currently in existence (armories, government reservations, and so on) which will be the sites of character foraging in the scenarios.

No matter the size or complexity of a city, the first step to setting up a campaign based there is procuring a fairly well-detailed map. Street maps made from aerial photographs are best, especially if they show schools, museums, police stations, monuments, etc., etc. All such unique locales are grist for the scenario mill.

Most of the testing for *Aftermath!* was conducted in two campaigns, running concurrently. One was set in rural New England, the characters moving through several cities as transients, but spending significant time in only one major municipality. The other confined its activity to Washington, D.C.

The D.C. campaign was played on a 25-page street map of the city, at 2000' to the inch (1 km to about 4 cm). The scale is about 25000:1. This proved quite satisfactory for overall mapping. The same scale was used in the map for the New England campaign, played from a national road atlas and a thick spiral-bound camper's map of Rhode Island, which had the added advantage of showing contours and other major geological features not included in the Washington map. Be that as it may, the desirable features for the campaign map are:

Size: The scale should be such that details are clear. The larger the better, really. U.S. Geodesic Survey maps, cheaply available from the Government Printing Office, are ideal as far as scale goes, but lack certain other features.

Details: Street names, the location of special features and sites, both are quite useful to the Gamesmaster.

Especially important are police and military installations, major transport nexi, subway stations if the city has such a system, etc. The more color and detail that is available, the better it is for the design of adventures, which need clearly-defined sites and borders for the detailed and tactical maps.

Room: The map should be on stock that will allow the Gamesmaster to write his own notations. The print should be clear enough to show through an overlay of highlighting color, since color-coding is the easiest method for differentiating areas as Residential, Commercial, etc., or for putting a forest, totally rubble area, or what have you, on the map.

Convenience: The map, or map book, should be of a size and layout allowing the Gamesmaster to follow the characters' progress on it easily, with a minimum of fumbling or squinting.

Having procured a suitable map, sit down and think about what overall situation you want to exist there. Is it an "enclave city," where the survivors hold their communities in isolation, venturing out only at need, or do such survivors as dwell there move freely? We would advise discretion in scattering organized communities about in great numbers. Suddenly, adventurers are only an hour from succor in one direction or another. Consider this: the resources available in a given area of city are limited. If two communities come into contention for these resources, they must either join forces or fight. The results, as we see them, will run toward one of two extremes:

Enclave City

Small, widely separated communities. Each is fiercely independent, although trade and cooperation are not impossible. Four such enclaves in the D.C. campaign are signatory to a treaty providing protection for the medical community based at D.C. General Hospital. Inhabitants of enclaves are generally reluctant to become involved with affairs outside their "turf," and the wastes of the city combine with this to constitute an effective barrier to travelers, with the notable exceptions of Player Characters, bandits and other human predators, and weirds.

Boss City

Some group or individual occupies a central power position in the city. This is usually a result of superior survival planning ability and/or firepower. The upshot of such a situation may well be an incipient feudal society, the Boss and his men being the aristocracy, offering protection, order, and military defense to those who in turn proffer obedience and a tithe of their products. The footloose adventurers who seem to be the bulk of Player Characters are unlikely to be very happy as permanent citizens of such a regime, although if they can establish good relations with the inhabitants, such cities would provide a useful base from which to operate on expeditions into other territories.

The Condition of the City

Having established the overall nature of the parts of the city that survive as human communities, the Gamesmaster must deal with the rest of it. One of the premises used in the D.C. campaign was that the rate of growth of forest land was increased by a factor of 5 to 10 by the action of unforeseen

combinations of biowar agents. Thus, parks became thick forests or jungles, and extended their boundaries for blocks. In some areas, queuing tendrils of the jungle grew together, extending a barrier between parts of the city. Since Washington is possessed of a very extensive zoo, this forest is the habitat of a number of animals, both in their natural condition and with mutants among them. Lions roam the streets of the city, and charging rhinos have tried conclusions with jeeps.

Certain areas of the city will be leveled, a wasteland of empty shells and rubble. This is not necessarily a product of the Ruin itself, for a primary element of Secondary Kill will be fires, raging out of control in cities with neither fire fighters nor water supplies. Rioting also accounts for a good deal of the wasting of real estate.

It then remains to designate neighborhoods or larger districts by one or more of several gradations: Forest, Rubble, Residential, Commercial, Industrial, etc. This is best handled by lightly overlaying the map with color-coded highlighter, permitting the original streets and their names, and other map features, to show clearly through the colored inks. Pastel or lightly saturated colors should be used. A red overlay is a very clear marking, but may cause red-inked map inscriptions to disappear unless a very light shade of highlighter is used.

So now our city map is ablaze with colors, having special locations marked out. Large communities have boundaries drawn in, covering whole blocks of territory.

If the campaign is based on a ruin which left behind long-term, widespread contaminated areas, any such should also be shown on the map, possibly by another color code. A large radioactive zone, for instance, would fall into this category.

The Residential Areas

These were sections of the city devoted to family dwellings and apartments before the Ruin. Their individual nature will depend much on the actual city and the culture of the pre-Ruin society. Manhattan will be mostly high-rise apartments, probably fitted with very hefty internal defenses by 2000. Northwest Washington is mostly single-family houses of varying designs.

They will tend to be sources of light tools, Household Lines for salvaging electricity, commercial small arms, books, etc. The small stores and other commercial ventures in such areas are probably well-looted, although there might be a lot of good picking hidden under the rubble.

The Commercial Areas

These are the main business districts: larger stores, offices, government buildings, etc. They produce much of the same sort of thing as the Residential Areas, as well as more diverse manufactures, scientific equipment, and (unlikely as such things really are) such intriguing finds as still-live computer access points, working small factories, construction gear, and so on.

The Industrial Areas

The large plants, where heavy tools, high-power electrical sources, vehicles, and other large finds of machined parts can be located. Often such areas form the hideouts for the more technologically-oriented survivors, who may be keeping one of the installations running to produce items for use or trade.

Communities

Not every survivor is a lone wolf. Human nature is such that within months of the collapse, there will be social groups springing up amid the ruins of civilizations. Some will be pragmatic organizations, devoted to survival and preserving the members' lives in some comfort. Others will be motivated by strange drives, holding on to the last shreds of their sanity by their fingernails, probably at the cost of unhealthy fixation

on some slightly crazy ideal. Many will be downright nasty, run by gangsters or worse, tight little oligarchies or mini-police states. In one playtest, we have built military dictatorships (two of them, one run by a National Guard colonel who thinks he's George Patton, and the other a real snake pit run by elements of the American Nazi Party); politically extreme communes of the Left (the United Maoist-Trotsky Free University People's Cosmic Commune) and the Right (the little-known but much-feared group in Langley, Virginia, centered around the CIA Headquarters complex, whose roving brigades of "Commie Stompers" are the dread of scuzzy, longhaired adventurers all over D.C.); religious groups (a military school run by a certain winemaking order of priests and brothers has a nasty reputation as street fighters); and so on. There are sane, straightforward organizations around as well.

Communities can be places where the Player Characters stop to rest, safe, for the time being, from the unremitting hazards of their world. They can be centers of trade, where barter can turn things the characters don't need into valuable weapons, ammo, and food.

The only limits to the nature of the communities in the campaign are the space involved and the Gamesmaster's imagination. But there are factors he will want to categorize for simplicity's sake in his records, and we will address these here.

Territory

This is the actual home ground occupied by the Community. It should be outlined on the Campaign map, labelled so he knows who it is at a glance. Communities will generally maintain a watch on their borders, according to their powers, and react to insure that approaching strangers pose no threat. This can be as simple as sending an official greeter to meet the strangers, or setting up a mortar to cover them and hailing them via bullhorn with a warning to stop and drop their weapons. It will depend a lot on the psychology of the Community.

Size

A simple population figure will do, to get an idea of how many mouths there are to feed, and how large a population the characters are likely to see on the streets of the group's territory when they come to call. A corollary of Size is the next factor to be considered.

Military Strength

This figure should be given in the number of TSP points the Community can field in a battle. The Military Strength is an arbitrary figure which the Gamesmaster can assign to fit his own conception of what kind of fight the Community can put up, or can work out as a Custom Army. Our feeling is that 30-80% of the total population will be able to bear arms in a general war.

The value of a TSP can be adjusted up or down to reflect the power of the weapons available to the Community. Special note should be taken of any unique war machines the Community can field: artillery, tanks, catapults, chemical weapons.

Resources

Does the Community produce or control some special resource? Farming groups are of course rich in food, but how about manufactured products? The medical staff of the D.C. General Treaty Hospital were the area's prime suppliers of medical supplies and expertise, but were almost always short of certain fuels for their diminishing fleet of copters and ambulances.

This entry should concern itself with special strengths or weaknesses of the Community's economy. General considerations come in the next entry.

Trade

Is the Community interested in trade at all? If so, are they

pretty sharp or are they easy marks for a smooth line? The Gamesmaster should note the following:

- Expertise of the Community's chief traders. BCS scores should be generated in Commerce.
- Areas in which they will not trade.
- The percentage chance of having a given item. This can be based on the Utility classifications in the Search rules. Let us say that they have a 40% chance of having any kind of weapon. The characters ask about 45 ACP ammo. Roll 1D100. Score equals 73. "Sorry, buddy, nothing for a while in that caliber." How about 223 for the M-16? Die roll gives a 22, so it's in stock. Using the ammo generation rules from the Gun List, we find that they have a box of the ammo in stock.

And so it goes. Things that the Community is noted as using itself will cost much more than the basic barter values. Junk they have been keeping just to trade will be cheap. Things they really need will often get a better price than the characters expected. They may refuse to trade at all in items essential to their survival or outside of their areas of interest.

General Reactions

This is a flat modifier to dealing with outsiders, added to the Reaction Die rolls. A very suspicious, hostile enclave will have a negative modifier. An outgoing community, one devoted to trade, let us say, or with a number of commissions for freelance adventurers, will tend to have a decently high positive modifier.

Background

A few brief paragraphs or pages of detailed description. This is a text outline of the principal characters in the Community, the type of rulership maintained, the overall thrust of the group, and any notable adventures to be found within its borders. It fleshes out the bare bones of the other data to provide an atmosphere uniquely the Community's own.

Example 1

Name: Hitlerville

Size: 1200

Military Strength: 250

2 Commando Armored Cars

Resources: Busy industry, producing explosives, including some hand grenades. Runs very skilled Search groups, composed of slave labor under well-trained guards, on scavenging runs into Northwest D.C., producing mixed amounts of material for internal use and some trade.

Trade: will not export weapons, except light sporting rifles (Rimfire or Shotguns). 30% chance of most gear being available, but payment in anything but armament is at 1.3 times base value. They will pay double the base value for gasoline for their Armored Cars. The Community also maintains a small fleet of trucks and motorcycles, for which they will buy alcohol fuel at 50% above base value if it is in appreciable quantity (say 10 gallons or more).

General Reaction: -20 (don't tell me you're surprised)

Background: Run by the local survivors of the American Nazi Party, the Community is a frustrated

bunch of expansionists, held back from their "lebensraum" dreams by the well-armed Pentagon survivors on the river bank to their north, and the fiercely independent Mormons who are building a farming community on the west. Travelers are not generally allowed in the Community limits, being put up at the half-collapsed Howard Johnson's down route I-95.

The elite of the Community are the Party members, led by the Rockwell, their "Fuehrer." With a slave economy, they are a bad group to deal with except from a position of strength. Raids on distant groups are not unknown, although the Hitlerville leadership is careful not to be too blatant about it closer to home.

Example 2:

Name: The Aggies

Size: 400

Military Strength: Nil

Resources: The Aggies occupy the old University Experimental Farm complex. They are the primary breadbasket for the whole city. Like the Treaty Hospital, they do not maintain troops of their own, and are protected by combined elements of neighboring Communities, who recognize the Aggies' value to their own survival.

Trade: The Aggies will trade out only foodstuffs, although they have a packaging plant in operation on the grounds, and can produce any form of food from fresh out of the ground or off the steer, to Freeze-Dried. They will not accept payment in weapons, being an essentially pacifistic group, although ruthless with food thieves.

General Reaction: +15

Background: The survivors who started the Aggies were of the old "Farm Commune" philosophy, but with an appreciation for modern agronomy as a science. They are not fanatics on the subject of organic farming or "natural" foods, but use the best technology they can get to work their immense acreage. They are known to have a Solar Screen installation of indeterminate size, from which they get power to operate their farm equipment, which is mostly electric. They will pay double price for parts for such gear, which is getting harder to come by each year.

Only rarely will an Aggie leave the territory of his group. They are clannish in the extreme, with very intricate social rituals. But non-hostile strangers will find them affable enough. They will never refuse "The Three Squares" to a starving traveler, for they find the idea of starving to death repugnant. Those in such plight will be offered 1 day's rations at no charge.

The simple outlines that the Gamesmaster starts with will grow as his Players interact with the Communities. The neo-Nazis of Hitlerville have crossed the paths of our Player Characters more than once, and we now have developed the standard uniform and equipment of their soldiers, the usual systems of slave treatment they use, and hints of the Rockwell's master plan to take over his side of the river, as elements of the D.C. campaign.

SEARCHING AND FORAGING

The Players must designate the scope of their search: a single building, a house, a city block. Let us say that a block represents the largest feasible unit for a given search attempt. The basic operation involved in completing a search is handled by treating it as a Task. The Task Points involved are equal to the area of the searched area in square meters (round the actual measurements to any convenient sum in the right neighborhood). The average city block is 100-150 meters long. Multiply this by a constant based on the type of environment:

Forest or other Rural Environment: 2D6 + 5

Rubble: 1 + 1D3

Residential: 1D10 (representing the range of space between single houses and apartments)

Commercial: 3D6

Industrial: 2D6

Divide this figure by the total sum of the Search BCSs of all those characters involved in the search, multiplied by the number of minutes in one turn of searching, a time-scale to be set by the Gamesmaster and the players. This represents the number of Task Points to be fulfilled before Search Skill rolls are made to see if anything has been found. Base a BCS equivalent on the character's Natural Talent (as a score, not a BCS) if he lacks the Search Skill.

In one turn of searching, each member of the party engaged in the activity will roll a Wit Effect Die, totalling the scores to see how many Task Points they have totalled in that period. When the accumulated points indicate that the Task has been finished, a Search Skill BCS roll is made by the leader of the search. See Search Skill on page 18 of Book 2 for modifications. Additionally, a BCS penalty equal to the Task Points/10, nearest, is applied to the roll. If it succeeds, the party has found something. If multiple parties are being used on the same chunk of territory, they go through this process individually, building up their Task Points and rolling for finds (and perhaps having encounters) on their own.

Frank, Irene, and Jumbo are out foraging. They have decided to tackle a block of office buildings in the Commercial district. The building they have chosen is, the Gamesmaster decides (purely at random, based on his personal knowledge of that part of his city), a big one, half a block on a side. At a standard scale of 100 meters per block, that is a building a 50 meters per side, for a 2500 square meter search area. In a Commercial area, this is multiplied by the roll of 3D6. The die roll result is a 10, for a total of 25000. Now, Frank has a Search, Urban BCS of 18. Irene, a very survival-wise kid who grew up in the mean streets, has a BCS of 7. Jumbo, with a country upbringing (he drifted into town when a biker raid wiped out his farming community), has no Search Skill, but a Natural Talent of 17, for a BCS equivalent of 3. This totals 28 (18 + 7 + 3). They decide to search in 1-hour Turns, which are, of course 60 minutes. $60 \times 28 = 1680$. $25000/1680 = 14.88$, rounding to 15. At the end of 1 hour of searching, they roll their Wit Effect dice (1D10, 1D6, and 1D3 respectively). The total rolls add up to 13, so they have not achieved a significant chance to salvage anything

yet. After their second hour, the points amount to 13 from the last period, and rolls totalling 17 from this one. That is 30, or two Tasks worth, so they will make two Search rolls. Frank is the Search leader, since he has the best score. With two helpers, one Skilled herself and one not, the Gamesmaster decides to be moderately generous and give him +2, for an effective BCS of 20. But since the search has a Task Value of 15, there is a 15/10, nearest, or 2-point penalty attached. So Frank is using his base BCS of 18. His first roll is 4, so they got something out of it. His second roll is a 20. The Gamesmaster may let this go as a simple "nothing" result, or toss them a find they can do without ("Were you actually looking for that lion?") for the Critical Miss. Likewise, a Critical Hit might mean that they find two items, or a better kind of item. If they were looking for something specific, such as the first food they have seen in days, he might adjudicate that that is what they found.

Cleaning Places Out

Based on the type of area and the size of the search zone, the Gamesmaster may assign an arbitrary number of possible finds to it. A house-to-house search in a Residential area might find 0-2 items per house. A day-long run through a block in a Commercial area might hold a D10 + 10 potential finds, though that is not to say that the characters will locate them all.

As the city is a constantly fluid environment, old caches of gear being salvaged daily, characters dying to leave their own supplies lost in a hideout somewhere, there is no guarantee that what was empty last month will be so today, or the stash that the characters left behind yesterday hasn't been hit today. There would logically be a class of scavenger that moves with search parties, gleaning their trails clean of left-overs.

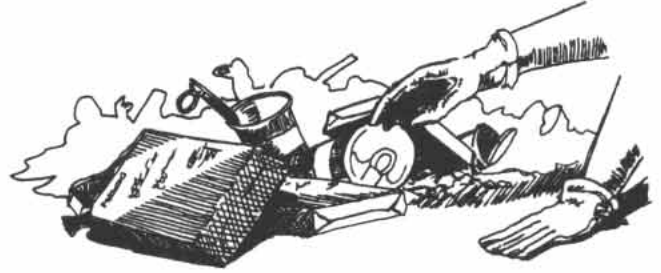
The Gamesmaster need feel no compunction on allowing, say, 1 Search attempt per area for Rubble zones. If that does not find anything, then there is nothing to find. Moreover, he may find before the first Search turn is done that the site holds no loot. He can let the characters hunt until they drop, without feeling obligated to inform them that the reason they can't find anything is because "anything" isn't there.



UTILITY

We discussed Utility as a concept in the various Equipment rules in Book 2. It carries over to the quality of finds made in foraging. Regrettably, the vast range of possible finds makes it impossible for us to give overmuch detail here. The following rules will act as a guide to the Gamesmaster's imagination in deciding what the characters have found.

Gamesmasters are encouraged to expand the Utility lists. A Sears Roebuck catalog, or some similar "map" of the vast array of possible goodies our technology can provide for those who are picking its bones, will be of tremendous value.



CLASS OF FIND TABLE (Roll D100)

| Class of Find | Die Rolls: | | | | |
|---------------------|------------|--------|-------------|------------|------------|
| | Rural | Rubble | Residential | Commercial | Industrial |
| Food | 01-20 | 01-05 | 01-15 | 01-10 | 01-05 |
| Luxuries | 21-25 | 06-10 | 16-30 | 11-25 | 06-10 |
| Weapons | 26-40 | 11-25 | 31-40 | 26-40 | 11-20 |
| Fuel/Power | 41-45 | 26-35 | 41-55 | 41-45 | 21-30 |
| Clothes/Armor | 46-50 | 36-40 | 56-65 | 46-55 | 31-35 |
| Tools/Kits | 51-65 | 41-50 | 66-70 | 56-65 | 36-50 |
| Medicine | 66-70 | 51-55 | 71-75 | 66-70 | 51-55 |
| Data/Communications | 71-72 | 56-65 | 76-85 | 71-85 | 56-70 |
| Transport | 73-80 | 66-80 | 86-90 | 86-90 | 71-85 |
| Environment | 81-90 | 81-95 | 91-95 | 91-95 | 86-95 |
| Survival | 91-00 | 96-00 | 96-00 | 96-00 | 96-00 |

These are only the crudest approximations, of course. Other classifications of area types might include Government, Military, Mining, Waterfront, etc., each with its areas of "wealth" and "poverty" in potential loot.

Having determined the class of material found with the above table, it only remains to roll to determine the Utility of the item.

UTILITY TABLE (Roll D20)

| Die Roll | Result | Die roll modifiers: | |
|----------|----------------|---------------------|----|
| 1 | Hazard located | | |
| 2-4 | Utility 0 | | |
| 5-7 | Utility 1 | Rural | +0 |
| 8-10 | Utility 2 | Rubble | -2 |
| 11-13 | Utility 3 | Residential | +0 |
| 14-17 | Utility 4 | Commercial | -1 |
| 18-19 | Utility 5 | Industrial | +0 |
| 20 | Cache | | |

Hazard

A dangerous situation has been encountered. This might be a structurally unsound building, a dangerous beast, hostile men or other characters encounter, a contaminated area, etc. The possibilities will be discussed more fully in the Dangers section on page 16.

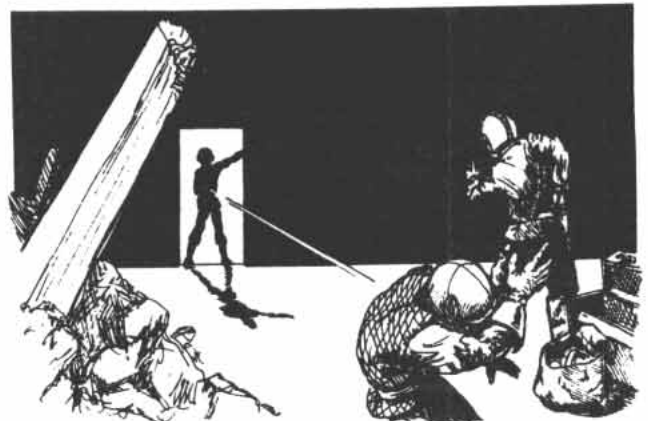
Cache

A treasure trove has been discovered. This represents a hidden stock of various items, a working shop of some kind, a lab, a firing range with weapons, etc. The Gamesmaster must fill in the blanks according to the kind of area and the overall nature of the find, although this latter area need not limit him. A Food Cache might also include contamination detectors and purification gear, for instance.

OPTION

Ownership

Especially when some valuable item has been found, or a Cache, there is a chance that it was stashed there by someone else. The Gamesmaster should construct a person or persons, or other logical owner (a Master Rat, perhaps) to whom the goods belong. He will have a 40% chance of discovering the characters busily looting his material; otherwise he will come upon the carnage of his hideout and track the thieves. The owner has a 5% chance per day cumulative probability of overtaking the characters. That means that, on the day they steal the goods, a D100 roll less than or equal to 05 indicates an avenging owner catching up to them. The next day, the chance is 10%, the day after that, 15%, and so on. Roll the chance of the owner catching them at the location of the stash once every hour that they are on the site.



CATALOGUE

The next set of lists are idea sheets for what the searchers have actually come across. If quantity is needed, roll a D20. The score represents a Group. The Effect Die roll for the indicated Group is the number of Units, or ENC, or items, or days' worth of material, or what have you, that the characters have found. Caches double the Effect Die roll at least. Of course, if a working Lab or similar installation has been found, then there is usually only the one unit.

If firearms or ammo have been found, their specific determinations have been given in Appendix 2.

FOOD

Quantity determinations are in Days' Rations for 1 man. Water supplies are assumed to be as much as they need, but the supply may not be there later.

- Utility 0 Spoiled foods. A portion of the food found is contaminated (1D100 determines what proportion is spoiled).
Contaminated Water source.
- Utility 1 Pure Water source.
- Utility 2 Fresh stock of natural foods (recently-killed animals or freshly-gathered or gatherable vegetable food).
- Utility 3 A stock of preserved natural food.
- Utility 4 Freeze-Dried food.
- Utility 5 Super-K Ration.
Stocks of High-Energy Glucose solution, in disposable plastic packs. Used to speed recovery of starvation or dehydration victims.

LUXURIES

Non-essentials that may have considerable trade value or may actually fall into other categories of goods.

- Utility 0 Junked household appliances or office supplies. Phonograph records. Stereo sets, etc. Bad liquor: causes Nausea for 1D3 hours if drunk.
- Utility 1 Home-fermented liquor (post-Ruin stock)—wine, beer, mead, not suitable for fuel. Jewelry. Objets d'art. Working appliances.
- Utility 2 Home-distilled liquor, not suitable for fuel. Athletic equipment (not overly useful) such as tennis gear, pool table, etc.
- Utility 3 Pure grain alcohol (drive it or drink it). Packaged, pre-Ruin tobacco products. Working portable tape player and cassettes, or similar usable, battery-powered entertainment equipment. Luxury foods (caviar, nuts, candies).
- Utility 4 Pre-Ruin liquor (bourbon, scotch, etc.). Useful, non-technological sporting gear: low value plastic "armor" such as football pads, baseball bats of wood or metal, camping gear, mountain-climbing equipment.
- Utility 5 A still (distilling apparatus) is found. Efficiency Factor of 1D3. Converts 5 units of corn, potatoes, etc., into alcohol equal to 1 liter per Efficiency Factor per hour. Double-distilled alcohol can be used as fuel.
Electronic "vices." Narco-headsets inducing sleep. Induction devices stimulating the pleasure centers of the brain. These have trade value, or can be used as pain killers, or modified to stimulate the pain centers (torture devices.) High technology sporting goods: guns (at the Gamesmaster's discretion), SCUBA gear, hang gliders, boats, skydiving gear, racing equipment, etc.

WEAPONS

Generally, only one or two actual weapons are found. Ammunition and other supplies can be quantified in one of the ways given in the Appendices or this section.

- Utility 0 Hand-to-Hand weapons. Select a weapon from the lists under Equipment. The WDM is reduced by the weapon's Utility x .1, since it is an inferior model. A Junked firearm. Dud ammo—it will not fire.
- Utility 1 A Utility 1 Hand-to-Hand weapon.
A disrepaired gun.
Faulty ammo. Critical Miss occurs on a roll of 18-20 when firing.
Weak ammo. Halve the BDG.
Materials to make a home-brewed explosive.
- Utility 2 A Utility 2 Hand-to-Hand weapon.
Saturday Night Special: A working gun with a permanent Durability of 1.
Rimfire ammo.
- Utility 3 A Utility 3 Hand-to-Hand weapon.
A normal working gun.
Ammunition (standard Ball Ammo or Shot Shell)
Working explosives.
- Utility 4 A Utility 4 Hand-to-Hand weapon.
Hi-Power, Hollow Point, or Fragmenting Ammo.
Grenades, Mines, Rifle Grenades, and other explosive weapons.
Features for firearms: Sights, Scopes, etc.
- Utility 5 Laser weapons.
High Tech ammo (explosive, incendiary, etc.).
Flame weapons.
Anti-Tank weapons.
Hand-reloading kits, and supplies of bullets, cases, powder, a swage unit, etc.

Machine Guns, Mortars, Cannon, etc., are not on the list. They are included in finds when and if the Gamesmaster feels ready to allow them in the campaign.

FUEL/POWER

Stocks of chemical fuels for vehicles, sources of electrical power, and so on. The Gamesmaster may have to juggle types and quantities to make the find logical for the area of the search.

- Utility 0 Dry and unrotted wood for fires. Also suitable for improvising torches.
- Utility 1 Irreparably damaged batteries.
Crank-operated manual generator.
Sterno or similar "portable fire."
- Utility 2 Bicycle-operated generator.
E-type Eternabatteries.
- Utility 3 Treadmill generator setup.
Alcohol fuel (also drinkable with safety).
Ev-type Eternabatteries.
- Utility 4 Salvageable electricity (live circuits) of wattage suitable to area of search.
Motorized generator.
Working wind or water generator, or parts for same if there is no logical reason for one to be set up.
Gasoline or Hydride fuels.
- Utility 5 Leech transformer.
Fuel Cells.
Solar Screen panels.

CLOTHES/ARMOR

- Utility 0 Light cloth stock.
Material which can be improvised into armor or shields.
- Utility 1 Stored clothing (Natural Materials). Max. Armor Value of 4.
- Utility 2 Heavy leather armors, light metals. Max. Armor Value of 7.
- Utility 3 Metal Armors up to Armor Value 10.
- Utility 4 Heavier metallic Armors.
Plastics of Flexible or Semi-Rigid types.
- Utility 5 Rigid Plastic Armors.
Integral Suits of Police and Military Armor.
Protective Armors, Lazab and Anti-radiation spray-on units.

TOOLS/KITS

This is very free-form. The Gamesmaster should try to come up with a logical reason for the type of kit to be there. See the closing section on Favorable Finds for ideas.

- Utility 0 Crowbars, hammers, axes, and other miscellaneous tools.
- Utility 1 Repair and manufacture Kits of type 1.
Crude lockpicks.
- Utility 2 Kits of type 2.
Good lockpicks.
Stethoscope for safecrackers.
- Utility 3 Magnalock tuner.
Kits of type 3.
- Utility 4 Kits or shops of type 4.
High-quality tools for lockpicking, etc. Memory storage Magnalock tuners.
- Utility 5 Full-scale shops, Labs, even working plants if the Gamesmaster so desires. Such finds, or Caches in such locations, would probably also hold a stock of finished products of such a plant.

MEDICINE

- Utility 0 Stocks of bandages.
- Utility 1 Medical Supply units.
- Utility 2 First Aid Kit.
- Utility 3 Medical Kit.
- Utility 4 Drugs.
Medical Computer. Defibrillator. Other Medical Technology devices.
- Utility 5 Surgery setup.
Mobile surgeries (ambulances with clinical gear).
Encephalographic Educators.

DATA/COMMUNICATIONS

Again, a rationale for what is found should be developed. The Gamesmaster will need to assign Skills and ranges to instructional materials.

- Utility 0 Fiction. Newspapers, magazines, etc. Used computer punch-cards.
- Utility 1 Maps (until Player Characters have found a map of the campaign city, the Gamesmaster may forbid them to use such a document as Players).
"Popular" texts. Rated for 01-05 in their respective Skills.
- Utility 2 Beginners' Texts. Have range starting at 01, plus roll of (D6 x 10).
Manuals with BCS D6 + 6.

- Utility 3 Reference books.
Prepared designs for various devices and processes. Can be used to build the item with proper resources and Skills, with all design factors already done.
Advanced Texts. Range is from 1 to 30 plus the roll of (D6 x 10).
Manuals with BCS D10 + 6.
- Utility 4 Calculators.
Mini-computers.
Full Range Texts (01-100 point range).
Manuals with BCS of D10 + 10.
- Utility 5 Computers or Data Access Points, terminals tied into working remote systems.

TRANSPORT

If the characters are deep in the center of a building block, they will just not find a transport system lying around, unless the Gamesmaster cares to adjudicate that they have floated into the garage in the basement. And isn't it a shame that the driveway up to the street is choked with rubble?

- Utility 0 Completely totalled, unsalvageable cars.
Roller skates, skate boards.
Pogo sticks.
- Utility 1 Muscle-powered vehicles: bicycles, tricycles. 40% chance that they are in kids' sizes.
- Utility 2 Low-speed powered vehicles: mopeds, electric scooters.
Junked car, parts are salvageable.
- Utility 3 Partially working or Disrepaired automobile. Low Durability if it works at all.
- Utility 4 Working vehicle, No fuel in it.
A horse (how did he get here?).
Horse-drawn conveyances.
- Utility 5 Working vehicle in good repair.
High Tech vehicles: rocket packs, mini-copters.

ENVIRONMENT

The term applies to devices or materials which analyze or otherwise affect the character's environment.

- Utility 0 A Junked or Disrepaired item from a higher Utility on this list.
- Utility 1 Matches, detergents, other household goods.
- Utility 2 Optical gear (telescope, binoculars).
Mine probes.
Candles, oil lamps, other non-electrical light sources.
- Utility 3 Flashlights, other electrical light sources.
Binary Detector gear ("Yes/No" detection of various radioactive, chemical, or biological contaminants). Mine-detecting equipment.
Chemical testing kits for water, soil, etc., quality and contamination.
- Utility 4 Detailed readout detectors (detect presence and give formula of or intensity for the hazard).
Various forms of intruder-alert systems (portable or non-portable). Burglar alarms, smoke detectors, etc.
- Utility 5 Radar installations.
Enhanced Vision Optical devices (Star-Light or Infra-Red).
High-sensitivity listening devices, either microphonic (bugs) or remote (like a shotgun mike, capable of picking up a whisper at 100 meters).

Seismic alarms, triggered by the vibrations of footsteps on the ground at ranges of up to 500 meters.

SURVIVAL

This is a bit of a catch-all category. The Survival materials include such goods as winter clothing, camping gear, rope, cookpots, canteens, etc.

Utility 0 Frayed thermal underwear (Thermal Factor 1.5).

Gunny sacks.

Twine or string.

Old blankets (ENC of .4 bundled up).

Utility 1 Small carrying sacks. Baggies. Light rope or clothesline.

Heavy cloth overgarments for winter (Q-HC), Thermal Factor of 2.

Mess kits. Eating utensils. Large glass bottles, flasks, jugs.

Utility 2 Heavy rope. Shoulder bags. Web belts.

Heavy cloth tents (1.2 ENC broken down for carrying). Holds 2-6 characters.

Rain gear.

Life preservers, inner tubes, etc.

Utility 3 Mountaineering rope. Other climbing gear.

Highway (or Railroad) flares.

Sleeping bags, backpacks, pack frames, rucksacks, etc.

Other containers, bottles, satchels, etc. Canteens.

Compass.

Utility 4 Backpacker's tents, at half the Encumbrance of the normal type.

Good thermal underwear (Thermal Factor 2). Light Cloth equivalent.

Hiking gear: foam instep pads (+5 to effective Speed for Strategic Movement), alpenstock, etc.

Axes, machetes, brush knives, collapsible saws, etc.

Utility 5 Flare guns or other long-distance signalling devices.

Electrically-heated underwear.

Space heaters, electrical (uses E-5 at 1 Charge per hour).

Inflatable life rafts, canoes, kayaks.

It goes without saying that these lists are a fraction, a microscopic minimum, of the possible finds a search can turn up. All we can do in the space available is give the Gamesmaster fuel for his imagination in dealing with such events. The campaign depends on his ability to go through the mental operation of "they found something like this—where are they—let's say they're in a police station—Utility 1 Environment in a Police Station?—Aha!—Okay, folks, you have found a valise with a fingerprint detection kit in it."

This is not too hard (nowhere as hard as it sounds), for those who can free themselves from a need for detailed tables and charts in determining loot. We are in the position where a whole city is there for the taking. If only a fraction of its former wealth remains, that is still a staggering diversity of goods.

Don't be afraid to make up the story as you go along. Even if you are later inconsistent, the flow of play will forgive much. So the place was too rich to clean out a week ago. That stuff they hid in a sub-basement will not necessarily stay put. Do the Players think they have the only competent scavengers in the city in their group? Oh, no, not by a long shot. The cache they left behind is fair game, and when the buildings are burning down almost weekly, why should they even expect the block to look the same when they come back?

No, in the fluid world of *Aftermath!* it is no problem to live for the moment in calling the shots. For every moment could be the character's last!

QUALITY OF FINDS

The simplest way to narrow down the choices as to just what kind of goodies a search has turned up is to slant it toward what the characters need and can use (this presupposes that something anyone can use, like medical

supplies, is not the answer). The fastest method of getting into the correct frame of mind to play Santa Claus is by rolling Reaction Dice. The better the Reaction, the more useful the find. This can even be a justification for increasing the amount of goods found, or their general utility to the group as a whole.

For example, a party with decent hand-to-hand weapons but no guns gets a Weapons find. In such a case, the Gamesmaster might just roll Reaction dice first. If it comes out Good or better, just assume that they have found a firearm or two, and probably some ammo for it. A Mediocre roll would require that their Utility roll allow them to find guns. A Bad roll or worse would insist that, if they find a Weapon, it be something that none of them have the Skill to use well.

The overall concept here is: is this just good for the characters, really great for the characters, or frustrating, mean, rotten, and crummy for the characters?

LOGIC OF FINDS

Let us say it just once more: try and provide a reason (even if it is only in your own mind) for the goods located being where they are. Fill in some cheap fiction to flesh it out. If the first couple of finds form a pattern, assume that it will hold for the rest of that search (a Medical Supply find might decide the Gamesmaster that they are looting a medical office building). This can, in turn, give background to the encounter they have next turn. The table says it's a bunch of Ghouls. Well swell, but this way they are all crazy doctors, perverting their surgical skill to butcher their meat, and armed with anesthetic dart guns instead of normal firearms.

This kind of thing turns random searching from a rather boring way to gain doctrinal treasures into an organic (sometimes overly organic) part of adventures in the world of the *Aftermath!*

ENCOUNTERS AND HAZARDS

The many hazards we have already described in **Aftermath!** can be met in as many forms. Our own opinion is that the hands of men bear more dangers for the Player Characters than the claws of beasties, but admittedly, a raging tiger or bear is not exactly a kitten. The environment itself, especially in the cities, is inimical to life: the crumbling buildings offer as many traps as they do resources to preserve life, the very air may bear the invisible death of virus or gas, the good earth may radiate the cell-tearing poison of nuclear contamination. If they are to live to bear the promise of renewal to future generations, the characters must overcome all these.

The dangers of the Aftermath may be met in several ways:

Random Encounter: As they travel overland (Strategic Time Scale) there is a chance that the characters will run into some group, individual, or event. The encounter need not be hostile. There may be opportunities for mutual aid, trading, or simply companionship, rather than combat.

Local Condition: The Gamesmaster has designated some local condition as existing on the map in the area entered by the characters. This can be a Community, a contaminated area, a local gang or tribe, etc.

Prepared Adventure: Actually, it need not be all that "prepared." The Gamesmaster has placed a scenario on the map at that point. This may be the headquarters of some major Non-Player Character into which the characters have blundered, it may be the scenario specially designed for that night's playing session, which the Gamesmaster has simply decided to put in their path to get things started, or it may be an improvised encounter of some degree of complexity, created on the spot. This latter type of adventure can be very rewarding. In one playtest campaign, the characters took shelter from a contaminated rainstorm in an old motel. While waiting for the rain to stop, it was determined that they had had a random encounter. The tables for this showed that they had met a pack of feral dogs, led by an intelligent mutant dog. Unable to resist the possibilities, the Gamesmaster created the motel on the spot, laying out a crude floorplan and designating the building as the headquarters of a pack of organized canines, who kept several human "pets." These pets allowed the dogs to have such defenses as tear gas canisters hooked up to the old sprinkler system in the motel's ceiling, and smaller dogs who were forced to carry radio-detonated satchel charges strapped to their backs, as suicide troops. In a final burst of madness, the leader animal was made telepathic, so that his sardonic comments could be broadcast to the characters. What had started as a minor, random encounter was turned into a major adventure with the application of five minutes of imaginative thinking.

RANDOM ENCOUNTERS

There are several traditional gaming techniques for determining when characters will have a random encounter, and just what that encounter is. The usual one is a table, keyed to various die rolls, to generate a particular encounter situation. It has the advantage of availability: it is there when you need it. The considerable effort in constructing it has been done, and all that is needed to generate an encounter is the time to roll the dice. The

disadvantage of encounter tables is that they can become static. The same combinations of events keep occurring. Creative interpretation can offset this to a degree, but there will be times when the fourth straight appearance of giant roaches is enough to make Players and Gamesmaster alike scream in agony.

The encounter deck is another tried-and-true system. The Gamesmaster prepares a number of index cards in advance, each one listing the details of a mini-scenario, or at least the numbers and vital statistics of an encountered group of characters, or a solo encounter. When an encounter is needed, the Gamesmaster draws a card at random. The advantages are diversity, since each encounter card can be as unique as desired, and standard cards listing simple, clear-cut scenarios can be shuffled back into the pack after use. Since the card can also indicate that a large scenario has been encountered ("Pull out file on 'The Ghouls of K Street'"), the deck has the added advantage of allowing more elaborate encounters to be plotted than can easily be generated on a table. The single biggest disadvantage to encounter decks is that they are never completed. They require a fairly continual amount of work to keep fresh. This may not appear as a disadvantage to many Gamesmasters, who prefer to update their campaigns constantly in order to maintain freshness.

A fairly short sample Encounter Table follows, both to provide a model for the Gamesmaster to use in constructing his own, and to give him something to use until that job is done.

SAMPLE ENCOUNTER TABLES

For every day of Strategic Scale Travel, or of encampment in the open during the night or day, roll 1D20. A score of 1-3 indicates that an Encounter has occurred.

CLASS OF ENCOUNTER (Roll 1D20)

| | |
|-------|---------------|
| 1-8 | Men |
| 9-15 | Beasts |
| 16-18 | Event |
| 19 | Contamination |
| 20 | Phenomenon |

MEN ENCOUNTERS (Roll 1D100)

| | |
|-------|----------------------------------|
| 01-30 | Group—Small (2D3 men) |
| 31-40 | Group—Medium (3D6+10men) |
| 41-50 | Group—Large (3D20 + 20 men) |
| 51-55 | Solo Traveler |
| 56-70 | Duo Team (2 members). Roll 1D6. |
| | 1-3 2 humans |
| | 4-5 Human and Tame Animal(s) |
| | 6 Human and Mutant Animal(s) |
| 71-80 | Personality Non-Player Character |
| 81-85 | Maniac |
| 86-90 | Disease-carrying Maniac |
| 91-00 | Special |

ORIGINS/INTENTIONS OF GROUPS (Roll 1D20)

- 1-3 Wild Group: Nomadic and semi-primitive. Often composed largely of kids who grew up without any adult care.
- 4-6 Tribal Group: Members of primitive Tribe, a low-technology form of Community.
- 7-9 Community: Members of one of the established Communities in the campaign. If they are far from their territory, they will have some form of transport.
- 10-12 Street People: Groups of semi-crazed scavengers who form mobs for self-preservation.
- 13-14 Ghouls: Cannibal groups.
- 15-16 Monos: Groups with some fixation: pre-Ruin politics, religion, culture (Samurai, Western, Medieval, etc.). There are Mono Communities.
- 17-20 Bandits: Those who prey on others.

NOTES ON MEN ENCOUNTERS

The encounters with people are the biggest potential headache for the Gamesmaster, since such figures can be every bit as diverse in Skills and equipment as the Player Characters themselves.

It will be very useful to have pre-fabricated samples of group encounters, solos, and so on, made up beforehand. Then, if an encounter with such characters is indicated, just whip out the paperwork and you are all set.

The encounter with a Personality Non-Player Character can be as significant as the Gamesmaster wishes it to be. It allows him to slip an equalizer into weak parties heading into dangerous scenarios (equalizers are non-player characters with more ability than the Player Characters, used by the Gamesmaster to even the odds in their favor when they are in over their heads). He can be a famous figure in the local folklore (or an infamous one, according to your tastes), or he may just be a fairly well-fleshed-out character, there to provide some color for the campaign. He may at least know where the characters can find a safe place for the night. He can also be used to lead the Player Characters to the scenario for the playing session.

Maniacs and Diseased Maniacs are mostly filler on the list. One is a harmless madman. The other carries some disgusting and communicable infection. There are many possible variations on this theme.

A Special is just that: some unique human (or semi-human) encounter that fits in your campaign. In playtest, this has included run-ins with human Quislings working for alien invaders, ninjas in the employ of the insidious Doctor Fu-Manchu (who has come through the Ruin quite well and is currently holed up in a secret base somewhere in the Rocky Mountains), and a real vampire. Do not overlook the potentials of releasing the manlike monsters of fantasy upon the defenseless world of the Aftermath. Several short stories in the genre have done so with great success, as have a number of comic books.

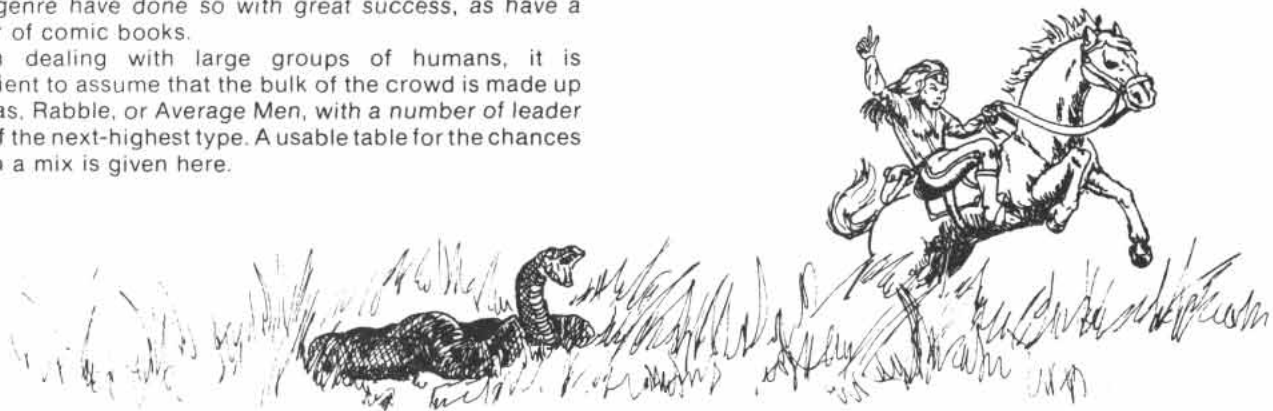
When dealing with large groups of humans, it is convenient to assume that the bulk of the crowd is made up of Extras, Rabble, or Average Men, with a number of leader types of the next-highest type. A usable table for the chances of such a mix is given here.

GROUP ORGANIZATION (Roll 1D100)

- 01-10 All Extras (DRT of 1)
 - 11-25 All Rabble (DRT of 10 or 1D10)
 - 26-30 Extras with Rabble Leaders
 - 31-60 All Average Men
 - 61-70 All Rabble with Average Leaders
 - 71-90 All Average with Superior Leaders
 - 91-00 As 71-90 above with a Heroic Overall Leader
- Leaders occur in a ratio of 1 Leader per 10 other characters.

BEAST ENCOUNTERS (Roll 1D100)

- 01-03 Lion
- 04-08 2D3 Lions
- 09-11 Tiger
- 12 D3 Tigers
- 13-14 Gator: On land, 1. Near Water, D3
- 15-18 Gator: On land, D3. Near Water, 3D3
- 19-30 Small Game (see page 26)
- 31-35 Black Bear. 30% chance of Mother with Cub (extremely dangerous)
- 36-38 Grizzly Bear. Same chance as above
- 39-40 Kodiak or Polar Bear. Same chance as above
- 41-55 Dogs. A pack of 3D3 (60% chance) or a large pack of 4D6. Roll 1D10 for Size of each dog, or group of dogs. Score of 1-7 indicates equivalent Size grouping. Score of 8-10 means Attack Dog. Roll D3+4 for Size of Attack Dogs. 20% chance per animal of being Rabid
- 56-60 Wolves. Pack of 4D6 animals
- 61-62 Giant constrictors. 2D3 appearing
- 63-64 Rattlesnakes. 60% chance of 1, in path of some member of group, as a Hidden Thing. If not seen it is stepped on and will attack. Otherwise, a nest of 1D100 snakes is found, but dangerous only if disturbed
- 65 Pack of Feral Cats (3D3)
- 66 Pack of Rabid Feral Cats
- 67 Rhinoceros
- 68 Rhinoceros, 1D3
- 69 Elephant
- 70-72 Razorbacks
- 73-88 Game (see page 26)
- 89-00 Rats



RAT ENCOUNTERS (Roll D20)

- 1-6 2D6 Mobs of Rats
- 7-11 2D10 Mobs of Super Rats
- 12 2D10 Super Giant Rats
- 13-16 2D6 Ruin Rats. Armed with long spikes (WDM of 1.5). There is a 60% chance that these weapons are coated with some low-grade form of poison. In any case, they will be filthy and expose those hit to infection
- 17-18 Super Mob. Roll on this table with 1D10. That type of Rat is encountered, but the number of Mobs rolled is doubled
- 19-20 Master Rat. Roll 1D6 for circumstances
 - 1-2 Solo Master Rat. Armed with Random Pistol. 20% chance of having his lair nearby, with a chance of technological loot in it
 - 3 Solo Master Rat as above, but also controlling 2D6 Mobs of normal Rats. There is a 30% chance that these will be Super Rats instead
 - 4 As above, but controlling 1D10 Super Giant Rats instead
 - 5-6 Mated pair of Master Rats, armed as 1-2 above. 40% chance of their lair being nearby.

Gamesmasters who wish to try something interesting with Master Rats are invited to create "Genius" Rats, Master Rats with even greater levels of intelligence than their fellows. Such mutants might well have definite plans about the fate of mankind. In playtest, at least one such creature existed, holed up in an abandoned museum. She had enslaved a number of technicians (humans, that is) who were forced to develop intricate defenses for her. Adding some telepathic capability to allow the Rat to communicate with humans can also be interesting. They should not be overlooked in the quest for unique non-player characters.

EVENT ENCOUNTERS (Roll 1D100)

- 01-10 An opportunity for Search Skill is found. If BCS made, a find is generated as if the characters had been Foraging (see Foraging, page 11)
- 11-15 Characters hear a firefight break out several blocks away
- 16-25 Characters see a combat occurring some blocks away
- 26-35 Characters come across a source of campaign background: political information, location of some scenario, information about a major Non-Player Character, etc.
- 36-50 Characters observe some "open-ended" situation: Ghouls getting ready to butcher their victims, attempted rape, lynch mob getting the rope ready, woman going into labor, someone in imminent danger, etc. Can escalate into a mini-scenario
- 51-55 Aircraft of some kind flies overhead
- 56-65 A vehicle of some kind drives by at high speed
- 66-70 A Sniper opens fire at 200-meter range with a rifle. He will fire until spotted and then run away (probably escaping)
- 71-75 Characters wander into a minefield. Gamesmaster should distribute 2D6 mines on the map around the characters, at random or in a pattern of his choice. Use DAT display for this situation
- 76-80 Characters see a UFO
- 81-85 Phone in nearby booth or building rings

86-95 Locate the residence of some individual or small group. Treat as a Men encounter

96-00 Gamesmaster's choice.

CONTAMINATION ENCOUNTERS

This is hard to quantify. The type of contamination in question depends on the campaign. Radioactivity is not likely if no atomic weapons were used in the Ruin. It boils down to this: what kind of contamination is encountered (atomic, biological, or chemical), is it passive (only endangers characters if they walk into it) or active (it comes to them, like plague carried by a victim)? If the characters have detectors, they should be able to avoid the encounter. As such encounters can be extremely deadly and very hard to game fairly outside of DAT display, you may not wish to include them in your Encounter Table as such.

PHENOMENON ENCOUNTERS

Another tricky one. In general, it means a significant environmental change or condition. But the exact type depends on your campaign's climate and the nature of the Ruin. Are earthquakes common in the campaign? Then they should appear on this table. Lightening Bolts? Then let random strikes with a given BCS attack the characters, doing 1D6 Charges of electrical damage. Is the rain likely to carry contamination? If so, then what kind? When you have a clear picture of these factors, you can build your table.

Examples of Phenomenon Hazards are:

Earthquake: Small or large tremors. If in the open, the only real danger is from falls. A Strength CST prevents this. Tremors are assigned a Force (score rolled on 1D6 x .5). If inside a building with Structural Stability less than this number, all are exposed to Structural Hazards (see page 19). If the campaign is in a heavy quake area (West Coast, Hawaii, etc.) the Force die roll can be increased.

Contaminated Rain: If the water is radioactive, assign the rainfall a REM per Hour figure, just as you do for other sources of nuclear contamination. If it contains a biological or chemical contaminant, assign it a rate factor. This represents the concentrations of contaminant in the water. Rate factors should be on the order of "Virulence Groups per Hour." Since the contaminating agent has an inherent Virulence, when the characters have been exposed to the rain for a sufficient period of time for it to "generate" that Group they must save against exposure to the contaminant. Thus, a storm carrying a Group 2 biological agent (a disease) starts, with a rate factor of 1 per hour. For every two hours of exposure, the characters will have to save against catching that disease.

"Acid" rains will have a maximum level, and will attack the characters as Acid does for every hour of exposure, at that level. These are mostly encountered in campaigns where civilization polluted itself into the Ruin.

Your Encounter Table should also have uncontaminated storms in it, to keep Players guessing.

Windstorms: Very high winds are assigned a value once they exceed 30 knots (about 50 kph). For every 20 kph above 50, they will add 1 to the effective Encumbrance Status of characters forced to move through them. They also wipe out sounds beyond a range of about 2 meters, if that much. Tornadoes and other such high-powered wind storms will apply a Blast effect to characters in their area of influence (a touchdown within 50 meters). This should be about 2D20 + 10 of Blast. They will affect buildings as Earthquakes do. A hurricane or direct hit by a tornado will have a Force in this regard of about 1D10x.5.

Flash Floods: These expose the characters to a situation where they must swim for their lives, to the nearest point

of safety the Gamesmaster designates (say 1D50 meters to reach some kind of safety). The flood is given a score of 1D3, or 1D6 if it is a nasty one, which is subtracted from the swimming BCS.

These are the principal forms of dangerous natural phenomena to be encountered in *Aftermath!* Since the most that characters can do when confronted by such attacks is to try to survive, it is not advisable to use them too liberally.

LOCAL CONDITIONS

These will not usually be the kind of thing encountered without pre-planning. As far as the more fixed and generally known Local Conditions in the campaign go, they will be the major Communities and tribal or gang territories, major contaminated areas, and places having reputations as strange or dangerous. This is assuming that the Player Characters are all natives of the area in question. Locals would know where you do not want to go in their territory—just ask your host the next time you visit New York City (if you already live in New York, you know what I mean).

Of course, there are Local Conditions that no one is really sure of. That bandit gang is likely to start staking out new areas once everybody gets the word about their old turf. The contaminated rain might leave a new section of town unhealthy for humans. Such things would receive the Gamesmaster's attention from time to time, as he does the "housekeeping" on his campaign.

STABILITY

The Structural Stability is a score measuring the physical condition of a given building, buildings, or even neighborhood. It is expressed as a number from 1 to 10, where 1 means that the building is little more than a shell and 10 implies that it is as solid as the day it was built. Some buildings (earthquake-proof or hardened sites) will have a higher score than 10. Exposure to fire, explosives, storms, and the inexorable passage of time all tend to lower the Structural Stability of a building. When the Characters enter a building with a score of less than 10, they are in danger of encountering a Building Hazard.

In larger time scales than Detailed Action Time, each turn (of whatever length) spent moving in a building with a less-than-perfect Structural Stability requires a check for Hazards. Roll 1D10: if the die roll is greater than the Structural Stability of the building, a Hazard has been encountered.

This will expose the members of the party who fail to make a Search, Urban BCS roll, minus a penalty equal to 10 divided by the Structural Stability, nearest, to an "attack" by the Hazard. The BCS for the Hazard is equal to 18 minus the Structural Stability score. Characters can defend against this only with their CDA, reducing the BCS by that amount. If they make a Speed AST, they will double their CDA. A CST will triple it. A Critical Hit will avoid the Hazard's attack entirely.

If the Hazard hits a character, he is exposed to a damage potential in Crush type damage equal to the Effect Die roll for a Group determined by subtracting the Structural Stability from 10, multiplied by a random WDM equivalent. This is determined by rolling 1D6 and multiplying that score times .5. This attacks the victim's Average Armor Value.

A building with Structural Stability of 3 will have a Group of 7, for an Effect Die of 2D10 + 2, and rolling the D6, the Gamesmaster gets a 5, for a WDM of 2.5. This is the kind of damage potential that a Hazard in that building would levy against a character.

The damage potential of a given Hazard's attack on a character is also the percentage chance of "Hazard Special Effects," some quirk of the situation that may redound to his good or ill. After generating the damage potential, the

Gamesmaster should roll this percentage before applying the damage to the character, as the Special Effects may alter the effects of the Hazard.

HAZARD SPECIAL EFFECTS (Roll 1D100)

- 01-10 Narrow escape! Take only 1 point of Subdual Damage
- 11-30 No special effects either way
- 31-50 Disabling Damage to random Location. Unable to use affected part of body until Health AST made (check every hour). Disable to Head or Torso means unconsciousness
- 51-70 Conked on the head! Out cold until Health AST made (check hourly)
- 71-85 Buried! Task Points equal to damage potential required to dig victim out. Strength AST needed to dig, with a Task Period of 1 Combat Turn. Victim may dig himself out, but uses Strength CST and is minus 1 effective Strength Group
- 86-90 Buried!! As above, but victim is subjected to Constriction attack by the debris each Combat Turn he is in there. Applied vs. Torso at a base value equal to Hazard's Group as Strength Group
- 91-95 Fall! Take a Fall result from an effective height equal to Hazard's Group in meters
- 96-00 As Fall, but effective height is equal to Hazard Group Effect Die roll

When applying this system in Strategic, Tactical, or the variable scale used for Foraging, roll 1D10 to determine the least-safe Structural Stability to be encountered in that turn, for purposes of calculating the Hazard. If you do not wish to make such events very common (a good idea in many campaigns—they're hazardous enough), use 2D10 to determine random Stability, thus eliminating frequent occurrences of unsafe structures.

In Detailed Action Time Scale (DAT), since the action is mapped out, and individual buildings are dealt with rather than whole blocks at a time, assign each building involved a Structural Stability. If structural Hazards are not in tune with the scenario being played, assume a value of 10. Then simply indicate dangerous locations (flights of stairs, fire escapes, rotted floor areas, crumbling walls or ceilings) on your map of the building.

If you want some variety, you can vary the Structural Stability of the building. Say it has an overall score of 9, making long treks through it pretty safe. But the doorway (the locked one) has a Stability of 4, if it is forced open, while that landing has a score of 6, not to mention the hole in the wall over there, lurking with a score of 1, waiting for some idiot to try crawling through it. Hazard encounters in DAT are aimed only at the character(s) who trigger them, not the whole party, unless they are all in on the decisive action.

In calling Hazard situations in larger scales, it will add immeasurably to play if some plausible event is used to describe the misfortune, rather than a dry announcement that so-and-so has just taken so many points of damage. Creative Player reactions to such calls should be rewarded by better odds of escape. Dumb player response should probably be proportionately punished, but we leave this to the Gamesmaster's mercy (his *what??*).

RANDOM COVER

Another element of creating the environment that Player Characters may evince a keen interest in from time to time, is the availability of some form of cover from missile fire. As they wander a wilderness peopled by trigger-happy neighbors, the ability to get one's person out of harm's way in a hurry may be of critical importance.

The chances of locating cover in a given type of terrain are given on the table below. Simply roll 1D20, cross-reference the score rolled with the type of terrain in which the character finds himself, and the resulting cover situation is available within 2D3 meters of the character. If the roll indicates "No Cover," a Search BCS of the appropriate type may be rolled for. If it is made, then a second try for locating cover may be made. The cover, if any is found, will be 2D10 + 5 meters away. If "No Cover" is again the result, there is no chance of any more being found until the Character has moved at least 25 meters from his present position.

RANDOM COVER TABLE

| | Rubble | City | Suburbs | Open | Forest | Swamp | Barren/Desert |
|----------------|--------|-------|---------|-------|--------|-------|---------------|
| No Cover | 1-3 | 1 | 1-2 | 1-4 | 1-3 | 1-3 | 1-5 |
| Visual Cover 1 | 4-5 | 2-3 | 3-5 | 5-8 | 4-7 | 4-8 | 6-9 |
| Visual Cover 2 | 6-7 | 4-6 | 6-9 | 9-10 | 8-11 | 9-13 | 10-11 |
| Prone Cover | 8-12 | 7-8 | 10-13 | 11 | 12-15 | 14-16 | 12 |
| 1 m. Cover | 13-15 | 9-12 | 14-16 | 12-17 | 16-17 | 17-18 | 13-18 |
| Chest Cover | 16-18 | 13-16 | 17-18 | 18-19 | 18-19 | 19 | 19 |
| Full Cover | 19-20 | 17-20 | 19-20 | 20 | 20 | 20 | 20 |

Visual Cover 1 and 2 are described under Target Cover in the Firearms Rules (Book 2, p. 34).

Prone Cover will afford cover to a prone character. He may fire over this as described in the Firearms Rules (Firing from Cover; (Book 2, p. 33).

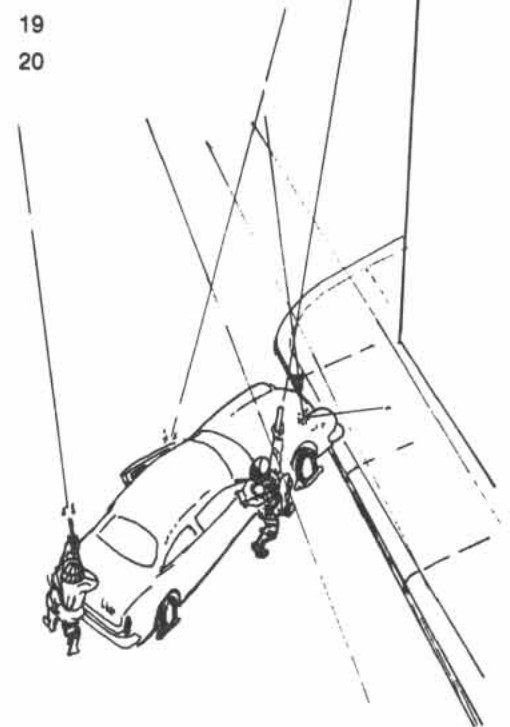
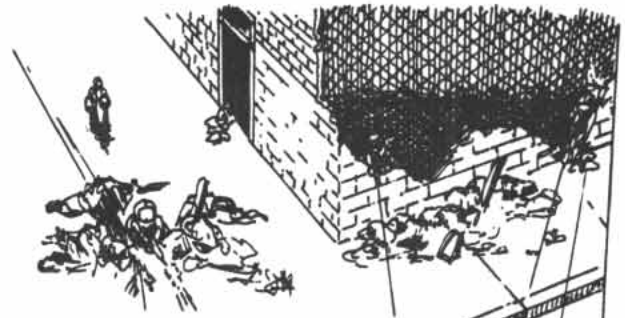
1 m. Cover is some form of Cover extending about 1 meter high.

Chest Cover will cover a standing man from Location 6 down. He may fire over it from a standing position, crouch behind it to be completely covered, or kneel to fire around the corner of it.

Full Cover will cover a standing man completely. He may fire around the corner from behind it. It may be a wall or building, a thick tree, etc.

Unless the Gamesmaster decrees otherwise, solid cover is assumed to be some material not penetrable by bullets. He may choose to make it of some logical material based on terrain (stone, brick, construction plastics in urban areas; wood, stone, or old brick in more rural ones).

This rule is designed for use in Strategic or Tactical Scale situations where the Gamesmaster does not have a detailed map of the area. In Detailed Action Scale, cover or its lack will be based on what the map shows.



BEASTS

The clash between man and beast is a classic situation of fantasy adventure. Many tales of Post-Ruin worlds postulate the release of animals in zoos and their subsequent re-adaptation to the wild and proliferation in the city owning the zoo. This allows a Gamesmaster to present the adventuring characters with encounters involving beasts not native to the country in which the campaign is set. Many Post-Ruin scenarios also posit the return of native animal species to former numbers and habitats.

In a world of reduced resources, encountered animals may also prove to be a valuable food resource for characters short on rations. The preceding, of course, assumes that the animals do not first make the characters into rations to feed the wife and cubs.

Beasts are presented in two categories, the hostile (carnivores, omnivores, and scavengers which might attack a man as a food source) and the non-hostile (herbivores which would rather flee or hide than fight).

Most animals operate according to programmed response patterns. A deer, for example, will run when threatened unless it is cornered, or believes itself cornered. The Gamesmaster is provided with some guidelines for the responses of the animals detailed later in this section. *Animals are, however, notorious for doing the unexpected.* This should be kept in mind by the Gamesmaster to be used when Players let their characters get too confident.

Each detailed animal is presented with a set of statistics similar to those used for humans. These are a collection of abilities, characteristics, and "skills." In many cases, the derivation of an animal's Ability is not the same as for a human. If an animal is required to make a Saving Throw for some reason, the number to be used can be determined from the statistics given. If a Deftness or Speed Saving Throw is required use the beast's Base Action Phase times 2 as its Attribute for the Throw. Treat its Mass as its Strength for Saving Throws involving that Attribute or for determining an Effect Die, if a matching of Strengths is needed for any reason. For Health Saving Throws, Hostile animals will have a value of one-third their Mass. This is used for both Critical and Ability Saving Throws. Non-hostile animals have a percentage Saving Throw equal to their Shock Factor.

Most animals are not particularly intelligent, as we use the term, but are crafty and wary. Their keener senses prevent them, in many cases, from being fooled as easily as a man.



Due to the multitude of factors involved, no set pattern of Saving Throws involving Wit is given for animals. The Gamesmaster should evaluate his opinion of the animal's capabilities and the situation, and decide on a value for a Saving Throw. Such a value would be used in that situation only; remember that a given animal is rarely fooled in the same way twice.

Animals are capable of moving at a higher-than-normal speed, or "Run," in the same way as humans.

Unless specified otherwise, the resolution of Hit Location on an animal will be done using the quadruped table and body map. Similarly a beast will occupy two hexes on the DAT display in the manner of a horse.

The letter appearing after an animal's BCS is an evaluation of the "weapon length" for determining Zones of Influence and Effect Die modifications due to range.

HOSTILE ANIMALS

The kinds of hostile beasts are grouped according to the kind of animal (cat, dog, etc.). A general description is given of attack and response patterns. This is followed by a listing of specifics for some beasts in that grouping.

BEARS

Bears are omnivores and do not really hunt prey of a substantial size. They have been known to attack men when wounded, threatened, frightened, protecting young, or denied something they want, such as a picnic lunch. Bears are given two Base Movement Allowances, one for quadrupedal and one for bipedal stance. They will move *about quadrupedally*, but will tend to attack men in bipedal stance. Use the appropriate Hit Location Table.

Bears favor attacking with their paws. Such blows have incredible power behind them and a check for a Bash should be made when a Paw attack is successful. If the bear scores two successful Paw hits on the body of a character, there is a 50% chance that the attack will become a hug. Damage for only one of the paws is delivered to the character, but he will be held as if he had received a Pin from a character using Unarmed Combat Skill. The character need not be prone to receive this result. Once the bear has a character in a hug, it will attempt to bite him on each Action. It will also do constriction attacks on each Action. The Mass of the bear is used to determine the Effect Die to generate the constriction results.

Black Bear

| | |
|----------------------------|---------------------------|
| BAP: 10 | Bite BCS: 6(S) WDM: 1,L |
| MNA: 2 | Paw BCS: 12(A) WDM: 1.5,B |
| PCA: 5 | Damage Die: 1D10 |
| BMA/quad.: 1 1/4 bi.: 1 | Mass: 20 |
| AV: 5 | |
| WDA: 2 | |
| CDA: 2 | |
| DRT: (3D6 + 15) x 2 | |
| SF: 20 | |

Grizzly Bear

BAP: 8 Bite BCS: 6(S) WDM: 1,L
MNA: 1 Paw BCS: 14(A) WDM: 2.5,B
PCA: 8 Damage Die: 2D6
BMA/quad.: 1 1/2 Mass: 40
 bi.: 1
AV: 5
WDA: 2
CDA: 1
DRT: (4D6 + 15) x 2.5
SF: 25

Polar or Kodiak Bear

BAP: 8 Bite BCS: 6(S) WDM: 1.2,L
MNA: 2 Paw BCS: 14(A) WDM: 3.5,B
PCA: 4 Damage Die: 2D6
BMA/quad.: 1 1/2 Mass: 55
 bi.: 1
AV: 5
WDA: 2
CDA: 1
DRT: (4D10 + 15) x 2.5
SF: 35

CATS

Cats are hunters capable of silently stalking their prey. The usual tactic is to approach quietly, if possible, then to leap upon it to drag it down and kill it. Most cats are solitary hunters though some will hunt in pairs.

A cat may "pounce." This involves making a Jump Action at the end of which an attack is resolved. The animal can cover a maximum distance equal to its PCA times its BMA in the leap, if moving, and half that from a standing start. The attack at the end of the leap will consist of a Bash and two Claw attacks. These claw attacks do half the normal damage but serve to let the cat grip its victim. Once gripped, the victim will be encumbered by the cat's Mass. The cat will then either bite (60% chance) or claw with the hind feet in an attempt to disembowel the prey. The claw attacks receive a -10 to the Hit Location roll. A bite attack has a Hit Location die roll modifier of +10. If a bite is successful on Locations 1 or 2, the cat and the victim will match Strength Effect Die rolls. If the cat's is higher, the victim must make a Health Saving Throw as if he had fallen. A die roll of 20 will require a save as if the character had received a Trauma Critical Effect at that Location. A successful hit by the cat on Location 3 will allow it to attack as if it were a character achieving a Choke with Unarmed Combat Skill.

Cats killing for food will make a single kill. Some will then remove the victim from the site preparatory to eating. Like most animals, cats will fight to the death in defense of young. Unlike many animals, some cats will hunt even when a food supply is available.

Cheetah

The cheetah's attack methods follow those of dogs more than those of cats. For one Combat Turn while at a Run, a cheetah may increase his BMA to 8. After this Combat Turn, the cheetah must decelerate to a stop. It may not use this burst of speed again for one-half hour. This burst will "damage" the animal by 1 point of subdual damage for each Action Phase on which it was moving at the special BMA. If the cheetah achieves a successful bite attack while pursuing (it may make this attack while moving), Strength Effect Die

rolls are compared. If the cat's is higher, the victim will fall and is treated as if he had fallen from a height equal to twice the CDA multiplier gained by the speed at which he was traveling. That is, a character Running (CDA modifier is 3) will be treated as falling 2 x 3 or 6 meters.

BAP: 16 Bite BCS: 15(S) WDM: 1.5,L
MNA: 3 Damage Die: 1D6
PCA: 5 Mass: 4
BMA: 2
AV: 3
WDA: 2
CDA: 4
DRT: (1D6 + 10) x 2
SF: 10

Feral Cat

BAP: 15 Bite BCS: 12(S) WDM: 1.3,L
MNA: 3 Claw BCS: 12(S) WDM: 1.5,L
PCA: 5 Damage Die: 1D2
BMA: 1 Mass: 1
AV: 2
WDA: 1
CDA: 4
DRT: 2D10 + 3
SF: 5

Puma or Leopard

BAP: 14 Bite BCS: 16(S) WDM: 1.5,L
MNA: 2 Claw BCS: 14(A) WDM: 1.7,L
PCA: 7 Damage Die: 1D6
BMA: 2 Mass: 10
AV: 3
WDA: 2
CDA: 3
DRT: (1D6+10)x2.5
SF: 15

Lion

Lions operate in prides of 2D3 which cooperate in hunting.

BAP: 12 Bite BCS: 17(S) WDM: 1.5,L
MNA: 2 Claw BCS: 15(A) WDM: 1.8,L
PCA: 6 Damage Die: 1D6+2
BMA: 1 1/2 Mass: 18
AV: 3 except for males: Locations 3-7 have AV 4
WDA: 2
CDA: 3
DRT: (2D6 + 15) x 2.5
SF: 18



Tigers

BAP: 11 Bite BCS: 18(S) WDM: 1.5,L
MNA: 2 Claw BCS: 16(A) WDM: 2,L
PCA: 5 Damage Die: 1D10 + 1
BMA: 1 1/2 Mass: 18
AV: 3
WDA: 2
CDA: 3
DRT: (4D5 + 10) x 2.5
SF: 20

DOGS

Dogs are primarily chasers. They tend to hunt in cooperative packs. The most powerful dog is usually the leader of the pack.

Some members of a pack will attack the victim in an attempt to get a grip. If the bite BCS die roll is under 50% of the score needed for a hit (12 needed and 6 or less rolled), the dog will have gotten a grip and his Mass will encumber the victim. Other members of the pack will attempt to kill the encumbered victim. Once a dog has a grip on a victim, it does not need to roll for an attack. It will do its damage to a victim in each Action. Armor will make all damage received up to its Armor Value act as subdual damage. All damage beyond that is lethal.

If the victim is standing or moving, the dogs will attempt to bring him down. This is checked for on the bookkeeping Phase. This is accomplished by matching the Effect Die rolls for the combined Strengths of all the dogs which have a grip and for the victim's Strength. If the dogs' is higher, the victim will be brought down. The victim will be treated as if he had fallen from a height equal to the CDA multiplier gained for the speed at which he was moving.

Dogs achieving Hit Locations of 1-3 are treated as cats who achieve the same Locations when they make a successful bite.

Feral Dogs

Statistics will vary by the size of the dog. A pack may easily be composed of dogs of various sizes. The smaller dogs are often the ones "assigned" the task of encumbering the victim. Dog sizes are given a classification (I, II, III, etc.) to identify the size grouping. Dogs only occupy 1 hex on the DAT display. Dogs I and II may have as many as 3 in one hex without restriction and Dogs III may have 2 in one space without restriction.

| Dog | I (5 kg) | II (10 kg) | III (15 kg) | IV (20 kg) | V (30 kg) | VI (40 kg) | VII (over 40 kg) |
|--------------|----------|------------|-------------|------------|-----------|------------|------------------|
| BAP | 16 | 14 | 12 | 12 | 10 | 12 | 12 |
| MNA | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| PCA | 8 | 7 | 6 | 6 | 5 | 6 | 6 |
| BMA | 1/2 | 1 | 1 1/2 | 2 | 2 | 2 | 2 |
| AV | 0 | 1 | 2 | 2 | 3 | 3 | 3 |
| WDA | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| CDA | 5 | 4 | 4 | 4 | 3 | 3 | 3 |
| DRT | 1D6 | 2D10 + 3 | 4D6 + 3 | 3D6 + 8 | 2D10 + 10 | 3D10 + 15 | 3D10 + 20 |
| SF | 2 | 4 | 6 | 8 | 12 | 12 | 15 |
| Bite BCS (S) | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| WDM: L | 1.5 | 1.5 | 1.5 | 1.5 | 1.6 | 1.6 | 1.7 |
| Damage Die | 1 point | 1 point | 1D2 | 1D3 | 1D3 | 1D6 | 1D6 |
| Mass | .5 | 1 | 1.5 | 2 | 2.5 | 3 | 4 |

Attack-trained dogs have their BCS increased by 2 and their Damage Die increased by one step. The step after 1D6 is 1D10.

Wolf

Bap: 15 Bite BCS: 15(S) WDM: 1.7
MNA: 2 Damage Die: 2D3
PCA: 7 Mass: 4
BMA: 2 1/2
AV: 3
WDA: 2
CDA: 3
DRT: 4D10 + 20
SF: 15



whether the armor is penetrated for the poison to be injected. If it is, the character will take 1 point of lethal damage.

Rattlesnake poison: S—L—DFT,SPD—2D3 hours—per unit injected—1 hr.—Nausea

RODENTS

Rodents, although small, are dangerous in large numbers. They may also carry disease and therefore pose a serious hazard.

More than one rodent may occupy a DAT display hex without Restricting the other rodents in the hex. The exact number is specified in the rodent description. Rodents are not affected by most kinds of Treacherous Ground.

Rodents are capable of mass attacks. This form of attack is called Mobbing. The number of rodents required to initiate a Mob attack will vary according to the type of rodent. A Mob has a BCS of 20. Each rodent in the Mob that is killed will reduce that BCS by the BCS/Rodent factor. The full Overall Defense Ability may be applied against a Mob attack. The damage inflicted by a Mob attack will be applied to the lowest AV the character has.

A Mob must be in the same hex as the victim in order to attack. If the victim moves, the Mob will stay with him. Mobs can be restored to full strength by the arrival of more of that type of rodent.

An attack made against a Mob by the Mobbed character is subject to a number of non-ignorable Distractions equal to one-half the number of surviving rodents, rounded up. A successful attack will apply the damage done to all the rodents in the mob to a maximum of the character's MNA. Thus, a character successfully attacking a Mob of rodents with 2 points of DRT each and doing 7 points of damage would slay three of the vermin if his MNA was 3, but only two if his MNA was 2. If the rodents had 8 points each, he would not even have slain the first one.

With regard to Overall Defense Ability, a Mob has the Defense Ability of a single rodent of that type.

A character attempting to help a Mobbed character faces the same problems in attacking as when attempting to aid a character in the coils of a constrictor. Individual rodents may be pulled off with a Deftness CST and thrown away. A strength AST will stun the vermin thrown and a CST will kill it. One attempt may be made per Action although if both hands are free, the helping character may grasp for two rodents with the number required for each grasp reduced by 1.

Rats

BAP: 15 Bite BCS: 10(VS) WDM: 1.5,L
 MNA: 2 Damage Die: 1D2
 PCA: 7 Rats per Mob: 10 BCS/Rat: 2
 BMA: 1/4 WDM: .2/Rat Damage Die: 1D3+1
 AV: 1 Mass: .25
 WDA: 0
 CDA: 6
 DRT: 1
 SF: —



Super-Rat

BAP: 17 Bite BCS: 12(VS) WDM: 1.5,L
 MNA: 2 Damage Die: 1D3
 PCA: 8 Rats per Mob: 6 BCS/Rat: 3
 BMA: 1/4 WDM: .3/Rat Damage Die: 1D3+2
 AV: 1 Mass: .3
 WDA: 1
 CDA: 6
 DRT: 2
 SF: —

SHARKS

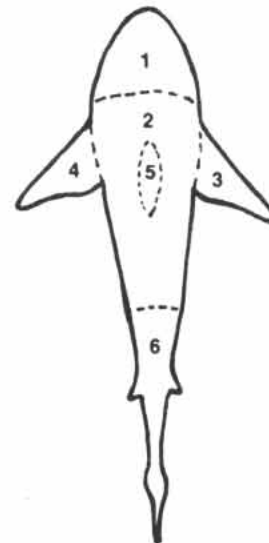
Sharks are killing machines of an unpredictable nature.

A shark may make one attack per Action but it may make it at any point in the Action. Sharks are always moving and the minimum move per Action Phase is the BMA. Sharks usually move a high speed during an attack run, but at low speed at all other times.

Hit Location on a shark uses a special table:

HIT LOCATION TABLE FOR SHARKS

| Die Roll | Location |
|----------|----------------|
| 01-30 | Head (1) |
| 31-65 | Body (2) |
| 66-70 | Right Fin (3) |
| 71-74 | Left Fin (4) |
| 75-78 | Dorsal Fin (5) |
| 79-00 | Tail (6) |



A character may await a shark's attack in order to strike it in an attempt to abort the attack. A Strength AST allows a percentage chance of aborting the shark's attack which is dependent on the shark's size. A Strength CST doubles this chance.

A specially-designed anti-shark weapon known as a "bang stick" has a chance of killing a shark almost instantly. The weapon is a pole which has a 00 shotgun shell at the end. When struck on the shark at Location 2 it will explode. The BDG is the percent chance that the shark will be killed. This is reduced by the shark's size classification. A Deftness CST is required to land the attack successfully. If the die roll was in the character's Ability Saving Throw range, the charge will go off but it will do only the normal damage to the shark.

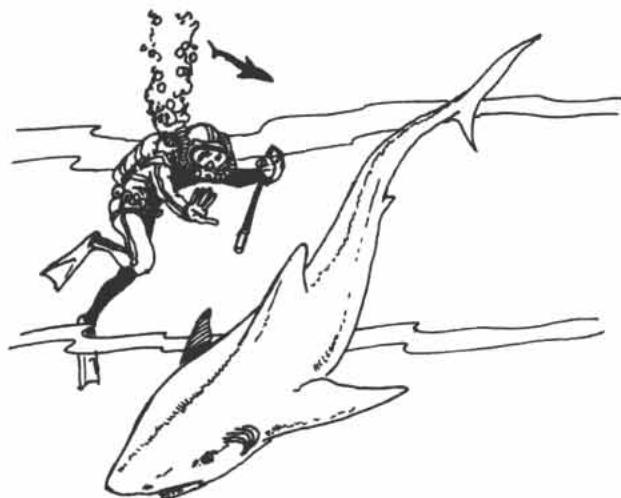
Sharks are notoriously hard to kill. A shark will continue to operate for 2D6 Actions after its DRT has been exceeded by damage done.

The shark's size classification is its chance in 20 of a Critical Hit. This is rolled for separately on each successful hit. A die roll of 1 on the attack roll indicates a Critical Hit as usual and this roll need not be made.

The shark's size classification is also the chance in twenty that it will "shake" its victim, doing an additional 1D3 of lethal damage per size classification.

Sharks are capable of going into "frenzy." When circumstances apply, a die roll greater than the shark's size classification on 1D10 will cause a shark to go into "frenzy." Circumstances that may trigger "frenzy" are excessive amounts of blood in the water or large numbers of feeding sharks in the area. Once a shark is in "frenzy," its BAP has 2D3 added to it, its MNA is doubled, its CDA is halved, and it is allowed to make a second attack if the first misses. This second attack has one-half the BCS of the first attack.

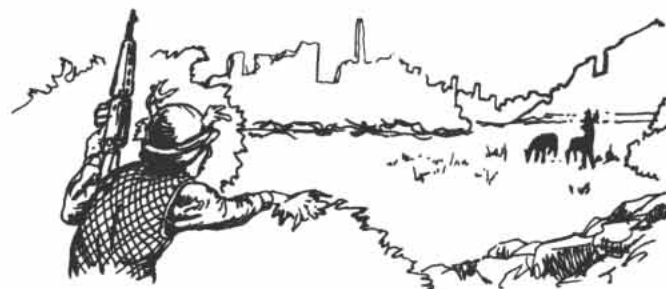
Sharks tend to fixate on a victim. They will often push past obstructions and people in their way in order to strike again at a victim that they have already attacked.



| Shark | I (1 m) | II (2 m) | III (4 m) | IV (6 m) | V (8 m) | VI (over 8 m) |
|-------------------------------|---------|-----------|------------|---------------|---------------|---------------|
| BAP | 14 | 13 | 12 | 11 | 10 | 10 |
| MNA | 3 | 2 | 2 | 1 | 1 | 1 |
| PCA | 4 | 6 | 6 | 11 | 10 | 10 |
| BMA | 4 | 3 | 3 | 4 | 4 | 4 |
| AV | 4 | 4 | 5 | 5 | 6 | 6 |
| WDA: | none | | | | | |
| CDA | 9 | 7 | 5 | 3 | 2 | 2 |
| DRT | 2D5 x 2 | (2D5+5)x2 | (2D10+5)x2 | (2D10+10)x2.5 | (3D10+10)x2.5 | (4D10+15)x3 |
| SF | 10 | 20 | 30 | 40 | 40 | 50 |
| Bite BCS | 12 | 12 | 16 | 16 | 18 | 18 |
| WDM | 2,L | | | | | |
| Damage Die | 1D3+3 | 1D6+1 | 1D10+1 | 2D6 | 2D10 | 3D10 |
| Mass | 1 | 2 | 8 | 24 | 72 | 72+ |
| Attack abandonment percentage | 70% | 60% | 50% | 35% | 20% | 10% |

NON-HOSTILE ANIMALS

For the most part, non-hostile animals will appear in the course of play simply as Game, a food source. To this end, whenever the characters encounter Game, the Gamesmaster should consult the table below. It will require the expenditure of a round of ammunition and a successful BCS roll to acquire each animal. Reusable ammunition, such as arrows, may be recovered if the BCS roll is successful. The BCS will receive a negative modifier of 2D6 for the first shot and an additional -2 for each shot thereafter until all the game has been shot or missed. Only one attempt is allowed per animal.



| Die roll | Classification | Mass | Hide Available In Locations (Armor Material) |
|----------|---------------------|---------|--|
| 01-15 | Small Game | 1D3x.5 | 1D3 (LH) |
| 16-55 | 2D6 Small Game | | |
| 56-69 | Medium Game | 1D3x1.5 | 2D3 (LH) |
| 70-79 | 2D3 Medium Game | | |
| 80-93 | Large Game | 2D6x2.5 | 1D3 (LH); 2D6 (HH) |
| 94-95 | 1D3 Large Game | | |
| 96-99 | Very Large Game | 2D6x5 | 1D6 (LH); 2D10 (HH) |
| 00 | 1D3 Very Large Game | | |

Some specifics are given for some interesting but normally non-hostile animals.

Razorback

This is a pig which has reverted back toward the wild boar of its ancestry. Such animals are well-known for the tendency to hunt a hunter who has wounded them. When engaged in such activity, they show considerable cunning. These can be very dangerous game.

BAP: 12 Tusk BCS: 14(S) WDM: 2,L plus Bash
 MNA: 3 Damage Die: 1D10
 PCA: 4 Mass: 15
 BMA: 1
 AV: 3
 WDA: 3
 CDA: 3
 DRT: (2D10+10)x1.5
 SF: 15

Rhinoceros

A large brute which will charge anything it thinks is worth charging; that is to say, anything. Poor eyesight is part of the reason behind this behavior. The rhino's hearing and sense of smell are reasonably good, as is its ability to detect motion. A rhinoceros will move through a character's hex and subject him to trampling possibilities as a horse does but the damage done will be different. This will occur if the strike with the horn does not succeed. If the horn strike succeeds, a character will be thrown 2D3 meters from the rhino. He will, of course, be subject to falling results as if he had fallen the distance he was thrown. A thrown character will not be trampled at that point although the animal may return to trample him.

BAP: 8 Horn BCS: 12(A) WDM: 1.5,L (thrust)
 MNA: 1 Damage Die: 2D6
 PCA: 8 Trampling damage: 3D10,B if trampled
 BMA: 2 Mass: 100
 AV: 5
 WDA: 0
 CDA: 2
 DRT: (1D20 + 40) x 3
 SF: 35

Elephant

An elephant's principal form of attack will be either by trampling a character or by grabbing him with the trunk and flinging him through the air. Flung characters will travel 2D6 meters.

Elephants occupy several hexes on the DAT display as shown in the illustration.

BAP: 10 Trunk BCS: 12 WDM: none
 MNA: 1 Trample damage: 4D10,B
 PCA: 10 Mass: 200
 BMA: 1
 AV: 4
 WDA: 1
 CDA: 1
 DRT: (2D10 + 60) x 2.5
 SF: 40

MUTANT ANIMALS

The mutagen-rich world of *Aftermath!* will undoubtedly produce changes in the fauna of earth. Most mutations will be harmful but some will be beneficial and some of these will become established in the gene pools of species. Such processes are lengthy in terms of generations.

New species arising from mutations due to the Ruin will first be seen in animals with a short generation period. The effects of such mutations can be widely varied. A Gamesmaster who wishes to include mutant animals in his campaign should design a mutation that suits him. He should keep in mind that fantastic powers will not appear overnight. Such things take time to prove their worth and increase their strength.

Some examples of possible paths of mutation are provided in this section. The Gamesmaster should guide himself with realistic parameters, but should also not allow himself to be trapped by them if he feels that an improbable mutation will make the game more exciting.

Rodents

Rodents are notorious for their short generation periods. Suggested here are some variations on rats which could plague the survivors of a Ruin.

Giant Rats

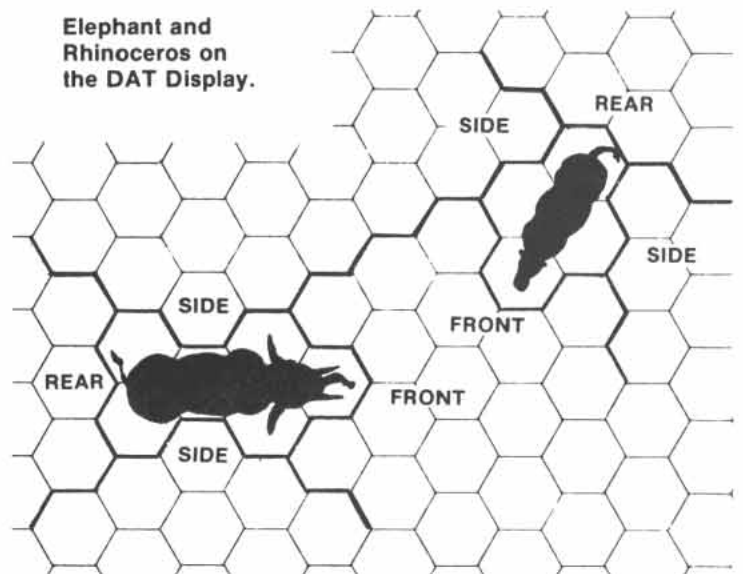
These monsters resemble regular rats in most particulars, although they are very large. They occupy a single hex on the DAT display. Weighing in at about 10 kilograms, they are the size of a small dog.

Super Giant Rats are further along in the evolutionary process and are even larger. They mass about 20 kilograms. They do not use Mob attacks.

Giant Rat

BAP: 12 Bite BCS: 14(VS) WDM: 1.5,L
 MNA: 2 Damage Die: 2D3 + 1
 PCA: 6 Rats per Mob: 3 BCS/Rat: 6
 BMA: .33 WDM/Rat: .6 Damage Die: 2D3
 AV: 2 Mass: 1
 WDA: 1
 CDA: 5
 DRT: 2D3x2
 SF: 5

Elephant and Rhinoceros on the DAT Display.



The apes, of course, vary by type. Three species have developed: Gorillas, Chimpanzees, and Orang-utans. Each has his area of expertise and special characteristics. All have learned to walk exclusively in a bipedal fashion. All wear clothes and armor.

Apes standardly consider humans as simply animals.

The Gorillas

The Gorillas are the warriors of the new order. They provide the generals and the soldiers for the ape armies. They are incapable of dealing with the arts and sciences, and thus tend to resent such things and those who practice them. They hate men and will hunt them for sport. The Gorillas represent about 40% of the ape population.

The Chimpanzees

The Chimpanzees are the scientists and artisans of the new order. They are pacifists and prefer to let others decide their own courses, rather than forcing one upon them. Chimps consider the martial Gorillas uncouth and obnoxious but, following their general philosophy, rarely bring this hostility into the open. The Chimps often use humans as laboratory animals, since the latter are so close to the structure of the higher species of apes. The Chimpanzees comprise about 40% of the ape population.

Chimpanzees will always have a Hindrance when studying Combat Skills are receive only one-half the initial score value.

The Orang-utans

The Orang-utans are the politicians and leaders of the apes. They are notoriously conservative and are fully capable of warping the truth to their own ends. They tend toward a scientific bent and, though few are warriors themselves, they often have a good command of strategic

concepts. The ruling council is usually comprised of Orangs and its authority, through smaller specific councils, extends throughout ape society.

Orang-utans have a Hindrance and reduction regarding Combat Skills as do Chimpanzees.

Ape Society

In general, the apes tend to be "back-to-nature" types who have little to do with the mechanical devices of man's world. The Gorillas, however, gladly use weapons, including firearms. Some manufacturing capability exists, but mostly the apes rely on found and maintained tools of man.

Humans are used as pets, slaves, and houseservants. It is considered in very poor taste to dress a human.

As mentioned before, a council rules although all are theoretically allowed to speak before it. The greatest law of the apes is "ape shall not kill ape." This does not, of course, apply to the naked ape, man.

Most details of the society are, and rightly so, left to the gamesmaster. Even the details given in sourceworks will vary, as they are set in different "historical" periods.

Characters in a World of Apes

Characters for this type of Post-Holocaust world will receive initial values in Attributes and Talents. Talents are still subject to the psychological profile results. If an Attribute has an initial value less than 1 it must be raised to 1 before the start of play.

Characters would start at Age Group 1. Apes and Wild Humans would not be "Changed" but all city men would. Wild Humans are poor for Player Characters due to their limitations, but are included to give the Gamesmaster an idea of their statistics.

Attribute Modification Chart

Initial values are given. The number in parentheses is the maximum value for the Attribute if that has been changed from 40.

| | Wit | Will | Strength | Deftness | Speed | Health |
|-------------|--------|--------|----------|----------|--------|--------|
| Gorillas | -5(30) | -5 | +8(50) | —(30) | —(30) | —(50) |
| Chimpanzees | +3 | — | — | +2 | -1 | +1(45) |
| Orang-utans | +5 | +2 | +2 | —5(30) | -5(25) | +1(45) |
| Wild Humans | -5(10) | -5(10) | —(30) | —(30) | — | +2 |
| City Men | +5 | +5 | -5(30) | — | — | -5(30) |

Talent Modification Chart

| | Charismatic | Combative | Communicative | Esthetic | Mechanical | Natural | Scientific |
|-------------|-------------|-----------|---------------|----------|------------|---------|------------|
| Gorillas | -3 | +4 | +0 | -2 | -2 | +0 | -2 |
| Chimpanzees | +0 | -2 | +0 | +3 | +4 | +0 | +3 |
| Orang-utans | +0 | -4 | +0 | +3 | +3 | +0 | +4 |
| Wild Humans | -2 | -2 | -10 | -2 | -1 | +10 | -5 |
| City Men | +0 | -3 | +5 | +2 | +1 | -5 | +5 |



USEFULNESS OF ANIMALS

Beasts will have uses to a man in the Aftermath. The Flesh is food, and the hide may be turned into clothing or armor. Each kind of animal, and in some cases a specific animal, is rated for the amount of edible mass in the body, the chance of contamination, the food value of the edible mass, and the amount and kind of hide available from the carcass. These values are found on the chart below.

| ANIMAL | EFFECTIVE % OF BODY MASS EDIBLE | FOOD VALUE IN MAN-DAYS OF RATIONS/ENC | % CHANCE OF IT BEING CONTAMINATED | NUMBER OF LOCATIONS OF HIDE (ARMOR MATERIAL) |
|--------------------|--|--|--|---|
| Hostile | | | | |
| Bear | 25% | 2 | 25% | 20 of HH |
| Cat, large | 25% | 2 | 25% | 3 of LH 10 of HH |
| feral | 25% | 2 | 30% | 3 of LH |
| Dog | 33% | 4 | 15% | number equal to Class of LH |
| Reptiles | | | | |
| Alligator | 25% | 1 | 30% | 2 of HH 5 of SH 5 of AH |
| Snake | 50% | 2 | 20% | number equal to 1/2 Mass of SH |
| Rodent | 50% | 1 | 50% | 1/Mass of LH |
| Shark | 25% | 3 | 25% | number equal to 1/2 Mass of HH |
| Non-hostile | | | | |
| Game | 33% | 3 | 10% | variable |
| Razorback | 33% | 4 | 60% | 8 of HH |
| Rhinoceros | 50% | 2 | 15% | 25 of AH |
| Elephant | 33% | 2 | 15% | 50 of HH |
| Other | | | | |
| Man | 33% | 3 | 80% | 15 of LH |
| Cockroach | 75% | 5 | 50% | none |
| Horse | 35% | 3 | 10% | 10 of LH |

THE NON-PLAYER CHARACTER

In the course of a game campaign, the Player Characters will meet and interact with a bewildering variety of other characters. These are all non-player characters in the control of the Gamesmaster. In some campaigns, the Gamesmaster will have friends run some of the characters for him. This allows him to function purely as a referee.

Non-player characters are any beings that the Player Characters meet. Most of them will be human. Many will simply be members of the faceless mob, but others will be Personality Non-Player Characters. These are designed by the Gamesmaster with as much detail as the players put into their own characters. All the statistics are known and the character is given a definite personality.

Non-player characters can appear in the campaign as adversaries, friends, flunkies, acquaintances, superiors, or in any other position relative to the Player Characters that the Gamesmaster can think of. Some will be dumb, some smart, some helpful, some dangerous. In short, they will come in as great a variety as real people and the characters of fiction. It is the job of the Gamesmaster to bring life to these characters. The more real they seem, the more life they will bring to the game.

When playing a non-player character, the Gamesmaster should remember that the character does not have the omniscient knowledge of the Gamesmaster himself. The character will only be able to make decisions using data that would be available to him. This is sometimes a difficult task. Planning a non-player character's action for a turn before asking the players to announce the actions of their characters will help to maintain the separation of Gamesmaster and character knowledges. This can lead to the demise of the Gamesmaster's favorite Personality Non-Player Character, but if the players have managed to get things to go their way through good play, the Gamesmaster should be prepared to let his character meet his fate.

HANDLING NON-PLAYER CHARACTERS

Most of the Gamesmaster's characters will be humans. As can be seen by simply looking at a Character Record Sheet, there are a great number of statistics involved in quantifying a character. For the purposes of simple non-player characters, these can be reduced somewhat. Several assumptions are made.

- The Attribute statistics in use for a non-player character are those appropriate to whatever Encumbrance Status the character is at, due to whatever armor he is wearing and gear he is carrying.
- Non-player characters do not Learn-by-Doing and thus need no Talent scores.
- If a non-player character is noted as having a Skill requiring a prerequisite and the prerequisite Skill is not listed, the character is assumed to have the prerequisite Skill at the minimum possible value; that is, a score of 25 for a BCS of 5.
- Non-player characters often have Skills other than those listed in their description. Only those most likely to be used or those important in defining the character are listed. The Gamesmaster may add Skills to the character's repertoire as he thinks appropriate.

Thus, in order to use a character, the Gamesmaster must know the character's Attribute scores, the values of the abilities used in Detailed Action Time, the character's BCS in a pertinent Skill, the armor worn, the weapons and gear available, and any pertinent special data.

The expression of Attribute and Ability scores is simple. A listing of pertinent Skills will follow. The character's BCS in the Skill is placed after the Skill name and in parentheses. If the Skill is a Combat Skill and the character has a score greater than 100, the BCS of the second 100 points follows the BCS. This second number is the character's Control Throw. Each four points in this second number represents a point of Aim. The Weapon Defense Ability of a character will depend on the weapon Skill in use. This has a value of 1 for every 5 points of BCS.

The armor worn by a character is listed in garments. Each garment has the Locations covered and the material of the garment presented inside parentheses. Weapons are listed in order of the character's preference for use. If the weapon uses some form of ammunition, the information on the amount available will be listed at that point. A gun is assumed to have a full load and any rounds listed are those available for reloading.

Any special notes on the character will follow. This can include patterns of behavior, distinguishing marks, other equipment, concerns, relationships with other characters, preferred tactics, etc.

This entire description is headed by the character's name. This can be followed with a brief description of his position or way of life. If important, the character's age can be placed in parentheses at the end of this line.

An example of such a character summary is presented below. If the Gamesmaster has a number of such characters, each could be entered on a separate 3 x 5" card and the entire stock kept in a file box until needed.

John Sample, survivor of the Ruin, loner (43)

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| WT | WL | STR | DFT | SPD | HLH |
| 12 | 12 | 12 | 12 | 12 | 12 |
| BAP | MNA | PCA | CDA | | DRT |
| 6 | 2 | 3 | 1 | | 24 |

Skills: Rifle, Modern (20/5); Brawling (15); Automobile Mechanic (7)

Armor: Fatigue jacket (4-11, HC); Pants (10-18, HC); Boots (17-20, LL)

Weapons: Rifle R1 with 15 rounds of 30-06 in a bullet belt; Trench Knife

Notes: Prefers to run away from a fight if possible. He has survived by not getting involved. He has a deathly fear of being bitten by a rabid dog.

John Sample is 43 years old. His Attribute scores can simply be read. His Ability scores will be needed for Detailed Action time can also be read. He has a BCS of 20 with a modern long gun, a Control Throw of 5, and 1 point of Aim. When using Brawling Skill, he will have a WDA of 3. The notation of Automobile Mechanic Skill implies that he also has Technology Use Skill. Since no score is given for that Skill, he is assumed to have the minimum necessary to use the Automobile Mechanic Skill for which Technology Use is a prerequisite. Thus, he has a Technology Use BCS of 5.

As an example of interpreting the armor designations, we will use the Fatigue jacket. The garment is indicated as covering Locations 4 to 11 on the Body Map. That means its Armor Value, if it is the best on the Location in question, will be subtracted from the Damage Potential of any attacks which are targeted on that Location. The Armor Value can be determined by finding the material represented in this designation by its letter Code on the Armor Material List which is Appendix 3 in Book 2. The Format for that material can also be gotten from the list. As familiarity with the system grows, the Gamesmaster will be able to tell the Armor Value and Format of a material simply by knowing what the material is.

A Rifle R1 (the designation is from the firearms listing which is Appendix 1 in Book 3) can come in a number of calibers. The ammunition listed indicates that the rifle is of 30-06 caliber. Since that rifle will hold 4 rounds of 30-06 ammunition, Sample's total ammunition is 19 rounds. The notation concerning where the spare ammunition is kept allows the Gamesmaster to determine the time necessary for Sample to reload. All data on the rifle can be gotten from the gun list.

The Trench Knife without Knife Skill implies that Sample uses the blade for utility work but may take advantage of the Brass Knuckle function of the knife when he is in a brawl.

The notes are self-explanatory. They add some color to the simple listing of statistics.

TOO MANY CHARACTERS

When the Gamesmaster is running a scenario involving large numbers of characters, he may find himself lost in a morass of numbers. If he feels capable of handling individual statistics for each and every character, he may go right ahead and try. The players will have little problem, as they have only one or two sets of statistics with which to concern themselves. For the harried Gamesmaster, we have evolved the concept of typical characters.

A typical character will have a given set of statistics. Any number of characters in a given Detailed Action Time situation can be designated as belonging to a given grouping of typical characters. This allows the Gamesmaster to handle several characters at once in an Action Phase. When resolving Actions of such characters he can almost treat a grouping of characters as he would a single character. At least, he can determine the start of their Actions all at once instead of having characters initiate Actions on widely varying Action Phases.

To further simplify a multitude of characters, they are rated for an Expertise Level. Each Level has a BCS associated with it. The character will have certain Skills specified as primary Skills. He will have the same BCS with all his primary Skills. Secondary Skills will have a lower Expertise Level.

Characters will be assigned an Armor Kit appropriate to the situation. Thus, a Gamesmaster need only have the specifics of one set of armor and clothing which can be referred to for several characters. This is much easier on a Gamesmaster than referring to separate descriptions of each garment for each character when there are a number of characters involved.

The Gamesmaster may also find it convenient to have several characters armed with the same weapons. The problem of keeping track of ammunition expended has no such easy solution. Such armaments could be referred to as Weapons Kits.

NON-PLAYER CHARACTER QUALITY

Non-player characters, who are not specially designed, have three basic levels of Quality: Average, Superior, and

Heroic. Each will give a character a specific set of Attribute and Ability scores.

| | WT | WL | STR | DFT | SPD | HLH |
|------------------|-----|-----|-----|-----|-----|-----|
| Average Quality | 11 | 11 | 11 | 11 | 11 | 11 |
| Superior Quality | 21 | 21 | 21 | 21 | 21 | 21 |
| Heroic Quality | 31 | 31 | 31 | 31 | 31 | 31 |
| | BAP | MNA | PCA | CDA | DRT | |
| Average Quality | 5 | 2 | 2 | 1 | 22 | |
| Superior Quality | 10 | 3 | 3 | 2 | 42 | |
| Heroic Quality | 15 | 4 | 3 | 3 | 62 | |

In addition, a character may be specified as Increased. This will add 5 to the specified Attributes and adjust the pertinent Abilities. Thus, an Increased Average: WT would have a WT score of 16 and no Ability scores would be altered. If the character had SPD designated as the Increased Attribute, the BAP would be changed to 8 and the PCA to 4. Multiple Increases are certainly possible. A group of weight-lifters might will be designated as Increased Average: STRx5, giving them a STR score of 36 while all the other Attribute scores remain at 11.

Characters, especially those that make up the bulk of a large force attacking a group of adventurers, may be designated as Rabble or Extras. Rabble have half the number of points in their DRT as are indicated by the normal calculations. Extras are even less resistant to injury. If the Damage Potential of an attack against an Extra is not completely reduced by the Extra's armor, he will be killed if the damage was lethal or rendered unconscious if it was subdual damage.

EXPERTISE LEVELS

The most common application of Expertise Levels is in regard to Combat Skills. The character's primary weapons are used with the BCS for the Expertise Level for which the character is rated. Secondary weapons are used at a lower level of Expertise. The Gamesmaster may find it simplest always to use the next lower level of Expertise rather than designate tertiary, quarternary, etc., Skills.

The Expertise Levels are:

| | |
|---------|----------|
| Green | BCS 5 |
| Novice | BCS 8 |
| Trained | BCS 11 |
| Veteran | BCS 14 |
| Elite | BCS 17 |
| Heroic | BCS 20 + |

If a character is designated Heroic with a Combat Skill, he will have a Control Throw of 2D5. Aim, if available, will be determined from this second "BCS."

Thus, a Trained character whose primary weapons are a rifle and a knife, and whose secondary weapons are the bayonet on the rifle as a polearm, Brass Knuckles, and a Ceremonial Sword, would have a BCS of 11 if Rifle, Modern, and Knife Combat Skill. He would also have a BCS of 8 in Polearm, Brawling, and Single Weapon Skills. It is assumed that he will be classified as Green with any other weapons.

If the weapons listed are not broken down into primary and secondary, the Gamesmaster may assume that the first weapon listed is the primary and all others are secondary. A weapon listed in the notes section indicates that the character has a Green Expertise with the Skill governing that weapon's use.

ARMOR KITS

Armor Kits may be simple or complex. They may consist of many or only a few garments. The Gamesmaster should keep a careful note of what garments he designates as comprising an Armor Kit. Characters may also be designated as having an Armor Kit plus some other garments in addition to those in the Kit. If a character is specified as having a garment that could not be worn over a specific Location along with a garment noted as being in the Kit, the garment in the character description can be assumed to replace the garment in the Armor Kit for that character only.

A sample Armor Kit might be the one presented as the Armor for John Sample on page 31. If the Gamesmaster has more than one non-player character in a group wearing this type of clothing, he can designate it as Armor Kit 1. A character with a steel army helmet in addition to the fatigues could then be specified as having Armor Kit 1 plus Helmet (1, SP).

SAMPLE SHORT FORM CHARACTER

Let us assume a character designated as Superior Rabble. The character is given an Expertise Level of Trained. This character is one of five in the group that the Player Characters are about to meet. Each of the non-player characters is wearing essentially the same outfit. Each has the same basic armament. The typical member of this group wears a Fatigue jacket (4-11, HC), Pants (10-18, HC), Boots (17-20, LL), and a Flakjacket (4-12, LP-AA). He is armed with an M-14 rifle with two spare clips and three loose rounds of ammunition, a Trench Knife, a Ceremonial Sword, and a Mk.6 Grenade.

The specific character in question does not have Throwing Skill with which to use the grenade. The character does have a steel helmet and a pair of gloves. Thus the short form of character listing would be:

Joan Sample, reluctant soldier (28)

Superior Rabble, Trained

Skills: Tailor (12); Weaving/Spinning (12)

Armor: Kit 1 plus Helmet (1, SP) and Gloves (29-30, HC)

Weapons: Kit 1 less grenade

Notes: Would rather be at home. Carries Mk.6 grenade.

Although they are not listed, the character has the following Skills: Rifle, Modern (BCS 11), Knife (BCS 8), and Single Weapon (BCS 8). As a Superior Quality character, all the Attribute scores will be 21. All the Ability scores have standard values except the DRT. This will only have a value of $(21 + 10.5 + 10.5)/2$ or 21 since the character is designated as Rabble.

USING MULTIPLE CHARACTERS

Playtesting has shown that most Gamesmasters could deal with 2 to 4 sets of statistics within a given group. A popular combination was a Personality Non-Player Character with individual statistics, one or two tough standardized characters, three or four of medium difficulty, and the rest fairly easy-to-take. Often the latter category was classed as Rabble or Extras.

The Gamesmaster should always try to balance the challenge. If he is facing the players with something that their characters will not be able to beat in a direct confrontation, he should leave them a way to escape annihilation. If he consistently fails to do this, his players will lose interest and all his work on the campaign will go to waste.

We have also found that the occasional encounter with a large number of Extras allows the players to achieve results resembling the massive victories so common in literature. Such free-for-alls can be great fun for both the players and the Gamesmaster. However, note the word *occasional*. A steady diet of such simple victories is every bit as boring as constant encounter with the unbeatable. Variety is the goal of a good Gamesmaster. Variety can be achieved in the type of characters encountered as well as in the basic adventure itself.

TECHNOLOGY IN THE AFTERMATH

The technological wonders available in a campaign depend upon two factors which the Gamesmaster must decide on as he is laying the first foundations of the game-world:

What level did technology reach in the pre-Ruin world?

How much of it is still present in usable or repairable form?

There is a dilemma in this. *Aftermath!* is designed for use in cultures which do not much exceed our own in technological development, though there is no reason not to build a more "science-fictiony" campaign if you want to. However, some of the basic postulates we will be making about the available pre-Ruin technology are not valid unless our progress here and now (1981) is assumed to be farther along in some areas than it actually is. Otherwise, the date of civilization's fall is pushed further and further into the future. Our own playtests set it at around 2000.

However you choose to settle this, we will here set forth rules covering a number of basic areas defined as "High Technology" material. Much of this material is very complex in the real world. Indeed, much of it is beyond the authors' comprehension, even after considerable research. Readers knowledgeable in electricity, for example, will no doubt cry aloud in horror at some of the rules governing that phenomenon. On the other hand, players do not need an Electrical Engineering degree to use them.

PACKAGING

The mundane-seeming question of packaging is central to the use of High Technology in *Aftermath!* This stuff is going to be sitting around for years, decades, even centuries in some campaigns. Characters should be able to "mine" the ruins for usable manufactured resources, things their own culture is unable to produce. This is hardly worth the effort if the goods are not to be found in edible-wearable-shootable-otherwise usable shape.

As we discussed briefly in the Survival section of Book 2, we are positing an improved system of packaging in the pre-Ruin civilization. Plastics technology and a more rigorous method of eliminating contaminants, chemical or bacterial, from the packaged substance, point the way to a means of sealing anything from foodstuffs to industrial machinery away from the effects of passing years.

Small items: food, liquor and tobacco, light machines, clothing, medical supplies; all could be vacuum packed, or sealed in an inert atmosphere (nitrogen or argon) for storage. Larger items would be sprayed in an epoxy-like resin which would solidify into a time-proof outer skin. Apply a solvent, attach a power supply, and bingo! It works again as if it were just off the assembly line. New silicone lubricants would replace grease as a preservative and greasing medium, much more resistant to the passage of time than the petroleum compounds used today.

But why should such a packaging renaissance happen in the first place? We can see one possible rationale emerging today. Western Civilization is developing an increasing horror of wasting resources. Yet much of what our industries produce is never used! It sits on the shelf, or in the warehouse, until it is not useful any longer, and then it is thrown away. But is something could be produced, and stored until needed, a week later, or a year, or ten years, then it becomes logical that stockpiles of goods will long outlast

the society that produced them. If such a movement were to gain credence among the consumers of the pre-Ruin world, it could well lead to the gift of preserved goods passed on to the scavengers of the Aftermath.

ELECTRICITY

When you come down to it, the single most important resource in modern technology is energy, usually in the form of electrical energy. The bulk of our electricity today (as we are all too well aware) come from petrochemicals: oil mainly, followed by coal. But there is study going forward in alternate forms of energy, sources of electricity that need not die when our civilization does. Some of these could continue to operate via automated control and maintenance, or by the efforts of dedicated bands of survivors who feel an obligation to keep their part of the old knowledge alive. Other sources might be reproduceable by survivors on a local basis. Electricity might be something scavenged from the ruins, like food or weapons, or something that can be homebrewed, like alcohol for your truck (or for a cold winter night).

MEASURING ELECTRICITY

How do we measure the amount of electricity a character has available from some source, or the amount he must expend to operate some device? There are two forms of electricity to consider:

Stored Power: Electricity held in a battery until needed. It may be released in a continuous flow or in large jolts. In *Aftermath!* we have posited the development of highly durable "Eternabatteries," or "E-batteries." Their capacity for current is rated in Charges. Let us assume a value of about 100 watt-hours (see below) as constituting a Charge.

Current: Electricity being generated, flowing along a circuit, is current. It will be rated in watts, for ease in converting it into Charge values and vice-versa.

These are terms of convenience, and relate to their actual meanings in electrical work only in the most abstract way.

To turn "watts" into "watt-hours," it is necessary to measure the flow of current over a period of time. A 1-watt current will generate 1 watt-hour of electricity in 1 hour. 1 watt-hour battery could provide a 1-watt current for 1 hour. To build up 1 Charge in a battery, you must have a 100-watt current flow into the battery for an hour. A 50-watt current will need to flow for 2 hours. The formula is: Watts x Hours = Watt-Hours.

A 100 watt-hour Charge will keep a 100-watt light bulb burning for 1 hour. It will keep a 50-watt bulb burning for 2 hours, or a 10-watt bulb going for 10 hours. The formula is: Hours of Operation = (Charges x 100)/Watts consumed.

The Gamesmaster may approach rating the wattage of devices in several ways. He may assign wattages to them (e.g., portable 2-way radio, 20 watts; searchlight, 1500 watts; and so on). Much of this information is available in catalogues for such merchandise. In fact, on most household appliances, federal law now requires a sticker giving the wattage rating. This approach is best for large-consumption devices that will be operated for long periods of time, from hours on up.

For very low-power devices that will be used in an "on-and-off" manner (flashlights, walkie-talkies, calculators,

watches, etc.) the most convenient solution seems to be a statement that 1 battery (usually an E-1) will keep the thing working for 1 year. This way, it is only necessary to record when the battery was last replaced, instead of the tedious process of bookkeeping involved in recording every minute usage of power, to the second.

Lastly, for devices used on a "one large shot" basis, the Gamesmaster may rate the drain on the battery in Charges. This is the obvious approach to electrically-powered weapons (Lasers, Electro-weapons), as well as flash units on cameras, or tailored articles (this electric camp stove takes 1 Charge to cook 1 ration). A variant is the device which uses significant fractions of a Charge, like the electric vehicles, getting so many kilometers to the Charge. Go half that many kilometers, use half a Charge, and so on.

ETERNABATTERIES

The use of the Eternabattery is classically simple in most cases. To charge it, hook it up to any source of current via a "leech," or induction transformer, to give it its formal name. When the connection has existed long enough for the wattage of the current to reach 100 x the Charge rating of the battery, the leech shuts down, and the battery is charged. Unless physically destroyed, the battery is indefinitely rechargeable.

The only real difficulty in getting the power out of an Eternabattery occurs when it is being used to supply the electricity for some device that is not designed to use E-batteries. This constitutes a Task, to be assigned a value by the Gamesmaster. The average Task Point range would be about 10-50, for fairly small conversions. The same applies to linking several smaller Eternabatteries together in series, to provide the necessary current to operate a device normally requiring a larger type of battery. For example, preparing a battery pack of ten E-5s to run a vehicle normally operated by one E-50: the relevant Skills would be Electrician, averaged with any relevant types of Mechanic or other related field of endeavor, and the usual Task Period would be on the order of 10-20 hours. Tools of some kind would be a necessity.

ACCUMULATORS

When dealing with large amounts of power, the output of a regional plant for instance, then another type of storage battery comes into the picture: the accumulator. This is a big, fixed installation, holding hundreds or thousands of Charges. If you use an analogy of electricity as water, then Eternabatteries are canteens. Accumulators are the reservoirs. When power is being generated, it is a use-it-or-lose-it situation. Accumulators are designed to take the surplus current and hold it as Charges. When the power is needed later, it is tapped and fed into the distribution system. They will generally be found in power plants, in factories, as auxiliary power supplied in small municipalities or rural areas, or in the holdings of technologically-oriented survivors. The Gamesmaster may assign any value he wishes to the accumulator, but in situations where the defenses a non-player character is bringing to bear upon the Player Characters are electrically powered by an accumulator, the Gamesmaster may wish to limit the opponent's resources to give the Players a chance to wear down his reserves.

Controlling accumulators, or working with them in any decisive way, is under the jurisdiction of the Power Generation, Electrical Skill. Such operations will be on an industrial scale, requiring long Task Periods, and extensive tools and resources.

GENERATORS

With Generators, we pass from electrical storage to systems which convert one form of energy into electrical current. A generator is, specifically, a machine which converts mechanical energy into electricity. A shaft runs through a magnetic core. Turning the shaft interrupts the

magnetic field of that core, causing electrons to move in a given direction. The result: current.

The enormous generator-turbines, powered by oil- or coal-burning furnaces, are not likely to survive the Ruin, if they have not been replaced by some other power source by then. But several other forms of mechanical generator are very likely to be useful to the characters.

Man-Powered Generators

The three most common types are cranked models (worked by hand), treadmills (which pool the work of several men to turn the shaft), and the "bicycle" generator.

Hand-cranked models are useful primarily for recharging batteries in emergencies, or for providing power to small devices on the spot. They are generally provided as a back-up power supply on military radio sets. The current generated by a crank generator is equal to the Strength Group of the user, in watts. He can maintain this rate of work for a period of time equal to 20 minutes times his Health Group. After that, he becomes Fatigued. He can then continue cranking at an effective Strength Group 1 less than his normal score, for a number of minutes equal to his Health. He then becomes Fully Fatigued and cannot turn the crank any longer.

Treadmill models are not portable, unless carried piecemeal. A description of a Rube Goldberg sort of treadmill generator is found in Walter Miller's novel *A Canticle for Liebowitz*. Their current has a wattage equal to the total Strength Groups of the characters on the treadmill. The Gamesmaster should assign a maximum wattage to the generator, as there is a point of diminishing returns to such addition. The characters can keep the generator going on the same basis as they can keep walking, as if they were traveling in Strategic Scale. "Fast March" can be used to increase the current for a short period, doubling the output. "Long March" can be used to put out more power in the day. It should be mentioned that unscrupulous communities in need of power might turn to a slave economy to turn treadmill generators.

The movie *Soylent Green* features the late Edward G. Robinson pumping a bicycle generator at one point. These are more in the line of an "exercycle." The bike does not travel, but turns the shaft of a small generator. The base current is equal to the character's Strength Group in watts, with a multiplier of 2-3 for the bike's mechanical leverage. Bicycle Skill is not required to use it.

Constructing a generator of one of these types requires materials (and a bicycle if you are making the third kind). The relevant Skills are Electrical Power Generation, Mechanical Power Generation, and any other Mechanical Skill that the Gamesmaster feels is relevant. Task Points run from about 50 to build a crank generator, to 100 or more for a large treadmill. Task Periods are in 1-day increments.

Hooking the generator up to anything but a leech transformer for Eternabattery charging, or some device designed to be powered by a small generator, is a Task for the Electrician.

Wind and Water Power

The mechanical energy derived from the swift passage of air or water is a potential source of power, one recognized today by the enormous hydroelectrical plants of the power utilities and the small windmills of the farmer and commune dweller alike.

There is no real way to work out a consistent formula for a windmill's output. If the only figures of significance are Charges generated over a given period (say a week) then $1D100 + 20$ seems a decent amount for a small unit.

If the current being generated at a given moment is important, roll 1D10 and 1D6. Read the 0 on the D10 as a zero, not a 10. Multiply the two rolls. That is the current being generated at that time. Roll again every hour to deal with changes in the weather, unless there is some reason to

assume a longer or shorter period of stability.

Hydroelectric power is more constant. The Gamesmaster must assign a value to the flow of the body of water being used. Small streams or natural small waterfalls would have a value of 1D6 x 100. The generator must be designed before it is built a Task requiring Skill in Electrical Power Generation and Physics. When the design Task is done, the Gamesmaster should roll 1D20 until he scores less than the Average BCS in these Skills. The Effect Number from this roll divided by 10 will provide a factor of efficiency for the generator. This factor times the water source's constant value is the current that will be generated by the device. It is then built using the appropriate construction Skills.

There may be seasonal fluctuations in the water's constant, based on rainfall and local climate. This is completely up to the Gamesmaster and his sense of detail. It is probably not worth the trouble except for campaigns where Players are running whole communities, and getting into simulations of the ecological factors which govern their lives.

Motorized Generators

Any internal combustion engine can be rigged to turn a generator shaft. So can an electric motor for that matter, but to prevent Players from exploiting loopholes in the following rules, we shall decree that such a hookup will generate electricity at exactly half the rate that the engine consumes it!

The Maximum Safe Speed for the type of engine being used is the basis for the current's wattage. It will generate power equal to that figure times 10 watts, consuming fuel as if traveling at that rate. This is probably over-generous.

Unless using a motorized generator that was made for the purpose, substantial modification to the device is called for. It will certainly not be able to run as a vehicle while so altered.

The relevant Skills for the conversion are Power Generation and the Mechanic Skill for the type of vehicle. It can then be hooked up as Eternabatteries are, with Electrician Skill. The Task Points will be on the order of 50-100, with a Task Period of about 1 hour. Tools are needed. Changing your car back into a car is a Task of half the Task Point cost for the switch from vehicle to generator.

FUEL CELLS

Fuel Cells are the first of several power sources we will examine that produce current by non-mechanical means. They derive electricity from the chemical action of breaking down certain substances (water, methane, oil) in a manner that we confess we do not quite understand. But as research in forging ahead on these, let's posit the design achieved before the Ruin as something like this.

Water is passed through a specially designed membrane that chemically separates the hydrogen and oxygen in it, tapping the small amount of electricity which derives from the reaction. The fuel cell is a small cube, 50cm on a side, weighing about 2 ENC, and designed to be hooked up in series to produce any desired current. Each fuel cell produces a current of 10 watts, running for 1 hour on .5 liter of water. This should be distilled or filtered water, to avoid clogging the membrane with debris.

SOLAR SCREENS

If you wish to use true solar power (i.e., "photovoltaic" power, electricity derived directly from sunlight), here is a system designed for use in *Aftermath!*

A screen-like device was discovered shortly before the Ruin. Cheap, easily transportable, and completely modular, it is manufactured in 1-square-meter units, and was widely distributed before the end came.

A single Solar Screen weighs 1.5 ENC. It will convert about 10% of impinging sunlight into current. This works out to about 100 watts under ideal conditions. To figure the daily output in a lump sum of watt-hours, multiply the area of the screen in square meters by 900. This represents the output in

24 hours if the weather is clear. If overcast, raining, at the North Pole, or what have you, divide the figure by 2.

If you wish the hourly values of the current in watts, here is a table figuring sunrise at 0600 and sunset at 1800 hours.

| | |
|-----------|---|
| 0600-0900 | 50 watts per Screen used |
| 0900-1500 | 100 watts per Screen used (max. efficiency) |
| 1500-1800 | 50 watts per Screen used |

Again, halve these values if it is an overcast day. If anything cuts off the light entirely (like a thick coating of snow, spray paint, etc.) cut the current to 0.

Setting up Solar Screen arrays, rigging them to feed normal power supplies, and other such manipulations, are in the province of Solar Power Generation Skill.

NUCLEAR POWER

This subject is not going to be treated exhaustively here, it is just too darn big. Suffice it to say that in the author's opinion, if large power plants can be kept alive by automated controls or survivor groups, they will probably be nuclear rather than other types that we have today. At that, modern fission reactors may not outlive the technology that bore them by long, requiring too many external facilities (fuels, waste disposal) to survive in the jungle of the Aftermath. But we can always assume cleaner reactor designs have been introduced. Moreover, nuclear fusion provides a very hopeful picture, producing minimal wastes, and possibly requiring less complicated rare fuels to operate.

Building such plants is not within the scope of the Nuclear Power Generation Skill. This is an operator's knowledge of such plants: how to handle routine maintenance, minor troubleshooting, and ongoing production of energy.

The main reason for keeping a nuclear capability in the campaign is to provide a rationale for the next section.

SALVAGING ELECTRICITY

If an area, probably a city, is still in the service network of a large power plant, presumably nuclear, then there may yet be live electric circuits in its buildings. If this is the case, then electricity becomes another resource to be scavenged by the characters.

This power is available over one of four types of line: Household, Hvy. Household, Lt. Industrial, Hvy. Industrial. The wattage available from such lines is based on the voltage of the line, controlled by its construction, and the amperage, controlled by the type of fuse or circuit breaker used on the line.

Voltage x Amperage = Wattage. Attempting to draw more power than this at any one moment will cause the fusing device to blow out. If it is a standard fuse, it must be completely replaced. If it is a circuit-breaker switch, it must be manually reset. Such switches are not always in the same area as the outlets that were used. In large offices or apartment complexes, they may be in some entirely different part of the building.

WATTAGE OUTPUT TABLE

| | Voltage | Amperage | Current |
|-----------------|---------|----------|-------------------|
| Household | 110 | 20 | 2200 watts |
| Hvy. Household | 220 | 30 | 6600 watts |
| Lt. Industrial | 440 | 50-100 | 22-44 kilowatts |
| Hvy. Industrial | 1000 | 100-200 | 100-200 kilowatts |

Household Lines may be used directly to power appliances, small power tools, anything that would be run on normal current today.

Hvy. Household is used to operate large appliances (washers, deep-freezers, air conditioner or ventilating pumps) and heavy duty equipment (commercial radio transmitters, large spotlights, heavy shop tools).

Light Industrial Lines provide the power for large printing presses, assembly lines, any large industrial plant's heaviest equipment.

Hvy. Industrial Lines are not used directly. They are feeders from the even higher voltages used in transmission lines to carry power from generator plant to users. One would expect to find this kind of line feeding into the substation at an industrial site.

An Electrician can convert the current from any higher line into two of the next lower lines. I.e., a 440-volt Lt. Industrial Line could be run through a transformer to generate current for two 220-volt Hvy. Household Lines. One of these could, in turn, be converted into two 110-volt Household Lines. The process can be reversed in the same way.

A useful rule of thumb for figuring the Task Points on this job is to give it a number of points equal to the difference in voltage between the lines used, divided by 10. The Task Period is based on the more powerful of the two lines involved. Hvy. Household: 1 hour; Lt. Industrial: 5 hours; Hvy. Industrial: 10 hours.

The Task Points or Period may be modified down if the necessary circuitry is all intact, and simple reconnections are needed. The base values assume the Electrician is cobbling a transformer station together.

USING SALVAGED CURRENT

There are two ways in which this may be used, or rather, two ways to keep track of power drains on the line.

If electricity is being tapped for storage in a battery, the only significant question is how long it will take to put a full Charge into the device. The formula is: Hours = (Battery Capacity in Charges x 100)/Wattage of the Line. Thus a 2200-watt Household Line will fully charge an E-5 in 500/2200 hours, or slightly under .25 hours.

If using the power in continuous drain, the Players and Gamesmaster should be aware that the maximum wattage in devices that may be operated off of it at any one time is equal to the wattage rating for the line. One can run 2000 watts worth of equipment on a 2200-watt Household Line with no problem. 2300 watts on the line will blow the fuse. If charging batteries from a line which has steady drainage from equipment of it as well, the leech transformer will draw only the surplus power. If 2000 watts of current are being used to run equipment, the battery will take only 200 watts. This will naturally increase the time needed to run up a Charge.

Overloading a line will blow out the breaker or fuse as stated above.

ELECTRICITY IN THE "200 YEARS AFTER" CAMPAIGN

The prevalence of electrical knowledge and resources in such a campaign is not something that can be legislated by the rules. If the Gamesmaster decides that some large plant (almost certainly nuclear if it is still operating) is still producing power, then it will exist. If he wants to posit the smaller generators as being in the body of common knowledge, that is also completely feasible. Temples dedicated to the Sun God, who makes the old magic work again (i.e. a Solar Screen installation) are a distinct possibility. The potentials in such a setup are very interesting. The priesthood of such a temple can be sincere believers, maintaining the plant by rote from the instructions in their "Holy Books" (maintenance manuals). Or they might know the truth of what they are doing. If so, are they unscrupulously perpetuating the myth of the Sun God to achieve power in their society, with impressive and very authentic "miracles" engineered by their preserved

technology, or are they using the cloak of religion to preserve and protect the old knowledge until it is time to release it to the world again?

It is a safe bet, in a campaign where old devices abound that do not function for want of power, that characters who achieve some ability in generating electricity will be able to parlay this into significant prestige. As the majority of desirable high-technology artifacts in use will be battery-powered, the campaign can probably do very nicely with no power available except from portable crank generators, treadmills in cities, and so on. Of course high-technology places of mystery (old security bases and such) will need some kind of constant power supply if their "magical" dangers and defenses are to function. This feature alone may be sufficient justification for the characters to risk penetrating such dangerous spots. Legends might develop about the lost magic of the old tools, recoverable only by confronting the demons of the lost cities.

ELECTROCUTION

When dealing with electricity, the subject of electrocution must be mentioned. A character may be exposed to this hazard by accident (a Critical Miss while working with a hot circuit), carelessness (messing with a hot circuit without proper tools or Skills), or attack (electroweapons, electrified fences, lightning bolts, etc.).

If the damage is being put out by a battery, i.e., dumping a bolt of power out in one shot, the base damage is 1D10 per Charge.

If the shock comes from a live wire, one carrying current, then the base damage is derived as if the line were attacking. An Effect Die is calculated as if the "Strength" of the line = Voltage/10. The Effect Die roll receives a multiplier, like the WDM, equal to the Amperage/10. Thus, a 110-volt line with a 20-amp fuse will have a score of 110/10, or 11, for a Group of 3, and will therefore roll a base damage of 1D10. This die roll receives a multiplier of 20/10, or 2.

Electrocution does Subdual damage, capable of killing only if it exceeds the DRT, as specified in Book 1.

OPTION

Burn Damage

The Gamesmaster may specify that the hand/hands grasping the wire, if that is how the damage was taken, is/are disabled with burns. The character will suffer Critical Damage to his hand(s) equal to 10% of the Lethal damage done by the shock (i.e., of the damage done in excess of the DRT). A Speed CST allows him to have released his grip before the burns had this effect and only the normal damage is suffered.

INSULATION

Insulation can be derived from specially-designed materials, which reduce the base damage of electrical shock, or from protective clothes or armor designed to stop more material hazards, but which provide some protection.

If using, say, insulated gloves to handle a line, we are in the first case given above. Such insulation is rated as class 1, 2, 3, and so on. It will stop 1 Charge per point of insulation if the shock derives from a battery, or reduce the base damage Group by 1 per point if a current is being used.

If the protection is from armor, the Armor Value reduces the points of damage done by the shock. Plastic armor receives its full Armor Value against such damage. Natural materials (cloth, leathers) receive half their Armor Value (round up). Metal armor does not impede electrical shock at all.

In manipulating electrified objects, a piece of plastic or wood will be quite safe. Metallic items, unless insulated for such use, will be exposed to current. If a character is touching the base metal at the other end of the item, he will

receive a shock. Read Mark Twain's *A Connecticut Yankee in King Arthur's Court* for a homily on the unwisdom of trying to hack through an electrified fence with a sword while dressed in full plate armor.

COMPUTERS

The big machines are perhaps the single most pivotal change in human resources in the late 20th century's impressive list of such marvels.

The principal uses of Computers in *Aftermath!* are:

Data Storage: Material of all kinds can be retrieved by proper use of the system, according to the Gamesmaster's decision as to what is in there in the first place. In playtest, we posited a number of access points (terminals) tied into a Public Data Bank, which could produce hard copy from libraries, news services, etc. Mack Reynolds's novel/projection *Looking Backwards From the Year 2000* shows the capabilities of such a system when fully supported by a working technology.

Processing of Models: The Programmer sets up a model of some Task on the computer and has it run through a simulation of the process. In any Task where possible errors exist, or variable efficiency due to design can occur, this allows the character to do the Task on the computer first, and keep a record of the processes. When he finds a method that suits him, he may proceed to do it for real, and will be able to reproduce that outcome exactly, as long as he has all the resources that were in the computer model.

Systems Control: The System Designer creates a program and servomechanism system allowing the computer to control some process or device. Highly sophisticated applications of this type maintain automated power plants, factories, and defensive systems. The character in this way creates a Robot Controlled Device.

DATA STORAGE

Requires a Programming BCS. Locating a given piece of information is a 10-Task-Point job for every level of specification, with a 10-minute Task Period. So a Character wants printout on a Reference manual: find Reference section of data bank (10 points). Next, find Skill or Knowledge in question (10 points). Activate printer now if you want a copy of the text. If you are looking for a specific reference only—that is, the answer to only one query—then that is another 10-point Task. When it is finished, the answer prints out. Hardcopy devices are quite valuable, since they allow the work retrieved to be taken with the character. As paper is going to be hard to find, the Gamesmaster can avoid a sudden wealth of books from developing by limiting most terminals found to the CRT (Cathode Ray Tube) type, where data is displayed on a T.V. screen.

PROCESSING MODELS

Programming Skill is used, averaged with the Skills governing the process being simulated. The Programming job has 5 times the Task Cost of the actual work under study, and a 1-day Task Period as a rule.

Once the program is completed, however, it can run through probable outcomes of the Task under study at a rate of 100 Task Points per hour, or faster (see Computer Resources below). It requires 1 hour and a System Design BCS to interpret the printout back into the terms of the actual Task. Once a satisfactory way to do the job has been found, the Task will always come out that way when done according to the computer's instructions.

This is valuable in that it allows the character to avoid processes which might produce dangerous or inert materials.

SYSTEMS CONTROL

Programming is used to set up the Task for the automated shop or other system as specified above. The System Designer then performs his Task of tying in the various devices to proper computer control.

Linkages between the computer and the device must be built if they do not already exist.

COMPUTER RESOURCES

These are the capabilities the Gamesmaster has designed into the computer system. The categories are:

Task Points per Hour: Used to see how fast the system can run through Process Models. The default value is 100 Task Points of simulated work per hour. Mini- or Micro-Computers will be much slower (by up to a factor of 10). Big systems (IBM 370) will be much faster, about as fast as you care to name in most cases.

Power Consumption: Like any other electrically-powered device, computers have a wattage rating. Normal systems draw from a Lt. Industrial Line at 5000 watts. Mini-Computers use Household Lines at 800 watts.

Memory: A figure expressing how much data can be stored in the system. Really big systems you don't have to worry about. They'll hold what they are given (the total human body of literature cannot fill them to capacity). Smaller units will be rated in terms of how many Skill points (not BCS points) they can store. A 1000-point unit (quite small) could store all of the data to give Reference BCS scores of 20 (i.e., Skill scores of 100) in 10 Skills.

The Gamesmaster will be the one to assign the chances of a malfunction in the computer. A fairly stingy rule is: after completing a given Task on the computer, there is a percentage chance equal to .1 times the Memory, Task Points, or what have you, processed in that Task, that the computer system will develop a bug and shut down. Systems fitted with automated maintenance controlled by backup systems will repair themselves at some fixed rate, while others will require human attention.

CYBERNETICS

Cybernetics, as used in this game, covers several topics often used in Science Fiction: Robots, Robot-Controlled Devices, and Artificial Intelligence. Robots are machines designed to perform some function on their own without human guidance. They can range from industrial robots for welding car frames to surveying robots such as have been sent to Mars to the utility devices commonly found in SF stories. We distinguish robots designed to look like humans, and often to stand in for humans, by the name of Animatron.

Robot-Controlled Devices are machines or mechanisms normally controlled by a human or several humans, but which have been put under the control of a robot brain. Such machines may be simple or complex. The after-hours walk-up window used by many banks is a good example of this kind of device.



Artificial Intelligence is used to cover the concept of machines that "think" for themselves. This is intended to represent machines that deal with a wide variety of circumstances beyond a limited pre-programmed range. Chess-playing computers do not qualify under this definition. Artificial Intelligences usually have the capability of changing their programming in response to new data. For game purposes, a robot or computer that will be treated as if it had a human or near-human capability to think will be classed as an Artificial Intelligence.

ROBOTS

Robots can be built in many ways to serve many functions. They may or may not be mobile. They may or may not have a self-contained power source. In general, they will only be capable of a certain number of functions which will be guided by a basic set of programmed instructions.

Robots will tend to be large, bulky, and awkward. Power will generally be supplied by cable to non-mobile Robots and, while mobile Robots often are battery-powered, they will usually contain an adaptor to allow them to draw power from a live circuit.

The exact specifics of a Robot's design will be left to the Gamesmaster, as many such things are still prototypes and one-of-a-kind items. Production Line Robots will tend to be simple, rugged, dumb, and basically harmless. The Gamesmaster is enjoined to consider such things as power sources and demands on that source. Difficult or complex tasks will require the Robot to expend more power. If the Robot has a limited power source, it will eventually run down. If it has a limit on the amount of power that it can draw on, some tasks will be beyond its power.

Also consider the nature of the device and the tasks for which it is programmed. A Robot will have a limited number of tasks which it may be programmed to perform. Simple tasks would not take up much of the Robot's memory capability, while complex tasks or tasks requiring many decisions to be made during the execution will often take large amounts of memory capacity.

A Robot is designed for a laboratory as an aid to scientists. It is to lift and hold objects and move them about the room. It is given motion sensors to respond to hand signals for activation of the system. It is given audio receptors to respond to a limited range of verbal

commands such as Stop, Lift, Lower, Release, etc. It is also connected to a control board by which its actions may be directed by a human operator. The brain of the device will hold 22 units of memory. Each command uses 1. The manual override function uses 2. The motion control circuitry which allows it to move back and forth across the room takes 5. The programming allowing it the basic operations of lifting and opening and closing the hand takes 10. Besides the commands specifically mentioned, the Robot could be programmed for another simple command.

Now consider this Robot reprogrammed to sinister ends. The manual override is removed, as are the verbal commands. Two units of memory are used to allow it to locate audio sources in the room. Three units are used to allow it to move toward motion and attempt to grasp and squeeze anything that moves. The last two units are used to let it beat moving objects that it is holding against a wall until they stop moving. The Robot has become a dumb but dangerous guardian of the room.

The Gamesmaster is the final arbiter of the amount of memory the instructions for a task will fill. He also will decide on power expenditure to fulfill a task. Some guidelines are presented in the chart below.

ROBOT-CONTROLLED DEVICES

Such devices could be almost anything. If the device does not use its own power to function, the Robot Controller would have to supply power for the device as well as for itself. Such devices are usually maintenance units allowing a human controller to leave and still have whatever the device does continue even though no human is there to supervise. Alternatively, a Robot Controller would be used to control a device or mechanism which will go where a human controller cannot or will not go. Such a device would have to carry its own power supply with it.

Robot Controllers would be constructed by the Gamesmaster in the same way as regular Robots in terms of power and memory considerations.

An example of a Robot-Controlled Device might be a Cybernetic Tank. Such a device would operate exactly like a vehicle crewed by men. The capacity of the

| ROBOT TASKS | | |
|---|-------------------------------------|---|
| Function | Memory | Power |
| Perform an action | variable by complexity | .2 Charge per Action spent |
| Perform a Combat Action | based on Skill | .5 Charges per Action |
| Use a Combat Skill | 2 per BCS point | see above |
| Knowledge Memory | 1 per point of BCS in the knowledge | .5 Charges times Effect number of die roll when knowledge used |
| Knowledge Integration with Performance of Skill | 10 | Simple tasks: 1 "E" charge per hour. More complex tasks will vary by the Gamesmaster's evaluation |
| Maintenance function allowing Robot to be aware and wait for a specific signal to return to full operation. | 3 | .01 Charge per hour |

Cyber-tank to respond would be based on the Robot Brain. Such a device would fill the tank, precluding human control. It could be programmed to conduct maneuvers, fire the weapons, call for resupply of fuel and ammunition, and report enemy actions visible to its sensors

A more advanced version, probably requiring Artificial Intelligence, would be able to make tactical decisions regarding its own safety on the battlefield and evidence a better ability to select suitable targets.

Such devices would probably have a power source separate from the vehicle's power source. Damage that would affect the crew would affect the Robot Brain.

ARTIFICIAL INTELLIGENCE

No hard-and-fast rules will be given concerning Artificial Intelligence. The Gamesmaster must decide on the limitations and power requirements of such things. A system of computers simulating a living intelligence, if it could be built today, would be quite large. With the advances in computer technology that are occurring even today, such a system might be smaller by a power of ten in twenty years or less.

An Artificial Intelligence should be given goals to accomplish and parameters inside which it will function. Traditionally, such things are emotionless.

The Gamesmaster will have to decide if the general opinion of the populace and/or the legal system sees intelligent machines as entities due treatment as any other intelligent entity, or if they are considered non-persons.

Although such things may not be possible in the near future, they can make for an interesting scenario if handled properly.

ANIMATRONS

Animatrons are Robots designed to function and look like humans. A prototype of such machines can be seen in the audio-animatronic creations of Walt Disney Enterprises. These represent a first generation of device. The power source and "brain" are not included in the body of the Robot. Motions and actions are preprogrammed and restricted to a fairly limited repertoire. These Robots are effectively non-mobile.

We postulate several "generations" for each major system in Animatron construction. These are presented in brief in this chart:

| | FIRST GENERATION | SECOND GENERATION | THIRD GENERATION |
|-----------------|--------------------------------------|--|---|
| MOBILITY | Non-mobile | Limited mobility to the length of a power cord | Fully mobile |
| POWER | External source | External main source with limited internal emergency supply equivalent to an Ev-20 | Internal power source equivalent to an Ev-150 |
| BRAIN | Pre-programmed specific instructions | Limited response but some decision-making capability | Wide range of response with programming |

A fourth-generation brain would be Artificial Intelligence.

The "brain" in all cases need not be incorporated into the Robot body. It may be connected by a transmission cord or have its instructions relayed to the body by radio, microwave, or some other form of wireless communications.

Animatrons are designed in several models. Each model is intended for a specific type of duty and is constructed to

reflect this. The basic types are:

Demonstration: This kind is generally non-mobile. It is used in stores, amusement parks, and in a receptionist capacity by businesses.

Servant: The principal function of this type is expressed in the name. Servant models are usually limited to one type of service, although more expensive and complex models can serve in more than one capacity.

Simulation: This type is used for testing purposes in such research as into the effects of automobile crashes on humans. Some are non-mobile and simply record effects on the body. Others are mobile and are programmed to respond in specific ways to the circumstance being tested. This series is also used at certain high-priced fantasy parks where customers pay to live out fantasies. The choice of this model for such use is based on its ability to simulate damage received as if it were human. This includes System Shock and efficiency reductions due to damage.

Surrogate: This type is designed to perform functions normally done by humans, but in environments which might be hazardous to human life due to the nature of the environment or the length of time required to perform the function.

Wardroid: A self-explanatory purpose. Still expensive and prototypical at the time of the Ruin. It was not yet cost-effective, so humans were still used as soldiers.

Animatrons can be programmed to move, act, and perform as a human. Each 5 points of Attribute score require 1 memory unit. Animatrons do not require Will and Health, and Wit is only pertinent for determining the sensors' ability to distinguish Hidden Things. Most models are limited to human maxima. Wardroids have maxima of 50.

The number of memory units available to an Animatron will vary. If the "brain" is external, it may be any size. If internal, the usual capacity will depend on the "generation" of the "brain." For game purposes, 50 times the "generation" number will give a good base.

Animatrons do not take damage as humans do. Each portion of the body has a Damage Resistance Total. That portion will continue to operate until the total damage received exceeds the Damage Resistance Total. Subdual damage from weapons does not affect an Animatron. Except for the Simulation type, Animatrons are not subject to System Shock.

Different models have different Armor Values for the covering of the body. This basic Armor Value will add to the AV of any armor or clothing worn by the Animatron.

Construction of Animatrons follows the basic design of humans. Sensors are in the head and the power source is in the body. If the sensors are destroyed, the Animatron will be blind, and if the power source is destroyed, it will cease to function.

Critical Hits against an Animatron are resolved on a special table. A Missile Special Effect against an Animatron uses the usual table. A Daze or Stun result against an Animatron will only last for a number of Action Phases equal to the machine's Phases Consumed in Action number.



ANIMATRON STATISTICS BY MODEL

| Model | Damage | | | |
|--|------------------|------------------|-------------|------|
| | Resistance Total | Structure Rating | Armor Value | Mass |
| Demonstration | Head: 15 | 5 | 5 | 8 |
| | Body: 25 | | | |
| | Limb: 10 | | | |
| Servant | Head: 15 | 5 | 5 | 8 |
| | Body: 25 | | | |
| | Limb: 10 | | | |
| Simulation | Head: 20 | 5 | 1 | 8.4 |
| | Body: 35 | | | |
| | Limb: 15 | | | |
| Usually contains sufficient "blood" to simulate 20 wounds. | | | | |
| Surrogate | Head: 30 | 7 | 9 | 9 |
| | Body: 50 | | | |
| | Limb: 20 | | | |
| Often incorporates special equipment specific to its job. | | | | |
| Wardroid | Head: 50 | 10 | 15 | 10 |
| | Body: 80 | | | |
| | Limb: 30 | | | |

IR and light amplification sensors standard. Frequently contains a self-destruct device to prevent capture.

ANIMATRON CRITICAL HIT TABLE

| Die Roll | Effect |
|---------------|---|
| 01-10 | No effect |
| 11-20 | Daze |
| 21-40 | Stun |
| 41-60 | General Efficiency reduction. Attributes reduced by 10% and BCS by 2 |
| Systems loss: | |
| 61-64 | Fine Control. Unit must make a Dexterity AST to perform any function requiring fine coordination. This includes such things as firing a gun |
| 65-68 | Identification. Unit will not recognize normal controllers or deactivation orders |
| 69-72 | Logic. Unit effectively acts in a random fashion |
| 73-75 | Manipulative. Unit may not manipulate objects |
| 76-77 | Motive. Unit is frozen where it is. It may not move on the DAT display or change facing |
| 78-80 | Sensory. Unit's sensory apparatus is destroyed |
| 81-95 | Power outage. Unit goes on reserve power or ceases function |
| 96-00 | Destructive dysfunction. Unit is junked. A 40% chance of destruction beyond repair |

REPAIR AND REPROGRAMMING

The Gamesmaster who incorporates Cybernetic devices into his campaign may also wish to add a Skill in Robotic Design, which would function similarly to Computer Design Skill.

Repair is accomplished as repair for vehicles, but Electrician Skill is used to do the work once the repair program is laid out by a qualified designer, that is, a character who has whatever Skill the Gamesmaster has designated as capable of understanding Cybernetic devices. Each portion (head, limb, body) is treated as a separate Task.

Repair is accomplished as a Task. The repair program must first be laid out as a design Task to determine the repairs to be made. Each portion of the Cybernetic device is treated as a separate Task. This includes head, limb, body, and "brain." Losses due to critical system loss must be repaired following a program similar to that used when repairing a vehicle with a system loss. Once the repair program is laid out, a character with Electrician Skill and an Animatron Repair Kit may proceed on the Task of repair. The Task Value is twice the damage sustained. Task period will be by the day. Besides the time required to perform the task, a repair Task will require a minimum of 2D6 units of parts.

A Cybernetic device is Disrepaired when its Damage Resistance Total is exceeded by the damage taken. Then its Structure Rating plus its DRT is exceeded, it is Junked. When its DRT plus twice its Structure Rating is exceeded it is destroyed beyond repair. Disrepaired and Junked units yield parts as the corresponding non-functional vehicles.

Reprogramming a Cybernetic device is possible, but will be limited to the functions that the device can perform and by its memory capacity. Reprogramming is a Computer Science, Programming Task. The Gamesmaster may assign whatever Task Value he deems appropriate. A value of 5 or 10 per memory unit would be reasonable. Some devices such as Wardroids or security devices would have anti-tamper mechanisms that could do anything ranging from self-destruction to simply requiring a Task, albeit a difficult one, be performed before the character could begin reprogramming. Such a Task would represent breaking the device's security systems and could have a Task Value in the hundreds for a well-protected device.

HIGH TECH WEAPONS

There are several potential developments in arms manufacture which are just coming off the drawing boards now, or are still on them in some cases, which the Gamesmaster may or may not wish to include in the campaign. Some represent improvements on existing weapons, others totally new concepts in destruction.

LASERS

If a workable "ray gun" is going to evolve from our present technology, it will be based on the Laser principle. While there are several ways in which Laser action can be simulated, the simplest one we have found posits that the amount of power used to generate the beam, modified by the tightness of the beam's collimation, determines the weapon's damage potential.

Assume Lasers eat power in Charges. If fitted with a power source drawing current, they must recycle between shots until the desired amount of power has built up in a capacitor as Charges. The Laser's base damage potential is 1D10 per Charge. The weapons should be assigned a maximum number of Charges per shot by the Gamesmaster, an upper limit on how much they can pump out at one time. The collimation of the Laser acts as a WDM for this power. It may be fixed or adjustable. Laser fire is handled as if it were a "Single Action" firearm: 1 Shot per Action is fired, resolving

the BCS on the middle Action Phase of the firer's PCA. The Skill used to aim and fire is the Small Arms Skill appropriate to the form of the Laser gun (it is shaped like a Pistol or a Rifle). But a permanent bonus equal to the user's Deftness score is added to the Skill score. If the user has no Firearms Skill, he will still have a BCS derived from his Combative Talent plus his Deftness.

Firing Stance does not affect Lasers, as there is no recoil and the beam goes exactly where you point it. Likewise, no bonuses to BCS derive from Brace Weapon, Rest Weapon, or other steadying modifiers.

Range with Lasers boils down to Short (10 meters), Medium (100 meters), and Long (over 100 meters). These are qualities of human vision rather than the weapon. The BCS modifiers for Range are +1, +0, and -1 respectively. As there is no BDG, no ballistic modifiers apply as such.

A Laser will shed 1 Charge for every 500 meters of distance traveled: out to 500 meters it is at full power; from 500 to 1000, it is down 1 Charge; and so on. Thus, a 3-Charge Laser has a maximum range of 1500 meters.

This is the situation in comparatively clear air. Light rain or misty air will alter the distance from 500 meters to 100 meters. Heavy rain will knock it down to 50 meters. A Smoke grenade cloud or similar dense smoke concentrations will reduce Laser fire traversing it by a factor of 1 Charge per (10 meters/Smoke's rating). A cloud of Smoke rated 1, i.e., reducing Light conditions 1 step, will knock 1 Charge off of a Laser beam for every 10 meters it travels through the cloud. Smoke rated at 2 will do so for every 5 meters traversed.

If the Gamesmaster wishes to introduce Smoke charges specifically designed to limit the effectiveness of Lasers in a battlefield situation, then the Beam will suffer the attrition as given for normal Smoke, but does so if it traverses any fraction of the stipulated distance, instead of only after it has traveled the entire distance.

When a Laser hits a flammable material, it will have a chance of igniting it as open flame does. It has a Strength Rating for this purpose equal to the Group derived from its damage potential times the collimation. Use the fire rules in Book 1, page 48.

Maintenance, repair, and modification of Laser devices is a function of the averaged Skills of Laser Technology and Electrician.

OPTION

Laser Trauma

The effects of a high-energy Laser beam passing through a human body are pretty gruesome. The heat of the beam will blast the water in the tissues into steam in micro-seconds, causing extensive damage. There is a chance of taking an automatic Critical Hit effect of Trauma to the affected Location. This is a percentage equal to the damage that penetrates the Armor Value on that Location: the actual damage suffered.

If the percentage roll indicated Trauma, half the total damage done is the amount of damage taken as Critical Disabling damage. The victim should be permitted a Health AST to resist this effect.

Note: Sever effects due to Laser Trauma are cauterized by the beam. Bleeding to death is not possible.

So Wild Winifred is potted by a Laser-firing sniper on a housetop. The weapon is a 4-Charge Laser Rifle with Collimation of 3. That will do 4D10 of base damage with a WDM of 3. Winnie is hit! The Laser pulse sizzles through her shoulder (Location 22) where she is wearing heavy leather (Armor Value of 4). The damage roll scores a 10, with a multiplier of 3 that gives a damage potential of 30. Wild Winifred will take 26 points of damage from the Laser hit. 30 points of damage gives the fire effect of the Laser a strength group of 4. That is not twice the Armor Value of the

Leather, so her clothes do not catch fire. But as the damage done exceeds three times the Armor Value, the armor on Location 22 is destroyed. Since Winifred suffered 26 points of damage, she has a 26% chance of suffering Laser Trauma. If this occurs, her shoulder takes 13 points of Critical damage, which has a flat 13% chance of severing the arm.

SAMPLE LASER WEAPONS

U.S. Army XLM-2: Max. Charge per Shot = 2.
Collimation = 2.

A Laser pistol loading two E-5 batteries in a clip-type magazine. ENC of .7. DUR of 2.

U.S. Army XLM-3: Max. Charges per Shot = 1.
Collimation = 2.

Lighter version of the XLM-2, for riot control and police use. Carries a single E-5 for power, loaded into the handle as in an autoloading Pistol. ENC of .4. DUR of 2.

U.S. Army XLMR-4: Max. Charges per Shot = 4.
Collimation = 3.

A Laser rifle drawing power from a backpack-type harness, containing an Ev-50. ENC of 1.2 for the gun and 1.5 for the backpack. DUR of 3.

Eastinghome Mining Laser Drill: Max Charges per Shot = 5.
Collimation = 1.5.

A fixed-mount device, about 2 meters long by 1.5 meters high. The relevant Combat Skill for its use is Direct Fire Cannon. The weapon can draw power from an Ev-50 or from a direct source of current. It contains a capacitor adjustable to complete charging at number of Charges from 1 to 5. DUR of 4.

LAZAB

A special bonded, spray-on material that will "take" on any plastic armor or clothing, or a Rigid non-plastic armor. Dispensed in 100-unit sprayers; 1 unit of this material, called "Lazab" (for Laser Ablative), will coat 1 Location on the user's person.

1 layer of Lazab will reduce the Collimation of impinging Laser fire by 1. Each such reduction also evaporates the layer. The material functions by subliming into a vapor which breaks up the coherent light beam of the Laser. A character treats a plastic breastplate with 3 layers of Lazab. He is later hit on a chest Location by a beam from a Laser with Collimation 2. The Lazab cancels both points of Collimation, leaving 1 layer still on that Location. A subsequent hit on the same Location is also at Collimation 2. 1 factor of this is cancelled, so that the impinging beam has a multiplier of 1 for its damage potential. The Lazab on that Location is now gone.

Optionally, the Gamesmaster may simply rate various pieces of treated armor as having a given Lazab factor, if the potential bookkeeping problems involved in the spray-on system dismay him. A constant divisor might be a better way of measuring its protective value in this case, so that complete immunity to Laser fire is never achieved by wearing Lazab with a greater value than most Collimations. Lazab 2 would halve the Collimation, Lazab 3 reduce it to 1/3 of its full value, and so on. This saves a good deal of record-keeping. If the Laser still manages to eliminate the Location's armor despite the reductions of the Lazab, then both the Armor Value and the Lazab value are gone.

Alternatively, an armor material with integral Lazab may have its Armor Value reduced by the Collimation of the hit. If this method is used, the Lazab need not be rated for strength factors.



XLMR-4

ELECTROWEAPONS

These are hand-to-hand weapons developed from the cattle prod. The theory is simple: modify a handweapon to deliver an electric shock in connection with a physical blow. Any standard weapon in the Gear section can be found in Electroweapon form. The most common are: Mace, Baton (Club), Sword, Knife, Spear. Military models were in field test when the Ruin struck, for both Electroweapon bayonets and trench knives, although Pentagon sources admitted that these were principally intended to improve troop morale, rather than to increase fighting effectiveness.

The standard Electroweapon carries an E-5 in its haft or handle. When the shock function is switched on (requiring 1 Action), the weapon will emit a 1-Charge jolt of power whenever it hits a grounded object. The Gamesmaster will have to determine if the object is really grounded or not.

If the weapon hits the target (i.e., the BCS is successfully rolled) then the Charge does damage in one of two ways. If the normal damage for the blow penetrates the armor at that Location on the target's body, the 1D10 of electrical damage is added to the damage that penetrated. If the damage potential was insufficient to penetrate the armor, the electrical damage is rolled separately in an attack upon that armor. This is defended against by the armor as described under Insulators in the Electrocutation rules (p. 37).

It is therefore possible for a steel breastplate, Armor Value 9, to completely stop the damage from the sword blow of an Electrosword, but presenting no defense against the electrical current, expose its wearer to the full value of the damage die for shock.

Remember that the electrical damage done will be Subdual damage, no matter what kind of damage the weapon does as a physical weapon.

TASERS

A form of Electroweapon in use today, in limited circumstances, is the "Taser." This is a small air gun, modified to fire a short "harpoon," a missile fitted with a barbed point. The harpoon is attached to the gun by a fine wire. Once the weapon has hit the target, the firer can press a stud which will release current into the wire and thus the victim.

Specifications for the Taser as it is used in *Aftermath!* are:

Skill Used: Pistol

ENC: .5 Single Barrel .75 Double Barrel

Range: 25 meters

The weapon can be pumped up to firing pressure (5 Task Points required to charge it with enough air pressure to fire once). The reservoir holds 20 "Task Points" of air at a time. A Strength AST allows the pumper to put Task Points equal to his Effect Die roll into the reservoir and the Task Period is 1 Action. Air guns using CO₂ cartridges can fire 10 shots on one cartridge. A battery case holding an E-5 is attached to the gun, providing power for the electric effect.

The Taser's harpoon is about pencil-sized and barbed. It will hit the target with 1D10 of force, and if it penetrates, it will sink its nasty head into the victim. This only causes 1 point of actual lethal damage. He must expend an Action to try to pull it out. To do so, he must roll a score on his Strength Effect Die that is higher than the damage done by the dart when it hit him. This will do him another D3 of damage as the barbs tear loose.

Meanwhile, once the barb is sticking in the target, all the firer need do is press a button mounted on the battery case. He may continue doing this until he runs out of power or the victim pulls the barb out. If the victim is still holding on to the barb when the Charge is sent, he may take the shock in his hand.

Tasers may be fitted with quick-retrieval systems, which will reel back the harpoon if it is not stuck in something, or may require manual rewinding (1 Action/10m). It takes 1 Action to load the harpoon back into the gun barrel when the wire has been reeled in. Critical Hits add 2D5 to the "penetrative force" when it hits. Critical Misses are treated as for arrows. A "String Breaks" result means that the wire has broken. Assume that the wire has about 10 points of resistance to being severed by cutting or breaking in the victim's hands if he tries to disable the Taser that way.

The relevant Skill for shooting a Taser is the Pistol, Modern Skill, but Average BCS is used due to the lower accuracy of the Taser. Repairing a Taser, or making one, is a Task combining the Gunsmith and Electrical Skills.

The Gamesmaster may want to develop larger, more powerful Taser-type weapons for use in special situations. One playtest gimmick that worked rather well was a little servomechanism on a wheeled base that scooted around under tables and behind crates shooting a Taser with a 3-Charge jolt behind it.

EXOTIC FIREARM AMMO

Another form of optional high tech weaponry we will discuss are cartridges used in small arms to enhance bullet damage or other ballistic factors, or to produce other effects.

SABOT ROUNDS

A cartridge case is loaded with a bullet of smaller caliber than the case's. Surrounding the bullet is a plastic sheath, or "sabot." The force of the burning powder can impart a much higher velocity to the lighter bullet, so that it maintains its speed far longer than do ordinary projectiles. Since the velocity is higher, the BDG is not appreciably affected by the use of a smaller slug.

Firing a sabot round will have the same effect as the Match Weapons feature: 50% increase in the Range Steps for the weapon. This reflects the lack of BDG loss over longer rounds and the flatter trajectory of the bullet.

EXPLOSIVE ROUNDS

The bullets are made of a high-impact-triggered explosive, producing a Blast of 1 for a 1-meter radius. If the shot misses its target, roll for scatter as for a miss with any missile weapon (roll a D6 for direction of scatter) with a distance off target equal to the effective BDG in meters times 1D10. Read a roll of 0 as zero, not ten. If the hit is within 1 meter of a character, he gets the Blast 1 effects. If the bullet hits the target, add 1D10 to the damage roll for the effective BDG. If the bullet is stopped by cover, apply the Blast effect to the cover, as if using explosives in an Unskilled manner. Also, the target will experience the Blast 1 effects if any part of his body is not behind the cover, i.e., if he is not completely behind it.

INCENDIARY ROUNDS

The bullet is packed with a high-temperature incendiary compound. On impact, it does not do normal bullet damage, but spatters into an small area of intensely hot fire, which will burn for 1D3 Combat Turns. The initial strength group of this fire is 4. Use the fire rules from Book 1.

FLAME WEAPONS

These are the flamethrowers, white phosphorus shells and grenades, napalm bombs, and so on.

FLAMETHROWERS

These are capable of squirting a stream of napalm for a maximum distance of about 100 meters. No Skill directly governs their use, the BCS (if needed) being derived by adding the user's Combative Talent and Deftness as a score. Actually, if you know how to operate it, all that need be done

is to point the muzzle of the weapon in the general direction of the target and pull the release trigger. Any non-moving target in range can be hit if all you want to do is splash the outside. If firing at a small part of the target item (a machine gun slit in a pillbox, for example), roll the BCS to do so.

Against targets in the open, or moving targets, roll the BCS. A miss will scatter. Roll the D6 for the direction of scatter and place the end of the spray in that direction at a number of meters equal to the Effect Number of the die roll.

Once an area has been hit by the spray, the user can "traverse" the end of the stream one meter per Action Phase as long as he keeps triggering the flamethrower. He may do this as if moving normally, but is himself limited to a 1-meter move per Action while firing. There is no Stance or aiming modifier to consider with the flamethrower. Just point and shoot.

The weapon operates like a garden hose. To fire at more distant targets, you lift the nozzle, and the stream splatters to the ground farther away. Lower the nozzle and the arc of fluid moves closer to you. Where the stream comes to earth, it will spatter napalm for a radius of 2 meters.

The average flamethrower consists of a long, rifle-sized sprayer, attached to a backpack harness holding tanks of napalm and a pressure tank to push it out. It has sufficient fuel for 10 normal shots, or 20 Action Phases of traversing. 2 phases will consume 1 shot's worth. ENC of sprayer is 1.5, of backpack 2.

FLAME RIFLE

Functions as does the Flamethrower, but lacks its bulk and its capacity. The maximum range is only about 20 meters, the splash radius where the stream hits the ground is only 1 meter, and the Flame Rifle does not have traverse capability.

It has an ENC of 2. No backpack for fuel is needed. Small canisters of pressurized napalm are loaded under the barrel, providing fuel for 5 shots. If a shot misses, check scatter as with the larger weapon.

In the event of a Critical Miss, a scatter result with either weapon which shows the stream landing with the firer in range is allowed. Otherwise, such a scatter cannot occur. Roll again for the vector in such a case.

NAPALM

Napalm is the incendiary fuel made for flamethrowers, flame rifles, and aerial napalm bombs. It can be extinguished by rolling or smothering, by chemical extinguishers, and in water it will float off the victim if he can immerse himself completely, although if he surfaces into a patch of floating napalm it will cover him again. If hit by napalm splatter from a flame weapon, the victim is assumed to be fairly evenly covered by the stuff. It will attack his Average Armor Value for purposes of doing damage, and the fire effects on armor are applied to everything he is wearing. At the Gamesmaster's option, a Location roll may be made, and that part of the body (limb, torso, or head) is what is attacked by the fire.

Napalm has an initial strength Rating of 4 for fire effects, and will burn for 2D3 Combat Turns before going out on its own, if not extinguished earlier.

WHITE PHOSPHORUS

Powdered white phosphorus burns fiercely once ignited, settling over an area in a fine drift of dust. Roll for the Location hit by exposure to White Phosphorus and apply the effects to the part of the body indicated, as was suggested for napalm. White Phosphorus will burn for 2D6 Combat Turns or until extinguished. It has an initial Strength Rating of 3 for fire effects, but it increases that figure by 2 for every Combat Turn of burning, instead of by 1!

White Phosphorus can be extinguished by rolling or smothering, or by chemical extinguishers. Water has no effect on it.

Weapons using White Phosphorus are:

Hand Grenade: 1 Combat Turn fuse, like explosive grenades. Scatters phosphorus for 2D3 meters from point of explosion with a BCS of 12 to hit characters in range. This is subject to Target modifiers for movement and Location rolls are subject to cover.

Mortar Shell: Scatters phosphorus over a radius of 20 meters, with a BCS equal to 14 to hit exposed characters in range. Again, target movement will increase CDA against this attack.

Rifle Grenade: Scatters phosphorus to a radius of 10 meters with a BCS of 12.

Air Bursts will double the effective radius of the scattering effect, but the phosphorus will not start reaching the ground for 1 full Combat Turn after detonation, at which point the BCS rolls for hits are made.

Anyone facing the direction of a White Phosphorus detonation within a range of 50 meters must make a Speed AST to cover his eyes or be blinded by the intense actinic light such weapons give off. If he does not make his roll successfully, he will be blinded for 1D10 Combat Turns.

NUCLEAR WEAPONS

How much higher can the technology behind a weapon get? The first major assumption to be made is that no matter how you ended the world in your campaign, there are not a lot of strategic nukes left. If you want the characters to find (or at least seek) a legendary "last big bomb" in a silo somewhere, then fine. But there is really no reason to put them in possession of a city-killer more than once.

This leaves us the tactical stuff, including the so-called "neutron" bomb. Even here, unless you are positing some pretty remarkable weapons research breakthroughs, the smallest delivery system around will be a 105mm howitzer. The Gamesmaster will have to do the research on this subject in terms of delivery systems.

Our concern here is the potential destructiveness of nuclear explosives. Even a "small" nuke will reduce most buildings to rubble for a radius of almost 1 km. It will put out lethal levels of gamma radiation to the same distance, sentencing the unprotected to slow death. For a slightly greater radius, exposed individuals will suffer third degree burns from the heat pulse of the weapon, which is almost certain to bring death within hours at the most. And that is for a 1 kiloton weapon—almost picayune by modern standards.

The new Neutron bomb, or Enhanced Radiation, Reduced Blast (ERRB) in polite company, does not, as popular belief would have it, noiselessly emit a blast of radiation which sweeps people down in windrows while leaving buildings intact. In fact, it puts out blast effects equivalent to that 1 kiloton weapon we described. Lethal radiation, however, is present at out to 3 kilometers! Significant radiation hazards are encountered as far away as 6 or 7 km. Within the primary radiation zone, even personnel protected by the heavy steel armor of tanks would suffer serious overdoses of gamma radiation. Unshielded individuals would almost surely suffer a killing dose.

The rule of thumb for exposure to a nuclear blast is: within the total destruction area of the blast, there will be no survivors, unless in a hardened site or a tank or other vehicle hardened to withstand the weapon's effects. Within an inner radius of the zone (say half its overall radius) there will be no chance of survival. Beyond this, anyone inside substantial coverage (concrete buildings, dugouts, tanks) will ride out the detonation of the device fairly safely. Exposed personnel, however, will suffer casualties out to the full radius of nuclear frightfulness.

These are the tactical nukes (with the exception of the 1 megaton warhead, which represents a fairly small strategic

RANGE EFFECTS OF NUCLEAR WEAPONS

| Weapon Size | Total Destruction | Major Destruction | 3rd Degree Burns | 2nd Degree Burns | 1st Degree Burns | 500 REM | 200 REM | 100 REM |
|----------------|-------------------|-------------------|------------------|------------------|------------------|---------|---------|---------|
| 1 kiloton | .25 km | .5 km | .75 km | 1.5 km | 2.0 km | .5 km | .75 km | 1.0 km |
| 100 kiloton | 1.0 km | 2.0 km | 3.0 km | 10 km | 15 km | 1.0 km | 2.5 km | 5.0 km |
| 1 megaton | 4.0 km | 10 km | 15 km | 25 km | 50 km | 10 km | 20 km | 25 km |
| ERRB (Neutron) | .2 km | .5 km | .6km | .8 km | 1.0 km | 3.0 km | 5.0 km | 8.0 km |

weapon). Pace off a brisk stroll of about 5 minutes' length from the center of your home city. If your starting point is Ground Zero for a 1-kiloton blast, everything you have passed will be either flattened, or a tottering hulk if it is very solidly constructed. The sights you pass in the next 5 minutes will still be standing, but severely weakened. Frame houses will probably still be rubble. Solid structures probably have had their Structural Stability knocked down to 5 or so. Another five minutes' walk brings you to the end of the main heat pulse's range. All unprotected individuals you have passed will be dead of extensive third-degree burns in a few hours. The rubble is probably starting to burn.

As you can see, there is not a whole lot of purpose in trying to stage a defense against nuclear strikes on an individual character basis. The bomb does not care.

The only real game factor that is of general interest in **Aftermath!** when it comes to nukes is the question of radiation, specifically of lingering contamination. How does that invisible killer work? How can you stop it?

Well, actually, you can't stop it. If you are exposed to x amount of radiation, so many REM, then you have such-and-such a chance of dying. This is (in game terms) boring.

Let us assume that areas of radioactive contamination still exist. Some authorities state that they will be with us for centuries; others are equally sure that the effects will become insignificant within a few years.

The Gamesmaster should assign a value to such contamination in REM per Hour. When the characters have absorbed a given number of REM, they will contract the appropriate "degree" of Radiation Poisoning.

First Degree (200 REM): The character will become Fully Fatigued and show the Nausea symptom given in Book 1 after a number of hours equal to his Health Group plus the roll of 1D10. He will remain in this state for a number of hours equal to 30 minus his Health AST. There are no further symptoms.

Second Degree (500 REM): The character evinces First Degree symptoms as given above. He will then be apparently normal for a number of weeks equal to his Health Group. After this time he will show the next set of symptoms. Hair will be lost, he will display the symptom of Purpura, and he will suffer a lowered white blood cell count, so that any wound can cause infection. He will be in a state of permanent Partial Fatigue, and further stress will Fully Fatigue him.

He will remain in this state until he can make a Health AST, rolling daily. He will then recover within a number of days equal to 6 minus his Health Group.

Third Degree (750 REM): The character evinces the same symptoms as in Second Degree Radiation Poisoning, but the second onset of the symptoms is accompanied by an Advance up Health. When the Advance reaches the CST, the character is permanently Fully Fatigued. When it reaches the AST, he will become delirious and feverish. At an Advance equal to the Health score, Crisis occurs. The "Virulence" of the condition is 3.

Fourth Degree (1000 REM): The same as Third Degree, but the Virulence of the condition is 4, and the Advance is down the Health: when the effective health is reduced to the current AST, Full Fatigue results. At the CST, delirium. When Health is reduced below 1, Crisis.

During every week that a Character avoids further exposure to radiation, his system will purge itself of REM equal to his Health score. A physician's care can increase this figure by the doctor's Wit Group Effect Die roll, if daily attention can be given to the case. Roll the Advanced Medical Skill BCS at the end of the week, when the REM purged are calculated. The use of 1 Medikit Unit per day in the week will increase the BCS by 1 and the effective Wit Group by the same.

Special drugs are also available which can increase the purge rate if properly administered.

If the character can reduce the degree of Radiation Poisoning to First or even down to none between the time of the symptoms described in First Degree Poisoning and the more severe symptoms of higher Degrees, then the advanced forms of the affliction will not manifest themselves.

For Gamesmasters who wish to use the device, we end this section with a "Neutron Grenade." God only knows how the thing works.

It is a Rifle Grenade, 22mm type, available in Ballistite-launched forms only. It has a Blast of 50 and no Frag. The weapon also generates 1500 REM at the point of detonation. This is reduced by 50 per meter from "Ground Zero."

GASES

Gas weapons may be delivered by hand grenade, 40mm or 22mm grenades from launchers or rifles, artillery shells, or aerial bombs. They range from the ubiquitous but essentially merciful Tear Gas and other riot control substances, to the Nerve Gases (Sarin, VN, and their lethal kin).

Any Gas delivery system will be rated for base volume and duration. These terms refer to how much Gas they will put out in a Combat Turn, and how many Combat Turns they will continue to give off Gas. A 5/5 Tear Gas Grenade will put out a cloud of Tear Gas to the radius of 5 meters, and will do so for 5 Combat Turns. Each Combat Turn after the first will extend the radius of the Gas by the volume figure, so that after the full 5 Combat Turns, a cloud of gas will extend from the grenade for 25 meters in all directions, wherever space exists for it.

Some standard Gas deliver systems are:

- Police Tear Gas Hand Grenade: ENC of .2, Volume/Duration of 1/10, 2/5, or 5/5
- 40mm Launcher Grenade: ENC of .4, Volume/Duration of 3/10
- 22mm Rifle Grenade: ENC of .8, Volume/Duration of 10/3
- 105mm Shell: Volume/Duration of 20/3
- 30 Kilogram Aerial Bomb: Volume/Duration of 50/2

NON-LETHAL GASES

Tear Gas (C-type)

The mainstay of riot control the world over. The gas will impose 1D10 of non-ignorable Distractions and Partial Blindness on anyone in the cloud area without a gas mask of some kind. It will add 1D10 to the Distractions every Combat Turn of exposure. When the total Distractions are greater than the victim's Will score, he will be seized only by the motivation to get out of the cloud. If he cannot make a Will AST, he does not even get to pick the direction of flight, but will charge blindly off in a randomly rolled direction. He will not change direction until he runs into something. A character in the cloud with no protection can resist the first Combat Turn of exposure if he makes a Health AST. He can resist the second Turn if he makes a CST, and if he rolls a 1 on the D20, he can hold out for a third Turn. After that, the Gas takes effect normally. A makeshift mask of wet cloth held or tied over the face will hold off the effects of the Gas for 1D3 Combat Turns.

Retch Gas (CL-type): Acts as Tear Gas, but also causes violent Nausea. It advances up the Health score, immobilizing the victim with cramping heaves and vomiting when that figure is exceeded. The gas advances by 1D6 per Combat Turn of exposure. The victim is subject to the Nausea symptom when the accumulated advance exceeds his Health AST.

Mace Gas (CN-type): Also called "Pepper Gas." Tear Gas in which the chemical Mace is in suspension. This will expose victims to the effects of Mace (see p. 47) on all unprotected portions of their bodies. Any Location not covered by armor or clothing of some kind is subject to attack. The stuff will penetrate clothing not sealed against Gas after a number of Combat Turns equal to the Average Armor Value of the wearer in any case. It will proceed to affect the body moving inward from the extremities (head, hands, feet) toward the center of the torso.

Smoke

Any of the above Gases can be mixed with a Smoke compound. Smoke charges in this application do not act as Narcotic poisons, but only reduce visibility. They have a normal density of 2. Smoke charges also are loaded into Gas systems alone, to provide visual cover for troop movements, defense against lasers, and so on.

LETHAL GASES

Mustard Gas

Discovered in WWI, this nasty substance is a poison both to breathe and to skin contact. It is not only a chemical poison, but a vesicant or blister gas, acting on unprotected flesh like an Acid.

A gas mask is required to withstand the effects of inhaled Mustard Gas.

Mustard Gas: A,(D)—(-)—HLH—1 Combat Turn—3—
1 Combat Turn/1 Hour—Lethal Poison

The two values for the Cycle represent the values when in the cloud as opposed to those in force once out of the cloud. While exposed to Mustard Gas, or any other poison gas, it is not possible to throw off the effects until out of the cloud, as it just re-poisons the victim. The Gas does its damage every Cycle period, with no Saving Throw possible.

Due to the vesicant action of Mustard Gas, those who have breathed it face a further danger once the principal effects have been thrown off: pneumonia. The effects of this infection are given later in this section (Germ Warfare). The chance a Mustard Gas Victim will contract the disease is equal to the total Advance of the poisoning down the Health score, before it was thrown off, as a percentage. If the D100 roll indicates that this has occurred, the character must save as if exposed to the disease, and if he fails his Health AST, he

will contract it.

The vesicant action of Mustard Gas acts as an acid on the victim as long as he is in the cloud. It does not attack armor, but will eventually penetrate any clothing or armor not sealed or otherwise treated to resist chemical warfare. It is not impeded by materials rated to protect only against riot control gases. When, in any Combat Turn, the Gas damage for acid attacks exceeds the Average Armor Value of the victim, it will do all further damage directly to the character's DRT as Combination Damage (half Lethal and half Subdual). As long as the victim is in the cloud, the acid group of the attack is 5, rolling 2D10 for damage. If the face is unprotected by a gas mask, the Gas will immediately do the Acid Special Effects given in Book 1 on page 49.

All vesicant action ceases upon leaving the Gas cloud.

Sarin

A Nerve Gas, acting to destroy directly the function of the victim's central nervous system. It can be breathed in, or absorbed through the skin. Personnel not wearing gas masks and protective clothing rated to defend against war gases will be affected. Sarin is both colorless and odorless, being detectable only by devices or chemically treated paper, which turns different colors in its presence.

In the first Combat Turn of exposure, all unmasked characters will be affected, and masked characters without protective clothing will resist the Gas with a Health AST, to which their Average Armor Value has been added. On the next Combat Turn of exposure, such characters receive an unaugmented Health AST. On the third Combat Turn, they receive only a CST as a chance of resisting exposure, and on the fourth Combat Turn, only a die roll of 1 will save them. Thereafter, they are exposed.

Sarin: A,D—(+)—HLH—1 to 4 Combat Turns—4—
10 minutes

When Advance exceeds Health CST, the victim becomes Fully Fatigued, his vision is affected, reducing his perception of local Light conditions one step (Good to Dim, Dim to Poor, etc.), and severe confusion doubles the character's PCA since he must concentrate harder to accomplish an Action. When the Advance exceeds the Health AST, the previous conditions persist, and Nausea sets in along with a loss of voluntary motor control which halves the character's BMA. When the full Health score is exceeded, Crisis occurs as with Lethal Poisons.

If the victim is still in the cloud at the end of a Cycle period, there is no chance he will be allowed a Saving Throw to throw off the effects of the Poison. This assumes he is still exposed to the Gas directly, instead of in protective gear.

Standard military issue today is Atropine, which acts to negate the effects of Sarin. It is issued in individual syrettes. Injection of Atropine before the end of the first Cycle will cancel the poison's effect entirely. This effect will last for 10 minutes plus the character's Health Group in minutes, should he still be exposed to the Gas. After that, he had best be out of the cloud or in protective gear, because further injections of Atropine will act as a Lethal Poison,

I—(-)—HLH—1 Combat Turn—2—5 Combat Turns

PERSISTENCE OF GASES

There are two classes of Persistence: Long and Short. Long Persistence Gases will clear from the air in 2D10 + 10 minutes, multiplied by 10, i.e. 120 to 300 minutes. Winds or rain will eliminate the multiplier. The cloud may drift in this period, maintaining its overall shape and dimensions, at a rate of 2D6 kph, in a random direction.

Long Persistence Gases are Mustard Gas, C-type and CL-type Tear Gases, and VX, a newer form of Sarin.

Short Persistence Gases will dissipate in 2D10 minutes, divided by 5 in the case of high local winds or rain. They are

also subject to drift, albeit this is not as vital a factor under the circumstances.

Short Persistence Gases are Mace Gas, Sarin, and T-Gas, a special form of Mustard Gas.

MACE

Mace is not a Gas but an aerosol spray, used in Mace Gas to augment its effects, or from a small spray can as a personal weapon. In this latter form it has an optimum range of 2-3 meters. If the target is at that range, the spray will hit if the Attacker can roll a Deftness AST. From 4-6 meters, a CST will hit. The Target may use his flat CDA to dodge, receiving no bonuses for movement since the spray covers a wide area.

At 1 meter or less, the Attacker must make a Deftness CST just to get the sprayer in position to use. If he succeeds, he also uses a CST to try to hit the target as given out above.

A shot of Mace will hit 1 Location on the Target's body. It will automatically penetrate any Flexible non-plastic clothing with an Armor Value of 4 or less. Plastic cloth will be penetrated only if it has an Armor Value of 3 or less.

The number of Locations affected by Mace, divided by 2, up, represents a Group. When the Group is increased, roll the Effect Die for that Group. This score represents a number of non-ignorable Distractions that the character will suffer until the Mace wears off. When another increase occurs, roll again. If the new die roll exceeds the highest previous score, that die roll is the number of Distractions in force. If it is lower than the current number of Distractions, there is no change.

A Mace Hit to a Head Location (Locations 1-3) will have more pronounced effects. This is treated as a case of System Shock. Even if the victim makes his Health CST, to avoid unconsciousness, he will be Partially Blinded until the Mace effects wear off. Any hit to the Head will also increase the current Group of the Mace effects by 1 full point, not half a point, as others do. The protection on these locations must provide facial coverage for Location 2, to defend against the Mace hit. Otherwise, the armor protection described for other Locations applies.

The Mace victim may make a Health AST to throw off the effects of the Mace every 5 Combat Turns. Special formulae for persistent Mace exist, requiring longer Cycles (up to 10 minutes). These are generally available only from military or police supplies.

GERM WARFARE

If a standard Ruin due to internecine war may be said to exist in the concepts used for *Aftermath!*, it is that after the major powers divested themselves of nuclear arms, they proceeded to re-arm with biological weapons: germ warfare.

The resulting conflict is quite lethal enough to clear the Earth of the requisite population, but leaves the resources available for salvage by the survivors. This is perhaps a cold-blooded sort of rationale for using Germ Warfare in your campaign, but it does allow a fairly fast flow of the character's search for survival equipment.

The brief list of symptoms given in Book 1 should serve as a model for designing others. The essential nature of a disease (natural or laboratory-bred) is to attack the system of the patient, displaying certain symptoms outwardly while the bacteria or viruses do their nefarious work. Our coding system for diseases will allow the plotting of the course for any number of conditions, from the common cold to the most lethal plagues. The apocalyptic literature which fuels the concept for *Aftermath!* is filled with examples of diseases that seem tailor-made for Germ Warfare use, and we will give the specifications for some of these here. Also included in this section are common diseases likely to be suffered in the normal course of daily life in the post-Ruin world.

BIOLOGICAL WEAPONS

Strains of disease bred for Germ Warfare. It is assumed that they were mutated to sporulate, go into a form of hibernation, when a host is not present to be infected. This

could have been a lab-developed trait or one which occurred via a random mutation after the germs were released.

Anthrax

D or A—(+)—HLH—1D3 Days—3—2 Days—Lesions. Nausea. Pain.

There is also a chance that the disease will cause the loss of facial and head hair. When the disease is cured, roll a Health AST. If it fails, the character is permanently bald. Once this disease has been overcome, the character is immune to it.

Cholera

G—(0)—None—1D3 Days—Special—1 Day

The victim of Cholera begins dying of thirst as described in Book 2 under Survival. This process continues until he is healed. He will remain at the stage of the dehydration process he reached when he overcame the disease until he makes a Health AST, rolling once per day. He will then be fully recovered. Cholera is generally contracted by drinking impure water, infected with the bacteria of the disease.

Boiled water will not carry the disease.

Pneumonic Plague

A—(-)—HLH—2D6 Hours—4—2 Hours—Nausea. Weakness. Fainting.

Once the disease passes the Health CST in its Advance, the victim will just go into delirium until death or healing takes place.

GENERAL DISEASES

These are likely to reappear in even the healthiest of regions when modern medical science is no longer controlling their spread.

Pneumonia

A—(-)—HLH—1D3 Hours—3—3 Hours—Pain. Weakness.

The victim has a chance of Infection if exposed to any kind of wound while suffering from pneumonia. There is also a much milder form of the disease, with a Virulence of 1 and all the time periods above given in Days, not Hours. This is often called "Walking Pneumonia."

Victims of exposure or damage to lung tissue can develop the disease without any apparent exposure to a carrier, as most humans carry the pneumococcus dormant in their lungs, ready to become active if the immune system of the victim is weakened.

Rabies

I—(+)—DFT—1D3 +5 Days—5—1 Day—Rheumatoid condition of arms and legs. Nausea. Pain.

Rabies is transmitted by the bite of a rabid animal.

Hepatitis

G or A—(+)—STR—1D3 Days—3—1 Day—Weakness. Nausea. Dizziness.

MODIFIED DISEASES

Diseases show a distressing sameness. If we have mutated people and animals, we can surely mutate the teeming swarms of bacilli to produce new, mad, exotic plagues. Some of those which strike terror into our playtesters' hearts include:

Brain Lighting

A—(-)—WL—2D6 Hours—3—1 Hour.

The sufferer will complain of hideous headaches once the Advance has wiped out half his Will score. He will become insane and require restraint if he is not to run madly about at random once the disease has reduced the Attribute below its current CST value.

Eyeburn

I—(+)—WL—1 day—2—12 Hours—Dystopia.

If the Crisis is not survived, the character is still alive, but

his optic nerve has been destroyed, leaving him permanently blinded. The disease is transmitted by the bite or claws of infected animals. It seems to be a mutant form of Rabies, which has become specific to the tissues of the optic nerve.

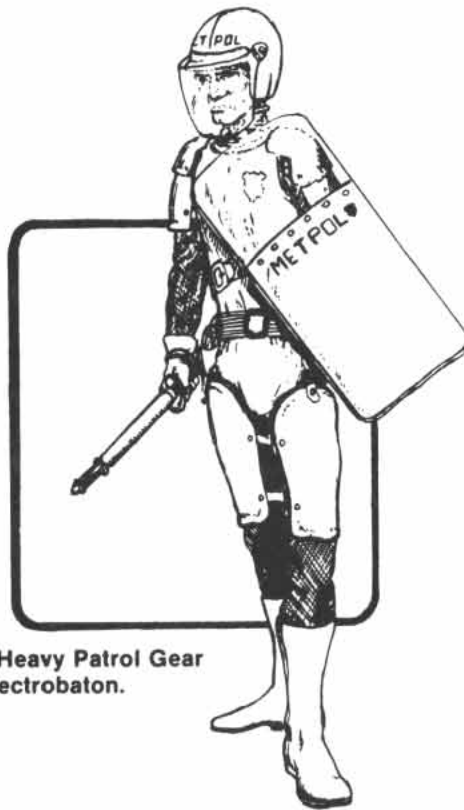
These two examples should put medically-inclined Gamesmasters on the right track toward breeding their own unique compendium of plagues with which to afflict their Players.

ARMOR

The kind you wear, not the kind you drive. We have discussed the materials pretty thoroughly in the Equipment rules. However, as far as military and police applications go, personnel will not be outfitted in piecemeal array like the average character is. Integral, standardized suits would be the rule, and when such suits, or certain parts of them, have been assembled, special capabilities will be gained.

POLICE ISSUE

If your campaign assumes, as our test campaigns did, that a time of grievous social disorder preceded the Ruin proper, then metropolitan police units will be outfitted with fairly heavy riot armor by the time the end comes. Light, quickly-assembled suits would be dispensed to normal officers, activated for riot control. SWAT teams and Civil Disorder Units would be issued more durable stuff, since their standard assignments will put them in positions of greater personal danger.



Metpol trooper in Heavy Patrol Gear with Shield and Electrobaton.

| Item | Locations Covered | ENC | Material |
|------------------|-------------------|------|----------|
| Jumper | 4-12 | .018 | PX |
| Upper Arm Guards | 21-24 | .096 | MP |
| Thigh Guards | 13-14 | .048 | MP |

Coverall, helmet, gloves are standard Metpol issue.

The Metpol (Metropolitan Police) Patrolman's Issue Armor

| Item | Locations Covered | ENC | Material |
|----------------|-------------------|--------------|----------|
| Helmet | 1-2 | .048 | MP |
| Gorget | 3 | .024 | MP |
| Flak Jacket | 4-12 | .288 | LP-MP |
| Coverall | 4-18, 21-28 | .046 | PH |
| Boots | 17-20 | .016 | LL |
| Gloves w/Cuffs | 29-30 27-28 | .008 .020 | LL SY |

Average AV: 6 Total ENC: .450

Features: When Helmet and Gorget are worn together, the protection over the Face (Location 2) locks down into the Gorget, forming a gas mask (filter type), effective against most standard gases but not biological contaminants. Plastihide Coverall is specially treated to protect against contact vector irritants, as are Gloves and Boots. Thus, integral suit is a defense against most chemical attacks.

The Helmet has a built-in portable communications unit (Com-Link), powered by an E-1. This is the equivalent of a hand-held Police radio. Reception can be switched to one of three police frequencies. Transmission is by voice-activated throat mike.

The Metpol SWAT/CDU Issue Armor

| Item | Locations Covered | ENC | Material |
|----------------|-------------------|--------------|----------|
| Helmet | 1-2 | .06 | DP |
| Gorget | 3 | .03 | DP |
| Breastplate | 4-9 | .18 | DP |
| Hip Guards | 10-12 | .096 | LP-MP |
| Coverall | 4-18, 21-28 | .046 | PH |
| Boots | 17-20 | .016 | LL |
| Gloves w/Cuffs | 29-30 27-28 | .008 .020 | LL SY |
| Joint Guards | 15-16, 25-26 | .280 | LP-PS |

Average AV: 7 Total ENC: .736

Features: Same as Patrolman's Issue plus optional Ballistic Cloth sheathing for Locations 4-14, looking like a short poncho, strapped to the armor. This garment has a BDG reduction value of 10.



Patrolman

SWAT Team Member

MILITARY ISSUE

The combination of protection and lightness which plastics bring to the field of personal armor may well give us infantrymen who look like medieval knights, or at least Cromwellian "Ironsides." Military troop specialization will be more extensive than police (unless the cities get very hostile before the Ruin hits them). Here, we give the statistics for four of the most common types of armor in modern military issue (circa 2000).

Field Infantry Mark I

| Item | Locations Covered | ENC | Material |
|------------------|-------------------|------|----------|
| Helm | 1-3 | .108 | AP |
| Torso Protection | 4-9 | .18 | DP |
| Hip Guards | 10-12 | .096 | DP |
| Arm Harness | 21-30 | .36 | M-MP |
| Leg Harness | 13-20 | .288 | M-MP |
| Boots | 17-20 | .04 | SY |
| Joint Guards | 15-16,25-26 | .28 | LP-PS |

Average AV: 9 Total ENC: 1.352

Features: Helm contains military issue Com-Link, powered by an E-5. Breathing intakes fitted with Micropor Mk.IV anti-viral filter, providing protection against aerosol biowar agents. Also resists gas attacks by standard military or police gases. Undersuit available providing protection against contact chemical and biological weapons. Also available is ballistic cloth oversuit, in assorted camouflage patterns (Green, White, Sand, and Grey). Provides 15 points of BDG reduction.

Heavy Infantry Armor Mark IIIa

| Item | Locations Covered | ENC | Material |
|-------------------------|-------------------|-----|----------|
| Helm | 1-3 | .12 | PS |
| Articulated Body Unit | 4-12 | .48 | PS |
| Articulated Leg Harness | 13-20 | .32 | PS |
| Articulated Arm Harness | 14-28 | .20 | PS |
| Gauntlets | 29-30 | .08 | PS |

Average AV: 15 Total ENC: 1.2

Features: Articulated pieces are gasketed at flex points (waist, joints). Overlap of rigid material at joints provides equivalent protection to that afforded areas behind solid plate. Due to its construction, the integral unit can be sealed against any form of CBW attack. Suit is potentially multi-environmental, can be equipped with breathing gear (standard Mk.II UAW unit) capable of providing fresh air supply for 2 hours.

Helm equipped with Micropor Mk.IV anti-viral filter and Com-Link. Flip-down Star-Light filters available for use in reduced visual conditions. All powered systems in suit draw from two E-5 batteries carried in case at hip. At full power, with internal air circulation, Star-Light scope, and Com-Link operating, suit draws 100 watts. It is thus good for ten hours' operation on one set of batteries.

The Mark IIIb version of this armor system is provided with an exoskeleton MAMP (Man AMPLification) unit. This provides a 50% increase in effective Strength of personnel. It draws power from an independent power supply, consisting of two E-10 in a backpack. It increases ENC by 1.5 and is rated at 250 watts.

Both versions of the Mark III are equipped with Blast Buffering rated at 10 and are issued with a Lazab Factor of 5 on all points of the body. Camouflage coveralls are available as for the Mark I.

Light Reconnaissance Unit Armor ("Intruder" System)

| Item | Locations Covered | ENC | Material |
|----------------|-------------------|------|----------|
| Helmet | 1-2 | .072 | AP |
| Gorget | 3 | .036 | AP |
| Body Armor | 4-9 | .270 | DP |
| Hip Protection | 10-12 | .120 | LP-DP |
| Fatigues | 4-18, 21-28 | .460 | PX |
| Gauntlets | 27-30 | .150 | LP-DP |
| Boots | 17-20 | .040 | SY |

Average AV: 8 Total ENC: 1.158

Features: Convertible flip-up vision units on helmet faceplate, allowing unaided, Star-Light, or Infra-Red visual scans. Also contains Com-Link, Micropor filter and audio-boost aural input units. These increase effective hearing range to about 60 meters in omnidirectional mode, or they may be tuned to a given vector for about 100-meter pickup. Their use makes normal sounds clearly audible at these ranges, and quiet noises are also possible to hear (as Hidden Things). Allows Wit AST when listening for noises through doors, etc., instead of usual Critical Saving Throw.

The suits were designed for use by units on scout and sentry duty. Options on certain experimental models released just prior to the Ruin include the "Intruder Chameleon," fitted with a switchable camouflage setting. Adjusting the controls caused the specially-treated materials of the suit to assume one of five camouflage patterns: Green, Brown, White, Grey, or Black. Accessories also included anti-biological and chemical oversuits, and a built-in Blast Buffer harness, rated at 5 points of Blast reduction.



Mark I

Mark IIIa

"Intruder"

MILITARY ANTI-RADIATION PROTECTION

A spray-on protection, much like Lazab. The rating of the protection is 1 per layer applied, to a maximum of 5, and is divided into the REM per hour of exposure in contaminated areas. The coverage breaks down by 1 factor per 100 REM of exposure. Partial coverage has a factor equal to the total number of layers divided by 30. Coverage of 3 layers on Locations 1-10 would not effectively reduce exposure, as 3 layers times 10 Locations is 30, and $30/30 = 1$. A factor of 1 is not effective. The first layer of such protection acts as a "primer," also working to absorb secondary contamination as the shielding breaks down. This substance is usually dispensed in 100-unit aerosols (ENC of .2). This is applied like Lazab.

CIVILIAN ARMOR & HIGH TECH CLOTHES

These spring from one of two sources: armor and other protective coverings developed for workers in high-risk environments and disaster control, and civilian protective garments designed to meet crime in the streets during the grim times of the Pre-Ruin Unrest period.

Fire Protection Suit

The familiar asbestos coverall. Silvered on the outside to reflect heat, and with room inside for self-contained breathing apparatus, the suit will present an effective Armor Value of 10 to Fire and Fire Damage, although its physical Armor Value vs. blows and other damage is only 5.

Anti-Radiation Suit

For use by disaster workers or plant workers in radioactively contaminated areas. A simple air filter keeps radioactive particles out of the wearer's lungs, so no breathing apparatus is needed. The exposure to local radioactivity is cut by 100% when the suit is at full efficiency (i.e., never before used). This protection is degraded by 5% per 100 REM of exposure taken by the suit. In a 500-REM-per-Hour area of contamination, the suit will be reduced 5% in efficiency every .2 hours, or 12 minutes. It will be down to 75% after the first hour, 50% after the second, and completely useless after a total of four hours. Its wearer will be exposed to increasing dosages of radiactivity as his protection erodes. Rips or tears in the suit negate its effect by 5% per Location torn. "Used-up" suits are at best no good and should be discarded. They have a high likelihood of being contaminated themselves (say 10-60 REM per hour) and should not be handled over-much. They are Armor Value 5 vs. normal damage.

Civilian CBW Suit

A Civil Defense unit. A large coverall with hood, made of light plastic. It has a small air tank of spun fiberglass, holding 30 minutes of air. The suit protects against any CBW agent as long as it remains sealed. It is designed to be used once and destroyed. Its Armor Value is 2.

Street Suits

Plastex (PX, Armor Value 6) coveralls worn by the inhabitants of urban areas with high crime rates. Deluxe models incorporated Ballistic Cloth into the torso (Locations 4-12). They often came equipped with hoods of quilted Plastex, with Armor Value 7, covering Locations 1-2. Gas masks were also part of the suit, or its optional accessories. Street Suits were often decorated in garish patterns, both in obedience to the dictates of fashion, and in an attempt to deny the grim necessities that forced the wearing of armor in one's own city.

Electro-Thermal Sporting Clothes

The ultimate in winter-weather protection. A suit of thermal underwear including socks, wired to maintain even warmth in the iciest of conditions. It will operate for ten hours continuously with 1 Charge of battery power, and has a

battery case at the waist designed to hold an E-1. It counts as Heavy Cloth.

Crash Suits

Designed for use by racing drivers, stunt men, etc., these are constructed of a unique material called Rigiplast. Rigiplast is an impact-sensitive plastic, soft and malleable under most circumstances, with an ENC of .005 per Location covered. But when it is struck with any force, it will become momentarily rigid, presenting an Armor Value of 7.

When worn as a suit, Rigiplast acts to provide Blast Buffering with a base value of 5. If only partial coverage is achieved (say by a jacket or trousers), the Blast Buffering is equal to 5 times the number of Locations covered, divided by 30. Round fractions nearest.

Crash suits may also be provided with flame protection, as are the Fire Protection Suits.

Rigi-Gloves

Gloves made of Rigiplast are much favored, since they add so appreciably to the impact of blows. Such hand protections will add 1 to the WDM of punches or chops, using any unarmed combat Skill (Brawling or Skilled Unarmed Combat). These are known as karatands.

MEDICINE

As the technological arts of destruction are much advanced, so are the healing disciplines. Wondrous drugs, remarkable devices cooperate with the skills of the physician to offset the hideous damage of wounds, the killing diseases of the Ruin. Even death, if it be not too long in control and the cause of death has left some shell into which life may flow again.

Here we give some samples of the medicinal arts that flourished before the Ruin. As with much of our material it includes things known to us now, sometimes without any real change in how the device operates. Other entries here are developments that may be seen occurring in modern medicine, some laudable, some not. We will posit that they were brought to fruition before the end came.

INJECTORS

We have stated that the advances in packaging will permit drugs to be preserved without degeneration for an indefinite period. The forms of such materials will be in pills for some drugs, but mainly we envision them in single-dose, disposable syrettes. Pre-loaded with the proper dosage, sterilized and ready to inject when the cap protecting the needle is removed, these little plastic hypos weigh a mere .01 ENC.

The needle can penetrate non-Rigid armors with an Armor Value of 4 or less. Any Location of the body may be used to inject the subject, unless the specific description of the drug states otherwise.

DRUGS

Polycellulac-3

Heals 2D10 of Lethal Damage per dose. Must be administered within 10 minutes of suffering the damage. The drug's action accelerates the normal healing systems of the body tremendously. As a result, the Healing Rate is reduced by 1 per dose. When the Healing Rate is 0, further doses will have no effect. The lost Healing Rate is restored at 1 point per day. Note that the character's Shock Factor will be reduced while his Healing Rate is reduced.

Polycellulac-4

Same as Polycellulac-3 but this formula is not subject to the time limits regarding when the damage was received. It will act upon any Lethal Damage currently in the patient's system.

Neo-Heroin

A very potent pain-killer. Reduces the effects of being wounded. If the damage total taken exceeds 50% of the DRT, the patient has no penalties for this state; he is effectively unwounded. If over 75% of the DRT, he suffers only the penalty for being over 50%. If his damage total exceeds his DRT by less than his Healing Rate, he is not comatose, which would be normal, but suffers the penalties for wounds past 75% of the DRT. Damage exceeding the kill point is still fatal, or incapacitating in the case of Subdual Damage. The patient's Shock Factor is increased under the influence of Neo-Heroin, by 5.

The drug is addictive. For every dose taken, a Health AST must be made, or the user will pick up a habit. It requires 72 hours of cold turkey from the drug to kick the habit. After an addict's last dose wears off, he will be unaffected for hours equal to his Health AST. He will become Partially Fatigued after that, until the time in hours since the last dose equals his Health score. He will then become Fully Fatigued. He must roll a Health AST and Will AST at this point (or rather, the Gamesmaster should roll for him). If he fails the first roll, he will collapse, delirious, after a number of hours equal to the Health Group Effect Die roll. If he makes the Health AST but fails the Will AST, he will retain consciousness but will do anything to get another shot of the drug during the remainder of the 72-hour detoxification period. The Gamesmaster may dictate his actions, or let the Player control them if he can be trusted to play the addict's desperate craving properly. We would remind readers that a junkie undergoing withdrawal is not entirely sane. He will undertake any course, no matter how slim its chance of success, that seems likely to get him that next shot.

A dose of Neo-Heroin will last for 2D3 hours. During that time, it controls the wound effects as stated. When it wears off, all wounds will revert to normal effects.

Cardiacine

An extremely powerful cardiac stimulator. Can restore the heartbeat in the newly "dead." The body must be intact enough to support life: no severs, no enormous holes in the guts, etc. The Gamesmaster is the final arbiter on this point.

The injection must be made directly into the heart (i.e., Location 6 must be used to inject) within 3 minutes of "death." Only one shot is allowed. The patient is permitted a Health CST when injected. If he makes it, he will have 0 DRT, and be comatose but alive. If he fails to make it, he does not revive, and is dead.

OPTION

Brain Damage

This is a gruesome but accurate element of any simulation of non-magical "resurrection." If the Cardiacine is not injected within 5 Combat Turns of "death," the patient will start to lose Wit and Will points. These losses are permanent. The character can still gain in these Attributes, but his maximum possible score is reduced from 40 by the number of points lost due to oxygen starvation while his heart was stopped.

If the injection is given 6-10 Combat Turns after "death," 1D3 of Wit and Will are lost. From 11-15 Combat Turns after the heart stopped, 1D6 is lost in addition. From 16-20, 1D10 more is lost. During the period 21-30 Combat Turns after heart activity stopped, a further 1D20 is lost. After 30 Combat Turns, it is irrelevant, as the 3-minute limit is up.

If the current Wit or Will score is reduced to 0 or less, the physical revivification of the patient is still possible, but not really desirable, as he will be a permanent vegetable, brain activity wiped out by oxygen starvation.



Syrette

Panomycin

A broad-band antibiotic. 1 Dose allows +1 to any Saving Throws the patient attempts against any form of disease. 1 Dose per Saving Throw attempt is allowed.

OPTION

Superior Broad-Band Antibiotics

The Gamesmaster may introduce more powerful, general remedies into his campaign's pharmacopeia. Assign a value of 2D3 to such drugs, which otherwise operate as does Panomycin. Alternatively, massive Panomycin treatment can fill this function, two Doses acting to give +1 to the base value of the first Dose. Thus, 3 Doses give +2 to the Saving Throw in question, 5 doses give +3, and so on.

Tailored Antibiotic

There is, theoretically, one of these for every disease the Gamesmaster has put in the Campaign. The antibiotic has a "formula" written exactly as is the formula for the disease. If used in a different case (i.e., for another disease) it will still give a bonus to the Saving Throw as does Panomycin, with a +1 for every element in its formula that matches the coding of the disease it is fighting.

An injection of the tailored antibiotic that exactly matches the disease code is the same thing as making the relevant Saving Throw. It cures the disease.

HDAP (Hyper-dexamylphet)

A powerful amphetamine. Reduces fatigue by 1 step. If the patient is not currently Fatigued, it will add 2D5 to Deftness and Speed. When the drug wears off (2D6 hours later), the patient will be Fully Fatigued until he has slept for 24 hours minus his Health AST. If another Dose is taken while under the influence of HDAP or in the Fully Fatigued state that follows its use, a Health CST is needed if the drug is to have its usual effect. Failure means that the patient's system will not accept more HDAP at that time, and will not do so until he has slept for the specified period. A Critical Failure will cause collapse for 2D10 hours.

HDAP is addictive, exactly as is Neo-Heroin. This is for convenience. The detoxification period for the amphetamines is much more drawn-out than that of heroin. If the Gamesmaster is interested, there is a glut of data available in modern books on the effects of drugs.

8-Gamma-PCP-III

Derived from the notorious drug PCP ("angel dust" or "KW" in modern slang). It was developed by the Army in experiments seeking a drug to increase the effectiveness of the infantryman in combat.

Strength, Deftness, and Speed are all increased by 50%, although the Strength bonus does not increase the DRT. The Shock Factor is increased by 10. Wounds are resisted as when under the influence of Neo-Heroin. The effect lasts 3D3 hours.

In stress (combat, hostile activities, personal danger, pain, etc.) the victim/user must make a Will AST to control himself (one such roll at the onset of the situation is enough, unless it is very drawn out, in which case the Gamesmaster may choose to require subsequent re-rolls). If he fails, he will go berserk, attacking any apparent threat in his vicinity, including armed or violent-looking members of his own party. He will not break off a fight until his opponent is obviously dead, and he will try to kill with no regard for other factors. In this state, the user will double the Effect Die rolls for such things as breaking restraints, great leaps, etc. He will be absolutely fearless, but will view any opposition to his ideas as a direct attack. He is immune to Fatigue.

When the drug wears off, the user must make an immediate Health AST, as well as checking for any results of losing his drug-given powers (wounds, pain, fatigue, etc.). If he fails to make the roll, he will undergo a mental flashback 2D12 hours later, lasting for 10-60 minutes. His mental attitudes will be the same as in the berserk state, but he will have none of the

physical advantages of the drug. After this spell ends, he must roll the Health AST again, repeating the flashback process over and over until the Saving Throw succeeds.

Anagathon

The pinnacle of medical research before the Ruin. The drug reverses the degenerative effects of age over 40 years. This is not a single-dose operation. A graded series of injections of various components of Anagathon are required over an unbroken period of one month. The full set of syrettes has an ENC of .5. Each such regimen cancels 2D3 of the effective age as far as the losses of physical Attributes go. As the effective age is lowered past the 3-year "break points" the reductions suffered due to age are restored.

The patient may not exert himself during this period, his food and water requirements are doubled, and there must be no more than three days at a time lost between treatment days or the process breaks down.

CPC (Catabolic Potential Catalyst)

This is a drug discovered earlier in the research that produced Anagathon. Following a regimen similar to that described for the other drug will extend the Character's "prime" by 1D3 years. In other words, after a 1-month CPC protocol, the Character will not start "aging" as is usual until he is 43, instead of 40. A maximum 5-year extension can be maintained at one time. If the "prime" has been extended to 45 years, no further treatment will have a result until the patient is at least 41.

NOTE: Neither of the above drugs restore or extend youthful looks. The patients still look aged, though hearty, after treatment. It is the effect on muscle, bone, and neural tissues that is combatted, not wrinkles, graying hair, and so on.

Anarad

A chemical compound of the versene series, operating to flush radioactive ions from tissues of the human body. A "Dose" of Anarad is a series of graded injections, used daily over the course of a week. It increases the rate at which REM are purged from the body by 20. A full set is .25 ENC.

Anti-REM

An injection which helps the body resist external levels of high radiation. Rated from 1 to 5, a Dose of Anti-REM will cause the actual REM rating of the environment to be multiplied by a factor equal to (10-Drug Rating)/10. A shot of Anti-REM 1 will cause only 90% of impinging radiation to be absorbed. Anti-REM 5 halves the effects of radioactive exposure.

One Dose will last for 48 hours. Multiple Doses may be used to add up the effects, as in taking two Doses of Anti-REM 1 to get the effect of Anti-REM 2, but the maximum protection the drug can afford is a rating of 5. Further Doses have no effect.

Memory RNA

Doses are rated from 1-10. This represents a BCS in some Skill. When the Dose takes effect, the character acquires the specified BCS in the Skill. If he already possesses the Skill, the figure is a bonus to his current BCS. If not, it is his total BCS in the Skill.

Alternatively, the drug may be rated with a Skill and a score (01-30, 51-75, etc.). If the character does not have that score in the Skill, he will acquire it. He cannot use it unless he possesses a total score from 1 to the lowest point to be acquired. Thus, the data acquired from a Dose of Memory RNA for Driving Skill, 51-80, is useless to the character until he gains a score of his own up to 50.

The former type is suitable for RNA Doses designed to act as temporary boosts to knowledge, the latter for permanent implants of knowledge.

It is not advisable for very physical Skills to be included in those available from Memory RNA, although some fictional treatments of the subject use them this way. The premise is

that the reflexes and muscles are adapted by the injection as well as the brain cells.

Temporary Doses of the drug will endure for one week.

MEDICAL TECHNOLOGY

Beside the wonder drugs listed, the equipment and resources available to the physician in **Aftermath!** can spell the difference between life and death for his patients.

Defibrillator

If the physician has this device (1.2 ENC, operating from the charge in an E-10) he may use it in lieu of Cardiacine, subject to the same restrictions. The defibrillator is a small valise, and if you do not recognize the name, it is used to administer an electric shock to restart a heartbeat.

The defibrillator consumes 1 Charge per use. The patient's chest (Locations 4-7) must be exposed, and the device itself open and turned on (1 Action to get it ready).

Upon applying the Charge, the physician must make an Advanced Medical Skill BCS. If he succeeds, the patient may make the Health CST as with Cardiacine. Unlike Cardiacine use, the defibrillator may be used more than once, until:

1. The physician makes a Critical Miss in his BCS roll.
2. The patient makes a Critical Miss in his Health CST.
3. Brain death ensues (3 minutes after heart action stops).
4. No more power is available.

Cardio-Pulmonary Resuscitation (CPR)

A technique, not a drug or device. It uses pressure from external "massage" over the heart (Location 6) to keep it pumping when it has ceased to do so on its own. It is part of the knowledge conferred by Advanced Medical Skill.

The Location must not be in Semi-Rigid or Rigid armor, and the Armor Value may not exceed the physician's Strength Group in any case. To apply CPR, a BCS roll in Advanced Medical Skill must be made. Success will keep the heart beating for a number of Combat Turns equal to the physician's Deftness Group Effect Die roll, after which a second BCS roll is needed. Each subsequent BCS attempt receives a cumulative penalty of -1. That is, for the second roll, a -1, for the third a -2, and so on. This applies for any character attempting to make the roll, and reflects the patient's worsening condition.

When a BCS roll is not made, then the patient will not respond to further CPR.

While CPR is being applied successfully, the "clock is stopped" on the results of heart inactivity. The effects of oxygen starvation do not advance past the stage they had reached when CPR was started. This can buy valuable time while preparing Cardiacine or a defibrillator.

Of course, applying CPR requires the continuous attention of the physician. He may attend to nothing else while performing this technique on a patient.

At the Gamesmaster's option, a Critical Hit when rolling the BCS for CPR results will permit the patient to make a Health CST. If it succeeds, heart activity will start up again.

Electric Cautery/Knife

Uses electrical current to cut or cauterize tissues. In surgical applications gives a +2 to the Advanced Medical BCS and to the patient's saving throws if any are used to avoid bad reactions to surgery. If used to cauterize Severed wounds, to prevent bleeding, the patient need not roll the Health AST to survive. It does put him into shock, but the tissue damage is more controlled, and unlikely to kill the victim. The device is about the size of a soldering iron, attached to a control pack which can be powered off an E-10 or Hvy. Household Current. It is rated at 2500 watts (that will consume .05 Charges per Combat Turn when operating on battery).

Inflatable Splints

Plastic bags, inflatable in 10 Actions, which can be fitted

around a broken limb before being blown up, like big balloons, to immobilize broken limbs. We will posit that the current models have been improved by the time of the Ruin to allow a character with a limb immobilized to move as if the limb were merely disabled. The splints come in three formats: arm, leg, and torso. A deflated splint folds down into a packet with ENC of .05.

Encephalographic Educator

A large and intricate computer and equipment complex capable of inscribing a permanent range of Skill score onto the memory of a character over a course of days (1 Skill point can be transmitted per hour). The maximum daily session is a number of hours equal to the sum of the Wit, Will, and Health Groups.

It is a very large unit, non-portable, requiring a Lt. Industrial Line of at least 22 kilowatts rating to operate. It can "instruct" only one subject at a time, since it must be attuned to that individual's brain-wave pattern, a process requiring a 20-point Task by a Computer Science user.

The Task Period is one day.



TACTICAL BATTLES AND LARGE-SCALE COMBATS

In the course of a campaign, the Gamesmaster may come to a situation which calls for combat but is too large to handle with the basic man-to-man rules. That is when this section will become useful.

This system is deliberately designed as a "shorthand" form. No great details are given and a character's individual actions are lost in the overview. The principal advantage of using this system is the quick resolution of combat situations beyond the scope of small man-to-man battles.

The basic rule is that two die rolls are compared and the difference is the basic loss to the strength rating of the sides involved. This is modified by the results of the application of the appropriate Skill by the commander. If the battle represents a fight with only about 20 men on a side, the appropriate Skill is Tactics. Larger battles use Operational Command Skill and the clash of whole armies over the course of a military campaign uses Strategic Command Skill.

THE COURSE OF A BATTLE

Each side in a battle is rated for Troop Strength Points (TSP). This is an abstract number representing the combat capability of the side.

Each Battle Turn represents about an hour. The battle will continue until one side is reduced to zero or less Troop Strength Points, one side retreats from battle, or prevailing conditions force an end to current hostilities.

On each Battle Turn, 1D6 will be rolled for each side. This is the Battle Determination roll. The side with the higher modified roll is considered to be Winning This Turn. The lower modified roll is considered to be Losing This Turn. If the modified rolls are equal, the turn is Deadlocked.

On a Turn when one side is reduced below 1 TSP, the side(s) which has (have) a TSP less than 1 is (are) considered to have Lost the Battle. The other side, if there is one, is considered to be Victorious.

The commander of each side (in some circumstances this may be a Player Character) will make a BCS roll on the appropriate Command Skill. A critical success will add the character's Wit Group to the D6 rolled for the Battle Turn results. A critical failure will subtract the opposing commander's Wit Group from the result of the failing character's Battle Determination roll, and the opposing side is considered to have made the Command BCS roll for purposes of Loss modification to the side with the Critical Miss. These die rolls will be used to modify the effects of the Battle Turn determination.

These steps are repeated until the battle is resolved or halted.

MODIFICATIONS TO THE DIE ROLL

The Battle Determination die roll is modified for several things. The result of the 1D6 roll is modified to get the number which will be compared to the modified die roll result

for the other side to determine the winner of that Battle Turn. These modifications are:

Superior Numbers: The side with superior numbers may add to the die roll result. The TSP of the stronger side is divided by the TSP of the weaker and rounded down. This gives a superiority factor which is referenced on this chart to get the add to the die roll.

| Superiority Factor | Die Roll Modification |
|--------------------|-----------------------|
| 1 or less | +0 |
| 2 | +1 |
| 3 | +2 |
| 4 | +3 |
| 5 or more | +4 |

Critical results of the commander's die roll

Retreat (see below): The side conducting the Retreat receives a -1.

Rout (see below): The side suffering from a Rout receives a -2.

Other: At the Gamesmaster's discretion he may apply other modifiers as he feels represent the situation.

RESULTS OF THE BATTLE DETERMINATION

Once both die roll results are modified, the smaller will be subtracted from the larger. The result is the Base Loss of Troop Strength Points for that Battle Turn. If both modified die rolls are equal, the Base Loss is 1.

The modification to the Base Loss is found on the Loss Modification Chart below. All numbers are rounded to the nearest whole number.

In a Deadlock, only a critical success with the Command BCS will cut the Loss to one-quarter and thus, rounded down, to nothing. A critical failure will increase the Loss to 2. In all other Deadlock situations, each side will suffer a 1 TSP Loss.

The modified Base Loss for a side is the number of Troop Strength Points which are subtracted from that side's total TSP.

MORALE FAILURE

A side in a Tactical Battle will have to check for its morale in one of three circumstances.

- Loss in one Battle Turn exceeds 25% of the side's original TSP total.
- The character making the Command BCS rolls (the commander) is killed or incapacitated.
- The commander has a critical failure on his Command BCS roll.

When one of these circumstances arises, the Gamesmaster will check to see if the side's morale will fail. The base percentage chance that it will fail is equal to 100 minus the side's current TSP total divided by the original TSP total, rounded nearest. This can be modified by another Command BCS roll made by the commander. This is called the Rally Roll. A successful Rally Roll will subtract 2 times the Effect Number from the percentage chance. An unsuccessful Roll will add 2 times the Effect Number to the percentage chance of morale failure.

If a side's morale fails, that side will conduct a Retreat on the next Battle Turn. A critical failure when rolling on the morale check (a die roll in the 96-100 range) or a critical failure on the Rally Roll means that the side will Rout on the next Battle Turn.

If a morale check is called for during a Retreat, the Retreat immediately becomes a Rout.

ENDING A BATTLE

A battle is ended when one side loses all its TSP points, Retreats, Routs, or Surrenders. A Battle may also end by mutual consent of the commanders. The latter case is usually due to such things as the fall of night (Command BCSs receive a -10 at night), adverse weather conditions (a variable modifier to the Command BCS), advent of a new force into the Battle (particularly if neither side knows if it is friendly), or any other circumstance that the Gamesmaster feels is sufficient cause.

A **Retreat** may be called at any time by the commander or forced on a side by the fortunes of war. Once it is determined that a Retreat will occur, that side will participate in one more Battle Turn. On this Turn, that side will receive a -1 modification to its Determination die roll. After this turn, the Battle is ended. The other side (neither side if both Retreat) is left in possession of the field. The Retreating side is treated as Losing that Turn even if it has the higher modified Battle Determination roll. It is not treated as if it had Lost the Battle.

A **Rout** will occur with a severe morale failure. The Routing side will participate in one more Battle Turn unless already in Retreat. It receives a -2 to its Battle Determination roll. It is treated as Losing that Turn even if it has the higher modified Determination result. It has lost the Battle.

A **Surrender** will occur when the commander of the opposing side accepts the offer of the side wishing to Surrender. No further Battle Turns are conducted.

STRENGTH DETERMINATIONS

If a Custom Army is not in use, one side will have its Troop Strength Points determined by rolling 2D6 and adding 10.

LOSS MODIFICATION CHART

| | Side With Higher Modified Battle Determination Roll | Side With Lower Modified Battle Determination Roll |
|--|---|--|
| Winner of Battle Turn Made Command BCS | 1/4 Base Loss | Base Loss |
| Loser of Battle Turn Made Command BCS | 1/2 Base Loss | 1/2 Base Loss |
| Both Sides Made Command BCS | 1/4 Base Loss | 1/2 Base Loss |
| Neither Side Made Command BCS | 1/2 Base Loss | Base Loss |

The other side's TSP may be determined in the same way, or the Gamesmaster may roll on the Reaction Table (Book 1, Appendix 1) and multiply the Value Number by 10%. This percentage will be added to 100% to determine what percentage of the TSP of the first side is the TSP of the second.

Thus, a Value Number of -1 multiplied by 10% for -10%, indicates that the second side has 100% + (-10%) or 90% of the strength of the first side. If the first side has a TSP of 15, the second side has 90% of 15 or a TSP of 13.5, or 14, since the value is rounded to the nearest.

The second method is advised for creating an army to face a Custom Army, unless the opposing army is also a Custom Army.

Shay commands an army with the strength of 15 TSP and his opponent, Thomas, has an army of 14 TSP. Neither receives advantage for being significantly stronger than the other at this point. Shay's Operational Command BCS is 12 and Thomas's is 14.

On the first Battle Turn, Shay rolls a 3 for the Determination roll and a 5 for his BCS. Thomas rolls a 3 and a 19 respectively. The Battle is Deadlocked. Each side loses 1 TSP. Their new strengths are Shay 14 and Thomas 13.

On the second Battle Turn, Shay rolls a 1 and a 2, while Thomas rolls a 6 and a 6. Thomas's side is Winning this Turn. The Base Loss is 5. Shay, with the lower Determination result and a successful Command BCS, will actually lose one-half of the Base since Thomas also made his BCS. This is a Loss of 2.5 rounded to 3 for a new TSP of 11. Thomas's Loss is one-quarter of the Base of $5/4 = 1.25$ rounded to 1, giving him a new TSP strength of 11.

On the third Battle Turn, Shay rolls a 4 and a 20, while Thomas rolls a 4 and a 17. Neither has made his Command BCS and Shay has Critically Missed. Thomas's Wit Group is 2, so this is the modification to Shay's Battle Determination result. If Shay had not Critically Missed on his Command BCS, the Battle would have been Deadlocked. As it is, his side has Lost that Turn and the Base Loss is $4 - (4 - 2) = 4 - 2 = 2$. As far as Shay's side is concerned, Thomas's side has had a successful Command BCS roll, even though this is not the case. Shay's side will thus take the Base Loss. Thomas's side, since neither made the Command BCS and they Won the Turn, will take half the Base Loss or 1. The new strengths are Shay 9 and Thomas 10.

But Shay has critically failed on his Command BCS roll and his side must check for morale failure. His current strength is 9. This divided by his original strength of 15 and subtracted from 100% yields a base percentage chance of 40 for morale failure. Shay fails his Rally Roll with a die roll of 17. Two times the Effect Number of 5 gives an additional 10% chance of failure for a total 50% chance of morale failure. The die roll is 33, indicating that Shay's side has had a morale failure. It will conduct a Retreat on the next Battle Turn.

On the fourth Battle Turn, Shay rolls a 5 and another 20, while Thomas rolls a 3 and a 10. Shay's modified Determination result is 3 instead of the 4 it would have been due to the Retreat, since he has once again Critically Missed. This immediately turns his Retreat into a Rout which has a -2 modifier to the Determination result. For Thomas's Side, this makes the Battle Turn a Deadlock resulting in a Base Loss of 1 which will reduce his TSP to 9; but Shay's side takes double that to reduce his side's strength to 7 TSP. This Battle is over since Shay's side Routed. Thomas has been Victorious and Shay has Lost the Battle on this Battle Turn. Thomas's side is left in possession of the field.

MILITARY CAMPAIGNS

In the course of a game campaign, one or more military campaigns may be waged. The simplest and fastest way to resolve a military campaign is to total all the Troop Strength points available to each side and treat the entire military campaign as if it were a single Battle. The appropriate Command Skill for this would be Strategic Command.

A more interesting way to deal with it is to treat the military campaign as a series of battles. This requires the Gamesmaster to make a number of decisions with regard to available supplies and facilities for transporting them, continuing morale modifications, positional Battles, re-engagements, and other such details as apply to military campaigns. The rules presented in this section are provided as a guideline for this sort of thing.

In a military campaign, a commander may have a large number of Troop Strength Points available to him. These probably will not be all in the same location.

An army's TSP will be classed as Ready and Unready. If used in a Battle, Unready TSP are at one-third of their value, rounded down. Thus, it requires 3 Unready TSP to equal 1 Ready TSP.

All TSP, on both sides, are Unready at the end of a Battle. The rate at which they may be made Ready will vary by how the side fared in the last Battle in which the particular TSP was engaged.

- A Victorious army may check for Battle-Ready TSP each day after the Battle. A successful Operational Command BCS roll will allow a number of TSP equal to the commander's Wit Group Effect Die roll to be Readied. Failure results in no additional TSP being Readied. Critical success adds 1 Group to the commander's effective Wit Group and critical failure means that the commander may not make a roll on the following day (in addition to none being Readied that day).
- An army which has Retreated from Battle may Ready TSP in a similar fashion but the commander's effective Wit Group is reduced by 1.
- An army which has Routed from Battle will roll for readying TSP once in a number of days equal to 5 minus the commander's Wit Group. Otherwise they are treated as if they had Retreated.
- An army reduced to zero TSP has no forces to Ready.

After a Battle some of the TSP losses will be returned to a commander's control. These are the recovered wounded, the units which just lost cohesion but were not destroyed, and a small pool of reinforcements. One the first day after a Battle, the side will receive 25% of the TSP lost. This number is rounded down. At the end of the week following the Battle, another 25% will be received. At the end of the month, a further 10% will be received. All of these TSP are Unready.

Thus, Thomas, the victor from the example of Tactical Combat, had a total TSP Loss of 5. Twenty-five percent of that is 1.25, rounded to 1, and 10% is .5, rounded to 0. At the end of the day following the Battle, he will receive back 1 Unready TSP. At the end of the week following the Battle, Thomas will receive 1 more Unready TSP. He will not receive any more TSP from that Battle at the end of a month.

On the day after the Battle, he will ready a number of TSP equal to his Wit Group Effect Die roll. He makes his Operational Command BCS with a die roll of 9. His Wit Group Effect Die is 1D6 and his roll is a 3. He will have 3 of his 9 TSP Ready and will add 1 TSP to his Unready TSP due to after-Battle recovery, giving him a force breakdown of 3 Ready TSP and 7 Unready TSP.

On the next day, his BCS roll is a 17, so he will not ready any troops that day.

On the third day, he makes his BCS with a die roll of 12. His Effect Die roll is a 5. His total force is now 8 Ready and 2 Unready TSP.

On the fourth day, he again makes his Operational Command BCS (with a 4), and his Effect Die roll is a 6. That is more than enough, so his remaining 2 Unready TSP are now Ready.

LOGISTICS

If the Gamesmaster desires, he may assign an upper limit to the number of Unready TSP that may be made into Ready TSP during a campaign. This is the simplest way of representing the resources available to a side.

Alternatively, a side may be given an upper limit which represents the stockpiled resources and a rate of production which will raise that limit. This allows planning of campaign strategy to eliminate stockpiles, resource centers, and production facilities.

ARMY MOVEMENT

An army, represented by even 1 TSP, has a base marching allowance of 8 kilometers a day. Vehicle-borne TSP have a base of 20 kilometers per day. This is used in Tactical Scale travel as a character's Speed is used.

For purposes of using Forced March, an army has a pseudo-DRT of 20. The reductions in Attributes called for by fatigue represent the percent of the total TSP that become Unready. If they are already Unready, one-half of the number called for are actually lost. *A completely Unready army may not use Forced March.*

Thomas of the previous example decides to move out before he has readied all his TSP. He leaves on the third day with 3 Ready and 7 Unready TSP. He travels with Forced March until he accumulates 16 "subdual points." This would reduce a character's Dexterity and Speed to 50%. Thus, 50% of Thomas's army is made Unready. Fifty percent of his total of 10 is 5. His 3 Ready TSP become Unready but he must still account for 2 more TSP. Since the rest are Unready, he will lose one-half of the unaccounted-for TSP, or $1/2$ of $2 = 1$. Thomas's army has been reduced to 9 TSP and all are Unready.

POSITIONAL BATTLES

When one side is attacking another which is holding a given position, the defending side will be given additional TSP representing the advantage of the position. This additional TSP should be kept separate from the defending side's normal TSP.

When Losses are assessed, one-half of the actual Loss will be assessed against the defender's normal TSP and one-half against the position's TSP. Fractions are rounded in the usual fashion for the defender but are retained for the position. Fractional position TSP are treated as having the Strength of the next-higher whole number. Thus, a positional TSP reduced to 5.5 still functions as if it were 6.

Once the position's TSP has been eliminated, the Battle proceeds in the normal fashion.

CUSTOM ARMIES

This section gives guidelines for evaluating a force composed of disparate elements. It is of greatest use when a character acquires sufficient forces to require combat to be resolved on a Tactical Battle scale.

Each Custom Army will be composed of "units." Each unit is a separate entity.

A unit of a Custom Army is made up of all the men of one Training Category who are armed and armored alike. A unit may also be a combat vehicle or a crew-served weapon.

Each unit will have three values calculated for it. A Defensive TSP, an Offensive TSP, and an Offensive TSP with Ammo are required. The last is used on any Battle Turn for which the unit is supplied; the second is used when the unit runs out of ammunition, or if the unit is only armed with hand-to-hand weapons. However, only one is used for calculating the comparative strengths for the Battle Turn.

Each unit's appropriate Offensive TSP is added to that of the other units on its side and rounded to the nearest to get the side's effective TSP for that Battle Turn. This is subject to Position benefits.

When Losses are taken by a Custom Army, they are applied at random to individual units. The Gamesmaster will assign each unit a number and roll a die with a range as large as the highest assigned number. If no die is available with a convenient range and a flat (equal probability for each number) curve, he will pick the next largest range with a flat curve and roll until he gets a number in the correct range. The number rolled will be the unit to first take damage. If the TSP indicated to be lost is greater than the Defensive TSP of the unit, the unit is destroyed and the excess points are applied to another unit determined at random.

If a unit is only partially destroyed by Losses, the percentage of the unit's Defensive TSP lost is the percentage of its Offensive TSP that will be lost for subsequent Battle Turns.

When assessing Losses for a Custom Army, do *not* round off the Loss. Fractional values can be significant to a Custom Army, which will often have TSP values to two decimal places.

Player characters in a Custom Army take the usual chances of Battle but add their available Offensive TSP into the total for that side.

CALCULATING VALUES FOR A CUSTOM ARMY

In order to determine the TSP for a unit of a Custom Army, its value must be assessed. Unready units have $1/3$ the normal values.

The value of the unit in each category (Offensive, Offensive with Ammo and Defensive) will be divided by a number chosen by the Gamesmaster to yield values in a convenient range for play. Divisors of 5, 10, or 20 will not affect the scale of Battle Turns. Increasing the divisor by a power of 10 (50, 100, 200 respectively) will double ammunition expenditures and the "time taken" by a Battle Turn.

Values for each unit are calculated separately and rounded to the nearest hundredth when the conversion to TSP is made.

A unit's Defensive value is equal to the Average Armor Value of a man in the unit times the Training Rating times the number of men in the unit. A crew-served weapon works the same way. A vehicle has a Defensive rating equal to its Vehicle Armor Value converted to regular Armor Value (i.e., multiplied by 10). If the vehicle is currently suffering a reduction in maximum speed due to reduced Durability, this same reduction is applied to its Defensive value.

A unit's Offensive value is equal to its Defensive value, if infantry. A crew-served weapon has no Offensive rating but that of its crew (to be used when the ammunition is gone). A vehicle has an Offensive value equal to its Structural Rating times the crew's Training rating when it carries no weapons or is out of ammunition.

A unit's Offensive Value with Ammo only applies to units which use firearms. For these units, the value of a single weapon is added to the base value. For infantry the Average AV of a man is added to the value for the weapon being used, at the rate being used, and the result is multiplied by the Training Rating. For crew-served weapons, the BDG of the weapon is the base. If a full crew is not present, the base is

CUSTOM ARMY VALUES

| Gun Action | Value | Rounds per Battle Turn | Weapon Ratings | | Training Ratings | Value Multiplier |
|----------------|-------|---------------------------|----------------|---|-------------------------|---------------------|
| | | | Weapon Type | Value | Training Category | |
| Black Powder | 1 | 5 | Hand-to-hand | 0 | Green (untrained) | x .25 |
| SA, DA, SS, PA | 2 | 20 | Bow | Pound Pull x .05 | Novice | x .5 |
| AL, SB | 5 | 50 | Crossbow | Pound Pull x .02 | Trained | x 1 |
| FA | 10 | 100 | Firearm | BDG of 1 round x .1 x Gun Action Value | Veteran/Elite | x 1.5 |
| Machine Gun | 15 | 1000 | Artillery | VDG x % of qualified crew active | Player Character/Heroic | x 2 |
| Artillery | * | 20 | | | | |

reduced to the percentage of the crew which is present before being multiplied by the Training Rating. Vehicles work the same way except that the Defensive value is added to the base value for all weapons able to be brought to bear before being multiplied by the Training Rating of the crew.

Reversing the calculations at the end of a Battle will indicate how many survivors there are in a unit. If a partial man is indicated, assume he is wounded. If a partial vehicle is indicated, determine the percentage damage and treat it as a percentage Durability loss.

Ammunition supply is dealt with on a rudimentary scale. Each Gun Action or class of weapon, if larger than small

arms, is assigned a number of rounds expended in a Battle Turn. If a character using a firearm is to get the value of that firearm, he must have sufficient rounds to match the required expenditure. If insufficient rounds are available, the Offensive Value without ammunition will be used. A character able to use a slower rate of fire with his weapon may do so, but he will only receive the Value for the Gun Action firing with the lesser ammunition expenditure.

EXAMPLE OF A CUSTOM ARMY

J. Caldwell has assembled an army. He commands 25 Trained soldiers in Average AV 8, 50 Green troops in Average AV 6, another 50 Green troops in Average AV 5, one Heavy Machine Gun with a crew of 2 (full

| Infantry | Defensive (1 man) | Offensive | Offensive with Ammo |
|--|-----------------------------------|----------------------|---|
| <i>Trained Riflemen</i> | $(8 \times 1) = 8$ | <i>same</i> | <i>firing 30-06 at BDG 26, AL ((26 x .1 x 5) + 8) x 1 = 21</i> |
| <i>Green Riflemen</i> | $(6 \times .25) = 1.5$ | <i>same</i> | <i>firing same as veterans (((26 x .1 x 5) + 6) x .25) = 4.75</i> |
| Other Infantry | $(5 \times .25) = 1.25$ | <i>same</i> | <i>none</i> |
| Caldwell (first 6 Turns) | — | — | <i>firing .223 at BDG 20, FA ((20 x .1 x 10) + 10) x 2 = 60</i> |
| <i>(7th Turn)</i> | — | — | <i>firing .45 ACP at BDG 11, AL ((11 x .1 x 5) + 10) x 2 = 31</i> |
| <i>(after 7th Turn)</i> | — | $(10 \times 2) = 20$ | <i>none</i> |
| Heavy Machine Gun with full crew firing 7.62 NATO at BDG 27 | <i>as men: (8 x 1) = 8</i> | 8 | $((27 \times .1 \times 15) + 8) \times 1 = 48.5$ |
| Tank with 50% crew firing 105mm gun (no MG) at VDG 56 and Vehicle AV 10, speed reuction 10% | $(10 \times 10) \times 90\% = 90$ | $(5 \times 1) = 5$ | $((50\% \text{ of } 56) + 90) \times 1 = 118$ |

This results in Caldwell's army having units with TSP values listed below. The Gamesmaster decided to divide by 20.

| Unit | Defensive Value (TSP) | Offensive (TSP) | Offensive with Ammo (TSP) |
|-------------------------------|------------------------------|------------------------|----------------------------------|
| #1 Trained Rifles (25 men) | 200 (10) | 200 (10) | 525 (26.25) |
| #2 Green Rifles (50 men) | 75 (3.75) | 75 (3.75) | 237.5 (11.88) |
| #3 Green Infantry (50 men) | 62.5 (3.13) | 62.5 (3.13) | — |
| #4 HMG crew (2 men) | 16 (.8) | 16 (.8) | 60 (3) |
| #5 Tank | 90 (4.5) | 5 (.25) | 118 (5.9) |
| <i>plus Caldwell</i> | | | |
| <i>Turns 1-6</i> | — | — | 60 (3) |
| <i>Turn 7</i> | — | — | 31 (1.55) |
| <i>After Turn 7</i> | — | 20 (1) | — |

crew), and a Tank mounting a 105mm gun, with 50% crew. The HMG and tank crews are Trained. The first two units of infantry are armed with M-1 Garand Semi-Automatic rifles and the third has only Hand-to-hand weapons. Caldwell himself is a Player Character, has an Average AV of 10, and is armed with an M-16 Assault Rifle and a .45 automatic.

He has stockpiled enough ammunition for two Battle Turns for the riflemen and the tank, four turns for the HMG, and 6 Turns for himself with the M-16 and 1 with the pistol. This means 7500 rounds $((50 + 25) \times 50 \times 2)$ for the M-1s, 40 rounds $(1 \times 20 \times 2)$ for the tank, 4000 rounds $(1 \times 1000 \times 4)$ for the HMG, 600 rounds (since he will be using his M-16 at Full Automatic) for the M-16, and 50 rounds for the .45.

The Battle engaged in by Caldwell's army is presented only in terms of Losses to demonstrate the procedure for dealing with them and their effects on the offensive ability of the army.

On the first Turn, the army generates the maximum Offensive value since all units with firearms have ammunition. This gives a TSP of 53.14 rounded to 53. The army is slated to take a Loss of 1 TSP. The Gamesmaster rolls 1D5 with a result of 4, which indicates the HMG crew. The Defensive TSP of that unit is .8. It is destroyed and its Offensive value will not be counted for the rest of the Battle. This still leaves .2 TSP to be assessed against Caldwell's army. The Gamesmaster rolls his die again and this time it indicates Unit 1. The Defensive value of this unit is reduced by .2 TSP to 9.8. This is 98% of its original value, so its Offensive value on the next Battle Turn will be at 98% of its value, that is, 98% of 26.25 or 25.73.

On the next Battle Turn, Caldwell's Offensive capability is reduced significantly by the loss of the HMG crew. His new total is 49.62, rounded to 50. On this Turn, the army takes no Losses.

Even though his army took no Losses on the last Battle Turn, Caldwell's Offensive power is reduced greatly because his riflemen and tank are out of ammunition. His total Offensive TSP is now 19.93 or 20. This is a loss of more than half of his Offensive Capability. Unfortunately for Caldwell, his enemies' ammunition supplies were greater and he finds his Offensive capability outstripped significantly. His opponent thus gets an additive modification to his Battle Determination result which permits him to inflict great casualties on Caldwell's army. The Loss is 8 TSP. The unit taking the casualties is indicated as No. 2. They are annihilated and 4.75 TSP are still to be allocated. The next unit indicated is No. 3. They also are annihilated, and 1.62 TSP are still to be allocated. The next unit indicated is No. 5, which has its Defensive TSP reduced to 2.88. This loss is greater than 25% of his original Defensive TSP, so the army is subject to a morale check. It fails and will Retreat on the next Battle Turn.

Miraculously, Caldwell's army escapes without further casualties.

CUSTOM ARMIES AFTER THE BATTLE

Like regular armies, a Custom Army will regain TSP after a Battle. These will be apportioned randomly among the units of the army. A unit annihilated in the Battle cannot receive any of these replacement TSPs until all units which survived the Battle are brought up to the strength they were at before the Battle. The Defensive TSP is used.

Once a unit is made Ready after a Battle, the men in it will have their Training Classification raised to the next higher category if they are Green or Novice. If they are Trained or

Veteran, they will be raised only on a die roll of 1 on the Operational Command roll used to Ready them. If the TSP value to be raised to Ready status was beyond what it would take to raise the unit so elevated in status category, the excess may not be used on another unit.

Ammunition resupply of units in a Custom Army is handled separately from getting them Ready for Battle again. Such resupply problems are campaign dependent and, as such, are in the province of the individual Gamesmaster.

Caldwell's total Losses in TSP were 9 TSP. Twenty-five percent of that is 2.25 and ten percent is .9. On the day after the Battle, his army receives 2.25 TSP randomly assigned to Unit 1. Their Loss was only .2 TSP, so they are back to full strength. The still unallocated TSP would normally be rolled for randomly, but Caldwell has only one other surviving unit, which is Unit 5, the tank. Its TSP loss was 1.62, which is replaced, leaving .43 still to be allocated. The lost units are eligible. The die roll indicates Unit 4, the HMG crew. This is over half the TSP. The machine gun itself is lost since the opponent holds the field of Battle. Making a color call, the Gamesmaster describes this result as the machine-gunner staggering into camp, dragging his wounded loader.

Caldwell decides to Ready his Trained Riflemen first. His Operational Command roll is a 1. His Wit Group is raised by 1 to its normal value (he was effectively lowered 1 Group due to the Retreat) and the die roll is 1D10 with a result of 6. Six TSP of Caldwell's Trained Riflemen are now Veterans and are Ready for Battle. If only they had ammunition! What has happened is that a new unit has effectively been created, since the Training Classification of the Unit 1 riflemen has been split.

On the next day Caldwell continues to Ready more of his Unit 1 riflemen. His die roll is a success, but not critically so. He uses his normal Wit Group for the Effect Die, which is 1D6. His roll is a 2. Two TSP worth of Trained Riflemen are now Ready. This still leaves 2 TSP of Unit 1 Unready.

Unfortunately for Caldwell's ambitions, his former opponent catches up with him on the third day. Unsupplied, his men still showing the effects of the previous Battle, Caldwell surrenders. He no longer has to worry about Readyng the rest of his army.

CHARACTERS IN A TACTICAL BATTLE

Characters may participate in a large-scale combat. Their fates, though related to that of the side on which they are fighting, are determined in a different way than that of the whole army.

Each character should have his Offensive Value assessed if a Custom Army is in use. If the Gamesmaster feels that this will involve too much work he may dispense with the calculations but should still charge the characters for ammunition expended in the battle. This should be done for the rate at which the character normally fires when in combat. If no normal pattern is established, assume the highest rate possible.

The calculated Offensive value for the characters is added to the total of the side on which they fight.

If a randomly-generated army is in use, the characters' offensive capabilities are ignored, although they are still assessed for ammunition expenditure.

For each Battle Turn, a character must choose a level of participation. A character may change from one level to the next between Battle Turns. He may not change more than one level at once. That is, he may not go from Courageous to Hanging Back or vice versa in one Turn. He must first spend a Battle Turn at Average level of participation.

The levels of participation are cross-indexed with the Battle Determination result for a Turn to find the probabilities character being wounded acquiring loot, or modifying his chance for recognition at the end of the Battle. These levels are:

Courageous: The character is in the forefront of the Battle. This is a dangerous position but tends to have a positive effect on the character's being recognized by the commanders of a Victorious army.

Average: The character does not seek out glory or withhold himself from the conflict. He takes the normal, not inconsiderable, risks of battle.

Hanging Back: The character does his best to avoid the thick of the fighting. Although safer than the other two levels of participation, participating in this fashion may well bring a character to the attention of his commanders in a very unflattering way.

BATTLE RESULTS FOR CHARACTERS

On each Battle Turn, the Gamesmaster will ask the players what level of participation their characters will be at during the Turn about to happen. Their decisions are recorded and the Battle Turn is conducted. When the Gamesmaster knows the status of the side on which the characters are participating, he can cross-index each character's level of participation with the status of the army for that Turn to get the die rolls to be used for determining how the character fared in that Turn.

Three letters will be found on the chart: W, L, and R. Each will be followed by a number. The letter indicates the category of fortune. W is for Wounds, L is for Loot, and R is for Recognition. The numbers represent a modified BCS which, when compared with the roll of 1D20, will determine an Effect Number. Each category is rolled for separately.

The Effect Number generated is a base number for that area. This may be multiplied by a factor representing the intensity or danger inherent to the circumstances. Specifics will vary by the category.

Wounds: Only if the die roll is less than the number indicated will the character receive wounds on that Battle Turn. The Effect Number of a successful roll is multiplied by the factor for an army with the appropriate status to give the number of points of lethal damage taken by the character on that Battle Turn. This may kill the character.

CRITICAL BATTLE RESULTS

| Die Roll | Result |
|----------|---|
| 01-30 | No special result |
| 31-60 | Character must make Health AST or treat as 61-90 below |
| 61-90 | Character is rendered unconscious for 1D3 Battle Turns. When he is conscious again, if the Battle is still continuing, his level of participation will be determined randomly for that first Turn. He may adjust it on the next Turn. If the Battle has ended and the enemy holds the field, he will be captured. If his side holds the field, he will be subject to normal After-Battle results. |
| 91-00 | Damage taken is critical damage. Roll Hit Location for results. The character will experience a Trauma Critical Effect (see page 30 in Book 1). If Location 2 was indicated, also treat as a Critical Acid Effect (see page 49 in Book 1). |

If the Wounds roll was a 20, the character will receive medical care that will heal 1D10 of the damage accumulated so far.

If the character has First Aid Skill, he may apply it to himself and any other characters in a unit with him during the time between Battle Turns. Any character with a Bandage may apply it to himself.

If the Wounds die roll was a 1, the character may receive a Critical Battle Result. A D100 is rolled and the damage received that Turn is added to the result. The modified D100 roll is checked on the chart above.

Characters may add a number equal to one-half of the percentage of their total DRT accounted for by wounds to the After-Battle die roll.

Loot: The character will maintain a running total of the results for this category. A successful roll will result in the Effect Number, as modified by the correct factor, being added to his total. An unsuccessful roll will result in the modified Effect Number being subtracted from his total.

A negative result at the end of the Battle means that no loot was gained.

A positive result is the Barter Point value of the Loot

FORTUNES OF WAR TABLE

| | Victorious | Winning That Turn | Deadlock | Losing That Turn | Lost |
|-------------------------------------|---------------------|----------------------|----------------------|----------------------|-----------------------|
| Courageous | W:9 L:16 R:30 | W:11 L:12 R:25 | W:13 L:8 R:20 | W:15* L:4 R:15 | W:17* L:0 R:10 |
| Average | W:7 L:18 R:20 | W:9 L:14 R:15 | W:11 L:10 R:10 | W:13* L:6 R:5 | W:15* L:2 R:0 |
| Hanging Back | W:5 L:20 R:10 | W:7 L:16 R:5 | W:9 L:12 R:0 | W:11* L:8 R:-5 | W:11* L:4 R:-10 |
| Modifying Factors | | | | | |
| Wounds | .5 | 1 | 1 | 1 | 1.5 |
| Loot, successful roll | 3 | 2 | 1.5 | 1 | 1 |
| unsuccessful roll | 1 | 1 | 1.5 | 2 | 3 |
| Recognition, successful roll | 2 | 1.5 | 1 | 1 | .5 |
| unsuccessful roll | .5 | 1 | 1 | 1.5 | 2 |

* The amount of damage taken that Turn is the percent chance that the character has been captured. All captives of a totally defeated army (TSP reduced to zero) or a Routed army are freed.

gained. The Gamesmaster may wish to handle this as ammunition for whatever firearm the character was using. If the character had no firearm, the Loot may still be represented as easily-bartered ammunition.

Recognition: Recognition is calculated as Loot and a running total is kept. The result at the end of the Battle is the modification which will be made to the character's After-Battle Reaction Roll.

Since officers are not supposed to throw their lives away, the Gamesmaster may wish to modify the Recognition BCS for characters functioning in that capacity. This modification is to the BCS indicated for Recognition.

Some suggested values are:

| | |
|-------------------------------|-----|
| Sergeant equivalent | +5 |
| Lieutenant/Captain equivalent | +10 |
| Major/Colonel equivalent | +15 |
| General equivalent | +20 |

AFTER-BATTLE RESULTS

There are no hard-and-fast rules to follow when dealing with the results of a Battle, but some guidelines can be presented.

The Gamesmaster may make a Reaction Roll for each character. This is modified by the character's Recognition total. The purpose of this roll is to get the evaluation of the character's performance in the eyes of his superiors. The Gamesmaster knows the results of the Battle and the character's actions in it. Using this, he should decide whether a character should be castigated or congratulated. The coward in a Victorious army is often ignored, while even the brave man in a defeated army may face hard times.

The Gamesmaster should also modify the results for player character officers. A defeat is harder on the officer corps than on the soldiers in terms of the wrath it brings from an army's superiors and/or sponsors.

In general, a negative result may only bring a reprimand and a fine, or it may be serious enough to have the character brought up on charges of cowardice which could result in an execution. Player Characters should be allowed a chance for a jailbreak to avoid such unpleasant side-effects. This can provide material for a gaming session.

A good result may earn the character a commendation, a medal, or a reward in the form of more pay. A very good result may cause the character to be promoted or to receive an exceptional reward.

In any case, the characters should be rewarded or punished according to their actions and the Gamesmaster's view of how those actions fit in with the situation. The nature of the army is also important. A Gamesmaster's shrewdest judgements can be called for in these situations.

Sal has gotten herself involved in a Battle. On the first Battle Turn, she decides to be Average and the side she is on Wins that Turn. The 1D20 rolls for each area are 6, 18, and 19. She receives 3 points of Lethal damage ($9 - 6 = 3 \times 1 = 3$). She starts with a negative Loot total of 4 ($14 - 18 = -4 \times 1 = -4$) and a negative Recognition total of 4 ($15 - 19 = -4 \times 1 = -4$).

On the next turn, she opts to be Courageous. This time, her side is in a Deadlock. The rolls are 1, 9, and 14. She takes 12 more points of Lethal damage and is subject to Critical Battle Results. Her Loot total now stands at -6 ($8 - 9 = -1 \times 1.5 = -1.5$ rounded to -2 and raising the loss to -6). She does, however, garner 6 points of Recognition which eliminates the earlier negative total and leaves her with a positive total of 2. For the Critical Battle Results, she rolls 1D5 and adds 12 to the die roll. The result is a die roll of 25 modified to 37. She fails her Health AST and is rendered unconscious for 1D3 Battle Turns. The die result is 2.

For Battle Turns 3 and 4, Sal is unconscious. She will participate in Battle Turn 5 but her level of participation is determined at random. It is determined to be Hanging Back. This indicates that the tide of battle has moved away from where she had been knocked unconscious. The die roll results are made once the Battle Determination is made. The side is Victorious on that Turn. Sal has no chance to move to the forefront of the Battle again. The die results are 20, 11, and 12. The 20 indicates that she is healed for 1D10 points of damage. The die roll here is a 6. She is still carrying 9 points of damage. She has gained a base amount of 9 Loot points which is multiplied by 3 for a result of 29 points; added to her previous negative total of 6, this leaves her with a net of 21 Loot points. Her Recognition roll gives a base loss of 2 points multiplied by .5 for a net loss of 1, leaving her final total at 1 Recognition point.

Since her side won, there will definitely be an After-Battle Reaction Roll. She receives a modification of +1 for her Recognition total and +14 for her wounds (total damage received was 15 points, which is 37.5 or 38% of her 40 points of DRT; divided by 2 and rounded nearest this gives 14). This is a total modification of +15. The result of 1D100 is 57 modified to 72. This is a "Good" result. Being a mercenary, she has her base pay multiplied by the Value Number for that reaction, which is a positive 2. The Gamesmaster decides that this reaction also entitles her to priority medical care, resulting in good, restful facilities and a doctor's care until she is healed.

For Loot she receives 21 Barter Points worth of ammunition. Had her Loot total remained negative, she would have received no Loot.

THE CHANGED

This is a brief outline of the mutations of human stock to be encountered in **Aftermath!** Primary consideration is given to the basic forms of alteration in the first five generations or so, although some comments will be made on potentials for development in later generations.

PHYSICAL MUTATIONS

These are Changed features which act upon the physical senses, the Attributes, and other features of physiological and neural configurations, having effect upon the mind, body, and senses of the mutant but not significantly allowing him to act upon the exterior world. Unless otherwise specified, Physical Mutations are always working, although some applications require specific calls to that effect by a Player.

STRONGS

Strongs *add 10* to their Strength (i.e., they effectively go up a Group). Gamesmaster's Option: allow Strong to train to 50 in Strength, as opposed to 40. For a more normal version, allow a score greater than 40 in a Changed Attribute only if the initial Permanent score reached such a figure. If points are lost due to healable Attribute damage, allow healing back to Permanent Value. If points are lost due to re-trainable damage, allow training back to Permanent Value.

Strong also suffer losses in other Attributes, proportionately based on their gains in Strength. Gamesmaster and Player may exercise options:

- Reduce Deftness and Speed by 5 each
- Reduce Wit by 10 (or amount of Strength increase)
- Allow Player to "rob Peter to pay Paul." He may increase Strength by transferring points from Attributes at a rate designated by the Gamesmaster (e.g., boost Strength by 3 points per 2 points reduced in Deftness)

In any case, the principal effect of being a Strong is going to be based on hormonal balance altered by the mutagens in the post-Ruin environment. This will cause increased production of usable heavy muscle tissue, but will tend to reduce movility and flexibility (Deftness and Speed) or mentation (Wit and Will). The options given above are to permit tailoring the character to an image pleasing to Player and Gamesmaster.

QUICKS

Quicks receive enhancements to Deftness and Speed in the same way that Strong gets enhanced Strength. They may have a boost in only one of these Attributes or in both. Penalties are levied against them as with Strong, but are probably targeted at Strength and Health. This is based on the image of their mutation as an increase in the basal metabolic rate, permitting greater reflex speed and muscle "firing" at a cost in the storage of protein as muscle and the general ability of the system to maintain homeostasis, reflected by Health reductions.

Other requirements based on this image could include doubled requirements for rations by the Quick, as well as player design of habits and quirks that non-Quick humans are likely to find highly irritating.

TOUGHS

Toughs resist physical damage in a gross anatomical sense. Possessed of metabolisms which fiercely resist certain forms of injury, they also have heavier skeletal

structures and tough hide in place of normal human skin. Gamesmaster or Player may wish to work out a highly-visible image of this latter mutation (scales, or a wrinkled, "elephant hide" appearance).

The Tough receives the following abilities.

- Generate a number from, say, the roll of 2D2. This will be used in all the following operations. It is called the Resistance Number.
- The Tough's skin has an inherent Armor Value equal to the Resistance Number. This figure is *added* to the Armor Value of whatever armor he is wearing over a given Location.
- Increase the Tough's Shock Factor by the Resistance Number. In addition, the period of time the Tough is unconscious due to Shock will be reduced by a number of Combat Turns equal to the Resistance Number.
- Add the Resistance number to all STs against succumbing to physical damage effects such as being winded, knocked out by a sandbag effect, stunned by falls, and so on.
- The Tough will not die, if knocked below 0 in his DRT, until the total damage below 0 is greater than his Healing Rate plus Resistance Number.

Interesting options with this mutation might include tying the Resistance Number into the Power Rolls discussed under Psionics later on. The Resistance Number equals the Tough's Power Group. Thus, the changes start in early adolescence and continue into young adulthood. Outward manifestations of the mutation would be less noticeable for those with low Resistance Numbers, but as such factors as inherent AV increase, the coarsening of skin, the roughening of voice as cartilage in the throat thickens, the stiffening of joints as bone cells increase in density, will mark him for a Changed One.

Penalties to abilities of Toughs are potentially numerous and the Gamesmaster should balance their severity with the levels of superiority gined by the mutant. Some possibilities included:

- Reduce all BCS and Saving Throws based on sensitivity of touch or lightness of movement by the Resistance Number. The heavy bones and thick, insensitive skin do not do much for such operations.
- Obviously, the Tough is no beauty. Figure this into the Changed One's interactions with people, especially ones with no love for mutants.
- The Tough could easily lose Speed and Deftness comparable with the Strong, by some number based on Resistance. A 1:1 ratio is certainly possible.

There are other options, too numerous to analyze in detail. The Gamesmaster is free to work out details with players, as well as to design his own variants.

IMMUNES

Immunes have systems which responded to the bacterial fury of germ warfare by developing tremendous resistance to subtler forms of injury than the Toughs. They also have a Resistance Number, but it acts as follows.

- Add to Saving Throws versus all forms of drugs and poisons.

- At the Gamesmaster's option, Immunes can be assumed to be totally immune to *all* forms of disease, or to have a chance equal to 10% x Resistance Number that their systems will eliminate a disease during incubation, with the Resistance Number added to Saving Throws in the event that it does not.
- Also at the Gamesmaster's option, transfusions of Immune blood could act for the recipient in the same way as for the donor. Some interesting scenario possibilities arise that way.

As to the penalties for immunes, they must *fail* their Health Saving Throw for beneficial drugs to work on them, and if the Gamesmaster feels that it is called for, their systems can oppose *any* medical care with a Health roll (a CST if drugs are involved). A bandage, of course, would not be resisted, and most forms of first aid are probably not a problem, but the use of medkit units, Pathology Skill care, etc., might be read as an attack by the hyper-active immunoresponse system of the Immune.

SMARTS

As you might guess, Smarts have increased Mental Attributes. If the *only* form of the mutation is a flat add to Wit and Will, there is no reason to penalize them in any other area. Such a change is certainly in homo sapiens's main evolutionary stream, and increased power of mentation in itself will not affect the biological balance as extremely as the more overt mutations do.

However, we can also posit the "super-minds" among the Changed, even though we are not yet speaking of the psionically gifted ones, who would suffer some offsetting penalty to preserve game balance. A case can be made that this increased mental ability will adversely affect physical development.

For such advanced Smarts, the abilities gained could be:

- Hidden Thing detection by AST rather than CST
- For Knowledges at least, a gain of the Initial Score in the Skill *every time* a full month is spent on the subject. This might *not* apply to Skills having a strongly physical side, as abstract theory is less important than reflex training and exercise. The Gamesmaster must apply his own view of hermeneutics to the question.
- No limit to Freely Improvable Skills
- Allowed "intuitions" (hints from the Gamesmaster) on making a Wit CST, allowed once in a given situation

In either type of mutation, the Smart will enjoy an increase of around 10 in Wit and Will, and in the case of "Super-Smarts" should suffer reductions in proportion of *all Physical Attributes* (say 5 apiece).

The nice thing about Super-Smarts is that they present a new thought process as the mutation, without necessarily requiring a measurable increase in brain-power. This is a truer kind of change than a straight jump in "IQ."

SENSERS

These are mutations enhancing the physical senses and the neural structures devoted to their interpretation. Do not confuse them with the ESP abilities described under Psionics. Basically, Senser abilities can run in two directions: increased power of reception (i.e., response to lower threshold of stimulation than normal) or increased range of perception (e.g., seeing farther into the spectrum, hearing higher or lower frequencies, etc.). The latter is a lesser form of the mutation and less prone to compensating penalties.

EYES: Eyes have an enhanced visual sense. In the perceptive form of the mutation, the Eye can see slightly farther into the ultraviolet and infrared than normal. Thus, he can perceive such phenomena as the UV aura caused

by ionization of air by radioactives or, in the presence of strong IR sources, see as if a visible light were present. The power is probably *not* strong enough in itself to allow seeing things by IR signature alone.

The receptive form of the mutation operates in a different way. The Changed has catlike eyes, capable of seeing clearly by low starlight levels. In game terms, the Eye in this form receives no penalty when operating in light levels lower than Good. However, in Good light (defined as ranging from a well-lit room on up to bright sunlight) the Eye is *totally blind!* To function in this environment, he requires sunglasses or similar protection, and when wearing such, his vision is on a par with normal human capability.

Strictly speaking, total darkness should be impenetrable to the receptive Eye as much as to the human norm. However, a mutant with *both* receptive and perceptive forms of the mutation will be able to operate in total darkness as well as near-total.

Rapid changes in brightness will be crippling to the Eye. If he is dumped from bright light to dim, of course, he need only remove his shades. Exposure to sudden light (turning on the switch in a dark room, flashbulbs, flares, etc.) will impact his visual centers so harshly that a Will AST is needed to prevent being Dazed (as by a Critical Hit) for the next 1D3 minutes. Even if it is made, he will be in a blinded state for that period after being protected from the glare (by closing his eyes, donning shades, getting out of the light, etc.).

If an Eye is exposed to such attacks, all relevant Saving Throws for avoiding their effects are halved. If an attack does succeed, then the procedures above are applied.

EARS: Ears have enhanced hearing. This also occurs in perceptive and receptive forms.

The perceptive Ear has a range of hearing covering a wider frequency response than the normal human (30-15000 hertz or so). This would enable them to hear such things as ultrasonic alarm triggers (such as are used in many modern anti-intruder systems), the distant pulse of turbines, or the sound of sonic sensors, and to penetrate white noise sound masking, hearing "around" the masking frequency. There is no particular penalty involved in this form of the mutation alone.

The receptive form of the mutation increases the sensitivity of hearing as if all input were amplified many times. Normal human hearing has a lower threshold of 2db; the receptive Ear has one much lower. On the other hand, the human threshold of pain is around 80db, with damage to neural tissue starting at 100. The Ear is much more vulnerable.

It is difficult to list all the things that can endanger the Ear. Any loud noise above the level of a human shout will at least tend to distract him. We must let a few common examples serve.

Gunfire: Outside, any report within 10 meters will impose Distractions (ringing head) for a period of time. Pistols and small-caliber Rifles do 1D6 of such effect, larger weapons (including some of the big pistols like the Magnums) 1D10. Distraction lasts for a full Combat Turn of firing at least. Thereafter, the Ear may spend an Action trying to get his nerves under control. A Will AST does so on the first try and a second Action will always succeed if the first fails.

Indoors, if in any enclosed space up to the size of a large auditorium with gunfire, the Ear is exposed to this attack. If he is within the 10-meter range, double all effects of the noise.

Explosions: If close enough to be attacked by the blast (i.e., Concussion) the sound will knock the Ear out unless he makes a Will CST. Otherwise, if the

Gamesmaster judges him to be in range (and that can be up to a kilometer) he must still make a Will AST or pass out. If he saves, he is Dazed for 1D3 minutes.

Continuous Sound: A loud stereo can be annoying to normal ears. To an Ear, it can be maddening. The bombardment by constant loud sounds will have a value set by the Gamesmaster at, for example, 1D3 for a phonograph, 2D3 for a loud PA system, 2D6 for feedback over a powerful amp and speakers, a flat 15 or 20 for a stamping mill, etc. In each Combat Turn where the Ear is trying to do *anything*, he must roll a Will AST or operate under the specified Distractions. If he makes a CST range, he has transcended the noise and receives no penalty. If he makes AST only, he is under half the Distractions (round up). If he fails, he cannot even move except at half his BMA. At the Gamesmaster's option, he may try to react to the environment if the Distraction level is less than his Will Group, but at large penalties.

Constant exposure to very loud sounds will act like explosions, attacking the Ear on every Combat Turn of exposure until he passes out.

Ears can protect themselves in one of two ways: by stopping their ears altogether (going deaf) or by wearing earpads or plugs designed to filter noise levels down, such as many shooters, press operators, and airport ground crewmen use on the job.

Total stoppage means that the Ear cannot hear at all. Reducing plugs or pads put his hearing on a par with normal human capabilities.

USES OF CHANGED SENSES

When using Changed senses to find things out, for example to find Hidden Things, the rules are as follows.

Attempt to find Hidden Thing using Changed sense that would normally be detectable by that sense in normal form: the mutant gets a Wit AST instead of a CST. If scanning for data that would not normally be detectable, a CST is still rolled. This latter use puts a burden on the player: he must specify that he is pushing his mutant senses to the limit. The Gamesmaster should then make a secret roll for the character's Wit Saving Throw. If it is successful, the Gamesmaster must decide what, if anything, such a scan will pick up. Of course, some things will be detected that have no relevance to the situation in hand.

When using Changed senses to influence Skills, the player must specify that he is attempting to use his mutation to enhance some Skill. Usually, this will be limited to Knowledges or Physical Skills using sensory input to operate. "Search" will be subject to bonuses for Eyes, "Safecracking" for Ears, etc. The Gamesmaster and player can discuss the relevance of the sense to the Skill in the particular use in application. If they agree that it is relevant, the player may roll a Will CST to see if he can interpolate the input into his BCS use. If he makes it, add a relevant bonus to the attempt, such as his Wit Group or a Group derived from his Power score.

It is hard to say just what can be done with senses we do not possess. If the Gamesmaster agrees to allow some extraordinary use of the Changed Skill, the relevant Saving Throw is Will (to focus the perceptions on that sense) and should be a CST. Results of success should be worked out by the Gamesmaster and player (or Gamesmaster alone if appropriate) in advance. If a Changed is exposed to his weakness as a Senser while occupied in this act, he should suffer the maximum penalty with no Saving Throw allowed.

BALANCERS

One could argue for putting such a mutant under Sensers, but the Balancer is quite unique. He has a heightened

kinesthetic sense with the following abilities as a result.

- No penalties for movement on Treacherous Ground, or moving backward (other than running into something).
- Double the usual Base Movement Allowance used for climbing movement.
- Strike to Side Hexes as if Frontal and Rear Hexes as if Side.
- Allow movement on slackwires, tightropes, branches, ledges, etc., at about half his Base Movement Allowance. Deftness AST to move at full Base Movement Allowance without falling.
- Allow longer fall increments for measuring danger and damage.

A Balancer has a tendency toward attacks of motion sickness. Cars or boats on calm waters, or commercial jets, have a constant Distraction Factor a 1D6. Rough driving, heavy seas, light planes would all have around D3 +3. Worse conditions have increased effects. Add 1 to the Distractions per hour that the condition continues. Resisting these effects requires a Saving Throw using the *average* of the Wit and Health ASTs. It is up to the Gamesmaster to decide if Balancers are potentially the best zero-gravity operators or permanent groundhogs.

BLENDS

The Blend is equipped with a photosensitive skin, some control over his body chemistry and involuntary muscular movements, and an instinctive sense of his surroundings. He is essentially a human chameleon. A Blend (stripped) can develop astoundingly effective personal camouflage, becoming a Hidden Thing.

If motionless, the Blend is a fully Hidden Thing, requiring a Wit CST to detect (for normal human senses). He will only assume a skin coloration matching his background, but his Infrared signature, scent, etc., will not match the environment.

In motion, the Blend's power will still maintain visible coverage, though he must use Stealth to cover the sounds of movement. His Infrared signature is still detectable to Infrared scans. It requires a Wit AST to spot the Blend in motion, with a bonus of +1 if he is running and +1 if he is dodging (cumulative).

In close combat, the Blend is visible enough to his opponent to hit effectively, although the bewildering shifting colors and patterns of his skin will confuse attempts to strike precisely. If the Gamesmaster feels that this rather neutral little mutation needs some frosting to make it appealing, the Blend's opponent in hand-to-hand combat needs to use his Average BCS.

Missile fire against the Blend *a/ways* uses an Average BCS.

The penalties levied on the Blend vary and should be minor if the heftier benefits are not used.

The powers of the Blend do not work if he is clothed. One might permit a breechclout in the Comics Code tradition.

The heavier version of this imposes a constant irritation at wearing an Average Armor Value higher than the Blend's Will Group, due to the increased pressure sensitivity of his skin.

Blends are a Changed type that presents a challenge to the player. A multiple Changed, such as a Blend who is an Eye, might be a lethally successful night fighter, effectively invisible but capable of moving freely. With proper training, he would be a near-perfect commando.

PSIONICS

Besides changes in gross physical anatomy and body chemistry, one might expect to see mental mutation in the mutagen-rich wake of NBC warfare. Sections of the brain now unused by Man could become active or more powerful.

The powers now studied by the psychic investigators could become concrete realities for the survivors of the Ruin.

All Psionically Changed will acquire psionic power with the amount based on their ages. It is assumed that psychic ability starts to manifest at the onset of puberty, based on the findings of some modern parapsychologists. Let us assume a base starting age of 14 in the *Aftermath!* system. That year, and every year thereafter until the age of 26 (the average age at which the growth process levels off in human beings), the Changed will gain 1D3 of psionic power, called "Psi" (pronounced like "sigh."). The initial score in Psi will be equal to: 1D3 per year at a value of the character's age minus 13. Thus, a 22-year-old character starting out in the Campaign would have 22-13 or 9D3 of Psi.

It will be seen that at full majority the range of Psi power in a normal Changed will be 13-39. In essence, the new ability is treated like an additional Attribute in many ways. The two principal areas in which the Psi score functions are:

- The effects of certain Psi Powers (see below) are measured by the number generated by rolling Effect Dice, just as Damage Dice determine the effects of using Strength. Calculate the "Psi Group" for the character as you would for any Attribute.
- A Psi "Saving Throw" should be generated, as for any Attribute. This will determine the Changed's success in using his Powers, as stipulated in the rules later on.

There are several broad categories of psychic phenomena recognized today. In *Aftermath!* these categories are called Functions. The are:

Telepathy: Forms of psionic ability dealing with contact or communication between two or more minds.

ESP: Short for "Extra-Sensory Perception." Psychic phenomena in which data are gathered which are beyond the reach of the character's physical senses.

Psychokinesis: "Mind over matter." Causing changes in matter by mental force.

Precognition: Sensing events or data before they actually occur or impinge upon the other senses.

All Psionically Changed will have at least one Psi Function. It will be rare for early generations of the Changed to display more than one Psi Function to any great extent. The Functions, in conjunction with his Talents, will determine what Powers a Changed has.

For every Talent in which the Changed has a score greater than 10, a Power will be gained, as described below.

In using Psi Powers, the Effect Die roll made for the output of such Powers will be multiplied by a factor equal to (Talent/10).

Vern has active Psi, with a Function in Telepathy. He has Communicative Talent of 14 and Combative Talent of 18. He will thus receive the Psi Powers ascribed to Telepathy in those two Talents. In using Effect Dice for the Communicative Power, his base die roll will be multiplied by (14/10) or 1.4. In the Combative Power the Effect roll is multiplied by 1.8.

PSIONIC POWERS

There are two main formats governing the use of Psi Powers in *Aftermath!*: Projected (P) and Receptive (R). You may also think of them as "active" and "passive."

Projected Powers

P-Powers require active concentration by the user to work and using them may exert a strain on his system.

The player controlling the Changed must declare that he is trying to use a P-Power. He then must make a Will AST to "tune in" the character's Psi abilities. This attempt requires 1 Action. Retries in the event of failure are permitted. There are no Critical Miss penalties or Critical Save bonuses.

The Changed may now direct the Power in some allowed manner. The direction requires 1 Action. Make a Psi AST. If it is made, the Power will take effect normally. If the throw is not made, the Power has not taken effect. On a Critical Miss, the Changed's Psi score will be reduced by the Psi Group of the Power projection he was attempting. The player must have declared the effective Psi power he was putting into the effort before attempting the Psi AST. He has the option of using less than his full score. If no such declaration was made, the Gamesmaster may assume that the full power was being used.

Murian tries to project a Psionic Power. Her Psi is 25, for a Psi Group of 4. She rolls a 20 on her Psi AST! Not only has her effort failed, but her Psi score will be reduced by 4 points, to an effective value of 21! This is sufficient to limit her to Group 3 until she recovers some of the lost Psi.

Psi is recovered at a rate per day equal to the Changed's Will Group. No means of increasing this is known to pre-Ruin science, and the Gamesmaster has discretion in allowing the development of any Psionic Skills in his Campaign.

Once the direction attempt has been made, whether it succeeded or not, the Changed will check to see if the strain of using the Power has affected his system. He must roll a Health Saving Throw. If a CST is made, then no deleterious effect occurs. If an AST is made, the character takes half the Psi Group used for the Power in Subdual Damage. If the Saving Throw is not made, he takes the full value of the Psi Group in Subdual Damage. On a Critical Miss, he takes damage as for a normal miss, and is subject to System Shock as if he had taken a severe wound.

If the direction attempt succeeded, then the Power works, even if the user passes out as a result of the strain.

Receptive Powers

Unlike the Projected Powers, these Receptive, or R-Powers, function continuously, doing their office for the user at a level of effectiveness dictated by the Changed's Psi Group. Let us say that an R-Power gives a permanent plus to the Changed's score in some area, such as a Saving Throw, a BCS, or some other Ability. The user receives such a bonus equal to his Psi Group at all times, every time the affected Abilities, Attributes, or Skills are used.

TELEPATHIC POWERS

The Powers listed below are usable by all Changed with the Telepathic Function if they have a score above 10 in the indicated Talent.

Charismatic

Psychic Induction (P). The Changed may attempt to take over the mind of a victim by mental invasion. The modified Effect Die roll must exceed the target's Will for this to occur.

The Changed may implant a strong belief, image, or suggestion in the victim's mind. The victim will act upon this as if it were his own conviction until he is released from control by psionic activity (a Psychic Induction to that end must generate an Effect score greater than the victim's CST to work), or until his senses provide proof that the suggestion is untrue. In all such actions the victim acts at full efficiency. This form of Psychic Induction may be used as often as desired by the Changed.

Alternatively, the Changed may take over the victim's body entirely. Resistance to such domination will have the effect of Fatiguing the victim 1 level while under such control. The Changed will have the use of his own Skills and mental Attributes, but the possessed body exercises its own Physical Attributes and Activities. The Changed may *not* use the victim's Skills in this case, as they are "walled away" from the controlling centers of the brain along with the victim's consciousness. The Changed may so control only one victim at a time, but he *can* switch from victim to victim without

returning to his own body. Such an attack requires a Psi CST to direct properly.

The Changed's own body is in an unconscious state during the second form of this Power. It is as if he had projected his consciousness into the other form. He may return to his own form at will, and must do so when the victim passes out of range, or is knocked out or killed. This takes 1 Action using the Changed's own PCA.

Half of all damage suffered by the possessed body is suffered by the Changed as Subdual Damage. If the victim is knocked out, the Changed must save against System Shock using Will instead of Health. If the victim is killed while possessed, the Changed must make a Saving Throw or suffer a fatal heart attack, again with a Will CST.

The Psychic Induction Power only functions against a sentient opponent (one of more or less human intellect).

Combative

Mind Bomb (P). The Changed can blast at the victim's consciousness with volts of mental force, confusing him or even rendering him unconscious.

If the Effect Die roll exceeds the victim's Will CST, he is Dazed for a full Combat Turn.

If the Effect Die roll exceeds the victim's Will AST, he is Stunned for a full Combat Turn.

If the Effect Die roll exceeds the victim's Will, he is exposed to System Shock.

The victim will reduce the effect of the mental attack if he can make a Will Saving Throw, with a penalty equal to the Changed's Psi Group, based on the Power used. An AST result will reduce the severity of the effect by one step. A CST reduces it by two steps.

Effects are cumulative. If a Changed can hit a Dazed victim with another Daze before he comes out of it, the victim suffers the Stunned result. If he Stuns a Dazed victim, the victim may suffer System Shock. A Daze effect against a victim suffering any effect of Mental Stun will put the target in danger of System Shock.

Communicative

Mental Telepathy (P or R). This is pure and simple telepathic communication: two or more minds linked together in an exchange of information. Range and effectiveness of communication will vary.

Among Telepaths

If all involved in communication have the Mental Telepathy Power, it may be used as either an R- or a P-Power.

If it is used as an R-Power, the maximum range for communication is the Psi score in kilometers.

If both succeed in using it as a P-Power, the maximum range is 100 times that. This is the maximum distance which can separate any two members of the link-up, so that relay chains can be forged across great distance by concerted telepathic action. The maximum duration of a P-Power link-up is equal to the Effect Die roll in minutes.

Use the individual telepath's Effect Die roll to see how long he can stay in the link before trying to Project the Power again.

To A Non-Telepath

The sending range to a non-telepath is more limited. To a willing mind *known* to the telepath (some character in his group of friends, close associates, etc.), the maximum range is the telepath's Psi x 100 meters. He must make a Psi AST to initiate contact, but this *does not* count as using Mental Telepathy as a P-Power. It merely indicates that his signal has become readable to his contact.

To send to a closed, hostile, or unknown mind requires a P-Power use of Mental Telepathy. Some idea of the mind's physical location is needed, and if the direction roll succeeds, it is merely a request to allow communications as described above between willing minds. Range maximum is Psi x 10 meters.

To "read" a closed, hostile, or unknown mind without its knowledge is another matter. While it also has a maximum range of Psi x 10 meters, and requires some idea of where the mind's owner is in relation to the telepath, it permits no sending by the Changed. A Psi CST is needed to make contact, and the telepath simply experiences the flow of surface thoughts in his target's mind. He can maintain the link-up for a maximum period equal to the Effect Die roll in Combat Turns, or until the target is knocked out or killed. If the target dies while the telepath is linked up, the Changed is exposed to System Shock but must save with Will, not Health.

GENERAL NOTES ON TELEPATHY

In all cases of communication among open minds, whether telepathic or not, the rate of information transfer is greater than in speech. Assume a ratio of 10:1. Thus, if Detailed Action Time is involved, the participants may "speak" 10 words per Phase. Those participating in any involved Mental Telepathy are assumed to be in "Observe and Command" Action. The Gamesmaster should allow fairly involved consultation among such characters without advancing the Game Time very much.

Telepathy transcends language barriers among sentient minds. It *cannot* operate with non-sentient minds (animals, plants, etc.).

The rate of thought reading from a hostile mind is at "real time" values. The telepath gets the thoughts as they arise in the surface (sub-verbal) consciousness of the target.

Esthetic

Empathy (P or R). Using it as an R-Power, the Empath is sensitive to emotional states of creatures (sentient or non-sentient) in his field of vision, to a range equal to his Psi in meters. He receives such data only as a one-word statement from the Gamesmaster summarizing the dominant emotion in the observed character's mind: Fear, Anger, Love, Trust, Hostility, Hatred, Hunger, etc. He may use this R-Power on one character at a time, and a reading requires an Action to become clear.

As a P-Power, the Empathy facility allows modification of a target's basic emotional state.

The target must be in range as defined for the R-Power Empathy. The Effect Die roll must exceed his Will score to take full effect, which is an overmastering emotional state, flooded with a single-minded fixation on the emotion named by the empathic character. In applying this full-fledged force, the Gamesmaster should allow some measure of control to the Empath. He may specify that the emotion is directed at some particular individual or group, or tailor the condition so that he can manipulate the victim further by playing on his mental state. If the Effect Die roll exceeds the victim's AST, he will indeed be inclined along the lines of the stated emotion, but remains in some measure of control. He will be in a "mood." Player Characters should be enjoined to portray their mood honestly for the effect's duration. The Gamesmaster will manipulate the responses of non-player characters the same way.

One-Eyed Harry has Telepathic Function and high Esthetic Talent, so he can function as an Empath. Confronted by two rough muggers in the ruined streets, he tries to drive them off by empathic attack. He hurls a sensation of intense fear at one of the pair, rolling out a high Effect and far exceeding the victim's Will. The stricken robber flees, screaming. Trying the same tactic on the other goon, he only manages to beat his foe's Will AST. Shaking but determined, the man slips out a knife and closes on Harry, mouthing fearful obscenities. Weakened by his efforts (Harry did badly on his Saving Throws against strain), the mutant moves to meet him.

In the above case, as the thief may be fairly assumed

As this is under mental control, the Changed could, for example, apply it to the lock on a door without needing any special action to focus all his energy on the lock alone.

The Power also allows the Changed to lift and move up to half his ENC Cap and move it at a walking pace for a maximum number of Combat Turns equal to his Psi Group. This is allowed on any unattached/unheld item in line of sight out to a range of 10 meters x Psi. Objects within the range for the Saving Throw use of the Power may be thrown instead, with a Strength Group based on Psi Group (at -1 as with all thrown missiles) and a BCS equal to the Psychokinetic's Will AST.

As a P-Power, it enables the Psychokinetic to Brawl at a range of up to 10 meters x Psi, using Psi in place of any Attributes used in the Brawling process, including the BCS, for which the direction roll serves instead. The Power may be used to press an attack, once properly directed, for a number of Actions equal to the user's Psi Group.

Natural

Cellular Psychokinesis (P). The Changed can heal wounds, restoring the Effect Die roll in Lethal or Subdual Damage, or the Psi Group in Critical Damage, by successful use of the Power. Such an act reduces the natural Healing Rate of the recipient by 1 point per use, as it draws upon this energy to accelerate the regeneration process. Unlike most drugs with this effect, however, the psionic form may be applied after the Healing Rate reaches 0. It will continue to reduce the Shock Factor of the recipient, and must cease when this is at 0. Such lost points are recovered only by the passage of time, at 1 per day. Until the 10-point basic Shock Factor is recovered, no restoration of the Healing Rate occurs.

The Changed must be within 1 meter of the target and both must be concentrating on the psychic link to accomplish this activity. It requires 10 minutes per use to complete. If interrupted, pro-rate the healing done at 10% of rolled value per minute spent. Fractions are lost. The check for stress on the mutant is not made until the use of the Power ends, naturally or by interruption.

Scientific

Electrokinesis (P). The psychokinetic can influence the flows of electrical current in circuits, or generate a bolt of power for combat.

In controlling circuitry, the Gamesmaster must exercise his judgment. Basically, the Power can interrupt a circuit for a maximum number of Combat Turns per use equal to the user's Psi Group. It can reduce the flow of heavy voltage in electrical defenses of similar circuits by the Psi Group. Thus, the Electrokinetic mutant could reduce the charge in an electrified fence by his Group for an equal number of Combat Turns. He could do the same to a power supply. When dealing with more delicate flows, as in electronic devices, the Changed can switch them off for a period equal to the Effect Die roll. Lasers, radios, ignition systems, alarms, sensors, or cameras are some of the possible targets. Contrariwise, the Changed may generate power into a suitable storage battery (i.e., an Eterna type) at .1 charge per Effect point rolled.

In its more dramatic manifestation, the Electrokinetic may alter the target's charge with respect to the earth, essentially hitting it with a small lightning bolt. This will act as an electrical attack with a Charge equal to the user's Psi Group. Insulation will defend as normal. This may be directed against ungrounded objects as well, doing considerable damage to metal and light plastics, very little to wood. Adjust the effect on Barrier values according to the Gamesmaster's decision.

The maximum range for Electrokinetic phenomena is 10 meters x Psi.

PRECOGNITIVE POWERS

These powers are available to the Changed having the Precognition Function and a score above 10 in the designated Talents.

Charismatic

Reaction Reading (R). The Precognitive Changed may foresee the effects of his words or actions upon another Character's attitude. He can, in effect, alter the results of an Attitude Die roll by his actions. The Gamesmaster may limit the scope of the power to one use per situation. The Changed player must announce that he is using Reaction Reading, and rolls his Effect Die for his current Psi Group. The result may be applied in full or in part to raise or lower the Attitude roll in question. Non-Player Characters using the power on Player-Characters will be able to convince the Players of whatever attitude they desire, within limits determined by the Gamesmaster on how unlikely this may seem. A sallow-faced rogue, just swallowing a mouthful of man-flesh, will not foresee the right words to use to convince Players that he is not a cannibal since NO foreseeable words to that effect exist.

Combative

Combat Precog (R). The Combat Precog power is similar to the Combat Sense Power enjoyed by Changed with ESP. It adds the current Psi Group to the character's effective CDA, AFTER all modifiers for movement have been calculated. Unlike Combat Sense, it operates at full value vs. any form of attack or danger which is relevant to CDA. The user does NOT have to know that the attack is coming.

The Combat Precog cannot apply his analytical consciousness to the data he receives from his Psi. The information obtainable by Combat Sense users is not available to him.

Communicative

Prescience (P). The power to foresee the future is gained. At any point where the Precognitive and those with him are confronted by a choice of actions (e.g. to enter a building, to follow a given strategy, etc.), the Changed may go into a prophetic trance, requiring one minute on the average. Successful use of the power is checked secretly by the Gamesmaster, and a secret roll of the appropriate Effect Die is also made. This gives the number of minutes into the future which the psychic has seen.

Play then proceeds normally, with the following exception: until the end of the time rolled by the Gamesmaster, the Players may decide that they did not perform the action at the Decision Point where the Precog used Prescience. In other words, having foreseen the events the (presumably) wish to avoid, they simply did not put themselves in a situation where they would encounter them. Play is rolled back to the point where Prescience was used (the end of that one minute Trance) and the Players may undertake any actions they wish except the one that they chose in the vision. The operation of the power may be summed up as a second chance to rectify a bad decision.

The Players lose this option if, during the time covered by the vision, one of the following things occurs:

- The precog who foresaw the events is killed or knocked out. This reflects the traditional theory that prophets cannot foresee personal danger or death in their visions.
- Another precog is present in the group (if any) which poses a danger to them. The two mutants will cancel each others' powers out.
- If the party cannot agree on how or when to alter their course of action, i.e. to exercise the option to cancel the recent events or not. The Gamesmaster may impose a limit in real time on such disputations.

Esthetic

Alarm (R). The power much resembles Risk Sense, the power derived from Esthetic Talent by those with ESP. Unlike using the Risk Sense, the Precog will not be able to use his Will to determine the nature of the danger. He will, however, receive a similar bonus to his Saving Throws, BCS rolls, or other defenses (including CDA if germane) against the results of the danger. Again, Precognition is handled here as something operating below the threshold of conscious thought.

Mechanical

Techanalysis (P). The precog can determine what a given device does with a single successful use of this power. He can work out how to make it work (in the sense of turning it on) by performing a Task to that end under terms set by the Gamesmaster, using the power for a BCS and his Psi Effect Die roll to generate the base Task Points achieved. When the Task is completed, he knows how to handle the device. This does not confer skill in its use, if such is needed, as in the case of a weapon or vehicle. Assume a BCS in using that particular device is gained. This would be equal to the Changed's Psi Group. This is not generalized to other similar devices. Thus, a Precog who has a Psi Group of 4 and who uses Techanalysis to deduce the operation of a Jet Plane, has a BCS of 4 in flying the plane, ONLY while using that particular jet. He does NOT gain a BCS of 4 in the Skill "Fixed Wing Jet Aircraft Pilot."

Natural

This is identical with the ESP power of Phenomanalysis.

Scientific

Process Precognition (R). The Precog can subject any given process (Lab Practice, Technological Task, etc.) to an analysis which will reveal any potential dangers or critical failures in his handling of it. This must be applied to Tasks which the Precog is conducting personally. He cannot interpret the data relating to fields in which he has no knowledge. Basically, the Precog may roll a Psi AST to negate any failure he may encounter while performing some Task of a scientific or technological nature. He may attempt to do so once per failure. If the AST is made, it will turn a simple failure into a success, allowing the Precog to accumulate Task Points, and turns a Critical Failure into a simple miss.

DETERMINING MUTATIONS

Consider the purely random alterations in mind and body that could result from the game of mutagenic Russian Roulette that will be played with man in a Post-Holocaust environment; as radiation, drugs, viral elements or what-have-you act upon the deepest recesses of his cell structure. Some of these changes will be beneficial, others will be deleterious. Still others will have no direct impact on his survival capacity. In game terms this may mean the character has one of the types of mutations described later in this section, a simple change from the human norm, or no visible sign or manifestation of a change in his genetic material. We make the assumption that a serious mutation that was deleterious to the organism would have killed it before the beginning of play.

For the Gamesmaster's convenience, we provide a table for selection of mutations. If he decides to alter the types of mutations present in his campaign, he should draw up a suitable table. For a campaign using these mutations where the setting is shortly after the Ruin or the mutagenic agents are not very active, a negative modifier (say 5 or 10) might be used on the die roll. If the mutagenic are extremely active (perhaps due to a deliberately designed mutation causing virus) or the campaign is set several generations after the Ruin, a positive modifier could be used. For the "200 Years

After" campaign, 5 could be added to the die roll for each generation since the Ruin. The Gamesmaster should feel free to adjust the modifiers to suit the rationale for his own campaign.

MUTATION GENERATION TABLE (1D100)

| Die Roll | Mutation |
|----------|---|
| 01-05 | Actual mutation is minor. No visible signs. |
| 06-15 | Skin coloration affected. This may take the form of albinism, melanism, uneven distribution of pigment (melanin) causing a piebald appearance, or even the creation of a color not previously found in human skin tones such as green or scarlet. |
| 16-30 | Skeletal modification. The mutant's skeletal structure might be altered causing a humpbacked condition, increased or decreased fragility, or increased or decreased flexibility. The first might have no effect on play, the second might alter the percentage chance for a bone breaking, while the third could help or hinder a character who finds himself in tight surroundings. |
| 31-40 | Alteration of hair fibers. The mutant might find himself devoid of body hair or completely hirsute. A more extreme form might have the hair structure altered to a feathery or tendrilous nature. |
| 41-45 | Alteration of features. Disfigurement lowering the character's personal appearance would be the most common. Extreme cases might include the loss or modification of one of the senses located in the head. |
| 46-60 | Limb Modification. This could be minor such as the loss or addition of a toe or finger. It could be more extreme with the actual or functional loss of a whole limb. This would cause varying penalties due to circumstances. Optionally the modification could be the addition of another limb or pair of limbs. Whether such limbs were functional and to what degree is left to the discretion of the Gamesmaster. |
| 61-75 | Tailed. The mutant has a tail which could be only a stump or a fully developed organ. |
| 76-90 | Psionic mutation. The mutant has a psionic mutation with a Function as determined from the Psionic Function Table and the specific power(s) as determined by his Talent Scores. |
| 91-99 | Physical Mutation. The character has a mutation as determined on the Physical Mutation Table. The exact strength and nature is left to the Gamesmaster. |
| 00 | Wild Card mutation. The mutant has a unique power. The player and the Gamesmaster should get together to design the specific power and its limitations. If such creativity is not desired or is precluded by lack of time, allow the player to choose his mutation from those normally listed. |

Any mutant with a Psionic, Physical, or Wild Card mutation may also have a simpler mutation as well. There is a 40% chance of this. If it is the case reroll on the Mutation Selection Table ignoring rolls higher than 75.

All mutations have a 50% chance of being sterile. This need not be checked unless and until the Changed One is attempting to have offspring.

PSIONIC FUNCTION TABLE

| Die Roll | Function |
|----------|---|
| 01-20 | Telepathy |
| 21-40 | ESP |
| 41-60 | Psychokinesis |
| 61-80 | Precognition |
| 81-90 | Choice of Function |
| 91-00 | Two Functions. Reroll ignoring results over 90. |

PHYSICAL MUTATION TABLE

| Die Roll | Mutation |
|----------|---|
| 01-25 | Weak mutation. Reroll ignoring results less than 25. The character has a weakened or lesser version of the rolled power(s). |
| 26-35 | STRONG |
| 36-40 | QUICK |
| 41-50 | TOUGH |
| 51-60 | IMMUNE |
| 61-75 | SMART |
| 76-80 | EAR |
| 81-85 | EYE |
| 86-90 | BALANCER |
| 91-95 | BLEND |
| 96-99 | OPTIONS: A. Player picks 1 mutation without penalties applied to his power. B. Roll for 2 physical mutations (ignore rolls over 95). C. Player picks 1 mutation and alters its abilities to suit himself then the <i>Gamesmaster</i> alters its weaknesses to suit himself!. |
| 00 | Player designs his own mutation with <i>Gamesmaster's</i> aid; treat as 96-99. |

THE CHANGED IN THE FUTURE

It is difficult to posit the directions evolution may take the successful mutations in the Aftermath. The random genetic shuffle that hit the human race when the Ruin dumped such

an enormous load of mutagens into the environment could lead to any result one can imagine (and quite a few one cannot). Let's assume that the tendency will be for the mutations to become reinforced.

Combinations: Characters may be born with more than one dominant Change. A Balancer who is also a Blend. A Strong-Tough (do not get that one unhappy with you). A physically Changed Psionic. Psionics with more than one Psi Function.

Intensified Mutations: Strongs with +20 in their Strength Attribute. Psionics who get a D6, or 2D3, of Psi every year. The basic patterns given here are made stronger and more potent in later generations.

New Mutations: The introduction of a new form of Change is always available to the *Gamesmaster*. Several later-generation powers we have experimented with include Teleports and Pyrokinesis.

Teleports: A Power derived from the interaction of Psychokinesis and the averaged Scores of the Scientific and Natural Talents. The user may teleport to any place he can see clearly (or sense with ESP) within a range of 5 meters x Psi. It requires 1 Action to focus in for the jump.

Pyrokinesis: Make a fire attack on a target with Strength Group equal to the Psi Group. Range is 10 meters x Psi. If within a range equal to Psi score, double the intensity of the flame attack.

You see the possibilities. Do not let the restraints of biology bind your imagination too closely. What you want to see in the campaign should be in the campaign.

REPUTATION

During the course of his adventuring career, a character will acquire a reputation. In many campaigns, a *Gamesmaster* will treat this in a very nebulous fashion. In some, it will not be a factor at all. This is certainly allowable and, in some campaigns, the play group might even find it preferable. For the *Gamesmaster* who wishes to have a more concrete handle on the concept of reputation, or "Rep," we provide these guidelines.

Reputation is gained by singular execution of a deed or by continued performance in an area of expertise. The performance may be successful or not. In some cases, reputation is inherent in holding a given position.

The components of a character's reputation will affect the way in which non-player characters will react to him and with him. A character with a reputation as a tough fighter will find that pacifistic characters fear and/or respect him while belligerent young punks occasionally challenge him to prove that they are better than he is.

A character's reputation will add to his Recognition Factor. This represents, in some cases, the circulation of his description along with the tales that form the basis of his reputation. Thus, when a character is recognized, those recognizing him will be aware of his reputation. At the least, they will know of the general areas in which the character has gained his reputation.

EARNED REPUTATION

The *Gamesmaster* will adjudicate when an action on the part of a character is of a level sufficient to affect his reputation. The action will be assigned a figure of merit. If the character performs the action successfully, the value will be

entered in the Positive Merit column of the Rep Area to which the action belongs. If the character fails to perform the action, it will be entered in the Negative Merit column.

In some cases, inaction on the part of a character will result in merit gains or losses. This is particularly the case with regard to the Survival Area of Rep.

For the most part, the *Gamesmaster* will not wish to rate every little thing done by a character. He may wish to rate a given scenario as a whole, or break it down into segments corresponding to particular areas in which reputation can be gained. Some suggestions with regard to areas to rate are:

Combat: The *Gamesmaster* can rate an individual combat where the character fights one-on-one with another character. He may, however, wish to deal with a firefight as a whole and apportion the results of success among the participating characters.

A man might be rated as having a figure of merit equal to his DRT/20 rounded to the nearest but with a minimum of 1. If a character engages in a specific duel with another specially-designed character, the base figure of merit might have a value added to it equal to the defeated character's Rep/10, nearest.

Dangers: A danger such as a contaminated environment might have a value equal to the virulence or strength of the danger. This would be applied to a character's reputation for survival.

Other dangers such as the attack of wild animals could affect the character's reputation as a Survivor or as a Hunter at the discretion of the *Gamesmaster*. Animals might be rated for merit by their size and nature. A

herbivore would have a value equal to its Mass/30, down, while a carnivore would be equal to its Mass/15, down. Particular things that increase the danger of the encounter with the beast, such as its being able to use poison, its being rabid, intelligent or semi-intelligent direction of the attack, etc., would multiply the base value by 1.5. A combination of factors would add .3 to the multiplier per factor beyond the first.

Sheer Courage: Braving a known danger or surviving any great danger by dint of valor, wits, and/or plain good luck will tend to make people consider the character(s) some kind(s) of hero(es). Thus, their Rep for Bravery will be increased, or, if they run (or appear to run) from such an encounter, decreased. A base value for such an encounter, if with men, could be rated as if a Custom Army were being created. The average of the calculated Offense and Defense values divided by 100 and rounded to the nearest whole number would give a good base. Such a value should be divided by the value for the characters involved in defeating or facing the danger (even those that were killed).

Puzzles and Problems: Characters solving such things will almost certainly demonstrate Competence in some form. Such a thing should be treated as a Danger and given a rating of merit which is divided up among the characters involved in the solution.

Other Sources: Other sources of gains in reputation are as varied as the Gamesmaster wishes. Values are assigned and success rewarded and failure chastised by the award of positive or negative merit respectively.

The accomplishment of a deed is only of value to a character's reputation if it is witnessed, or if the story is believed when the tale is told. Even if believed or witnessed, it may not have any significant effect on a character's reputation. To represent this variability, the Gamesmaster will roll on the Reaction table. One-half the Value Number obtained will be used as a multiplier to the merit figure. This may change a positive value to a negative, or vice versa, but that is the nature of a reputation—it is not always based on truth. The Gamesmaster may wish to modify the Reaction Roll if there are no witnesses other than the Player Characters in the party. Such a modification may be a -5 if the Player Characters have evidence to support their claims and twice that if there is no evidence.

When a character has accumulated 10 merit points in an area, he will have acquired 1 point of Rep. These merit points may be positive or negative. Thus, a character with 5 positive and 5 negative points of merit as a fighter with guns will have done enough that people have heard of him, but his reputation will be as an indifferent shot with a gun.

POSITIONAL REPUTATION

Sometimes reputation will be attached to a position. Much as the marshal of Tombstone was expected to be a good shot with a six-shooter, a position may indicate that a character is successful in an Area for which reputation can be gained. Such reputation only belongs to the character as long as he is in that position. Optionally, the Gamesmaster may allow some of the glitter of a position to remain with a character after he has left the position. This may "decay" over time, or simply be a constant value that is a fraction of the value of the position.

The value of Rep points gained by a position may vary. The marshal of Tombstone gains Rep due to the fact that he is a marshal and that the town in which he is marshal is a "tough" town. If someone is unaware that the man at the bar is the marshal (his badge being hidden), he will not be influenced by the Rep of the position of marshal.

RECOGNITION AND REPUTATION

An increased reputation will increase the chance that a character will be recognized. When recognized, the Gamesmaster may assume that the character's reputation is also known. This will be the reputation as expressed on the Character Record Sheet in the Rep section. As the Gamesmaster knows, this may not be the true evaluation of the character's accomplishments and failures, but the non-player characters will only know what is expressed on the sheet. When this happens, the Gamesmaster should refresh his memory of the reputation by asking the player to show him the Rep section of the Character Record Sheet of the character who has been recognized.

When dealing with a group of Player Characters, the Gamesmaster may wish to save himself time and effort by only checking to see if the leader or the character with the highest Recognition Factor is recognized. It may be assumed that if the one is recognized, any characters who are usually found in association with him are recognized for themselves also. New members of the group might have to be recognized separately.

A character's Recognition Factor will be increased by 1 for every 10 full points of Reputation that he has acquired.

VARIATIONS ON REPUTATION DUE TO LOCATION

Needless to say, the strongest effect achieved by a reputation will be in the locality where the reputation was gained. The sphere of influence of a reputation will depend on the forms of communication in use. Mass media, if operating, will enhance the effects of reputation.

The Gamesmaster should designate on his map, spheres of influence which are representative of communities in communication to such a degree that a character's reputation will be spread within one. These can be referred to as Reputation Zones. A Reputation Zone may be as small as a building or as large as a country, with steps in between at neighborhood, town/village, city, state, and regional networks of interacting communications.

When a character crosses into a new Zone of Reputation, the Gamesmaster should make a Reaction Roll to see if his reputation has preceded him. The chart below shows what roll is needed for the Rep to remain intact. If that level of reaction is not achieved, the character has no reputation in that Reputation Zone. His effective Rep for Recognition Factor enhancement is his normal Total Rep divided by 1 plus the number of Recognition Zones between the Zone he is currently in and the Zone in which the reputation was made.

Characters who move around a lot will require players to maintain several different reputations for them. This is not necessarily a bad thing. It can be downright advantageous for undercover work. This can lead to interesting consequences if a character is recognized by a non-player character who knows him by sight and reputation from one Zone and only by reputation or positional reputation from another Zone. When the non-player character puts the two together, the fireworks may start.

REPUTATION CARRYOVER CHART

| Zone | Minimum Reaction necessary to retain Reputation |
|---------------------|---|
| Reputation built in | automatic |
| Contiguous Zone | Mediocre |
| One Zone between | Good |
| Two Zones between | Excellent |
| Three Zones between | automatic loss |

APPENDIX I THE GUN LIST

This contains almost two hundred weapons: sporting and service firearms available in the US to civilians and military. All the statistics needed to use the gun in *Aftermath* are included, in a format called the Spec Sheet. This includes the following:

CODE: A letter and number identification code for the weapon, for convenience in record keeping and random gun generation. All the Codes fall into easily generated die roll ranges.

BBL: The barrel length. In some cases, as in the listings for Rifles, this is not given for every entry, since a Rifle must have a BBL of over 20" to be in that classification.

ACTION: AL, SA, DA etc. Again, in some cases this is specified for a whole series of entries. Note that some single shot entries are listed as SS/BA, indicating that a Bolt is the means of loading and cocking the gun.

MAG: For Magazine. Gives the type of Magazine and its Capacity.

CALIBER: The loads the gun will take. For shotguns, this is given as GAUGE. If the gun is manufactured in different Calibers, a "Frequency" number is assigned to each specific Caliber listed. This is usually a D10 roll, although for some weapons a D100 was necessary, so diverse were the possibilities. When a weapon with this type of Caliber entry is generated, roll the appropriate die to see what model you have as regards to Caliber.

Shotgun GAUGE entries note whether the gun is designed for standard; Magnum, or Slug loads.

DUR: Gives the base Durability score of the weapon. The circumstances in which it is found may alter this. The Foraging Table may indicate that a temporarily reduced DUR is in effect, until the gun is serviced. Or it may even have a DUR equal to 1, due to poor care, or because it is a cheap imitation of the real model, a "Saturday Night Special."

ENC: Gives the Encumbrance of the weapon.

FEATURES: Lists any Features the weapon has or may have. This entry also includes any background information on the gun, special characteristics, and so on.

More on this feature in a Book 2 Appendix: About Features.

All you need to arm your Characters to the teeth is in this List, or the attached section on Military Issue Firearms, which provides the same statistics for famous weapons used from WWII to the present (and even the Future). But for all its handiness, we do recommend procuring your own copy of some of the source books in the bibliography, and working out your own gun tables from those. Among other things, they almost always have *Pictures* of the weapons, which will add immensely to your Players and your own ability to visualize the Campaign more vividly. For another, you may find that you have different feelings about how a given weapon works. Lastly, it gives a more satisfying feel to play to be able to say, "I pull my Colt Python 357 Magnum," rather than "I am using my P51."

PISTOLS

REVOLVERS:

CODE: P1 BBL: SHT ACTION: DA
MAG: Snap-Cyl 5 ENC: .25 DUR: 3
CALIBER: 44 Special (1-3)
38 Special (3-5)
357 Magnum (6-8)
22 Long Rifle (9)
32 Long (0)
FEATURES: None.

CODE: P2 BBL: SHT ACTION: DA
MAG: Snap-Cyl 5 DUR: 3 ENC: .2
CALIBER: 38 Special (1-6)
22 Long Rifle (7-8)
32 Long (9-0)
FEATURES: None.

CODE: P3 BBL: SHT ACTION: DA
MAG: Snap-Cyl 5 DUR: 3 ENC: .2
CALIBER: 38 Special (1-6)
22 Long Rifle (7-8)
32 Long (9-0)
FEATURES: None.

CODE: P3 BBL: STD ACTION: DA
MAG: Swing-Cyl 6 DUR: 4 ENC: .4
CALIBER: 38 Special (1-6)
357 Magnum (7-0)
FEATURES: 357 Magnum model can also use 38 Special.

CODE: P5 BBL: LNG ACTION: DA
MAG: Swing-Cyl 6 DUR: 4 ENC: .45
CALIBER: 38 Special (1-6)
357 Magnum (7-0)
FEATURES: 357 Magnum model can also use 38 Special.

CODE: P6 BBL: STD ACTION: DA
MAG: Break 9 DUR: 3 ENC: .4
CALIBER: 22 Short (1-2)
22 Long (3-5)
22 Long Rifle (6-0)
FEATURES: High quality Sights give a +1 to Sighted Fire.

CODE: P7 BBL: SHT ACTION: SA
MAG: Snap-Cyl 6 DUR: 3 ENC: .3
CALIBER: 22 Long Rifle
FEATURES: Also fires 22 Rimfire Magnum.

CODE: P8 BBL: STD ACTION: SA
MAG: Snap-Cyl 6 DUR: 3 ENC: .4
CALIBER: 22 Long Rifle
FEATURES: Also fires 22 Rimfire Magnum.

CODE: P9 BBL: LNG ACTION: SA
MAG: Snap-Cyl 6 DUR: 3 ENC: .45
CALIBER: 22 Long Rifle
FEATURES: Also fires 22 Rimfire Magnum.

CODE: P9 BBL: XLNG ACTION: SA
MAG: Snap-Cyl 6 DUR: 3 ENC: .6
CALIBER: 22 Long Rifle
FEATURES: Also fires 22 Rimfire Magnum.

CODE: P10 BBL: Pistol Carbine ACTION: SA
MAG: Snap-Cyl 6 DUR: 3 ENC: .85
CALIBER: 22 Long Rifle
FEATURES: Also fires 22 Rimfire Magnum.

CODE: P11 BBL: SHT ACTION: DA
MAG: Swing-Cyl 6 DUR: 2 ENC: .25
CALIBER: 32 Short (1-4)
32 Long (6-0)
FEATURES: None.

CODE: P12 BBL: SHT ACTION: DA
MAG: Swing-Cyl 6 DUR: 2 ENC: .25
CALIBER: 32 Short (1-4)
32 Long (6-0)
FEATURES: None.

CODE: P13 BBL: SHT ACTION: DA
MAG: Break 5 DUR: 2 ENC: .27
CALIBER: 38 Short
FEATURES: None.

CODE: P14 BBL: SHT ACTION: DA
MAG: Snap-Cyl 6 DUR: 5 ENC: .3
CALIBER: 357 Magnum
FEATURES: Also fires 38 Special. High quality Sights give +1 to Sighted Fire.

CODE: P15 BBL: SHT ACTION: DA
MAG: Snap-Cyl 6 DUR: 5 ENC: .35
CALIBER: 357 Magnum
FEATURES: Also fires 38 Special. High quality Sights give +1 to Sighted Fire.

CODE: P16 BBL: STD ACTION: DA
MAG: Snap-Cyl 6 DUR: 5 ENC: .45
CALIBER: 357 Magnum
FEATURES: Also fires 38 Special. High quality Sights give +1 to Sighted Fire.

CODE: P17 BBL: SHT ACTION: DA
MAG: Snap-Cyl 6 DUR: 5 ENC: .3
CALIBER: 357 Magnum (1-3)
38 Special (4-8)
9mm Parabellum (9-0)
FEATURES: None.

CODE: P18 BBL: SHT ACTION: DA
MAG: Snap-Cyl 6 DUR: 5 ENC: .4
CALIBER: 357 Magnum (1-3)
38 Special (4-8)
9mm Parabellum (9-0)
FEATURES: None.

CODE: P19 BBL: STD ACTION: DA
MAG: Swing-Cyl 6 DUR: 4 ENC: .45
CALIBER: 41 Magnum
FEATURES: None.

CODE: P20 BBL: LNG ACTION: DA
MAG: Swing-Cyl 6 DUR: 4 ENC: .5
CALIBER: 41 Magnum
FEATURES: None.

CODE: P21 BBL: XLNG ACTION: DA
MAG: Swing Cyl 6 DUR: 4 ENC: .65
CALIBER: 41 Magnum
FEATURES: None.

CODE: P22 BBL: SHT ACTION: DA
MAG: Swing-Cyl 6 DUR: 4 ENC: .37
CALIBER: 44 Magnum (1-6)
44 Special (7-0)
FEATURES: 44 Magnum also fires 44 Special.

CODE: P23 BBL: STD ACTION: DA
MAG: Swing-Cyl 6 DUR: 4 ENC: .47
CALIBER: 44 Magnum (1-7)
44 Special (8-0)
FEATURES: 44 Magnum model also fires 44 Special.

CODE: P24 BBL: LNG ACTION: DA
MAG: Swing-Cyl 6 DUR: 4 ENC: .5
CALIBER: 44 Magnum (1-7)
FEATURES: 44 Magnum model also fires 44 Special.

CODE: P25 BBL: STD ACTION: SA
MAG: Port-Cyl 6 DUR: 3 ENC: .45
CALIBER: 357 Magnum (1-3)
44 Special (4)
45 Long Colt (5-8)
44 Magnum (9-0)
FEATURES: Replica of Colt 45, the "Peacemaker."

CODE: P26 BBL: LNG ACTION: SA
MAG: Port-Cyl 6 DUR: 3 ENC: .45
CALIBER: 357 Magnum (1-3)
44 Special (4)
45 Long Colt (5-8)
44 Magnum (9-0)
FEATURES: Match weapon. Superior Sights give +1 to Sighted Fire.

CODE: P27 BBL: STD ACTION: SA
MAG: Port-Cyl 6 DUR: 2 ENC: .36
CALIBER: 32-20 (1)
38 Long (2-3)
38 Short (4)
38-40 (5-6)
44-40 (7-8)
45 Long Colt (9-0)
FEATURES: Again, a replica of the frontier Colt 45. The Calibers shown are historically correct.

CODE: P28 BBL: Pistol Carbine ACTION: SA
MAG: Port-Cyl 6 DUR: 3 ENC: 1.3
CALIBER: 45 Long Colt
FEATURES: Removable shoulder stock. A replica of the famous "Buntline Special," used by Wyatt Earp.

CODE: P29 BBL: STD ACTION: SA
MAG: Port-Cyl 6 DUR: 2 ENC: .45
CALIBER: 22 Short (1)
22 Long (2-3)
22 Long Rifle (4-7)
22 RF Magnum (8-0)
FEATURES: None.

CODE: P30 BBL: LNG ACTION: SA
MAG: Port-Cyl 6 DUR: 5 ENC: .47
CALIBER: 357 Magnum (1-3)

357/9mm Parabellum Convertible (4)
45 Long Colt (5-6)
45 Long Colt/45 ACP Convertible (7)
44 Magnum (8-0)

FEATURES: This is a Match Weapon. It is equipped with Peep Sights giving +1 to BCS and +1 to Aim when using the Sights.

Also, the "Convertible" models listed permit firing either of the specified rounds if the appropriate cylinder is being used. Each convertible weapon will accept a cylinder in either of the Calibers listed. Finally, all 357 models can also use 38 Special and 44 Magnum models can use 44 Special, with no special actions required for the switch.

AUTOLOADERS

CODE: P31 BBL: SHT ACTION: AL
MAG: Box Variable DUR: 2 ENC: .35
CALIBER: 32 ACP 8 Rounds (1-3)
380 ACP 7 Rounds (4-7)
22 Long Rifle (8-0)
FEATURES: None.

CODE: P32 BBL: SNUB ACTION: AL
MAG: Box 6 DUR: 2 ENC: .2
CALIBER: 25 ACP
FEATURES: None.

CODE: P33 BBL: SHT ACTION: AL
MAG: Box Variable DUR: 3 ENC: .37
CALIBER: 32 ACP 12 Rounds (1-3)
380 ACP 13 Rounds (4-6)
9mm Parabellum 15 Rounds (7-0)
FEATURES: None.

CODE: P34 BBL: STD ACTION: AL
MAG: Box Variable DUR: 3 ENC: .37
CALIBER: 32 ACP 12 Rounds (1-3)
380 ACP 13 Rounds (4-6)
9mm Parabellum 15 Rounds (7-0)
FEATURES: None.

CODE: P35 BBL: STD ACTION: AL
MAG: Box Variable DUR: 4 ENC: .38
CALIBER: 45 ACP 7 Rounds (1-6)
9mm Parabellum 9 Rounds (7-0)
FEATURES: None.

CODE: P36 BBL: STD ACTION: AL
MAG: Box 13 DUR: 5 ENC: .35
CALIBER: 9mm Parabellum
FEATURES: Hi-Power weapon — uses High Power ammo at no risk. Safety catch is High Security. Gun cannot discharge when "safe" even if dropped or struck.

CODE: P37 BBL: SNUB ACTION: AL
MAG: Box 6, 7, or 9 DUR: 4 ENC: .3
CALIBER: 45 ACP
FEATURES: Can use the 7 or 9 round Magazines from ANY other 45 ACP Autoloading Pistol.

CODE: P38 BBL: STD ACTION: AL
MAG: Box 18 DUR: 3 ENC: .4
CALIBER: 9mm Parabellum
FEATURES: Military issue of this model has capability for AB Gun Action. Civilian model given here can be adapted for this use by a Gunsmith.

CODE: P39 BBL: STD ACTION: AL
MAG: Box 9 DUR: 3 ENC: .42
CALIBER: 22 Long Rifle
FEATURES: Match Weapon. +1 when using Sights.

CODE: P40 BBL: SHT ACTION: AL
MAG: Box Variable DUR: 2 ENC: .27
CALIBER: 22 Long Rifle 9 Rounds (1-2)
32 ACP 8 Rounds (3-6)
380 ACP 7 Rounds (7-0)
FEATURES: None.

CODE: P41 BBL: STD ACTION: AL
MAG: Box Variable DUR: 2 ENC: .3
CALIBER: 38 Super Auto 8 Rounds (1-6)
45 ACP 7 Rounds (7-0)
FEATURES: None.

CODE: P42 BBL: STD ACTION: AL
MAG: Box 8 DUR: 4 ENC: .4
CALIBER: 30 (1-4)
9mm Parabellum (5-0)
FEATURES: Replica of the Luger.

CODE: P43 BBL: SNUB ACTION: AL
MAG: Box Variable DUR: 2 ENC: .2
CALIBER: 22 Long Rifle 10 Rounds (1-4)
25 ACP 8 Rounds (5-0)
FEATURES: May be equipped with conversion kit consisting of the Barrel, Clip, and Bolt of the specified Calibers. This allows the gun to be altered from one to the other.

CODE: P44 BBL: STD ACTION: AL
MAG: Box 11 DUR: 3 ENC: .4
CALIBER: 22 Long Rifle
FEATURES: Luger replica.

CODE: P45 BBL: STD ACTION: AL
MAG: Box 7 DUR: 5 ENC: .5
CALIBER: 44 Magnum (AMP)
FEATURES: The ammo fired by this gun acts as 44 Magnum in all respects BUT a special AMP case is needed. Standard 44 Magnum ammo will always Jam the gun. The weapon is made of stainless steel and is known as an "Auto-Mag."

TARGET WEAPONS

All the Pistols listed here are Match Weapons!

CODE: P46 BBL: STD ACTION: AL
MAG: Box 10 DUR: 4 ENC: .45
CALIBER: 22 Long Rifle
FEATURES: Left or Right Handed Grips. Can be set for Hair Trigger or normal pull. Tunable Gun if used by a Character with the same "handedness" as grips.

CODE: P47 BBL: STD ACTION: AL
MAG: Box 7 DUR: 5 ENC: .45
CALIBER: 45 ACP
FEATURES: Target model of famous Colt 45 Autoloader. +1 to BCS when using Sights. Trigger adjustable to Hair Trigger or normal pull.

CODE: P48 BBL: STD ACTION: AL
MAG: Box 5 DUR: 5 ENC: .55
CALIBER: 32 Long
FEATURES: Tunable gun. +1 to AIM when firing with Sight. Conversion Kit available to switch to 22 Long Rifle.

TARGET REVOLVERS

CODE: P49 BBL: SNUB ACTION: DA
MAG: Swing-Cyl 6 DUR: 5 ENC: .32
CALIBER: 22 Short (1)
22 Long (2-3)
22 Long Rifle (4-5)
38 Special (6-7)
357 Magnum (8-0)
FEATURES: All models have +1 to AIM using Sighted Fire. 357 Magnum model can also fire 38 Special.

CODE: P50 BBL: STD ACTION: DA
MAG: Swing-Cyl 6 DUR: 5 ENC: .42
CALIBER: 22 Short (1)
22 Long (2-3)
22 Long Rifle (4-5)
38 Special (6-7)
357 Magnum (8-0)
FEATURES: All models have +1 to AIM using Sighted Fire. 357 Magnum model can also fire 38 Special.

CODE: P51 BBL: XLNG ACTION: DA
MAG: Swing-Cyl 6 DUR: 5 ENC: .62
CALIBER: 22 Short (1)
22 Long (2-3)
22 Long Rifle (4-5)
38 Special (6-7)
357 Magnum (8-0)
FEATURES: All models have +1 to AIM using Sighted Fire. 357 Magnum model can also fire 38 Special.

CODE: P51 BBL: Pistol Carbine ACTION: DA
MAG: Swing-Cyl 6 DUR: 5 ENC: .82
CALIBER: 22 Short (1)
22 Long (2-3)
22 Long Rifle (4-5)
38 Special (6-7)
357 Magnum (8-0)
FEATURES: All models have +1 to AIM using Sighted Fire. 357 Magnum model can also fire 38 Special.

CODE: P53 BBL: LNG ACTION: DA
MAG: Swing-Cyl 6 DUR: 5 ENC: .65
CALIBER: 45 ACP
FEATURES: High quality Iron Sights give +1 to Sighted Fire BCS. Tapped for Telescopic Sight.

CODE: P54 BBL: STD ACTION: DA
MAG: Swing-Cyl 6 DUR: 5 ENC: .5
CALIBER: 44 Magnum
FEATURES: Tapped for Telescopic Sights.

CODE: P55 BBL: LNG ACTION: DA
MAG: Swing-Cyl 6 DUR: 5 ENC: .43
CALIBER: 22 Long Rifle (1-2)
22 RF Magnum o(3-5)
32 Long (6-7)
38 Special (8-0)
FEATURES: Tunable gun. If Tuned, and fired as a SA gun, the Character receives a bonus as if using Squeeze-Off Option: adds his DFT to his Pistol Skill score.

MISCELLANEOUS PISTOLS

CODE: P56 BBL: Varies ACTION: SA
MAG: Swing-Cyl 6 DUR: 4 ENC: Varies
CALIBER: 38 Special (1-4)
357 Magnum (5-0)
FEATURES: Equipped with a special "Quick Change" Barrel system, the gun may be given a Barrel of ANY size: SNUB up to Pistol Carbine. Barrels must be of P56 type and it takes 10 Actions to accomplish change.
The ENC of the gun is .15 + the Base ENC for the BBL size.

CODE: P57 BBL: SNUB ACTION: SA
MAG: Break 2 DUR: 1 ENC: .2
CALIBER: 22 Short (1-3)
38 Special (4-5)
38 Short (6-9)
38 Long (0)
FEATURES: This is a Derringer, the hideaway gun of the frontier gambler. It uses "Over-Under" Barrels which must be turned manually to bring the next round under the hammer. This requires an extra Action.

CODE: P58 BBL: XLNG ACTION: SS
MAG: Break 1 DUR: 5 ENC: .75
CALIBER: 22 Short (01-03)
22 Long (04-05)
22 Long Rifle (06-15)
22 RF Magnum (16-25)
22 Jet (26-35)
357 Magnum (36-50)
38 Special (51-60)
256 Magnum (61-65) see Long Gun Ammo Table
45 Long Colt (66-75)
30-30 (76-85) See Long Gun Ammo Table
44 Magnum (86-00)
FEATURES: The gun may be adapted to take ANY of the specified rounds. Interchangeable barrels are

needed. Gun is grooved to take a Telescopic Sight (Clamp Mounted) and may be provided with a special forearm brace. If equipped with this brace and Tuned, as with Tunable Guns then it will allow the firer to add his DFT to his Pistol Skill as if firing with Squeeze-Off Option.

CODE: P59 BBL: XLNG ACTION: BA
MAG: Falling Block 1 DUR: 5 ENC: .8
 CALIBER: 221 Fireball
FEATURES: Recoil Reduction. Right or Left-Handed Grips. If used by Character with correct "Handedness" it is a Tunable gun. Tapped for Telescopic Sights.

CODE: P60 BBL: LNG/XLNG ACTION: SS
MAG: Break 1 DUR: 4 ENC: .55 with LNG BBL
 ENC: .7 with XLNG BBL

CALIBER: 22 Jet (01-05)
 221 Fireball (06-15)
 25-35 (16-20) See Long Gun Ammo Table
 30-30 (21-30) See Long Gun Ammo Table
 22 S, L, LR (31-45)
 22 RF Magnum (46-55)
 222 (56-58) See Long Gun Ammo Table
 256 Magnum (59-60) See Long Gun Ammo
 9mm Parabellum (61-65)
 38 Super Auto (66-67)
 357 Magnum (68-75)
 38 Special (76-80)
 30 Carbine (76-85) See Long Gun Ammo Table
 45 ACP (86-90)
 44 Magnum (91-96)
 45 Long Colt (97-00)

FEATURES: Another weapon with interchangeable barrels, both as regards length and caliber. If the appropriate barrel is available, ANY of the above calibers may be fired. Changing barrels requires 10 Actions and changing from CF to RF ammo requires another 10.
 Apart from this, the gun is tapped for Telescopic Sight mounts.

LONG GUNS

Rifles (BBL longer than 20")

CODE: R1 ACTION: AL
MAG: Box Variable DUR: 4 ENC: 1.4
CALIBER: 243 4 Rounds (1)
 270 4 Rounds (2)
 30-06 4 Rounds (3-5)
 308 4 Rounds (6-7)
 7mm Magnum 3 Rounds (8)
 300 Magnum 3 Rounds (9-0)
FEATURES: Tapped for Telescopic Sight mounts. +1 to Aim using gun's own Sights to fire.

CODE: R2 ACTION: AL
MAG: Box 5 DUR: 4 ENC: 1.25
CALIBER: 223
FEATURES: Civilian model of the M-16. Can be converted to permit FA fire by a Gunsmith. Uses government magazines, so that M-16 Box 30 clips can be used by this model as well.

CODE: R3 ACTION: AL
MAG: Port-Mag 3 DUR: 3 ENC: 1.25
CALIBER: 308
FEATURES: Tapped for Telescopic Sight mount.

CODE: R4 ACTION: AL
MAG: Box 4 DUR: 4 ENC: 1.3
CALIBER: 243 (1-2)
 6mm (3-4)
 280 (5)
 308 (6-7)
 30-06 (8-0)
FEATURES: Tapped for Telescopic Sight mounts. Swivel Sling feature.

CODE: R5 ACTION: PA
MAG: Box 4 DUR: 4 ENC: 1.3
CALIBERS: 243 (1-2)
 6mm (3-4)
 280 (5)
 308 (6-7)
 30-06 (8-0)
FEATURES: Tapped for Telescopic Sight mounts. Swivel Sling feature.

CODE: R6 ACTION: PA
MAG: Port-Mag 3 DUR: 4 ENC: 1.2
CALIBER: 30-30 (1-6)
 35mm (7-0)
FEATURES: Tapped for Telescopic Sight mounts.

CODE: R7 ACTION: AL
MAG: Box 10 or 20 DUR: 4 ENC: 1.5
CALIBER: 7.62mm NATO
FEATURES: Commercial replica of M-14. Gunsmith can convert to allow FA fire. Has no provision for bayonet. There is a 20% chance that a specimen of this gun will be a Match Weapon. Takes government issue 4X or 6X Telescopic Sight.

CODE: R8 ACTION: LA
MAG: Tub-Mag 6 DUR: 3 ENC: 1.45
CALIBER: 44-40 (1-6)
 357 Magnum (7-0) See Pistol Ammo Table
FEATURES: Replica of 1873 Winchester.

CODE: R9 ACTION: LA
MAG: Tub-Mag 4 DUR: 5 ENC: 1.25
CALIBER: 444 Marlin
FEATURES: Swivel Sling. Tapped for Telescopic Sights.

CODE: R10 ACTION: LA
MAG: Port-Mag Var. DUR: 4 ENC: 1.3
CALIBER: 300 Magnum 5 Shot (1-3)
 243 5 Shot (4-5)
 308 5 Shot (6-8)
 250 5 Shot (9)
 358 6 Shot (0)
FEATURES: Tapped for Telescopic Sights. Swivel Sling. Recoil Pad. Magazine is actually a "Rotary Magazine," extremely efficient and resistant to jams. Adds +3 to Control BCS even if user has no Control of his own.

CODE: R11 ACTION: BA
MAG: Box Variable DUR: 4 ENC: 1.5
CALIBER: 25-06 4 Round (1-2)
 270 4 Round (3)
 30-06 4 Round (4-5)
 300 Magnum 3 Round (6-7)
 7mm Magnum 3 Round (8-9)
 458 Magnum 3 Round (0)
FEATURES: Recoil Pad. NO SIGHTS ON GUN! Iron or Telescopic Sights must be mounted by a Gunsmith.

CODE: R12 ACTION: BA
MAG: Port-Mag 5 DUR: 3 ENC: 1.25
CALIBER: 30-06
FEATURES: Recoil Pad. Tapped for Telescopic Sight. Swivel Sling.

CODE: R13 ACTION: BA
MAG: Box 3 DUR: 3 ENC: 1.2
CALIBER: 222 (1-2)
 243 (3-4)
 308 (5-7)
 22-250 (8)
 6mm (9-0)
FEATURES: Adjustable trigger can be set for Hair Trigger or normal pull. Tapped for Telescopic Sights. Sling Swivels.

CODE: R14 ACTION: BA
MAG: Box 3 DUR: 3 ENC: 1.25
CALIBER: 7mm Magnum (1-6)
 300 Magnum (7-0)

FEATURES: Tapped for Telescopic Sight. Swivel Sling. Trigger is adjustable for Hair Trigger or normal pull.

CODE: R15 ACTION: BA
MAG: Port-Mag 3 DUR: 4 ENC: 1.4
CALIBER: 375 Magnum (1-6)
458 Magnum (7-0)
FEATURES: Swivel Sling.

CODE: R16 ACTION: BA
MAG: Port-Mag Var. DUR: 5 ENC: 1.2
CALIBER: 222 5 Round (1)
22-250 5 Round (2)
6mm 5 Round (3)
243 5 Round (4)
25-06 5 Round (5)
270 5 Round (6)
308 5 Round (7)
30-06 5 Round (8)
375 Magnum 3 Round (9)
458 Magnum 3 Round (0)
FEATURES: Recoil Pad. Swivel Sling. Tapped for Telescopic Sight. There is a 20% chance that this gun will be a Match Weapon.

CODE: R17 ACTION: SS
MAG: Fall-Block 1 DUR: 3 ENC: 1.35
CALIBER: 45-70
FEATURES: Tapped for Telescopic Sight. Swivel Sling.

CODE: R18 ACTION: SS
MAG: Fall-Block 1 DUR: 5 ENC: 1.3
CALIBER: 30-06 (1-3)
25-06 (4-5)
6mm (6)
243 (7)
22-250 (8)
7mm Magnum (9-0)
FEATURES: Tapped for Telescopic Sight. Recoil Pad. GUN HAS NO IRON SIGHTS!

CODE: R19 ACTION: SS
MAG: Port-Mag 1 DUR: 3 ENC: 1.3
CALIBER: 44 Magnum (1-7)
45-70 (8-0)
FEATURES: None.

CODE: R20 ACTION: SS
MAG: Fall-Block 1 DUR: 5 ENC: 1.4
CALIBER: 22-250 (01-10)
243 (11-15)
6mm (16-25)
25-06 (26-30)
270 (31-40)
30-06 (41-55)
7mm Magnum (56-60)
300 Magnum (61-70)
45-70 (71-75)
30-40 Krag (76-80)
458 Magnum (81-85)
375 Magnum (86-00)
FEATURES: Swivel Sling. NO IRON SIGHTS ON GUN!
Equipped with mounts for Iron or Telescopic Sights.

CODE: R21 ACTION: AL
MAG: Tub-Mag 20 DUR: 4 ENC: 1.2
CALIBER: 22 Long Rifle
FEATURES: Grooved for Telescopic Sight.

CODE: R22 ACTION: PA
MAG: Tub-Mag Var. DUR: 4 ENC: 1.3
CALIBER: 22 Long Rifle (1-5)
22 RF Magnum (6-0)
FEATURES: Grooved for Telescopic Sights.

CODE: R23 ACTION: AL
MAG: Box 5 DUR: 3 ENC: 1.3
CALIBER: 22 RF Magnum
FEATURES: Tapped for Telescopic Sight.

CODE: R24 ACTION: AL
MAG: Tub-Mag Var. DUR: 4 ENC: 1.25

CALIBER: 22 Short 20 Rounds
22 Long 17 Rounds
22 Long Rifle 15 Rounds
FEATURES: Grooved for Telescopic Sight. The gun can fire any of the specified Calibers. The only difference is how many rounds of a given size can fit into the Tubular Magazine.

CODE: R25 ACTION: AL
MAG: Box 5, 10 or 15 DUR: 4 ENC: 1.3
CALIBER: 22 Long Rifle
FEATURES: Grooved for Telescopic Sight. The odds of a gun having any particular size of magazine are even. It can use any of them.

CODE: R26 ACTION: LA
MAG: Tub-Mag Var. DUR: 4 ENC: 1.25
CALIBER: 22 Short 22 Round (1-2)
22 Long 17 Round (3-4)
22 Long Rifle 15 Round (5-9)
22 RF Magnum (0)
FEATURES: Hi-Power weapon, using High Power rounds at no extra risk. As with R24, the gun can fire any of the non-Magnum 22 Rimfire cartridges. It simply holds different quantities of them. The frequency numbers given are solely to distinguish between the Magnum and non-Magnum models. Also has Hair Trigger and is tapped for Telescopic Sight. Swivel Sling.

CODE: R27 ACTION: LA
MAG: Tub-Mag Var. DUR: 3 ENC: 1.35
CALIBER: 22 Short 26 Round
22 Long 21 Round
22 Long Rifle 15 Round
FEATURES: Tapped for Telescopic Sight. Swivel Sling. As with other Tub-Mag Variable Capacity magazines the gun can handle any 22 Rimfire round listed, but holds different quantities of them.

CODE: R28 ACTION: LA
MAG: Tub-Mag 11 DUR: 4 ENC: 1.3
CALIBER: 22 RF Magnum
FEATURES: Grooved for Telescopic Sight.

CODE: R29 ACTION: BA
MAG: Box 7 DUR: 3 ENC: 1.2
CALIBER: 22 Short (1-2)
22 Long (3-5)
22 Long Rifle (6-0)
FEATURES: Grooved for Telescopic Sight.

CODE: R30 ACTION: BA
MAG: Box 7 DUR: 4 ENC: 1.4
CALIBER: Any 22 RF non-Magnum
FEATURES: Clip can be altered to accommodate 22 Short, Long or Long Rifle. Grooved for Telescopic Sight.

CODE: R31 ACTION: BA
MAG: Box 5 DUR: 3 ENC: 1.35
CALIBER: 22 RF Magnum
FEATURES: None.

CODE: R32 ACTION: BA
MAG: Box 5 or 10 DUR: 4 ENC: 1.25
CALIBER: 22 Short (1-2)
22 Long (3-5)
22 Long Rifle (6-0)
FEATURES: Even chance of gun being found with either clip. It can use both sizes. Also Tapped for Telescopic Sight. GUN HAS NO IRON SIGHTS ON IT! Sighted fire possible only when Sights installed by a Gunsmith.

CODE: R33 ACTION: BA
MAG: Tub-Mag Var. DUR: 4 ENC: 1.2
CALIBER: 22 Short
22 Long
22 Long Rifle
FEATURES: Grooved for Telescopic Sight. As with other Tub-Mag rifles it can use any 22 Rimfire but holds varying amounts of them.

CODE: R34 ACTION: BA
MAG: Port-Mag 5 DUR: 4 ENC: 1.25
 CALIBER: 22 RF Magnum
 FEATURES: Grooved for Telescopic Sight.

CODE: R35 ACTION: BA
MAG: Box 5 DUR: 5 ENC: 1.3
 CALIBER: 22 Long Rifle (1-4)
 22 RF Magnum (5-0)
 FEATURES: Fully adjustable trigger, settable for Hair Trigger or normal pull. Grooved for Telescopic Sight.

CODE: R36 ACTION: SS/BA
MAG: Fall-Block 1 DUR: 3 ENC: 1.2
 CALIBER: Any 22 Rimfire non-Magnum
 FEATURES: Equipped with Sights giving +1 to Aim when using Sighted Fire. Grooved for Telescopic Sight (if so equipped, the Peep Sight cannot be used).

CODE: R37 ACTION: SS/BA
MAG: Fall-Block 1 DUR: 5 ENC: 1.2
 CALIBER: Any 22 Rimfire non-Magnum
 FEATURES: Equipped with Iron Sights giving +1 to BCS and Aim when using Sighted Fire. Swivel Sling.

CODE: R38 ACTION: SS
MAG: Fall-Block 1 DUR: 4 ENC: 1.3
 CALIBER: Any 22 Rimfire non—Magnum (1-6)
 22 RF Magnum (7-0)
 FEATURES: Grooved for Telescopic Sight.

CODE: R39 ACTION: SS
MAG: Break 1 DUR: 4 ENC: 1.25
 CALIBER: Any 22 Rimfire non—Magnum
 FEATURES: Grooved for Telescopic Sight.

CODE: R40 ACTION: SS
MAG: Fall-Block 1 DUR: 4 ENC: 1.3
 CALIBER: 22 RF Magnum
 FEATURES: Grooved for Telescopic Sight. Sling Swivel.

TARGET RIFLES

All of the following Rifles have the Match Weapon Feature.

CODE: R41 ACTION: SS/BA
MAG: Fall—Block 1 DUR: 5 ENC: 1.7
 CALIBER: 22 Long Rifle
 FEATURES: No sling provided for. Has no Iron Sights but can be fitted with Match Sights giving +1 to BCS and Aim when using Sighted Fire. Also is a Handed Gun (Right or Left). Can be used as a Tunable Gun by Character with corresponding handedness.

CODE: R42 ACTION: BA
MAG: Strip 5 DUR: 5 ENC: 1.5
 CALIBER: 7.62mm NATO
 FEATURES: Match version of M-1 but firing 7.62mm instead of 30-06. No Iron Sights but can have these or Match Sights mounted by a Gunsmith. Swivel Sling.

CODE: R43 ACTION: BA
MAG: Box 7 DUR: 5 ENC: 1.4
 CALIBER: 22 Long Rifle
 FEATURES: Iron Sights give +1 to Aim. Grooved for Telescopic Sight but this precludes using Iron Sights. Also has adjustable trigger (Hair Trigger or normal pull).

CODE: R44 ACTION: BA
MAG: Port-Mag 5 DUR: 5 ENC: 1.6
 CALIBER: 222 (1-2)
 222 Magnum (3-5)
 223 (6-8)
 7.62mm NATO (9-0)
 FEATURES: Tapped for Telescopic Sight. No Iron Sights. No provision for Sling. Some models (30%) have Hair Trigger.

CODE: R45 ACTION: SS/BA
MAG: Fall-Block 1 DUR: 5 ENC: 2
 CALIBER: 22 Long Rifle
 FEATURES: Sights give +1 to Aim when using Sighted Fire. No provision for Sling. Tunable Gun. There is a fully adjustable trigger (Hair Trigger or normal pull).

DOUBLE RIFLES

All of the following Guns are Double-Barreled, Single Shot weapons. A Rifle Barrel is mounted on top of a Shotgun Barrel, or vice-versa. Caliber is recorded as (Top Barrel / Bottom Barrel). A "12 Ga/30-06" has a 12 Gauge Shotgun Barrel on top and a Single-Shot 30-06 Barrel on the bottom.

CODE: R46 ACTION: SA
MAG: Break 1/1 DUR: 4 ENC: 1.4
 CALIBER: 12 Ga/30-06 (1-6)
 12 Ga/243 (7-0)
 FEATURES: Recoil Pad.

CODE: R47 ACTION: SA
MAG: Break 1/1 DUR: 4 ENC: 1.35
 CALIBER: 12 Ga/222
 FEATURES: Equipped with changeable Choke Tubes, allowing the Choke on the shotgun barrel to be changed in 10 Actions. Swivel Sling. Grooved for Telescopic Sight.

CODE: R48 ACTION: SA
MAG: Break 1/1 DUR: 4 ENC: 1.4
 CALIBER: 12 Ga/308
 FEATURES: Modified Choke only. Tapped for Telescopic Sight. Recoil Pad. Swivel Sling.

CODE: R49 ACTION: SA
MAG: Break 1/1 DUR: 5 ENC: 1.5
 CALIBER: 12 Ga/375 Magnum (1-3)
 12 Ga Magnum/375 Magnum (4-6)
 12 Ga/458 Magnum (7-8)
 12 Ga Magnum/458 Magnum (9-0)
 FEATURES: Interchangeable barrels are available, although it requires a Gunsmith to change them (per barrel: Task Points = 10, Task Period = 2 hours). Tapped for Telescopic Sight. Swivel Sling. Recoil Pad.

CODE: R50 ACTION: SA
MAG: Break 1/1 DUR: 3 ENC: 1.3
 CALIBER: 22 RF Magnum/20 Ga (1-2)
 222/20 Ga (3)
 30-30/20 Ga (4-5)
 Any 22 Rimfire non—Magnum/410 (6-7)
 22 RF Magnum/410 (8-0)
 FEATURES: Grooved for Telescopic Sight.

CARBINES

All of the following guns have BBL less than or equal to 20".

CODE: C1 ACTION: AL
MAG: Box 5 DUR: 3 ENC: 1
 CALIBER: 223
 FEATURES: Civilian model of M-18 Assault Rifle. 3X Military issue Telescopic Sight. Folding stock. Can be given FA capacity by Gunsmith. Also uses military issue Box 30 magazine.

CODE: C2 ACTION: AL
MAG: Box 5, 10, 20, 30 DUR: 5 ENC: 9
 CALIBER: 223
 FEATURES: Can be converted to FA Action by Gunsmith. Swivel Sling.

CODE: C3 ACTION: AL
MAG: Tub-Mag 4 DUR: 5 ENC: .9
 CALIBER: 44 Magnum
 FEATURES: Swivel Sling. Peep Sight gives +1 to Aim for Sighted Fire. Tapped for Telescopic Sight.

CODE: C4 ACTION: LA
MAG: Box 4 DUR: 4 ENC: 1
 CALIBER: 243 (1-2)
 308 (3-6)
 358 Magnum (7-0)
 FEATURES: Recoil Pad. Tapped for Telescopic Sight.

CODE: C5 ACTION: LA
MAG: Tub-Mag 6 DUR: 3 ENC: 1.2
 CALIBER: 30-30 (1-7)
 35 (8-0)
 FEATURES: None.

CODE: C6 ACTION: LA
MAG: Tub-Mag 4 DUR: 3 ENC: .8
 CALIBER: 44-40 (1-4)
 357 Magnum (5-0)
 FEATURES: None.

CODE: C7 ACTION: BA
MAG: Port-Mag 5 DUR: 5 ENC: 1.2
 CALIBER: 22-250 (1-2)
 6mm (3)
 243 (4)
 270 (5-6)
 30-06 (7-9)
 308 (0)
 FEATURES: Tapped for Telescopic Sight.

CODE: C8 ACTION: AL
MAG: Box 8 DUR: 3 ENC: .75
 CALIBER: 22 Long Rifle
 FEATURES: A specially designed survival and packer's weapon. The barrel, main body, and buttstock of the weapon can be broken down into separate pieces. The first two pieces fit into a carrying compartment in the stock.

CODE: C9 ACTION: AL
MAG: Tub-Mag 9 DUR: 4 ENC: .9
 CALIBER: 22 Long Rifle
 FEATURES: Grooved for Telescopic Sight.

CODE: C10 ACTION: AL
MAG: Port-Mag 10 DUR: 5 ENC: .9
 CALIBER: 22 Long Rifle
 FEATURES: Tapped and Grooved for Telescopic Sight. Swivel Sling.

CODE: C11 ACTION: LA
MAG: Tub-Mag 15 DUR: 3 ENC: .85
 CALIBER: 22 Long Rifle
 FEATURES: Grooved for Telescopic Sight.

CODE: C12 ACTION: LA
MAG: Tub-Mag Var. DUR: 3 ENC: 1
 CALIBER: 22 Short 21 Rounds
 22 Long 16 Rounds
 22 Long Rifle 15 Rounds
 FEATURES: Swivel Sling. Tapped for Telescopic Sight.

CODE: C13 ACTION: BA
MAG: Box 5 DUR: 4 ENC: .85
 CALIBER: 22 RF Magnum
 FEATURES: Grooved for Telescopic Sight.

CODE: C14 ACTION: PA
MAG: Box 5 DUR: 4 ENC: .8
 CALIBER: 22 Long Rifle (1-6)
 22 RF Magnum (7-0)
 FEATURES: Grooved for Telescopic Sight. Swivel Sling.

CODE: C15 ACTION: SS
MAG: Port-Mag 1 DUR: 2 ENC: .75
 CALIBER: Any 22 Rimfire non-Magnum
 FEATURES: A skeleton stock weapon. Made of light alloys, the gun resembles a tube with the outline of a stock at one end.

CODE: C16 ACTION: SS
MAG: Fall-Block 1 DUR: 4 ENC: .95
 CALIBER: Any 22 Rimfire non-Magnum
 FEATURES: None.

CODE: C17 ACTION: SS
MAG: Fall-Block 1 DUR: 3 ENC: 1
 CALIBER: 22 RF Magnum
 FEATURES: None.

CODE: C18 ACTION: SA
MAG: Break 1/1 DUR: 2 ENC: .8
 CALIBER: 22 Long Rifle/410 Magnum

FEATURES: This is a Double Carbine, having a 410 Caliber shotgun barrel mounted under a 22 Carbine barrel. It is also a skeleton gun like C15.

SHOTGUNS

CODE: SG1 ACTION: SA
MAG: Break 2 DUR: 3 ENC: 1.6
 GAUGE: 12 Ga (1-6)
 20 Ga Magnum (7-0)
 FEATURES: None.

CODE: SG2 ACTION: SA
MAG: Break 2 DUR: 5 ENC: 1.8
 GAUGE: 10 Ga Magnum
 FEATURES: Recoil Pad.

CODE: SG3 ACTION: SA
MAG: Break 2 DUR: 5 ENC: 1.6
 GAUGE: 10 Ga Magnum (1)
 12 Ga Magnum (2-3)
 20 Ga Magnum (4)
 410 Magnum (5)
 12 Ga (6-0)
 FEATURES: Recoil Pad.

CODE: SG4 ACTION: SA
MAG: Break 2 DUR: 4 ENC: 1.5
 GAUGE: 12 Ga (1-4)
 16 Ga (5-6)
 20 Ga (7)
 12 Ga Magnum (8)
 16 Ga Magnum (9)
 20 Ga Magnum (0)
 FEATURES: None.

AUTOLOADING SHOTGUNS

CODE: SG5 ACTION: AL
MAG: Tub-Mag 5 DUR: 4 ENC: 1.5
 GAUGE: 12 Ga (1-4)
 20 Ga (5-6)
 12 Ga Magnum (7)
 20 Ga Magnum (8)
 12 Ga Slug (9)
 20 Ga Slug (0)
 FEATURES: Interchangeable barrels available, permitting alteration of Choke. Must be SG5 barrel.

CODE: SG6 ACTION: AL
MAG: Tub-Mag 5 DUR: 4 ENC: 1.3
 GAUGE: 12 Ga (1-3)
 20 Ga (4-5)
 12 Ga Magnum (6)
 20 Ga Magnum (7)
 12 Ga Slug (8-9)
 20 Ga Slug (0)
 FEATURES: Recoil Pad. Swivel sling.

CODE: SG7 ACTION: AL
MAG: Tub-Mag 4 DUR: 5 ENC: 1.6
 GAUGE: 12 Ga (1-4)
 20 Ga (5-6)
 12 Ga Magnum (7-8)
 20 Ga Magnum (9-0)
 FEATURES: Quick-change Choke tubes inserted in barrel an alter Choke setting in 10 Actions (5 to remove Choke, 5 to insert new one). Recoil Pad.

CODE: SG8 ACTION: AL
MAG: Tub-Mag 5 DUR: 4 ENC: 1.5
 GAUGE: 12 Ga (1-2)
 20 Ga (3-5)
 20 Ga Magnum (6-7)
 Slug (8-0)
 FEATURES: All barrels interchangeable to alter Choke. Has built in Recoil Reduction of 1.

CODE: SG9 ACTION: AL
MAG: Tub-Mag 5 DUR: 5 ENC: 1
 GAUGE: 12 Ga Magnum (1-5)
 12 Ga Slug (6-0)

FEATURES: This is a short-barrled Riot Gun, acting like a Carbine as regards BDG. Such weapons are legally restricted to Police in our own culture.

CODE: SG10 ACTION: AL
MAG: Tub-Mag 3 DUR: 4 ENC: .8
GAUGE: 12 Ga Magnum (1-4)
12 Ga Slug (5)
10 Ga (6-8)
10 Ga Slug (9-0)

FEATURES: Another Riot Gun, fitted with a Folding Stock, allowing it to be fired with Pistol Skill. A very mean looking gun, it is colloquially known as a "Room Broom."

PUMP ACTION SHOTGUNS

CODE: SG11 ACTION: PA
MAG: Tub-Mag 5 DUR: 4 ENC: 1.5
GAUGE: 12 Ga (1-6)
20 Ga Magnum (7-0)
FEATURES: Recoil Pad.

CODE: SG12 ACTION: PA
MAG: Tub-Mag 5 DUR: 4 ENC: 1.3
GAUGE: 12 Ga (1-4)
16 Ga (5-7)
20 Ga (8-0)

FEATURES: +1 to Aim with Sighted Fire, due to special, translucent Sight with Peep function.

CODE: SG13 ACTION: PA
MAG: Tub-Mag 5 DUR: 4 ENC: 1.7
GAUGE: 12 Ga Magnum
FEATURES: Interchangeable barrels for different Chokes. Recoil pad.

CODE: SG14 ACTION: PA
MAG: Tub-Mag 5 DUR: 4 ENC: 1.8
GAUGE: 12 Ga Slub
GAUGE: 12 Ga Slug
FEATURES: Recoil pad. Beaded Sight gives +1 to Aim with Sighted Fire.

CODE: SG15 ACTION: PA
MAG: Tub-Mag 5 DUR: 5 ENC: 1.5
GAUGE: 12 Ga (1-3)
12 Ga Magnum (4-5)
20 Ga (6-7)
20 Ga Magnum (8-9)
410 Magnum (0)
FEATURES: Interchangeable Choke Tubes available, same models as used with SG7. Recoil pad.

CODE: SG16 ACTION: PA
MAG: Tub-Mag 5 DUR: 4 ENC: 1
GAUGE: 12 Ga (1-3)
12 Ga Magnum (4-5)
10 Ga (6-8)
10 Ga Slug (9)
12 Ga Slug (0)
FEATURES: A Riot Gun. Swivel Sling.

BOLT ACTION SHOTGUNS

CODE: SG17 ACTION: BA
MAG: Box 2 DUR: 4 ENC: 1.8
GAUGE: 10 Ga (1-4)
10 Ga Magnum (5-7)
10 Ga Slug (8-0)
FEATURES: Swivel Sling.

CODE: SG18 ACTION: BA
MAG: Box 3 DUR: 4 ENC: 1.4
GAUGE: 12 Ga (1-4)
12 Ga Slug (5-7)
410 Ga (8-9)
410 Ga Slug (0)
FEATURES: Gun is fitting with a Variable Choke device on non-Slug models. This permits user to set for a given Choke in 1 Action by turning a small dial around the muzzle. Swivel Sling. Recoil pad. Slug firing models have high quality Iron Sights given +1 to Aim using Sighted Fire.

SINGLE SHOT SHOTGUNS

CODE: SG19 ACTION: SS
MAG: Break 1 DUR: 4 ENC: 1.5
GAUGE: 10 Ga (01-10)
10 Ga Magnum (11-15)
12 Ga (16-45)
12 Ga Magnum (61-70)
16 Ga (61-70)
16 Ga Magnum (71-80)
20 Ga (81-85)
20 Ga Magnum (86-90)
410 (91-95)
410 Magnum (96-00)

FEATURES: Recoil pad. Changeable barrels to alter Choke.

CODE: SG20 ACTION: SS
MAG: Break 1 DUR: 4 ENC: 1.6
GAUGE: 10 Ga Slug (1-2)
12 Ga Slug (3-6)
16 Ga Slug (7-8)
20 Ga Slug (9)
410 Slug (0)
FEATURES: None.

DOUBLE BARREL SHOTGUNS

Gun has Two Barrels mounted one on top of another

CODE: SG21 ACTION: SA
MAG: Break 2 DUR: 3 ENC: 1.6
GAUGE: 12 Ga (1-6)
20 Ga Magnum (7-0)
FEATURES: None.

CODE: 22 ACTION: SA
MAG: Break 2 DUR: 5 ENC: 1.8
GAUGE: 10 Ga Magnum
FEATURES: Recoil Pad.

CODE: SG23 ACTION: SA
MAG: Break 2 DUR: 5 ENC: 1.6
GAUGE: 10 Ga Magnum (1)
12 Ga Magnum (2-3)
20 Ga Magnum (4)
410 Magnum (5)
12 Ga (6-0)
FEATURES: Recoil pad.

CODE: SG24 ACTION: SA
MAG: Break 2 DUR: 4 ENC: 1.5
GAUGE: 12 Ga (1-4)
16 Ga (5-6)
20 Ga (7)
12 Ga Magnum (8)
16 Ga Magnum (9)
20 Ga Magnum (0)
FEATURES: None.

AFTERMATH! MILITARY ISSUE FIREARMS

The following specifications quantize certain military and police weapons in general use in the U.S. (or available from its allies) between WWII and the Ruin.

RIFLE, ASSAULT RIFLES, AND CARBINES:

M-1 Garand Rifle ACTION: AL MAG: Strip 8
CALIBER: 30-06 DUR: 4 ENC: 1.5
FEATURES: Auto-extractor. Bayonet lug. Takes adapter to fire M-1 Rifle Grenade.

M-1 Carbine ACTION: AL MAG: Box 15 or 30
CALIBER: 30 Carbine DUR: 4 ENC: .9
FEATURES: Auto extractor.

M1A1 Carbine ACTION: AL MAG: Box 15 or 30
CALIBER: 30 Carbine DUR: 4 ENC: .9
FEATURES: Auto-extractor. May be equipped with Folding Stock.

M-14 Rifle ACTION: AL-FA MAG: Box 20
CAL: 7.62 NATO (308) DUR: 5 ENC: 1.4
FEATURES: Auto-extractor. Bayonet lug. Can be fitted with bipod for Rest Weapon Modifier. Takes Adapter device to fire M-14 Rifle Grenade.

M-16 Rifle
 CAL: 5.56 (223)
 ACTION: AL-FA MAG: Box 20 or 30
 DUR: 4 ENC: 1.3
 FEATURES: Auto-extractor. Bayonet lug. Can be fitted with Bipod for Rest Weapon Modifier. 22mm Grenade Launcher built into Flash Hider. Takes military issue Telescopic Sight, Star-Light Scope, or I-R Scope. Can be fitted with under-slung 40mm Grenade Launcher.

Colt Commando Carbine
 CAL: 5.56mm
 ACTION: AL-FA MAG: Box 20 or 30
 DUR: 4 ENC: 1
 FEATURES: Folding Stock. Auto-extractor. Flash Hider.

M-18 Rifle
 CAL: 5.56mm
 ACTION: AL-FA-AB MAG: Box 30
 DUR: 5 ENC: 1.2
 FEATURES: Auto-extractor. Bayonet lug. Can be fitted with Bipod. 22mm Grenade Launcher built into Flash Hider. Can take military issue Telescopic Sight, Star-Light Scope, or I-R Scope. Can be fitted with underslung 40mm Grenade Launcher. Date of issue - 1985.

M-22 Rifle
 CAL: 5.56mm
 ACTION: AL-FA-AB MAG: Box 30
 DUR: 5 ENC: 1.3
 FEATURES: Auto-extractor. Bayonet lug. Can be fitted with Bipod. 22mm Grenade Launcher. Flash Hider. Takes military issue Telescopic, Star-Light, or I-R Sights. Has Built-in LED Peep Sight. Supermachine Gun rate of autofire: D6 per Burst. Can be equipped with Laser Sight or 40mm Grenade Launcher in underslung position. Folding Stock, allows fire with Pistol Skill, but Rifle characteristics (two hands required for proper use). High Power Feature. Date of issue - 1995.

(The following 2 weapons are made by FN in Belgium, and are widely used by NATO forces)

FAL Assault Rifle
 CAL: 7.62mm NATO
 ACTION: AL-FA MAG: Box 20
 DUR: 4 ENC: 1.45
 FEATURES: Auto-extractor. Bayonet lug.

FAR Assault Carbine
 CAL: 7.62mm NATO
 ACTION: AL-FA-AB MAG: Box 20 or 30
 DUR: 5 ENC: .9
 FEATURES: Auto-extractor. Folding Stock. 22mm Grenade Launcher in Flash Hider. Can take Bipod for Rest Weapon Modifier.

(The next 2 are of British manufacture, being their standard WWII and modern infantry weapons.)

Mk.4 Rifle
 CAL: 7.62mm NATO
 ACTION: AL MAG: Box 10
 DUR: 5 ENC: 1.4
 FEATURES: Bayonet lug. Auto-extractor. This is the "final generation" of the old Lee-Enfield.

EM-2 Carbine
 CAL: 5.56mm
 ACTION: AL-FA MAG: Box 20
 DUR: 4 ENC: 1.1
 FEATURES: Auto-extractor. Folding stock. 22mm Grenade Launcher in Flash Hider. Can take military issue Telescopic, Star-Light, or I-R Scopes. This is a bit of speculative writing, as the weapon is currently still in trials. Date of issue: 1983.

PISTOLS

There are only two that really need to be discussed: the Colt .45 M1911 A1 and its 9mm counterpart, the Browning High Power.

M1911A1
 MAG: Box 7
 ENC: .4
 BBL: STD ACTION: AL
 CAL: .45 ACP DUR: 5
 FEATURES: None.

Browning High Power
 MAG: Box 13
 ENC: .4
 BBL: STD ACTION: AL
 CAL: 9mm Parabellum DUR: 4
 FEATURES: High Power weapon. Some models have a Detachable Stock, allowing Rifle Skill to be used to fire the gun.

SUB-MACHINE GUNS

Thompson M1928A1
 MAG: Drum 50
 ENC: 1.2
 BBL: XLNG ACTION: AL-FA
 CAL: 45 ACP DUR: 3
 FEATURES: The famous "Tommy Gun," introduced late in WWI and beloved of both the cops and robbers of the "Roaring 20's." Although it has a Pistol size barrel, it is fired using Rifle Skill (averaged with Autoweapon when firing automatic). A number of models (40%) are equipped with the Cutts Compensator, an anti-recoil device mounted at the mouth of the barrel giving a Recoil Reduction of 2.

Thompson M1A1 Automatic Carbine
 MAG: Box 20 or 30
 ENC: 1.2
 BBL: XLNG ACTION: AL-FA
 CAL: 45 ACP DUR: 4
 FEATURES: This is the later, massproduced version of the Thompson which saw extensive service in WWII. It has no special Features.

M3A1 Sub-Machine Gun
 MAG: Box 30
 ENC: 1
 BBL: XLNG ACTION: FA
 CAL: 45 ACP DUR: 4
 FEATURES: Folding Stock. The "Grease Gun" developed during WWII.

Other contemporary SMGs of note are to be found in the US, although often illegally.

Uzi SMG
 MAG: Box 25, 32 or 40
 ENC: .8
 BBL: XLNG ACTION: AL-FA
 CAL: 9mm Parabellum DUR: 3

FEATURES: Removable wooden stock or Folding Wire stocks, depending on the model. When in Pistol configuration, the balance of the Uzi permits normal, one-handed use, with no penalties normally accruing to firing Rifle class weapons in that manner. It is probably the commonest modern SMG in the world, manufactured under license in a number of countries.

MP-40
 MAG: Box 32
 ENC: .9
 BBL: XLNG ACTION: AL-FA
 CAL: 9mm Parabellum DUR: 3

FEATURES: Folding stock. This is the standard German SMG of WWII. Well constructed, at least in the early years of the war, a number of them have found their way into this country as souvenirs and collector's pieces, where loving care keeps them at their deadly best.

Mk.2 Sten
 MAG: Box 32
 ENC: .8
 BBL: XLNG ACTION: FA
 CAL: 9mm Parabellum DUR: 2

FEATURES: Folding stock. Specially made socket bayonet made for the Sten. Silencers for some models are available. The Sten was the "tin tommy gun" of the British infantry in WWII. Almost 250,000 were produced during the war and in the decade following.

MAC-10
 MAG: Box 30
 ENC: .6
 BBL: STD ACTION: AL-FA
 CAL: 45 ACP DUR: 3

MAC-11
 Same specifications as MAC-10 but fires 9mm Parabellum
 FEATURES: The MAC-10 and 11 represent a new, non-military application of the SMG idea. The size of an ordinary pistol, the MAC series are not suitable for battlefield use, but are ideal for police, security, and espionage activities. Both the MAC-10 and MAC-11 are equipped with Folding Stocks, and may be fitted with an extremely efficient silencer, although autofire through the silencer is not recommended.

American 180
MAG: Drum 177
ENC: 1.2

BBL: Carbine
CAL: 22 Stinger

ACTION: AL-FA
DUR: 4

Those not oriented to a Caliber may be used to repair other models. If necessary, one form of gun can be altered into another, given time (a Task for a Gunsmith).

American 180 Machine Pistol
ENC: 9

BBL: XLNG
Other specs as above

Introduced for police work in 1974, the American 180 Carbine, or its pistol-size cousin, the 180 Machine Pistol, both fall into the "Supermachine Gun" class, firing a Burst of 6 rounds instead of the normal 3 rounds. If hit by the weapon, a D6 is rolled to see how many slugs actually got in.

As 22 Stinger is simply a super-high velocity 22 Long Rifle round, the weapon can also fire that ammo, but does so as a normal SMG. (3 Rounds/Burst)

Other Features include a Recoil Reduction of 1. Ammo is fed from a flat Drum magazine attached to the top of the receiver. The gun is specifically designed to accept a Laser Sight, but is equipped with normal Iron Sights as well. The authors have seen film clips of this little buzz saw in action. It was used to cut a Volkswagen in two, and after that, the demonstrator wrote his initials on a brick wall. Longhand.

It is really a remarkable weapon.

MACHINE GUNS

These are 7 of the best known machine guns in use since WWII. They range from the standard US weapons of that period to the Heckler and Koch guns used by NATO forces. All may be vehicle mounted.

30 Caliber Browning Med. MG

MAG: Disintegrating Link or Fabric Belt 250
CAL: 30 Browning DUR: 4 ENC: 7
RATE: 450 RpM RATE FACTOR: D6x.5

FEATURES: Tripod mounted in most (80%) cases. Others use a beefed up Bipod.

M60 GPMG

MAG: Disintegrating Link Belt 250
CAL: 7.62mm NATO DUR: 5 ENC: 5.2
RATE: 600 RpM RATE FACTOR: 2D3 x .5

FEATURES: The current standard MG used by the US Armed Forces. Can be Bipod or Tripod mounted.

Browning M2 HMG

MAG: Metal Link Belt 100
CAL: 50 DUR: 4 ENC: 14.1
RATE: 450 RpM RATE FACTOR: D6 x .5

FEATURES: Mounted on tripod.

Bren LMG

MAG: Box 30 or Drum 50 or 100
CAL: 7.62 NATO DUR: 4 ENC: 4.35
RATE: 480 RpM RATE FACTOR: D6 x .5

FEATURES: Bipod fitted. Easily man portable (subject to Encumbrance rules). A Section Support weapon designed for mobility.

SIG 710-3 GPMG

MAG: Disintegrating or Metal Link Belt 250
CAL: 7.62 NATO DUR: 5 ENC: 4.82
RATE: 800 RpM RATE FACTOR: D10 x .5
SUSTAINED: 1400 RpM 2D5 x .5

FEATURES: One of the current NATO machine gun systems. It can be Bipod mounted in its lower Rate role, but the Sustained Fire requires Tripod mounting to hold the gun sufficiently steady.

HK 21 LMG

MAG: Box 20 or Drum 80 or Disintegrating Link Belt 250
CAL: 5.56mm

HK 21 GPMG

CAL: 7.62 NATO

HK 21 HMG

CAL: 7.62 x 39mm DUR: 5 ENC: 3.65
RATE: 850 RpM RATE FACTOR: D10 x .5

FEATURES: The newest thing in MG systems. Usually Bipod mounted, almost ALL the parts of the weapon in either mode are interchangeable.

Mauser MG1

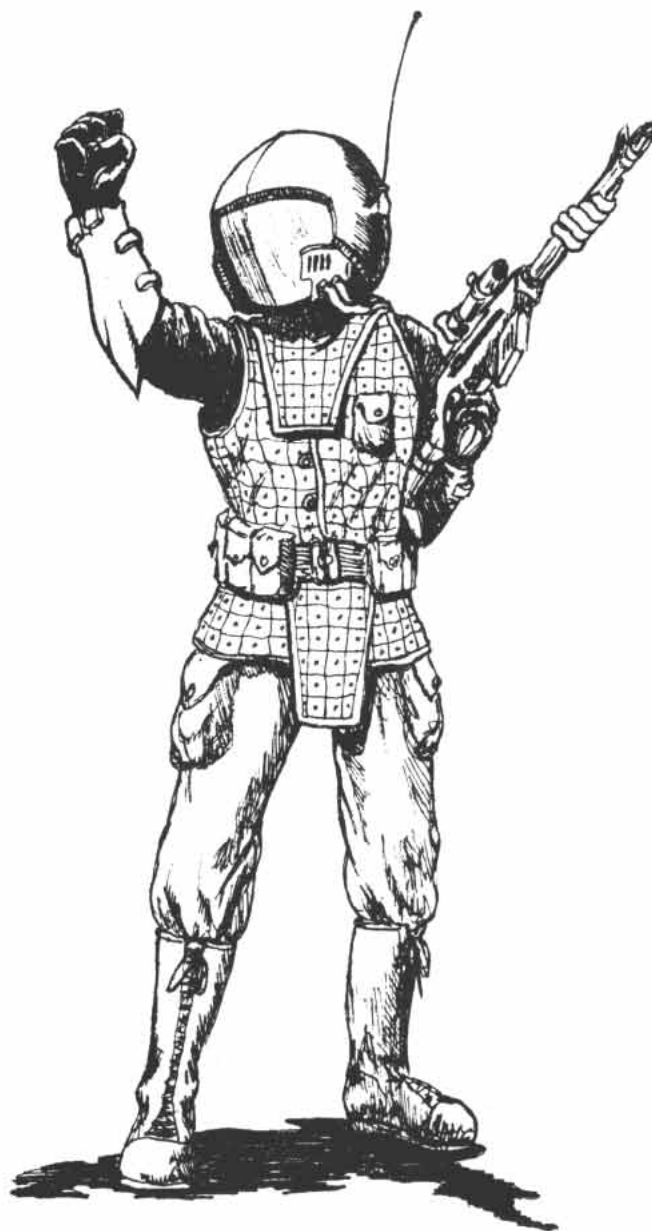
MAG: Disintegrating Link Belt 50 or Box/Belt 100 (A prepared ammo box holding a Link Belt)

CAL: 7.62 NATO DUR: 3 ENC: 5.8

RATE: 1200 RpM RATE FACTOR: 2D5 x .5

FEATURES: Tripod mount only, in order to support that appalling rate of fire. This was the standard MG of the Third Reich, and remains in service in Third World and Insurgent forces today. It is a lethal engine and far from outdated.

These provide a sampling of the many types of Machine Guns now known. The Gamesmaster should not cast these lightly into his Campaign, for their tremendous lethality can unbalance his scenarios beyond even his wildest fears. But they should not be ignored. Even in a "scarce ammo economy," the Machine Gun will have its users.



APPENDIX 2 RANDOM FIREARMS DETERMINATION

HOW TO USE THE GUN LIST

The most direct use of the Gun List is quite simple: there are 60 Pistols, 50 Rifles, 18 Carbines, and 24 Shotguns on the tables. Determine the kind of gun required on the index given below, and then roll a die of the appropriate type for the number of possible choices (i.e. roll a D60 if you need a Pistol, a D50 for a Rifle, and so on). The die roll is the Code number from the Gun List. If other rolls need to be made, such as the Frequency roll for Caliber if the gun is made in more than one size, then roll that die. When all the extra determinants, the break down on the Gun List are as follows:

Pistols—Contains 30 Revolvers. 15 Autoloaders. 10 Target weapons. 5 Miscellaneous.

Rifles—Contains 40 regular weapons. 5 Target weapons. 5 "Double" Rifles.

Carbines—Contains no differentiated types.

Shotguns—Contains 4 Double Barreled. 6 Autoloading. 5 Pump Action. 2 Bolt Action. 4 Over-Under.

So if you really want a Revolver, specifically, then roll a D30 for the Code number. A D15 plus 30 gives you the Code for an Autoloader, a D10 plus 45 for a Target Pistol, and so on.

SUBSIDIARY DIE ROLLS

When you just want a random determination on a gun, roll D100 and consult this table.

| Die Roll | Result | Roll Die For Gun List Code |
|----------|-----------------------|----------------------------|
| 01-30 | Pistol | |
| 31-50 | Rifle | |
| 51-70 | Carbine | |
| 71-90 | Shotgun | |
| 90-00 | Military Issue Weapon | |

The Gun List can also be used to determine ammunition found scavenging, or available for barter. Roll on the above table for the type of ammo, then roll normally for as many kinds of ammo as you need. The Caliber or Gauge of the weapon is the ammo present. It then remains to find out how much has been found and what, if any, special qualities it may have.

| Ammo Quantities | | Ammo Qualities | |
|-----------------|-------------------------|----------------|--------------|
| Die Roll | Quantity | Die Roll | Ball Ammo |
| 01-05 | 1 Round. | 01-60 | Standard |
| 06-10 | D6 Rounds. | 61-75 | Hollow Point |
| 11-30 | 3D6 Rounds. | 76-85 | Jacketed |
| 31-60 | D20 plus 20 Rounds. | 86-95 | High Power |
| 61-80 | 1 Box of 25 Rounds. | 96-00 | Fragmenting |
| 81-90 | 1 Box plus D100 Rounds. | | |
| 91-00 | D6 Boxes of Rounds. | | |

If Clips are sought, either when a clip or clips is found, or when they are being bartered for, roll on the Autoloading weapons Gun List of the appropriate type. If clips are found, there is a flat 30% chance of finding Military Issue magazines. Then roll to see the model on that List.

Shotgun Choke Determination

Whenever a Shotgun is found, bartered, or otherwise appears on the scene, the Gamesmaster may use the following system to determine the Choke on it, unless it is a Riot Gun (always Open Choke) or a Slug Gun (always Slug Choke). Roll a D6 as shown below. If the weapon is a Double-Barreled or Over-Under model, roll again for the second barrel, adding the indicated modifier. The usual pattern in shotgun manufacture is to have one barrel with a fairly loose Choke (Open or Modified) for the first, closer shot, and a tighter Choke on the second, if a longer range shot at fleeing game is required.

| Die Roll | Choke | 2nd Die Roll Modifier |
|----------|----------|-----------------------|
| 1-2 | Full | +1 |
| 3-4 | Modified | +0 |
| 5-6 | Open | -1 |

This may also be applied to such as spare barrels for a shotgun, or insertable Choke Tubes, or Choke devices.

Sight Quality and Other Characteristics

When a Telescopic sight is found installed on a gun or separately, a roll is needed to determine its construction and qualities.

Magnification—The scope has a magnifying power of 2D3x. i.e., roll 2, you have a 2x scope, reducing the effective range to the target by a factor of 2.

Light Efficiency—Roll a D3. This establishes a Light Efficiency Level.

Level 1—May be used in any Light better than darkness.

Level 2—May only be used in Light Level of Dim or better.

Level 3—May only be used in Full Light.

Mounting—This need not be rolled for if scope is found mounted, since it will have the correct type mount for the gun it is on. For scopes found separately, roll on the following table.

Die

Roll Mounting

1-4 Tap Mounts. Goes on any gun Tapped for Telescopic Sights.

5-7 Groove Mounts. There is a 60% Chance such a scope is a "Tip-off" model. That is, it can be tipped to the side allowing the shooter to use his Iron Sights should he prefer to, without removing the Telescopic Sight.

8-9 Military Mounts. Fits any Military Issue Rifle or Carbine designated as taking Telescopic Sights.

0 Clamp Mounts. Can be fitted to any firearm of the correct size (Pistol or Long Gun).

Reticule—There is a flat 40% chance that Telescopic Sights will have a Reticule (or Cross Hairs). This allows plus one to Aim (ie. Hit Location movement) when using sighted fire.

Pistol Sights—There are Telescopic Sights made for Pistols as well as Long Guns. If random determination is desired, assume a 20% chance of finding them on a gun, or that sights found separately are Pistol rather than Long Gun sights.

Military Weapons Determination Table

When random determination for Military Issue weapons is necessary, first roll for the overall class of the gun, and then for the specific model.

Weapon Type Table: Roll 1D10

| Die Roll | Result |
|----------|----------------------------------|
| 1-6 | Rifle, Assault Rifle, or Carbine |
| 7-8 | Sub-Machine Gun |
| 9-0 | Pistol |

Rifle Table: Roll 1D30

| Die Roll | Result |
|----------|-----------------------|
| 1-5 | M-1 Garand Rifle |
| 6-8 | M-1 Carbine |
| 9-10 | M1A2 Carbine |
| 11-14 | M-14 Rifle |
| 15-17 | M-16 Rifle |
| 18-19 | Colt Commando Carbine |
| 20-21 | M-18 Rifle |
| 22 | M-22 Rifle |
| 23-25 | FAL Assault Rifle |
| 26-27 | FAR Assault Carbine |
| 28-29 | Mk 4 Rifle |
| 30 | EM-2 Carbine |

Sub-Machine Gun Table: Roll 1D30

| Die Roll | Result |
|----------|-----------------------------|
| 1-2 | Thompson M1928A1 |
| 3-7 | Thompson M1A1 |
| 8-12 | M3A1 SMG |
| 13-16 | UZI SMG |
| 17-19 | MP-40 |
| 20-24 | Mk 2 Sten |
| 25-26 | MAC-10 |
| 27-28 | MAC-11 |
| 29 | American 180 Carbine |
| 30 | American 180 Machine Pistol |

Pistol Table: Roll 1D10

| Die Roll | Result |
|----------|---------------------|
| 1-6 | M1911A1 |
| 7-0 | Browning High Power |

No tables are given for other, heavier weapons, as we do not feel random assignment is valid in their case. If firepower like that is going to appear in the Campaign, it should be as a result of careful planning.

APPENDIX 3

"DESIGNING" FIREARMS

This appendix gives an overview of how values were arrived at, and how weapons not given here may be inserted in the Campaign.

Finding The Model

It is really necessary to locate a moderately detailed description of the gun. In the Bibliography, we list several highly useful source-books of weapon statistics which will provide the information necessary to work out the game-version of the gun.

The model should provide the weapon's Weight, Barrel Length, Caliber, Rates of Fire, indications of the type of Magazine used, and notes regarding any gamable Features.

One fact that is NOT going to be found in any reference book is the DURABILITY of a given weapon. This is entirely in the hands of the Gamesmaster. It is difficult to prescribe a method for determining the Durability. Any manufacturer worth his salt is going to claim his product has a score of 5. Gun-fanciers will differ widely on the subject, each favoring his ideal weapon or most admired gunmaker. For commercial guns, one possible guideline is the price. We have tended to assign higher Durability to the more expensive weapons. But this can result in giving too low a value to a well-made but inexpensive gun. For convenience, the DUR=1 is only encountered in weapons found as U-1 loot (ie. low-value treasure). The DUR=5 score is restricted to late-model military weapons and ultra-high quality commercial ones. If you need a figure in between, roll a D3 and add 1. If dealing with one of the giants in the gunmaker's field, Smith and Wesson, or Colt, add 2 instead. Treat rolls of over 4 as 4.

Designing The Spec Sheet

With a Durability score selected, all the rest falls neatly into place. All the main items of information required in the model translate directly into *Aftermath!* conventions. This can best be illustrated by taking a well-known gun and designing the Specs for it.

The best known autoloading pistol in modern use is undoubtedly the Colt .45 Mk. IV, or M1911A1. It is a standard sidearm of the United States Armed Forces.

Opening "Modern Small Arms," by Major Frederick Myatt, Crescent Books, 1978, we find the following information:

Length: 8.5" Weight: 30 oz. (1.1 kg) Barrel: 5" Caliber: 45 ACP Magazine Capacity: 7.

There is more, but these are all we need for the moment. Looking at the specifications for Pistols, we find that the BBL for a 5" weapon is STD. While the source book does not actually specify that the Colt is autoloading, we know that it is. So the Action is coded AL. The picture of the weapon shows us its clip, so we can indicate the Magazine as a Box 7, the capacity being given in the book. Caliber in *Aftermath!* is the same as the real Caliber. The Base ENC for STD Pistols is .3. The real weight of the gun divided by 10 is (1.1kg/10), or .11. This can be rounded to .1 for convenience. So the ENC of the weapon is .3+1, or .4.

The Spec Sheet for the *Aftermath!* model of this weapon is now:

NAME: M1911A1 BBL: STD ACTION: AL MAG: Box 7
CALIBER: 45 ACP DUR: 5 ENC: .4

How did we arrive at the maximum Durability? Well, the M1911A1 is one of the toughest firearms in the world. It has been used under the worst conditions in the field, and performed reliably. Its rugged frame is highly resistant to damage. With this knowledge, it seemed fitting to make it DUR=5. As a principal military arm, it would at least have been given a 4, were the authors not familiar with its history.

It only remains to check for any special Features possessed by the Pistol. As it happens, the gun is as utilitarian as it is tough. There are none, and so we leave the stats as they are.

Let's take a more diverse weapon for an example. Opening the 1978 Gun Digest at random, we find listed the statistics on a medium-priced hunting rifle made by a well-known firm of gunsmiths. The information tells us it is 5.5 lbs in weight, has a 22" barrel, is a Bolt action rifle, with a 5 round trap loading integral magazine, and is made in calibers 222, 30-30, and 30-06. The brief blurb under the hard-data listing indicates that the barrel is drilled and tapped for a scope mount, has a recoil pad, and swivel sling mounts. The write up of the Spec Sheet goes as follows:

NAME: Remchester BAR (for Bolt Action Rifle)

BBL: Rifle (At 22" the weapon falls into this category. At 20" or less, the usual standards would call for a Carbine classification, although the Gamesmaster can alter this. The M-16, for example,

has a Barrel Length of just under 20", but we feel it operates in the Rifle class.)

ACTION: BA

MAG: Port-Mag 5 (This is the correct classification for any integral, top- or bottom-loading magazine.)

CALIBER: 222 (1-3), 30-30 (4-6), 30-06 (7-0) (The frequency numbers for the caliber are again a judgement call for the Gamesmaster. In this case, the idea is an even split between the two smaller cartridges, but giving the lion's share to the 30-06, the most popular rifle load in the US.)

DUR: 3 (The weapon is made by a top-rated firm, but is not near the top of their line. It will not be junk, but it is not going to be better than average either. So, a 3 seems called for.)

ENC: 1.25 (Base ENC for Rifles is 1. The rifle weighs 5.5 lb. The weight in kg is 5.5/2.2, which is exactly 2.5. 2.5/10=.25, therefore the ENC of this gun is 1+.25=1.25.)

FEATURES: The relevant ones are the Tapped for Telescopic Sights, Recoil Pad, and Swivel sling elements in the gun's design. Any other unique characteristics about the weapon would be noted here as well.

Special Weapons

There are numerous guns that, for one reason or another, do not fit exactly into the *Aftermath!* simulation. usually, there is an equivalent mechanic in the game to allow for them. For example, Double-Barreled Shotguns are not exactly Single-Action weapons, but as far as *Aftermath!* is concerned, they handle as if they were, and they are so classified on the Gun Table.

When a unique weapon is encountered, such as the American 180 described on page 81, it is best to do as we have done and write rules dealing specifically with that weapon. They usually justify the trouble, in that they are special cases, giving the user some advantage which should be carefully quantified for the most faithful simulation.

There are also cases where the thing just does not look right! The ENC is not high enough, or the weapon should act differently than its mere physical specs indicate, if it is to perform in the way it should. The answer here is simple: the Gamesmaster alters the Spec Sheet to suit the image he has of the weapon, rather than its (usually brief) outline in the source book used.

How We Figured Things Out

This is in the nature of Designer Notes on the Firearms Simulation, inserted here to make expansions or changes by our readers easier.

The Firearms rules are far and away one of the most detailed elements of the *Aftermath!* system. They represent hundreds of hours of research, design, and testing. There are no reliable figures on how many foot-pounds of bullet energy will make a hole so many inches deep in a human being, or what the chances of stopping effects are on any non-arbitrary scale, though combat ballistics has addressed the problem to some degree. As to asking firearms buffs about handling characteristics of their guns, hoo boy! Our first consultant would give his stamp of approval to a rule (a former cop who still fires on a range for fun) and then our playtester who went to West Point allows as how that rule is wrong. We though we had troubles with the hand-to-hand rules!

In the end, it evolved as you have read it. Here we show you the clanking machinery by which the game figures are derived from the dry numbers of ballistics tables and gun catalogues. Do with them as you will.

BDG—The formula for calculating the BDG is easy. Obtain a Ballistics Table for standard ammunition (they are usually free at your local sporting goods store or gun shop. Many of the source books in the Bibliography include a full set). One of the figures given is the "Muzzle Energy" of the round, in "foot/pounds" of kinetic energy. Divide that figure by 100, and voila! You have the BDG. You will note that we have altered some of the figures directly obtained by this method. 44 Magnum, fired from a 6" barrel on a handgun, has a Muzzle Energy of 1150 ft/lb. This would give a BDG of 12 (1150/100=11.5, nearest, for 12). This is just not high enough to fill the niche in the game filled by 44 Magnum: the big manstopper slug. So we have arbitrarily juiced it up to its current value of 21, to get it that extra D10 of damage.

If it is necessary to figure the Muzzle Energy for some round for which you lack the figure, since we did not include every cartridge known to man in the standard table, the formula for the figure is: ME in ft./lb.= Mass of Bullet in Grains x (Muzzle Velocity in feet per second)² x (2.22 x 10⁻⁶). Remember that there are 480 grains to the ounce. If you need to roughly figure the mass of a slug out, this

formula may help. It is accurate only for the Mass of a Lead musket ball. It will be off the mark for modern bullets which are neither spherical nor necessarily made of lead.

Mass in Grains = 1500 x (Caliber in inches)³.

As with the BDG formula for Muzzle Loaders in the Firearms rules, remember to use the fractional values of the Caliber inches, or you

will get the mass of a cannon ball, not a bullet!

The application of these formulae will allow fine-tuned results, for the detail fiends among you. Likewise, if you decide to include such off-the-wall guns as the British EM-2 experimental Infantry Rifle, with its 28 Caliber load, at a muzzle velocity of 2530 ft/sec, then you can work out the BDG for the gun. (It is roughly 5, or 10 to 12 from a Rifle.)

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PERIODICALS

XXI

Guns Illustrated

An annual digest of articles, data, and advertising. Includes an illustrated section on EVERY major firearm available for public sale in the U.S.

XX2

Gun Digest

An annual publication of great value to the Campaigner who needs more data on firearms. Comprehensive listing of firearms available in the U.S., profusely illustrated.

XX3

Soldier of Fortune

Hairy-chested but informative magazine often dealing with the subject of post-collapse survival. Advertising sections include publishers of many other useful works.



AFTERMATH!

SURVIVE!

An Introductory Scenario



Designers: Bob Charrette
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**Designers: Bob Charrette
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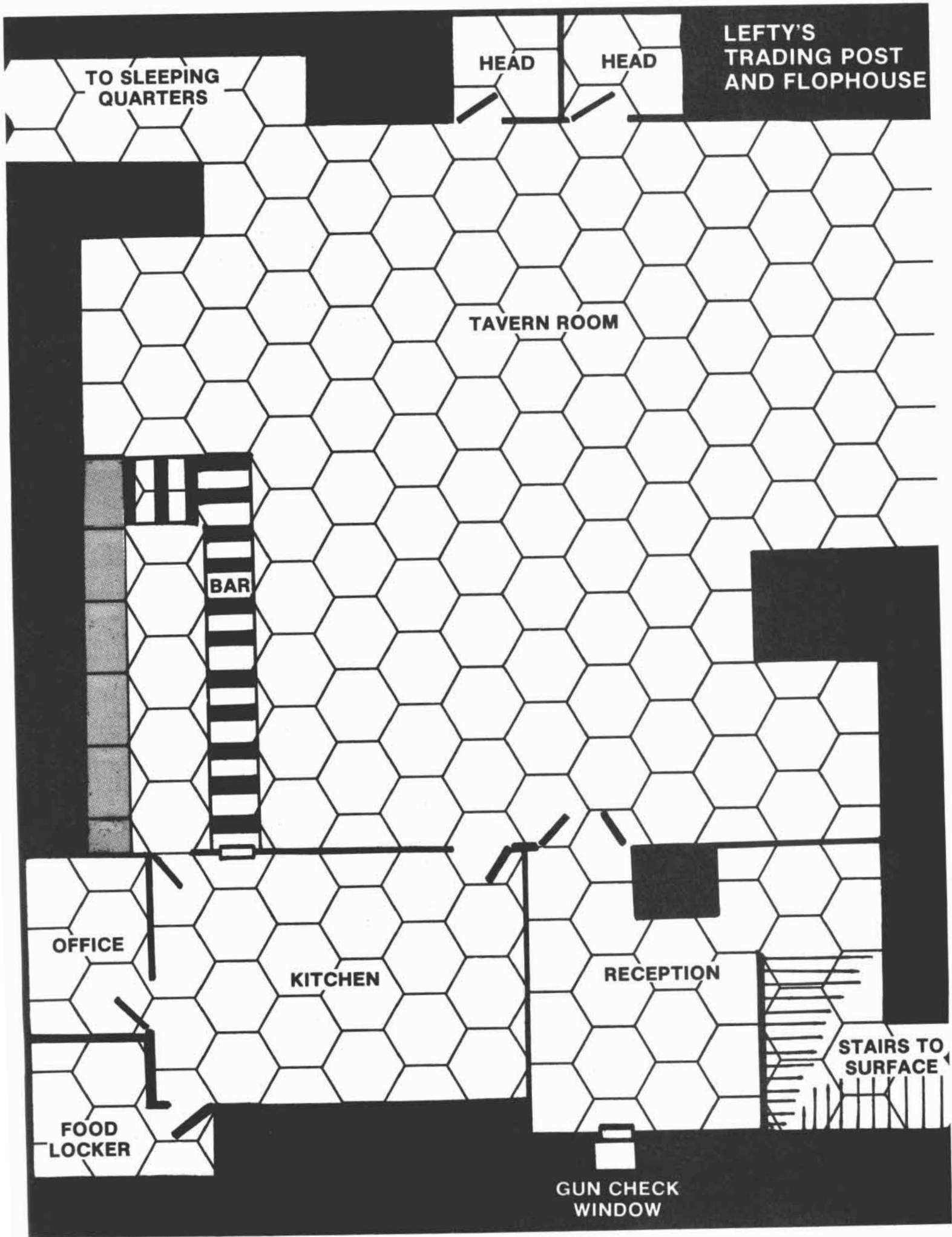
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The designers will attempt to answer any questions regarding the game. Please type the question allowing space for the answer on the same sheet and enclose a stamped, self-addressed envelope. Send the letter in care of Fantasy Games Unlimited.

MAP KEY

| | |
|--|--------------------------------------|
|  | Door |
|  | Door with Push Bar |
|  | Sliding Door |
|  | Elevator Door |
|  | See-thru Door |
|  | Window |
|  | See-thru Section of Wall |
|  | Object in Room |
|  | Counter or Railing |
|  | Stairs |
|  | Ladder |
|  | Significant Line |
|  | Significant Area |
|  | Designation for Non-standard version |

Walls give an indication of their structural strength by the thickness of the line.



SURVIVE!

An Introductory Scenario

This scenario pack is designed to allow players to get the feel of *Aftermath!* movement and combat rules. The background presented is generalized to allow a Gamesmaster to fit it into his own campaign. Beginning characters are assumed.

When the players have finished constructing their characters, the Gamesmaster may inform them that they have met and formed a group since their individual efforts in combing the ruins have not met with much success recently. The sight of their meeting is Lefty's Trading Post and Flophouse.

Lefty's Trading Post and Flophouse

This establishment is well known in the area. It is a haven for ruin-combers and a place to barter found goods for more useful items. Survivor communities in the area make use of it and have an informal agreement to protect the neutrality of the establishment. It is located in the basement of a building which, although the upper stories are gone, remains sound structurally.

Lefty's place allows weary adventurers a place to stay for the night and a meal for a few barter points provided they follow the house rules. All firearms and explosives are checked at the door. Lefty's gun checkroom is well armed and armored. Patrons receive a check which will redeem their weapons when they leave the premises. Ammunition is allowed to remain with customers.

Assault of house employees is cause for immediate ejection and forfeiture of one half (or some equitable division approaching half) of any weapons checked by the rowdy customer.

Brawls are not forbidden but all involved are fined equally for damages. It is custom that brawls are conducted with non-lethal weapons and fists. Any employing lethal force without provocation are subject to the same penalty as for assaulting house personnel. Casualties of brawls forfeit half of checked weapons to the House while the remainder is split between the victors of the brawl and any surviving members of the loser's side of the brawl.

Lefty and his people are known for their fairness in all dealings. This is a necessity for them to continue their business. Characters should have no fear of losing weapons checked at the door. If anyone decided to try to smuggle firearms or explosives inside, he should inform the Gamesmaster of the attempt. The Gamesmaster must determine the success of the attempt and, if unsuccessful, when and how the rule violator is revealed.

The Situation

The player characters are sitting at a table discussing their plans when a group of tough-looking customers enter the tavern room. The new group moves to the bar, and after casually assessing the crowd, approaches the table at which the player characters are seated. Opening the conversation with "This is our table that you scum are slobbering on," the new group proceeds to pick a fight. The player characters have just met Joey White and his gang. They make part of their living by winning brawls in Lefty's Trading Post and Flophouse.

The Gamesmaster can easily escalate the brawl into including most of the patrons on the premises by such means as misthrown punches, hurtling bodies, poorly aimed missiles, etc.

This free-for-all is intended to get players used to the movement and hand-to-hand combat rules.

Notes on Action in the Tavern Room

Remember that this is an eating and drinking establishment so that if a fight starts there is likely to be some



not insignificant amount of spilled food. This will result in areas of Treacherous Ground and can add a little slapstick to the overall sober tone of the situation.

Chairs are all 'small' and tables are all 'medium' if anyone cares to indulge in a game of furniture toss. It is a safe assumption that any occupied table will have dishes and drinking vessels on them if only to make a colorful clatter as a character goes sailing along the top after being thrown by another beligerant.

Replacement fees and damages due to breakage from the brawl are left to the Gamesmaster to adjudicate as befits the value of such items in his campaign.

The Cast THE CAST

Lefty, owner (48)

| WT | WL | STR | DFT | SPD | HLH |
|-----|-----|-----|-----|-----|-----|
| 15 | 8 | 22 | 13 | 18 | 30 |
| BAP | MNA | PCA | CDA | | DRT |
| 11 | 2 | 5 | 2 | | 45 |

Skills: Brawling (20/4); Rifle, Modern (16); Commerce (17); Knife (12)

Armor: Denim shirt (4-9, 21-28, HC); Fatigue pants (10-18, HC); Combat boots (19-20,LL); Vest (4-9,PX)

Weapons: Trench Knife

Notes: Will only get involved in the brawl if necessary to protect his operation or personnel. He keeps a shotgun SG10 in 10 Gauge, behind the bar.

Lefty's Boys

All 4 of these men are Superior Quality Veterans. Their primary Combat Skills are Brawling and Knife. All have Secondary Skills of Rifle and Pistol, Modern and Throwing. Their armor is determined using the Armor Kit Table at the end of the scenario pack.

Joey White's Gang

Joey himself is a Superior Quality character while the bulk of his gang is only Average Quality. All are Trained level with Brawling, Knife, Throwing, and Single Weapon. Each carries Brass Knuckles, a Bowie Knife, and a Cudgel. Their armor kits are determined using the table at the end of the scenario pack.

The gang will break off from combat if in serious danger of losing. If Joey is seriously injured he will initiate lethal combat by drawing his knife or breaking a bottle. The gang will follow suit to support him.

The Gamesmaster should adjust the number of members in the gang to suit the number of player characters. The gang should outnumber them by about 30%. There will be no firearms to be split by the victors if White's gang loses as they cached their weapons nearby to avoid such a possibility.

Other Patrons

The number and nature of other patrons in the tavern room is left to the Gamesmaster. This can prove to be a good way of trying out some ideas. One might be adept in Unarmed Combat or another of the more exotic Hand-to-Hand Combat Skills. Another might be the classic big, dumb guy with a 40 in Strength but only a 2 or 3 in Wit. Be careful not to overdo it because there will probably be more than enough statistics floating around for a first attempt at running this sort of game.

After the Brawl

After the brawl the player characters may spend the rest of the night in peace. The next morning, however, they will discover that one of the regular patrons died (of a terrible disease) during the night. All present in the Tavern the previous night may be presumed to have been exposed. A raid was conducted on the Trading Post's medical supplies and the possible antidote stolen. One of the raiders was shot while fleeing. If questioned he will reveal that Joey White's gang was responsible. He will also reveal their hideout but will die of his wounds before any other useful data can be gotten from him.

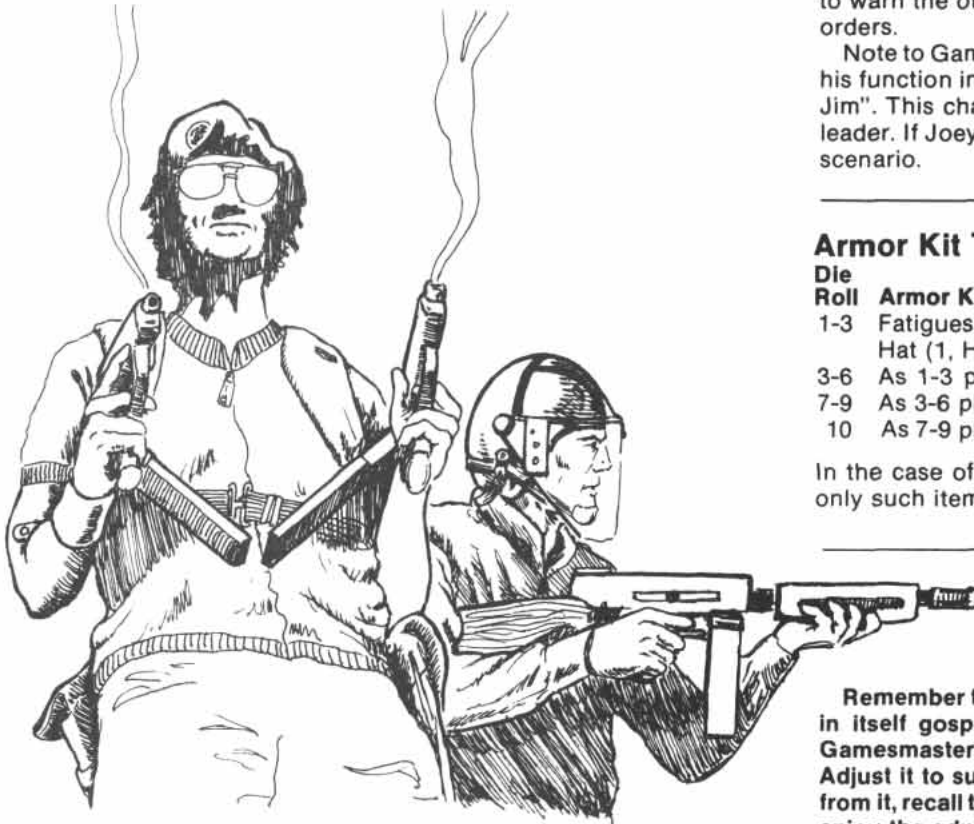
All of Lefty's boys have contracted the disease and some of the player characters are showing early signs. It is up to the player characters to recover the antidote in time to save themselves and, if they are feeling noble, the other patrons of the Trading Post.

The Disease

If the Gamesmaster is feeling kindly, he may allow the player characters to be free from the danger of the disease. He should not tell them this if it is so. Allow them to think that they have it. Later those "early signs" of the disease can be chalked up to paranoia.

The disease is coded:

A — (-) — HLH — 24 hours — 4-12 hours —
Dizziness and Deftness Disfunction.



THE HIDEOUT

The Hideout is an old factory. All exterior doors have been broken open except the loading dock doors which are frozen shut due to lack of power. The machinery present in the main room is considered impervious to bullets. It will take a character 1D3 Actions to clamber to a perch on top of a piece. Movement along the top is on Treacherous Ground. The machinery provides Full Cover when a character is on the floor. It will provide 1 Meter Cover against fire from the top of other machinery and Chest Cover against fire from a character on the floor.

The rubble piles are Treacherous Ground but will provide Prone Cover against opponents on the floor but no cover against any on the machinery.

The survivors of White's gang will be here. There will also be 4 more members of the gang. These are Average Quality Novices. Other statistics are as given earlier. All members of the gang are armed with Rifles R12 except for Joey and one other. Joey uses an M1 rifle as a Primary weapon. Firearms are Secondary weapons for all other members of the gang. The character without the rifle is carrying a Shotgun SG2 in 10 gauge with 00 buck ammunition. Each member of the gang has 10 plus 2D6 rounds of ammunition.

At the start of the player characters' assault and/or negotiations, the gang will be scattered throughout the building. Their exact disposition is left to the Gamesmaster and should be decided before the player characters reach the factory. Once the gang, or its individual members, is alerted to the presence of the adventurers, they will attempt to warn the others and regroup with their leader to receive orders.

Note to Gamesmaster: If Joey has been killed in the brawl, his function in the Hideout will be performed by "his brother Jim". This character exists only to provide the gang with a leader. If Joey survived, Jim does not come into play in this scenario.

Armor Kit Table (1D10)

| Die Roll | Armor Kit |
|----------|---|
| 1-3 | Fatigues (4-18, 21-28, HC); Combat boots (18-20, LL); Hat (1, HC) |
| 3-6 | As 1-3 plus Gloves (29-30, LL) Steel Helmet (1, SP) |
| 7-9 | As 3-6 plus Jacket (4-9, 21-28, SY) |
| 10 | As 7-9 plus Helmet (1-2, MP); Flak Vest (4-12, LP-MS) |

In the case of headgear assume the best protection is the only such item that the character has with him.

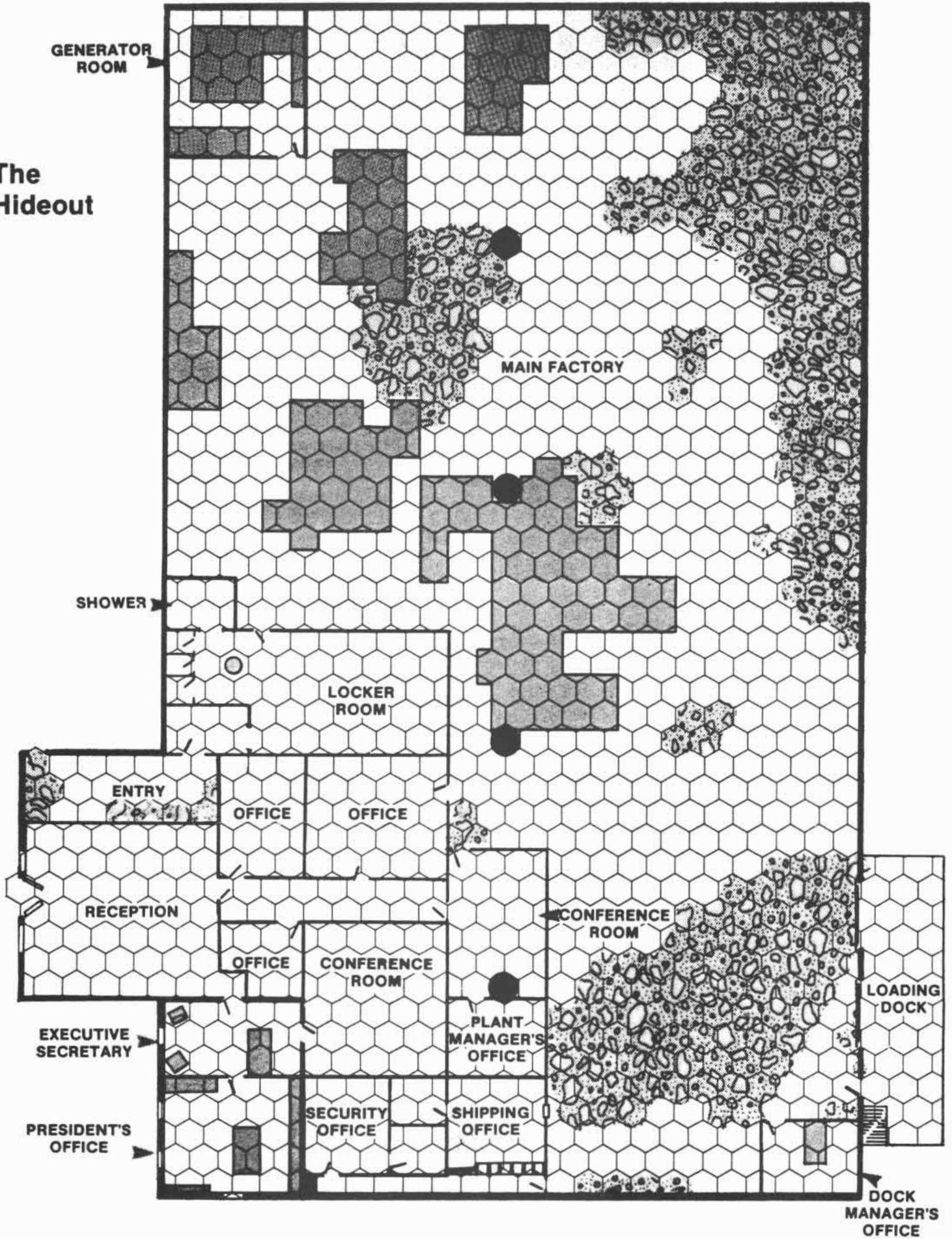
Closing Remarks

Remember that this scenario pack is for your aid and is not in itself gospel. It was written to allow room for you as Gamesmaster to exercise your own creativity and ingenuity. Adjust it to suit your own campaign. As you add or subtract from it, recall that balance is needed if everyone involved is to enjoy the adventure.

Character and Object Markers

To use these markers, cut individual markers free and store in a container until needed. These markers are provided as a convenience. If you have miniature figures to use go right ahead as they will surely add to enjoyment. Use as many markers as you wish and/or need to represent the situation.

The Hideout



AFTERMATH

Player
Character

Age Group
Size

Base Age
Bulk

Actual Age
Looks

Recog. Factor
Personal ENC

| Attributes | Allocated | Permanent | Current | AST | CST |
|------------|-----------|-----------|---------|-----|-----|
| WT | | | | | |
| WL | | | | | |
| STR | | | | | |
| DFT | | | | | |
| SPD | | | | | |
| HLH | | | | | |

| |
|---|
| Learning rate (WT Group) |
| Freely Improvable Skills (WT & WL) |
| STR Group |
| Maximum Number of Actions (DFTGrp) |
| Base Action Phase (SPD AST) |
| Phases Consumed in Action (BAP/MNA, d) |
| Combat Dodge Ability (DFT & SPD)/20,n) |

| |
|---|
| Healing Rate (HLH Group) |
| Shock Factor (10+ Healing Rate) |
| Damage Resistance Total (HLH + STR + WL) |
| Damage Taken |
| Lethal _____ |
| Subdual _____ |
| Total _____ |
| Critical damage location amount |

Talents (15 + 2D6 = ___ points to allocate)

| | Base | Allocated | Current |
|---------------|------|-----------|---------|
| Charismatic | ___ | ___ | ___ |
| Combative | ___ | ___ | ___ |
| Communicative | ___ | ___ | ___ |
| Esthetic | ___ | ___ | ___ |
| Mechanical | ___ | ___ | ___ |
| Natural | ___ | ___ | ___ |
| Scientific | ___ | ___ | ___ |

"Changed"

Encumbrance
Maximum value carried with status
unencumbered partially Enc. fully Enc.

In Pack or Bag (Capacity _____)

On Belt

| Loc | Item | ENC |
|-----|------|-----|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

Left Slung

Right Slung

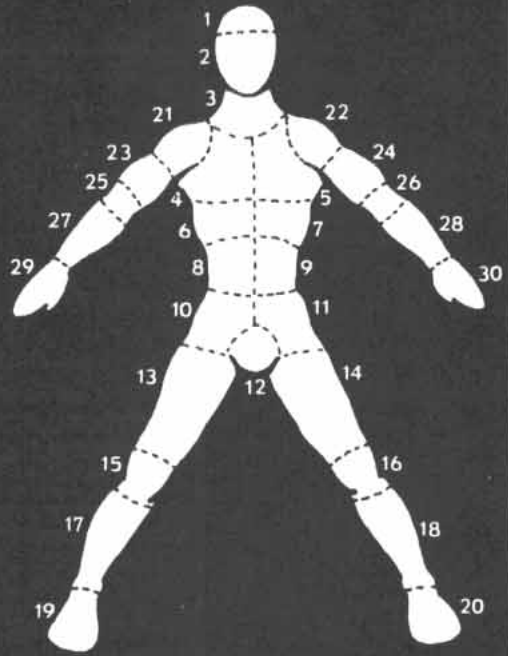
Left Hand

Right Hand

Pockets

| | |
|---|--|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |

Enter Armor Value on Location covered



Item Coverage Format Code AV ENC

| Item | Coverage | Format | Code | AV | ENC |
|---------------------------|----------|--------|------|----|-----|
| Average Armor Value _____ | | | | | |

Skills

| Skills | SCORE | BCS |
|--------------------|-------|-----|
| Off-hand Dexterity | _____ | |
| Brawling | | |
| Survival, _____ | | |

Guns

| Weapon | Format | Action | Magazine Capacity | Caliber (BDG) | ENC |
|--------|--------|--------|-------------------|---------------|-----|
| | | | | | |

Weapons

| Type | length | Format | Survival Value | WDM | ENC |
|------|--------|--------|----------------|-----|-----|
| | | | | | |

| ENC Carried | Worn | Total |
|-------------|-------|---------------|
| _____ | _____ | _____ = _____ |

Story of _____
Character's Name

| Rep | current merit total | | current Rep total | |
|------------------------------------|---------------------|----------------|-------------------|--|
| | Positive Merit | Negative Merit | Overall Rating | |
| Areas | | | | |
| Fighter, HTH , missile , gun | | | | |
| Personal Bravery | | | | |
| Survival, self , others | | | | |
| Hunter, HTH , missile , gun | | | | |
| Competence nontech skill | | | | |
| tech skill | | | | |
| high tech skill | | | | |
| Other | | | | |
| Gear | ENC | | ENC | |
| matches (3D6) | .01/5 | | | |
| flint & steel (1D3 flint) | .01 | | | |
| chalk (1D3) | .01 | | | |
| snares (2D3) | .05 | | | |
| magnifying lens | .01 | | | |
| compass | .1 | | | |
| jackknife | .1 | | | |
| 1 l. canteen | .2(full) | | | |
| "space" blanket | .1 | | | |

AFTERMATH

Player
Character

Age Group
Size

Base Age
Bulk

Actual Age
Looks

Recog. Factor
Personal ENC

| Attribute | Allocated | Permanent | Current | AST | CST |
|-----------|-----------|-----------|---------|-----|-----|
| WT | | | | | |
| WL | | | | | |
| STR | | | | | |
| DFT | | | | | |
| SPD | | | | | |
| HLH | | | | | |

| |
|---|
| Learning rate (WT Group) |
| Freely Improvable Skills (WT & WL) |
| STR Group |
| Maximum Number of Actions DFTGrp |
| Base Action Phase (SPD AST) |
| Phases Consumed in Action (BAP/MNA, d) |
| Combat Dodge Ability (DFT & SPD/20, n) |

| |
|---|
| Healing Rate (HLH Group) |
| Shock Factor (10 * Healing Rate) |
| Damage Resistance Total (HLH * % STR * % WL) |
| Damage Taken |
| Lethal: _____ |
| Subdual: _____ |
| Total: _____ |
| Critical damage location amount |

| | | | |
|--|------|-----------|---------|
| Talents (15 + 2D6 = ___ points to allocate) | | | |
| | Base | Allocated | Current |
| Charismatic | ___ | ___ | ___ |
| Combative | ___ | ___ | ___ |
| Communicative | ___ | ___ | ___ |
| Esthetic | ___ | ___ | ___ |
| Mechanical | ___ | ___ | ___ |
| Natural | ___ | ___ | ___ |
| Scientific | ___ | ___ | ___ |

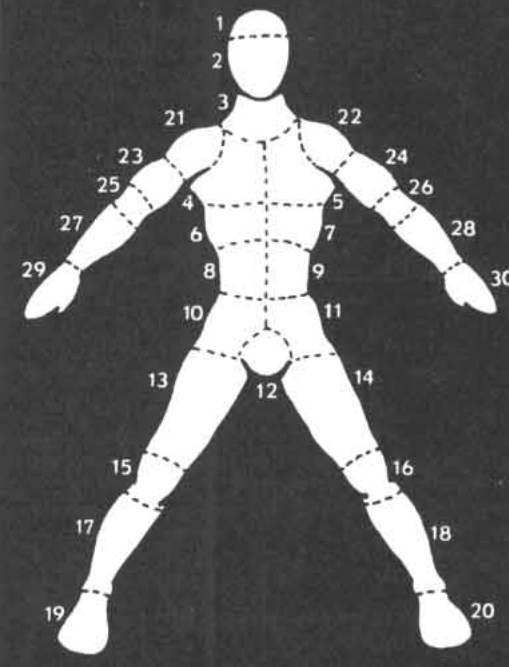
"Changed"

Encumbrance
Maximum value carried with status
unencumbered partially Enc. fully Enc.

In Pack or Bag (Capacity _____)

- On Belt**
- | Loc | Item | ENC |
|-----|------|-----|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
- Left Slung**
- Right Slung**
- Left Hand**
- Right Hand**
- Pockets**
- | | |
|---|--|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |

Enter Armor Value on Location covered



| Item | Coverage | Format | Code | AV | ENC |
|------|----------|--------|------|----|-----|
|------|----------|--------|------|----|-----|

| | | | | | |
|---------------------------|--|--|--|--|--|
| | | | | | |
| Average Armor Value _____ | | | | | |

Skills

| Skills | SCORE | BCS |
|--------------------|-------|-----|
| Off-hand Dexterity | _____ | |
| Brawling | | |
| Survival, _____ | | |

Guns

| Weapon | Format | Action | Magazine Capacity | Caliber (BDG) | ENC |
|--------|--------|--------|-------------------|---------------|-----|
|--------|--------|--------|-------------------|---------------|-----|

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

Weapons

| Type | length | Format | Survival Value | WDM | ENC |
|------|--------|--------|----------------|-----|-----|
|------|--------|--------|----------------|-----|-----|

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

| ENC Carried | Worn | Total |
|-------------|-------|-------|
| _____ | _____ | _____ |
| = | | |

Story of _____

Character's Name _____

Rep

current merit total

current Rep total

| Areas | Positive Merit | Negative Merit | Overall Rating |
|------------------------------------|----------------|----------------|----------------|
| Fighter, HTH , missile , gun | | | |
| Personal Bravery | | | |
| Survival, self , others | | | |
| Hunter, HTH , missile , gun | | | |
| Competence nontech skill | | | |
| tech skill | | | |
| high tech skill | | | |
| Other | | | |

Gear

ENC

ENC

| | |
|---------------------------|----------|
| matches (3D6) | .01/5 |
| flint & steel (1D3 flint) | .01 |
| chalk (1D3) | .01 |
| snares (2D3) | .05 |
| magnifying lens | .01 |
| compass | .1 |
| jackknife | .1 |
| 1 L canteen | .2(full) |
| "space" blanket | .1 |

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Recog. Factor
Personal ENC

| Attribute | Allocated | Permanent | Current | AST | CST |
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| STR | | | | | |
| DFT | | | | | |
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| HLH | | | | | |

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|---|
| Learning rate <small>(WT Group)</small> |
| Freely Improvable Skills <small>(WT & WL)</small> |
| STR Group |
| Maximum Number of Actions <small>DFTGrp</small> |
| Base Action Phase <small>(SPD AST)</small> |
| Phases Consumed in Action <small>((BAP/MNA).d)</small> |
| Combat Dodge Ability <small>((DFT & SPD)/20.n)</small> |

| |
|--|
| Healing Rate <small>(HLH Group)</small> |
| Shock Factor <small>(10+ Healing Rate)</small> |
| Damage Resistance Total <small>(HLH + 1/2 STR + 1/2 WL)</small> |
| Damage Taken |
| Lethal _____ |
| Subdual _____ |
| Total _____ |
| Critical damage location amount |

Talents (15 + 2D6 = ___ points to allocate)

| | Base | Allocated | Current |
|---------------|------|-----------|---------|
| Charismatic | ___ | ___ | ___ |
| Combative | ___ | ___ | ___ |
| Communicative | ___ | ___ | ___ |
| Esthetic | ___ | ___ | ___ |
| Mechanical | ___ | ___ | ___ |
| Natural | ___ | ___ | ___ |
| Scientific | ___ | ___ | ___ |

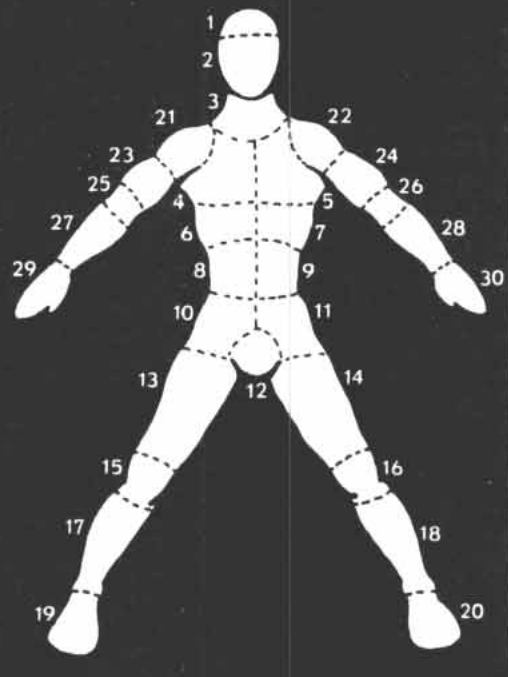
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- Left Slung
- Right Slung
- Left Hand
- Right Hand
- Pockets
- | | |
|---|--|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |

Enter Armor Value on Location covered



| Item | Coverage | Format | Code | AV | ENC |
|------|----------|--------|------|----|-----|
| | | | | | |

Average Armor Value _____

Skills

Off-hand Dexterity _____

Brawling _____

Survival, _____

SCORE

BCS

Guns

| Weapon | Format | Action | Magazine Capacity | Caliber (BDG) | ENC |
|--------|--------|--------|-------------------|---------------|-----|
| | | | | | |

Weapons

| Type | length | Format | Survival Value | WDM | ENC |
|------|--------|--------|----------------|-----|-----|
| | | | | | |

| ENC Carried | Worn | Total |
|-------------|-------|-------|
| _____ | _____ | _____ |

Story of _____

Character's Name _____

Rep

current merit total

current Rep total

Areas

Positive
Merit

Negative
Merit

Overall
Rating

Fighter, HTH
 , missile
 , gun

Personal Bravery

Survival, self
 , others

Hunter, HTH
 , missile
 , gun

Competence
nontech skill

tech skill

high tech skill

Other

Gear

ENC

ENC

matches (3D6) .01/5
flint & steel (1D3 flint) .01
chalk (1D3) .01
snares (2D3) .05
magnifying lens .01
compass .1
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1 L canteen .2(full)
"space" blanket .1