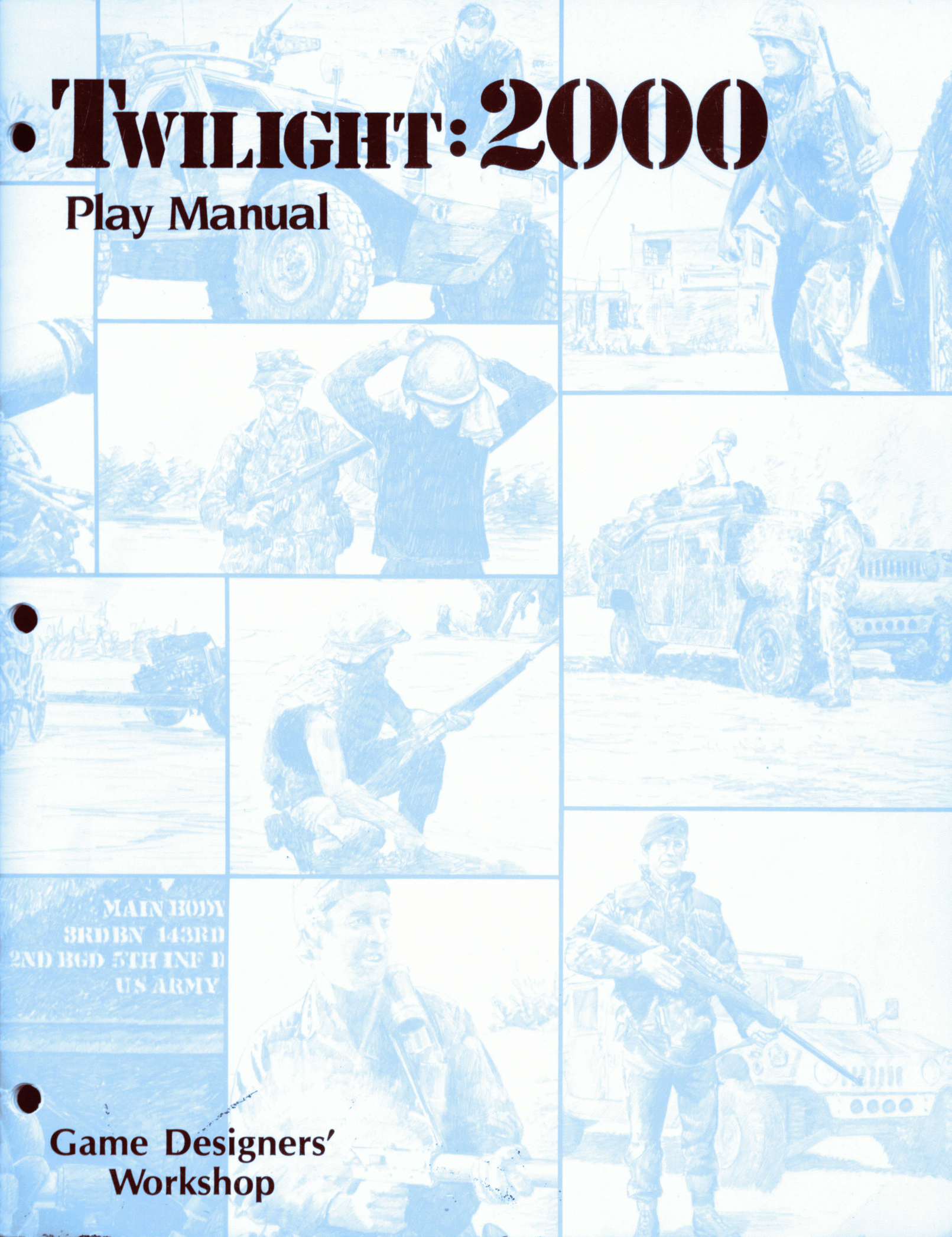
TWILIGHT: 2000

Play Manual



Game Designers' Workshop

TWILIGHT: 2000

Play Manual

Contents

Introduction 2
- A Battered World 2
- Playing the Game 2
- The Referee 2
- Required Materials 3
- Die-Rolling Conventions 3
- Weights and Measures 3
- A Note on Gender 3
- Players 3

Character Generation 4
- Basic Attributes 4
- Other Physical Characteristics 5
- Military Experience 5
- Coolness under Fire 5
- Reds 6
- Age 6
- Rank 6
- Army, Nationality, and Language 6
- Service Branch and Specialty 7
- Obtaining Skills 7
- Base Hit Numbers 8
- Body Combat Damage 8
- Equipment 8

Skills and Attributes: Part One 10

Time and Travel 11
- The Day 11
- Encounters 11
- Combat Turns 11
- Travel 11
- Terrain and Travel 12
- Fatigue 12

Upkeep 14
- Food Requirements 14
- Foraging 14
- Fishing 14
- Hunting 15
- Fuel 15
- Vehicle Maintenance 15
- Animal Maintenance 16

Combat, Part One 17
- The Combat Turn 17
- Movement 17
- Actions 18
- Coolness under Fire 18
- Order of Attacks 19
- Body Combat 19
- Melee Combat 20
- Fire Combat 20
- Direct Fire 21
- Indirect Fire 23
- Thrown Weapons 24
- Hand Grenades 24
- Direct Fire Deviation 24
- Anti-Tank Missiles 24
- Damage 24

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INTRODUCTION

The year is 2000 AD. For five years the armies of the world have fought back and forth across an increasingly devastated planet. Chemical weapons, biological agents, tactical and strategic nuclear weapons, every horror from a technological cornucopia of destruction was used. And in the wake of war came famine and plague, until well over half of the planet's population had been carried away.

But the war goes on.

Most civilian governments have collapsed under the burden of massive casualties and a total breakdown of the communication and transportation systems. Only the military has survived as a cohesive force. For many soldiers, particularly those out-side their own national borders, surrounded by a foreign and increasingly hostile population; the army has become their country.

But even the pressures of unit loyalty and wartime discipline have not been sufficient to prevent the gradual disintegration of the armed forces. The countryside is infested with bands of murderous marauders, made up largely of deserters, preying on soldier and civilian with equal ferocity.

In the spring of the year 2000, the German 3rd Army launched its final offensive against Poland. It was postponed due to late rains—the soldiers were delayed in getting their fields planted. The objective was to clear the Baltic coast of Polish and Soviet forces and thus gain control of the plentiful Baltic fishing and the Vistula River barge traffic.

When the offensive finally got under way it was spearhead-ed by the U.S. Eleventh Corps, because the U.S. troops were less tied to their garrison areas than were the Germans. The initial drives were successful, with two U.S. divisions breaking loose and conducting deep penetration raids into the enemy rear area. While the 8th Division (Mechanized) headed for the port of Kalilininigrad and a link-up with the Free Latvian Army, the 5th Division (Mechanized) headed southeast toward Lodz. Then, everything started to come apart.

The last battle-worthy remnants of the Polish army counterattacked, and battered themselves to pieces against the NATO troops. When the dust had settled, though, the last heavy equipment of Eleventh Corps was burning junk. The remnants of four Soviet armies went on the offensive against the base camp areas of 3rd German Army, and German troops began drifting west to bolster the defenses of their homes. Finally, two additional Soviet armies, the 4th Guards Tank and 22nd Cavalry, rolled across the Polish frontier from Byelorussia and hit the U.S. 5th Division. With a combined strength of 21,000 men and almost a hundred modern tanks, the two Soviet armies plowed 5th Division under near the Polish city of Kalisz, 200 kilometers southwest of the ruins of Warsaw. As division headquarters was being overrun, the CO's last radio message was, "You're on your own. Good luck."

A BATTERED WORLD

Twilight: 2000 is a role-playing game dealing with survival in a war-ravaged world in the near future. Players take on the parts of soldiers cut off from home and attempting to survive in a hostile environment. Initially, characters will represent survivors of the U.S. 5th Division (Mechanized), all but wiped out in central Poland. However, as the game progresses other characters from different nationalities and backgrounds may be added to the game.

The rules of the game allow the players to chart their own courses. Since they are members of a military unit, they will be reasonably well equipped and proficient at combat. They can attempt to survive by taking what they need by force, or they can attempt to befriend the local civilians, and obtain the goods they need by trade or in return for assistance. They can become a guerrilla force, attacking Soviet and Polish bases and supply convoys, become marauders attacking anyone with something of value, or head for one of the "free cities" that offer haven to any man and allegiance to no government. The choices are up to the players.

PLAYING THE GAME

Twilight: 2000 usually requires one referee and several players. Characters' chances for survival are greater if several of them pool their resources and talents and work as a team. However, it is possible to play with only one player.

THE REFEREE

The purpose of a referee is to describe the world the players are traveling and adventuring in. The referee plays the role of the non-player characters (NPCs) encountered along the way and adjudicates all conflicts and battles. It is his responsibility to keep the game exciting for the players. This requires several special qualities.

First, the referee must be imaginative. The world of *Twilight: 2000* is our own world, but changed dramatically. Much of the excitement of the game lies in those very changes. Since the world is still in the process of adjusting to its altered state, the village across the next hill should always be an unknown quantity. A wealth of background material is provided in the referee's manual, but it should be viewed only as a starting point. The referee should not be afraid to depart from it when he feels the need to; this package provides guidelines to help the referee get started, but it's his world to create and elaborate as he sees fit.

Second, the referee should have the ability to improvise. While we have attempted to make this game reasonably complete, it has also been necessary to avoid detailing a great many things just to keep it usable. After all, if we included tables for things as detailed as what a player might find going through the dresser of a militia captain, and covered everything in that detail, the referee would spend most of his time trying to find the correct table l Instead, the rules supply a broad general framework within which the referee has to improvise.

Finally, the referee must have a sense of proportion. Rewards should be proportionate to the risks the players take, neither too much nor too little. A common mistake beginning referees make is to keep player interest up by handing out very large rewards for completing the simplest tasks. Players rapidly accumulate money and equipment and come to see this as the sole purpose in the "lives" of their characters. Soon, they no longer find the game a challenge and lose interest. Alternatively, some referees delight in creating inescapable death traps for their players and feel a sense of achievement in wiping parties out. Neither approach makes for an enjoyable game in the long run.

A good referee should so structure the players' adventures that they are always aware of being extremely close to danger and destruction. Success in a task should not mean sudden security, but may mean a slightly greater margin of safety in the future. In other cases, success may be as simple a thing

as survival. The world of *Twilight: 2000* is a harsh one, but not hopeless. The assumption of the game is that players who exercise good judgment and cunning, and who make wise use of their personal strengths, can survive.

REQUIRED MATERIALS

This book details the basic mechanical rules of character generation and game play, and should be read by players and referee; during play, it should usually be in the ref's hands, since they will most often have to refer to it. The referee's manual provides background information, rules on encounters and their resolution, and suggestions on getting started; it should usually be in the players' hands—in fact, there are portions of it which the players should not be allowed to see.

The character generation and record sheets and the vehicle record sheets are used to store information about the player characters and their vehicles. The referee should make several photocopies of them before the game begins, and permission is here specifically granted to photocopy these sheets.

Players and referees need only supply paper and pencils for taking notes and a pack of ordinary playing cards for the referee to use in generating non-player characters (as explained in the referee's manual).

DIE-ROLLING CONVENTIONS

Die-rolls are used frequently in these rules for many purposes. A number of conventions and symbols are used for brevity and ease of comprehension; these are defined below.

This game includes one ten-sided die and four six-sided dice, referred to as D 1 0 and D6, respectively. If one die is to be rolled, it is called (for example) 1 D6; 2D6 means that two six-sided dice should be rolled and added together (for a result from 2 to 1 2); 3D6 means three dice, and so on. (N)D6 means that a number of dice equal to N should be rolled. 1 D1Ox1 D10 means that the roll of one ten-sided die is multiplied by the roll of another one.

Unless specifically stated otherwise, a roll of 0 on a D10 is treated as 10 (that is, the result on a D1O is from 1 to 10). However, see percentage rolls below.

Less Than and Greater Than: The symbol > means "greater than" and < means "less than"; similarly, ~ means "greater than or equal to" and _ means "less than or equal to". For example, in these rules, "if 2D1 0 ~ 8" means that the player should roll 2D10 and determine if the result is 8 or higher.

Rounding-Off: Fractions will sometimes have to be rounded off to whole numbers. If the number is to be rounded up (5.5 becomes 6), the printed value will have a line above it; for example, 2D10/7 If the number is to be rounded down (5.5 becomes 5), the printed value will have a line below it.

Percentage Rolls: Frequently, random numbers between 1 and 1 00 must be generated. Two Dl Os are used for this purpose, one of them representing the tens digit and the other representing the ones digit (the player must specify which is which before rolling). When used for this purpose, the two dice together are called a D100. Unlike the usual D1O roll, 0 is counted as 0; however, a roll of 00 (0 on both dice) is counted as 1 00. For example, a roll of 6 on the ones die and 0 on the tens die is 6; a roll of 6 on the tens die and 0 on the ones die is 60.

The most common use of the D100 is for a percentage roll: if an event has a 27% chance of success, for example, the player rolls D100 and succeeds on a roll of 27.

WEIGHTS AND MEASURES

All weights and measures in the rules are given under the metric system. There are only six units of metric measure used:

Millimeter (mm): One thousandth of a meter. There are about 25 millimeters in an inch.

Meter (m): Roughly one yard.

Kilometer (km or "klick"): 1,000 meters, roughly two-thirds of a mile.

Liter (l): Roughly a quart.

KIlogram (kg or "kilo"): Roughly two pounds.

Ton (t): 1,000 kilograms, about 10% more than a U.S. ton.

A NOTE ON GENDER

Characters may be either male or female, as illustrated by the examples in the rules. For readability, however, the rules themselves exclusively use male pronouns. Use of the pronouns he, his, or him apply to all characters, regardless of gender.

PLAYERS

The players are the heart of *Twilight: 2000.* While the referee creates the world, it is the players who travel through it and, by their actions, ultimately change it. The course of the game is a description of the adventures of a band of men and women attempting to survive and perhaps strike a blow for their beliefs. The game will take on more interest if the players seriously attempt to make their characters "come alive". When playing, they should keep in mind who their characters are and try to act accordingly. The first step, however, is to find out who the characters are, the subject of the next chapter.

Character Generation

There really weren't many of us left after Kalisz. I remember that Carson, the Major's driver, found some paint and stenciled a sign he stuck in the ground next to where we had the Hum-Vee parked.

Headquarters
3rd Battalion, 1 43rd Infantry
2nd Brigade
5th Infantry Division (Mechanized)
United States Army

When Gordon saw it, she borrowed the paint and stencils and painted the same thing on a sign we put next to our other vehicle, the old LA V-25, except instead of headquarters she painted "Main Body - The Major laughed when he saw it, but made us get rid of both of them. Security.

There was a time when none of us laughed much at all, but now we laugh again. What the hell, we're still alive.

Characters are the focus of Twilight: 2000; they are the alter egos of the players and all activity centers on them. Each character is a person within the game, interacting with other player characters (those controlled by other players) and non-player characters (controlled by the referee).

Characters are described in the game using their physical and mental attributes, their skills, and a number of other facts. All these facts are derived by a combination of die rolls and player choices. The following rules explain this process of character generation.

In order to make the long process of character generation easier, several character generation worksheets are included with this game. The worksheet is largely self-explanatory, but occasional reference to the rules is necessary, at least for the first few characters. A player should read the rules as he generates his character, filling in the appropriate blanks of the worksheet as he goes. Once the character is completely generated, the player should transfer the information in the unshaded portions of the worksheet to a character record sheet. The record sheet is a permanent record; the worksheet may be discarded. (Important: remember to save at least one blank copy of each sheet to photocopy.)

BASIC ATTRIBUTES

Each character is described, in the simplest of terms, by six basic attributes: fitness, agility, constitution, stature, intelligence, education.

Each attribute is determined by rolling 4D6 and subtracting 4 from the total. This gives a range of from 0 to 20 for an at-tribute. Any result of 0 may be rolled over.

Meaning of Attributes:

Fitness: A measure of the character's strength in proportion to his size. Together with stature, it is used to determine his actual strength. Fitness is not used after that, and strength replaces it as a basic attribute.

Agility: A measure of the character's coordination and nimbleness.

Constitution: Health and physical stamina. This affects the character's resistance to disease and also influences his hit capacity.

Stature: The physical size of the character. A large stature indicates great physical bulk. Stature helps to determine strength, but a character may be large and fat but relatively weak, or may be small and wiry but very strong. Stature also affects hit capacity and damage inflicted in body combat.

Intelligence: A measure of the ability of the character to per-form abstract reasoning. Intelligence primarily affects the ability of the character to learn; it is not the same thing as common sense. (How much common sense the character has is deter-mined by the actions of the player himself.)

Education: A measure of the extent of a character's prior education. All characters are assumed to have more than a 3rd grade education. A character's education number is the number of additional years of schooling he has attained. Thus, an education level of 9 or above indicates a high school graduate, 13 or above a college graduate, 1 5 or above a master's degree, and 18 or above a PhD.

Favoring Attributes: Before a player rolls any attributes, he may decide to favor one or more of them. A player may favor up to three attributes, but for each attribute favored he must slight another attribute. No single attribute may be favored or slighted more than once.

A favored attribute is adjusted upward to halfway between the actual results of the attribute die roll and 20, rounding fractions down [= (4D6 + 16)/2]. A slighted attribute is adjusted downward to halfway between the actual result of the die roll and zero, rounding fractions up [= (4D6 - 4)/2]

For example, Monk has decided to favor fitness and slight agility. He rolls(18—4)= l4forfitnessand (13—4)=9 for agility. Fitness is adjusted upward to 17 while agility is adjusted downward to 5.

Total: The total of all six attributes is used later in the character generation process, so it should be added up now.

Strength: Strength is the average of fitness and stature, and is determined by adding the two attributes and dividing the total by two, rounding fractions down.

Abbreviations: The six attributes of strength, agility, constitution, stature, intelligence, and education are used throughout these rules. For brevity, they will be abbreviated from now on as **STR, AGL, CON, STA, INT,** and **EDU**.

OTHER PHYSICAL CHARACTERISTICS

Hit Capacity: Hit capacity is a measure of the amount of damage (hits or hit points) a character can take before suffering serious injury. Hit points can be suffered in any of seven different parts of the body: left leg, right leg, left arm, right arm, head, abdomen, and chest. The hit capacity of a character's head is equal to his CON. The hit capacity of his chest is equal to the sum of his STR, CON, and STA. Each of his other body parts has a hit capacity equal to the sum of his CON and STA.

Weight: A character's weight in kilograms is equal to forty plus four times his STA. Thus, a character with a STA of 12 would weigh 88 kilos (roughly 1 75 pounds).

Load: A character can carry a considerable amount of equipment cross-country, but there is a limit. A character may carry, without being heavily burdened, weight in kilograms equal to the sum of his STR, CON, and STA. This is called his normal load. A character may carry up to twice this amount but is burdened and has his movement reduced, as explained in later rules. A character may lift loads up to four times this amount and carry them short distances (50 to 1 00 meters).

Throw Range: The distance (in meters) a character can throw a 1 -kilogram weight accurately is called his throw range. Throw range is twice the character's STR.

MILITARY EXPERIENCE

As a kid I saw John Wayne in The Sands of Iwo Jima and Dan Daley in What Price Glory on the late show. I guess that's how I always pictured first sergeants; great big men. But our "top Anderson, is a little guy and kind of quiet. It seems like he 's been in forever; if we had dress uniforms, he 'd probably have hash marks all the way up his sleeve and across his shoulder blades.

One night he got talking about a p/ace in Vietnam he called "Happy Valley" and it sounded even worse than all this. I said so, and he just shook his head. "Monk," he said, "The A Shau was just one valley. This is everywhere."

Military experience represents the length of time the character has spent in combat and determines the amount of skill he has picked up while in the army. Because of the way experience is determined, a character who has rolled high attributes will have a low military experience, and a character with low at-tributes will have a high military experience. This is an intentional if arbitrary way to balance the luck of character generation. Military experience also affects several other attributes of the character, explained below.

Military Experience Base: This is a number roughly representing experience. It is determined by subtracting the basic attribute total from 1 20 and dividing the result by 7, rounding down.

Time In Combat: Time spent in combat, in months, is determined by rolling a number of D6 equal to the military experience base.

For example, Monk has an attribute total of 72, which subtracted from 1 20 results in 48. Divided by seven and rounding fractions down means that Monk rolls 6D6 for months in combat and obtains a 24. He has been in combat for 24 months.

Note that it is possible for a character to have been in combat for longer than the length of the war, although this is unlikely. Characters with more that 60 months in combat are "old timers", career soldiers who saw active duty in the numerous brush-fire wars and police actions that preceded full-scale war. Some officers and senior NCOs may even have combat experience reaching back as far as Vietnam.

COOLNESS UNDER FIRE

We've been in some tight spots now and then, but for some reason I've never lost my head. I don 't know why. Wood, who used to be a pre-med student and is the closest thing we have to a medic, says my glands produce too much noradrenaline. He says that's why I don 't panic during the fireworks but shake like a leaf when it's all over. Well, I've seen people panic under fire. They don't shake afterwards; mostly they lie very, very still. I think I'll keep my glands the way they are.

Coolness under fire is largely a function of experience in combat, and affects how well a character functions in the stress of a life-threatening situation. To determine coolness, divide the time in combat by 1 0 and drop fractions. Roll 1 D6 and add the result to the total obtained. Now subtract the total from 1 0. The resulting number is the coolness under fire rating of the character. A low coolness rating is better than a high one. All negative results are treated as a coolness rating of zero.

Example: Monk has served 24 months in combat. Dividing this by 1 0 and dropping fractions results in a 2. He rolls 1 D6 and obtains a 6 for a total of 8. Subtracting this from 1 0 yields a coolness rating of 2, a very good rating.

RADS

We accidentally moved through an old impact crater once. Didn't bother most of us, but Anderson and the Major both got sick for about a day. Not super sick, but nausea and weakness. Wood says there 's nothing to worry about because none of us have anywhere near a bad dose, but we've got to be careful, because exposure is cumulative. The Major and Anderson have been here from the start and have just picked up more than the rest of us.

Since nuclear weapons were used earlier in the war, some exposure to radiation is unavoidable. Rads are a measure of the extent of exposure a character has suffered. (No character will begin the game with serious or lethal exposure levels, for obvious reasons.) The number of reds a character has been exposed to should influence his willingness to take risks in potentially contaminated areas.

To determine the exposure level of a character in rads, roll a number of D6 equal to his military experience base.

AGE

Most of us are pretty young, all but the Major and Anderson. The Major once said this was a young man 'a war, and Anderson said, "So name one that wasn't. We call him "Sergeant Anderson, United States Army, Retired"~ He must be pushing fifty. I found out he really was retired but got back in when all this started. He says he got reactivated, but I don't think they do that. I think he pulled some strings to get back in. Other than that, though, he seems reasonably sane.

Age helps players to visualize their characters as actual people rather than numbers on a piece of paper. To determine age in years, divide the number of months in combat by 1 2, rounding fractions up. Add the result to the character's EDU, plus 8. If the character has 49 or fewer months in combat, add 1D6 to this. If he has 50 or more months in combat, add 2D6 instead. If he has 60 or more months in combat, add 3D6. If he has 70 or more months in combat, add 4D6.

For example, Monk has been in combat for 24 months and has an EDU of 8. 24 divided by 1 2 equals 2. He adds this to 8 (EDU) and 8 (constant) for a result of 1 8. He then rolls 1 D6 and obtains a 2, making his age 20.

Anderson has been in combat a total of 73 months and has an EDU of 9. 73 divided by 1 2 equals 6.08, which rounds up to 7. He adds this to 9 (EDU) and 8 (constant) for a result of 24. He then rolls 4D6 and obtains a 22, making his age 46.

RANK

Back at Kalisz, when everything was falling apart and there were Soviet tanks all over the place, this crazy artillery captain comes running up to the LA V-25 and tells us he 's taking us under command and we 're going to ride shotgun for his ammo carriers. In a pig's eye we were! Just when things looked like they might get ugly the Major got back from the QM depot with our rations, and that was the end of that. That captain wanted our LAV big time, but the Major had the rank and that's all she wrote.

Although player characters are under no game obligation to obey other characters of higher rank, rank can be important when dealing with non-player characters.

First, determine whether the character is an officer or enlisted man. Roll 2D6 and add 1 6. If the result is less than or equal to the sum of the character's INT and EDU, he is an officer. (Note that characters with a combined INT and EDU total of 1 7 or less cannot be officers.)

Next, determine the character's rank. Divide his time in combat by ten, rounding all fractions down. Roll 1 D6. If the result is 1 or 2, subtract one from the total. If the result is 5 or 6, add one to the total. Consult the rank table to determine the character's rank.

Example: Monk has an EDU of 8 and an INT of 11 for a total of 19. He rolls 2D6 for (5 + 16)= 21; he is not an officer. He has served 24 months in combat. Divided by 1 0 and rounding down, this results in 2. He rolls 1 D6 and gets a 5, so his rank is increased to 3. He is a sergeant.

ARMY, NATIONALITY, AND LANGUAGE

We picked up Jones right before we jumped off on the Baltic push. There wasn't time to get him back to a British unit then, and I wouldn't know where to look for one now. I call him British, but he says he's Welsh, and calls himself "Jones the Machine gunner"~ I guess half the people in Wales are named Jones, to hear him tell it. He told me a joke once about a KGB agent who was supposed to contact and activate a mole, an agent who had spent years getting accepted by the locals. So the KGB agent walks into the Welsh village where the mole lives and asks at the local pub where he can find him. He describes him to the bartender, who says, "Ah! It's Jones the Spy you're wanting!"

I think it was probably funnier if you were Welsh. Fortunately, he knows German and a smattering of Polish, which has saved our butts more than once.

Army and nationality are chosen by the players, using the army/nationality/native language chart. Native language depends on nationality.

Players may choose to be Americans or Europeans, at their option. Since all armies practice considerable local recruiting and have picked up deserters from the other side, a U.S. unit could

contain virtually any nationality. However, it is recommended that at least half of the unit be American. Europeans, although they are with the group, are not technically in the U.S. Army; the unit is technically under the command of the highest ranking American, despite the ranks of any European characters.

Army: Players now choose their army. Americans are automatically in the U.S. Army; Europeans choose any of the remaining armies as the one the character originally served in (everyone is now in the U.S. Army, more or less). The character's army affects the nature of the equipment he starts with.

Nationality: Players now choose their nationality from the ones available for their army. For example, a character in the British Army may be English, Welsh, Scottish, or Irish, while a character in either German army is always German. In most cases, this is actually the ethnic or linguistic group the character is from. This affects his native language. Because there are so many nationalities in the Soviet Union, there is a separate Soviet nationalities list.

Native Language: A character's nationality determines his native language. All characters receive a 1 00% skill level in their native language. Characters of certain nationalities have a chance of having a second native language as well. The third column of the chart lists possible second languages and the percentage chance that the character speaks them. For example, a Hungarian character has a chance of speaking German or Romany in addition to Hungarian. Players make percentage rolls for each language, in order, stopping at the first success or after failing to receive all of them. The character receives a 1 00% skill level in his second native language too.

Soviet Languages: Former members of the Soviet army are treated differently. The player chooses his nationality and receives a 1 00% skill level in that language (Each of the listed nationalities is also a language except for Ukrainian and Byelorussian, and in many cases it also corresponds to one of the major political divisions of the Soviet Union.) If any nationality other than Russian, Ukrainian, or Byelorussian was chosen, the player also rolls 1 D 1 0 and multiplies the roll by 1 0 (if an officer) or 5 if enlisted). The result is his skill in Russian.

In addition to native languages, players may purchase additional language skills as explained later in the rules.

SERVICE BRANCH AND SPECIALTY

Bobbi Lee joined up with us back around Frankfurt-on-the-Oder and she 's walked point ever since. The Major says he 's never seen anyone with an eye for an ambush like she has. Well, he's seen more than I have. All I know is that we've never gotten cracked with Bobbi Lee on point. She says it's because her brothers used to take her coon hunting. Maybe. But I've got a feeling that Ranger patch on her shoulder has something to do with it.

Each character belongs to a particular service branch and has a specialty within that branch. Branches, specialties, and information about those specialties are

In aircraft mechanic skill would be written as ACM37. The LNG skill is a special case; each language is a separate skill, and a level of 66 in Gaelic would be written as LNG(Gaelic)66.

Skill Points: Each character has skill points in three areas: military skills, education skills, and background skills. Military skill points are determined by multiplying the listed on the service branch/specialty table.

A character may attempt to choose his area of specialization; his service branch is determined by his specialty.

The table lists the options available and the die roll or higher on 2D6 needed to be accepted into that specialization. If the character fails to achieve the needed die roll, he may at-tempt a different specialization, but suffers a die roll modification of -2. If he fails again, he suffers a die roll modification of -4 on the next attempt, and -6 on the next attempt. If he has not succeeded by then, he must choose one of the specialties in the support services branch.

Some of the specialties have a minimum requirement for acceptance. A character must have a score of 1 2 or higher in the listed attribute (or, in the case of special forces intelligence specialist, both listed attributes) to be accepted into the specialty in question.

Each area of specialization has benefits: it either provides automatic skills, allows easier access to certain skills, or both.

OBTAINING SKILLS

Me, I'm a grease monkey. That's why they call me "Monk"~ I keep the Hum- Vee purring and the LA V-25 limping along (so far). I guess I've always loved engines, which is why I'm so good with them. Admittedly, with the LA V-25 it's definitely a love-hate relationship. Gordon 's an engineer, and even though there's not much to work with in the way of construction material, she's kept us from driving over a couple bad bridges I figured would've supported us. And I'll never forget the time a year ago in Germany when she got us out of that FASCAM minefield those yoyo 5 in the First Cay dumped right on top of us. I figure Wood has saved everybody's life at least once; last winter when I took one in the side and it got infected I'd have been gone except for him. Carson, the Major's driver, is a maniac behind the wheel and a deadly rifle shot, and Griffith, our master scrounger, could find roast chicken and mashed potatoes in the Sahara. We're a team. We complement each other. I guess that's why we're still alive.

Player characters will have to carry out many difficult and dangerous tasks over the course of the game. Skills in various fields of knowledge will determine their success or failure.

Players obtain skills initially in two ways: automatic skills and acquired skills. Automatic skills include knowledge of the character's native language (or languages), certain combat skills all recruits are taught in basic training, and skills supplied by his specialty. Acquired skills are purchased with skill points.

All skills are listed on the skill list, together with standard abbreviations, special requirements of purchase, and descriptions.

Skills are purchased in levels, or percentages. A level of 37

character's military experience base by 40. Education skill points are determined by multiplying the character's EDU by 20. Every character receives 300 background skill points.

Automatic Skills: Every character begins with the following automatic skills: CRM2O, MC2O, BC2O, WVD4O, TW2O, and SWM2O. (These skills are already printed on the character generation worksheet.) Characters receive additional automatic skills from their specialties. For example, an infantryman receives CRM2O; together with the CRM2O every character receives, this gives him a total of CRM4O.

Buying Skills: In general, each skill point may be exchanged for one level of skill expertise Thus, twenty skill points would buy a level of 20 in one skill, or a level of 1 0 in two areas, etc. There are several restrictions and complications.

Buying Languages: Each language is a separate skill. All languages, which characters may buy, are given on the language list, along with the groups and families to which they belong.

Skill Areas: The three types of skill points buy different skills. The second column of the skill list states whether a given skill may be bought with a given type of points (M for military, E for education, B for background). For example, BC may be bought with any of the three types of points, while BIO may be bought only with education points. Points of different types may be freely combined to buy skills within these restrictions.

Low Levels: If a player buys any amount of a skill, he must buy enough to have a skill level of at least 10.

High Levels: All skill levels in excess of 50 cost double. Thus, buying a skill level of 60 would cost 70 points, not 60 points. A character may not initially have a skill level of greater than 80 except in his native languages (although later rules allow for the receipt of higher levels during the game).

Specialty Benefits*:* Some specialties allow certain skills to be bought at half-price.

Unusual Costs: Notes attached to the second column of the list describe the peculiarities of some skills: double cost, half cost, or other special restrictions.

Cumulative Modifiers: All modifications are cumulative. Thus, if a ranger character buys RCN, he gets it for one point per level up to 50 (double cost, bought for half cost) and two points per level past 50. A European intelligence analyst buying LNG(Italian) pays 1/4 point per level up to 50 (half of half cost) and 1/2 point per level past 50.

BASE HIT NUMBERS

After a character has selected the skills he desires, he should determine his base hit numbers. Base hit numbers are used in fire combat to determine the chances of hitting the target.

Each of five combat skills (CRM, HW, LB, LCG, and PST) requires the calculation of three base hit numbers, one each for close, medium, and long range. To calculate the base hit number at close range, multiply the appropriate skill by 0.6; for medium range, multiply the skill by 0.3; for long range multiply by 0.1. Round all fractions down.

For example, Carson has a skill level of CRM77. His base hit number at close range would be (77 x 0.6 = 46.2) 46, at medium range (77x0.3=23.1) 23,and at long range (77xO.1 =7.7)7.

BODY COMBAT DAMAGE

One day everyone was out foraging except for me. I was working on the LA V-25's transmission. The story of my life. First thing I know there's this Hungarian sergeant leaning under the LA V-25 and sticking a Makarov in my face. Beats me what he was doing this far north, but he was pretty skinny and raggedy looking, so I figure he was probably a deserter. Well, I was pretty tired of working on the LA V-25 anyway, so I crawled out and stood up. About then Bobbi Lee got beck to camp and I guess she wasn't expecting trouble because it's the only time I've ever seen her surprised. She dropped her M- 16, but then the Hungarian looked beck at me. Wrong move. Bobbi Lee kicked him. She kicked him in the HEAD. She kicked him so hard she broke his neck. This I do not believe she learned coon hunting with her brothers.

Body combat damage determines the amount of damage a character will inflict on an opponent if he hits him during body combat. Body combat damage is determined by adding the character's STR and STA, multiplying by his body combat skill, and dividing by 200, rounding fractions down. The result is the number of hit points the character will inflict (plus a roll of 1 D6 per attack).

Example: Bobbi Lee has a strength of 1 2, a stature of 7, and a body combat skill level of 75. 12 plus 7 is 19, times 75 equals 1,425. 1,425 divided by 200 equals 7. 1 25. Therefore, Bobbi Lee will inflict 7 plus 1 D6 hit points per body combat attack.

EQUIPMENT

Right there at the end at Kalisz things got pretty hot and we ended up having to make a run for it across about 200 meters of fire-swept open ground. Well, we made it, somehow, and even the Hum-Vee didn't take much damage. But the alcohol still on the trailer behind the LA V-25 got all shot up. That's bad news, because we can 't run these vehicles on bat droppings and gasoline's scarcer than politicians these days.

L got it mostly patched up, but the tubing had been shot away and fell off the trailer. I told the Major we needed tubing for the still or we'd have to start walking. He called Griffith over and told him we needed some tubing for the still "What kind?" he said. "Copper would be nice," I said. "Right." And he was gone. Eight hours later he's back with fifteen feet of copper tubing and an almost-new truck battery with a full charge on it as a bonus. I don't know how he does it.

Soldiers accumulate gear, particularly in as fluid and changing a situation as this one. Each character begins the game with a set of fatigues, combat webbing, a rucksack, and a personal weapon. The personal weapon depends on the character's army, and should be selected from the personal weapons list. Thus, a Czech character could choose any of the personal weapons listed under Czech personal weapons. Each officer also receives a pistol in

addition to his personal weapon. Note that an American officer may choose either a 9mm Parabellum or a 45 automatic.

Vehicles: Next, characters should roll for vehicles, using the vehicle table. Only a party of two or more characters will have vehicles. Each group of characters receives one D6 die roll for vehicles for every two characters in the group (rounding fractions up). Players may combine their dice into 2D6 or 3D6 rolls if desired (but not 4D6 or more); many of the more desirable vehicles are only obtainable with rolls greater than six.

For example, a party of seven characters would have four D6 rolls for vehicles. They could use them as four rolls of 1 D6, two rolls of 2D6, one roll of 1 D6 and one roll of 3D6, or any other combination desired.

Each vehicle begins the game with a full tank of fuel, either methanol or ethanol at the option of the players, and a full load of ammunition as given in the vehicle's entry on the equipment list. (Type is up to the players, but the referee should restrict the quantities of rare ammunition chosen.)

Vehicles and their characteristics are given on the equipment list. The players should fill out a vehicle record sheet for each vehicle they own, using the equipment list and the vehicle damage location charts.

BuyIng Equipment: Finally, each character can buy equipment at the beginning of the game. This is not meant to represent the actual purchase of equipment; instead, the money for buying equipment allocated to each player is a representation of the value of the equipment he has accumulated over time.

Players may buy equipment separately, or may pool their resources to buy equipment. Note that motorcycles do not appear on the vehicle table and thus cannot be obtained with a vehicle die roll. They may, however, be bought.

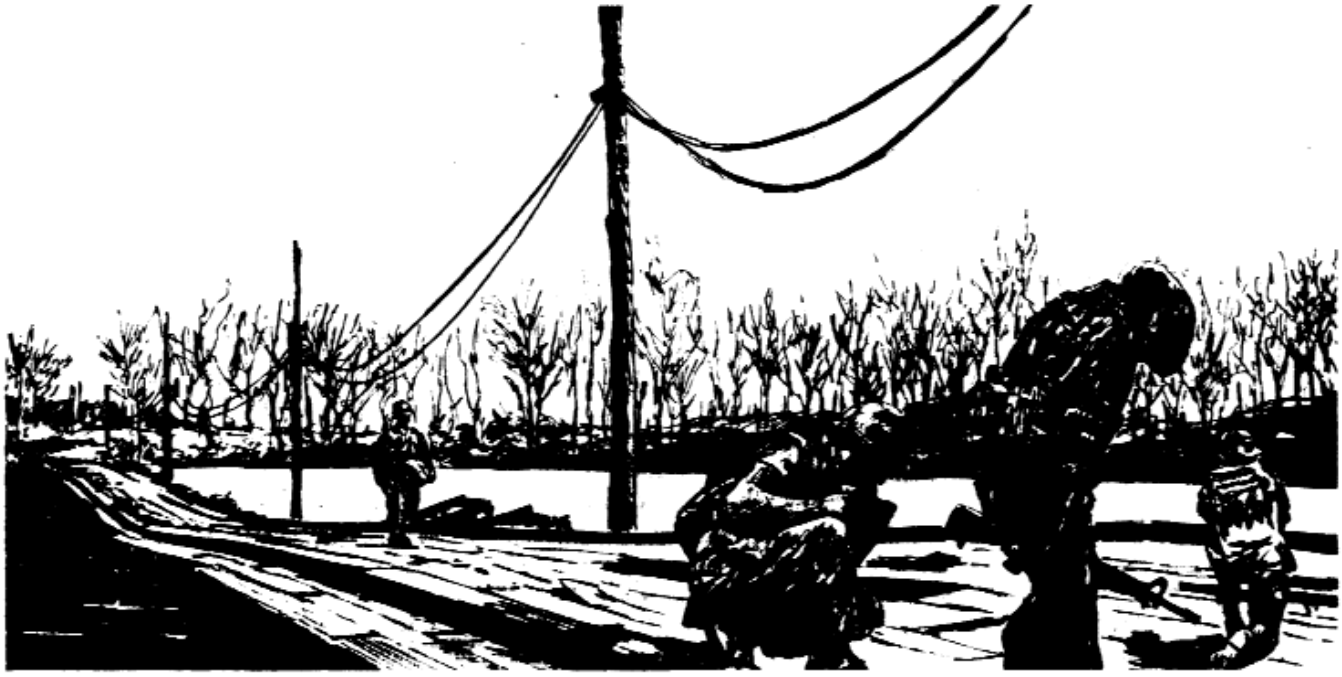
To determine a character's equipment purchase allowance in dollars, multiply his months in combat by 500 if enlisted or 1000 if an officer.

All items of equipment are listed on the price list, along with their rarities and prices. They are described in greater detail on the equipment list. An Eastern Bloc character may not buy equipment listed as rare in the East; other characters may not buy equipment listed as rare in the West. A character may, if he desires, take up to 1 0% of his total equipment allowance in gold coins, in the hope of using them later to purchase additional supplies.

Since the characters start the game on the run, no equipment may be bought which cannot be carried in the characters' vehicles. Vehicle cargo capacities are given on the equipment lists; armored vehicles may carry an extra 1 0% of vehicle weight fastened to the outside of the vehicle. All equipment and all passengers (but not crew) must fit within those limits.

Characters may not initially outfit themselves with pack animals. (They may have had them, but had to leave them behind during their escape from the encirclement.)

Additional Characters: During the course of the game, it may be necessary to generate additional player characters. This may be due to other players wishing to join the group, or as a result of one of the players having his character killed and generating a new character to rejoin the group. In this case, it is possible to meet a new group or just a single character; a single character could not have a vehicle (except for a motorcycle) and thus probably will not be able to carry all of the equipment he could purchase. The referee should allow the character to purchase his full allotment of equipment, but join the group only with the equipment he can carry on his back. The rest may be in a hid-den cache some distance away, and the trip by the group to the cache can constitute a small adventure itself. Naturally, the cache should not be too close to where the new character joins the group, and placing the cache in a dangerous area will add interest to the mission.



Skills and Attributes: Part One

The main use of skills and attributes is in determining the success or failure of actions the characters attempt. Actions depending on the use of skills and attributes are called tasks.

Some tasks are obviously impossible, such as building a new truck engine from scratch. Other tasks, such as filling a gas tank with gasoline, are so simple that it is assumed any character can carry them out successfully. In between these two extremes, however, lie a multitude of tasks, which the referee will be called on to adjudicate. Some tasks used repeatedly during the game (such as foraging or firing a rifle) are covered in detail in the rules. Others are up to the referee to determine.

When determining the success of a character's attempt to carry out a task, the referee should ask himself two questions: how difficult is the task, and what skills or attributes are important to the task?

Each task is a percentage roll against the character's relevant skill or attribute.

Percentage Rolls Using Attributes: To convert an attribute to a number suitable for a percentage roll, it should first be multiplied by five.

Difficulty: While there are numerous shades of difficulty in tasks, for game purposes all tasks are broken down into three categories: difficult (DIF), average (AVG), and easy (ESY). For example, a mechanic needs to repair a villager's tractor. The referee first decides roughly what the vehicle's problem is (not strictly necessary, but it helps both players and referee visualize the situation) and then decides if repair is difficult, average, or easy. If the engine needs a short length of wire cut and fitted into place, the mechanic's job is easy. If it needs a hole in a metal tube soldered, the task would be average. If the engine needs a new timing gear filed from a piece of sheet metal, the task would be difficult. The referee may further decide to break the task into two parts. Using the above example, the referee may decide that the vehicle needs a part the mechanic does not have and cannot make. In this case, determining the problem would be an average task, but repair would be difficult, and perhaps impossible (which might lead to an adventure to locate and obtain the proper part).

Useful Skills and Attributes: The referee must decide which skill or attribute is important to performance of the task. In the above example, the mechanic's MEC skill is obviously the important one. For ease of description, in the remainder of this rule, skills and attributes are collectively called assets.

Abbreviations: The chance of success in a task is completely described by its difficulty and the asset used. The many tasks described in these rules are expressed in an abbreviated form as difficulty: asset. For example, ESY:SWM refers to an easy task using swimming skill as an asset.

Determining Success: Once difficulty and the relevant asset have been determined, the task is resolved as a percentage roll against the character's asset. If the task is AVG. roll against the asset itself. If the task is ESY, multiply the asset by two; if it is DIF; divide the asset by two, rounding fractions down.

Thus, returning to the mechanic in the example above, if he had a MEC skill level of 40, he would have a 20% chance of succeeding at a difficult task, a 40% chance at an average task, and an 80% chance at an easy task.

For another example, suppose a character wants to break down a door. The referee decides this is DIF:STR. The character has STR1 3; multiplying by 5 gives 65; dividing this by two gives the character a 32% chance of success.

More Rules: The chapter entitled *Skills and Attributes: Part Two* in the referee's manual goes into greater detail and explains a number of specific tasks.

Time and Travel

A typical *Twilight: 2000* adventure may take several days or several weeks. A campaign will last months, and perhaps even years. An encounter can last a few minutes and a firefight can be over in seconds. Obviously, the variety of possible activities in the game cannot all be done at the same rate of passage of time, and thus a variety of time scales are used.

THE DAY

The longest measure of time regularly used is the game day. Game days are used to gauge travel over long distances or progress toward completion of a major task. Referees and players will want to keep general track of weeks and months as well, to keep a broader perspective on the passage of time.

The game day is broken down into six 4-hour periods. These periods are used to schedule the activities of players during a day. When moving cross-country, it is seldom necessary to plan each day separately; instead, players should settle on a routine, such as eight hours on the road, four hours foraging and hunting, four hours of camp duties and maintenance, and eight hours of sleep. Likewise, a typical day in town might consist of eight hours each of work, recreation, and sleep. Players would then merely specify to the referee what task they were working on. Special situations, such as a forced march away from pursuers, will require alteration in the routine, and the players are free to do so. A generalized routine, however, will greatly speed play of the game.

The use of four-hour periods is for the convenience of the referee and players, to make scheduling of daily activities easy. It is not meant to unduly restrict players' activities. Thus, for example, if a group of players want to move a certain distance that is half of the distance their vehicles can move in a four-hour period, the referee should feel free to let them do so and only charge them half the normal fuel cost for a one-period move.

ENCOUNTERS

The referee will usually roll for an encounter once every four-hour period (or fraction thereof) spent moving and once per day spent stationary. The rules on encounters explain the procedures followed to determine what sort of encounter results.

Encounters with people are resolved at the time scale the referee feels is appropriate. Usually, this will consist of role-playing the encounter, with the referee playing the part of the non-player characters encountered, and periodically informing the players of the passage of time. For example, after an exchange of conversation, the referee may say, 'you've been talking to the farmer for about half an hour."

If the encounter is a violent one, the referee will begin using combat turns or even combat rounds.

COMBAT TURNS

Combat is resolved in half-minute turns, each of which is divided into six 5-second combat rounds. Each character can per-form one action (run, shoot, reload) per combat round. For long-range encounters or encounters with large parties, the referee will often use 30-second combat turns as the means of resolving the encounter. When greater detail is desired, the combat round will have to be used. The use of combat turns and combat rounds is explained more completely in the chapter on combat.

TRAVEL

Daily travel distances can vary greatly based on terrain, loads carried, mechanical breakdowns, and a variety of other factors. The travel movement table gives rough values, in kilometers traveled per period. The first number is used if traveling on a road, the second if traveling off the road.

The referee should feel free to vary this as he sees fit. Remember that players should never feel that their interaction with the world around them is purely mechanical or a function of reading numbers off a chart.

There are some complications to this. Terrain is one, as

covered in the next section. Others are explained below.

Men: Men march half the listed distance if burdened. They are also subject to fatigue (see below).

Animals: Horses and oxen should not be made to travel more than two periods per day; mules should not be made to travel more than three periods per day. They can travel more than that, but they suffer an increased chance of going lame (see *Upkeep).*

Horses and mules may be force-marched. If force-marched, a horse's travel distance is multiplied by 2, and a mule's by 1 .5. However, this also increases the animal's chance of going lame.

An animal may be burdened (carrying up to twice its load); unlike a man, its travel distance is not reduced, but burdening increases the animal's chance of going lame. A burdened animal may not be force-marched.

Animals pulling wagons or carts may not be force-marched or burdened, but may be forced to travel more than their usual number of periods.

Bicycles: A bicycle has no load of its own; a character riding a bicycle can carry his personal load. He travels at half speed if encumbered. If unable to ride (see Terrain below) a character may walk his bicycle at his off-road walking speed; its weight does not count against his load limit.

TERRAIN AND TRAVEL

Travel on a good road is largely unaffected by the terrain through which the road passes, but good roads are becoming scarce. Furthermore, the roads are still fairly well settled, and often infested with military patrols and convoys. Most characters will spend much of their time on back roads and traveling cross-country. When travel on a good road is practical, however, it is done at the road movement rate. A poor road (one which is breaking up, partially washed out, or just hasn't seen a road crew in three or four years) allows travel at the full cross-country rate for vehicles regardless of terrain.

Aside from roads, there are four main types of terrain encountered in the countryside: woods, swamp, hills, and open terrain.

Woods: Woods are forested areas of considerable extent. Most wooded areas in Europe have frequent clearings and open areas and are crossed by numerous dirt roads, paths, and firebreaks. While a man can walk through virgin forest, it is an impractical means of travel for vehicles and for a party of men for any distance. Thus, all travel through wooded areas is assumed to be along only paths and roads and through clearings whenever possible. Movement on foot or by animals through woods is at the full movement rate. Vehicles travel through woods at half their off-road movement rate unless following a particularly well-traveled old dirt road, in which case they move at their full off-road movement rate. Bicycles may not be rid-den through woods except along such roads.

Swamp: Swamps are difficult to traverse. A man on foot can move at his full movement rate. Animals and all vehicles move at half of their off-road movement rate. Bicycles may not be rid-den. In addition, roll 1 D6 once each four-hour period for each non-amphibious vehicle. A roll of 1 indicates that the vehicle has become mired. Extracting a mired vehicle takes one additional period and requires the use of one or more vehicles whose combined weight equals or exceeds that of the mired vehicle.

Hills: Hills are relatively steep but regular rolling ground. All movement is reduced by half in hills. Hills may also be wooded. If so, determine the movement rate for woods first and then apply the hill terrain reductions to the result.

Open: Open terrain is generally flat or gently rolling grasslands, and for the most part consists of former cultivated lands, which have reverted to the wild but are not yet wooded. Open terrain also includes cultivated ground in the area of settlements. All movement through open terrain is at the full off-road movement rate.

FATIGUE

There are four general types of activity that a character can undertake in a four-hour period: sleep, rest, hard work, and easy work.

Sleep: No other activity is possible while sleeping. Each character must have one period of sleep per day or two periods of sleep if he has performed three or more periods of hard work. For every sleep period deficiency, the character suffers one level of fatigue. A fatigued character will recover one fatigue level for every period spent in sleep.

Rest: Rest is a poor substitute for sleep, but can help combat its lack. A character riding in a vehicle and not serving as a driver or lookout can rest. While rest does not count toward a character's sleep requirement, a fatigued character recovers one level of fatigue for each period spent resting.

Hard Work: Hard work constitutes tasks, which are extremely fatiguing. These are marching, riding an animal or bicycle, driving a vehicle cross-country, fighting, and actual physical labor (including, but not limited to, farming, building bridges and buildings, digging ditches or entrenchments, carrying out major repairs on heavy machinery, etc.). Some referee discretion is required when deciding which tasks constitute hard work. Changing a flat tire, for example, is not particularly heavy labor; changing an axle is. A few minutes of hard work in a period do not make it a period of hard work; it takes a substantial quantity, with one exception: any combat whatsoever in a period, however brief, makes it a period of hard work.

An already fatigued character may still do hard work, but suffers one additional level of fatigue per period of hard work, regardless of how many periods are spent sleeping.

Easy Work: Hunting and foraging, routine maintenance,

guard duty, setting up and tearing down camp, preparing meals, driving a vehicle on a road, and simple first aid are all examples of easy work. Easy work neither increases nor decreases the character's fatigue level.

Effects of Fatigue: A character's effective STR, AGL, CON, and INT are reduced by one for each level of fatigue. If any at-tribute is reduced to zero, the character becomes unconscious and will sleep for one complete period (thus raising the attribute back to 1).

Derived values (such as base hit numbers) are not recalculated based on altered attributes. Instead, these are affected directly. All base hit numbers are reduced by three at close range, two at medium range, and one at long range per level of fatigue. Load and throw range are reduced by two per level of fatigue. Body combat damage is reduced by one per level of fatigue. All skills are reduced by five per level of fatigue.

Example: Monk and Carson are moving overland on a several-day march. They are carrying plenty of food with them, so they don't have to spend time foraging. Their routine is:

Midnight to 8:00 AM: Monk sleeps, Carson stands guard.

8:00 AM to 4:00 PM: Both march.

4:00 PM to Midnight: Carson sleeps, Monk stands guard.

Both Monk and Carson have two periods of hard work (marching), two periods of sleep, and two periods of easy work (standing guard) each day, and thus neither of them becomes fatigued.

On the second day out, a party of intruders stumbles into their camp at 1 0:00 PM. Monk wakes up Carson and in a firefight they chase the intruders off. Starting the next morning, Carson has a fatigue level of one (three periods of hard work—marching or fighting—and only one period of sleep) while Monk is not fatigued (also three periods of hard work, but two periods of sleep).

They decide to stick to their schedule and from Midnight to 8:00 AM Monk sleeps. When he wakes up, he has met his requirement for two sleep periods. Carson, however, still has a fatigue level of one. At the end of the day's march Carson's fatigue level has risen to three, since once fatigued he suffers an additional fatigue level per period of hard work.

That night he goes to bed and sleeps for two periods. When Monk wakes him up at midnight he has a fatigue level of one, having

recovered two points. When Monk wakes up at eight the next morning, they decide not to march that day and let Carson get some rest. Both spend the day in routine maintenance and foraging, and at 4:00 PM Carson turns in. When he awakes at 8:00 PM, he is refreshed and recovered from his fatigue.

As should be clear from this example, it is difficult for only two people to make good time cross-country, keep a constant guard, and not rapidly wear themselves out.

The referee should not bother about minor sleep period deficiencies except in instances where fatigue and endurance can clearly become important to a group's activities. That is, if a group is moving fairly leisurely with plenty of time to catch up on sleep and rest, an interrupted night's sleep period is of no great concern, and should not be allowed to slow up the game by causing a flurry of paperwork and calculations on the part of either the referee or the players.

Upkeep

This chapter is concerned with the day-to-day realities of the characters' lives. Even while they are having adventures, they must still eat, find fuel for their vehicles, and take care of their vehicles and animals.

FOOD REQUIREMENTS

Each character must eat at least 3 kilograms of food every day to remain healthy. Most of this must be found in the wild. 'Civilized' food – domesticated animals, cultivated grains and vegetables, canned or packaged food, etc.— counts as 1 .5 times its weight. Thus a man could survive on 2 kilograms of such food a day. Specially fortified and pre-packaged military rations count double, and a character could survive on 1 .5 kilograms of these a day. The most common form of such rations is the MRE (Meal, Ready to Eat), although over the years they have become rare and are highly prized for their lightweight, ease of preparation (they are pre-cooked), and generally good flavor.

Effects of Starvation: If a character eats less than his daily requirement, but at least half the requirement, he suffers one level of fatigue. This fatigue remains (but gets no worse) until he eats his full requirement for as many days as he was under-fed (or 1 0 days at most). A character gains one level of fatigue for each day in which he eats less than half the requirement, until his STR, AGL, CON, and AGL are all reduced to 1; they do not fall below 1. One level of fatigue is recovered for each consecutive day of full rations.

Eventually, a character on less than half rations will starve. This takes about a month of no food or several months of half rations.

FORAGING

Characters may find food in the wild by foraging. It takes one four-hour period to forage a 1-kilometer square area. An area may be foraged only once per month. For simplicity's sake, it is best to consider an area foraged out after one forage attempt.

Only one foraging party may forage an area. The number of people in the foraging party reduces the time it takes to forage an area but does not affect the quantity of food found. If two people forage an area, for example, they can search it in half a period. (A party can break up into several smaller foraging par-ties, provided they spread out and forage different areas.) Foraging is a task (AVG:FOR) performed by the character in the party with the highest FOR. Failure means that no food is found.

The foraging table lists the amount of food, in kilograms, found by a successful forage attempt in each of the four seasons and in each of the major terrain types. If the character achieves outstanding success (see the referee's manual), double the amount of food found.

Fields: Players do not forage, per se, in fields, and no die roll is necessary. In the winter and spring, there is no food to be found in fields. In the summer and fall, there will generally be standing crops and characters can gather virtually as much food as they can carry. In one period, this will generally amount to 200 kilograms per man, and counts as hard work. An additional period is required to separate the edible parts of the crop from the chaff. This will yield a total of 50 kilograms of edible food in the summer or 1 00 kilograms of edible food in the fall. If in a hurry, the separation of edible food from chaff can be delayed until later, but the full 200 kilograms of weight must be carried until that time. Alternatively, a period can be divided into two hours of harvesting and two hours of separation, resulting in 25 kilograms of edible food in the summer and 50 kilograms of edible food in the fall.

In both cases, the resulting food is considered "wild", and thus only counts as 1 kilogram of nutrition per kilogram of bulk.

FISHING

Fish can be caught from any open water: a swamp, stream, river, pond, lake, or ocean. Fishing is a task (AVG:FSH) requiring line and hooks, a net, or a fish trap. Fishing without adequate equipment is DIF:FSH. If the task succeeds, a character can catch fish in one period equal to the amount given on the foraging table

(expressed in kilograms of edible meat). Double the total for outstanding success.

These totals are for line fishing from a shore or boat or net fishing from a shore. Double the totals for net fishing from a boat in large open waters (large lakes or the ocean).

Grenade Fishing: Any klutz can throw a grenade in a pond and kill fish. No skill is needed. When a character announces his intent to try grenade fishing, the referee secretly rolls 2D6 x 1 0. This is the total quantity of fish (in kilograms of meat) available to be caught. Each grenade will bring 1 D6 — 1 times 4 kilograms of meat to the surface. The character can keep throwing in grenades as long as he wishes. After the allowed number of kilograms of fish have floated to the surface, however, the referee will tell him, after each additional grenade, that no fish float up. Note that it is possible to have a grenade fall to turn up any fish before the fish population is exhausted. Grenade fishing cannot be used in swiftly flowing water (since the dead fish float away).

HUNTING

Many encounters will be with animals, and the procedure for resolving the encounter is explained in the referee's manual. Briefly, players will often be able to surprise and kill animals and, if so, eat them. The animal data chart lists the edible meat on the animals characters can encounter.

FUEL

After years of war and a breakdown in the world transportation system, Europe is starved for petrochemicals, and most machinery is grinding slowly to a halt. There are still isolated wells and small oil fields pumping, but the need for lubricants is so great that virtually no one can afford the luxury of actually burning the oil. As a result, the most common fuel in use is alcohol. A few vehicles were originally equipped with multi-fuel engines that could, in a pinch, burn alcohol. Over the last several years' virtually all-remaining vehicles have been converted to alcohol burners.

The advantage of alcohol is that cornhusks and waste vegetable products can be distilled into alcohol, and these are both plentiful and renewable. In addition, most units have made stills they carry on trailers or trucks, which enable the unit to live off the land in respect to fuel as well as food. The disadvantage is that alcohol has less than half the energy value per liter as gasoline. Thus, alcohol burners tend to have much higher fuel consumption to get the same performance. Since the engine has to be modified to burn alcohol, it would have to be modified back before it could again burn gasoline or diesel fuel. Certain high performance engines cannot be modified to burn alcohol. Aircraft designed to fly on aviation gas cannot get off the ground on alcohol. Thus, airpower is mostly a thing of the past (to the secret relief of many infantrymen).

Consumption: Each vehicle's entry on the equipment list gives its fuel consumption rate (liters consumed per period spent traveling or in combat) and fuel capacity (in liters). These values are repeated on the travel movement chart. Additional fuel, of course, can be carried in supply vehicles or strapped to the outside of the vehicle, but this can be dangerous in combat. The entry also states all the types of fuel the vehicle can be modified to burn. All vehicles initially should be set up to burn either ethanol (grain alcohol) or methanol (wood alcohol), whichever the players prefer. The fuel consumption of a vehicle assumes gasoline or diesel fuel. Fuels with lower energy properties are consumed at a higher rate. The fuel energy table lists fuel consumption multipliers for each type of fuel. To determine a vehicle's actual fuel consumption, multiply its listed fuel consumption by the consumption multiplier of the fuel being used. For example, the Ml tank has a fuel consumption rate of 550. Thus it would consume 550 liters of gasoline per period, or 1 650 liters of ethanol, or 2200 liters of methanol.

Changing Fuels: The fuel burned by a vehicle may be altered from its current choice to any of the other choices given in the vehicle's entry on the equipment list. This task is ESY:MEC and takes 8 hours. Vehicles which are listed as burning all types of fuels (gasoline, aviation gas, diesel, and alcohol) have multi-fuel engines and do not need to be adjusted.

Distilling Alcohol: If a character has a still, he can distill alcohol for fuel. The equipment list contains a variety of stills and their prices. The list and the alcohol output chart give the two values controlling distillation: kilograms of vegetable matter required and liters of fuel produced per day. These figures are the same whether the still is to be used to produce ethanol or methanol.

Distilling alcohol takes three days from start to finish. The first day is spent gathering material for the still, pulverizing it, and combining it with water to make a "mash". For the next 24 hours the mash is cooked over a constant low heat. It is during this time that fermentation (and other chemical processes) creates alcohol. On the third day the mash is distilled to separate the alcohol from the rest of the mash. While the still needs to be stationary for the distillation step and while gathering material for the mash, the group can move while the mash is fermenting. Alcohol making can be a continuous process, with all three steps going on at once.

Gathering Material: One person can gather, pulverize, and turn into mash 1 00 kilograms of material per period, on the average. This is halved in winter and halved in non-wooded hills. If both conditions are present, the amount gathered is quartered.

Material gathered anywhere could be used to distill methanol. Only cultivated grain (or other edible plant matter containing carbohydrates or sugars) may be used to distill ethanol. Thus the above figures on material gathered apply only to methanol. Material gathered for ethanol consists of the edible food weight foraged from a field in summer or fall. Alternatively, grain can be purchased or bartered for.

While the above rules go into some detail, considerably less detail is necessary in actually administering the process. Since the material for methanol is plentiful everywhere and easy to gather, the referee should normally allow players to run a methanol still full-time without bothering to require an exact accounting of time and material.

VEHICLE MAINTENANCE

A vehicle requires nearly constant maintenance to keep it running, even in the best of times, and these are not the best of times. People used to driving civilian cars on good roads are seldom aware of how much more punishment a military vehicle takes, even something as mundane as a cargo truck. In the world of *Twiight:2000,* a good mechanic is worth his weight in gold, and indispensable if the players have vehicles they want to keep running.

A good mechanic, for all his worth, will sometimes be considered a pest by the rest of the group. He will want to spend as much of his time as possible with the vehicles going over them and conducting minor repairs and preventive maintenance. He will be constantly searching for more spare parts, whether they are needed now or not. (Someday they'll be needed and might not be available then, so get them now is his philosophy.)

Routine Maintenance: There are very few vehicles left which are in perfect condition. Most have been repeatedly repaired and rebuilt, sometimes with homemade parts, and are generally worn out. Every vehicle has a base maintenance number. This is the number of hours per week that should be spent in routine preventive maintenance to keep it in good working shape, assuming it is in mint condition. The actual time spent in maintenance is up to the players, but should be influenced by the actual condition of the vehicle.

Vehicle Condition: Whenever characters acquire a vehicle during the game, including during character generation, the referee should determine its wear condition by rolling 1 D 1 0. The higher the wear condition, the more worn out the vehicle. Whenever characters are in a position to buy or sell a vehicle, its true value is determined by dividing its base price by its wear number. Thus, a vehicle which would normally cost $20,000 but had a wear value of 8 would only be worth $2,500.

Breakdowns: Each vehicle has the potential to break down each time it spends a period in either movement or combat. The percentage chance of a potential breakdown is equal to the vehicle's wear number.

A potential breakdown does not mean the vehicle has actually suffered a serious malfunction. Avoiding an actual breakdown is a task (AVG:MEC) performed by the character who did the last maintenance on the vehicle. If the vehicle has not been main-tamed its required amount in the last week, the potential breakdown automatically results in an actual breakdown.

If a potential breakdown does not result in an actual breakdown, the characters may continue moving. The occurrence of a potential breakdown is obvious to the characters, and the referee should tell the players that they hear ominous grinding noises in the engine, see smoke in the exhaust, etc. Once a potential breakdown has occurred there will be an additional automatic potential breakdown every period traveled thereafter until the vehicle receives its required weekly maintenance. Avoiding an actual breakdown is a task (DIF:MEC) performed by any character during intermittent short halts. The severity of breakdowns and how to repair them are covered in the referee's manual.

Preventive Maintenance: Extra preventive maintenance can reduce the risk of a potential breakdown. If a mechanic spends twice as much time in maintenance on a vehicle as required, he reduces its potential breakdown risk by 1 %. Thus a vehicle with a wear value of 4 would only have a 3% risk of a potential breakdown per period. Spending three times the required maintenance time reduces the risk by 2%; four times the maintenance reduces risk by 3%, etc. However, the risk of a potential breakdown may never be reduced below 1 %.

Increasing Wear: After a vehicle has suffered ten actual breakdowns its wear value is increased by 1. A vehicle with a wear value of 1 0 which suffers its tenth breakdown at that value is no longer repairable and is good only for salvaging parts.

Once players and the referee are very familiar with the game mechanics they may wish to keep separate track of the wear value of the components of a vehicle. That is, a vehicle which suffers repeated engine breakdowns would end up having a very worn out engine, but a sound suspension. In this case the tenth engine breakdown at wear value ten would mean the characters need to find a new engine, not a whole new vehicle. This rule is not suggested for beginning use; players and the referee have enough to keep track of as it is.

ANIMAL MAINTENANCE

Animals, like vehicles, require 'maintenance" if they are to perform properly.

Feeding: All draft animals need to graze for two periods per day. Horses and mules also require grain if they do any work that day (including being ridden). The amount of grain required is given on the animal list. If they do no work, they need not be fed grain, but must spend all day grazing to make up for it. Each day in which an animal does not receive enough to eat, it receives a hunger level increase of 1. If it is also forced to work, it receives a hunger level increase of 2. All animals start at a hunger level of 0. If an animal's hunger level reaches 20, it dies. The animal's hunger level also increases its chance of going lame (see below). For every day in which the animal gets all the food it needs and is not required to do any work, it receives a hunger level decrease of 1.

Care: Maintenance is a task (ESY:EQ) and takes 20 minutes per animal after its work is completed each day. Failure to conduct animal maintenance (or a failed roll) causes the animal to suffer a hunger level increase of 1, but not more than once per week. (The animal is not really hungry, but the effects and remedies of inadequate care are the same as for hunger. For simplicity they are treated as the same.)

Going Lame: Each period in which an animal travels, it has a 1 % chance of going lame. This is increased by 5% for each of the following: each hunger level, forced march, being burdened, and each period traveled that day in addition to the nor-mal allowed number.

If the player rolls less than half of the number required to go lame, the horse has either broken a leg or collapsed from exhaustion, and in either case must be put out of its misery.

An animal carrying no load at all has no chance of going lame.

Recovery: An animal can recover from going lame. In order to recover, it must not carry any load and may not be force-marched (although it can move at the normal travel speed). It must receive its full care and be well-fed. If so, it will recover in two weeks automatically. There is a chance it will recover in one week if the character caring for the animal does his job well (AVE:EQ). If any of the above requirements for recovery is not met, the animal is permanently lame and of no further use (except food or sale to the gullible).

Combat: Part One

The world of *Twilight: 2000* is a dangerous place, with the threat of violence always just around the corner. It won't always be possible for characters to talk their way out of a difficult situation (sometimes they may not even be given a chance to try!) and so a resort to combat is often the only means of surviving.

The general heading of combat includes attacks against people, animals, and vehicles using firearms, melee weapons (such as knives), bare fists, grenades, even rocks. Regardless of the type of attack made or the type or target, the results of an at-tack can always be determined by answering three questions:

1 Did you hit the target?
2. If so, where did you hit it?
3. How much damage did you do?

To resolve a combat attack, players and referee roll dice to determine the answers of each of the above questions. Specific rules vary and there are many complications, but the three main steps are always there.

This chapter covers everything relating to the first two questions and to the third question except for the complicated question of damage to vehicles. That and others of the more complex combat-related rules, such as those covering explosions and chemical rounds, are contained in the referee's manual.

THE COMBAT TURN

Each combat turn is thirty seconds long and is divided into six 5-second combat rounds. One action can be performed by each player in each combat round. Each action takes only one combat round to complete.

Many combats can be resolved using the combat turn instead of resolving each combat round in order. Each player should tell the referee what he is doing during the turn; then the referee resolves the fire of hostile NPCs while telling the players what they see and and when to resolve their own fire.

MOVEMENT

Movement during combat can be resolved in whatever detail the situation warrants. In many cases, no map at all is needed: long range sniping between parties on foot, for instance. In others, the referee can do well enough by just drawing a map and positions on a piece of paper. If greater detail is needed, the referee can make a map beforehand and the positions of characters and vehicles can be represented by pins, drawing on plastic overlays, counters, or miniature figures. Any scale may be used; movement rates and weapon ranges are given here in meters.

Combat movement rates, in meters per combat round, are given on the combat movement table.

People: People may move at four different rates: crawl (2 meters), walk (8 meters), trot (1 5 meters), or run (30 meters). A character who is burdened travels half this fast. These rates affect characters' ability to fire small arms, as shown on the weapons chart. Characters who are crawling are prone.

Animals: Animals have three different rates: walk, trot, or run (some animals do not run). Horses and mules may be ridden in combat. Anyone may ride a walking animal safely. Riding a trot-ting animal is safe for anyone with any EQ skill and is ESY:AGL for other characters. A character with EQ skill has a maximum safe speed on a horse equal to 20 **+** (EQ/5); round fractions up. Riding at the safe speed is automatic. A character may ride at greater than the safe speed, up to 40 meters per round (full gallop) at the risk of falling off. Avoiding a fall is AVG:EQ or DIF:AGL, rolled once per turn. A fall results in 1 D — 3 hits with location rolled on the damage location chart.

Bicycles: The listed speeds are the safe speeds on and off-road. A character can attempt to go up to twice the safe speed (AVG:AGL). Failure results in falling off; no damage results. if the character is encumbered he travels at half speed and may not go faster than that. Vehicles: The listed speeds are the safe speeds on and off-road.

A vehicle may travel faster than this at the risk of a mishap (see below).

Mishaps: A character may drive a vehicle (including a motorcycle) at up to three times the safe speed but runs the risk of a mishap. Driving at up to twice the safe speed is AVG; the skill used Is TVD, WVD, or MCY, depending on the vehicle. Driving at up to three times the safe speed is DIF. The roll is made once per turn.

If a mishap happens, the vehicle has become stuck in a pothole or ditch or bottomed out in rough ground; the vehicle is stuck in place. Once per turn, the driver may attempt to get it moving again (DIF:TVD or DIF:WVD); this occupies his time for the en-tire turn. A mishap on a motorcycle means that the rider has fallen off; the motorcycle and (probably) the rider are undamaged; he can get back on and continue. If a catastrophic failure happens (see the referee's manual), a serious mishap happens. Serious mishaps include breaking an axle, throwing a track, rolling the vehicle, or in some other way putting it out of commission until major repairs are undertaken. The referee should determine the exact nature of the mishap according to circumstances. On a crowded road, there may be a collision. A light vehicle is easy to overturn, a tank almost impossible. Passenger injuries are also up to the referee.

ACTIONS

A character may perform one action in each combat round (or sometimes two actions). Actions are chosen at the beginning of each round. First, the referee should decide what each NPC is doing, and then each player should decide what his character is doing. These decisions are revealed simultaneously. The possible actions are listed below.

Fire: With some weapons, this may be combined with a walk or trot.

Aim: Aiming improves the chance of hitting if done just before firing.

Reload: It generally takes one combat round to change a magazine.

Recover Spent Brass: The empty cartridge cases from firing are valuable and can be used in trade. A character can spend one round to recover all the brass from a single magazine directly after reloading. If this is not done, the brass falls on the ground and later takes several minutes to gather up, if it can be found at all. Characters firing 4.7 CIs ammo or mortars have nothing to recover. Brass from vehicle-mounted weapons is automatically recovered.

Melee: Attacking with a melee weapon. This action may be combined with a walk or trot.

Body Combat: Attacking without a weapon. There are four types, which must be specified: *strike, grapple, escape,* and *div-in$_9$ blow.* This action may be combined with a walk or trot. A diving blow may also be combined with a run.

Crawl: 2 meters.

Walk: 8 meters.

Trot: 15 meters.

Run: 30 meters.

Go Prone: A crawling character is prone. This action is used if a character wants to become prone without moving. A prone character can stand up at any time by walking, trotting, running, or engaging in body or melee combat.

Drive a Vehicle or Ride an Animal: Speed (safe or not, on or off road) must be specified.

Hesitate: This action involves doing nothing. A character is forced to take a certain number of hesitation actions in each turn, depending on his coolness under fire. See below.

Communication: Often players will wish to discuss their plans during combat. The referee should be careful to keep these discussions within the bounds of reality. For example, one player 50 yards away from another would not be able to carry on a normal conversation in the middle of a firefight unless both had radios. Also, it takes time to talk, particularly on the radio. Thus, the referee should allow conferences when it's possible for players to converse, but should not allow them to fire or do other difficult actions at the same time (except for simple messages like "look out behind you!"). Two players in the same foxhole could probably converse fairly easily while reloading; two players running across a field firing submachine guns could not.

COOLNESS UNDER FIRE

A character's coolness under fire determines his susceptibility to hesitation and panic.

Hesitation: Not everyone responds as quickly under fire as the best, and this is taken into account with hesitation actions. In each combat turn, a character must perform as many hesitation actions as his coolness under fire rating divided by 2, rounding fractions up. He may conduct these at the beginning, mid-die, or end of the turn or spread them out in any sequence he desires.

For example, a character with a coolness rating of 5 would have to spend three combat rounds per turn hesitating, while a character with a coolness of 0 would not spend any rounds hesitating.

Repetition: A character is not required to take any hesitations in a turn if he does exactly the same action repeatedly for the entire turn. For example, a player wishes to crawl down a ditch, which is 36 meters long. He can crawl two meters per round, but he normally has to take three hesitations per turn. This would mean that he could only crawl three times, or 6 meters, per turn. Since he has made the decision in advance that he will just crawl, however, he is able to crawl six times, or 1 2 meters, per turn. He is thus able to crawl the length of the ditch in three combat turns instead of six.

As a second example, a player normally must take two hesitations a turn but wants to give covering fire for another player. He decides in advance that in the turn he will fire each combat round. In this case, he is not required to hesitate. However, if his weapon held less than six shots when he started, he could not reload his weapon without hesitating, as reloading is a different action.

If a repetitive action becomes impossible before the turn is over (as was suggested in the above example), the character must hesitate for the remainder of the turn.

Vehicle Drivers: Drivers hesitate like other characters, and when one does his vehicle does not move. This may be overcome in two ways. First, another character in the vehicle may give him a clear destination; he could say, for example, "Get over behind that barn." While the driver is moving toward the destination he is not subject to hesitation. Once there, he will again be subject to hesitation. Also, if his orders are changed on the way to the destination, he is subject to his regular amount of hesitation for one combat turn before the new orders take effect.

Second, a character with better coolness can give the driver constant directions. The other character may not do anything else, but as long as he continues to give instructions, the driver hesitates only when the character giving him orders does. Regardless of these two conditions, if the driver panics

(see below) he suffers the mandatory hesitation, which results.

Knockdown: Whenever a character suffers hit points during a combat round greater than or equal to his STA, he is knocked down. (There are other ways to be knocked down too; see later rules. The effects are the same.) A knocked down character's next action must be a hesitation if he has any hesitations remaining that turn. Body armor does not affect hit points for knockdown purposes. For example, a character with STA8 who received 9 hit points in a combat round is knocked down, even if his body armor absorbs all 9 hits and he suffers no actual damage. A character is knocked down even if he is already prone, or even sitting in a vehicle, since knockdown also represents the shock of being fired upon.

Panic: Whenever a character is surprised (attacked from an unexpected direction or as defined in the encounter chapter of the referee's manual) or is knocked down, there is a chance that he will panic. This is not blind panic, which sends him running for cover, but rather causes him to momentarily freeze or become confused. To determine if a player panics, roll 1 Dl 0. If the result is equal to or less than his coolness rating, he panics, and must immediately hesitate for a number of rounds equal to his coolness divided by two, rounded up. This is true even if he has already used up his hesitations for the turn. Once all of his hesitations have been used (and assuming he is still alive), he returns to normal. Note that players with a coolness rating of zero never panic. Although all hesitations must be taken immediately, only the first hesitation is actual shock paralysis. On the second hesitation the character may go prone or duck into cover that is within 2 meters of him and remain stationary there until all his hesitations have been used.

Bailout: If an armored vehicle is penetrated by fire (receives hits equal to its armor value), there is a chance that each character inside will panic and bail out. The roll is the same as for panic, above. If he fails the roll, he must immediately climb out of the vehicle, seeking cover within two meters, and once out must take all his hesitations. When his hesitations are done, he may get back in. It takes one round to get out of or into a side or rear door, and two rounds to get out of or into a top or turret hatch.

Charge: If a character on foot is being charged by a vehicle (not a bicycle) or running horse within 1 00 meters (that is, he is about to be run over by something large and fast), he must check for panic. If he panics, he does not hesitate; instead, he runs. Subtract two from the panic roll if the character has a weapon with a good chance of stopping the attacker and is prepared to fire it.

ORDER OF ATTACKS

Most fire and thrown weapon combat in a round is simultaneous. Melee, body combat, and all fire combat aimed at anyone attempting melee or body combat, however, are resolved in a sequence.

These attacks are resolved one at a time, in order of the skill levels of the characters making the attacks (starting with the highest). If two characters have the same skill level, each has a 50% chance of going first. If a character is put out of action by an attack earlier in the round, he may not attack in that round.

These attacks happen first in the round. After they are over, remaining fire and thrown weapon attacks are resolved simultaneously; that is, anyone put out of action still gets to attack in that round.

Example: Monk is out of ammunition and next to Gerhard, who has a pistol. Gerhard is trying to shoot Monk while Monk is at-tempting to strike Gerhard with his rifle butt. The appropriate skill levels used to determine which character attacks first would be Gerhard's PST skill level versus Monk's MC skill level. If Gerhard's skill level is higher than Monk's, he will get a shot off before Monk is able to swing his rifle butt at him.

BODY COMBAT

Characters must be within 2 meters of each other to make body combat attacks. There are four types of body attacks: strikes, grapples, escapes, and diving blows. Strikes and div-ing blows attempt to do damage to the target while grapples and escapes attempt to seize and hold the target or to escape from a hold. A character may make only one body combat at-tack per combat round.

Strike Attacks: A strike attack is a task (AVG:BC). Success means that the attack hits.

Blocks: If a character successfully hits an opponent, the opponent may be able to block the blow. The opponent may do so only if he is conducting a melee or body combat attack that combat round. If so, he attempts to block (in addition to his at-tack). Blocking is also a task (DIF:BC or DIF:MC). Success means that the attack has no effect. Note that two characters may both attack and attempt to block each other.

Aimed Attacks: A character may decide to concentrate his attacks against one particular body part (DIF:BC). If the attack succeeds, the die roll for location (see below) is not made; the attacker chooses the hit location.

Hit Location: Hit location (if the attack succeeds and is not blocked) is rolled on the hit location chart (biped or quadruped).

The die roll for hit location is not made for a surprise strike (an unexpected attack from behind). The attacker is allowed to pick his target.

Damage: Damage inflicted from a strike is equal to the attacker's body combat damage rating plus a roll of 1 D6.

Armor: Armor absorbs hits equal to its armor level from each strike attack and suffers no damage. Half of the damage absorbed (rounding fractions down) is inflicted on the attacker on the body part (right arm, left arm, right leg or left leg) used in the attack. Thus, if Monk punched Gerhard in the torso and

caused 8 points of damage, but Gerhard was wearing an armor class 4 flak jacket, Gerhard would only suffer 4 hits, while Monk's right arm would suffer 2 hits.

Grappling: Grappling is a task (AVG:AGL). It is somewhat simpler than a strike to resolve. Blocking is not possible; there is no hit location; and armor has no effect.

While grappling "damage" is calculated in the same way as for a strike the results of the attack are termed controlling hits. They are not damage, but rather a measure of the extent to which one character has physically controlled another (with a hammer lock, pinning him to the ground, etc.). Once a character has inflicted controlling hits on another character equal to or in excess of that character's STR, the target character is totally controlled and ceases struggling. The controlled character may not move; the controlling character may not move without releasing control (all controlling hits disappear). Until that time, however, the character may attempt to escape or grapple with the original attacking character. If both characters grapple, the first one to achieve hits equal to his opponent's strength controls the other.

Escape: An escape attempt is resolved in exactly the same way as a grapple; however, if the attempt is successful, hits are removed from the accumulated total, which the other player has already built up.

Diving Blows: A diving blow is an attempt to throw oneself at the enemy and knock him down. Blocking is not possible and armor has no effect.

Avoidance: If a character is surprised (an unexpected attack from behind) the attack always hits. If he is not surprised, he may avoid the attack (AVG:AGL). If the blow is avoided, the attacker is knocked down. If the attack is not avoided, it automatically hits.

Effects: If a diving blow hits, either the attacker or defender is knocked down and suffers hits. If 1 D6 + 2 x STA of the attacker is greater than STR + STA of the defender, the defender is knocked down and suffers hits equal to the difference. Otherwise, the attacker is knocked down and suffers hits equal to the difference. If the defender is surprised, only his STA is used in the comparison.

MELEE COMBAT

Range: There are two general categories of melee weapons:

short and long range. Characters must be within two meters of each other (the same as for body combat attacks) for short-range attacks, and three meters for long-range attacks. If a character with a short-range weapon (including body combat) encounters a character with a long-range weapon, the short-range weapon may not attack in the first round of contact (although a short-range melee weapon may block).

The ranges of melee weapons are given on the melee weapon chart.

Hit Procedure: A melee attack is a task (AVG:MC). In the case of a surprise attack (unexpected attack from behind), no roll is made; the attack automatically hits.

Modifiers: Certain melee weapons add a modifier to the character's MC skill, also shown on the melee weapon chart. This modifier is added to or subtracted from the character's skill; however, it may never reduce the character's skill below level 10.

Blocks: If the target of a melee attack is also armed with a melee weapon and is making a melee attack that combat round, the opponent may attempt a block (in addition to his attack).

A block is a task (DIF:MC); if successful, the attack misses.

Hit Location: Hit location is rolled on the hit location chart.

Exceptions: The die roll for hit location is not made for a surprise attack; the attacker picks his target. The attacker may at-tempt to pick his target in any melee attack; this is a task (DIF:MC). If he hits, he chooses where he hits. Additionally, the referee should feel free to mandate certain hit locations if the situation warrants it. If an injured player crawls up to an enemy with a knife, he is unlikely to hit him anywhere but in the legs. Likewise, a character mounted on horseback and swinging a club is not going to hit the leg of a man on foot.

Damage: Damage inflicted from a melee attack varies with the weapon used. The melee weapons chart gives the number of dice rolled for damage for each weapon.

Some melee weapons have the notation + 5". These weapons inflict damage equal to the indicated die roll plus the STR of the character using the weapon. Weapons with the notation + ½S" inflict damage equal to the indicated die roll plus half the STR (rounding fractions down) of the attacking character.

Armor: Armor absorbs hits equal to twice its armor level from each melee combat attack, and suffers no damage.

FIRE COMBAT

Fire combat may be conducted at considerably greater distances than either body combat or melee combat. Fire combat weapons (and hand grenades) are listed on the weapons chart. The weapons chart gives a number of pieces of information for each weapon (or type of round, if the weapon can fire more than one type): rate of fire, magazine size, range, damage, and armor multiplier are explained in this chapter. Knockdown and burst radius is explained under Explosions in the referee's manual. Indirect fire range is explained under Indirect Fire, later in this chapter. There are two varieties of fire combat: direct fire and indirect fire. Both types share certain basic concepts, explained below.

Human Limits: A single character can fire only one weapon at a time (even a tank gunner who has a cannon and a machinegun in his turret). If a character has no applicable skill, he cannot fire a weapon.

Rate of Fire: Rate of fire (abbreviated ROF) is the number of shots a weapon *can* fire in a single combat round. A weapon may fire any number of shots in a round from zero up to its full ROF. (A shot is usually a burst of three bullets or rounds, although for some weapons it is only one round. Everything in these rules is described in terms of shots, not bullets or rounds.) A weapon may fire several times in a combat round, until it uses up its rate of fire or until it has used up all the shots in its magazine. For example, if a weapon with a magazine of 5 shots and a ROF of 3 fired 3 shots in one round, it could fire only 2 shots in the next round before exhausting its magazine.

ZSU-30-6 and M988: The ZSU-3O-6 mounts a 6-barreled gatling gun. Its ROF of 5 applies to each of the 6 barrels. The ZSU-30-6 can fire up to 6 shots at a single target while using up only one on its ROF (although it uses 6 shots of ammunition). The M988 has a double-barreled gun, which acts the same way, except that it fires up to 2 shots at a target.

Reloading: A character may generally remove a used magazine and insert a new one in one round; some weapons take longer and these are noted on the weapons chart. If loading takes more than one round, a hesitation in the middle merely postpones the loading. Some weapons have a loader and a gunner; the gunner may aim the weapon while the gunner loads it; he may also do anything else not involving the weapon being loaded, including firing a different weapon. If a weapon has a listed ROF of 0, that means that loading and firing are a single action, taking one round to complete (mortars and hand grenades fall into this category).

DIRECT FIRE

Direct fire is the most common type. In direct fire, the target is a person, animal, vehicle, or building visible to the firing character.

Hit Procedure:

Skill Needed: The skill used depends on the weapon fired. All pistols use PST. All rifles, submachine guns, machineguns, crossbows, and rifle grenades use CRM. Rocket launchers and anti-tank missiles use HW. Large-caliber guns, howitzers, and the 82mm mortar use LCG. Longbows use LB. Grenade launchers use either CRM or HW, whichever is greater. (Note: all weapons capable of indirect fire use IF when firing indirect fire.)

Base Hit Number: Unlike most tasks, skills are not used directly in fire combat. Instead, the base hit number is used. Each of the direct fire skills has three base hit numbers: one each for close range (skill x 0.6), medium range (skill x 0.3), and long range (skill x 0. 1); round all fractions down. The hit number us-ed depends on the range.

Range: Every weapon has its own value, in meters, for close range; this is listed on the weapons chart. Medium range is twice this. Long range is twice medium range (four times close range). Extreme range is twice long range (eight times close range).

Shotguns: Shotguns may fire only at close or medium range. *Aimed Shots:* All base hit numbers assume a quick shot (the most common type in a combat situation). A character may, if he wishes, instead take a carefully aimed shot. This involves spending one combat round aiming. The shot (which is fired in the next combat round) is resolved with the character's base hit number doubled. Many weapons are capable of firing more than one shot per combat round. If a character spends a corn-bat round aiming, he may still fire multiple shots in the next combat round, up to the weapon's rate of fire, but only the first shot counts as an aimed shot. The aimer must be able to see the target when aiming.

Extreme Range: There is no base hit number for use at extreme range. The long-range hit number is used for extreme range too. There are restrictions on extreme range fire.

A tripod-mounted or vehicle-mounted machinegun or automatic grenade launcher may always fire at extreme range, and the hit number is doubled if it is an aimed shot.

A sniper rifle may be fired at extreme range only if firing an aimed shot; the hit number is doubled.

Pistols, submachine guns, and all other rifles and machineguns may fire at extreme range if firing an aimed shot and firing from a rest (a bipod, tree limb, wall, etc.); the hit number is not doubled.

Large caliber guns may fire at extreme range only if firing an aimed shot using a range finder; the hit number is half the long range hit number (including half the rangefinder bonus—see below), with fractions rounded down.

Other weapons may not fire at extreme range: rifle grenades, bows, rockets, anti-tank guided missiles, grenade launchers (other than those on tripod or vehicle mounts), howitzers, and mortars.

Rangefinders: Vehicle-mounted and towed large caliber guns and howitzers have rangefinders, which provide a firing bonus to the gunner's base hit number. This bonus may only be used for aimed shots and only when shooting at vehicles or other large targets (such as buildings). The entry in the equipment list for each vehicle or towed gun gives its rangefinder bonus. This bonus is added to the base hit number at close, medium, and long range. Half the bonus is added at extreme range.

Movement by Firer: No hand weapon may be fired while the firer is crawling or running. Most weapons, however, can be fired while walking or trotting. The weapons chart indicates the effects of walking or trotting on the base hit number of a character firing each type of weapon. These are listed after the category heading of the weapon type and apply to all weapons in that category. W means the weapon can be fired while walking without modification; 1/2W means that the hit number is halved; if neither of these appears, the weapon may not be fired at all while walking. T and 1/2T mean the same things for trotting.

For example, the character noted above has a base hit number of 42 at medium range using CAM skill. Assault rifles are halved if fired while trotting while submachine guns are unaffected if fired while trotting. Thus, if the character were trotting, he would have a base hit number of 21 if firing an assault rifle or 42 if firing a submachine gun.

Fire from the Saddle: A character mounted on a draft animal uses the rule above, but is counted as being one movement category faster than he is; if the animal is stationary he is counted as walking, if the animal is walking he is counted as trotting, and if the animal is trotting he is counted as running (no fire possible).

Fire from a Moving Vehicle: No aimed fire is possible from a moving vehicle. There are no other restrictions.

Target Movement: If the target is moving 30 meters or more in the current round, the base hit number is halved.

Target Obscured: If the target is partially obscured (in brush, fog, mist, light smoke, etc.) the base hit number is halved.

Multiple Modifiers: If the hit number is modified several times (halved and/or doubled more than once, range finder bonus, etc.),

all modifiers are cumulative. The range finder bonus is added first, then all halvings and doublings occur, and then fractions are rounded down.

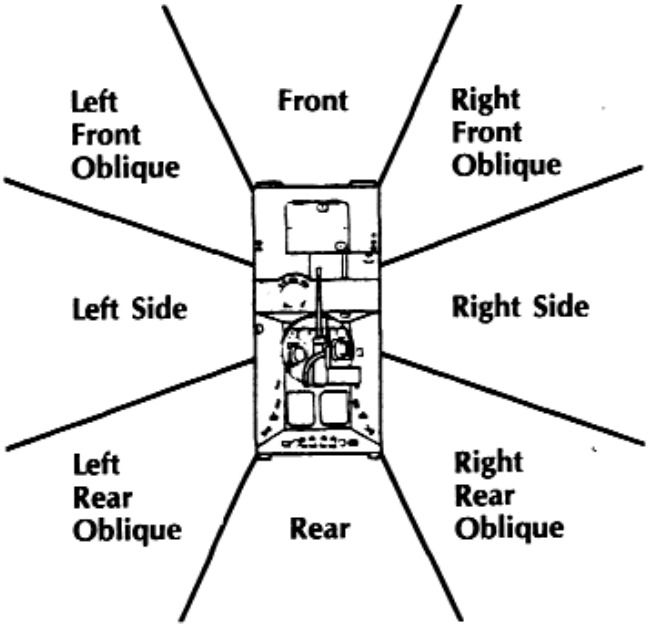
For example, A hit number of 35 with a range finder bonus of + 1 5 gives a hit number of 50. If this is doubled, halved, halved, and halved again, the final hit number is 12.

General Restriction: Regardless of the character's base hit number, all rolls of 91 or higher miss the target, and all rolls of 1 hit the target.

Firing at Riders: If the target is a draft animal and rider, motorcycle and rider, or bicycle and rider, the firer must announce which he is firing at: rider or mount. The shot is rolled as usual, but if it misses its intended target, it has a 1 0% chance (or half the hit number if that is lower) of hitting the other.

Hit Location: Hit location is rolled on the appropriate hit location chart (biped, quadruped, or vehicle).

Vehicle Hit Location: Vehicles are fired upon from one of eight target aspects, each covering a 45° arc of the vehicle. These aspects are front, right front oblique, right side, right rear oblique, rear, left rear oblique, left side, and left front oblique, as shown in the diagram below.



Once the aspect is determined, the referee rolls a D1O and consults the column of the table covering that aspect. Then the vehicle's damage location chart is consulted, as explained in the referee's manual.

Sometimes, a vehicle will be attacked from above. In this case the referee rolls 1 D6; on a 1 or 2, the hit is on the front deck; on a 3 or 4 it is on the turret deck; on a 5 or 6 it is on the rear deck.

Motorcycle Hit Location: To determine hit location on a motorcycle, roll 1 Dl 0 and consult the motorcycle hit location table.

Aimed Shots: A character conducting an aimed shot may, if he wishes, try to pick his hit location. If so, his base hit number is halved (although it is usually also doubled for aiming), but any hits automatically hit the part of the body or vehicle aimed at. This part must be one it would be possible to hit if the hit location table were used. A character firing an aimed shot with a sniper rifle may always choose a specific part of the body to aim at, without halving his hit number.

Damage: Damage inflicted from a fire attack varies with the weapon used and the range. Small arms weapons have a base damage number. At close range the weapon does four times the base damage plus 4D6. At medium range it does three times the base damage plus 3D6. At long range it does twice the base damage plus 2D6. At extreme range, it does damage equal to the base damage plus a roll of 1 D6.

For example, both battle rifles listed in the game (the G3 and the FAL) have a base damage number of 4. At close range it would cause 1 6 plus 4D6 hits of damage. At medium range it would cause 1 2 plus 3D6 hits of damage. At long range it would cause 8 plus 2D6 hits of damage. At extreme range it would cause 4 plus 1 D6 hits of damage.

Larger weapons have a damage multiplier instead of a base damage number. These weapons have their damage number preceded by x .

Weapons with a damage multiplier instead of a base damage number inflict damage equal to 4D6 times their multiplier at close range, 3D6 times their multiplier at medium range, 2D6 times their multiplier at long range, and 1 D6 times their multiplier at extreme range.

Some weapons with a damage multiplier have their multiplier followed by the letter "C". These weapons Inflict constant damage. That is, the amount of damage they inflict does not decline with range. They will inflict 4D6 times their damage multiplier at all ranges.

For example, a 25mm armor piercing incendiary (API) round has a damage multiplier of x 5. At close range it would do 4D6 x 5 hits of damage. At medium range it would do 3D6 x 5 hits of damage. At long range it would do 2D6 x 5 hits of damage. At extreme range it would do 1 D6 x 5 hits of damage. The high explosive (HE) round for the same gun has a damage multiplier of x SC, and so does 4D6 x 5 hits of damage at all ranges.

Damage to Vehicles: Damage to vehicles is considerably more complex than damage to people or animals, and is covered in the referee's manual.

Armor: Armor absorbs hits equal to its armor level from each fire combat attack. Thus, if a character was wearing an armor class 8 Kevlar jacket and was hit in the chest by a weapon doing 1 2 hits, he would only suffer 4 hits, the armor absorbing the remainder.

Each time that a weapon does as much damage in a single hit as the armor can absorb, the armor has been penetrated. A player should make a note on his character record sheet each time his armor is penetrated. After armor has been penetrated ten times it is heavily breached and is no longer useful.

Some rounds, due to a low velocity, poor penetrating shape, or other factors, are less effective in penetrating armor. These weapons have an armor multiplier listed with their fire statistics. This multiplier is applied to the armor value to determine the number of hits the armor will absorb. For example, a 22 pistol has an armor multiplier of x 4. If a character was wearing an armor class 8 Kevlar jacket and was hit in the chest with a 22, the jacket would absorb (8 x 4 =) 32 hits before the character suffered any damage.

Some rounds are particularly good at penetrating armor, and these rounds have an armor multiplier of x ½. This indicates that the armor will only absorb half as many hits as its armor value before being penetrated. For example, the 4.7mm caseless round of the German G11 submachine gun has an armor multiplier of x ½. If it hit a character wearing an armor class 8 Kevlar jacket, the jacket would only absorb 4 hits before being penetrated.

Cover: Characters and vehicles may hide behind obstacles as protection from fire. If the hit location rolled is covered by the obstacle, the shot has no effect unless it is able to penetrate the obstacle. The armor equivalent chart gives the armor values of common types of cover. For example, If a character is under cover behind a tree, the referee first decides which parts of the character's body are under cover. If the character is firing a weapon, at least his head and right arm are probably exposed. If someone shoots and hits him in the chest, the first 1 5 hits are absorbed by the tree.

Helmets: If a character is wearing a helmet and is hit in the head, there is a 50% chance that the shot hit the helmet if hit from the front, a 1 00% chance if hit from the rear, and a 75% chance if hit from the side. If the helmet is hit, the character receives the benefit of the armor of his helmet. If not, he receives no benefit from the helmet.

INDIRECT FIRE

Indirect fire is fire at a target which the firing character can-not see, following the directions given to him by a forward observer who can see the target. Only weapons with an indirect fire range (listed on the weapons chart) may use indirect fire. These are rifle grenades, grenade launchers, howitzers, and mortars.

Calling Fire: In order for indirect fire to be possible, the firing character or gun crew must be in communication (usually by radio) with a character (called a forward observer) who can see the target. The target is a stationary position; it can be a building, but it can't be a moving vehicle (although it can be the place where the forward observer believes the vehicle will be when the fire hits). Before fire begins, the forward observer must talk to the firer for 6 combat rounds. After fire has begun, the for-ward observer may want to call in corrections to make the fire more accurate. The same restrictions on both characters' actions apply as with other communication; in particular, the firer may not fire his weapon during the conversation.

Hit Procedure: The base hit number for indirect fire is half the IF of the firing character or half the FO of the forward observer, whichever is less, rounded down. Exception: indirect fire with a rifle grenade or hand-held grenade launcher (M203 or HK-69) uses one quarter the skill level. If the shot fails to hit, it deviates (hits somewhere else). The roll is made when the first shot is fired and after every correction. Once the roll succeeds, no further roll is necessary.

Deviation: If the round deviates, the referee determines the distance and direction from the target of the impact point. First the referee rolls 1 Dl 0 for distance of deviation. For grenade launchers and rifle grenades, multiply the result by 5 meters. For mortars and howitzers multiply the result by 1 0 meters. If the indirect fire weapon is firing at greater than half its indirect fire range, double the result of the deviation roll. Then he rolls 1 Dl 0 and consults the scatter diagram to determine the direction of deviation.

Corrections: If the shot doesn't hit, the forward observer may call in corrections. After each correction, add 1 0% to the chance of a hit and subtract 1 from the die roll for distance of deviation if the round misses. Thus, four corrections would raise the chance of a hit by 40% and would lower the deviation die roll by four. A deviation roll of less than zero is changed to zero. There must be at least one additional shot after each correction before another correction is possible.

Accuracy: There is a maximum limit to the accuracy of in-direct fire. The maximum chance of a hit is 75%; for rifle grenades and hand-held grenade launchers, the maximum

chance is 50%. In addition, the deviation distance roll may never be reduced by more than 5; for rifle grenades and hand-held grenade launchers the roll may never be reduced by more than 3.

Subsequent Shots: If a shot hits, subsequent shots will continue to deviate around the target because of the maximum limits of accuracy. If a shot does not hit, subsequent shots will deviate around the initial impact point (not the target). In both cases, the deviation distance roll is reduced by 5 (for most weapons) 3 (for rifle grenades and hand-held grenade launchers).

For example, Wood has an Mk-19 grenade launcher and lF6O. Carson has FO78. Carson is on a hill crest observing enemy soldiers coming up the hill. Wood is on the other side

of the hill. Carson radios Wood and tells him to fire. Wood fires one grenade with a 30% chance of hitting. The referee rolls a 45, indicating a miss. For deviation distance he rolls a 5: the grenade misses the target by 25 meters. He then rolls a 2, indicating that the grenade goes long. He fires another; this time there is no roll to hit, and the grenade deviates from the point where the first grenade hit. He rolls a 3 for distance, reduced by 5, which makes the deviation distance 0; a direction roll is unnecessary and the grenade hits in the same place.

Carson radios a correction, which takes the next combat turn. This correction increases the chance of a hit to 40%. On the turn following, Wood fires again but rolls a 60, thus missing. The referee rolls a 5 for distance. Because of the correction, this is reduced to a 4, or 20 meters from the target. He rolls a 3 for direction (long and to the right). The next turn Carson radios another correction and when Wood fires again he has a hit chance of 50%. This time he hits the target. Having hit the target, all further deviation is around the target, subtracting 5 from the distance roll.

Self-Observed Fire: The firing character may act as his own observer if he can see the target. (This is done if the target is out of the weapon's direct fire range or if the weapon is a mortar with no direct fire capability.) In this case, only the firer's IF skill is used. The rules above apply except that there is no delay for corrections; fire is corrected automatically after every shot until a hit is scored.

CLGP: Cannon-launched guided projectiles are a special type of round fired by the 1 55mm howitzer. They are laser-guided.

if the forward observer (or anyone else—no skill is required) lights the target with a laser designator, the round has a 90% chance of hitting. If it doesn't hit, roll for deviation, subtracting 5 from the distance roll. The target for a CLGP round may be a moving vehicle.

THROWN WEAPONS

Any hard object can be thrown at another character or animal. Hitting the target is AVG:TW at effective range and DIF:TW at long range. Effective range is equal to the character's throw range if the object weighs 1 kilogram or less; if the object weighs more than 1 kilogram, effective range is equal to the character's throw

range divided by the weight of the object. Long range is twice effective range. Thus, if a character had a throw range of 20 meters, he would have an effective range of 1 0 meters with a 2 kilogram object, 5 meters with a 4 kilogram object, etc.

If a thrown object hits its target it causes hits equal to the sum of the throwing player's STR plus 1 D6, regardless of the weight of the object. Thrown objects have an armor multiplier of x5.

A throwing knife will always inflict 4D6 hits, regardless of the range or strength of the thrower.

HAND GRENADES

Hand grenades are thrown at specific targets. Hand grenades may be thrown at either effective range or long range, as explained above.

If the throw misses, roll for distance and direction of deviation in the same way as for indirect fire, but multiply the distance of deviation die roll by 1 meter if within effective range and 2 meters if within long range. The total deviation may never be greater than half the range of the throw. Thus, if a grenade is thrown at a target twenty meters away, the grenade cannot deviate more than ten meters.

A player may throw additional grenades at the same target. If the target does not move, add 1 0 to the thrower's TW skill for all grenades after the first.

The referee can alter the chances of a hit based upon the difficulty of the throw; he might reduce the difficulty level by one for throwing a grenade at a large target like a tank, or increase it by one for trying to throw a grenade through the firing slit of a bunker.

DIRECT FIRE DEVIATION

Certain weapons deviate if they miss when fired in direct fire:

rifle grenades, grenade launchers, and the 82mm mortar. The die is rolled for distance and direction in the same way as for indirect fire; the distance die roll is multiplied by 1 meter.

ANTI-TANK MISSILES

There are several guided anti-tank missiles available to players. Unlike other direct fire weapons, the range given on the combat chart for an anti-tank missile is its maximum range. Within this range, the chance to hit is the same regardless of distance:

twice the firer's HW. The character must aim before firing, and (except for Tank Breaker) must continue to aim during the en-tire flight of the missile or it will miss the target. (The hit number is not doubled for aiming.) All anti-tank missiles travel 1000 meters per combat round, and thus it is easy to determine how long the missile will take to reach its target. If the character is hit by any sort of attack, he will stop aiming and the missile will miss. If the character is forced to hesitate while the missile is

in flight, the missile will miss. However, aiming, firing, and guiding the missile during flight are considered a single type of action, so a character may avoid the need to hesitate by spending an entire turn firing one missile.

Tank Breaker: Tank Breaker is a fire-and-forget anti-tank missile. That is, once it is aimed and launched it will continue to home in on the target without further guidance from the operator. The firing character must still aim before firing, but once the missile is fired he need not continue to aim. Tank Breaker may be programmed to hit the target on the aspect faced by the firing character or to fly over the target and hit it from above. If the second option is chosen, all hits are overhead hits.

DAMAGE

The ability of a character to absorb damage is measured by the hit capacities of the various parts of his body. Hits in different body parts are kept track of separately. (Note: See exception to this for NPCs below.)

Types of Hits: There are three types of hits, corresponding to three types of injuries: slight, serious, and critical. If an area of a character's body has taken hits less than or equal to its hit capacity, the area is slightly injured and such hits are slight hits. If an area has taken hits in excess of its hit capacity but no more than its capacity, the area is seriously injured and the excess hits are serious hits. If an area has taken hits in excess of twice its capacity, the area is critically injured and the excess hits are critical hits.

Slight Injuries: Slight injuries have no effect on combat, although the referee may wish to penalize actions making use of slightly injured arms or legs.

Serious Injuries: A character that suffers a serious injury must make a percentage roll against his CON to avoid losing consciousness. This roll must be repeated every combat round in which the character attempts to conduct any activity other than remaining still. A serious injury to the head automatically causes loss of consciousness. A character that loses consciousness will remain unconscious for 1D1O turns.

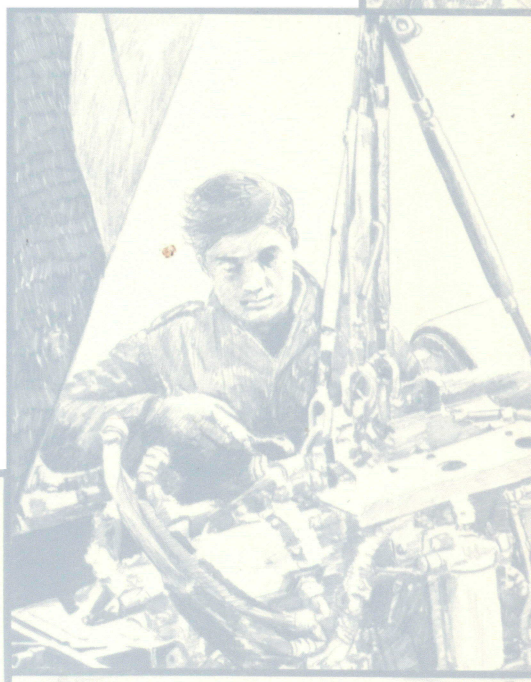
In addition, a serious wound to a leg or arm causes the character to lose the use of that limb until it is healed.

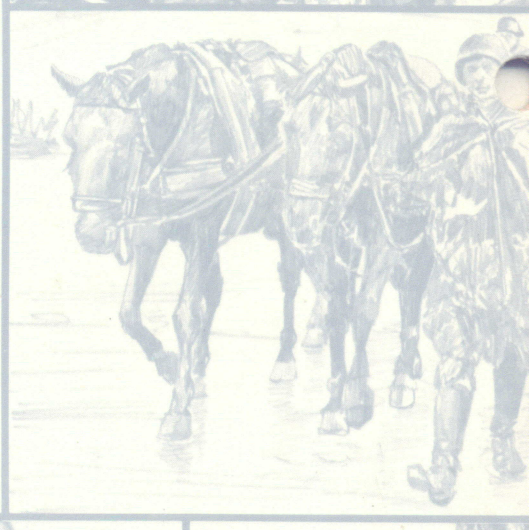
Critical Injuries: A critical injury to the head causes immediate death. Critical injuries to other body parts cause immediate loss of consciousness and require medical attention within 10 minutes or the character will die from loss of blood. Characters who lose consciousness due to a critical wound remain unconscious for 1 D 1 0 x 1 0 turns.

Death: In addition to critical head injuries, any character that suffers hits to his chest or abdomen in excess of four times its hit capacity is immediately killed. A character never dies (immediately, at least) as a result of hits to his arms or legs.

NPCs: It is not necessary to keep track of hits to NPCs or animals in detail, and this simplified rule reduces bookkeeping. (If the referee decides that a particular NPC is of special importance, he may treat him as a player character.) NPCs have only a single hit capacity, equal to 2D1 0 x 2. The hit capacities of animals are given on the animal data chart. If this capacity is exceeded, the NPC loses consciousness. If the NPC's hit total reaches double his capacity, he dies. Hit location is still rolled, for several reasons: the damage from all head hits is doubled; it is necessary to determine the effect of armor; if the NPC is behind cover, the shot may hit a covered part; and some hits against prone characters and animals are counted as misses.

Recovery: Wound recovery is explained in the referee's manual.





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