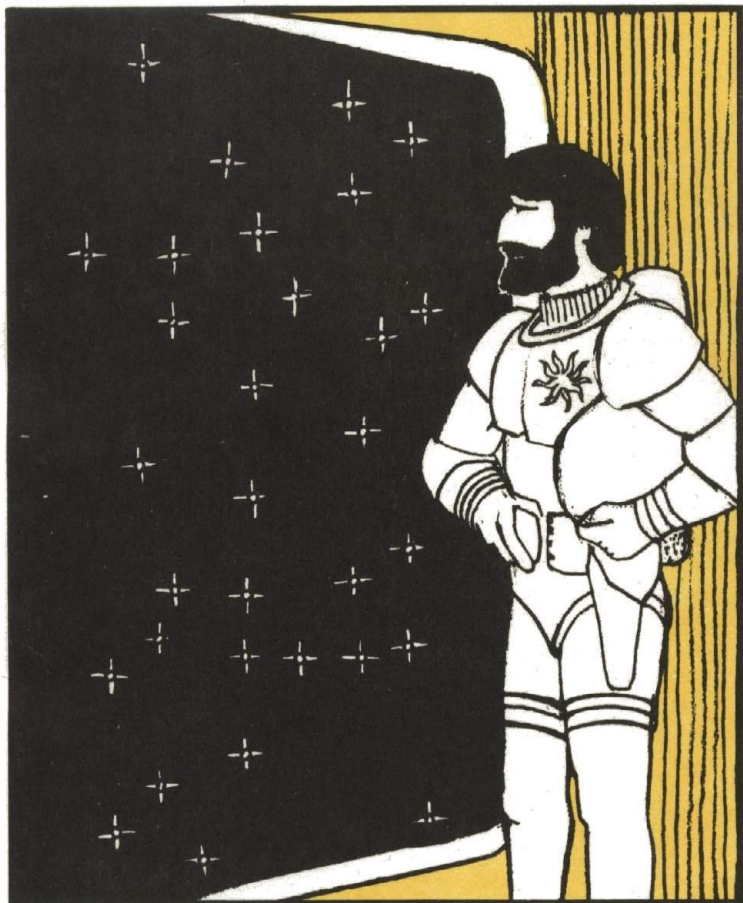


# STAR PROBE

The Game of Adventure,  
Conflict and Exploration in Space



By **JOHN M. SNIDER**

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**The Game of Adventure,  
Conflict and Exploration in Space**

**By JOHN M. SNIDER**

ILLUSTRATIONS BY  
PAUL G. SNIDER

Games based on the projected future are perforce fanciful, but STAR PROBE seems to operate on far more realistic precepts. This does not imply that there is a lack of imagination in its concept. Rather, playing the game brings one to the point where he almost believes that it could happen this way. STAR PROBE is basically a parallel contest, where the participants, representing separate empires, seek to explore and exploit new star systems for the glory of their governments and the enrichment of their bank accounts -- interstellar colonialism indeed! During the course of a game these contestants will seldom run afoul of each other, which is well and good, for the likelihood of fearsome life forms and hostile natives inhabiting the discovered planetary systems is all too great. So each player will probably find himself embroiled in a surface battle or an engagement in outer space before many game months have elapsed. The victor is that player who managed to gain the most from his explorations, while losing the least, during the allotted five game years (60 strategic turns each of one game-month). In fact, the game can be shortened a bit, or extended infinitely, as suits the participants. It can be played solo or by eight separate players (although more can play by assuming subordinate roles or by acting as the discovered life forms).

The star map provided with the game shows over 2,000 star systems. Assuming that starting positions are decided by some random method, a given participant will have to play many dozens of games before he becomes really conversant with the sector represented by the map. In fact, if the games played are not connected, but each is considered a complete contest in itself, there will be endless variety available, for the same star system can yield hundreds of different exploration results, so each time the player visits the system it can prove to be novel.

STAR PROBE, however, is more than just another interesting space-game. It is the first part of a trilogy of games/rules. It is introductory and provides practice and the groundwork for those who desire to enlarge the former into a vast stellar campaign game, and we believe that most of you will. The successive volumes will enable players to design their own ships, detail adventures with strange beasts and unknown intelligent civilizations, explore the ruins of vanished empires, and engage in cosmic confrontations which involve whole fleets of warships. If this prospect does not appeal to you, then there is nothing lost, for this game alone will provide all the variety needed to maintain continual challenge. For those readers who are excited by the larger prospective offered we suggest that you become thoroughly familiar with STAR PROBE now, so that the other aspects of the campaign can be added as quickly as possible. Either way you can't lose!

John Snider is a resident of the Twin Cities and a member of a large and active group of wargamers there. This group, the Midwest Military Simulation Association, did much in the testing and refinement of the author's work. As of this writing they are still engaged in a campaign, currently in a stage of imperial expansion, with one lost vessel from an avian race having had the misfortune of somehow arriving at the world of "Blackmoor" (and promptly losing all to an angry wizard whom they foolishly disturbed)! Although John is interested primarily in space wargaming, he somehow manages to become involved in the other campaigns and battles which the MMSA maintains in perpetuity. Despite his bent for mathematics, we managed to convince him that his game should be linguistically (and mathematically) simplified so we all could enjoy it. You will.

E. GARY GYGAX  
TSR GAMES EDITOR

1 SEPTEMBER 1974

LAKE GENEVA, WISCONSIN

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## I. INTRODUCTION

It is suggested that you play several short games with a few players before you try a full-length contest with five or more contestants. In this way you will not find that game length detracts from your enjoyment. Typically a game is five years (60 turns) in length, so introductory games can be cut to perhaps three game-years. When you have a group of adept players it is likely that they'll want to extend the game to as much as double the normal time. In fact, if your group can meet regularly, it is suggested that each game be made part of a series, with players maintaining their identity from game to game, and the discoveries of each recorded. This game is the basis for an expanded and augmented campaign, and this continuity and information are integral to the campaign. (Two additional volumes will eventually be published which will detail the remainder of the campaign game.) Complete exploration of the Star Map provided with the game will require considerable time, and exploration information should be filed with a neutral referee.

The justification for the game requirement -- exploration -- is that the various empires have arrived at a point in their development where they must either expand or face dissolution. Thus you, the player, must venture forth in order to save your race from barbarism or extinction. Naturally, there can be several factions within any empire, so it is possible to have several players representing a single government, and this adds excitement to the contest if there are sufficient players to allow it.

The rules herein are by no means absolutes, and you may, if you wish, alter them, add to them, or omit any parts which you find are not to your taste. The game is meant to be enjoyable and challenging, and how you find these qualities is a personal matter.

It is recommended that for strategic movement colored sequins be used on the Star Map to represent the ships. These inexpensive markers can be purchased at any variety store.

A number of tactical counters for space battles have been provided. However, if you have some pet ideas on what space ships should look like, add a few of your own designs to the game.

Finally, expense does not permit the inclusion of whole pads of Crew Cards, Ship Parameters, and System Exploration Sheets. Each player should make up a supply of his own so that he can maintain exact and complete records for each game, however. This can be accomplished by either hand copying them on graph paper or by some form of mechanical reproduction.

## II. THE STAR MAP

The total map represents a three dimensional space measuring 150 light years by 100 light years by 115 light years. It contains over 2,000 star systems. Each star is represented by a ● for regular stars (yellow, orange, white, etc.), a ▲ for hot stars (blue, violet, etc.), and a ■ for cool stars (red). The home star system, race type and empire boundaries for each player are stamped on the map.

Next to each star symbol is a number: 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15. If the number is underlined the star is that many levels below the plane of the board (level 0). If the number designating the star is not underlined it is that many levels above the plane of the board. Each square on the map (square(s) will hereafter be referred to as hex(es)) represents a cube five light years across.

Example: 15 is 15 hexes below the plane of the board, so it is 75 light years from the 0 point, just as 15 is 75 light years (or 15 hexes) above the zero level.

Also note that there are cloud areas on the map. These areas cannot be moved through in any manner, including a hyper-space jump. Players must either go above, below or around cloud areas. Cloud areas are identified in each hex by a "C" and two level numbers which tell how far below and above the 0 plane the cloud extends.

Example: C 13-12 indicates that from the 13th level below the zero plane to the

12th level above it travel is blocked by the cloud.

### III. RANDOMIZERS

If you do not have suitable dice, then you can use the following methods instead:

Randomizer Method 1: Using the chits, numbered 1 through 20, separate the appropriate ones, putting them in an opaque container, and then draw one.

RM 1-a. Use chits 1 through 4.

RM 2-b. Use chits 1 through 6.

RM 1-c. Use chits 1 through 8.

RM 1-d. Use chits 1 through 10.

RM 1-e. Use chits 1 through 12.

RM 1-f. Use chits 1 through 20.

Randomizer Method 2 (RM 2): For this method two sets of chits are required. From each set the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0 are to be used. These twenty numbers are then placed in an opaque container and two chits are drawn. The numbers on the chits are then added together giving sums 2 to 20 as possible results.

Randomizer Method 3 (RM 3): In this method, as in RM 2, the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0 are separated from two sets of 20. They are then placed in an opaque container. Draw two chits, reading the first one drawn first and second one next, giving a two digit number. The chit 0 is a zero, but if two of them are drawn, the two digit number will be 100. This RM will produce percentage numbers 01, 02, 03 ..... 96, 97, 98, 99, 00.

### IV. GAME SCALE:

#### Strategic Scale

1. Time: Each turn represents a period of one month.
2. Space: Each inch (or hex) on the star map will represent five light years.

#### Tactical Scale

Definition: For the purpose of this game, each increment of space, that is an inch or a square, will hereinafter be called a hex.

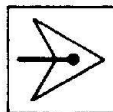
For the purpose of battle between opposing space ships, the following time and space references are used:

1. Time: Each battle turn will represent a period of one day.

2. Space: Each inch (or hex) on the battle surface will represent 5,000 miles. Thus, if your velocity is 10, then you will cover a distance of 10 inches (or hexes), or 50,000 miles in one day.

Battle Surface: This is either a floor or a gridded playing surface on which the playing pieces are placed and maneuvered to simulate combat. Either of the two surfaces may be used as long as the appropriate space scale is used with each.

Playing pieces for battle should be 1/2" square playing pieces with front of ship indicated, see below.



## V. TURN PROCEDURE

- A. Before play commences players must do the following:
1. Determine the order of movement (see VI, INITIAL SET UP).
  2. Each player must outfit his ship (see VIII, OUTFITTING YOUR SHIP).
- EACH PLAYER, IN TURN, WILL THEN:
- B. Move;
1. Make Hyper-Space Jump (see IX, THE HYPER - SPACE JUMP), and
  2. Check for Space Hazards and Malfunctions (see X, SPACE HAZARDS AND SHIP MALFUNCTIONS).
- C. When a star system has been reached:
1. Use the EXPLORATION MATRIX (see XI, SYSTEM EXPLORATION) to determine system class and the time (in months, or turns) it will require to arrive at the analysis, and
  2. Consult the CONFLICT MATRIX (see SYSTEM EXPLORATION) in order to determine if any trouble ("T" on the matrix) arose during the exploration phase.
- D. If exploration reveals a Class 1 system:
1. Determine the Race and Technical-Social Level of the intelligent life form inhabiting the system (see XII, CONTACT STAGE).
  2. Consult the RACE VERSUS RACE table to determine if any racial problems have arisen adjusting for "T's," and
  3. Negotiate with the natives according to the NEGOTIATION MATRIX, and if the negotiations are successful, record the Megaron gain and immediately revert to B.; or
  4. Negotiate again as in 3. above (or leave the system and revert to step B., and
  5. If the negotiations again fail the natives attack, and the section on HOSTILE ACTIONS (XV) must be referred to to determine the outcome of hostilities.
- E. If exploration reveals a system of Class 2 - 5, or there is a "No Result" from the exploration:
1. If in step C. 2. a "T" resulted, consult the LIFEFORM MATRIX (see XV HOSTILE ACTIONS).
  2. Each additional two months that you remain in the system the CONFLICT MATRIX must be consulted again to determine if trouble (a "T" result) arises, and
  3. Record the Megaron gain when exploration is complete and revert to step B.
- F. When leaving a system always revert to step B. above.

## VI. INITIAL SET UP:

The players will determine who is to move first and select his ship first.

1. Each player will roll two dice and add them together.
2. After the order of move has been determined, the players will then select which of the two possible ships they want;  
i.e., an Explorer I or an Explorer II. The number of each type of ship available is equal to the number of players (divide by 2). If there is an odd number of players, then the greater number of ships will be Explorer II's; i.e., if there are seven players then there will be three Explorer I's and four Explorer II's.
3. Once the above has been settled, the players then proceed to outfit their



ships with the desired personnel.

NOTE: Prior to establishing the order of move, the players should always agree as to whether all rules herein provided are to be used and agree as to their use to save arguments later on.

## VII. AVAILABLE SHIPS AND THEIR BASIC COMPONENTS

For the purpose of this game there are 3 basic types of space craft available, two of which are the Explorer I's and II's. The other craft that will come into the play of the game will be the Warship, the military vessel of both your home system and of other systems, a "TECH VII". When you become involved in a space battle you will be engaging the native warships. Listed below are the ships, at their various Technical Social Levels, and the value assigned to the seven basic ship components used in this portion of the overall game. (See the SHIP PARAMATERS TABLE.)

1) ATTACK: This item designates the total available damage that your ship may inflict on another in terms of Megarons. That is, if the value listed for your ship is 2, then if you hit another ship you will inflict a total of 2 Megarons damage.

2) SCREEN VALUE: This is used to indicate how many Megarons worth of damage your ships screens will absorb before they collapse from overload. Once your screens are gone then you will begin to take damage to the ship itself. Thus, if you have a Screen Value of 5, you may take a total of 5 Megarons damage before your screens collapse. It should be noted that you are able to dissipate 1 Megaron worth of damage per turn in which your screens receive no hits, so if you can take 5 Megarons total damage and have taken 3 so far, 2 more next turn would cause your screens to collapse; but if on the next turn your opponent should miss then you would go up 1, so that 3 Megarons in hits are required to collapse your screens. Even if the screens have collapsed the above holds true as long as the screen generators are not destroyed. If the generators are hit you must use your Repair Crew (if any) to bring them back to working order; so if the generators take a 3 Megaron blast it will take your crew 3 turns to repair. The damage is cumulative here in terms of repair.

3) ATTACK RANGE: This is the number of hexes you may fire beams.

4) ACCELERATION FACTOR: This defines the amount by which you are able to increase or decrease the present velocity of your ship or change direction of travel. Thus if you have an acceleration factor of 2 then you will be able to increase your speed by either 1 or 2, or decrease your speed by either 1 or 2. So if your present velocity was 6, and you accelerated by 2, then your new velocity would be 8, but if you had chosen to decelerate by 1 then your new velocity would be 5.

DEFINITIONS: Acceleration will constitute an increase over the velocity with which you start the turn, or a maintenance of present velocity during turning manoeuvres. Deceleration will constitute a diminishment of your velocity at the start of a turn to a lower value, to include deceleration through various manoeuvres.

5) HYPER-SPACE JUMP DISTANCE: This signifies the number of hexes that your ship is able to transverse on the Star Map in the period of one month, where 1 hex is 5 light years across. Thus if your jump distance was 3 then you could cover up to 3 hexes or 15 light years in one month's time. It should be noted that the jump time itself is basically instantaneous but that setting up the program for the jump takes one month since you must take fixes on six known objects, and to do this you must first locate them in a very cluttered heavens.

6) HULL VALUE: This is a measure of how much damage (in Megarons) your ship is able to absorb into its structure before falling apart. If your ship has a value of 40 then it is capable of absorbing that many Megarons worth of damage in the hull before disintegrating under an enemy attack.

7) CARGO HOLDS: The number here will signify how many holds you have in your ship. Each hold will have 10 units of storage space. Thus if you have one hold you

can store up to 10 units worth of cargo, two holds up to 20 units of cargo, and so on.

### SHIP PARAMETERS TABLE:

#### 1. WARSHIPS

ATTACK	3	ATTACK RANGE	6
SCREEN VALUE	5	ACCELERATE FACTOR	2
JUMP DISTANCE	0	HULL VALUE	30

TECH VI

ATTACK	5	ATTACK RANGE	7
SCREEN VALUE	10	ACCELERATE FACTOR	2
JUMP DISTANCE	3	HULL VALUE	35

TECH VII

ATTACK	7	ATTACK RANGE	8
SCREEN VALUE	15	ACCELERATE FACTOR	3
JUMP DISTANCE	5	HULL VALUE	40

TECH VIII

#### 2. EXPLORER I AND II

ATTACK	3	ATTACK RANGE	7
SCREEN VALUE	7	ACCELERATE FACTOR	3
JUMP DISTANCE	3	HULL VALUE	25
CARGO HOLDS	1		

EXPLORER I

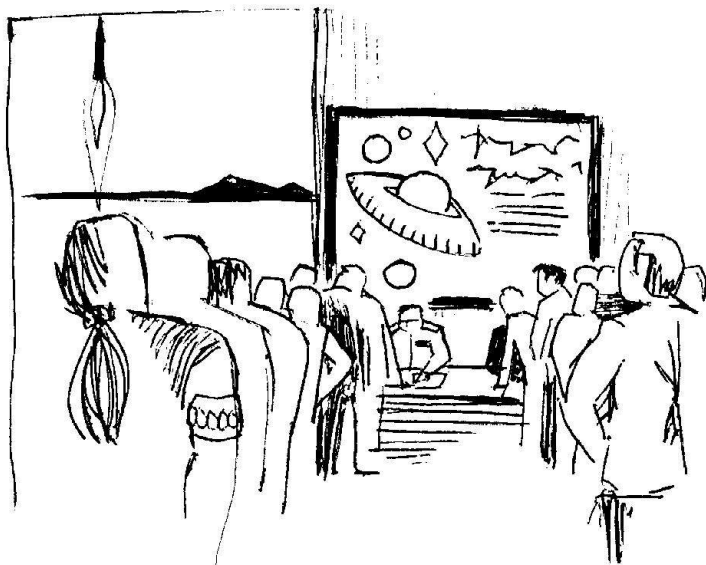
ATTACK	2	ATTACK RANGE	6
SCREEN VALUE	4	ACCELERATE FACTOR	3
JUMP DISTANCE	4	HULL VALUE	20
CARGO HOLDS	2		

EXPLORER II

HIT LOCATION	AMOUNT OF DAMAGE POSSIBLE
ATTACK VALUE	10
ATTACK RANGE	VALUE LISTED
SCREEN VALUE	VALUE LISTED
ACCELERATION	10
JUMP ENGINES	10
HULL VALUE	VALUE LISTED
SCREEN GENERATORS	10

#### VIII. -OUTFITTING SHIPS

Once the order of movement and the selection of ships has been done, you will outfit your expedition. To enable you to do this, your "department" or "backers" will give you a grant of 35 Megarons. With this grant you will proceed to outfit and crew your ship. (Note: a ship will hold only 2500 personnel) Following are the items that you may purchase with your grant - all costs are in terms of Megarons (the major monetary unit for stellar affairs).



### AVAILABLE ITEMS

A. Naval Personnel: To run your ship in a safe manner, you will have to buy 1000 of these at a cost of 5 Megarons. For each 200 that you are below this amount, you would add 10% to the chance of a Malfunction in the section on Space Hazards. A ship will run with no crew on computers for two jumps only.

B. Supplies: To feed your crew and maintain your ship at peak efficiency supplies are required. They are available at a cost of 2 Megarons per year's worth per 1250 personnel or part thereof. Thus if you plan to stay away for 3 years, you would buy that much supply at a cost of 6 Megarons, if you have 1250 people or 12 Megarons if you had 1251 - 2500 personnel aboard.

C. Specialty Teams: These teams are used to explore and classify the systems. There are two basic types of teams available. They are the Contact and the Scientific teams. The first one is used to establish communications with any intelligent life forms that may be found in a system. The second is used to identify any non-inhabited system, i.e., Class 2,3,4, and 5, and to discover any specialized items. Each of the teams may be bought at the cost of 2 Megarons apiece. Once you have bought the teams, they are organized into Survey Crews. The Survey Crew consists of a total of 4 teams, with at least one of the four being different than the other three, i.e., if you have 3 Contact teams you must have a Scientific team in the Survey Crew. After organizing complete Survey Crews, remaining teams may be organized into a Survey Crew of less than four teams. As long as you have at least one of each kind of team, you will be entitled to pick an Exploration Mode for your Survey Crew.

D. First-In-Team: This unit combines all the functions of the Survey Crew, i.e., it can explore all types of systems and classify them, and contact any intelligent life that may be found. Unless OPTION 1 is used no player may have more than one of these teams. The cost of this unit is 7 Megarons.

OPTION 1: The commanders ability to control his personnel: Since the First-In Team unit is noted for its unruliness and general inability to get along with others, you must determine if you can control one or more of them. This will be done as follows: First generate a random number from 1 to 20 (RM 1-f.) and compare to Table below:

NUMBER DRAWN	1 - 3	4-9	10-15	15-18	19	20
TEAMS MAY HAVE	0	1	2	3	4	5

E. Marine Groups: These units cost  $1/2$  Megaron each and consist of combat trained professionals. They are used to provide protection for your teams while they are exploring a system. Thus if losses are incurred while exploring, they are taken out of the Marines first.

F. Repair Crews: Each crew is capable of repairing 1 Megaron of damage per battle turn. They are used to repair component damage only, they may not fix any damage to the ship's structure. They cost  $5$  Megarons each.

G. Missile Salvos: They may be purchased at the cost of  $1$  Megaron per  $5$  Salvos. Also for each  $5$  Salvos or part thereof you must provide  $1$  unit of cargo space to hold them. Unless OPTION 2 is used these salvos are used only in space battles or Support action.

#### OPTION 2. "BLAST THE NATIVES INTO SUBMISSION."

Each missile salvo has a basic  $5\%$  chance of causing the natives to submit. The basic chance will be multiplied by the difference in your Technical-Social Level and the natives Technical-Social Level.

Example: If you have TSL  $7$  and the natives are  $1$ , the difference is  $6$  giving you a final percent chance per salvo of  $6 \times 5 = 30\%$ . Thus, if you fire  $4$  Salvos the natives will submit. This option only works on races below TSL  $6$ . If a player chooses to employ this method of dealing with the natives, then, after determining the system is a Class  $1$ , spending the time required to establish initial contact (see XI. SYSTEM EXPLORATION), and determining the natives race and Technical-Social Level, he would blast away. To determine if they submit generate a random number from  $1-100$  (RM  $3$ .) If they don't submit the first time they will never submit to this method. Also, this method marks the system as Hostile (H) and if they don't submit mark War (W). You are charged by the Board of Revue for all H & W systems as explained later. If natives do submit treat as + outcome on the Negotiation Matrix and use whatever Random Method you wish to increase your plunder, except RM  $3$  ( $1-100$ ).

H. Negotiation Modes: These consist of goods and information that are used for trade or barter purposes with the intelligent races of a system. They are purchased at the cost of  $1/2$  Megarons each and coded numerically  $1$  through  $20$ . Thus, if you buy  $10$  NM's you would pay  $5$  Megarons and record on your Personnel And Equipment Chart  $10$  out of a possible  $20$ . They may be in any combination desired and may even be the same as each other. For example, the  $10$  may be  $1,3,5,5,6,9,9, 13, 16,$  and  $19$ . Once any one of your NM's has been used it must be crossed off your list as it is expanded. You must store NM's in your cargo hold at  $1$  unit of space for every  $5$  NM's or part thereof carried. If you had  $6$  NM's you must use  $2$  units of cargo space to carry them.

I. Hyper-Space Fuel Slugs: This item enables your Hyper-Space Engine to propel your ship at speeds faster than light for a certain distance. Each slug costs  $1/4$  Megaron and the engines on any ship are designed to contain  $12$  slugs. Each  $4$  additional slugs may be stored in the cargo hold at a cost of  $1$  unit of space. Thus, if you bought  $16$  slugs, you would pay  $4$  megarons and store  $12$  in the engine and  $4$  in the cargo hold at a cost of  $1$  unit of space.

Using your  $35$  Megarons you may proceed to buy any of the above desired, within the limits of your budget. You may try to tailor your total crew to certain exploration needs. If you were planning on concentrating on exploring inhabited systems then you would buy more Contact than Scientific teams and so on. More than  $3$  each of the Contact or Scientific teams will enable you to adjust the results somewhat, this will be explained later. Below is listed the standard "government approved" Exploration Crew for those who don't want to figure out their own crew and equipment.

a.  $1000$  Naval Personnel ( $5M$ ); b.  $1$  year's Supply ( $4M$ ); c.  $2$  Contact and  $2$  Scientific ( $8M$ ); d.  $6$  Marines ( $3M$ ); e.  $10$  Negotiation Modes ( $5M$ ); f.  $8$  Hyper space fuel slugs ( $2M$ ); g.  $5$  Missile Salvos ( $1M$ ); and h.  $1$  First-In Team ( $7M$ ).

Later in the rules there is a chance that you will be attacked when you are exploring a system. If that happens you will need to know the attack and defense of your various teams. These values are listed below, along with a general recap, and the number of personnel in each group. Any of the teams or groups below, if they have men in them, may be assigned to protect other units, except that a First-In Team will not accept help from the Marines.

What teams, groups, etc. that you have will be kept track of on the PERSONNEL AND EQUIPMENT CHART. If you have the item make a diagonal cross from the lower left to the upper right corner in the boxes on chart. When the item is expended draw another diagonal line from the other side as below:

1 Month's Supply



Supply Used



Keep track of each 100 Naval Crewmen, each Contact, Scientific and First-In Team each Marine Group, each Fuel Slug and Missile Salvo and each month of supply. Also record the Negotiation Modes by placing their numbers in the boxes on the Card. When a NM is used cross it off:

NM



NM Used



PERSONNEL AND EQUIPMENT TABLE

ITEM	GROUND ATTACK	DEFENSE	SALARY/YEAR	MEGARONS PENAL- IZED IF KILLED	CREW STRENGTH
NAVAL PERSONNEL	5	5	.5 M	4 M	100
CONTACT TEAM	5	0	2 M	5 M	100
SCIENTIFIC TEAM	5	5	2 M	5 M	100
MARINE GROUP	20	15	.5 M	10 M	50
FIRST-IN TEAM	40	30	7 M	22 M	250
REPAIR CREW	10	20	5 M	12 M	100
SUPPLIES*	-	-	2 M per year's worth		
NEGOTIATION MODES*-	-	-	.5 M per NM		
5 MISSILE SALVOS*	50	-	1 M		
4 FUEL SLUGS*	-	-	1 M		

\* The Megaron value listed here is what you pay to buy outright the 4 items, i.e. if you don't use them while out on your expedition you do not have to rebuy them for the next one, as you do for the items with personnel in them (the first six).

PERSONNEL & EQUIPMENT CARD

COST                  NUMBER TEAMS, GROUPS, OR EQUIPMENT                  PERSONNEL

NAVAL PERSONNEL


SCIENTIFIC TEAMS

--	--	--	--	--

CONTACT TEAMS

--	--	--	--	--

MARINE GROUPS


FIRST-IN TEAMS

--	--	--	--	--

NEGOTIATION MODES


FUEL SLUGS



MONTHS OF SUPPLY


MISSILE SALVOS



REPAIR CREWS

--	--	--	--	--

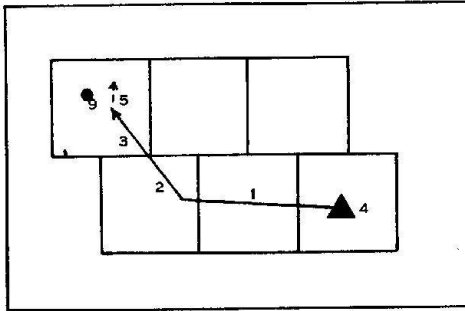
EXPLORATION METHOD

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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IX. THE HYPER-SPACE JUMP

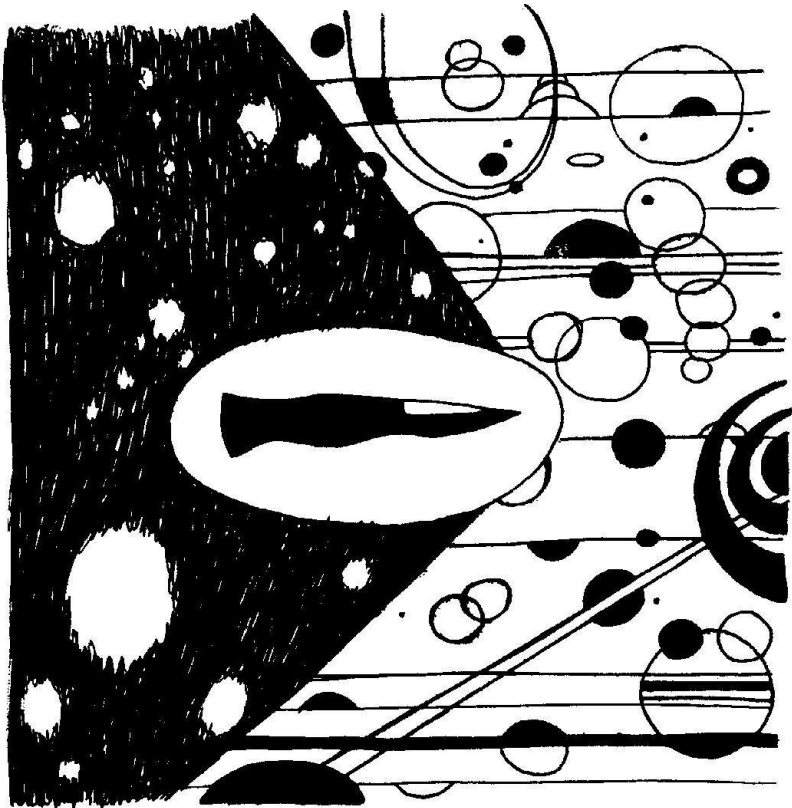
The SHIP PARAMETERS TABLE lists the Hyper-Space Jump distance - the number of hexes a ship may move on the Star Map. If your jump distance is 4 then you could go up to 4 hexes (20 light years) in one month's turn. A hyper-space jump consists of mov-

ing your ship from point A to point B on the Star Map, see the illustration below. It cost one fuel slug. To determine how far it is from one point to the other first find the number of hexes they are apart on the Star Map and then the number of levels between the two points. Thus, if you were going from a star that was on level 0 to a star that is 3 hexes away and at level (plus) 5, then the distance apart is 3 hexes and the level distance is 5 hexes. Once the distance apart has been found then the jump distance will be: "THE GREATER NUMERICAL DISTANCE PLUS ONE HALF THE SMALLER DISTANCE". In the above example then the jump distance would be 5 plus 3/2 or 6 and 1/2 hexes. To make such a jump in one month you would need a jump ability of at least the above; if your jump distance was 4 it would then take you 2 months to get to your destination; if it is 2 then it would take 4 months to get there.



TO GET FROM STAR ▲ 4 TO STAR ● 9 YOU MUST GO THROUGH 3 SQUARES AND THEN UP 5 LEVELS WHICH GIVES A JUMP DISTANCE OF 5 PLUS 3/2 OR 32.5 LIGHT YEARS OR 6 1/2 HEXES.

ILLUSTRATION . JUMP DISTANCE



## X. SPACE HAZARDS AND SHIP MALFUNCTIONS

Everytime that you make a hyper-space jump you must determine if it is done safely. The Table below shows what numbers based on 1 - 100 (RM 3) will result in either a malfunction or encountering one of the natural hazards of space. There is an 8% chance of a malfunction, and a 6% chance of encountering a space hazard if you have a full crew of 1,000. Determine the result before each jump. Note that probabilities for malfunction increase, and the numbers shown are cumulative, as the number of crew decreases, so if only 200 crew were aboard the chance for malfunction would be 1 - 48!

SHIP MALFUNCTION TABLE

NO. OF NAVAL PERSONNEL	DIE ROLL					DISTANCE	DIRECTION	DRIVE BREAK DOWN	REPAIR TIME NUMBER OF MONTHS
	200	400	600	800	1000				
	39,47	36	19,27	16	1	5	0	YES	2 months
	40,48	35	20,28	15	2	2	R	NO	-
	41	34	21	14	3	2	L	NO	-
	42	33	22	13	4	-3	S	NO	-
	43	32	23	12	5	3	S	NO	-
	44	31	24	11	6	4	L	YES	2 months
	45	30,38	25	10,18	7	2	R	YES	1 month
	46	29,37	26	9,17	8	5	0	NO	-

### EXPLANATIONS:

1). Distance refers to the number of hexes that would be added or subtracted to your original jump distance. If you were going to go 3 hexes but rolled a 1, then you would go 3 plus 5 or 8 hexes.

2). Direction refers to the final direction of travel by your ships. "S" means go in direction that you had planned. "O" means that you go directly opposite to the planned course. "R" and "L" mean that you will go on a course that is 90 degrees to the right or left of your planned course. Using the example above you would travel 8 hexes in the opposite direction from the one that you had planned. The distance starts from where you start your jump, not the planned end point.

3). If the drive breaks down then you must remain stationary for the time listed in order to repair it. You may not explore any system until it is repaired.

4). If your new course puts you in a hex that has a star at the same level as your ship, there is a 33% chance that you will be in the system. If the new course sends you out of your Empire's sphere of influence, stop at the edge. Do not leave the playing surface.

SPACE HAZARD TABLE

DIE ROLL	HAZARD	MEGARONS OF STRUCTURAL DAMAGE	TIME LOST IN MONTHS
95	HYDROGEN CLOUDS	3	0
96	SPACE DEBRIS	5	0
97	RADIATION STORMS	7	1
98	BLACK STAR	11	1
99	COSMIC STORM	13	2
100	HYPER-SPACE DISTORTION	17	3





## XI. SYSTEM EXPLORATION

Once you have arrived at a system you will determine what Class it is. This is done in the following manner:

STEP 1. The player that is doing the exploring will pick an Exploration Method (EM) for each complete and incomplete (has at least one of each kind of specialized team) Survey Crew and First-In-Team that he has. Exploration Methods are numbered 1 to 20. For each Exploration Method that you pick cross off the box that has the same number on it from the Personnel and Equipment Chart in order to keep track of your Exploration Methods. Keep this number secret.

STEP 2. Once the above has been done another player will generate two random numbers from 1 to 20. (RM 1-f), noting both secretly for each exploration to be made.

STEP 3. Choosing either of the two numbers that were generated, the exploring player will play it here in order to determine the outcome of the exploration of the system. Using the SYSTEM EXPLORATION MATRIX the number played will now be cross indexed with the EM's that were picked. The cross indexing of the numbers will reveal the possible Class of the system, any special value for the system, or no result (blank space). If all exploration yields no results then a fresh attempt may be made next turn or the player may move on.

When more than one Exploration Method is used there is an order of dominance to determine which one of the results is to be used. This order runs as follows:

1. First-In Team, then 2. the Exploration Method that requires the shortest time to get results. If the time is the same then the higher number Exploration Method will dominate. The order of dominance would only be used when there is a choice of outcomes. Example: If you were using 3 Exploration Methods, one by a First-In Team and two by Survey Crews, and the results had been a no result, and a class 3 and a class 2; the result that would be used to determine the system would be figures as follows - 1. The no result is discarded since there is a choice for the value system, (i.e. Class 2 or 3) even though it was found by the First-In Team; 2. Among the other two the final outcome would be determined by the order of dominance Rule 2 and 3, for shortest time or highest number if time was the same.

STEP 4. Once STEP 3 has been completed then the second random number (R-20) would be played. It is cross indexed on the CONFLICT MATRIX against the successful Exploration Method only, unless all the Exploration Methods had produced a

no result (then the second chit would be indexed against all the Exploration Methods used.) Example: 1. If you use 3 Exploration Methods and the order of dominance yielded a Class 3 system, then the second number would be cross indexed against the Exploration Method that yielded that result, 2. If you use three Exploration Methods and all should yield no result then the second number would be indexed against all three and not just one as in the first example.

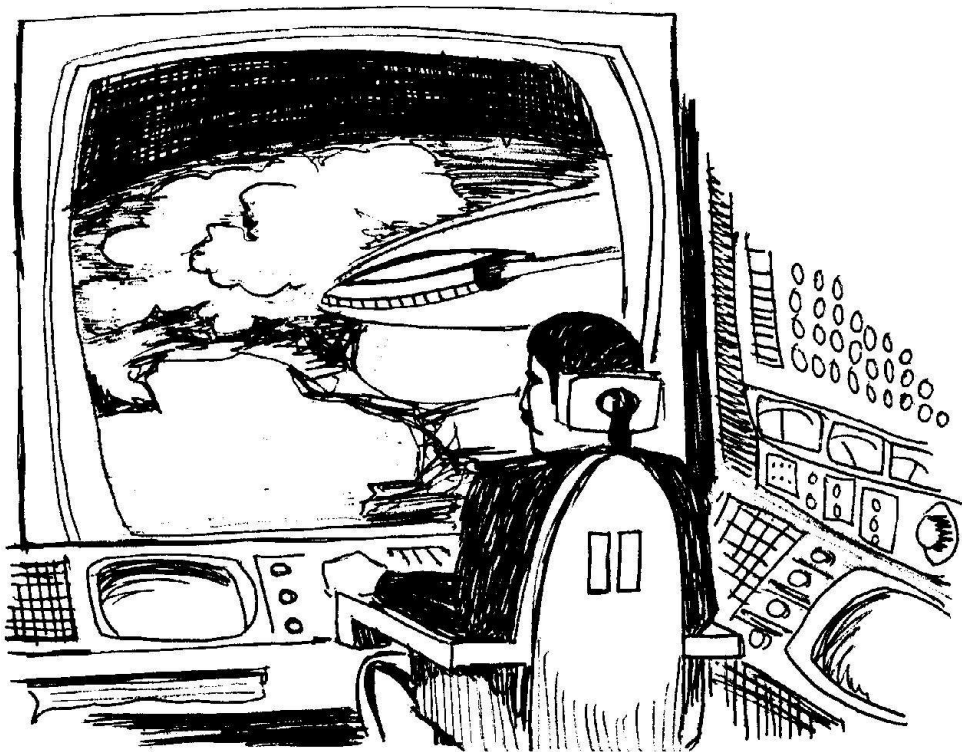
If on cross indexing the numbers a T (Trouble) had resulted; then depending on whether you had found a Class 1 system, any of the other Classes of systems, or had no result, you would do one of the following:

1. If the system is a Class 1 then for every T that you had on the turn that you found the Classification 3 would be added to the number in determining Race versus Race interactions in the Contact Section. Thus if you had a 3T then 9 would be added to the race vs. race number. **Note:** Any T's that are generated before you discover the Class 1 value of the system will be dealt with as in 2 below.

2. If the system turns out to be Class 2, 3, 4, 5 or a no result for the final outcome in Step 3, then you would go to the HOSTILE ACTIONS SECTION XV, Part 1) and determine if you are attacked by the lifeforms in the system.

STEP 5. Once the type of system has been found you must spend the time required by your Exploration Method in the system to complete the classification or to establish contact with the natives. If you do not spend the required time record the system in the normal manner but list it as "non-proved" (np).

For every two months or part thereof you will go through Step 4 again, except that only one number will be generated at random. The Exploration Method does not change.



## STAR SYSTEM TYPE EXPLORATION MATRIX

Time	0	0	0	1	1	1	0	0	0	2	2	3	3	3	3	4	5	0	0	0	0
Time	6	6	6	5	5	5	4	4	4	3	3	2	2	2	2	1	1	1	0	0	0
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1		1					4		1	2		4			3		2	5		3*	
2				1			3*		2		2	5*		1		3				4	
3		2								1	3		5		4		1*	4	2	2	
4	2		(4)*						2	4			1	3		3	1	5*			
5				5*			1		2			4		3	4	1	5	2			
6	3				1	4			3		2		2				4*	1	5	2	
7		3					2	4*					3			1	2		4	1	
8			4		2				3		4		1		2		5	1,2*		1	
9	4				2	3				2			2*		1	3	4			1	
10		4*			3					3*		1		5		2	3	2	1		
11			3		1		5	4					2	(6)*	3		2	3	12		
12	5			(6)*			4		4		1	2		5	2	3				13	
13			3		4			1			5	2		3			11		2		
14		(1)*		5	4	3				5		2			1			12		2	
15	1		2			(3)*	3					2			4				13*	4	
16				4		1		3			(6)*	3	2		1	4				1	5
17		4							3	1*			3*		23	5	2	1	3		
18	(6)*			3				2			3	1			2	5			1	2*	
19			1		5			1	5*					24		2*		2	3		
20				2		3	5				1	1*	4	14*	5		3	22	5		

■ ▲ ● □ Exploration Method

RANDOM NUMBER

PLAY MATRIX I: SYSTEM DETERMINATION

Time above indicates how long it will take to complete Survey of System.  
 An asterisk indicates a Speciality (see XIII SYSTEM VALUE).  
 A two-diget number indicates a double system (see XIII SYSTEM VALUE).

## CONFLICT MATRIX

RANDOM NUMBER	EXPLORATION MODE NUMBER																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1							T		T					T				3T		T
2							T			T				T			2T		T	
3				T				T	T				T			T		T	T	
4											T	2T	T	T			T		T	T
5					T			T	T						2T		T		T	T
6		T				T			T				T		T		T		2T	T
7			T					T		T				T		T		T		2T
8				T					T		T			T		T		2T		T
9		T				T	T			T			T		T		2T		T	T
10			T			T					T				2T	8	T		T	T
11				T			T			T				T	9	T		T		2T
12							T	T					2T		T		T		2T	
13					T			T				T			T		T		T	3T
14					T				T		T			T		2T		T		3T
15				T				T		T				T		T		T		3T
16							T	T					T		2T		T		T	2T
17			T								T	T		T			T		T	3T
18				T							T			T		T		T		3T
19					T					2T				T		T		3T		T
20					T	T					2T		T			2T		T		2T

Percent      10   15   15   25   20   20   30   25   30   30   35   35   40   45   40   45   50   50   60   60

PLAY MATRIX II: DETERMINATION OF ATTACKS

T means that you are attacked by hostile lifeforms on a Class 2 to 5, on a 1, T indicates that you have violated native customs and 3 will be added to the chance of Native Attack as determined in the Contact stage. 2 or 3T indicates that you will have 2 or 3 chances of trouble, i.e. Roll 2 or 3 times.

OPTION 3. If a player chooses not to finish the analysis of a system then he will not be certain as to what the system really is. If the system was a Class 1 it will remain so and will not come under this section. If the system was a 2 and you leave, then another player can explore it to determine if it was inhabited. This is done in the normal manner for system exploration, but you are trying to get a Class 1; any other result, even no result, would indicate that the system was a Class 2.

If the system was recorded as a Class 3 to 5 but, non-proved, then any other player may go there and attempt to discover if you were wrong. To do this he would explore the system in the normal manner, as if no one had ever been there before. Any result found will be the real find if he spends the required time there as before.

Penalties will be assessed if you are able to prove another player wrong (see the following table).

NEW FIND

O	CLASS	1	2	3	4	5	
L		2	-4	2	3	4	7
D		3	-5	-3	3	3	5
F		4	-6	-5	-2	2	3
I		5	-8	-6	-4	-2	1
N	N.R.	-5	-6	-3	-2	-1	
D							

If the new find is a combination or a special value an additional 3 Megarons will be subtracted from the original explorer. Results in Table are in plus or minus form indicating that the original explorer will either go up (plus) or go down (minus) in his total Megaron worth.

If the new explorer does not complete the survey of the system then he will take the place of the one he was trying to prove wrong, and any other player, even the original one, may go to the system and attempt to re-explore it.



## XII. SYSTEM VALUE

For the purpose of this game there are 5 basic types of systems, these are:

SYSTEM CLASS	BASE VALUE (Megarons)	MEANING
1	4	This class of system is one that contains intelligent lifeforms at a certain stage of development.
2	3	These systems are those that are suitable for large scale colonizations by you.
3	2	These systems are those that are capable of being exploited for their mineral value only.
4	1	These systems have the same use as Class 3, but due to harsh conditions in the system are of less value.
5	0	System has no apparent value under your present Technology.

These are the basic systems, but besides them you may also encounter double systems; that is, ones with two of the above numbers listed. An example would be 13, indicating that the system is inhabited by intelligent life and that you may also start mining operations in it. The total base value of one of the double systems would be twice the sum of the base value. In the example above, the value of the system would be 4 plus 2 times 2 or 12 Megarons.

**BASE VALUE MODIFIERS.** Once the base value is known then it could be modified for certain systems.

Modifier 1. If the system is a Class 1 its base value would be increased by the Technical - Social Level of Inhabitants as determined during the contact stage. Thus if you find a race that has a Level of 6, that would indicate that the value of the system to you would be 6 plus 4 or 10 Megarons.

Modifier 2. If, on cross indexing, the system type had an asterisk then the system is represented by the number and has a specialty item of the same number. Example - if you find a system 3\* then you have found a Class 3 system with item 3. If the item is in parenthesis it would indicate that the system has not been analyzed yet but that the specialty item corresponding to the number in parenthesis has been found, i.e. (4\*) would indicate the discovery of Item 4. The Class of the system would be found in the normal manner on a subsequent turn. The value added to the base value of the system depends on the number of the item found.

NUMBER	1	2	3	4	5	6
ITEM	MINERALS:	FUEL:	EXOTICS:	DRUGS:	FOOD:	ANIMALS:
VALUE (in Megarons)	17	13	11	7	5	3

### USES FOR \* ITEMS:

ITEM 1. Besides the Megaron value for finding them, MINERALS enables you to obtain Negotiation Modes 11 to 15 at the rate of 2 per month.

ITEM 2. If you find FUEL, then you would be able to refuel your ship without going home or to a military base. It takes 1 month to refine 2 fuel slugs.

ITEM 3. EXOTICS enable you to obtain Negotiation Modes 6 to 10 at the rate of 3 per month.

ITEM 4. DRUGS will enable you to obtain Negotiation Modes 1 to 5 at the

rate of 3 per month.

ITEM 5. FOOD will enable you to replenish your supplies at the rate of 3 month's supply for every 1 month spent there. No stored supplies are used during this period.

NOTE: The player who found the above items will be thereafter considered the controller of said resources and he will get them free of charge. Any other player who wishes to get the items will have to pay the controller what he asks for them or go elsewhere.

### XIII. CONTACT STAGE

If during exploration you find a Class 1 system go through the following steps after the required time to establish initial contact has passed.

STEP 1. Determination of Race and its Technical - Social Level (TSL). Using the two tables below roll dice to generate two random numbers (RM 3)

#### DETERMINATION OF TSL AND RACE OF CLASS 1 SYSTEM

DICE ROLL	TSL	DICE ROLL	3	RANDOM METHOD RACE
1-25	1	1-5		AMOEBOID
26-40	2	6-10		PLANT
41-50	3	11-20		INSECT
51-60	4	21-30		FELINE
61-80	5	31-45		CANINE
81-97	6	46-70		HUMANOID
98-99	7*	71-80		URSOID
100	8*	81-85		AVIAN
		86-90		MAMMALIAN
		91-93		REPTILIAN
		94-96		ICTHYOID/AMPHIBIAN
		97-98		SILICATE BASE
		99-100		UNKNOWN CLASSES (STRANGE)**

\*When you contact a race with a TSL of 7 or 8 they will control from one to six systems besides their "Home System". To determine how many systems roll one six sided die. The value of this small empire to the finder will be the value of the home system plus 5 Megarons for every system in the empire. If you found an empire with a TSL of 8 and you rolled 4 then there are 5 systems in the empire for 25 Megarons and for TSL 8 you would get 12 Megarons making the empire potentially worth 37 Megarons to you.

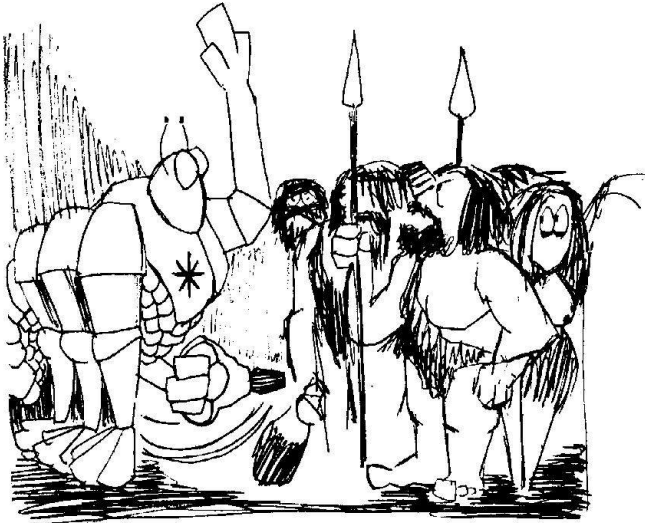
\*\* A race that is unknown means that there is no corresponding lifeform on your planet with which to compare it. For example: it could be based on gas, liquid or some other solid besides Carbon or Silicon. The final Characterization is not important in this game.

STEP 2. Following the passage of the time required to establish Contact with the inhabitants and the determination of the total number of T's resulting on the CONFLICT MATRIX, go to the RACE VERSUS RACE TABLE to determine if there is incompatibility between you and the inhabitants of the system on racial and social grounds. To determine if there is such conflict compare your race to that of the inhabitants of the system. To the number listed add 3 times the number of T's that had resulted while trying to contact them. Thus if you are HUMAN trying to contact HUMAN the number is 4; if you had 3 T's then add 9 for a total of 13. You must then generate a random number from 1 to 20 and score higher than the incompatibility number. If the number generated is not higher go to step 5.

RACE VERSUS RACE TABLE

SYSTEMS RACE	CONTACTERS RACE													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. AMOEBOID	3	8	4	7	10	14	12	7	10	5	7	6	12	6
2. PLANT	7	4	5	8	8	10	10	5	6	6	6	6	5	10
3. INSECT	4	5	6	10	9	11	12	8	9	9	7	8	7	9
4. FELINE	7	8	13	4	15	6	8	10	7	9	9	9	7	10
5. CANINE	11	8	12	16	4	5	7	9	6	8	10	12	10	10
6. HUMANOID	16	10	14	6	5	4	6	8	7	10	9	8	10	10
7. URSOID	13	10	12	8	7	6	4	8	7	9	12	12	10	10
8. ANVIAN	7	5	7	9	10	7	8	4	8	7	9	9	5	10
9. MAMMALIAN	12	7	11	7	6	7	7	7	4	8	8	8	7	10
10. REPTILEA	5	7	6	9	8	10	10	6	8	5	8	6	5	10
11. ICTHYOID	6	6	5	10	10	9	12	9	7	9	4	6	7	10
12. AMPHIBIAN	5	6	7	9	10	8	12	9	8	8	5	4	5	10
13. SILCATE	9	7	9	9	10	11	10	8	10	12	9	7	2	5
14. UNKNOWN	10	13	12	12	15	10	13	11	10	11	12	10	6	8

If you are successful in avoiding the above problem then go to STEP 3.



STEP 3. Here you attempt to open friendly diplomatic relations with the inhabitants of the system. This is the first step in inducing them to join or become part of your empire.

A) The contacting player will pick one of his available Negotiation Nodes (keeping it secret).

B) Another player will choose any number (1 through 20) that he wants, and keep it secret.

C) Once both sides have made their picks then the contactor will first reveal his number and the other player will reveal his. The two numbers will then be cross indexed on the NEGOTIATION MATRIX to determine if the result is 0, +, or -. If the result is 0 then there is no change in the value of the system and you may leave the system on to the next turn, having successfully negotiated. If the result is a plus or a minus, go to STEP 4.

## NEGOTIATION MATRIX

Random  
Number

	Mode																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	-	+	0	0	0	+	-	0	0	-	0	+	-	-	0	+	+	0
2	0	0	0	-	+	0	0	0	+	-	0	0	-	0	+	-	-	0	+	+
3	+	0	0	0	-	+	0	0	0	+	-	0	0	-	0	+	-	-	0	+
4	+	+	0	0	0	-	+	0	0	0	+	-	0	0	-	0	+	-	-	0
5	0	+	+	0	0	0	-	+	0	0	0	+	-	0	0	-	0	+	-	-
6	-	0	+	+	0	0	0	-	+	0	0	0	+	-	0	0	-	0	+	-
7	-	-	0	+	+	0	0	0	-	+	0	0	0	+	-	0	0	-	0	+
8	+	-	-	0	+	+	0	0	0	-	+	0	0	0	+	-	0	0	-	0
9	0	+	-	-	0	+	+	0	0	0	-	+	0	0	0	+	-	0	0	-
10	-	0	+	-	-	0	+	+	0	0	0	-	+	0	0	0	+	-	0	0
11	0	-	0	+	-	-	0	+	+	0	0	0	-	+	0	0	0	+	-	0
12	0	0	-	0	+	-	-	0	+	+	0	0	0	-	+	0	0	0	+	-
13	-	0	0	-	0	+	-	-	0	+	+	0	0	0	-	+	0	0	0	+
14	+	-	0	0	-	0	+	-	-	0	+	+	0	0	0	-	+	0	0	0
15	0	+	-	0	0	-	0	+	-	-	0	+	+	0	0	0	-	+	0	0
16	0	0	+	-	0	0	-	0	+	-	-	0	+	+	0	0	0	-	+	0
17	0	0	0	+	-	0	0	-	0	+	-	-	0	+	+	0	0	0	-	+
18	+	0	0	0	+	-	0	0	-	0	+	-	-	0	+	+	0	0	0	-
19	-	+	0	0	0	+	-	0	0	-	0	+	-	-	0	+	+	0	0	0
20	0	-	+	0	0	0	+	-	0	0	-	0	+	-	-	0	+	+	0	0

STEP 4. If the result of negotiation is a plus or minus adjust the value of the system by the following amount:

A) If the result is a plus you may generate an extra amount of Megarons to be added to the system's present value by using any of the Randomizer Methods but 3, adding the number generated to the starting value of the system. For example: if you were negotiating with a race whose TSL was 5 the starting value of the system would be 9 Megarons. To this you would now add the number generated. So if you decided to use RM2 and got 10, then the system would be worth 19 Megarons. Once the final value of the system is known then you must determine if the natives turn unfriendly. This is done as follows: divide the worth of the system to you by 1/2 and round up; this will be the number that you must get higher than by generating a random number from 2-20 (RM 2). Thus in the above example the system was worth 19, 1/2 of this is 10, therefore, you must get higher than a ten. If you do get higher then collect the value of the system and you may leave. If you get under the number or equal to it then you must start over and try to renegotiate with the natives, but use STEP 5.

B) If the result had been a negative then would generate a random number from 1-10 (RM1-d). The number generated would then be subtracted from the starting value of the system. Example: If the value of the system is 8 Megarons and you get a 6 then you would subtract 6 from 8 leaving 2 as a final value of the system to you. If on subtracting the number from the value of the system a negative final value had resulted, then the natives insist on being paid by you or they will not let you go (you are being held for ransom). If you don't pay you must fight to get away. The amount paid will be the positive of the negative number, i.e. if result was a -3 then you must pay them 3 Megarons. Once the subtractor is known and the above done you must determine if the natives turn unfriendly. This is done as follows: To the number rolled add 1/2 of the Base value of the Class 1 system. You must get more than this value by generating a random number from 2-20 (RM 2). If the final value of the system was negative and you paid the natives, what you paid would be subtracted from the number that you must get more than (you may overpay if you wish). If you get less than or equal to the number



needed, go to STEP 5. If you roll higher then collect the value of the system and you may leave.

STEP 5. If you have racial problems with the natives at the start, or the first attempt at negotiations has failed; then use this step. Here you may do two things; either leave the system recording it as a Class 1 and potentially hostile, or try to overcome the natives reluctance and negotiate with them. If you do the first, take your turn and leave the system. If you choose the second method then go through the normal negotiation steps (STEP 3). When it comes to the point of determining if the natives turn hostile you must add the number listed on the RACE VERSUS RACE TABLE to the chance of being unfriendly. Thus you would go through Steps 3, and 4, as normal, but to the numbers that are determined for whether the race becomes unfriendly you would add the number that is on the RACE VERSUS RACE. For example: If you were a HUMAN contacting a PLANT on a 0 result in negotiation, then the number you must beat is 10. If the result was positive and the number generated was 7 then you would add 10 to it, and the same for minus.

SYSTEM CODE	CLASS 1-5	SPECIAL VALUE*	RACE-TECH R T	HOSTILE OR WAR	SYSTEM CODE	CLASS 1-5	SPECIAL VALUE*	RACE-TECH R T	HOSTILE OR WAR
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									

If you fail to beat the required number then the inhabitants turn HOSTILE and attack you. If they do this, go to the section on HOSTILE ACTIONS, XV.

OPTION 4. Bribery. You may buy off the natives to lower the number you are required to beat when determining if Negotiations fail or the natives turn hostile. For each Megaron you pay the natives subtract 1 from the number.

### PLAY MODIFIERS FOR CONTACT STAGE

For this game the following modifiers are available for your use if you can satisfy the required prerequisites.

MODIFIER 1. You can reduce the required time that you must spend in a system. For a Class 1 system you may reduce the required time to establish Initial Contact by 1 month for each and every extra Contact or First-In Team over three that you have. Time can not be reduced below 1 month. For the other classes of systems you may reduce the required time by 1 month for each and every extra Scientific and/or First-In Team over three that you have. Time can not be reduced below 1 month.

MODIFIER 2. How to play through negotiation: If you have more than three Contact Teams or First-In Teams, and the required Negotiation Mode, then you may adjust your original Negotiation Mode as follows: if you have four teams then you may lower your Negotiation Mode by 1; if you have five teams you may raise it by 1; and if you have 6 or more teams you may adjust by plus or minus 1. Example: If you had 5 teams and had played NM 12 during negotiation stage but didn't like the final outcome, then you may raise it to 13 if, and only if, you have NM 13. If you do so modify, both the original NM and the new NM are used; i.e. in above example both 12 and 13 would be deducted from your list of available Negotiation Modes.

MODIFIER 3. How to modify the outcome of exploration: If a player has more than five Scientific or First-In-Teams he may designate one or more of them as a reserve. Using these reserve teams he may adjust the Exploration Method that resulted in the classification of the system as follows. One reserve team may lower the Exploration Method by one; two reserve teams may add one to the original Exploration Method; three reserve teams may adjust by plus or minus 1; four reserve teams may subtract 2 or add 1; and five or more reserve teams may adjust by plus or minus 2. The teams that are used to modify the result are very vulnerable; therefore they, or their guards, may be destroyed. For First-In Teams the chance is 15%, and for Scientific Teams or 1 Marine Guard the chance is 30%. Roll for all teams used to determine if they are destroyed.

### XIV. DATA STORAGE (Optional)

To represent the fact that you do not have unlimited capacity to store the information on the systems that you are exploring the following may be used:

All the information that you obtain must be stored on memory tapes and then be placed in the cargo hold. Each 10 Megarons worth of data on systems will go on one tape and will require 1 unit of cargo space in the hold. If you should run out of room in your hold and do not wish to return home to turn in the data then you may sell it to the military. To do this go to any military base (see XVI. BUREAU OF MILITARY AFFAIRS) and drop off the tape(s). The price received will be normal value of all finds that you have sold, in other words the military will subtract nothing from you when they pay you off. If you sell to the military then the data sold will not be gone over by the Board of Review (see XVII). Megarons that you receive from the military are credited to your private account and may be used in the following manner. Any negatives that you incur while exploring may be paid off with these funds. That is, if you return home with 15 Megarons in structural damage then you may use the Megarons in your private account to fix the damage before your records are submitted to the Board of Review.

NOTE: The Megarons received from the military do not count towards your total for determination of victory; the value of the data sold goes to the military total to de-

termine if they are going to win in an empire. If they do win then the player with the highest total will take over, but he will have a Military Junta for a government instead of being allowed to pick his own form of government. This is only to be used if you are going on to Empire Stage.

## XV. HOSTILE ACTIONS

Under this section actions involving the lifeforms and the intelligent natives in a system will be covered.

**PART 1 HOSTILE LIFEFORMS.** If a T has resulted on the CONFLICT MATRIX, and the system has not been identified as a Class 1., then do the following:

**STEP 1.** Another player generates a random number from 1 to 20 cross-indexes it with the Exploration Method that produced the result of a Class 2 to 5 system using the LIFE FORM MATRIX below. If the Exploration Methods had produced no result then it would be cross-indexed against all the Exploration Methods used.

**STEP 2.** If the result is "/" then nothing happens and you go on to the next 2 month period. If required to stay longer in the system, then do Step 1 again. If time is completed then make another hyper-space jump.

**STEP 3.** If the result is a number you are being attacked. Go to Step 4.

LIFEFORM MATRIX

ANIMAL ATTACKING	EXPLORATION METHOD																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Simian	1	/	10	/	20	/	/	20	/	/	/	/	/	30	/	/	/	40	/	/	/
	2	10	/	/	/	/	20	/	/	20	/	/	/	/	30	/	/	/	/	/	60
Plant	3	10	/	/	/	/	/	20	/	10	/	/	30	/	/	/	/	40	/	/	/
	4	/	/	20	/	/	20	/	/	30	/	/	/	/	20	/	/	/	/	50	/
Avian	5	/	/	/	20	/	/	30	/	/	30	/	/	/	40	/	45	/	/	/	/
	6	/	10	/	/	20	/	/	/	30	/	/	/	40	/	/	/	/	/	/	60
Canine	7	/	/	10	/	/	/	30	/	/	30	/	/	/	/	40	/	/	50	/	/
	8	/	10	/	/	30	/	/	30	/	/	/	/	30	/	/	40	/	/	/	/
Feline	9	/	/	20	/	/	/	/	30	/	40	/	/	/	/	40	/	50	/	/	/
	10	/	/	/	30	/	/	20	/	/	/	40	/	/	40	/	/	/	40	/	/
Ursoid	11	/	20	/	/	30	/	/	/	30	/	/	30	/	/	/	/	/	/	/	/
	12	/	/	/	/	/	40	/	30	/	/	30	/	/	/	/	/	/	/	/	/
Amoedoid	13	10	/	/	/	/	/	20	/	/	50	/	/	/	40	/	/	/	30	/	/
	14	/	/	20	/	/	/	/	/	30	/	/	30	/	/	/	50	/	/	60	/
Reptile	15	/	/	/	30	/	/	/	/	/	40	/	/	40	/	/	50	/	/	/	70
	16	20	/	/	/	30	/	/	/	/	/	40	/	/	50	/	60	/	/	/	/
Strange	17	/	/	20	/	/	/	30	/	/	/	30	/	/	/	60	/	/	/	/	70
	18	/	10	/	/	/	30	/	/	/	/	/	50	/	/	40	/	/	70	/	/
PSI - ** Beast	19	/	/	/	30	/	/	/	40	/	/	/	50	/	/	/	50	/	/	/	80
	20	20	/	/	/	20	40	/	/	/	/	/	/	40	/	/	/	/	/	/	100

\*\*This will be dealt with further in a later volume.

Numbers listed in the LIFEFORM MATRIX are the % chance of attack probability that the animal has of killing one unit of a group that has a defense equal to 1/2 the number listed. The number is also its defense value when you try to kill it.

STEP 4. Immediately resolve the combat between you and the lifeform that you have encountered. This is done as follows:

A) Determine whether a Scientific Team (and its guards) are being attacked or a First-In Team. Roll 1 six sided die; 1, 2, 3, 4, it is the former; 5 or 6 it is the latter (assuming both types of teams are present).

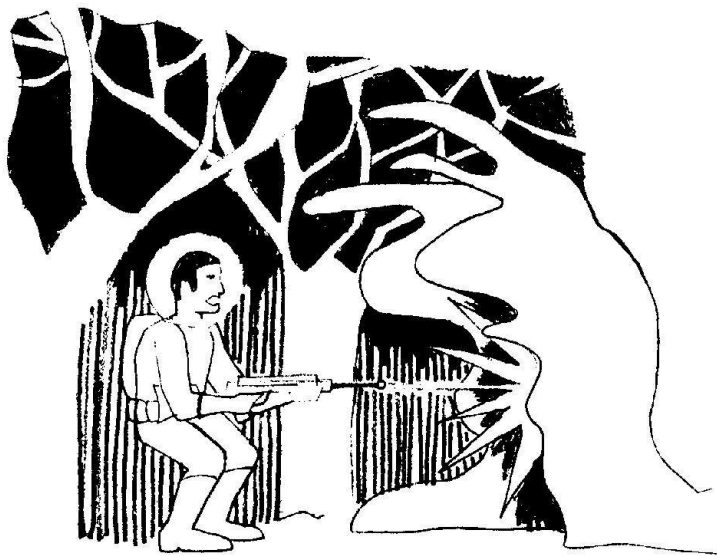
B) If the Scientific Team is being attacked, determine how many Marine Groups are with it. Divide the number of marines by the number of Scientific Teams and round to the nearest whole number. Thus if there are 4 teams and 9 groups, the number with the attacked team is 2 Marine Groups.

C) Once it is known who is being attacked determine the total attack probability and defense of the whole group. This is done by using the values listed in the section OUTFITTING SHIPS and adding them together for the team and its guards, or taking the listed value for the First-In Team. The Attack Probability is the percent chance that in one turn of combat you will be able to kill an attacker that has a defense number that is 1/2 of your attack probability. Example: the First-In Team has an attack probability of 40 which means it has a 40% chance of killing anything that has a defense of 20 or less (always round up to the nearest whole number). For every 5 total units of defense that a defender is below or above the 1/2 value subtract or add 5% of the attack probability. In the above example if the attacker has a defense of 27, the difference is 7, and 5% would be subtracted from the attack probability of 40%.

D) You may also use beam fire and missile salvos to add to attack and defense. Beam fire will add in 5 times its attack value to both the attack probability and the defense; also it will last as long as the battle. Missile Salvos will add to the attack probability the number listed for "Salvos" in the section on OUTFITTING SHIPS. You may only use missiles as long as you have salvos; once used up you can't fire any more.

E) Each side will generate a random number from 1 to 100 (RM3) results once per turn. Attacks are simultaneous.

F) Battle will continue until either you have destroyed the lifeform, it has killed your group, or it withdraws having failed to kill anyone for 3 consecutive turns.



PART II - If following an unsuccessful attempt at Negotiations (Step 5, in the rules, CONTACT STAGE), the natives in a system attack you, use the following STEPS to determine the outcome of the battle.

STEP 1. Determine how many of your Contact Teams or First-In Teams are being attacked. Do this generating a random number from 1 to 4 (RM 1-a), and number generated will be the number of teams being attacked. It will be your option as to whether they will be First-In Teams, or Contact Teams and their Marine Guards; or combinations of the two.

STEP 2. If Contact Teams are to be attacked then you must determine how many marines will be with each team. This will be done in the same way that the number of marines with each Scientific Team was determined in PART I.

STEP 3. Now you must find out how great the ATTACK PROBABILITY of the natives is and what their DEFENSE is. Using the positive difference between the number that you generated and the number that you had to get higher than to keep the natives non-hostile, and the Technical-Social Level (TSL); the Table below will yield the required data by cross indexing. Thus if you had to beat a 16 with RM 2 (2 to 20) and had gotten a 6, then the difference would be  $16 - 6 = 10$ . 10 would then be indexed against the TSL of the NATIVES to give their AP and D, and reinforcement time T.

#### NATIVE ATTACK PROBABILITY, DEFENSE AND REINFORCEMENT

TECH. SOC. LEVEL	DIFFERENCE BETWEEN YOUR ROLL AND REQUIRED ONE											
	0 to 3		4 to 6		7 to 9		10 to 12		13 to 15		16 on	
	AP&D	T	AP&D	T	AP&D	T	AP&D	T	AP&D	T	AP&D	T
1	15	1	20	1	25	1	25	1	25	1	30	1
2	20	1	20	1	25	1	25	1	30	2	50	2
3	20	1	25	1	30	2	35	2	45	2	60	2
4	25	1	30	1	40	2	50	2	60	2	80	3
5	30	2	40	2	50	3	60	3	80	3	100	4
6	35	2	50	2	60	3	70	3	S1	RM-1c	S2	RM-1c
7	40	2	60	2	80	3	S1	RM-1e	S1	RM-1e	S2	RM-1e
8	40	2	70	2	90	3	S1	RM-2	S1	RM-2	S1	RM-2

EXPLANATIONS. As in PART I the ATTACK PROBABILITY is the percent chance that the natives will be able to destroy one of your marine or teams that has a DEFENSE that is equal to one half the natives AP. For example if the natives AP is 50 then they will have a 50% chance of destroying one marine or team if the Defense is 25. The AP value would be adjusted in the same way that it was in PART I, i.e. for every complete 5 unit increment that the defense is above or below the half way point you would subtract or add 5 to the AP. Thus, if in the above example the defense were 34 then 5 would be subtracted from the AP making it 45.

DEFENSE as in Part I will be equal to the AP value listed in the Table, thus if the value in the Table is 50 then the defense of the attacking natives would be 50 also. T refers to the reinforcement time of the natives. The number listed under T will be how many turns of battle must go by before the natives will receive reinforcements equal in value to their AP. If the Table reads (30 1) then the Natives will start with an AP of 30 and receive the same 1 turn later.



S 1 or 2 would indicate that you are involved in a Space and not a Ground Battle with either 1 or 2 vessels.

STEP 4. Ground combat will be resolved in the following way using RM3 (random numbers 1 to 100). Each side will generate random numbers and see if it is able to score a hit they will destroy one of the groups or teams, explorer's choice. If you score a hit use the Table below to determine how many hits you actually score. Each hit will lower the natives ATTACK PROBABILITY and DEFENSE by 10. Continue to attack each other until one side is completely destroyed or withdraws from combat. The explorer may withdraw from combat on any turn, but does not attack that turn.

NATIVES TSL	1	2	3	4	5	6 - 8
NUMBER HITS	5	5	4	3	2	1

The natives will cease to attack if you either destroy them completely before they receive their next group of reinforcements, or they fail to inflict casualties on the explorer's party for 3 consecutive turns.

You may fire missile salvos and ship beams to assist your personnel on the ground. For actions against natives missiles attack probability will be 10 (not 50 as listed in the table). The beam attack is as in PART 1 (5 X Ship's AV). This AP from the ship may be added to your GROUND AP for a total AP. If you are withdrawing your ground elements from combat the ship may still fire its weaponry.

REINFORCEMENTS: For the natives the ground reinforcements and how often they are received are given in the table in STEP 3. If you are in a space battle the following table gives the native's total number of ships available and the amount of time before the arrival of new ships. They will receive 1 or 2 ships per turn as indicated for reinforcements.

TSL	TOTAL AVAILABLE SHIPS	TIME
6	25	1 to 8 turns
7	15	1 to 12 turns
8	20	2 to 20 turns

For the Time between reinforcements generate one random number at the start of battle and on the arrival of each reinforcement. The previous number will be discarded when a new one is generated. See the section on SPACE COMBAT XVIII. to fight the battle.

The explorer may reinforce the ground battle with any three available teams or groups each turn after the initial turn.

If the natives fail to drive you from the system then you may take the base value for it. NOTE in your records that the system is hostile (H). If you are driven from the system the natives will not negotiate with you anymore. If you return they will attack at twice their previous strength. Another player may try but would have to use STEP 5 in the rules on CONTACT STAGE.

In general any CLASS 1 system that you have to fight for will be recorded as hostile by the discoverer.



## XVI. THE BUREAU OF MILITARY AFFAIRS

For the player who runs into problems that he feels unable to handle, this bureau is provided for assistance (at a cost of course). It represents the military forces that your home system has available, both spacial and land. Thus if you should run into a race that becomes so unfriendly that it attacks you, there is then someone available to save you and your teams. You may call for military land and/or space forces to subjugate a system. If the military is called in though, they will charge you (or your appropriate sponsors) for their services. Also, it should be noted that the military will found a base in any system they subdue. This base will be in operation 12 months after the arrival of the military. Below are listed the types of Forces that you may call in.

### GROUND ACTIONS

	YOUR ASSIGNED PRIORITY RATING										
	1	2	3	4	5	6	7	8	9	10	10E
TURNES FOR ARRIVAL	5	5	5	4	4	3	3	3	3	3	2
CHARGES (in Megarons)	3	6	9	11	13	15	17	23	28	35	50
% CHANCES											
SOLVE TROUBLE	25	30	35	45	50	60	65	70	75	80	90%

EXPLANATION: In general the ability of the forces the military sends is to solve the problem in a straight land battle, as detailed above, with the following modifier - for every Technical-Social Level that the natives are below five add 15% to above percentages, but for every Technical-Social Level that they are above five subtract 15% from their chance. If this force should fail to put down the natives then you will be charged 35 Megarons for involving the military in WAR. If a war occurs it should be

recorded on your RECORD SHEET as the system it is in will be closed to outside travel for the rest of this phase of the game and once the Empire Stage (to be detailed in a future volume) starts you will have to assign forces to conquer this system. "E" above means you have indicated a dire emergency!

**MILITARY BASE:** Available at these bases are the following items: Supplies, Missile Salvos, Negotiation Modes, and Hyper-Space Fuel Slugs. The cost of the above items is twice the normal value; i.e., twice what they cost at your home system. So Fuel Slugs would cost 1/2 a Megaron each at a Military Base.

See also SPACE COMBAT (XVIII) for military actions in space.

## XVII. BOARD OF REVIEW

In order to determine if you are doing a satisfactory job, every time that you return to your home system after a period of at least one year in space your records and performance will be examined by a "Board of Review". Determinations of this review are as follows:

A) First they will examine your accumulated Megarons total. To be subtracted from this are charges for any lost teams, damage to the ship that they will have to repair (i.e. -structural damage), wages to be paid your crew for any time they have coming - (what you paid originally was 1 years salary, so if you are out for 3 years you owe them for two more years), and penalties for flubbed exploration if that option is used.

B) From the remainder they will now subtract any charges that the military has levied against you - for calling them to your aid, buying items from them, or getting them involved in a war. This sum is added to the military total.

C) From what is now left they will deduct the following: For every race that you have recorded as hostile you will lose 3 Megarons.

D) If the total after A, B, and C is positive, the Review Board will recommend that you be allowed to go out again and continue your explorations. They will also loan you up to 50 Megarons to re-outfit your ship.

E) If result after A, B, and C had been 0 or less then the Board will recommend that you be "beached". If you are not beached you will have available to re-outfit your ship only 30 Megarons.

F) Determination of how soon you go out is as follows: The base chance of being allowed to go out is 30%. If the Board recommended that you be allowed to go out again then add 15% to the base chance. On the other hand, if the Board has recommended beaching, then subtract 10% from the base possibility. Also, you would add or subtract the number of Megarons that you have (after A, B, and C above are done) to the percentage chance. NOTE: You will always have a 10% chance of being allowed to go out again. Once the percentage needed has been found you would then roll every month until the required number comes up. When this happens you may go out again.

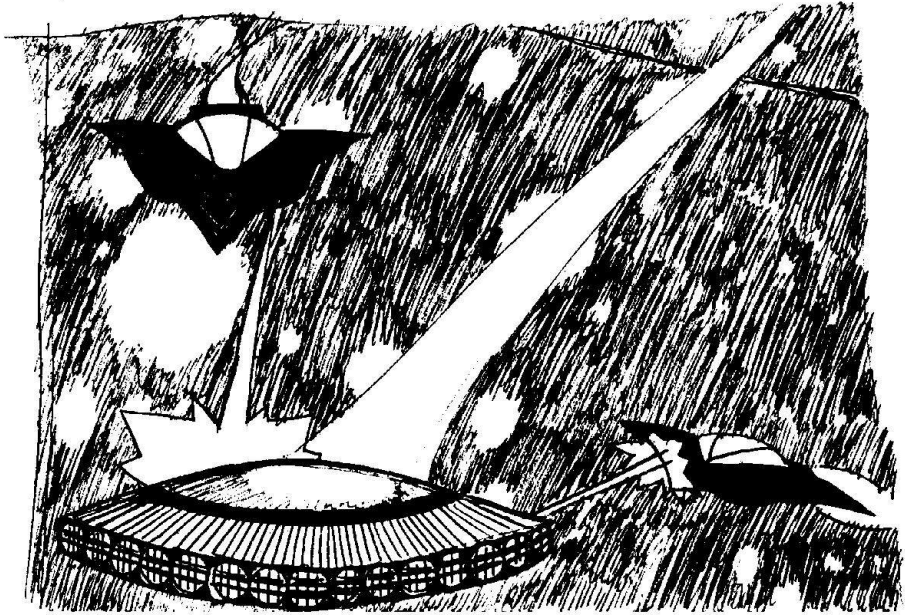
G) The total Megarons that you had left after A, B, and C will be recorded by the Board (for eventual determination of the winner). This total will be adjusted next time you come before the Board. When you return the second time you will submit your new records to the Board, and they will adjust by operations A, B, and C for the final sub total. The sub total will be used to determine your chance of being allowed to go out again. Finally the sub total is added to your previous total for a new final total.

FOR EXAMPLE: Assume you went out and discovered 60 Megarons worth of system, but were charged 40 Megarons in Steps A, B, and C, leaving you with a positive total of 20 Megarons and a 65% chance of being allowed to go out again. On returning the next time you have discovered a total of 70 Megarons; but due to unforeseen events A, B, and C add up to 85, leaving you with a subtotal of minus 15, and thus a 20% chance of being allowed out again. Minus 15 added to your old total of 20 now leaves you with a new total of 5. Thus for determining who wins at the end of the game you will, so far, have a total score of 5 Megarons.



You receive credit only for items seen by the Board. Thus, if you don't make it back before game ends any new data on systems will not count to adjust your total.

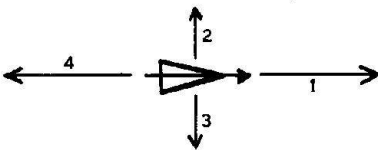
## XVIII. SPACE COMBAT



### PART 1: SET UP

**STEP 1.** Determination of the relative position of enemy ships versus yours: Generate a random number for each ship that the enemy has (Use RM 1-a). 1 indicates they are straight ahead of you, 2 means to the right 90 degrees, 3 means to the left 90 degrees, and 4 indicates directly behind you (see diagram below).

**STEP 2.** Determination of initial velocity: - For each of four cardinal points listed in Step 1 the player (or players) who is (are) representing the natives will generate a random number (use RM1-d) and the resulting number (1 to 10) will be the velocity. To determine your initial velocity you will do the same (Use RM1-d). You are allowed to add or subtract up to one total increment of acceleration. Thus if you drew a 7 on the draw and have an Explorer 1 with an acceleration of 3, you may then have a velocity anywhere from 4 to 10 as desired.



**STEP 3.** After STEPS 1 and 2 have been done you may move. The order of move will be determined by the roll of two six sided dice, with the high total going first, low last. At this point the explorer must decide what he plans on doing. He may abandon the system,

i.e. run for it, or he may fight by himself, or call on the military to assist him. If abandoning the system, the player must run for at least 6 turns before he can make his hyper-space jump. If during this period the hyper space engines are hit, he must start all over again from 1; i.e. run for 6 turns from the time of the hit. If you are going to fight you will do so using the method detailed in Part II below. If you are calling in the military you will do the following:

1) Assign a number 1 through 10 to your call for aid. The numbers represent your feelings of urgency in this situation, and will determine how many ships (a) the

military will send and (b) how long they will take to get there. For the details see the Table below which, besides the above also tells how many Megarons you will be charged by the military for coming to your assistance. (See also the rule regarding the BUREAU OF MILITARY AFFAIRS for land combat.)

### SPACE ACTIONS

PRIORITY	1	2	3	4	5	6	7	8	9	10	10E
TIME	/10	/5	/2	/5	3	/10	/5	/5	/5	/5	/5
SHIPS	1	1	1	2	2/	3	3	4	5	7	10
MEGARONS CHARGED	2	4	6	7	8	9	10	15	19	25	35

The natives will cease to attack in space if you are able to destroy all their ships before the arrival of reinforcements. Thus, if they start with 1 ship and will get another in 10 turns, then you have that many turns to end the battle.

### PART II: COMBAT


After the ships have been set up (per Part 1) the following rules will be used to govern movement and firing of weapons.

1) **MOVEMENT:** You are able to go in a straight line equal to your velocity. Thus, if you have a velocity of 4 you are able to travel 4 hexes straight forward. You may increase the above velocity by an amount up to the value of your acceleration factor (AF). You may decelerate by a factor up to that of your AF. Depending on the velocity of your ship, you are able to change the direction of its travel by factors of 45 degrees. As specified in the table below, you must go a minimum distance in a straight line before you may make a correction; this is due to the inherent inertia of your ship.

### TABLE OF TURNING DISTANCES

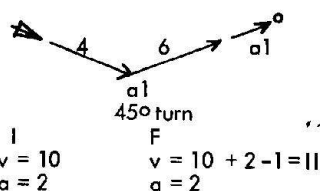
VELOCITY AT START OF A TURN: 1-4	5-8	9-12	13-16	17-20	21-25	26-30	31-35
STRAIGHT DISTANCE MUST GO	1	2	4	5	6	7	9

Also note that for each 45 degree turn that you make, you will lose 1 unit of velocity; unless you expend 1 unit of acceleration to counteract it. You may make course correction to the left and the right in any order that you desire. For example, if you had an initial velocity of 10 and an AF of 2 then you could execute some of the following turning maneuvers depicted below.

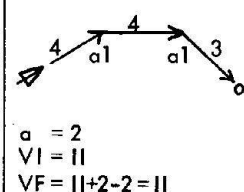
**SYMBOLS**  = ship  
 a = accelerate  
 v = velocity  
 d = decelerate

For Example: Ship has a  $V = 10 + a = 2$

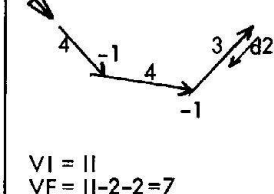
①



②

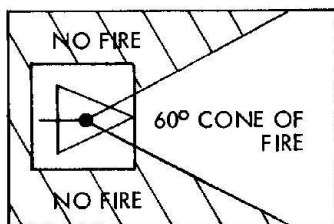


③



2) **FIRING BEAM WEAPONS:** Once both sides have moved all their ships, any ships that are in position to fire may do so. To determine whether or not you have a shot proceed as follows; if there is a ship within your attack range (see below) and to the

front of your ship or up to 30 degrees off of your front, then you have an effective shot. If so you may fire your beams or missiles. Beam weapons are fired only at the end of a turn. Weaponry is mounted in the front of the ship only. See illustration below for an example of this.



3) DETERMINATION OF HITS AND HIT AREA: To determine if you hit and where you hit, the following tables are used.

A. Determine if you hit your target with the table below. It compares range to the Technical-Social Level of the ship. Use RM 2 (2 to 20). You must get above the number shown to hit.

BEAM FIRING TABLE

Range in Hexes	Technical-Social Level		
	6	7	8
1	6	5	5
2-3	9	8	7
4-5	11	10	9
6	16	15	14
7	--	17	16
8	--	--	17

B. If you hit, the area must be determined if and only if your screens are down. To determine where your ship has been hit you will roll on the table for where the hit impacts, use RM 1-d, 1 to 10. Ship systems will operate until the value listed is exceeded. If a ship is being attacked from the rear; then the first two entries on the table are exchanged with the last two. 1 for 5-6, and 2 for 7-10.

HIT LOCATION

ROLL	AREA	# HITS
1	HYPER ENGINES	10 Megarons
2	ACCELERATION	10 Megarons
3	ATTACK	10 Megarons
4	ATTACK RANGE	Value Listed
5-6	SCREEN GENERATORS	10 Megarons
7-10	HULL	Value Listed

MISSILES: Each salvo at the various Technical-Social Levels is capable of inflicting an appropriate number of Megarons worth of damage. The table for this damage is:

MISSILE TABLE

TECH LEVEL	DAMAGE INFLICTED	VELOCITY (hexes/turn)	RANGE	SALVOS MAY FIRE		SALVOS CARRIED
				WS	EI & II	WS
6	4	10	20	1	-	10
7	5	15	30	3	2	15
8	6	15	45	4	-	20

WS = Warship      E = Explorer

Missiles may only be fired at the end of the turn. To determine if they hit the Range Table below will be consulted (use RM 2, 2 to 20). You must equal or be lower than the number listed.

MISSILE RANGE TABLE

RANGE TO TARGET			
HEXES	TECH VI	TECH VII	TECH VIII
0-5	14	17	17
6-10	13	15	17
11-15	12	13	14
16-20	8	10	12
21-25	0	8	10
26-30	0	5	6
31-35	0	0	5
36-40	0	0	4
41-45	0	0	3
46-50	0	0	0

NOTE: Missiles are maneuvered as ships if players wish to complicate, if not, they will move in straight line. Determine hits only if the missiles are in or pass through the hex in which the target rests at the end of its turn.

ORDER OF TURN FOR COMBAT:

1) Determine in a random manner who is to move first and last. Drawing chits is suggested; but orders, showing distance and direction of movement may be written so that movement is simultaneous.

2) After the above is completed all players move their ships.

3) After all players have moved, these with a shot may fire beams and missiles.

4) Determine the effects of fire on each ship.

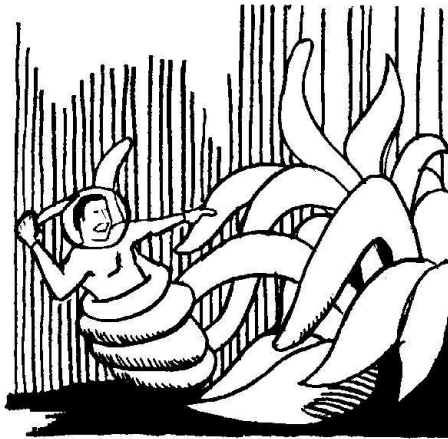
5) Return to phase 1 and continue until the end of combat.

6) It is suggested that the non-involved players each command a native ship during each particular combat.

## XIX. THE SOLO GAME

There is nothing easier than playing a solo game. All that you need to decide is for what time period the game will last and what conditions will indicate you won. The amount of time you have available will determine the answers to both decisions to some extent. Victory can be nearly any criterion, or a combination of factors. For example, a win can be based on exceeding a set number of Megarons, on discovering a source of fuel or some other item "needed" by your government, on completing a course of exploration without sustaining losses above 20%, etc. A little experimentation will soon show what develops the most satisfying solo game for you.

Solo battles are also handled with relative ease, for all you need to do is to make up a set of cards stating what maneuvers the enemy can perform. Draw one at random for acceleration/deceleration and for turn/straight ahead. Generate a random number to determine how much or how many, and move the native ship accordingly.



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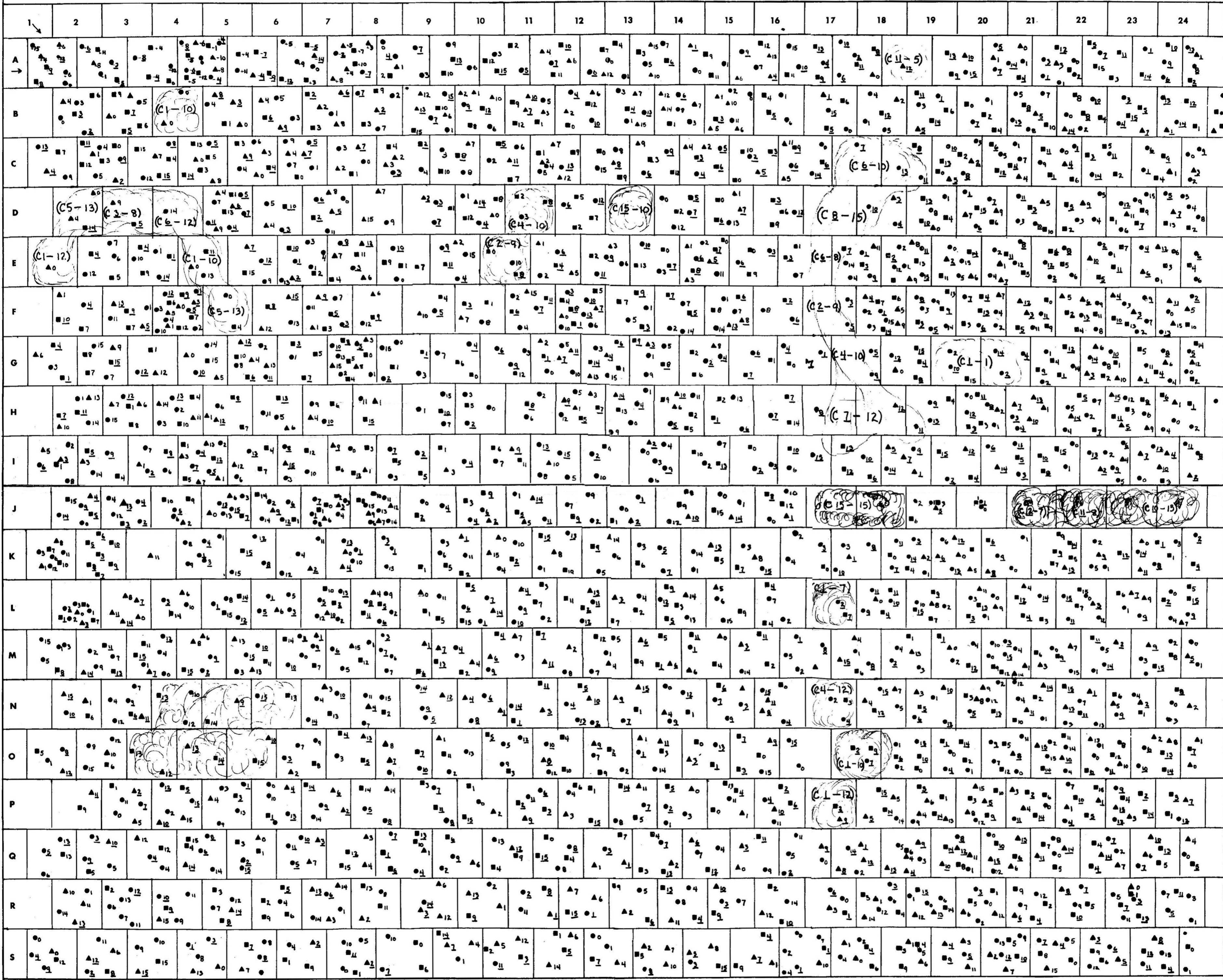
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I 17 ● 1	AMOEBOID	G TO M

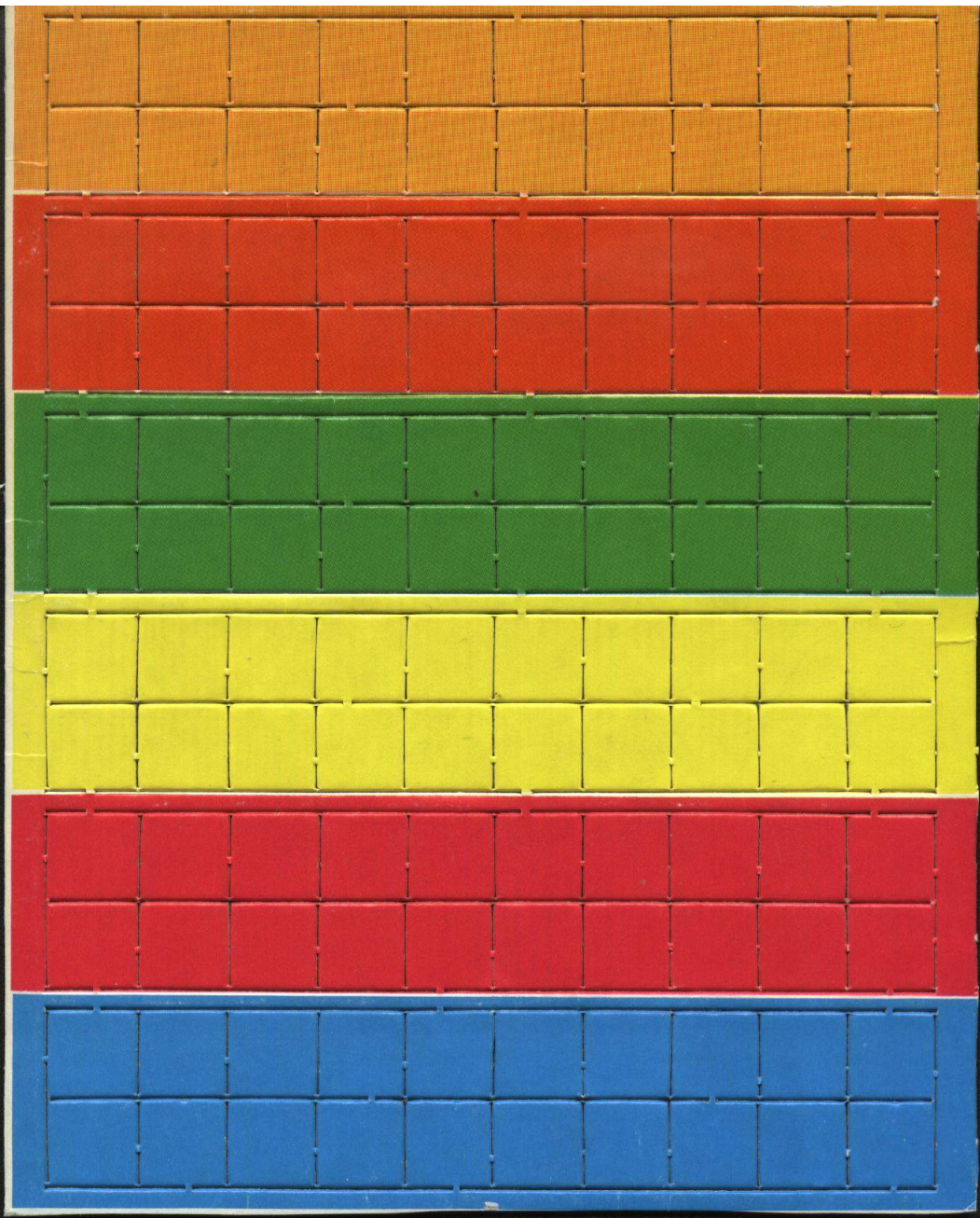


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