VLADIMÍR SUCHÝ

PULSAR 2849

RULEBOOK

LIST OF COMPONENTS

1 double-sided star cluster board

1 double-sided dice board

6 double-sided technology boards

1 die modifiers board

1 gyrodyne board

1 time marker

24 transmitter tiles

6 double-sided goal tiles

4 double-sided HQ boards

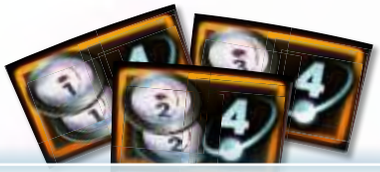
17 planetary system tiles

6 pulsar claim rings in each of 4 colors

30 gyrodyne tiles (10 of each type)

12 four-cube tokens

3 seven-point construction award tiles

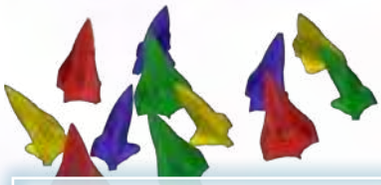

3 four-point construction award tiles

12 exploration bonus tiles

1 hundred-point tile in each of 4 colors

12 plus-minus die modifier tokens

9 plus-two die modifier tokens


3 rocket figures in each of 4 colors

30+ plastic tokens in each of 4 colors

1 median marker

25+ engineering cubes

1 red die

rulebook

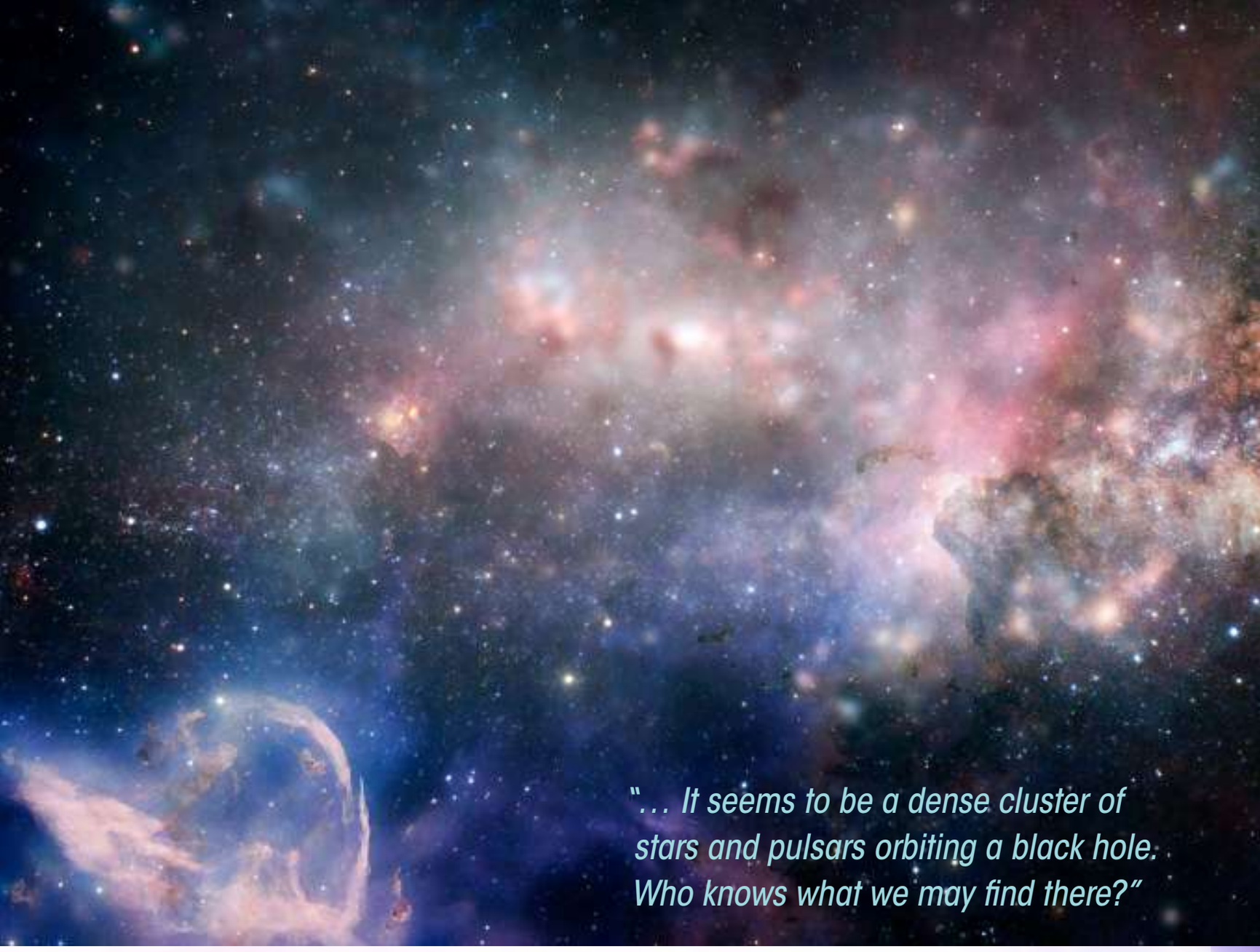
technology manual

4 quick reference sheets

9 silver dice

rules video available at cge.as/puv

GAMING RULES!



OVERVIEW

SETTING

The year is 2849 and an interstellar energy boom is about to begin. Rival corporations have survey ships poised on the edge of a pulsar-rich star cluster, ready to exploit its riches.

Players expand the reach of their corporations by building enormous megastructures in space. Gyrodynamic generators spin around pulsars and transmit power instantaneously across vast distances. Energy transmission arrays redistribute this energy to remote planets that survey teams have recently discovered. The frontier is open for business!

GAMEPLAY

The game is played over 8 rounds. Each round has the following phases in this order:

1. **Dice Phase:** Players take turns choosing dice.
2. **Action Phase:** Each player gets one turn for spending their chosen dice on actions.
3. **Production Phase:** Players score points and set up for the next round.

Points represent a corporation's success at fulfilling its chosen roles in the energy distribution industry. At the end of the game, players score additional points based on various aspects of their performance, and the player with the most points wins.

SETUP

Dice Board: Flip this to the correct side and place it anywhere against the star cluster board. This is the only board that depends on the number of players.

4 Use this side for a 4-player game.

2 3 Use this side for a 2- or 3-player game.

Setup of the rocket figures and counters is described on page 6.

Star Cluster Board: Place this in the center of the table. You can use either side. One side has dead end locations, which lead to slightly different tactics. We recommend the side without dead ends for your first game. It is marked with the icon on the 0 points space.

Dice: The number of dice used depends on the number of players.

9× **Four-player game:** Use all 9 silver dice and the red die.

7× **Two or three-player game:** Use 7 silver dice and the red die. Leave 2 silver dice in the box.

Dice start in the black hole in the center of the board.

Median Marker: Leave this near the dice board for now.

Planetary System Tiles: Turn these tiles face down, mix them up, and deal 16 of them to the planetary system locations on the star cluster board. Return the remaining tile to the box without looking at it.

Gyrodyne Board: Place this anywhere against the star cluster board.

Gyrodyne Tiles: Separate them by type and stack each group in its place on the gyrodyne board.

Construction Award Tiles: Make three stacks with a 7-point award tile atop a 4-point award tile. Place the stacks on the indicated spaces of the gyrodyne board.

Die Modifiers Board: Place this anywhere against the star cluster board.

Plus-Minus Die Modifier Tokens: Give one of these to each player. Stack the rest on the corresponding space of the die modifiers board.

Plus-Two Die Modifier Tokens: Stack these on the corresponding space of the die modifiers board.

Exploration Bonus Tiles: Shuffle these and keep them in a face-down stack where everyone can reach them.

3 of 6 Goal Tiles: For your first game, we recommend the three goal tiles marked with this symbol: . Place them against the star cluster board with the marked side up. For a standard game, choose 3 at random and play with a random side up. Return the 3 unused tiles to the box.

3 of 6 Technology Boards: Technologies come in three categories – I, II, and III. You need one board for each category. In a standard game, you can choose each category's board randomly. For example, DI, AII, and CIII. For your first game, however, use boards AI, AII, and AIII. These boards are explained on the first page of the technology manual. Place them against the star cluster board, in order, with board I on the inside and board III on the outside.

Time Marker: This marker points to the current round. Set it to point at the innermost row of technologies.

Engineering Cubes: Keep these where everyone can reach them.

Four-Cube Tokens: Each token represents 4 engineering cubes. Players can make change freely during the game.

Transmitter Tiles: Group these according to their letters – A, B, and C. Stack each group with the lettered side up and shuffle. Make a big stack with all the Cs on the bottom, all Bs in the middle, and all As on top.

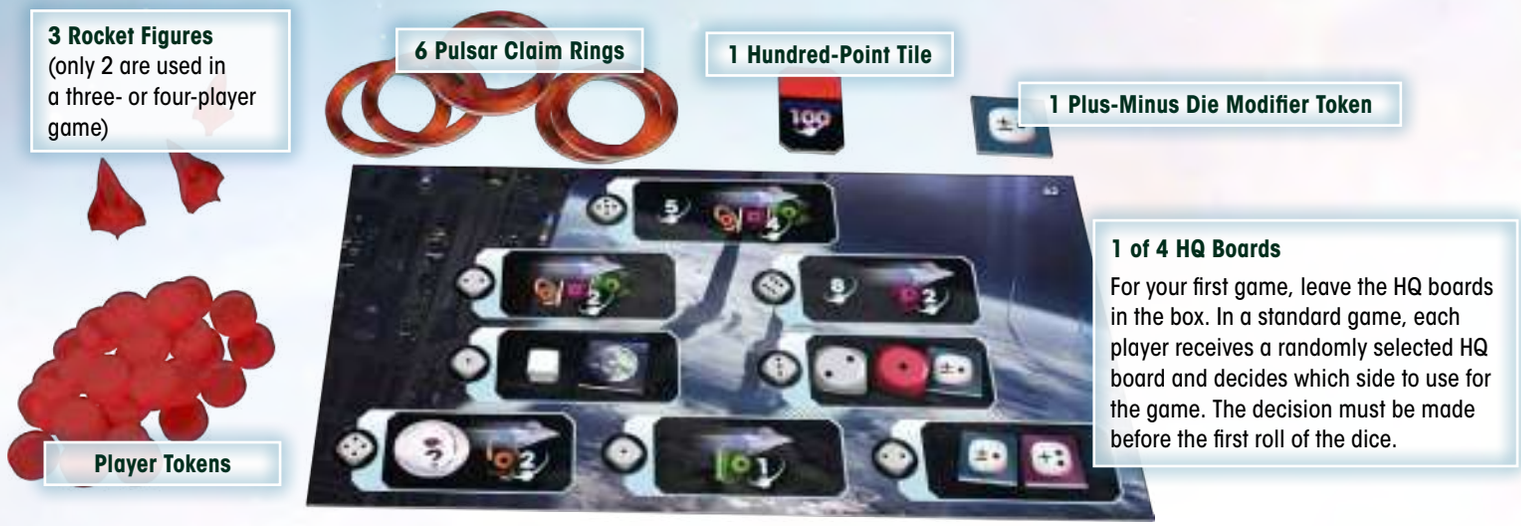
Deal the top 3 transmitters and place them beside the stack so that all players can see the silver dice printed on them.

The remaining components are explained on the next page.

PLAYER SETUP

PLAYER COMPONENTS

Each player chooses a color. Each color has the following components:



Each player should also take a quick reference sheet. Your rocket figures, your score tile, and some tokens go to the game boards, as explained below. Keep all your other components on the table in front of you.

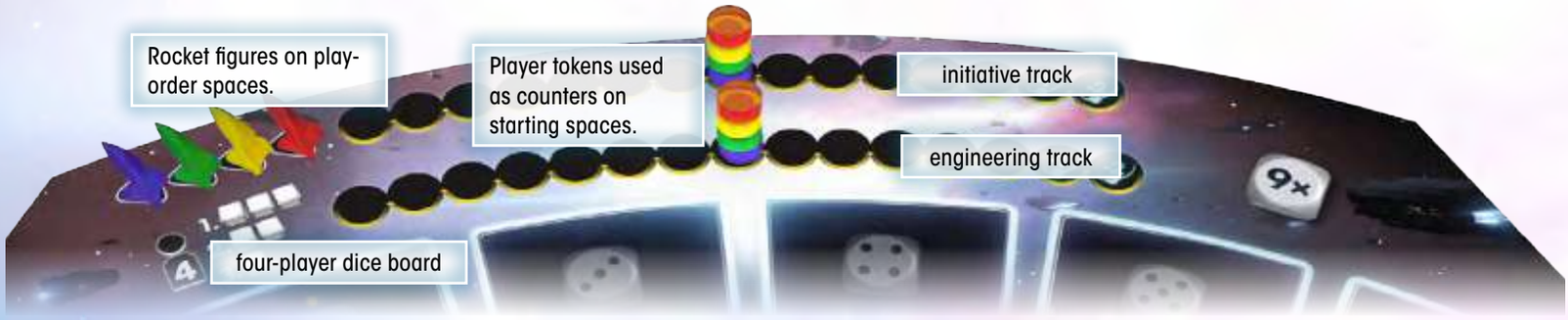
INITIAL POSITIONS

Place one rocket figure of each player's color on the dice board's play-order spaces in a randomly determined order, as shown below. This determines play order during the remainder of setup and during round 1. At the end of each round, play order may change.

Each player also has two tokens on the dice board to act as counters on the initiative and engineering tracks. These counters are stacked in reverse order, with the first player's counter on the bottom of the stack and the last player's counter on top, as shown.

The stacks go on the starting spaces, which are marked like this.

Three-player setup is the same. Just be sure to use the other side of the dice board. Two-player setup is explained on page 19.



Tokens are also used as score counters around the edge of the star cluster board. The player chosen to be the starting player begins the game with 5 points. The second player starts with 6 points. If there are more players, the third starts with 7 points, and the fourth starts with 8. The extra points are compensation for the disadvantages of playing later in the first round.

Place each player's hundred-point tile near space 0.

Beginning with the last player and proceeding in reverse play order, each player chooses one unoccupied entry gate and places one of his or her rocket figures there.

Note: *In a three- or four-player game, each player has 1 rocket figure on a play-order space and one on an entry gate. Leave the third one in the box. The third one is used in a two-player game, as explained on page 19.*

DICE PHASE

SUMMARY OF THE DICE PHASE

Each round begins with a die roll. You use all 9 silver dice in a four-player game. In a two- or three-player game, you use only 7 silver dice.

Each player will choose two dice that will be used to buy actions during the Action Phase. The choice of dice affects players' positions on the initiative and engineering tracks. Once the dice have been chosen, one silver die is left over (or three silver dice in a two-player game). This remaining die can be copied as a bonus die during the Action Phase.

ROLLING THE DICE

The first player (the one whose rocket figure is on the first play-order space) takes all the silver dice and rolls them. This determines the values that the dice will have for the entire round. Each die should be placed on the space of the dice board that corresponds to its value.

Note: *The red die is not rolled. Leave it in the black hole for now.*

DETERMINING THE MEDIAN

The median value of the dice is given by the die in the middle.

Note: *We give examples from a 3-player game. A 4-player game uses all nine silver dice.*

When demonstrating the median to new players, place all the dice in a line in order. The median die is the one in the middle of the line.

Place the median marker on the space with the median die. Use your hand to cover all dice on that space.

With the die space covered, you can easily tell whether there are more dice on the left side of it or the right. If there are more dice on the left, move the marker one place to the left. If there are more dice on the right, move the marker one place to the right. In these cases, the marker ends up between two die spaces.

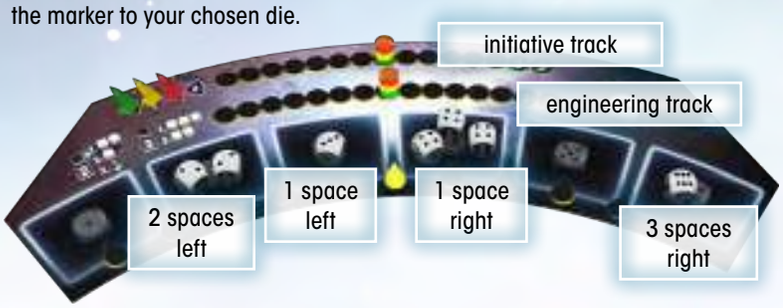
If there is the same amount of dice on both sides, the marker stays where it is – on a die space.

TAKING DICE

Players take turns taking a die, beginning with the starting player. When you take a die, you move one of your two counters left or right, depending on the position of the die relative to the median marker. In general, you get to choose whether to move your initiative counter or your engineering counter.

Moving Your Chosen Counter

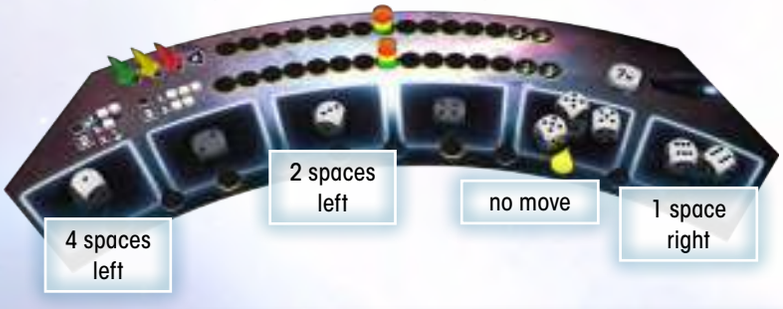
If you took the die from a space to the right of the median marker, you move your counter right. If you took it from a space to the left, you move your counter left. The number of spaces moved is determined by the number of die spaces from the marker to your chosen die.



Example:

Green takes a 2 and decides to move her engineering counter. It moves 2 spaces left.

If the median marker is on a die space, you do not move your marker when you take a die from that space, as shown in this example:



Note: *Moving to the left on a track can be as advantageous as choosing a good die. The engineering track can earn you engineering cubes. The initiative track determines play order for the next round. These benefits are received during the Production Phase. Details are on page 16.*

Stacks

If any counters are on top of yours when you move it, leave them on the same space in that same order. If the space that your counter moves onto is occupied, place your counter on top of whatever counters are already there. A counter is considered to be "ahead" of any counters beneath it.

Special Cases

You are not allowed to move a counter off the right end of the track. If neither counter has enough space to move, you must choose a different die.

If the only dice left are those which would move either counter off the right end of the track, then you may choose any die and either counter. Put your counter on the farthest right space at the bottom of the stack.

If your chosen die would take you off the left end of your chosen track, then simply move your counter to the leftmost space.

If your counter is in a stack on the left end and you choose to move "left" on that track, you move your counter to the top of that stack.

Example:

Red takes a die allowing her to move 1 space left. She chooses to move on the initiative track.

Second Die

After each player has taken one die in order, each player takes a second die in reverse order. In the examples on this page, players choose in this order: Green, Yellow, Red, Red, Yellow, Green. The first player will choose his or her second die last.

Exception: *In a two-player game, each player has two figures on the play-order spaces, so they choose in that order, as explained on page 19.*

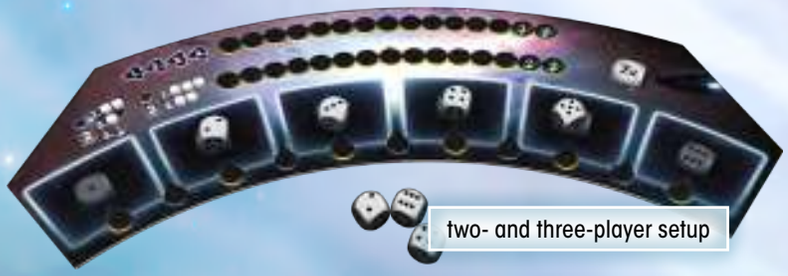
In a three- or four-player game, one die will be left on the dice board. In a two-player game, three dice will be left. The die or dice left on the dice board can be copied for use as a bonus die by spending 4 engineering cubes during the Action Phase. Details are on page 15.

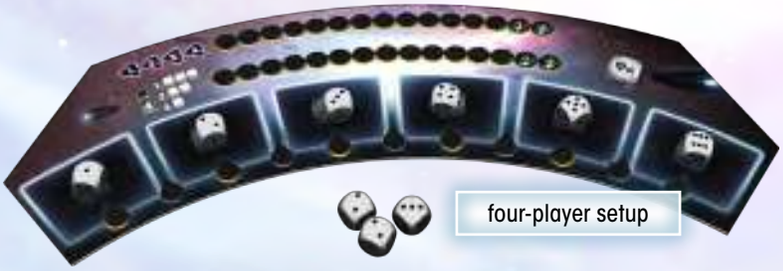
EVEN START VARIANT

To avoid extreme rolls in the first round you can roll the dice this way for the first roll of the game only:

- In a four-player game, set six dice equal to 1, 2, 3, 4, 5, and 6. Roll only the three remaining dice.
- In a two- or three-player game, set four dice equal to 2, 3, 4, and 5. Roll only the three remaining dice.

Determine the median as usual.





ACTION PHASE

SUMMARY OF THE ACTION PHASE

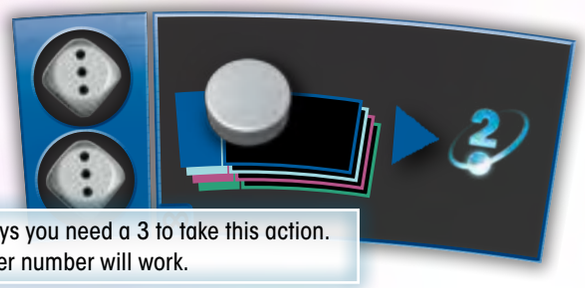
During the Action Phase, each player gets one turn, in which they perform actions using the two dice they took from the dice board. The game also offers various ways to get a bonus die for an extra action. Only one bonus die is allowed per turn.

Players take their turns in order, as shown by the rocket figures on the play-order spaces, beginning with the current round's starting player.

PAYING FOR AN ACTION

Each action in the game requires a certain die. When you pay for the action, you use up a die with exactly that value.

Example:



This says you need a 3 to take this action. No other number will work.

A die that has been used to pay for an action should be placed in the black hole to help you remember that it cannot be used again this round.

Modifying a Die

Each player starts the game with 1 plus-minus die modifier token. There are ways to gain more modifier tokens during the game. These tokens can be spent to modify a die. When a token is spent, it is returned to the die modifiers board.

This token can change a die's value by 1. For example, if you return this token to the bank, you can change a 4 into a 3 or a 5.

This token can be spent to add 2 to a die. For example, it can change a 4 to a 6.

Example:

Suppose you want to patent the technology in the previous example. You need a 3. If you have a plus-minus token, you can spend it to turn either a 2 or a 4 into a 3 and pay for that action.

Tokens cannot be combined. So there is no way to change a 3 to a 6. However, certain technologies may allow you perform an action with a die higher or lower than the required value. These technologies can be combined with a die modifier.

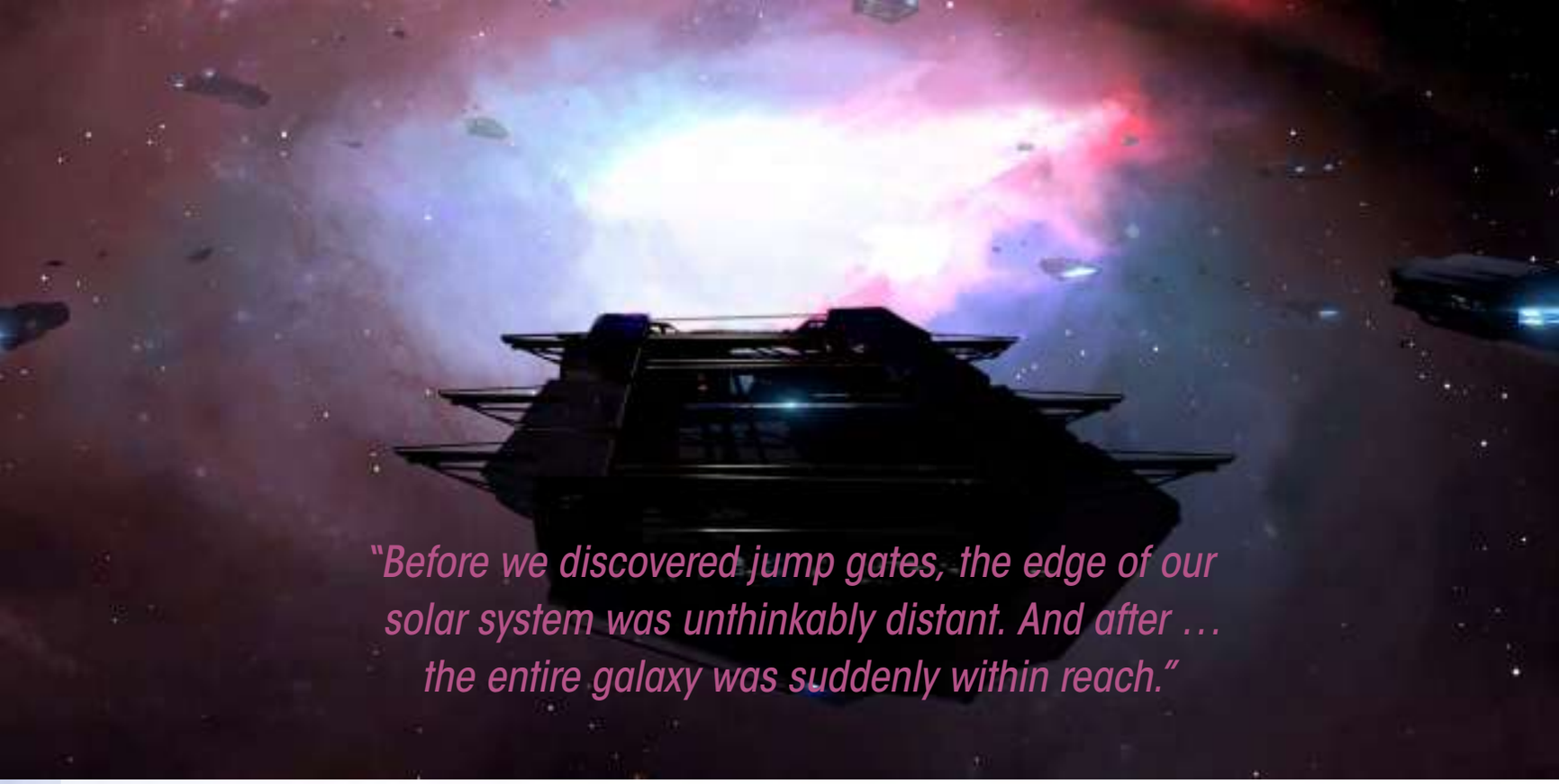
It is possible to change a die to a value higher than 6. Most actions cannot use 7s or 8s, but these are legal values for flying your survey ship. (See page 10.) However, there is no good reason to change a die to a 0.

ACTION OVERVIEW

On your turn, you can accomplish many things:

- Fly your survey ship.
- Develop pulsars.
- Build your energy transmission array.
- Patent technologies.
- Work on special projects at your headquarters.

A complete list of available actions is on your quick reference sheet. It is possible to choose the same action more than once. The only limitation is that you need the correct die to pay for each action.



"Before we discovered jump gates, the edge of our solar system was unthinkably distant. And after … the entire galaxy was suddenly within reach."

FLYING YOUR SURVEY SHIP

Each player has one survey ship. The ship's job is to explore the star cluster, claim pulsars, and establish power stations at various planets.

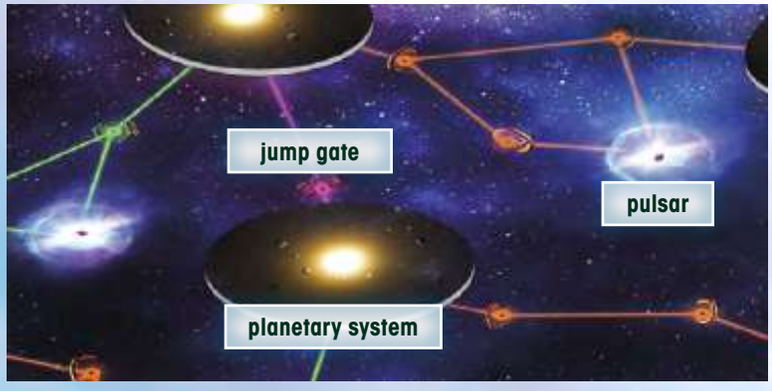
Entry Gate

Each ship starts at a different entry gate. The entry gates were chosen by the players, in reverse order, at the start of the game. These are starting locations that you fly from once, on your first flight. You will never fly to an entry gate.

Your Flight

To fly your survey ship, you pay one die of any value. The value determines the number of segments in your flight. You must fly this far and no farther. Using a modifier token, it is possible to play a die with a value of 7 or even 8. (Modifier tokens are discussed on page 9.) Flights of distance zero are not allowed.

A flight is always along flight segments. Each flight segment connects two locations. Possible locations are shown here:



Note: *Some pulsars are isolated – no flight segment connects to them. You cannot fly your survey ship to an isolated pulsar.*

These Are Legal Flights:

Red can end a flight at the pulsar with a 1 or a 2. She can end a flight at the planetary system with a 1 or a 4.

During the course of one action (one die, plus any modifiers) you are not allowed to use any flight segment more than once.

These Are Not Legal Flights:

Red wants to end her flight at the pulsar. Neither a 3 nor a 5 will work. These moves are not legal because they retrace a segment.

The restriction is only for one flight – that is, one die. If you do another flight in the same turn, it is okay to retrace segments from a previous flight.

Planets

Your ship explores planetary systems. After moving your ship, flip over any face-down systems you visited. This will reveal new planets.

When playing with fewer than four players, some of those planets may be blocked by nonplayer colors. In a two-player game, place a token in a nonplayer color on any planet labeled 3+. In a two- or three-player game, place a token in a nonplayer color on any planet labeled 4. This indicates that those planets are not available.

Whether you are the first player to discover a system or a latecomer, you may be able to establish a station at one of its planets. The availability of planets is limited by the following rules:

- Only one token is allowed per planet.
- In particular, planets labeled 3+ are not available in a two-player game, and those labeled 4 are not available in a two- or three-player game.
- If you have a station at one planet in that system, you cannot establish another station at a different planet in that system.

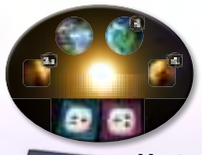
Each planetary system offers an exploration bonus, as depicted on the tile. The bonus is available only if you end your flight at the system and establish your station on a blue planet. There will always be at least 1 blue planet available in any undiscovered system, so it pays to get there first. If both blue and lifeless planets are available, you can't take a blue planet unless your flight ends there. Here are the rules case-by-case:

- If no planet is available, or if you already have a station there, then you can establish no new station and you get no bonus.
- If a planet is available, then your options depend on whether your flight is ending there or just passing through:
  - If you fly through a planetary system, you must place your token on a lifeless planet if one is available. But if not, then you place your token on a blue planet. Either way, you get no bonus.
  - If your flight ends at a planetary system, you must place your token on a blue planet if one is available. In this case, you get an exploration bonus. If no blue planet is available, you establish your station on an available lifeless planet and get no bonus.

***Special** Case: Sometimes it is possible to end at a system that you also visited earlier on the same flight. In this case, establish the station at the end of the flight and ignore the earlier visit.*

Exploration Bonuses

As stated above, you are eligible for a bonus when your flight ends at a planetary system and you establish a station on a blue planet. At that time, you may either take the bonus offered by the planetary system, or you may draw an exploration bonus tile. Most exploration bonus tiles offer a random number of points. Some offer other benefits. The meanings of the symbols are explained on the back page of this rulebook.



Example:

If you end your flight at this system and establish a station at a blue planet, you can take the indicated modifier tokens. If you choose not to do so, you draw a random exploration bonus tile and gain its benefits instead.

Most exploration bonus tiles are resolved and discarded immediately. If you need to draw one and the stack is empty, reshuffle the discarded ones and make a new stack.

Claiming Pulsars

Your survey ship can also claim a pulsar. If your flight ends at an unclaimed pulsar, you claim it by placing one of your rings around it. Once a pulsar is claimed, no other player may claim it or develop it.

***Special** Case: If you have already claimed 6 pulsars, you have no more claim rings, and thus you do not claim a pulsar when you end your flight at one.*

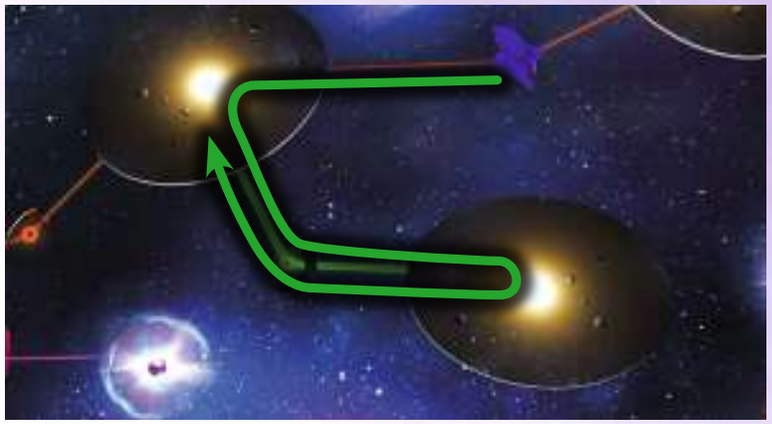
Visits

Certain technologies may give you benefits for visiting a particular type of location. You visit the locations you end at or fly through. This does not include the location at which your flight starts (unless you somehow visit it later in the flight).

Dead Ends

One side of the board has dead end locations. The path to a dead end location is marked by doubled flight segments. This means you can go out and back along that path as part of one action – you use one segment for going out, and the other segment for coming back.

Example:



This is a legal flight.

Dead ends take you out of your way, but there are benefits for exploring them. Draw an exploration bonus tile if your survey ship claims a dead end pulsar or establishes a station in a dead end system. (This is in addition to any exploration bonus you may get from the planetary system.)

Example:

In the picture above, if Blue uses a 3, he establishes stations in two planetary systems. In the dead end system, he draws an exploration bonus tile because it is a dead end, and then he may either take the system's bonus or draw another tile because his flight ends there.

If Blue uses a 4, he establishes stations in both systems and draws an exploration bonus tile because one of those systems is a dead end.

If Blue uses a 5, as shown, he draws an exploration bonus tile for establishing a station in the dead end system. Then when he returns to the other system he can take its bonus or draw another tile because his flight ends there.

Survey Ship Summary

- Move exactly as far as indicated by the die (possibly modified).
- Reveal any unrevealed systems you visit.
- If you pass through a system, put a token on a lifeless planet there. If no lifeless planet is available, your token may go on a blue planet.
- If you end your flight at a system, put a token on a blue planet and get an exploration bonus. If no blue planet is available, your token may go on a lifeless planet, but you get no bonus.
- If your flight ends at a pulsar, claim it.
- If you claim a dead end pulsar or establish a station in a dead end system, draw an exploration bonus tile.

"It's simple. You build a giant ring. It starts rotating in resonance with the pulsar. And then, when it tries to spin faster than light, its energy is forced into an extra dimension."

DEVELOPING PULSARS

Pulsar Summary

There are three steps to harnessing the energy of a pulsar:

1. Claim it.
2. Start constructing a gyrodyne.
3. Start the gyrodyne spinning.

Claiming a Pulsar

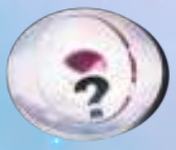
Pulsars are usually claimed by ending a flight at one, as explained in the previous section.

Some technologies and transmitters allow you to claim a pulsar. In this case, you must choose an isolated pulsar – that is, one of the pulsars that has no flight segments connecting it.

Once a player claims a pulsar, it belongs to that player for the rest of the game. No one else can claim or develop it. You can claim at most 6 pulsars during the game because you have only 6 claim rings.

Taking a Gyrodyne Tile

To develop your claim, you need a gyrodyne tile. As an action, you can spend one of your dice to take a gyrodyne tile from the gyrodyne board. You need a 1 for a small gyrodyne, a 2 for a medium gyrodyne, or a 4 for a large gyrodyne. This information is printed on the gyrodyne board.

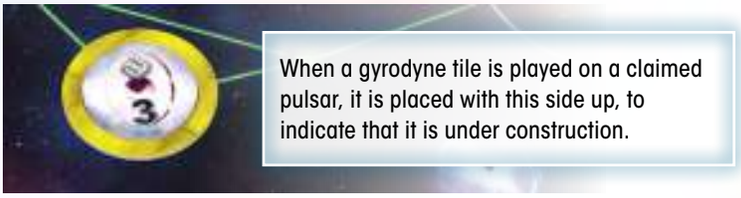


However, it is often more effective to take a different action that gives you a gyrodyne tile as one of its benefits. Certain planetary systems, HQ projects, and technologies offer the opportunity to take one or more gyrodyne tiles. Sometimes the size of the gyrodyne is specified, and sometimes you have a choice.

You can take a gyrodyne tile even if you haven't claimed a pulsar yet. Keep it on the table in front of you until you are ready to use it.

Starting Construction

You can start construction as soon as you have a pulsar and a gyrodyne tile.



A pulsar can have at most one gyrodyne, and once you have put a gyrodyne tile on the pulsar, you cannot replace it with a different one. However, you are not required to develop your pulsar claim as soon as you get a gyrodyne tile. You can begin construction at any time during your turn (or any of your future turns). Starting construction does not count as an action.

Gyrodyne Construction Awards

Because gyrodynes are the engines that drive the energy distribution industry, there is a special reward for these construction projects. The criteria are:

- You need at least two gyrodynes of the same size.
- They must be on the board, that is, on pulsars you have claimed. (But it doesn't matter whether they are still under construction or are already spinning.)

The first player to meet these criteria receives 7 points. The recipient should take the 7-point award tile from the corresponding section of the gyrodyne board. The second player to meet these criteria for that size of gyrodyne receives 4 points and takes the 4-point award tile.

The 7-point and 4-point awards can be given out for each size of gyrodyne. You can win awards for two different sizes or even all three. It is even possible to win both awards: If you have four gyrodynes of the same size on the board before any other player has more than one of that size, take the 4-point award tile as well.

Keep the award tiles you take. In many games, they will have no further effect, but some games have a technology that could give you more points for these award tiles at the end of the game.

Completing a Gyrodyne

If you have a gyrodyne under construction at a pulsar, you can complete it with the die shown on the tile. Spend the die and flip the tile over. It is now capturing energy from the pulsar.

- Spend a 3 to flip a small gyrodyne.
- A medium gyrodyne requires a 5.
- A large gyrodyne requires a 6.

Once it is flipped, your gyrodyne is "spinning". It will keep spinning until the end of the game, producing points for you. You receive these points during the Production Phase, as explained on page 16.

BUILDING AN ENERGY TRANSMISSION MEGASTRUCTURE ARRAY

Taking a Transmitter

Your energy transmission system consists of one or more arrays of transmitters in various stages of construction. To start building, you need a transmitter tile.

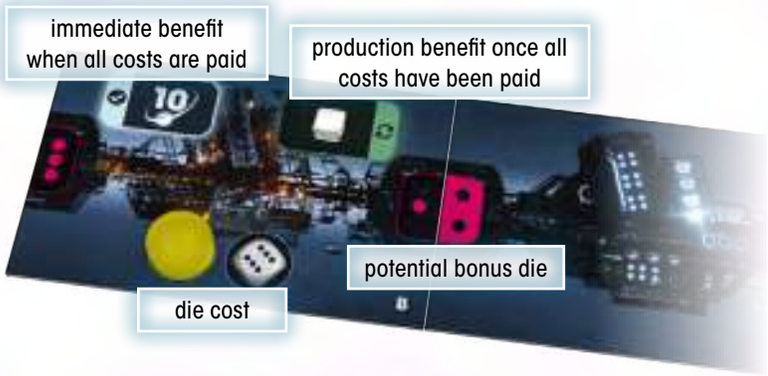
Each round, a different set of three transmitters is available. To take one, simply spend a die matching any of the dice printed on the tile. Place your first transmitter anywhere in front of you. To represent that you have paid that particular die cost, cover that icon with one of your player tokens. You now have the first transmitter in your array.

Linking Transmitters

Every transmitter can link to another one. Some transmitters can link to two others. The links are on the ends of the tile. Ends that can link are marked by a symbol representing half a die.

When you get a second transmitter, you can attach it to the first. This forms a die that you will be able to use as a bonus die once both transmitters are complete. Transmitters link end-to-end, but they do not have to be oriented the same way. Some can be "upside-down" if you want.

Whenever you take a new transmitter, you must immediately decide whether to link it to another transmitter or whether you want it to be the first transmitter in a new array. Transmitters that are linked cannot be unlinked. And a transmitter that you decided not to link cannot later be added to a different array.



Online Transmitters

To complete a transmitter, you need to pay each cost shown on the tile. One of those dice was already paid when you took it, so that cost is covered. (Literally, it should be covered by one of your tokens.) The costs can be paid in any order, possibly over several rounds. Each time you pay a cost, cover it with a token.

Once the final cost is paid, the transmitter provides any immediate benefit that is promised on the front side. Then it is flipped over. (Take your tokens back.) At the end of every round, it will provide any benefit depicted on the flip side. It is now online – collecting and distributing power throughout the energy grid.

When you flip a transmitter tile, the links on the flip side should be the same as the links on the construction side; it is not legal to swap ends. Black half-dice on the construction side will change to red half-dice on the online side.

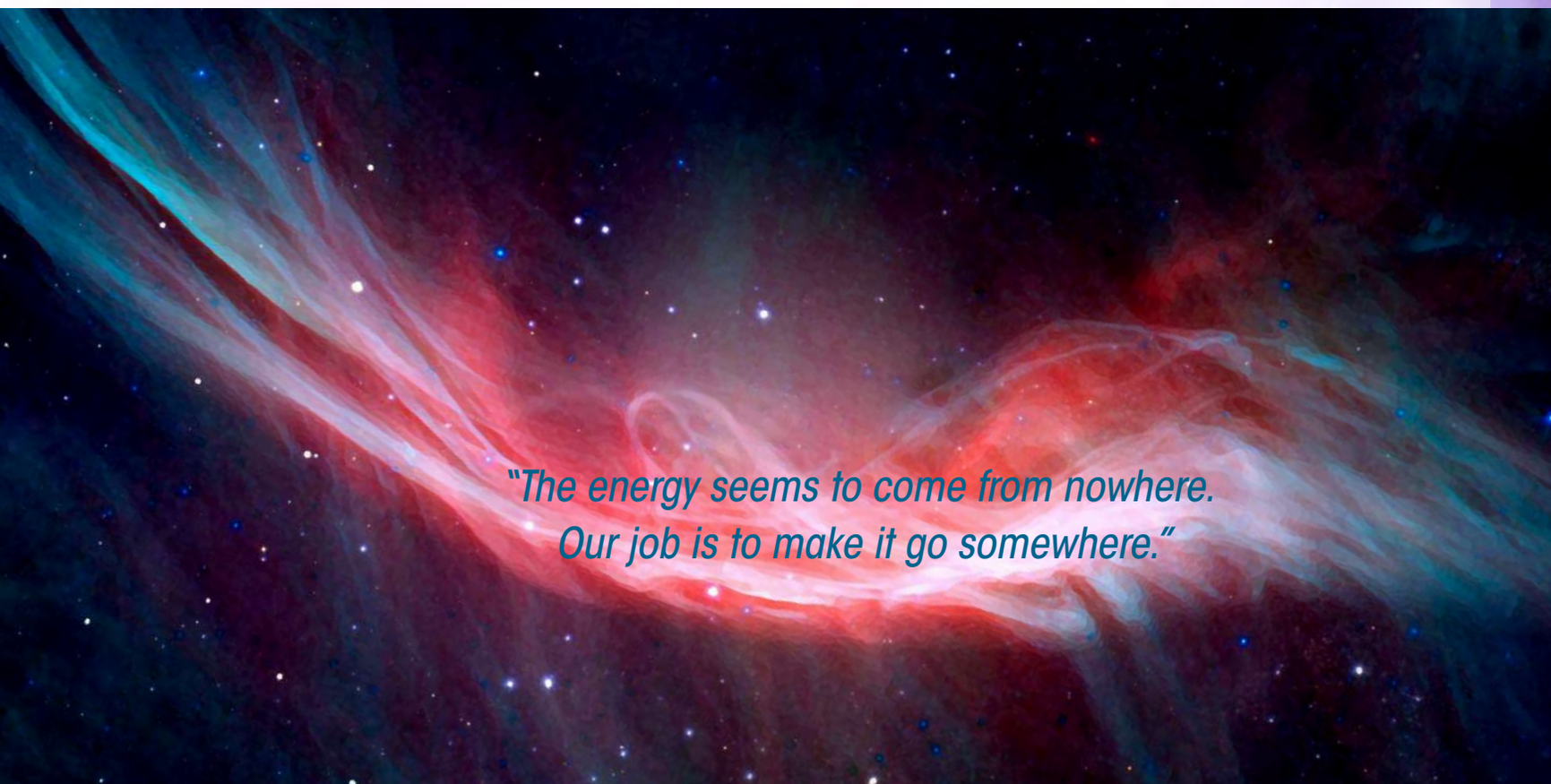
Some transmitters have only one die in their cost. If you take one of these, you have paid its full cost, and you flip it immediately.

The benefits depicted on the transmitter tiles are explained on the back page of this rulebook.

Transmitter Bonus Die

If you have flipped two linked transmitters, you gain the red die formed by the link. It can be used as your bonus die this turn, as explained on page 15. If you do not use it this turn, it will be wasted.

It is possible to use a die that has zero pips, but you will probably need a die modifier token to make it work. You can't use a zero die on a flight, for example. However, some technologies may allow you to use a zero die to pay for certain actions.



HEADQUARTERS

The game includes four double-sided HQ boards which offer a variety of additional actions. Players can learn the game more easily without HQ boards, so we recommend leaving them in the box for your first game. When you play without HQ boards, you should use technology boards AI, AII, and AIII.

In a standard game, you receive a random HQ board at the beginning of the game. Your HQ board is unique to your corporation, and no other player can play on it.

Two Sides

Your randomly selected HQ board has two sides. At the beginning of the game, before the dice are rolled for the first time, you must decide which side you will use for this game. Side 1 is slightly better for building gyrodynes. Side 2 is slightly better if you plan to fly your survey ship a lot.

The Project Pyramid

Projects are arranged in a pyramid. At the beginning of the game, only those on the bottom row are available to you. A second-row project becomes available when the two projects underneath it have been completed. A project in the third row becomes available when the project directly underneath it has been completed.

The top project is available only if all other projects have been completed. It is a high-scoring opportunity, so players who put a lot of work into their headquarters will be rewarded.

Completing a Project

Each project can be completed only once per game. To complete a project, spend the indicated die and mark the project as completed with a token in your color.

Types of Projects

Most projects give immediate one-time benefits. These are similar to the bonuses that planets offer to your survey ship. They are explained on the back page of this rulebook.

Projects like this give you an opportunity to do a gate run. If such a project also offers points or other benefits, you gain those immediately. Points from the gate run, however, can only be earned when you fly your survey ship.

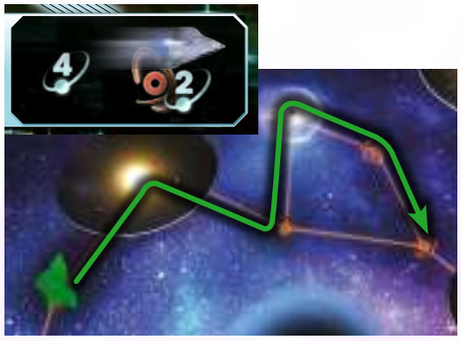
Gate Run

A gate run is a chance to score points by visiting multiple jump gates of one color. You can do a gate run only if you have completed a project that allows you to do so. You can do a particular project's gate run only once per game, but you get to choose whether to use the gate run opportunity on a particular flight or save it for a later flight.

To do a gate run, announce which completed project you are using when you fly your survey ship. (The gate run applies to only one die, even if you fly the ship again as your next action.) If you have multiple completed, unused gate run projects, you may choose any one of them (but not more than one).

Your goal is to visit as many of the indicated jump gates as you can. Do not count a jump gate that you start from, but do count a jump gate that you pass through or end at. Each gate counts only once, even if you visit it more than once. For each gate of the indicated color, score the number of points determined by the project.

Example:



Green completes this project and scores 4 points immediately. Later in the game, she decides to use the gate run. She pays a 5 to move her survey ship.

She visits 3 orange gates and scores 6 points. (No points for her starting location, even though it is also an orange jump gate.)

If she had used a 6, she could have visited one orange gate twice, but that would not get her any more points because each gate can count only once.

After you have used the completed gate run project, place a token on the gate run icon to remind you that you cannot use it again.

When you use this project, you get to choose the color that gives you points for the gate run. You still get points only for one color.

PATENTING TECHNOLOGIES

Technological Progress

Each game uses 3 technology boards (one randomly chosen board from each of groups I, II, and III). All technologies are visible at the start of the game.

In the first round, only the technologies in the first row are available. (This is the innermost arc, closest to the star cluster board.) The time marker should be set to point to this row.

Rows beyond the time marker are not yet in play. At the end of each round, the time marker moves outward to the next row to indicate that a new set of technologies has become available. All rows inside the new row continue to remain in play.

Paying for a Patent

On your turn, you can spend a die to patent an available technology. The cost is printed beside the technology. Place your token on the cost icon to indicate that you have patented this technology.

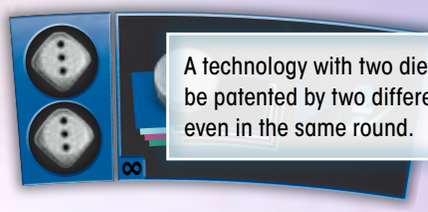
Two Patents

In the interest of competition, each technology can be patented by two different players. Once two players have patented a technology, no one else will have access to it for the rest of the game. A single player is not allowed to patent the same technology twice.

There are two different patent processes:

A technology with one die icon can be patented by at most one player per round. At the end of the first round in which it is patented, the owner's token is moved to the space below the die icon to allow a second player to patent it.

Note: *In a two-player game, technologies with one die icon can be patented by only one player during the game.*



A technology with two die icons can be patented by two different players even in the same round.

Effects of Patents

Some patents provide immediate bonuses. Others give you a special ability that you can use for the rest of the game. All technologies are explained in the technology manual.

BUYING A DIE MODIFIER

Certain HQ projects, planetary systems, and patents may give you a die modifier token. It is also possible to simply buy one. You can buy a plus-minus modifier by spending a 1 or a 2. You can buy a plus-two modifier token with a 2.

Die modifier tokens are not intended to be limited. If the board runs out, use coins or some other suitable substitute.

BONUS DIE

The Red Die

Each turn, you may use at most one bonus die. If you have access to more than one, you may choose which one you wish to use.

Bonus dice are represented as red dice in the iconography. When you use one, you can take the red die from the black hole and set it to the value of the bonus die you are using. Once you have used it, return it to the black hole.

Your bonus die can be used like any other die. In particular, it can be used with a die modifier. There is no restriction on the order in which you use your dice.

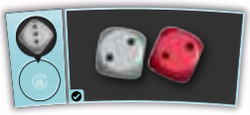
Copying a Leftover Die

After players chose dice, one was left (or three in a 2-player game). On your turn during the Action Phase, it is possible to copy a leftover die and use it as your bonus die. Pay 4 engineering cubes to the bank and set the red die to the value you are copying. The actual physical silver die should remain on the dice board. One player's use of it does not prevent another from using it later.

Using a Bonus Die in Your Transmitter Array

When you flip a transmitter tile, it may create a red die if an adjacent transmitter is already online. You may use this die as your bonus die this turn. (It cannot be saved for later.) If you create multiple such dice, you may choose any one of them.

Using a Die Doubler



Certain patents and HQ projects allow you to spend one die to get two. The first die is just a regular silver die, which you can spend as usual. When you pay for such an action, instead of putting your silver die in the black hole, just reset it to this new number.

The red die is a bonus die. You are not allowed to take this action unless you use the indicated red die.

Patenting a Die

When you patent this technology, you must pay one engineering cube and you must use the depicted die as your bonus die. If you cannot, then you cannot patent it.

Note: *In general, you are allowed to patent a technology or complete an HQ project even when you can't use its full benefit. Those that give you red dice are exceptions.*

Exploration Bonus

Some planetary systems offer a bonus die. If you are offered this exploration bonus and don't want to use it (for example, because you have already used a different bonus die), remember that you can always draw an exploration bonus tile instead.

PRODUCTION PHASE

End of Round Summary

Once each player has had a turn in the Action Phase, it is time for the Production Phase. Players gain some engineering cubes, score some points, and set up for the next round. Specifically, the steps are performed in this order:

1. Determine the new order of play.
2. Hand out engineering cubes.
3. Take initiative and engineering penalties.
4. Gain points and cubes for online transmitters.
5. Score points for spinning gyrodynes.
6. Score points for certain technologies.
7. Set up for next round.

Determining Order of Play

Rearrange the rocket figures on the play-order spaces according to the order of the players' counters on the initiative track. The player farthest left will go first next round. The player farthest right will go last. If multiple counters are on the same space, each counter is ahead of (to the "left" of) any counters beneath it. This new play order will apply for the next round.

You should rearrange the rocket figures even if this is the end of the final round. The resulting play order will be worth points during final scoring.

Note: *The rocket figures did not match the initiative counters at the start of round 1, but they will match at the beginning of every round after.*

Gaining Engineering Cubes

Players receive engineering cubes as depicted beside the engineering track. Again, if players' counters are on the same space, ties are broken in favor of the players highest in the stack.

The exact nature of the benefits depends on the number of players in the game.

Example:

Red is ahead, so she gets 3 engineering cubes. Green is second because her counter is on top of Yellow's. Green gets 2 engineering cubes. Yellow gets none.

Engineering cubes can be used for various purposes – buying a bonus die, buying points from certain online transmitters, and buying bonus points from the end-of-game goals.

Penalties

The initiative and engineering tracks have spaces on the right side marked -1 and -2. A player whose counter is on one of these spaces loses the indicated number of points at this time. (If both counters are on penalty spaces, the player takes penalties for each.) Scores cannot go below zero.

Online Transmitters

An online transmitter is one that has been flipped over after all dice costs have been paid. Such transmitters may produce points or engineering cubes at this time.

Note: *Transmitters that produce engineering cubes can be resolved first. And then you can spend their cubes on those that let you buy points.*

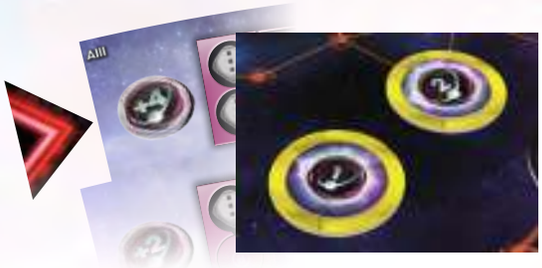
Score Spinning Gyrodynes

A spinning gyrodyne is one that has been placed on a claimed pulsar and flipped over. All spinning gyrodynes produce points at this time.

Each spinning gyrodyne produces the amount of points shown on its face, plus the amount of points shown on the left end of the current round's technology row. (The time marker should be pointing right at this value.)

Example:

The medium gyrodyne will produce 6 points. The small one will produce 5. Yellow's total gyrodyne production this round would be 11 points.



Note: *Even if the technology row offers 0 points, spinning gyrodynes still produce the points shown on their faces.*

This symbol indicates that the number of points depends on the roll of the dice. If the median marker is on a die space, the +? value equals the value of that die space. If the marker is between two die spaces, use the larger of the two values.

Example:

Each spinning gyrodyne produces 5 points, in addition to the value shown on its face.

Score Technologies

The green technologies, marked with the ↻ icon, can give you points at the end of every round. They are scored at this time.

Setting Up for the Next Round

If this is not the eighth round, do the following to set up for the next round:

- Discard any transmitters that were not taken during the round. Deal out 3 new ones from the top of the stack. (The letters on the 3 new transmitters will not always match. At the beginning of round 3, for example, you will have two As and a B.)
- For each technology that was patented for the first time this round, move the token down to indicate that it will be possible for a different player to patent this technology. (Do this even for technologies that can be patented twice in the same round – it makes it easier to see that one space is open.) On technologies with 2 players' tokens, no action is needed, since no one else can patent them.
- Move the time marker outward to the next row of technologies. This new row of technologies will be in play for the first time in the upcoming round.

SCORING SUMMARY

There are many ways to score points during the game.

During the Action Phase:

- You can get a bonus for being the first or second player to begin construction of two gyrodynes of the same type.
- You can get points for flipping over certain transmitters.
- When your flight ends at a planetary system with an available blue planet, you can get points from an exploration bonus tile.
- Certain patents give you immediate points.
- Some patents give you points for certain actions.
- Certain HQ projects give you immediate points.
- Some HQ projects give you an opportunity to score points when you make a flight that visits jump gates of a certain color.

During the Production Phase:

- Some online transmitters produce points or give you the opportunity to buy points.
- All spinning gyrodynes produce points.
- Certain patents produce points.
- You can lose points if you are at the right end of the initiative track or the engineering track.
- In a two-player game, you get 1 point for being third on the engineering track.

At the End of the Game:

- Score points as summarized on your quick reference sheet. This is explained in the next section.

Note: *When your score reaches 100 points or more, take your hundred-point tile and put it in front of you. If your score reaches 200 points, flip it over to the 200 side.*

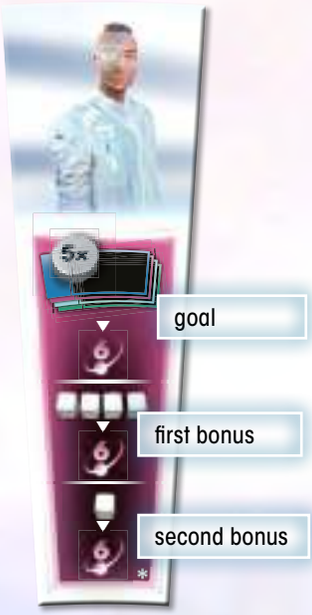
END OF GAME

The game ends after the eighth round. At the end of the game, you will receive points for various accomplishments.

Goal Tiles

Each game has three goals, depicted by the goal tiles. You should use the goal tiles with the icon for your first game. In a standard game, three goal tiles are chosen randomly. (The other three are left in the box.)

A goal tile offers ways to score points at the end of the game:



If you achieve the depicted goal, you will score the indicated number of points at the end of the game. At that time, you will have the opportunity to buy the first bonus by spending the indicated number of engineering cubes. If you pay for the first bonus, you have the opportunity to buy the second bonus.

Example:

If you have patented at least five technologies, you score 6 points at the end of the game. In addition, you gain the option to buy 6 more points for four engineering cubes. If you buy that bonus, you gain the option to buy 6 more points for one more cube. The bonuses are available only if you have patented at least five technologies.

Goals are listed on the next page.

Final Scoring

Players score points at the end of the game, as depicted on the quick reference sheets:

1. Purple patents give you points at the end of the game. Most of these can be scored in this step. Some of them will increase your score in one of the later steps.
2. Score points for goal tiles.
3. Score 1 point for each pulsar you have claimed that either has no gyrodyne or has a gyrodyne still under construction.
4. Score 1 point for each gyrodyne tile you have either still under construction or still on the table in front of you.
5. Score 1 point for each pair of engineering cubes you have left. (A single cube is worth nothing.)
6. Score points for final position on the initiative track. It is always 7 points for first and 4 points for second. With two or four players, there are also 2 points for third. In a three-player game, there are no points for third.
7. Finally, each player scores points for the number of stations he or she has in the planetary systems, as shown on the quick reference sheet. You score 50 points for 13 stations, with a bonus of +3 for each station beyond 13.

Note: *Exploration bonus tiles and technologies with this icon apply to step 7 above. They do not apply to any other situation in which you are counting stations.*

Victory

Once all the points are added up, the player with the most points wins. Break ties in favor of the player farthest ahead on the initiative track.

GOAL TILES

Goal: To have at least 2 spinning gyrodynes of the same type.

Goal: To have at least 3 spinning gyrodynes of the same type.

Goal: To have at least 2 different types of spinning gyrodynes.

Goal: To have at least 3 spinning gyrodynes of any type.

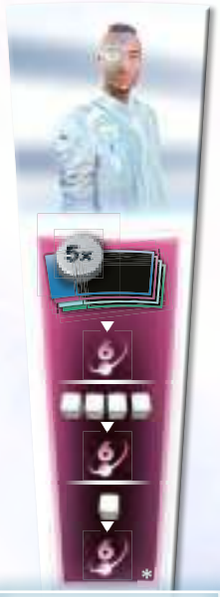
Goal: To have at least 3 online transmitters.

Goal: To have at least 4 online transmitters.

Note: *In a game with two goal tiles that require spinning gyrodynes, those counted toward one goal cannot be counted toward the other.*

Goal: To have at least 9 of your tokens on planets on the star cluster board.

Goal: To have at least 11 of your tokens on planets on the star cluster board.



Goal: To have at least 5 technologies patented.

Goal: To have at least 6 technologies patented.

Goal: To have completed at least 5 HQ projects. (Completed gate run projects count even if the gate run has not been used.)

Goal: To have completed and used at least 3 gate runs projects. (Gate run projects used on a flight that scored 0 points still count as used.)

Note: *Technologies and exploration bonus tiles that can be counted as additional stations when you count stations at the end of the game do not apply to this goal tile.*

TWO-PLAYER GAME

Setup

Use the two- and three-player side of the dice board. All other boards are the same for any number of players.

In a two-player game, two rocket figures are used as play-order markers. Randomly decide which player will go first. Place that player's rocket figures on play-order spaces 1 and 3. The second player's rocket figures go on spaces 2 and 4. (Each player's remaining rocket figure is their survey ship in the star cluster, as usual.)

Each player has 2 counters on the initiative and engineering tracks. They are stacked in reverse play order, as usual.

Example:

If Green plays first, the play-order markers, the rocket figures and the counters should look like this:

Dice Phase

The first player rolls 7 silver dice. Players choose two dice, as usual. The choices are made in the order depicted on the play-order spaces. Thus it is possible for the first player to also choose second, third, or fourth, depending on the order of the rocket figures.

When moving counters to take rewards or penalties, a player may choose any of his or her four counters, unless the move would take that particular counter off the right end of the chosen track.

Action Phase

Three dice will be left. A player may spend four engineering cubes to copy any one of them as a bonus die.

The player who is first on the play-order spaces takes the first turn and the other player takes the second turn. (The positions of the other rocket figures do not matter in the Action Phase.)

Tokens in a nonplayer color are used to occupy planets labeled 3+ or 4.

Technologies with one die icon can be patented by only one player during the game.

Everything else remains the same. In particular, the 4-point construction award for being the second player to begin two gyrodynes of the same type is still in play.

Production Phase

Rearrange all four rocket figures according to the four counters on the initiative track. (In the setup for round 1, counters are stacked in reverse order. But at the start of all later rounds, the rocket figures should match the order shown on the initiative track.) This is the new play order.

The rewards for position on the engineering track are printed on the two-player side of the dice board:

- 2 engineering cubes for the player whose counter is farthest ahead.
- 1 cube for the player with the second counter.
- 1 point for the player with the third counter.

Note that if a player is first and second on the engineering track, that player gets 3 cubes.

A player at the right end of either track will take penalties for each counter on one of the penalty spaces.

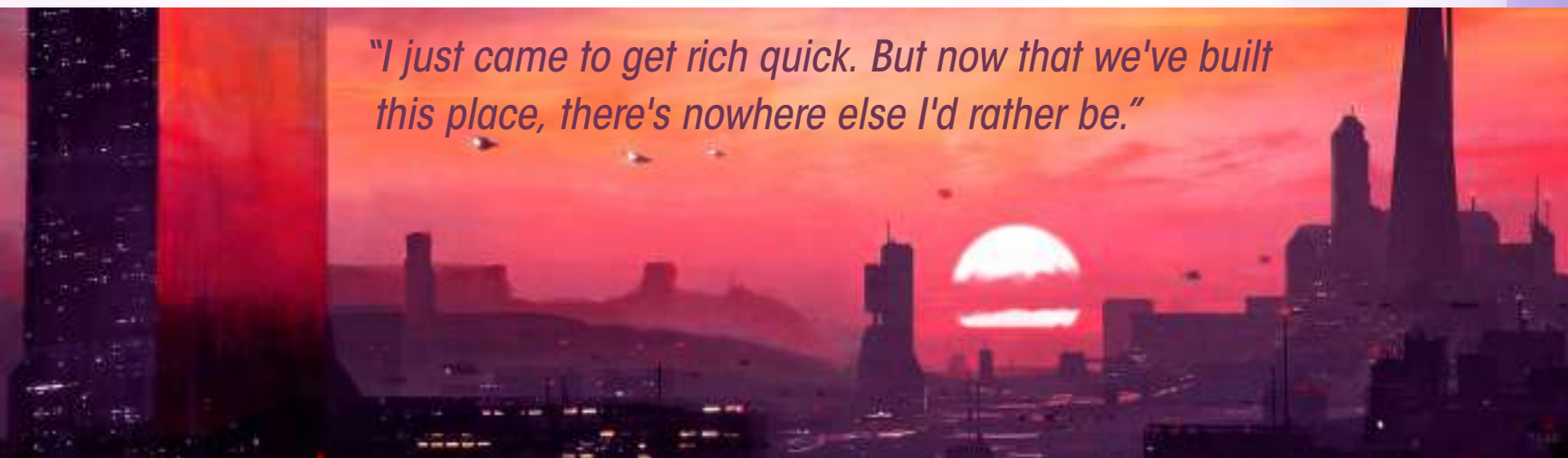
Final Scoring

Final scoring is as usual. When scoring initiative, score it as you do for a four-player game. One player will get points for two places.

THREE-PLAYER GAME

These are the differences between a 3-player game and a 4-player game:

- The 3-player game uses the other side of the dice board, which gives different rewards on the engineering track.
- The 3-player game uses only 7 of the 9 silver dice.
- The tokens in the nonplayer color are used to occupy planets labeled 4.
- In final scoring, there are no points for third place.



ICON INDEX

Immediate Benefits

Score the indicated number of points.

Take the indicated type of gyrodyne tile from the gyrodyne board.

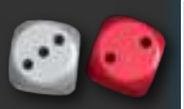
Take a gyrodyne tile with one of the two indicated types from the gyrodyne board.

Take a gyrodyne tile of your choice from the gyrodyne board.

Take two gyrodyne tiles from the gyrodyne board. They must be of two different types.

Draw an exploration bonus tile (and evaluate it). Most tiles are discarded immediately. If no tiles are left in the draw stack, shuffle the discard pile and make a new stack to draw from.

Gain the indicated die modifier tokens. (If tokens run out, use a suitable substitute to represent them.)



Gain the indicated dice. You must use the red die as your bonus die this turn. Die doublers are explained on page 15.

Gain the indicated number of engineering cubes. (Engineering cubes should not run out. The four-cube tokens are intended to represent 4 engineering cubes. You can make change freely at any time.)

Gain a red die of the indicated value which you may use as your bonus die for the turn. (Remember, if you don't want or can't use a planetary system's exploration bonus, you can always draw an exploration bonus tile instead.)

Other Benefits

This project lets you do a gate run. Gate runs are explained on page 14.

This gate run project lets you do a gate run based on one color of your choice, as explained on page 14.

If you draw one of these exploration bonus tiles, keep it for the rest of the game. (This is the only exploration bonus tile that is not immediately resolved and discarded.) At the end of the game, when counting up stations at planets, each of these tiles counts as one extra station. This applies only to the station-scoring step, not to the goal tiles.

Transmitters

Immediately score the indicated number of points.

You may immediately claim an isolated pulsar.

Immediately teleport your ship to a pulsar and treat it as though you just ended a flight there.

Immediately teleport your ship to a planetary system and treat it as though you just ended a flight there.

Immediately teleport your ship to any location and treat it as though you just ended a flight there.

Note: *You can never teleport to an isolated pulsar.*

During each Production Phase, score the indicated points.

During each Production Phase, gain the indicated number of engineering cubes.

During each Production Phase, you may spend 1 engineering cube to buy the indicated points. Usable once per round. You can use a cube that was just produced by a transmitter.

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