

PULSAR 2849

GOAL: having the most VP.

SETUP: p4-6.

- **2p: p19**
- **3p : p19**
- When using HQ, 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.

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 1 turn for spending their chosen dice on actions.
3. **Production Phase:** Players score VP and set up for the next round.

PHASE 1: DICE PHASE

- Rolling the dice (p7):

The 1st player (with his rocket figure on the 1st play-order space) takes all the silver dice and rolls them. 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.

(see p8 for an « Even start variant »).

- **2p:** The 1st player rolls 7 silver dice.

- **3p:** roll 7 dice

- Determining the median (p7):

- Place all dice in a line, each die being in the space corresponding to its value.
- **The median value of the dice is given by the die in the middle.**
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 1 place to the left; if there are more dice on the right, move the marker 1 place to the right. In these cases, the marker ends up between 2 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 (p8):

- Players take turns **taking a first die**, beginning with the 1st player; when you take a die, you have to **move 1 of your 2 counters** (initiative or engineering)(your choice):
 - **2p:**
 - Players choose 2 dice, as usual. The choices are made in the order depicted on the play-order spaces.
 - 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.
 - The Initiative track determines play order for the next round. The Engineering track can earn you engineering cubes.
 - **If you take a die from a space to the right of the median marker, you move your counter right.**
 - **If you take 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**.
 - If the median marker is on a die space, you do not move your marker when you take a die from that space.
 - Else just counting the **number of die spaces** to go from the median to the space where the die is.
 - 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.

- After each player has taken 1 die in order, each player takes a **2nd die in reverse order**. The 1st player will choose his 2nd die last.
 - **2p:** each player has 2 figures on the play-order spaces, so they choose in that order.

PHASE 2: ACTION PHASE (p9)

Each player gets only 1 turn, in which they perform actions using the 2 dice they took from the dice board. The game also offers various ways to get a bonus die for an extra action. **Only 1 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.

- **2p:** The player who is 1st on the play-order spaces takes the 1st turn and the other player takes the 2nd turn. (The positions of the other rocket figures do not matter in the Action Phase.)

Paying for an action:

Each action in the game requires a certain value. When you pay for the action, you use up a die with exactly that value, placing it back into the black hole: it cannot be used again this round.

Modifying a die:

- **Only 1 Modifying token (+/-1 or +2) can be used per die per turn to modify it.** When a token is spent, it is returned to the die modifiers board.
- 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.

Action overview:

- It is possible to choose the same action more than once. The only limitation is that you need the correct value to pay for each action.
- **When an action provides a die, the die comes with the value that is shown: do not throw it!**

Action: Flying your survey ship (p10-11)

- Each ship starts at a different entry gate. You will never fly to an entry gate.
- To fly your survey ship, you **pay 1 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. Flights of distance 0 are not allowed.
- A flight is always along flight segments. Each flight segment connects two locations.
Note: Some pulsars are isolated – no flight segment connects to them. You cannot fly your survey ship to an isolated pulsar.
- During the course of 1 action (1 die, plus any modifiers) you are **not allowed to use any flight segment more than once.**
 - The restriction is only for 1 flight – that is, 1 die. If you do another flight in the same turn, it is okay to retrace segments from a previous flight.
 - **Dead-end:** there are doubled flight segments = 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.

Planets

- If you are the first player whose flight passes through or ends at a particular planetary system, flip the tile over.
- **Some planets are not accessible depending on the number of players:**
 - **2p:** put a token of a nonplayer color to planets labeled 3+ and 4.
 - **3p:** put a token of a nonplayer color to planets labeled 4.
- If you are just **passing through** the system, you **MUST place your token on a lifeless (brown) planet if one is available.** If all lifeless planets are already occupied, you must put a station on a blue planet. **You get no bonus in both cases.**
- 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 the exploration bonus depicted at the bottom of the tile.
 - **Instead of using this bonus, you may draw an exploration bonus tile (earth)**(providing mostly VP).
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.
 - If no blue planet is available, you establish your station on an **available lifeless planet BUT get no bonus.**
- Only 1 token is allowed per planet.
- 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 you establish **a station in a planetary system in a dead-end, draw 1 exploration bonus tile (earth) as bonus** (in addition to the bonus if you end your flight there).

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.

Claiming Pulsars

- If your flight ends at an unclaimed pulsar, you claim it by placing 1 of your rings around it. Once a pulsar is claimed, no other player may claim it or develop it.
- If you claim a Pulsar in a dead-end, draw 1 exploration bonus tile (earth) as bonus.
- 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

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).

Action: Developing Pulsars (p12)

There are 3 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.
- **Some technologies and transmitters allow you to claim a pulsar.** In this case, you must choose an isolated pulsar – that is, 1 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.
- 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 1 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 (as printed on the board).
Place it in front of you with the white side up.
- Certain planetary systems, HQ projects, and technologies offer the opportunity to take one or more Gyrodyne tiles.
- **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. Starting construction does not count as an action.**
- When a gyrodyne tile is played on a claimed pulsar, it is placed **with the white side up**.
- A pulsar can have at most 1 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).**

Gyrodyne Construction Awards

- The criteria are:
 - You need at least 2 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 for a given gyrodyne size takes the 7 VP award tile associated to the gyrodyne size on the gyrodyne board and receives 7 VP.
 - The second player to meet these criteria for that size of gyrodyne takes the 4 VP award tile and received 4 VP.
- You can win awards for several different sizes, or even to win both awards for the same size: If you have 4 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: some technologies may give you more VP 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 spend 1 of your dice** with the die value shown on the tile to complete it: flip the tile over.
- Once it is flipped, your gyrodyne is "spinning". It will keep spinning until the end of the game, producing VP for you. **You receive these VP during the Production Phase.**

Action: Building an energy transmission megastructure array (p13)

Taking a Transmitter

- Your energy transmission system consists of 1 or more arrays of transmitters in various stages of construction. To start building, you need a transmitter tile.
- Each round, a different set of 3 transmitters is available. To take one, simply **spend 1 die matching any of the dice printed on the tile**.
Place your 1st transmitter anywhere in front of you and cover the icon of the die cost you paid with 1 of your player tokens.

Linking Transmitters

- Every transmitter can link to another one. Some transmitters can link to 2 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 2nd transmitter, you can attach it to the 1st. This may form a red 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 1st 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.

Putting Transmitters online

- **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 (and one of your tokens on it). **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 (blue « check » icon). 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 (*green double-arrow icon*).
 - Some transmitters have only 1 die in their cost. If you take one of these, you have paid its full cost, and you flip it immediately.
- **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.

Transmitter bonus die

- If you have flipped 2 linked transmitters, you gain the red die formed by the link: **you must use it immediately the turn you flip the 2nd transmitter, or it is lost**.
- **It is possible to use a die that has 0 pips**, but you will probably need a die modifier token to make it work. Some technologies may allow you to use a 0 die to pay for certain actions.

Action: Developing HQ (p14)

- Projects are arranged in a pyramid: **you must complete projects under a given project and connected to it to be able to develop that one**.
- Each project can be completed only once per game. To complete a project, **spend the indicated die** and mark the project as completed with 1 of your tokens.
- Most projects give immediate one-time benefits similar to the bonuses that planets offer to your survey ship.
- **Gate run projects** (symbols: ship with a square and a color, possibly with some VP):
 - 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**.
 - You can do a particular project's gate run only once per game; **you get to choose with which flight you want to make the Gate run (can be in any turn after the project has been activated)**.
 - To do a gate run:
 - Announce which completed project you are using when you fly your survey ship.
If you have multiple completed, unused gate run projects, you may choose any one of them (but not more than 1).
 - **The gate run applies to only 1 die**, even if you fly the ship again as your next action.
 - Your goal is to **visit as many gates of the indicated color 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 VP determined by the project**.
 - After you have used the completed gate run project, place 1 of your player tokens on the gate run icon to remind you that you cannot use it again.

Action: Patenting Technologies (p15)

- In the 1st round, only the technologies in the 1st row are available. 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.**
- On your turn, you can **spend a die** to patent an available technology. The cost is printed beside the technology. Place one of your player tokens on the cost icon to indicate that you have patented this technology.
 - Each technology can only be patented by 2 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.
 - 2 different patent processes:
 - *Die icon on the upper space, lock icon in the lower:* the technology can be **patented by at most 1 player per turn**. At the end of the 1st turn in which it is patented, the owner's token is moved to the space below the die icon to allow a 2nd player to patent it.
 - 2p: Those technologies with one die icon can be patented by only 1 player during the game.
 - *2 die icons:* the technology can be patented by 2 different players even on the same turn.
- Patents with a **light blue** background and **check mark** provide a **one-shot bonus**
 Patents with a **dark blue** background and **infinite symbol** provide a **permanent bonus**
 Patents with a **green** background provide a **bonus at the end of each round**.
 Patents with a **purple** background provide a **bonus at the end of the game**.

Action: Buying a die modifier (p15)

You can buy a +/-1 modifier by **spending a 1 or a 2 die**. You can buy a +2 modifier by **spending a 2**.

BONUS DIE (p15)

- **Each round, you may use at most 1 bonus die.** If you have access to more than one, you may choose which one you wish to use. **When you get it, you MUST use it this turn or loose it.**
- 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.
- You can get the bonus red die as follow:
 - **On your turn during the Action Phase, you can copy a die leftover on the dice board 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.
 - 2p: 3 dice will be left. A player may spend 4 engineering cubes to copy any one of them as a bonus die.
 - **Flipping a transmitter.** If you create multiple such dice, you may choose any one of them.
 - **Patenting a technology:** **you MUST be able to use the red die to be allowed to patent the technology.**
 - **Exploration bonus on a planetary system tile.** 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 this turn), remember that you can always draw an exploration bonus tile instead.

PHASE 3: PRODUCTION PHASE (p16)

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.

Step1: Determine the new 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 1st 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.

Step2: Hand out 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 number of cubes earned by each player with respect to their position depends on the number of players in the game as indicated on the board beside the Engineering track. **First position is the farthest left.**

Step3: Take initiative and engineering 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 VP at this time. (If both counters are on penalty spaces, the player takes penalties for each.) Scores cannot go below 0.

Step4: Gain points and cubes for online transmitters

Online transmitters (flipped) that produce engineering cubes can be resolved first. Then you can spend their cubes on those that let you buy points.

Step5: Score points for spinning gyrodynes

- A spinning gyrodyne is one that has been placed on a claimed pulsar and flipped over, showing VP. All spinning gyrodynes produce VP at this time.
- **Each spinning gyrodyne produces the amount of VP shown on its face, plus the amount of VP shown on the left end of the current round's technology row.** (The time marker should be pointing right at this value.)
 - If a gyrodyne has a « ? » **symbol**, the number of VP it provides depends on the **position of the median marker**. If the median marker is on a die space, the value equals the value of that die space. If the marker is between 2 die spaces, use the larger of the 2 values.

Step6: Score points for certain technologies

The green technologies, marked with the double arrow symbol give you points at this time.

Step7: Set up for next round

- **Discard the Transmitter tiles that have not been taken, and deal out 3 new ones.**
- **If not 2p game:** On the Technology pyramid, for each Technology where a player token has been placed on the upper space and the lower space is empty, move the player token to the lower space to free the upper space.
- Move the time marker up on the Technology pyramid.

SCORING SUMMARY: read p17.

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END OF GAME & FINAL SCORING (p17)

The game ends after the 8th round (time marker counting the turn)

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

1. Purple patents
2. Goal tiles (see below)
3. 1 VP for each pulsar you have claimed that either has no gyrodyne or has a gyrodyne still under construction.
4. 1 VP for each gyrodyne tile you have either still under construction or still on the table in front of you.
5. 1 VP for each pair of engineering cubes you have left, after spending on the goal tiles. (A single cube is worth nothing.)
6. VP for final position on the initiative track: 7 VP for 1st, 4 VP for 2nd.
With 2p or 4p players, also 2 VP for 3rd. In a 3p game, there are no points for 3rd.
7. Finally, each player scores VP 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: see p17 Exploration bonus tiles and technologies with specific icon to be applied to step 7 above.

The player with the most VP wins. Break ties in favor of the player farthest ahead on the initiative track.

Goal tiles: Each game has 3 goals, depicted by the goal tiles.

If you achieve the goal depicted just below the picture, you score the indicated number of VP indicated just below.

At that time (ie you achieve the above goal), you have the opportunity to buy the 1st bonus (# of VP indicated below the arrow) by spending the indicated number of engineering cubes.

If you pay for the 1st bonus, you have the opportunity to buy the 2nd bonus and earn the VP indicated at the bottom.