

Build and Service Ship

- Building a ship require resources or \$B on Earth as specified on ship counter. The resource cost must come from the location where it is built
- You can never exceed your RE or CV support limit above four, not even during yearly turns
- CVs can be built reserved: subtract 1 SUP and 1 FUEL from their cost
- Earth counts as having a large Spaceport for all purposes. (A Space Elevator must be built for Earth to build or service ships larger than CV-4.)
- Requirements to build a ship (B) or unreserve a CV (U). SSS=Small Supply Station, LSS=Large Supply Station, SSP=Small Spaceport, LSP=Large Spaceport

Facility	LV1	LV2	LV3	LV4	RE	CV2	CV3	CV4	CV5	CV6+	Repair
SSS	B	B				U					1
LSS	B	B	B	B		U	U				2
SSP	B	B	B	B	B	B/U	U	U	U		3
LSP	B	B	B	B	B	B/U	B/U	B/U	B/U	B/U	Unlimited

- Un-reserving a CV costs 1 SUP and 1 FUEL on bases or \$2B on Earth. Repairing a CV costs 1 ORE or \$1B on Earth
- Scrap undamaged can on a base or Earth. Add half of each of the cost in resources for that ship to the reserves on Earth. Reduce by 1 SUP and 1 FUEL if scrapping a reserved CV.

Movement

- Drop all ships in heliocentric transfer boxes

Each player moved in *reverse initiative order*. A player with better initiative may interrupt before someone with worse initiative.

- Can move between:
 - A world and its orbit
 - Between world orbits connected to the same planetary system (Earth orbit to Lunar orbit)
 - Along movement arrows to/from a world orbit and a Flyby box (Lunar orbit and Earth Flyby box)
- Can move multiple times a turn but must stop if they land on a world or stack with a base
- **Orbiters** can never move again once they enter orbit around a world. **Rovers** can never move again once they land on a world surface. **Telescopes** can only move from moving Orbit.

Heliocentric Transfers

- Time to perform the transfer is = difference in numbers in each solar system tile adjusted by your heliocentric transfer modifier from tech. (Earth to Saturn different is 7. Fusion Rockets tech mod is x0.6. So it would take 4 turns to reach Saturn. Place the ship in the Saturn 4 box.)

Moving with Launch Vehicles

- LVs are destroyed after their use unless you have the *Reusable Launch Vehicles* tech; in that case, destroy if you roll 25% or less; recovered at the launch location and can be used again the next yearly turn with no cost
- REs must be carried by a LV on the first move. Reduces RE heliocentric transfer times by 1 for each size larger than LV-1 (-3 for an LV-4)
- When leaving Earth, CVs must be carried by an LV of equal or greater size
- LVs can be used to transport resources equal to their size, from LV's location to any of your bases.

Engine Failures

- Check whenever ships move. An LV carrying a CV or RE counts for both ships
- Base rate is 5% and is modified by techs and minus the CV size
- For a RE or LV with cargo lost, draw 1 free Engineering tech marker, and for a CV draw 3 free Engineering tech markers for a CV-2 or 5 for a CV-3.

Interception by other Players or Pirates

- A fleet can intercept another enemy fleet leaving its location:
 - The intercepting fleet needs to be composed exclusively of unreserved CVs, contain at least one CV with combat value.
 - To intercept a fleet, you must have a foreign relation of embargo or war with its owner(s) faction. Embargoing allows to intercept LVs or CVs. War any of their fleets, including REs
- A moving fleet can be intercepted by any number of opposing fleets in the same turn. Interception does not preclude a fleet from searching for fleets later during the combat phase
- Both attacker and defender fleets roll a d10. Success if 4 or less on either die.
- On successful interception:
 - LVs and REs are destroyed
 - CVs have a choice of i) stop moving, or ii) resolve the combat immediately as if it was a successful combat search. After interception combat, remaining ships can complete their move
- One **Pirate** per Flyby box will always try to intercept fleets containing a CV leaving their transfer box unless those CVs have combat values.
- If intercepted by pirates, roll a d10. You can either pay cash equal to the die roll (place in the pirate cache), surrender, or fight
- Can pay the pirate double the roll to remove the pirate (place in the pirate cache). You can go into debt to pay pirate (subtract from next Earth production).

Combat

1. Resolve Searches

- Fleet must be composed solely of **unreserved CVs**, have at least one ship with an **attack or strike value** and must have foreign relations that allow offensive action (unless targeting pirates). No offensive action can be taken on Earth or in Earth orbit
- Each of your fleets can search for one enemy fleet each turn. But not within a numbered transfer box
- Both attacker and defender fleets roll a d10. Success if 4 or less on either die. Automatic success if a base is involved, but the die roll will still determine tactics points. Each CV beyond the first on both sides will raise the success number by one
- Fighter Drones* tech will subtract 1 from the die if the fleet contains a drone squadron, or 2 if there are 5 or more drone squadrons
- LVs and REs alone are destroyed by a successful search.

2. If successful search, resolve Surrenders

- After any successful search against a fleet containing CVs and/or bases, the other side may choose to offer to surrender
- While embargoing, you must accept all surrenders. If at war, you must accept base's surrenders but can ignore a fleet surrender
- Surrendering affects the entire fleet. If you accept:
 - Destroy all resources carried by CVs. Roll a d10 and destroy that number of resources on a base. Take up to half of the destroyed resources into your fleet, up to your cargo capacity
 - Reserve all defending CVs
 - Take one politics marker from the defender.
- A fleet that surrenders can not be attacked by the same faction again that turn.

3. Roll and Resolve for tactics points

- Earn points from the other side's modified search roll
- Add to that roll 1 point for every full 7 points of enemy CV size
- Subtract the smaller number from the larger one. The person who has the larger number spends the difference:
 - Spend 1 to make it direct-fire combat, otherwise it is a strike
 - Spend 3 to avoid the combat (unless your fleet containing a base)
 - Spend 2 to increase or decrease a point of damage
 - Spend 1 to select a target instead of your opponent.

4. Resolve Combat

- If a direct-fire combat:
 - Select any of your ships/bases to screen. They will not participate in combat but can not be damaged unless tactic points are spent to target them. Screened ships/bases become targets when all non-screen targets are destroyed.
- If a strike combat:
 - Fighter Drones* tech: decrease the damage inflicted on your fleet by 1 per fighter squadron
 - Bomber Drones* tech: choose to use drones as fighters (defend) or bombers (attack). If bombers, increase the damage to enemy by 1 per fighter squadron. Defending fighters cancel attacking bombers and only excess will get through.
- Add up combat values and add 1d10 plus 1 for each enemy ship or base in the combat after the first. Then cross reference with combat table
- Damage is simultaneous. Inflict alternating hits on ships or bases. If strikes, attacker picks target first and for direct-fire, the defender does
- LV and RE are destroyed on first damage. CVs are destroyed when they accumulate damage markers equal to their size
- Bases without facilities are destroyed on first damage. Otherwise, hits can be applied to facilities or resources. Destroyed large facilities can be downgraded into their small version. For each resource hit, destroy 2 resources of any type (also mixed).

5. Post-Combat Effects

- Earn victory markers based on CVs destroyed: 1 for CV-2/3, 2 for CV-4/5, 3 for CV-6, or 4 for CV-7/8 (even if you don't win the battle)
- For each CV or base you lose (also with pirates or NPF raids), earn equivalent Engineering tech markers (1 for CV-2, etc.)
- For each damage marker on a CV, check for recall. Can earn a Biology tech marker, but only one per ship.

Blockades

- If you can attack a base from orbit, you can declare a blockade instead of combat
- The fleet must be composed of only unreserved CVs and must have a combat value greater than the Defense Networks at the base plus half of defending ships stacked with that bases. A blockading fleet is free to take other actions like explore or initiate combat
- When a base is blockaded: Tech and resource production is halved after modifiers, Settlements decline instead of grow, May not trade or receive a new trade marker, Blockading player receives \$2B for each blockade during the production step.

Combat with Pirates

- Can search for the pirate to initiate combat but only the strongest pirate is ever included at a time. Pirates roll for searches but only spend tactic points to avoid combat if possible. They always attempt to choose direct-fire combat
- Damaged pirate ships remain damaged. Players fighting pirates can choose how to apply all damages they sustain
- Destroying pirates earns you half the accumulated pirate cache, a politics marker and a victory marker.

Blockading and Raiding NPF Bases

- Blockading only allowed if you have relations of Embargo or War with the NPF. The fleet must be composed of only unreserved CVs
- Gain \$2B during the production step for each NPF base blockaded
- If you have a relation of War you can raid a NPF base. It works like an attack but uses the table on page 17
- A roll of 10 destroys the base, but no damage or resources are sustained
- Roll a recall for each damage sustained during a raid
- If you raid a base and don't lose a CV, earn a victory marker.

Exploration

- Each ship can explore only once a turn and must have an exploration value to do so
- Bases and ships stacked with bases cannot explore
- If you have the *Space Mining* technology, you can produce resources with CVs instead of exploring.
- When **exploring with a RE**:
 - **Exploration value** = current exploration value of the world + the exploration value of the RE + *Computing* technology bonuses (+1,+2,+3) + Unified *Robotic* policy bonuses (+1) + bonus from world card to RE exploration.
 - Reduce exploration value by 1 if an **orbiter** orbiting the central world in a planetary system is exploring any other world in that planetary system
 - Reduce exploration value by the heliocentric number if exploring with a **flyby** from a heliocentric area
 - Halve the current exploration value of the world when exploring with **telescopes**
 - Cannot explore a world whose current exploration value is zero.
 - Using a **probe** takes the exploration action of the carrying RE for this turn. Probes are always **destroyed** after use. **Probes** can only be used to:
 - **Explore a World** from the surface of the world, except gas giants and Sun surface (**Rover**), or the orbit of the world (**Orbiter**)
 - **Explore any World** from the flyby area (**Flyby RE**).
 - Earn a **tech marker** per 10 exploration value. Roll d10 for any remaining fraction of 10
 - **Roll for malfunction**, except if using a probe. Your starting RE malfunction rate is 30%.
 - Add +10% to malfunction rate if exploring from an area with severe radiation, unless you have the *Active Radiation Shielding* technology
 - Add +20% to malfunction rate if exploring Venus with a rover, unless you have the *Pressure Shell* technology
 - For each RE (non-probe) lost to malfunction, draw an **Engineering** tech marker.
 - If any tech markers drawn is 3 or higher, earn a **depletion**.
 - A **Flyby RE** in a flyby area (after exploration or not) must make a heliocentric transfer (rolling for engine failure) to another planetary system farther from the sun. Flyby RE are destroyed after they leave the Scattered Disc flyby area (cannot move to Alpha Centaury)
- When **exploring with a CV**:
 - **Exploration value** = current exploration value of the world + the exploration value of the CV + Crew technology bonuses (+1,+2,+3,+5) + bonus from world card to CV exploration.
 - Cannot explore a world whose current exploration value is zero.
 - Earn a **tech marker** per 10 exploration value. Roll d10 for any remaining fraction of 10
 - When equipped with a **mobile lab**, roll 2 dice and choose which one to keep
 - **Roll for recall** after each CV exploration. Your starting CV recall rate is 50%
 - For each CV recalled, draw a **Biology** tech marker.
 - If the sum of all tech markers drawn is 3 or higher, earn a **depletion**.
- When **earning a depletion**:
 - Reduce the **exploration value** of the world by 1
 - When a world exploration value is reduced to zero, remove any unearned mission marker for that world from the game and draw a replacement for it.
 - Draw a **politics marker**
 - Draw a **world card** (if exploring with a spectrometer, draw two and choose which one to keep)
 - If the world card is eligible (share at least one descriptor with a world to occupy the world box), choose to **place** it or **discard** it
 - When a world exploration value is **reduced to zero** and the world does not have a world card yet, you must place a world card or keep drawing until an eligible one is drawn.
 - Check if the depletion **completes an unearned mission**, private or public (except for telescopes). **Upon completing a mission**:
 - Draw a **politics marker**
 - Draw a **new mission** to replace it
 - Keep the completed mission marker next to your board if possible:
 - You can only keep completed mission markers equal to the decade of the game (1 marker for 2030, 2 markers for 2040, etc.)
 - When you complete a mission that you can't keep:
 - Earn one victory marker
 - Return any one of your completed mission markers to the pool.
 - **Search for life**:
 - *Requirements*:
 - You cannot search for life in a world that already has Existing life
 - You must have the Signs of life technology to search for Existing life in a world that has Signs of life
 - After one player has discovered Sign of Life or Existing Life technology, these technologies can be developed like any other
 - Roll d100 against the life chance of the world.
 - On a successful roll **find Signs of life**. If they were already present, instead **find Existing life**.
 - When finding **Signs of life**:
 - Earn the Signs of life technology
 - Draw 2 Biology tech markers, 1 victory marker and 1 politics marker
 - The world receives the Signs of life marker.
 - When finding **Existing life**:
 - Earn the Existing life technology
 - Draw 4 Biology tech markers, 2 victory marker and 2 politics marker
 - The world receives the Life! marker.

Trade & Base Construction

Trade with Bases

- Can only trade with bases that have trade markers. Remove the marker after that base participates in a trade
- Can always trade with your bases. Can only trade with other's bases if you have a Neutral or better relationship with them and you have a fleet in the same location. Resources traded must come from and go to the fleet
- You can refuse another player's request for trade or demand a \$1B tariff to trade with you
- The maximum number of resources you can trade is restricted to the lesser of a) foreign relations, or b) the limit based on the base's Settlements (unlimited for NPF bases).

Building and Expanding Bases

- Bases can be built in Earth's orbit or on any world that can hold a world card
- Spend SUP from the cargo of a CV at the location. The CV must be unreserved, have an exploration value and all SUP must come from the cargo of a single ship
- The cost is found on the world's solar system tile and can be modified by tech
- Using the same rules, you can also build and expand facilities, even on the same turn as building the base
- Can only build or expand one facility level per turn
- If you have the tech, you can purchase terraforming points using SUP. The cost is increased by 1 after the initial purchase, for any additional purchases in the same turn.

Game Mechanics

Cash

- Does not need to be transported
- On Earth, buy any resource for \$1B each and sell 2 resources for \$1B.

Politics Markers

- Spend politics markers to:
 - Modify initiative rolls by +10% per marker
 - Add 2 tech points of any type to your tech bank
 - Convert to \$1B at any time
 - Spend 2 markers to return an unused mission and re-draw
 - Spend 4 markers to buy a victory marker
 - Attempt to increase or decrease your foreign relations with another faction
 - Discard remaining markers at the end of the technology step.

Politics and foreign relations

- Non player factions can be traded with by using the text within the foreign relations track on your faction's player board. For example, (\$1B/6R) means you can trade up to 6 resources with this faction for an extra \$1B, provided the base has a trade marker
- Earn extra politics markers for each Alliance
- An Alliance can join fleets
- If able to embargo, that means you can block bases, intercept LV's, intercept and search for CV's to initiate combat.

Crew Vehicle Range

- The CV range is the maximum heliocentric distance a CV can travel for earth or a base that can unreserve the CV
- A base that can resupply (unreserve) a CV extends the range from earth.

Reserve Status

- You must turn a ship to reserve if:
 - It is recalled during exploration, production or combat
 - It cannot reach earth or a base the could unreserve it
 - It surrenders.
- You can always choose to reserve a ship
- You can purchase a ship reserved. The cost is reduced by 1 SUP and 1 FUEL
- A reserved CV can only move, transfer resources or defend.

Fleets and Stacking

- You must make an engine failure roll if you separate from a fleet and remain in the same location.

Damage Markers

- CV's: reduces exploration and combat values, and every 2 points damage reduces drone squadrons by 1
- Settlements: trade and production modifiers are not used
- Mining Stations, Refineries and Research Labs: produces one less resource per point of damage
- Spaceports and Supply Stations: count as one level lower, or small Supply Stations don't function at all
- Remove damage by spending 1 ORE. Ships must be at a supply station or spaceport.