

the earthman's burden

BACKGROUND

It is the not-too-distant future – next Sunday, AD – and Earth has been on the brink of war for decades. The Secretary-General uses the military and economic clout of the UN to enforce a fragile peace as best he can. This delicate balance is shattered by the invention of a functional, efficient and powerful Bussard ramjet engine capable of 1g throughout the Solar System. Within a few short years, and with the Outer Space Treaty quickly forgotten, the superpowers of Earth expand outward to claim, colonise, exploit and perhaps even invade the other worlds of the system.

It will take a clever commander to strike just the right balance. Rush to build an unstoppable armada? Husband your resources? Research ever-more-advanced technologies? Leap upon the hotly-contested inner system or play the long game in the outer worlds? When do you turn on that most treasured prize – Earth itself?

TERMINOLOGY

- All **rolls** are made on d6. A **bonus** of $+n$ adds n to your roll (making it easier to achieve higher scores) and a **penalty** of $-n$ subtracts n from your roll (making it harder to achieve higher scores). All applicable boni and penalties are cumulative.
- The board has ten **worlds**, each of which between two and seven **regions** and an **orbit**. Units occupying a region or an orbit are **on** that world.
- The board also has ten **trajectories**, connected to each other and to the worlds' orbits by arrows. Movement may only occur between nodes – whether orbits or trajectories – which are directly connected by arrows. A move inward, towards the centre of the Solar Disc, is a move **skyward**; a move outward, towards the rim of the Solar Disc, is a move **worldward**.
- Units occupying a region are **claiming** it and are called **developments**. Units in a world's locale or in a trajectory are called **fleets**.
- Unit counters may also be used on each player's **AI miniboard**, in the **research pool** and on the **technologies miniboard**; these are but markers and are described in the relevant rules.

SETUP

Start with a randomly-determined player; setup rounds proceed anticlockwise.

- In the first round of setup, each player may **either** claim a region on Earth with a development **or** place three fleets on Earth **or** place three fleets in any one trajectory any number of moves skyward of Earth **or** claim a technology with no prerequisites.
- In the subsequent three rounds of setup, players may not place developments but may take any of the other setup actions.

When all four setup rounds have been taken by all players, fill any unclaimed regions on Earth with UN developments and place 12 UN fleets on Earth.

The last player to take a Setup round takes the first turn; turns then proceed clockwise.

THE TURN

At the start of each of your turns, reset your AI miniboard to 0 counters (though this may be modified by technologies).

<< phase 1: movement >>

A fleet which starts the phase on a world **may** move any number of rings skyward.

A fleet which does not start the phase on a world **must** move exactly one ring worldward.

<< phase 2: military actions >>

You may, as many times as you like, form a group of fleets on a world. This group must contain only fleets on the same world and none of which have taken an action with any other group this turn. Each group of fleets may attempt one action from the following list: **Attack, Exploration**. See the Actions section for details.

<< phase 3: civilian actions >>

You may, as many times as you like, form a group of developments on a world. This group must contain only developments on the same world and none of which have taken an action with any other group this turn. Furthermore, each fleet which did not take an action in the Military phase may as its action assist one group of developments on the same world. Each group of developments may attempt one action from the following list: **Overthrow, Espionage, Construction, Research**. See the Actions section for details.

<< extraordinary actions >>

You may, as many times as you like and at any time (including in another player's turn) save in between an action being declared and its being resolved, perform any of the following actions:

- Remove **ten** of your counters from the research pool and, in exchange, gain access to a technology of your choice for which you have the prerequisites.
- Remove **one or more** of your counters from your AI miniboard immediately after any die or dice have been rolled; you may re-roll or force another faction to re-roll a die of your choice for each counter thus removed.
- Remove **any** of your developments and replace each thus removed with a fleet on the same world.
- Remove **any** of your units or counters from anywhere on any board, so long as this does not leave any of your technologies without prerequisites.
- Transfer ownership to any other faction of **any** fleet or development which has not taken an action or assisted with an action since the start of your most recent or current turn.
- Give any player access to **any** technology to which you have access, so long as they have the prerequisites.

THE UNITED NATIONS

The United Nations may assist you to maintain peace and stability on Earth:

- Any UN units on Earth are counted as yours for outnumbering purposes, for defensive purposes and for returning fire in the event that another player takes an Attack or Overthrow action against you on Earth.
- If both you and the UN still have development(s) on Earth, you may use all your Earthly development(s) in one group (no matter how many you have) to construct one fleet without needing to make a Construction roll or place one of your counters in the research pool without needing to make a Research roll. This counts as the action that turn for all your Earthly development(s).

The United Nations acts to maintain its own interests:

- If the UN still have development(s) on Earth, they will at the end of your turn automatically place development(s) in any unclaimed regions on Earth and, should they have at that time fewer than 10 fleets, construct one new fleet there. The UN is assumed to have vast resource reserves, run most of the world banks and so forth, and hence has no need to roll.

ACTIONS

Attack (Nominate a target faction with units (of any sort) on the same world)

- Rolls: Once per fleet taking the action.
- Modifiers: -1 penalty if your target's units (of any sort) on that world outnumber yours. Technologies may also modify the roll.
- Outcome: **Each roll of 4+ (after modification)** destroys one of the target's units on that world (his choice which). A roll of 6 before modification always destroys an enemy unit; a roll of 1 before modification never does.
- Response: Any surviving fleets remaining to the target on that world after the action has been resolved may open fire on you as if they were attacking in their turn, at a -1 penalty (you may not respond to this response).

Exploration

- Rolls: Once per fleet taking the action.
- Outcome: **Each roll less than or equal to the number of unclaimed regions on the world** allows you to remove one of the fleets taking the action and place a new development in one of the unclaimed regions (should any remain).

Overthrow (Nominate a target faction with developments on the same world)

- Rolls: Once per development taking the action and once per two fleets (rounding down) assisting with the action.
- Modifiers: -1 penalty if your target's units (of any sort) on that world outnumber yours. Technologies may also modify the roll.
- Outcome: **Every two rolls of 4+ (after modification)** allow you to remove one of the target's developments on that world and replace it with a new development of your own (though see the Response section). A roll of 6 before modification always counts towards the total; a roll of 1 before modification never does.
- Response: The target may roll once for each unit (of any sort) he has on that world. Each roll of 6 cancels out one of your rolls of 4+ (whether or not it were a 6).

Espionage (Nominate a target faction with developments on the same world)

- Rolls: Once per development taking the action and once per two fleets (rounding down) assisting with the action.
- Modifiers: Technologies may modify the roll.
- Outcome: **Every two rolls of 5+ (after modification)** allow you *either* to gain access to one technology of your choice to which the target has access and for which you have the prerequisites *or* to remove the target's access to one technology of your choice which is not a prerequisite for any other technology to which the target presently has access. A roll of 6 before modification always counts towards the total; a roll of 1 before modification never does.
- Response: The target may roll once for each development he has on that world. Each roll of 6 cancels out one of your rolls of 5+ (whether or not it were a 6).

Construction

- Rolls: Once per development taking the action.
- Outcome: **If your highest roll is 4+**, you may place a new fleet on that world. **If your highest roll is 3**, you fail to produce a fleet but do not overstretch your resource. **If your highest roll is 2 or less**, you must lose a development from among those taking the action; you have over-exploited your manpower, resources and perhaps even your native allies.

Research

- Rolls: Once per development taking the action.
- Outcome: For the **first roll of 4+** in each of your research actions, you may add one new counter to your heap in the research pool. For the **second** such roll in the same action, you may add two further counters; for the **third** such roll in the same action, three further counters **and so on**.

TECHNOLOGIES

Access to a technology is indicated by placing a counter on that technology's slot on the miniboard.

Heavy Weapons: Take a +1 bonus to all your Attack rolls, including those in response to being fired upon.

Superconductors: When taking an Attack action, each roll of 6 before modification allows you to take an extra roll, just as if you had another fleet participating in the combat.

Overcharge: Each fleet taking an Attack action may (but need not) roll two dice instead of one, just as if it were two fleets (though it does not count as two fleets for the purposes of outnumbering; other modifiers apply as normal). However, each roll of 1 before modification from these fleets destroys one of your units on that world (your choice which).

Shielding: Other factions take a -1 penalty on all their Attack rolls against you, including those in response to your firing upon them.

Defensive Grid: Your developments each count as two fleets (in addition to counting as developments) each for the purposes both of outnumbering and of returning fire.

Intel: Take a +1 bonus to all your Overthrow and Espionage rolls.

Security: Other factions take a -1 penalty on all their Overthrow and Espionage rolls against you.

Counter-Intelligence: When responding to Overthrow and Espionage actions, you may roll two extra dice per development (though fleets may not roll more dice).

Orion Engines: Before your Movement Phase, you may as many times as you like sacrifice one unit (of any sort) on any world to move one group of up to five fleets on that world as many moves skyward as you like as if it were an extra movement phase. All fleets in any one such group must move together.

Solar Sails: After your Movement Phase, you may roll three dice. For each roll of 4+, you may move one group of up to five fleets in any trajectory one move worldward as if it were an extra movement phase. All fleets in any one such group must move together, and no fleet may move twice in the same turn due to Solar Sails.

Exploration Drones: Once per turn, you may when taking an Exploration action choose to roll one extra die (as if one extra fleet were also taking the action).

Nanotechnology: Once per turn, you may when taking a Construction action choose to roll one extra die (as if one extra development were taking the action).

Abstraction Circuits: You get +1 counter on your AI miniboard at the start of each turn.

Forecasting Circuits: You get +1 counter on your AI miniboard at the start of each turn.

➤ **Advanced Weapons (Prerequisites: Heavy Weapons):** Take a further +1 bonus to all your Attack rolls, including those in response to being fired upon.

➤ **Advanced Shielding (Prerequisites: Shielding):** Other factions take a further -1 penalty on all their Attack rolls against you, including those in response to your firing upon them.

➤ **Advanced Intel (Prerequisites: Intel):** Take a further +1 bonus to all your Overthrow and Espionage rolls.

➤ **Advanced Security (Prerequisites: Security):** Other factions take a further -1 penalty on all their Overthrow and Espionage rolls against you.

➤ **Fusion Engines (Prerequisites: Orion Engines):** Before your Movement Phase but after you use Orion Engines, you may as many times as you like sacrifice one fleet in any trajectory to move one group of up to five fleets in that trajectory one move worldward as if it were an extra movement phase. All fleets in any one such group must move together, and no fleet may move twice in the same turn due to Fusion Engines (though they may move due both to Orion Engines and Fusion Engines in the same turn).

➤ **Refraction Fields (Prerequisites: Solar Sails):** Roll five dice instead of three when rolling for Solar Sails.

Furthermore, any roll of 6 in your Solar Sail roll allows you to move one group two moves worldward rather than one.

➤ **Von Neumann Engines (Prerequisites: Exploration Drones):** When taking an Exploration action, each roll of 6 allows you, as well as replacing a fleet with a development, to construct a second development at no additional cost (should there be sufficient unclaimed regions to do so).

➤ **Nanofactories (Prerequisites: Nanotechnology):** When taking a Construction action, any roll of 6 allows you to construct two fleets instead of one from that action.

➤ **Artificial Intelligence (Prerequisites: Abstraction Circuits):** You get +1 counter on your AI miniboard at the start of each turn.

➤ **Paradox Circuits (Prerequisites: Forecasting Circuits):** You may expend two AI counters instead of one to choose what result a die shows rather than merely have it re-rolled (though other players may still use their own AI to force this result to be re-rolled yet again).

➤➤ **Advanced Von Neumann Engines (Prerequisites: Von Neumann Engines, Nanofactories):** You may in the Civilian phase use any fleet(s) which did not take an action in the Military phase to initiate or take part in Construction or Research actions as if they were in every way development(s).

➤➤ **The Eschaton (Prerequisites: Artificial Intelligence, Paradox Circuits):** You may as an extraordinary action expend a counter from your AI miniboard and roll once. Should you roll a 6 before modification (though other players may of course force you to re-roll with their own AI counters), you immanentise the Eschaton and bring about the Singularity. See the Victory section.

VICTORY

A player shall be declared victorious if he fulfils one or more of the following conditions.

Conquest: If all other player(s) with units remaining on the board agree that a player has won, then he has won. Note that this may be achieved simply by eliminating the units of all other player(s) from the board.

Supremacy: If a player holds all seven regions on Earth at the start of any three consecutive turns of his, then he has won. If you hold the whole Earth, you can maintain a blockade; technology has not yet advanced to the stage where it is possible for a balanced ecosystem to survive with absolutely no assistance from the homeworld.

The Singularity: If a player has access to the Eschaton technology and passes an Eschaton roll, then he has won. This represents breaching the technological singularity; your competitors will be left far behind the exponential growth in power and intelligence of your AIs, far beyond that of their creators.

OPTIONAL RULES

Victory Conditions: Players may by mutual consent and before the game starts choose which of the above-listed victory conditions are actually applicable to the game, though the Conquest condition must always be in effect.

Basic Game: Players may by mutual consent and before the game starts choose not to use technologies. In this case, do not give players AI minibords, and do not deploy the technologies board or the research pool. The actions Research, Espionage and Sabotage are no longer accessible, players may not choose to claim a technology as a setup action and the Singularity is no longer a victory condition.

Minigame: If playing with four or fewer players, players may by mutual consent and before the game starts choose to ban travel to either or both of the outermost planetary systems (Jupiter and Saturn).

Assassination: Each player places a Commander on Earth before setup commences. A Commander may move like a fleet; a Commander acts in the Military phase and in the Civilian phase just as if it were two fleets acting in whichever group to which the Commander is assigned (it rolls twice instead of once for each fleet action it takes, contributes one whole roll to any development it assists, counts as two units for the purposes of outnumbering and so forth). You may only choose to assign damage to your Commander should there be no other units to which you could assign the damage; it still takes only one hit to destroy the Commander, as if it were only one fleet. Should your Commander be removed for any reason, you are out of the game and have lost. All your fleets are immediately removed from the board; your developments and technologies remain as neutral pieces which can be acted against but which never act (not even in response to Overthrow or Espionage attempts).