

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 $+n$ to the roll adds n to the amount shown on each die, making it easier to achieve higher targets; a **penalty** of $-n$ subtracts n similarly, making higher targets harder. All applicable bonuses and penalties are cumulative.
- The board consists of **worlds** and **trajectories**, among which each player has **units**, as do the UN.
- Worlds each have an **orbit** and between two and seven **regions**.
- Orbits and trajectories are connected by arrows. Moves **skyward** are made against arrows, towards the centre of the Solar Disc; moves **worldward** are made with arrows towards the rim of the Disc. In each case, one move involves travelling one ring to an orbit or trajectory directly connected, with no intervening trajectories, to the orbit or trajectory whence the move started.
- Units occupying a region are **developments** and are said to be **on** that world and **claiming** that region. A development may be inverted to show that it is **at risk**, which shows that the development is in political or economic turmoil.
- Units occupying an orbit are **fleets** and are said to be **on** that world; units occupying a trajectory are also **fleets** but are **spaceborne**.
- The **technology board** consists of three tracks – the **Research Track**, the **AI Track** and the **Eschaton Track** – and the **technology grid**, on which tokens show each player's access to various technologies.

SETUP

Select a player at random. Starting with this player and proceeding anticlockwise, each player takes setup rounds until each player has taken four setup rounds.

- In the first setup round only, you may *either* claim one region on Earth with a development, *or* place three fleets in Earth's orbit, *or* place three fleets in any one trajectory any number of rings directly skyward of Earth, towards the centre of the Solar Disc, *or* research any one technology which has no prerequisites.
- In the second, third and fourth rounds of setup, you may *either* place three fleets in Earth's orbit, *or* place three fleets in any one trajectory any number of rings directly skyward of Earth, towards the centre of the Solar Disc, *or* research any one technology for which you have any and all prerequisites.

Place 12 UN fleets in Earth's orbit and place UN developments in any and all unclaimed regions on Earth.

Place a counter for each player on node 0 of the AI track, on the Starting node of the Research track and on the Starting node of the Eschaton track.

Turns begin with the last player to take a setup round and proceed clockwise.

THE TURN

In your turn, phases are resolved in the order shown below. Extraordinary actions may take place at any time, including in another player's turn, except in between an action being declared and its being resolved.

<< phase 1: movement >>

Each fleet starting the phase in a world's orbit **may** move skyward, up an arrow or arrows, as many rings as it likes towards the centre of the Solar Disc.

Each fleet starting the phase in a trajectory **must** move worldward, down an arrow, exactly one ring towards the rim of the Solar Disc; this may bring it into a world's orbit.

<< phase 2: military actions >>

You may form your fleets which start the phase in a world's orbit into groups. Not all fleets need be assigned to a group. Members of each group must all be in orbit of the same world, and no fleet may be in more than one group. Each group may take one of the following actions: **Attack, Exploration**. Resolve the actions on a group-by-group basis, one world at a time.

<< phase 3: civilian actions >>

Before any civilian actions are taken, you must first resolve any ongoing risk. For each world, roll once per development which was at risk at the start of the phase. **Each roll of 3 or less** puts one other development on that world at risk; if no developments on that world remain which are not at risk, you must lose a development from that world.

You may then form your remaining developments and any fleets which did not act in the Military Actions phase into groups. Not all units need be assigned to a group. Members of each group must all be claiming regions on or in orbit of the same world, and no fleet or development may be in more than one group. Each group may take one of the following actions: **Overthrow, Espionage, Pacification, Construction** (developments only), **Research** (developments only). Resolve the actions one of group by group basis, one world at a time.

<< extraordinary actions >>

You may remove any of your fleets in orbit or developments from the board; you may move your counters on the AI track, the Research track and the Eschaton track as many nodes closer to the 0 node or the Starting nodes respectively as you like.

You may remove any of your developments and replace each with a fleet in orbit of that world. This is **automatic** if the development is not at risk, although for each such development at risk you must roll once and lose the fleet **on a roll of 3 or less**.

You may with another player's consent give him ownership of any of your fleets in orbit or developments, so long as none of these units have acted as part of a group or assisted a group since the beginning of your most recent turn; you may allow any player to copy any technology which you know and to which he has any and all prerequisites, just as if he had researched it.

THE UNITED NATIONS

Should the UN have any units when an Attack or Overthrow action is declared on Earth against you, you may count the UN units as yours when checking whether you outnumber your attacker and may make use of the UN fleets as well as any of your own when returning fire against an Attack action. The UN will return fire in full as if they were a player if you open fire upon them.

Should the UN have any developments in your Civilian Actions phase, any one group of your developments on Earth each turn may construct one fleet without needing to roll or put any developments at risk at all.

Should the UN have any developments at the end of your turn, they will automatically claim any unclaimed regions on Earth with new developments; they have no need to roll.

Should the UN have any developments at the end of your turn and should they have fewer than 12 fleets, they will construct one new fleet on Earth without needing to roll.

ACTIONS

Your technologies and those of other players may modify any of your action rolls, as stated in the rules for that technology. Any other modifiers to action rolls are given in this section.

Attack

Nominate a target faction with units of any sort on the world.

Roll one die per fleet taking the action.

Take a -1 penalty to each roll if the target's units in total outnumber your units in total on that world.

For **each roll of 4+ after modification** (though a 6 before modification always counts and a 1 before modification never does), the target must remove one of his units from that world (his choice which).

The target may then return fire, though he is of course at a disadvantage; all his fleets on that world which survived the attack may at a -1 penalty to each roll attack the player taking the initial action in exactly the same way (including modifiers for outnumbering and technologies). Note that the player taking the initial action may not return further fire to this return fire.

Exploration

Roll one die per fleet taking the action.

Take a +1 bonus **sequentially** for every two unclaimed regions on the world.

For **each roll of 5+ after modification** (though a 6 before modification always counts and a 1 before modification never does), you may remove one of your fleets from that world and place a new development in one of the unclaimed regions. For example, if a world has 4 unclaimed regions and two fleets roll 3 and 3 to explore, the first may be swapped for a development (3 + 2 bonus = 5) but the second may not, since there are now only 3 unclaimed regions and therefore a bonus of only 1 (had the initial roll been 3 and 4, therefore, two regions could have been claimed).

Overthrow

Nominate a target faction with at least one development on the world.

Roll one die per development taking the action and one die per two fleets (rounded down) taking the action.

Take a -1 penalty to each roll if the target's units in total outnumber your units in total on that world; take a -1 penalty to each roll if you have no developments on that world.

For **each roll of 4+ after modification** (though a 6 before modification always counts and a 1 before modification never does), you may *either* set one of the target's developments on that world at risk *or* replace one of the target's developments on that world which is at risk with a new development of your own (also at risk).

Espionage

Nominate a target faction with at least one development on the world.

Roll one die per development taking the action and one die per two fleets (rounded down) taking the action.

Take a +1 bonus to each roll if any of the target's developments on that world are at risk.

For **each roll of 4+ after modification** (though a 6 before modification always counts and a 1 before modification never does), your agents have located a lead and may follow it up. To do so, roll once per lead; for **each 6 when following up** you may *either* research any one technology to which the target has access and you do not and for which you have any and all prerequisites *or* you may remove the target's knowledge of any one technology to which he has access, so long as it leaves all his remaining technologies with any and all of their prerequisites *or* you may move the target's counter on the Eschaton track one space back, away from the Singularity.

Pacification

Roll one die per development taking the action and one die per two fleets (rounded down) taking the action.

For **each roll of 5+**, you may cancel the at-risk status of any one development among those taking the action.

Construction

Nominate how many fleets the group will attempt to construct.

Roll one die per development taking the action.

For **each roll of 3+**, you may construct a fleet, **up to a maximum** of the number you nominated. **However**, for each fleet you attempted to construct but did not, one of the developments taking the action is put at risk; if no developments in that group remain which are not at risk, you must lose a development from that group. Fleets may not take or assist with an action in the turn in which they are constructed.

Research

Roll one die per development taking the action.

For **each roll of 5+**, you may advance your counter on the Research track by one node. **Furthermore, if you make any rolls of 6** among these, you have made a scientific breakthrough and the whole group may roll again (though no group may make more than one breakthrough per turn). Should your counter on the Research track reach the Research node, immediately research any one technology of your choice for which you have the prerequisites and reset your counter to the starting node on the Research track.

TECHNOLOGIES

When you research a technology, you indicate this by placing a counter on its node on the technology board.

Heavy Weapons: Take a +1 bonus to all your Attack rolls, including those when returning fire.

Shielding: All other factions take a -1 penalty to all their Attack rolls against you, including those when returning fire.

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

Security: All other factions take a -1 penalty to all their Overthrow and Espionage rolls against you.

Infrastructure: Take a +1 bonus to all your Pacification rolls.

Defensive Grid: Each of your developments counts as three fleets for the purposes of returning fire when another faction takes an Attack action against you.

Orion Engines: Before each of your Movement phases, you may as many times as you like sacrifice any one of your units of your choice on any world to move a group of up to five fleets from that world skyward, up an arrow or arrows, as many rings as they like towards the centre of the Solar Disc, just as if they had an extra Movement phase. All the units in each such group must end this extra move in the same trajectory.

Solar Sails: Directly after each of your Movement phases, you may roll three dice. Each roll of 4+ allows you to move a group of up to five fleets in any one trajectory worldward, down an arrow, exactly one ring towards the rim of the Solar Disc, just as if they had an extra Movement phase. All the fleets in each such group must end their move in the same trajectory or on the same world, and no one fleet may be affected twice in the same turn by Solar Sails.

Nanotechnology: Before each of your Civilian Actions phases, you may roll one die for each world on which you have developments. If you roll less than or equal to the number of your developments on that world, you may place a new fleet on that world without risk and in addition to any you create in your Civilian Actions phase. This fleet may not take or assist with an action in the turn in which it is created.

Von Neumann Engines: Before each of your Civilian Actions phases, you may roll one die for each world on which you have developments and on which there is at least one unclaimed region. If you roll less than or equal to the number of your developments on that world, you may place a new development on that world in one of the unclaimed regions.

Artificial Intelligence: If you have both this technology and Cognition Circuits, you may place your AI counter on node 2 of the AI track at the start of each of your turns. So long as your counter is not on node 0, you may after any roll has been made move your AI counter as many steps down the AI track towards node 0 as you like and re-roll or force to be re-rolled that many dice from the roll just made; the new result replaces the old. Your AI may affect rolls already affected by your AI or that of other players.

Cognition Circuits: See *Artificial Intelligence*.

➤ **Advanced Weapons (Prerequisites: Heavy Weapons):** Take a further +1 bonus to all your Attack rolls and all combat rolls made in response to another player attacking you.

➤ **Advanced Shielding (Prerequisites: Shielding):** All other factions take a further -1 penalty to all their Attack rolls against you and all combat rolls made in response to your attacks.

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

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

➤ **Advanced Infrastructure (Prerequisites: Infrastructure):** Take a further +1 bonus to all your Pacification rolls.

➤ **Tracking Systems (Prerequisites: Defensive Grid):** If you have any developments on the world in question, you do not take the -1 penalty when returning fire (though all other penalties still apply).

➤ **Fusion Engines (Prerequisites: Orion Engines):** Before each your Movement phases but after any Orion Engines have been used, you may as many times as you like sacrifice any one of your units of your choice in any trajectory to move a group of up to five fleets in any one trajectory worldward, down an arrow, exactly one ring towards the rim of the Solar Disc, just as if they had an extra Movement phase. All the units in any one such group must end this extra move in the same trajectory, and no one fleet may be affected twice in the same turn by Fusion Engines (though it may be affected by both Orion Engines and Fusion Engines).

➤ **Refraction Fields (Prerequisites: Solar Sails):** You may roll five dice instead of three when rolling for Solar Sails; furthermore, each roll of 6 allows you to move one of the groups of fleets affected by Solar Sails two rings worldward instead of one.

➤ **Nanofactories (Prerequisites: Nanotechnology):** You may roll one extra die per two developments in the group (rounding down) when taking a Construction action.

➤ **Drone Networking (Prerequisites: Von Neumann Engines):** Take a +1 bonus to all your Exploration rolls.

➤ **Advanced AI (Prerequisites: Artificial Intelligence):** If you have both this technology and Abstraction Circuits, you may place your AI counter on node 5 of the AI track at the start of each of your turns.

➤ **Abstraction Circuits (Prerequisites: Cognition Circuits):** See *Advanced AI*.

➤➤ **Advanced Von Neumann Engines (Prerequisites: Drone Networking, Nanofactories):** Any of your fleets in orbit about any world may initiate or assist with construction actions, providing one die per two fleets (rounding down). If a fleet would be put at risk (or given the choice you choose to put a fleet at risk), simply resolve an Attack action as if two of your own fleets had opened fire on you (with all applicable modifiers, save outnumbering). Note that fleet dice are not affected by Nanofactories, which have already been taken into account.

➤➤ **The Eschaton (Prerequisites: Advanced AI):** If you have both this technology and Paradox Circuits, you may at the start of each turn roll once. On a 5+, move one step along the Eschaton track towards the Singularity. This roll may be affected by your AI counters and those of other players, just like any other roll.

➤➤ **Paradox Circuits (Prerequisites: Abstraction Circuits):** See *The Eschaton*.

VICTORY

Should all other players (if there are any) with units remaining on the board agree that you have won, then you have won by **conquest**.

Should you have claimed all seven regions of Earth at the start of three consecutive turns, then you have won by **blockade**.

Should your counter on the Eschaton track reach the Singularity node, then you have won by bringing about **the Singularity**.

OPTIONAL RULES

All players must agree the use of any optional rules before the game starts.

Basic Game: Players may not research technologies at any time, use the Research action, use the Espionage action or win by bringing about the Singularity.

No True AI: Players may not research the Eschaton or Paradox Circuits and cannot win by bringing about the Singularity.

Advanced Hydroponics: Players may not win by blockade.

Minigame: Use with four or fewer players only. Players may not place any fleets in or more any fleets to the central trajectory of the Solar Disc, and may not therefore move units to Jupiter or Saturn in any way.

Seven Players: If you can find counters in a seventh colour, you may play with seven players. If there are no UN developments on Earth when play begins, place one UN development in an imaginary region in the centre of the Earth and have it act as one normal UN development. This imaginary region ceases to exist if for whatever reason the development occupying it ceases to exist or ceases to belong to the UN or if for whatever reason the UN gain any other developments on Earth.

Loyal Subjects: You may not give another player your fleets or developments or allow him to copy any of your technologies (save with the Overthrow or Espionage actions respectively).

Assassination: Each player places a Commander in Earth's orbit 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).

Resignation: Should a player leave the game for any reason other than destruction, treat his units as if the Assassination rules were in effect and his Commander had just been destroyed.