



Engineering Ops

Boost [H4, Q2, Q4]

- Pay 1 WT per mass to move white cards from hand to LEO or Bernal in home orbit.
- Thrust = 3 when boosting to your Bernal.
- Pay 10 WTs to boost your Ersatz-Bernal.
- NASA & SpaceX gain 1 WT each Boost op.

Digital Swap [N1] (Freighter Module Only)

- Swap cards from your freighter stack with 1 black card from hand of \leq mass. All cards must be same spectral type as freighter.

ET Production [H8, S1]

- Add black card at factory or Bernal with a *dirtside*. Spectral class must match site.
- **Basic:** you may also place freighter cube.
- Card/freighter may move on turn produced.
- You're limited to 1 GW/TW on the map.

Income [H1] • Gain 2 WTs

Industrialize [H7]

- Decommission 1 robonaut + 1 refinery + supports (except radiators) at your claim.
- Place cube and adjust exploitation track.
- UN & ROSCOSMOS gain 1 WT each Ind. op.

Site Refuel [H5]

- **ISRU:** Gain water or isotope tanks = 1 + site hydration - ISRU. Or 10 dirt tanks.
- **Factory or Bernal with dirtside:** Gain 8 water, 1 isotope, or 20 dirt tanks.



Finance Ops

Activism [N6]

- During blue sector, initiate *election auction*.

Anti-Trust [N7]

- If in power and an opponent has multiple hand cards of the same category, steal one of the extra cards, opponent's choice.

Free Market [H3, K5, Q9]

- Return a white hand card to the bottom of its deck for market value (**Basic:** 5 WTs).
- Sell a black card at LEO or a Bernal for WTs = exploitation value. The Bernal must be promoted and in its home orbit or have a *dirtside*. It may not have a *dirtside* that matches the black card's spectral type.
- The black card goes to the bottom of its deck if you sell it at LEO or your own Bernal. The black card goes to your hand if you sell it, with permission, at another's Bernal. Bernal's owner may require a fee.

Hostile Recruit [N5] (Colonist Module Only)

- Steal a colonist loyal to you and collocated with one of your stacks. Not during war.

Income [H1] • Gain 2 WTs

Recruit [N4] (Colonist Module Only)

- Look at the top 3 cards on the colonists deck and choose 1 to *auction*. Place the other 2 at the bottom of the deck.



Science Ops

Income [H1] • Gain 2 WTs

Promote [N2, Q6]

- Flip Bernal to its purple side if it has a generator and is in home orbit or has *dirtside*.
- Flip colonist, freighter, or GW if at a *lab*.

Prospect [H6]

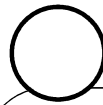
- Requires ISRU \leq site hydration.
- Place claim disk if die roll \leq site size. Otherwise place blue, busted disk.
- A ray-gun may prospect all *adjacent* sites that don't have atmospheres.
- A buggy may re-roll or prospect all sites connected by a road.
- UN & ROSCOSMOS gain 1 WT each claim.

Research [H2, O3]

- *Auction* the top card from one patent or the colonist deck. Winner takes the card plus the top card from listed support decks.

Suffrage [N3] (Colonist Module Only)

- If you're in power & robot colonist in play, roll < purple cards to become emancipator.



Free Actions

Deal-Making [D3]

- Allowed any time, not just during your turn.
- If patent card deal, trade equal number.

Decommission / Form Space Colony [D1]

- Return cards to your hand. However, human colonists go to the bottom of deck.
- Decom humans at factory to place colony.

Disband Space Colony [D1]

- Replace colony with crew card from hand.

Discard [D1]

- Return hand card to the bottom of its deck.

Stack / Unstack / Transfer / Jettison [D1]

- Stack and unstack collocated cards.
- Move WTs between your orbital depot and LEO stacks or your Bernal in home orbit.
- Add fuel to your rocket or Bernal.
- Jettison cards and/or fuel from your rocket or Bernal. You may use them to form an outpost. This is allowed mid-move.

Move [F, G]

- Move your rocket, freighter, and/or Bernal.

Start Game [C, L]

Moon Treaty

- Bust both Luna sites. Revival isn't allowed.

Idea Turns (optional)

- Take WTs equal to the number of decks.
- Take turns buying cards, 1 at a time, from the tops of their decks for 1 WT each. However, 1st player pays 2 WTs for his or her 1st card.
- Ignore research and recruit hand size limit.
- Don't take additional support cards.
- Idea turns end and game starts when someone does an op instead of buying a card.

End Game [J,U]

Standard Game End Condition

- Trigger after 4 factories are built if a 2 player game, 6 factories if 3 players, 7 if 4-5 players.
- Finish the year and play 1 more year.

Endgame Module End Condition

- Trigger after (players - 1) Futures stars have been covered, then finish 2 more events and hold a final *election auction*. However, game ends 12 turns after Footfall is announced.

Victory Points

- 1 VP for each claim, factory, and freighter.
- 2 VPs for each colony dome.
- Exploitation bonus = +exploitation value for each factory based on site's spectral type.
- Science bonus = +2 VPs for each factory at a science site, +2 more if it's a ★ science site.
- VPs from Glory, Ventures, and Futures.
- 1 VP for Ersatz-Bernal and 1 VP for promoted Bernal in home orbit or with a *dirtside*.
- 5 VPs for the player in power.

Rockets [F, S]

Fuel

- GW/TW thrusters use isotopic fuel from site with same spectral class. MW use isotopic fuel or water. Dirt rockets use anything including decommissioned hardware and dirt.

Net Thrust

- Thruster (left side) + wet mass mod + 1 if afterburn used (adjust mass) + support mods.
- If solar, add heliocentric zone modifier.
- If thruster has a push icon, +1 from a willing powersat or +2 from a willing push factory.
- Only solar supports modify GW/TW thrust.
- GW/TW thrusters have higher afterburn values as indicated on their thruster icon.
- GW/TW thruster afterburn cost is always 1.

Burn

- For each burn, lose fuel steps = thruster value (right side) +/- support fuel economy.
- GW/TW fuel econ not modified by supports.
- Each pivot counts as 2 burns.
- Number of burns cannot exceed net thrust.

Auctions

Research [H2] or Recruit [N4]

- You may bid or start auction only if you have < 4 cards in hand. Skunkworks ignore limit.
- Start at any value, including 0. Bid any order.
- If you started the auction, you win ties or choose winner of ties among other players.
- If you started the auction and win, pay the pool. If someone else wins, they pay you.
- You may start only 1 card auction your turn.

Election [N6]

- Each player secretly bids 0 to 10 WTs.
- Colonists in space vote their ballot boxes. However, during war they vote for employer.
- Winner **may** move politics marker 1 space.
- Ties are decided by the player in power. If tied and no one in power, marker isn't moved.
- Win or lose, all WTs bid go to the pool.

Miscellaneous

Adjacent

- Ignore intervening crash hazards (including burns with ☠) and all lander burns.

Colonists [R]

- Max human colonist cards in space = $\frac{1}{2}$ (round down) of promoted Bernal's *dirtside* hydration. But you're always allowed one.
- Pay colonists in space 1 WT for 1st op in each specialization, 2 WTs for 2nd op, etc...

Dirtside

- Factory collocated with or *adjacent* to Bernal.

Felonies

- Only if card text allows or during anarchy/war.
- Only by humans and if no opposing humans.
- Replace someone's claim disk with your own.
- Factory refuel without owner's permission.
- Decommission humans not in LEO or factory.
- Promote without *lab* owner's permission.

Hazards

- **Crash** ☠: Spend 4 WTs from depot or roll a die. If result = 1, decom stack (not Bernal).
- **Radiation**: Die roll, +2 if red solar cycle, -net thrust. Decom cards with lower hardness.

Lab

- A factory on a ★ science site.
- A Bernal with a *dirtside* on any science site.

Lander Burn [G4]

- Can't stop in lander burn. Bernal can't enter.
- Can't use factory-assist to lift-off or land.
- Can't use sling-shot bonus to enter.

Landing & Lift-off [G]

- **Powered**: Net thrust must be > site size unless lifting off from an aerostat.
- **Factory-Assist**: Lift-off or land at willing factory. But not into or out of *lander burn*. ☠
- **Areobreak**: Follow parachute arrows. ☠

Push Factory

- A factory on ☿, ♀, or Io gives +2 push bonus.



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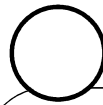
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- Decommission humans not in LEO or factory.
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Hazards

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- A factory on a ★ science site.
- A Bernal with a *dirtside* on any science site.

Lander Burn [G4]

- Can't stop in lander burn. Bernal can't enter.
- Can't use factory-assist to lift-off or land.
- Can't use sling-shot bonus to enter.

Landing & Lift-off [G]

- **Powered**: Net thrust must be > site size unless lifting off from an aerostat.
- **Factory-Assist**: Lift-off or land at willing factory. But not into or out of *lander burn*. ☠
- **Areobreak**: Follow parachute arrows. ☠

Push Factory

- A factory on ☿, ♀, or Io gives +2 push bonus.

* Basic Ops

Boost [H4]

- Pay 1 water tank (WT) per mass to move white cards from your hand to LEO.
- NASA gains 1 WT for each Boost Op.

ET Production [H8]

- Build a black card at your factory.
- Card's *spectral type* must match the site's.
- You may also place your freighter cube.
- Card/freighter may move on turn produced.

Free Market [H3]

- Sell white card from your hand for 5 WTs.
- Sell black card at LEO for exploit value.
- Place a sold card on the bottom of its deck.

Income [H1]

- Gain 2 WTs.

Industrialize [H7]

- Decommission at your claim a robonaut and a refinery. Ignore card *spectral types*.
- Place cube and adjust exploitation track.
- UN gains 1 WT for each Industrialize Op.

Prospect [H6]

- Requires ISRU <= site hydration.
- Place claim disk if die roll <= site size. Otherwise place blue, busted disk.
- A ray-gun may prospect all *adjacent* sites that don't have atmospheres.
- A buggy may re-roll or prospect all sites connected by a road.
- UN gains 1 WT for each successful claim.

Research [H2]

- Auction the top card from one patent deck.
- You may bid or start auction only if you have < 4 cards in hand. Shimzu ignore.
- Start at any value, even 0. Bid in any order.
- If you started the auction, you win ties or choose winner of ties among other players.
- If you started the auction and win, pay the pool. If someone else wins, they pay you.

Site Refuel [H5]

- **ISRU:** Gain WTs = 1 + site hydration - ISRU. Or 10 dirt tanks.
- **Factory:** Gain 8 WTs or 20 dirt tanks.

Free Actions

Deal-Making [D3]

- Allowed any time, not just during your turn.
- If hand card deal, trade equal number.

Decommission / Form Space Colony [D1]

- Return cards to your hand.
- Decom humans at factory to place colony.

Disband Space Colony [D1]

- Replace colony with crew card from hand.

Discard [D1]

- Return hand card to the bottom of its deck.

Stack / Unstack / Transfer / Jettison [D1]

- Stack and unstack collocated cards.
- Move WTs between depot and LEO stack.
- Jettison cards and/or fuel from your rocket. May form an outpost. Allowed mid-move.

Move [F, G]

- Move your rocket and/or freighter.

Start Game [C]

Idea Turns (optional)

- Start with 3 WTs instead of the usual 4 WTs.
- Take turns buying cards for 1 WT each. However, 1st player pays 2 WTs for 1st card.
- Ignore research hand size limit.
- Idea turns end and game begins when someone does an op instead of buying a card.

End Game [J]

Game End Condition

- Trigger after 4 factories are built if a 2 player game, 6 factories if 3 players, 7 if 4-5 players.
- Finish the year and play 1 more year.

Victory Points

- 1 VP for each claim, factory, and freighter.
- 2 VPs for each colony dome.
- Exploitation bonus = +exploitation value for each factory based on site's *spectral type*.
- Science bonus = +2 VPs for each factory at a science site, +2 more if it's a ★ science site.
- 3 VPs from each Glory and Venture card.

Rockets [F]

Fuel

- Standard rockets use WT propellant.
- Dirt rockets use anything including decommissioned hardware and dirt.

Net Thrust

- Thruster (left side) + wet mass mod + 1 if afterburn used (adjust wet mass first).
- If solar, add heliocentric zone modifier.
- If thruster has a push icon and the ESA is willing, +1 from ESA powersat.

Burn

- For each burn, lose fuel steps = thruster value (right side).
- Each pivot counts as 2 burns or you can wait.
- Number of burns cannot exceed net thrust.

Miscellaneous

Adjacent

- Ignore all intervening lander burns and crash hazards (☠) including burns with ☠.

Felonies

- Only the PRC may commit felonies.
- Only by humans and if no opposing humans.
- Replace someone's claim disk with your own.
- Factory refuel without owner's permission.
- Decommission humans not in LEO or factory.

Hazards

- **Crash ☠:** Spend 4 WTs from depot **or** roll a die. If result = 1, decommission stack.

Lander Burn [G4]

- Can't stop in lander burn.
- Can't use factory-assist to lift-off or land.

Landing & Lift-off [G]

- **Powered:** Net thrust must be > site size unless lifting off from an aerostat.
- **Factory-Assist:** Lift-off or land at willing factory. But not into or out of *lander burn*. ☠
- **Areobreak:** Follow parachute arrows. ☠

Not Basic

- Flybys, moon boosts, push factories, radiation hazards, radical factions, supports.

Spectral Types

- **Dark, Carbon, Metal, Stone, and Vestoid.**