

# Surviving Mars

By Ovid



Welcome to Mars! Oh wait, too early. You are in charge of a Mars colonization mission. You will start by picking your Mission Sponsor and Commander Profile, then use your Funding to outfit your first Rocket that will begin the setup phase for your future colony. Then pick your landing zone, and land your Rocket. Take your time, and try not to screw up, this is only costing your Sponsor literally billions of dollars in funding.

Oh yeah, and because this is Jumpchain, you also get 1000CP too.

First off, let's talk time. In reality, a Sol is a martian day and is about 25 hours. However, in this game, a Sol seems to be much longer than that. A newborn child takes 5 Sols to become able to work in a job. As a result of this odd game mechanic, there is a mandatory time drawback to make things work. Don't worry, there's a free perk for this jump only that keeps you and any companions alive.

Oh, and your stay for this jump is going to be 5 martian years, since each martian year is 687 days long.

You can pick whatever age and gender you are, it won't really matter much.

**Discounts:** There will be no Origins for this jump, so you will have floating discounts. You can take 4 100CP Perks and 4 100CP Items for free, discount 2 200CP Perks & 2 200CP Items, and discount 2 400CP Perks. There are no 600CP Perks, and you aren't getting a discount for the

Wonders, which are the only 600CP Items. You may use a higher discount on a lower option, such as a 200 item discount to make a 100 item free, though must stay in the same category.

**Mission Sponsor:** Pick only one.

-**International Mars Mission:** Colonists never get Earthsick. Food supply from passenger rockets is increased 10X. Rockets synthesize Fuel themselves. You start with a Self-Sufficient Dome prefab, Zeus Rocket, and Advanced Sterling Generator.

--Funding: \$30,000M. Applicant Pool: 200. Research per Sol: 300. Funding per rare metal: \$25M. Starting amount of Rockets: 4.

-**USA:** Periodic additional funding. Zeus rocket, advanced orbital probe, Megamall.

--Funding: \$8,000M. Applicant Pool: 100. Research per Sol: 300. Funding per rare metal: \$25M. Starting amount of Rockets: 3.

-**Blue Sun Corporation:** Can buy Applicants with funding. Additional rockets are significantly cheaper. Probes can discover deep Rare Metal Deposits. Bonus Tech: Deep Metal Extraction (can exploit deep Metal and Rare Metals deposits). RC Harvester, Corporate Office.

--Funding: \$10,000M. Applicant Pool: 100. Research per Sol: 100. Funding per rare metal: \$30M. Starting amount of Rockets: 2.

-**China:** Passenger Rockets carry 10 additional colonists. Applicants are generated twice as fast. RC generator, Tai-chi garden.

--Funding: \$8,000M. Applicant Pool: 200. Research per Sol: 200. Funding per rare metal: \$25M. Starting amount of Rockets: 3.

-**India:** All Building costs reduced by 20%. Bonus tech: Low-G Engineering (unlocks Medium and Trigon domes). RC Constructor and Metals Refinery (converts waste rock into metals).

--Funding: \$7,000M. Applicant Pool: 150. Research per Sol: 100. Funding per rare metal: \$24M. Starting amount of Rockets: 3.

-**Europe:** 5 extra starting technologies. Gain Funding every time a tech is researched. Gain double if it's a Breakthrough tech. RC Seeker, Low-G Lab (outside research, plus discount on certain research fields).

--Funding: \$6,000M. Applicant Pool: 100. Research per Sol: 400. Funding per rare metal: \$22M. Starting amount of Rockets: 2.

-**SpaceY:** Drone Hubs start with additional Drones. 50% cheaper advanced resources. Dragon Rocket, Solar Array.

--Funding: \$6,000M. Applicant Pool: 75. Research per Sol: 200. Funding per rare metal: \$20M. Starting amount of Rockets: 5.

-Church Of The New Ark (+100CP): All Colonists have Religious trait (which means they don't ever commit suicide). Birthrate is doubled. Drawback: Hydroponic Farms performance reduced by 50. Ark Pod, Temple Spire.

--Funding: \$4,000M. Applicant Pool: 120. Research per Sol: 0. Funding per rare metal: \$20M. Starting amount of Rockets: 1.

-Russia (+100CP): Fueled Extractors upgrade is free (to add to buildings). Fuel Refinery prefab costs 50% less. Bonus Tech: Fueled Extractors (extractor performance improved when supplied with Fuel). Drawback: Rockets have extended Travel time. RC Driller (can freely extract resources, but wastes some of the deposit, Concrete Plant (creates concrete without a deposit, but requires power and Fuel).

--Funding: \$5,000M. Applicant Pool: 100. Research per Sol: 200. Funding per rare metal: \$22M. Starting amount of Rockets: 2.

-Paradox Interactive (+100CP): Discover more Breakthrough Anomalies. Researching a Breakthrough grants Applicants. Drawback: Rockets require more fuel to launch. Jumper Shuttle, Game Developer.

--Funding: \$4,000M. Applicant Pool: 75. Research per Sol: 100. Funding per rare metal: \$24M. Starting amount of Rockets: 1.

-Brazil: Colonists grant funding when they arrive on Mars. Passages cost no resources and are constructed instantly. Colonists suffer no penalties when using passages to work or visit connected domes. 5 free Large Supply Pods. Large Supply Pod, Rare Metals Refinery (which converts waste rock into rare metals).

--Funding: \$9,000M. Applicant Pool: 100. Research per Sol: 100. Funding per rare metal: \$35M. Starting amount of Rockets: 1.

-Japan (+100CP): Rovers and Drones - cost and weight lowered by 50% (on shuttles). Exploring a sector grants 500 research points. All specialists perform better (+10 performance). Drawback: Applicant generation reduced. Wasp Drones (flying drones), Automated Metals Extractor.

--Funding: \$6,000M. Applicant Pool: 50. Research per Sol: 100. Funding per rare metal: \$20M. Starting amount of Rockets: 1.

-Terraforming Initiative: All Terraforming techs are 50% cheaper for research. Forestation Plants do not require Power. Can import RC Dozers from the start. Bonus Techs: Interplanetary Projects, Martian Vegetation (this unlocks Forestation Plants). No unique vehicles/buildings.

--Funding: \$8,000M. Applicant Pool: 100. Research per Sol: 100. Funding per rare metal: \$24M. Starting amount of Rockets: 2.

-Mod Mission Sponsor (-100CP): Is there a nonstandard Mission Sponsor you want to use? Maybe play as Skynet and have a colony full of robots, or maybe another country that wasn't part of the Mars colonization program? Go right ahead, but you will have to pay CP for the

opportunity. Also, no flat out cheats like a growing electronics or machine parts in a farm/hydroponics/etc.

**Commander Profile:** Pick only one.

-Geo Engineer: Seeds import cost reduced by 50%. Bonus Prefabs: 2x GHG Factory, 2x Forestation Planter. Early Access tech: Designed Forestation (Breakthrough).

-City Mayor: 2,000M additional starting funding. Buildings require upkeep less often. Early Access tech: Mars Nouveau.

-Inventor: Drones are gradually optimized to work and construct faster until Sol 100. Early Access tech: Autonomous Hubs (Breakthrough).

-Oligarch: Fuel production increased by 25%. Early access tech: Arcology.

-Hydro Engineer: Start with a Water deposit revealed. Domes consume 25% less Water. Early access tech: Water Reclamation.

-Doctor: Minimum Comfort required for birth lowered by 15. Early access tech: Stem Reconstruction.

-Psychologist: Colonists recover 5 additional Sanity while resting in their homes. Early access tech: Behavioral Shaping.

-Politician: All Funding gains are increased by 20%. Early access tech: Martian Patents.

-Futurist: Breakthrough techs are researched 30% faster. Early access tech: Autonomous Sensors.

-Ecologist: Service Comfort of decorations increased by 10. Early access tech: Hanging Gardens.

-Astrogeologist: Start with a Rare Metals deposit revealed. Extractor production increased by 10%. Early access tech: Deep Scanning.

-Rocket Scientist: Start with an extra Rocket. Early access tech: CO2 Jet Propulsion.

-Mod Commander Profile (-100CP): Is there a nonstandard Commander Profile you want to use? Go right ahead, though you will be paying CP for the opportunity. You aren't allowed to take actual cheat-mods though.

**Perks:**

-Immortal Leadership (Free, this jump only): For this jump to work with the mandatory time drawback, it's going to be highly recommended you take this perk. This perk will make you effectively immortal and unaging during your time here, and no one will notice. This perk also extends to any companions you make or import here. Alternatively, if you want, you could choose to be some sort of disembodied "mission command" person-thing, though your companions don't get that option and will have the first version. This perk is FOR THIS JUMP ONLY, and you cannot take it with you on your jumpchain.

-Automatic Orders (0/200CP): As mission command, you will have a lot of decisions to make. Thankfully, the majority of your day-to-day commands are already automated for your drones and drone controllers. Your drones will do whatever tasks need doing that is in the range of their drone controllers, such as moving resources around where they need to go, constructing and maintaining structures, and recharging themselves. They also are great at pathfinding, which is no small feat of programming. This perk is free for this jump, but if you pay to keep it, this perk will also function for your non-mechanical subordinates.

-Tracking Inventory (100CP): You are able to know where all your stuff is with just a moment of concentration. You know where it is, how much, and if you need to move it. You know if it's stockpiled at a factory or extractor and needs to be moved out, or if your food storage for a distant dome is running low. You also have a mental alarm whenever your stuff is in harm's way, like if a Rover is in the projected impact zone of a meteor. You may turn that feature off at will if it gets too annoying.

-Leader's Vision (100CP): You can see at a glance how people who work for you are doing. Health, sanity, morale, comfort. Age, traits (positive, negative, and quirks), interests, job, home, current actions, and if they are a Renegade or not. You can also look at a workplace or location in general and see how people are doing in terms of having their needs/desires met.

-Keeping Your People Alive (200CP): People make mistakes. That will always happen. But some of these mistakes are completely silly, and now you prevent the ones your subordinates should really know better about. Your subordinates will now no longer make life- or sanity-risking mistakes that are easily preventable. For example, they will no longer go on walks that take longer than they have capacity for oxygen. They won't suffocate in a closed Mars suit that they are wearing inside perfectly good domes with working life support. They will eat food when they are hungry or starving. They will alert you when critical supplies are running out instead of when they are completely gone. They won't sign up for a colonization mission with limited living space if they are claustrophobic or anti-social.

-Trapping the Tourists (200CP): Tourism is a complicated thing. People need to be happy to visit a place, spend money there, and be willing to go back home feeling like the trip was well worth it. And yet, somehow Mars is a tourist destination for the mega-rich, even if all that's available is the basic stuff like living space and food and water. People will happily come here, live like a Martian colonist, then go home to earth and recommend the experience to their fellow

megarich friends. And now, you can bring this odd effect with you. You can turn any location into a tourist destination so long as you have the basic necessities of life available, and people will happily spread the word of your tourist trap so that you have a constant flow of tourists in the future.

-Terraforming Mars (200CP): Colonizing a inhospitable planet is relatively easy, but eventually, you want to improve it so that it's no longer inhospitable. But the process of terraforming usually takes a long time, years at the very least. This perk eases things for you. You can figure out how to use locally sourced resources such as fuel, waste rock, and even ice asteroids to speed up the process, and can safely terraform a planet. Sure, slamming ice asteroids into a planet might set off quakes, and dumping greenhouse gases from one planet onto yours might trigger toxic rains, but everything will be survivable and will work out for the best.

-Cleanup Protocols (200CP): In the course of developing a colony, sometimes things happen that leave harmful leftovers behind. Maybe a radiation leak occurred, or toxic rains left behind toxic pools behind that are poisoning the ground and undoing your terraforming work. You now have the ability to clean that crap up with relative ease. You can convert any harmful environmental issues or pollutants into harmless waste rock that can be stored away or converted into usable materials later.

-Martians Are Sexy (200CP): There's just something about your people. They are just... ~sexy. People who work for you or nearby you will tend to be more attractive, and/or can become so over a relatively short time. This can and will lead to more people breeding. This effect also applies to you.

-Playing Nice (400CP): While it would be best for a colony to be independent in terms of resources and population, sometimes that's just not possible. One colony might be optimized for food production, another might have literal tons of concrete, another might have an excess of research capacity, and so on. When this happens, trade and diplomacy is key. You can trade with anyone who hasn't declared full-on war on you, and with better relationships, the more favorable the trade deals are for you. And if you manage to become good friends with your trade partners, you could even convince them to trade/share their unique stuff, like their mission sponsor's unique buildings and vehicles. They might even be willing to send you resources if you ever have a resource shortage or an emergency pop up. When the world you are living on is trying to kill you all, sometimes it pays to have good friends.

-Playing Rough (200CP) (Officer archetype): When it comes to survival, it's a dog eat dog world, especially on a world like Mars. You may not have time to play nice, so it's time to just take what you need. With a handful of ~~red-shirts~~ roughnecks, you can jump on a Rocket, head to another colony, and steal whatever you need. You can steal drones, research data, hire/kidnap colonists, and sabotage buildings, all without being caught. However, if you hit the same target location too often, they have an increasing chance of figuring out who the jerk is that's not playing fair, and would likely hit you with sanctions.

-Climate Change Adaptation (400CP): Building a home on Mars is all well and good, but have you thought about what happens when terraforming takes off, and your colony site ends up underwater? It'd suck to have to completely rebuild your colony elsewhere, so instead, adapt to change! You can adjust any of your buildings and vehicles to work in environments in addition to the one they were previously built for. Your domes can be adapted from holding in an atmosphere to also holding out the water of a new sea, and your shuttles can become submersible craft in addition to being flight capable. You can even adjust in-dome buildings into being out-dome ones, and vice versa. The only change you can't do is building underground, as you'll need a different perk for that.

-Subterranean Construction (200CP): Domes are great for protecting people from the harsh Martian atmosphere and landscape. But in case you are sick of dealing with dust storms and meteor showers, you can now build underground and avoid all those issues. You can convert your building designs into underground versions, which makes them far more durable to environmental factors. As a bonus, you can also design them in such a way that people living and working underground do not suffer any negative effects from doing so. And the nice thing about building underground is that you can gradually expand your living and work spaces if you need to. One example would be, underground farming.

-Geokinesis (400CP): Landscaping is a long and dedicated process. You need to add or take away waste rock from your work site, have drones and/or rovers available to move land around, and lots of time. With this perk, you drastically speed things up, and can do all of that yourself. You have a basic geokinesis ability, meaning you can raise and lower land, flatten it, make lakes, and so on. You can eventually train this ability up more, but even at its most basic state, it should definitely allow you to conquer the terrain around your colony, allowing you to expand with relative ease.

-Automated Buildings (400CP): Having skilled workers can do great things for your production and mining needs. But what happens if you just don't have enough people, or they aren't skilled enough? Now, you can add automation to your buildings for no added cost in resources or space. You can fully automate a building so that it doesn't require any staff or workers assigned, and it will work at nominal capacity. Alternatively, you could go for partial automation, and have skilled workers maximizing performance beyond that nominal level, and still benefit from reduced labor needs. Or, you could turn automation off entirely in case you just need jobs for your unemployed populace. You can apply this to mining, refineries, factories, agriculture, and service buildings, and can figure out other building categories in time.

-Space Efficiency (400CP): You can upgrade a building with +100% effectiveness by having the normal build costs present. This means the building is working at 200/300/400% effectiveness while still only needing the base amount of power and maintenance. You still need any increased resource inputs though. You may also choose if the amount of workers needed is similarly expanded or not, as more skilled workers can further boost effectiveness. There is

some degree of spatial compression, as the building is as effective as 2/3/4 others. This perk can apply to any building or vehicle, such as housing, life support, factories, extractors, service buildings, drones, rovers, rockets, etc. This upgrade will work in addition to any other upgrades as well. The effectiveness upgrade is additive, not multiplicative, and can be applied up to 3 times. So 100% is base, then 200%, 300%, and finally 400%. Buildings with an area-of-effect are also increased.

-Learning Booster (100CP) (No Specialization archetype): No one can fully predict what knowledge and skills will be necessary on a new world, and so it becomes critical to be able to learn quickly. You can learn at twice the rate of a normal student in whichever field you are studying, and can retain all of what you learn.

-Service Pro (100CP) (No Specialization archetype): When it comes to handling customers, you are the professional of professionals. Every customer and client who interacts with you will come away fully satisfied, assuming their needs are met. In addition, you work so hard, it's like there are 5 of you, all doing the same role. Lastly, you get paid for the effects of your work, meaning as if there were 5 of you.

-Martian Wagyu (100CP) (No Specialization archetype): Some people are said to have “green thumbs” when it comes to plants, and you have the animal equivalent. You are able to figure out the best nutrition plans for you animals, the best way to keep them happy and stress free, and can keep them healthy. As a result, your animals create (or are) the best quality of products, and produce thrice the amount a normal animal would.

-Green Thumb (100CP) (Botanist archetype): Growing food locally is critical to any successful colonization, from the age of sail to colonizing the stars. And when it comes to plants, you are the growing master. Plants under your care grow up to 100 times faster, meaning they are much faster to start producing food for you and your colony. For example, rice on Earth can take up to 105-150 days to mature, but for you, only takes up to 4.

-Got Seed? (100CP) (Botanist archetype): Plants can be great resources for any civilization, but you are ultimately limited by whatever plants are available to you. And on a desolate planet like Mars, you only have what you brought with you. But what if you forgot a plant species? You now have the ability to pull fully viable seeds (or spores, or tubers, or whatever reproductive method a plant species uses) out of nowhere, allowing you to get started on growing them immediately. And no one will find it odd how a plant species that wasn't on a cargo manifest somehow manages to make it to Mars. However, you are only able to get plant species that you've handled some minimally-process part of. Sugarcane is fine, but sugar and molasses wouldn't work.

-Working Efficiently (100CP) (Botanist archetype): Work smarter, not harder. You can do a full day's work in a third of the time, letting you spend your time on other things. And any project that might require full-time attention will still function as if you gave it that full attention.



-Optimization (100CP) (Engineer archetype): Every building process has some way to make it more effective, you just have to have the ability to figure it out. And now you do. You can optimize any factory, extractor, refinery, and so on to make it give more than 100%, so long as you are working there in some way.

-Workaholic (100CP) (All archetypes): Some people need to relax after work. You pity these poor people who can't find satisfaction in their work. You no longer need relaxation activities, and gain satisfaction from working hard.

-Mars Is Your Playground (100CP) (Geologist archetype): When your role is the extraction of materials vital to the success of the colony, it is important that you can handle the job. You move in a Mars suit (and similar suits) like it is your own skin, and can go three times as long on an air supply. And while some people don't like working in the Martian night (they're too used to Earth's common light pollution), you become energized by it and can see in the dark.

-Doctor Of Mars (100CP) (Medic archetype): Life comes with injury. Birth comes with danger. You are one of the vital medical staff, and you now have all the medical skills you need to keep this colony alive. You can handle any issue involving injuries, birth, kids, and nutrition. You can even deal with and remove chronic conditions with minimal supplies and trauma (to the patient).

-Outsourcing (100CP) (Scientist archetype): You can be a great scientist, but sometimes you just don't have time to do the research yourself. So just throw money at the issue. You can exchange money for help from outside groups in getting research done, and they won't copy your data for themselves, unless you desire otherwise.

-Genius (100CP) (Scientist archetype): Among your many accolades, you are a Genius. Mad laughter optional. You can multitask with the best of them, and can run side-projects alongside whatever you are officially working on. Occasionally, this will lead to dramatic successes in your side-projects that would benefit the rest of the colony.

-Data Can Be Anywhere (200CP) (Scientist archetype): You collect data from all sorts of places and actions. The safe/unsafe landing and launching of rockets, meteor impacts/interception, building upgrades, sector scans, and so on. This means you get a decent amount of research just from doing your normal colony building activities, in addition to any other sources.

-Non-Harmful Takedowns (100CP) (Officer archetype): When you work security, it's important to be able to neutralize a threatening person without harming them. You can quickly capture and detain individuals without long-lasting harm to the target. Great for people suffering from sanity breaks.

-Person In Charge (100CP) (Officer archetype): When you are around, people are scared less by catastrophic events. You are here, and so, everything will be well. You fortify the will of the people around you, making them more resilient to terrible events.

### **Items:**

-Starting Blueprints (Free): Every colony starts with the same basic blueprints, because these are the bones of any colony effort. You have the blueprints for every non-researchable building and can make them as much as you want, assuming you have the resources to build and run them.

This includes the following buildings: Recharge station, sensor tower, landing and trade pads, tunnel, large and normal solar panels, large and normal wind turbines, power accumulator, power switch, concrete extractor, metal and rare metal extractors, MOXIE, oxygen tank, water extractor, water tower, pipe, pipe valve, in-dome and out-dome ranches. Universal depot, depots, dumping sites, basic/micro/barrel domes, passage, passage ramp. Living quarter, living complex, nursery, playground, school, research lab. Small spacebar, spacebar, diner, infirmary, open air gym, casino complex, security station, small grover, grocer, small art store, art store, electronics store. All decorations. All outside decorations. Landscaping, rock formations.

-Drones Blueprints (Free): Don't get excited, these are just the normal drones here, and you don't have the ability to make them locally yet. You'll need a Drone Assembler to do that. What this item is meant for is so you can make these handy little drones post-jump, and have them still work, depending on what your definition of fiat-backing means. They will work just as well on other planets as they will on Mars, even if the atmosphere and gravity are totally different. And these drones will keep the benefits of any discovered Techs and Breakthroughs, even if you haven't purchased the discoveries with CP.

--Wasp Drones (Free, Japan Mission Sponsor Only): Now these are cool. Take your normal Drone and all its features, then give it fancy wheels that let it hover and fly over obstacles, buildings and most terrain. They are faster than normal Drones, and will not be hit by meteors or lightning when flying.

-Bonus Funding (100CP each purchase): Normally, Funding is provided by the Mission Sponsor at the start of a colonization effort, and is used to buy assets to put on a Rocket to Mars. Then, when a batch of rare metals is shipped back to Earth, the mission sponsor will pay an amount of Funding per unit of rare metals. But if you want bonus funding, here's where you can spend CP on it. For every purchase of this item, you will receive the same amount of funding your mission sponsor (and Commande Profile, if appropriate) initially provided you, every 60 days. The IMM is the highest at \$30 Billion, while Church Of The New Ark and Paradox Interactive offer the lowest at \$4 Billion. Post-Jump, the pay period instead becomes "once a year".

-Prefab (100CP each): You can buy normal prefab buildings from your mission sponsor, and have it shipped to your colony site on a Rocket. However, if you don't want to waste your starting Rocket cargo or Funding, you can buy Prefabs here. Check the Prefab list in the notes. Each Prefab will cost 100CP each, will take no additional space in a Rocket, and will be

fiat-backed, meaning it doesn't need to be supplied with power, maintenance, or resource inputs. A Prefab will also have all possible normal upgrades, and includes Breakthrough improvements. However, you are unable to make more examples of this fiat-backed Prefab, and cannot reverse engineer it or its upgrades. Please note, some Prefabs are not available depending on Mission Sponsor and Commander Profile.

-Super Probe (100CP): Probes are normally used to provide rapid scanning of potential landing sites, to determine what local resources are available. But they are also one-shot devices, able to scan a single sector before becoming inoperative. This Super Probe is better than any other probe type in every single way, and is more of a satellite. It can perform deep scans to uncover deep resource deposits, will scan 5 sectors in a cross-pattern at a time, and will maintain orbit indefinitely. You could even lend it to other colonies for scanning duties, or simply scan far off areas.

-Mars Suit (Free): Mar Suits aren't just space suits, since living on Mars has very different requirements to operating in a vacuum. Mars Suits require the ability to walk against surfaces, and to resist abrasion from multiple sources. Mars gravity is 37.8% of Earth's, so weight is a significant issue, but thermal issues are reduced compared to open space. With Mars' reduced atmosphere, radiation is also a concern, as well as the fact that air pressure is much reduced from Earth sea level air pressure. There's also the dust and temperature to deal with. Aren't you glad that has all been taken care of already by your Mission Sponsor? You have a supply of Mars Suits for every person in your colony, including yourself. ([LINK](#).)

-Supply Pod (100CP): Supply pods are a way of transporting resources, prefabs and other assets from your Mission Sponsor to Mars. They are 1 way, are faster than Rockets, and have lower cargo capacity. You can recycle them at the end of their journey for raw materials. This item takes all that, and allows you to send them the opposite direction. If you ever need to ship materials back to your Sponsor, like a batch of rare metals, you now can without having to send a Rocket. You will start with 4 Supply Pods that you can fill up and launch from your colony, and have the blueprints and ability to create more. And yes, you can use them to give gifts to other martian colonies.

-Deposit (100/200CP each): Sometimes your initial landing site is in a poor location. It might be on permafrost, or have no buildable space, or simply might have no supply of critical resources. If you want, you can pay to have a guaranteed deposit of a single type near your landing spot. Concrete, metal and water are all 100CP each, rare metal is 200CP each. Each deposit has enough in it to provide for a year of heavy, constant extraction, no matter how much extraction capacity you put down. In future jumps, non-water deposits will update with equivalent minable materials. Please note that this Deposit is not attached to your Warehouse, and spawns near you at the start of a Jump. If you wish, you may delay the placement of the Deposit(s) for up to a year.

-Communications Satellite (200CP each): When humanity is expanding amongst the stars, orbital infrastructure will become key. Instead of you having to make a communications satellite yourself, you can buy one for CP instead. This satellite grants instantaneous communications with anyone on the same planet (assuming they have an appropriate communications system), and even rapid communication elsewhere in the solar system, with only up to a minute of travel delay. This is great for talking to distant loved ones, or sharing research data back home.

-Rover (100CP each): The workhorse of any colony, excluding the drones. These remote control rovers all have limited self-cleaning, so that if they get caught in a dust storm, they won't always need a RC Commander to come clean them off. CP-purchased Rovers come with all possible normal upgrades as well, but are unable to be reproduced until the normal Tech is researched.

--RC Commander: The base model. It commands, carries, repairs and recharges a number of drones. This allows drones to function away from other drone commander networks, such as Rockets and Drone hubs. It normally comes with 4 drones.

--RC Generator (China only): This is a China-exclusive version of the Commander, and can do everything the Commander can, plus if it is parked on a power line, will unfurl high-efficiency solar panels and generate the power output of 5 large solar panels during the daytime.

--RC Seeker (Europe only): This is a Europe-exclusive version of the Commander. It does everything the Commander can, and also functions as a Sensor Tower when idle.

--RC Transport: This rover can harvest surface deposits and transport them wherever needed. Also has an automatic mode to collect any detected unstored resources.

--RC Harvester: This is a Blue Sun Corporation-exclusive version of the Transport, and has the additional ability to harvest concrete directly from deposits without needing an extractor. It also has 66% more base storage capacity.

--RC Constructor: This is an India-exclusive variant of the Transport, and can construct buildings from resources in it's storage, without needing a drone to handle the construction. It also has 40% more base storage capacity.

--RC Explorer: This rover is used to explore anomalies on Mars. It also has an upgrade to automatically seek out anomalies, and is also able to collect research data from around itself.

--RC Driller: This unique rover is exclusive to Russia. It is able to harvest any non-water resource deposit without aid, though it does waste 50% of the material it pulls from the deposit. Excellent for early colony setup.

--RC Dozer: Another rover with a unique purpose, this specialized rover is designed to handle any landscaping assignments. Raising or lowering land, flattening, or making ramps. It also carries a decent amount of waste rock.

-Rocket (200CP each): All Rockets take 24-25 hours to go from Mars to Earth and vice versa, before drawbacks and upgrades. If you don't want to buy Rockets here, you can purchase them

with Funding from your sponsor for 3,000 M each, or with enough research, can build them yourself.

--Normal Rocket: 50,000 kg cargo, room for 12 passengers before upgrades. Requires 50 fuel to go from Mars to Earth.

--Dragon Rocket (SpaceY only): 40,000 kg cargo, room for 12 passengers before upgrades. Requires 35 fuel to go from Mars to Earth.

--Zeus Rocket (International Mars Mission or USA only): 70,000 kg cargo, room for 12 passengers before upgrades. Requires 50 fuel to go from Mars to Earth. The International Mars Mission rockets also have the unique capability to slowly self-refuel.

-Tech (100CP each): You start with a Technology unlocked. Some Techs unlock access to new units or buildings, and others unlock upgrades. Any Tech-unlocked upgrades apply to all applicable units/buildings, unlike fiat-backed Prefabs that are a single example of that building. Upgrades are expanded to similar-target-examples, such as any "drone" getting drone-targeted bonus, such as increased move speed or carry capacity, or simplified construction materials. Colonist-targeted Tech bonuses also apply to a Jumper & companions as a type of perk.

-Breakthrough (200CP each): You can buy a Breakthrough with CP immediately. Breakthroughs apply to all applicable units/buildings, unlike Prefabs that are a single example of that building. This Breakthrough is expanded to similar-target-examples, such as any "drone" getting drone-targeted bonus, such as increased move speed or carry capacity, or simplified construction materials. Colonist-targeted Breakthroughs also apply to a Jumper & companions as a type of perk.

-Upgraded Buildings (200CP each): These building options have bonus features, and you are able to make more from blueprints. For balance purposes, while these Upgraded Buildings have fiat-backing (so don't need resource inputs, power or maintenance), it will only take effect post-jump.

--Super MOXIE: This building can create Oxygen (or any breathable gas required by a lifeform) from essentially any atmospheric composition.

--Super Water Vaporator: This improved Water Vaporator design is smaller, and more effective. It provides half the effect for a quarter of the building size and area of effect, which means you can cram more in a given area. In addition, this is also worth buying simply because it'd be accessible so much earlier compared to normal tech research.

--Super Ranch (No Specialization archetype): This Ranch has an integrated animal cloning lab that can create animals from insemination to fetus to birth. You can place in or outside of a Dome as you wish.

--All-In-One Mall (No Specialization archetype): This building provides every service needed by a populace, including medical. It uses some dimensional folding hijinks to increase customer capacity at one time into the thousands.

--Mega Hydroponics (Botanist archetype): This structure can grow any plant species, from any environment, to full health. It can provide any climate type, in case you need to mimic a specific region or soil type. This can be an out- or in-dome building.

--Omni-Factory (Engineer archetype): This improved factory processes and outputs all advanced resources, in a single location. In future jumps, you can add in additional manufacturing lines for other advanced resources into the same space. If you wish, you can dedicate other lines to a single resource, if you want to focus on a single type of output.

--Super Drone Assembler (Engineer archetype): This upgrade to the Drone Assembler can assemble 5 drones at a time, and can manufacture any type of drone or robot you have the designs for. However, the design cannot be larger than a large commuter bus. And unless you have the appropriate Breakthrough, you cannot create Biorobots here.

--Mobile Extractor (Geologist archetype): Deposits are finite, but why break down your extractor facilities when they run out? Why not just make them mobile? This building is designed to be a single extractor design that can extract all resources at any depth, and when there is no more to extract, deploy either legs or wheels and move to the next deposit. Concrete, water and waste rock don't require a work crew for oversight, but metals and rare metals extraction can be improved by a work crew's performance.

--Medical Complex (Medic archetype): This large building has the same footprint as an open-air gym, and has a lot more capacity for patients when compared to an infirmary. It can handle any medical issue that can occur on Mars.

--Sanatorium (Medic archetype): This facility uses humane and proven methods to help people remove negative traits from themselves. It can even replace those flaws with positive traits instead, to help people stay on a positive path. You can order this facility to focus on treating certain flaws over others.

--Science Outpost (Scientist archetype): This is an out-dome miniature-dome structure that provides lab space and living space to its scientists, as well as meets their service needs. It does still need life support and food delivery, but it means you can put down a single dedicated structure for research purposes and not have to waste space with living space and service buildings.

--Security Station MK2 (Officer archetype): Any officers stationed here can effectively patrol and secure any dome up to one connection away, not including space-suit-walks. It also has specialized drones meant to rescue idiots outside who may be suffocating/starving/dehydrated,

with a drone mounted rescue bubble. Still takes up the same space footprint as a normal security station.

--Playground: When kids learn to play, they can learn valuable life lessons. At the very least, they won't become idiots, and should gain at least a few positive traits.

--Gradeschool: This facility teaches pre-adults the basics of an education, as well as how to learn. It also can teach a number of teachable perks, including Jumpchain perks. However, it doesn't work on youths and adults.

--Vocational University: This university can teach vocations/specializations to people via remote learning, with a bonus of being able to teach new specializations to current specialists without any loss in effectiveness. You won't even have to worry about new skillsets overwriting the old ones.

--Sensor Tower: This autonomous sensor doesn't need maintenance or power. It scans for resources above and below ground, scans for interesting anomalies, scans for and predicts disasters from far away and from space, and calculates asteroid impacts. You can make more of these, and they will network together for better/faster results.

--Mod Buildings (-200CP each): There are a lot of mods for this game, and many create new or modify old buildings. If you want, you can purchase them here. Normally, you'd be paying for them piecemeal, but if you have a mod author who has made several building mods (such as Silva), you can take all their building mods in a single purchase. You cannot take full on cheat-mods, such as being able to grow electronics or machine parts in farming buildings.

--Wonders (600CP each): Any Wonder purchased here can be built multiple times. Each purchase comes with a Prefab of that wonder, meaning it doesn't need the immense resources to build it. These are also fiat-backed, meaning no resource or power inputs required, and no maintenance.

--Mohole Mine: This gigantic hole in the ground can provide unending amounts of metals and rare metals without ever running dry. Because it goes so deep, it also warms the area around it, preventing ice from forming. In post-jump settings, it also provides moderate amounts of any mineable resources (such as metals, minerals, crystals, etc). The more common the resource, the more the amount.

--Project Morpheus: This giant transmitter grants positive traits to people in a 100 miles radius. A bonus feature allows a single perk held by you or a companion to be spread to other people in that range, and they will keep the perk even if Project Morpheus is switched to a different perk. Project Morpheus does not spread birth/genetic/physical traits like Earthborn, Martionborne, Biorobot, or species changes. It will cause people to become Fit, and other mindset-leading-to-physical-change types of traits.

--Artificial Sun: This massive device would normally consume an immense amount of water, and create a self-sustaining fusion reaction AKA a sun. It creates an immense amount of power, and can provide constant light to nearby solar panels, as well as heating the surrounding area, which prevents ice from forming. This version doesn't require the water on startup.

--Geoscape Dome: This is the closest you'll get to Earth-on-Mars without a full terraforming effort. This dome is slightly smaller than a Mega Dome, but has fake beaches on the outside of it, greatly increases the housing comfort of any housing inside, greatly increases the morale of anyone inside, and restores and fortifies people's sanity. Pretty much no one will complain if they live in a Geoscape Dome.

--Omega Telescope: This immense radio telescope greatly improves the effectiveness of any research efforts, and occasionally allows new Breakthroughs to be discovered. It will help with any efforts to discover stellar bodies or see travelers among the stars.

--Space Elevator: This immense structure greatly simplifies the process of moving resources from Earth to Mars, and vice versa. When you don't need a Rocket to get resources safely to the ground, it makes the shipping process much faster and cheaper. You can order resources and prefabs from other planets in the star system for half price, and send and receive resource shipments at a much faster travel time. However, you still need Rockets if you want to send passengers.

--The Excavator: For when you need insane amounts of concrete production, but don't want to bother looking for [sulfur?] deposits, use The Excavator. This Wonder can create large amounts of concrete from any type of ground, and the only thing required is enough drones to empty out it's output trays.

**Companions**: Any previous companions can be imported into any role.

-Nepotism Applicants (Free): Do you just want to bring your friends into a highly dangerous environment, where the slightest mistake could kill you and everyone in the colony? Then feel free to import any prior companions you want as generic people, and they'll be on the next passenger rocket. However, they will have no additional training, skills, or will count as an Archetype.

-Offspring (Free): Did you make some poor decisions and had a kid, and DON'T want them to live only a few Sols? You can make any offspring you or your companions have and turn them into Companions for free, though this does remove them from the Martian Lifespan drawback, meaning they age as normal. For your sanity, you can have as child-safe stasis tubes in your Warehouse as you need, so you can raise them properly somewhere not this jump.

-Pets (Free): You gotta love the Project Laika DLC. Err, no, not the animal ranching bit, we're talking about the pets option. You can import any animal friend you had previously (in jumpchain or prior to), or can bring a new pet you found here along with you on your Jumpchain. Your pet



has no health or age-related issues, and will remember you clearly, no matter how you look, smell, or act. There are many pets you can choose from, such as: Dog, Cat, Goat, Pony, Penguin, Rabbit, Tortoise, Platypus, Llama, Deer, and others.

--Archetypes (300CP each): Each Archetype corresponds to a job specialization a colonist can have. Any Archetype can learn another specialization (especially with the Vocational University item), but does not get any of the provided stuff of that Archetype.

--No Specialization: The people without a specific skill set. They work best in service buildings, allowing specialists to focus on their fields instead of slinging drinks and flipping burgers. Oddly, these are also the best kind of people to have working on Animal Ranches, since Botanists aren't usually trained to take care of animals. A No-Specialization-archetype companion gets Learning Booster, Service Pro, Martian Wagyu, and Workaholic perks, plus one purchase each of the Super Ranch and All-In-One Mall buildings.

--Botanist: Botanists are the people in charge of food production in the colony, using plants to serve all/most of the nutritional needs. They work best in hydroponics, farms and fungal farms. A Botanist-archetype companion gets Green Thumb, Got Seed?, Working Efficiently, and Workaholic perks, plus one purchase of the Mega Hydroponics building.

--Engineer: Engineers are the people who make the advanced products that allow a colony to be truly independent from their mission sponsor. An Engineer-archetype companion gets Optimization and Workaholic perks, plus one purchase each of the Omni-Factory and Super Drone Assembler buildings.

--Geologist: Geologists work in extractors to pull resources out of the ground, and are vital when Rovers have scoured the surface resource deposits clean. They will supply the raw materials for the Engineers to create with. Geologist-archetype companions get the Workaholic & Mars Is Your Playground perks, plus 2 purchases of the Mobile Extractor building.

--Medic: The medical personnel that make sure you don't die of dysentery or of a cold, or Wildfire. They are also extremely important in the childbirth process, making it much easier to bring new humans into the world. Medic-archetype companions get the Workaholic and Doctor Or Mars perks, plus one each of the Medical Complex and Sanatorium buildings.

--Scientist: Scientists allow you and your colony to expand your knowledge of the universe, and make it your bitch. Don't worry, the mad science is mostly kept contained. Scientist-archetype companions get the Workaholic, Outsourcing, Genius and Data Can Be Anywhere perks, and 1 purchase of the Science Outpost.

--Officer: Officers keep order in a colony during disasters, and prevent crimes. They can also be used for covert actions against other colonies. Officer-archetype companions get the Workaholic, Non-Harmful Takedowns, Person In Charge, and Playing Rough perks, and one purchase of the Security Station MK2 building.

### **Drawbacks:**

-Martian Lifespan (+0 CP, Mandatory): This is the mandatory time drawback. For whatever reason, your colonists will go through their lives fairly quickly. They will breed quickly, age quickly, and die quickly. For a reference: When a colony first gets colonists, they have to survive 10 Sols to prove viability, or have the colonists be so comfortable that a martian-born child is born. This means at least 9 months of gestation have gone by in that 0-10 Sols time period. It takes a newborn 5 Sols to become old enough to work and contribute to the colony, and at 61 Sols, they are now senior Colonists and are too old to work or breed (barring certain Techs or Breakthroughs). Anyways, this accelerated life cycle will not attract notice or worry from anyone on Earth or Mars and will be accepted as normal. This drawback does not affect the Jumper or Companions, though they might want to avoid reproducing, as offspring will count as Colonists for the purpose of these drawback, unless you make them Companions, in which case good luck explaining why your newborn child has been a child longer than several generations of colonists have lived. On the positive side, it does explain how a colony can explode in population and become independent in only a year or so.

-Tropico: Mars Edition (+0CP): Somehow, a small island nation led by an elected dictator in the Caribbean has sponsored their own colony on Mars. Expect toucans, locally produced rum, swiss bank accounts, and general craziness. However, El Presidente has stayed in Tropico, but has entrusted his vice Presidente to handle the initial colony setup. Someone named Penultimo? Ah well, surely it will go fine. Surely.

### **Game Rules:**

--Amateurs (+200): Your applicants on Earth won't have any specialist training.

--Armageddon (+300CP): Meteor rating is set to max no matter where your location on Mars is. Expect many many meteor storms.

--Dust In The Wing (+300CP): Dust Storm rating is set to max no matter where your location on Mars is. Expect many Dust Storms in your future. You will want to invest in lots of O2 and water storage, and probably wind turbines.

--Hunger (+100CP): You can't import food from Earth. [Does this include the food that comes on passenger rockets? It can't, you need that food while the first batch of food is growing.]

--Inflation (+300CP): Import prices increase over time. (Estimated by fixed 10% of initial prices after every 20 sols).

--Long Rider (+300CP): Rocket travel time to and from Mars is three times longer, increasing from 25 h to 75 h.

--Rebel Yell (+300CP): Colonists periodically become renegades. Crimes are more severe.

--The Last Ark (+400CP): Can call a Passenger Rocket only once.

--Twister (+100CP): Dust Devil rating set to a new max level for all locations on Mars.

--Winter Is Coming (+300CP): Cold wave rating set to a new max level for all locations on Mars. Cold waves increase power consumption even more. You will want to invest in lots of heater-type buildings like subsurface heaters.

--Power Lockout (+200CP): For the duration of this jump, all your perks and powers are not accessible to both you and any companions. Sorry reality warpers, you are going to have to survive Mars like the rest of us.

--Warehouse Restrictions (+200CP): For the duration of this jump, you are unable to use anything stored in your warehouse that originates from outside of this jump. You can still use it as storage and move locally-sourced assets in and out though.

--Enemy Colony (200CP each): Did you pee in someone's coffee before leaving Earth? Cause you seem to have really angered a rival colony and they hate your guts, and as a result, your colony. They will cheat you on any trade offers, will send personnel to sabotage your buildings, steal your drones and colonists, and copy and delete your research. And they will have potent defenses against any reprisal covert actions. You may take this drawback up to 12 times, or 13 times if you took the Tropico toggle. But if you do, your enemies will gladly work together to bring you down, so you can't even set them against each other.

--Switcheroo (+300CP, requires archetype companion): You and an archetype companion switch builds for this jump. They are the commander, you are whatever archetype they are. Do you trust them to be able to succeed with your build? As a victory bonus, when this jump is successfully completed, you and the companion get a copy of each other's builds for this jump, in addition to the build you had before taking this drawback.

Mystery: You may take as many Mysteries as you think you can handle. These will add some interesting (and "interesting") events to your stay here.

--The Power of Three (+100CP): "Science is no more than an investigation of a miracle we can never explain, and art is an interpretation of that miracle." - Ray Bradbury

--Inner Light (+100CP): "Seize the time... Live now! Make now always the most precious time. Now will never come again." - Jean-Luc Picard

--Beyond Earth (+100CP): "It isn't all over; everything has not been invented; the human adventure is just beginning." - Gene Roddenberry

--The Philosopher's Stone (+100CP): "All the gold which is under or upon the earth is not enough to give in exchange for virtue." - Plato

--The Dredgers (+200CP): "Two possibilities exist: either we are alone in the Universe or we are not. Both are equally terrifying." - Arthur C. Clarke

--Artificial Intelligence (+200CP): "I am putting myself to the fullest possible use, which is all I think that any conscious entity can ever hope to do." - HAL 9000

--Spheres (+200CP): "Never fire a laser at a mirror." - Larry Niven

--St Elmo's Fire (+200CP): "To light a candle is to cast a shadow." - Ursula K. Le Guin

--The Last War (+300CP): "Mankind must put an end to war before war puts an end to mankind." - John F. Kennedy

--Wildfire (+300CP): "The worst pandemic in modern history was the Spanish flu of 1918, which killed tens of millions of people. Today, with how interconnected the world is, it would spread faster." - Bill Gates

--Marsgate (+300CP): "The saddest aspect of life right now is that science fiction gathers knowledge faster than society gathers wisdom." - Isaac Asimov

--Metatron (+300CP): "The gods do not protect fools. Fools are protected by more capable fools." - Larry Niven

-Hearing Bobby Prince (+600CP): A Martian year into your jump, you will be informed by your mission sponsor that a company has bought and taken over all supply and command of your colony. They call themselves the Union Aerospace Corporation, and they are very interested in having a profitable colony on Mars. In addition, they are also interested in using Mars as a testing ground for some very interesting experiments in high-energy physics. You will be their subordinate and be required to assist them, otherwise you will have no further support from Earth. And even if you are fine with being cut off, the Union Aero Corp will just do the same thing to another Sponsor's colony. You might want to keep an eye on them, you never know what the Hell will pop out of their experiments.

### **Challenge:**

"1000% Difficulty Challenge": Must take at least +1000 CP worth of drawbacks, possibly including the Mission Sponsor, but do not get that 1000 drawback CP to spend on the initial budget. You must take power/item lockout drawbacks, though it can count towards your required +1000CP drawback count. You have 5 Martian years to get a colony up and running, and to fully terraform Mars. Atmo, Heat, Water, and Vegetation. You also must finish any

Mysteries taken. Regardless of if the Challenge is won or not, you get that missing 1000CP back to spend at the end of the jump, and can move on in jumpchain.

Reward: Entire planet of Mars. It keeps any buildings, population, changes, terraforming, orbital assets, and even other colonies (from the other mission sponsors you didn't pick).

### **Notes** (for Jumpers)

-Funding: Because this is a interplanetary colonization attempt, and funded by governments (mostly), this isn't cheap. That's why all the costs for buying stuff here are in M, which stands for "million". So a Rocket costs 3 Billion to buy.

-"Prefab": A term for a building shipped over from Earth via rocket, with no Martian resources required to create the building. You just need to assemble the building with a drone. This is handy when you don't have the research done to create a building from local resources, like a Water Vaporator or Fuel Refinery or Stirling Reactor.

--CP purchased Prefabs are single examples that have fiat-backing, which means they need no power, maintenance, or supply. They also have all upgrades installed by default, but are also toggleable. Breakthrough improvements are also present. Manned facilities still need staff. However, you only have a single example of the fiat-backed Prefabs (unless you bought more with CP), and are unable to make more. Any other examples you build will be non-fiat-backed.

-List of Prefabs available for CP & cash purchase:

--Purchasable: Drone Hub. Moisture Vaporator. Fuel Refinery. Stirling Generator. Machine Parts Factory. Polymer Factory. Electronics Factory. Small Machine Parts Factory. Small Electronics Factory. Advanced Stirling Generator (USA).

--Spires: Arcology. Hanging Gardens. Water Reclamation System. Network Node. Medical Center. Sanatorium.

--Unique Examples at start:

---~~Prefab Colony Rule: 1 Drone Hub, 4 Recharge Stations, 1 Sensor Tower, 6 Stirling Generators, 1 Concrete Extractor, 1 Fuel Refinery, 1 MOXIE, 1 Oxygen Tank, 2 Moisture Vaporators, 1 Water Tower, 1 Basic Dome, 2 Living Quarters.~~ (not applicable to this Jump)

---1 Self Sufficient Dome (International Mars Mission): 1 small dome, 1 MOXIE, 2 moisture vaporators, 1 water tower, 1 oxygen tank, 1 food depot, power cables and pipes.

---2 GHG Factories, 2 Forestation Plants. (Geo Engineer Commander Profile)

-Rockets: Compared to real world technology, these rockets have amazing capabilities. With current technology, it would take 6-8 months to go from Earth to Mars. These take 24-25 hours. The NASA Space Shuttle could carry up to 22,400 kg, but is out of service now. All the commercial spacecraft have less than 10,000 kg lift capacity. The Atla V rocket can carry 20,520 kg into Low Earth Orbit, but that amount shrinks greatly when trying for greater distances. A Leopard Dropship from Battletech, when converted to cargo-hauling, can carry 150 tons or 136,078 kg, but that's from a scifi setting and was first created in the year 2537, so of course it's much better.

--Post-Jump, all Rockets will have self-refueling. That's normally a IMM Sponsor bonus, but I'll allow it to let Rockets have more use post-Jump.

-Orbital Elevator: Do you want to expand upon the Orbital Elevator's capabilities? Want it to be able to transport people? You can make it do whatever, assuming you have the research ability to figure out how.

-"Breakthrough": A Breakthrough is a technology that must normally be researched, and provides significant gameplay changes, especially if taken early on. For example, electrical wires and life support pipes can leak and occasionally need repair, but each has a Breakthrough that makes them unbreakable and can be built instantly, for free, anywhere, even without a drone commander nearby.

-Colonists: Anytime a tech or building says it affects "colonists", you can rule if it affects Jumper/companions. Also, post-jump, "Colonist" effects can also be applied to your subordinates, people, etc.

-Why is Tropico on Mars? Cause Haemimont Games also made Tropico 3, 4, and 5. And I thought it'd be funny.

-Hearing Bobby Prince: In case you didn't know, and didn't google-search, Bobby Prince is the guy who made the soundtracks for the original Doom games. Yes, this is a Doom drawback. Unless you have your own outside-context capabilities, it's highly recommended not to take this drawback, as just taking it links this setting to the Doom Hell. However, it's up to you what Doom timeline it may be.

--That being said, don't be surprised if Oliva Pierce ends up being a resident of your colony. I'm not joking, "Olivia Pierce" can pop up from the name pool, it happens every so often in my games. I use a mod that gives me alerts on people graduating from grade school/university/sanatorium, so I see examples of the names every so often. The name generator is one part hippy-parent, one part meme/references, one part mission-sponsor-appropriate-namelist.

Breakthrough details: For posterity, here are the in-game details, then what changes I'm adding for CP purchases.

Advanced Drone Dive: Drones move 50% faster.

-**CP Purchase**: Applies to all "Drone" type units, no matter how they move around.

Alien Imprints: Uncovers new Anomalies - Alien Artifacts - which provide a boost to all research when scanned (3% reduced cost for each scanned Alien Artifact anomaly, up to 10. Does not reduce research of Breakthroughs).

-**CP Purchase**: Every jump after this one will have various advanced artifacts you can discover that will greatly enhance your knowledge of local knowledge fields.

Ancient Terraforming Device: Instantly gain 20% in all terraforming parameters.

**-CP Purchase:** You discover an Ancient Terraforming Device that can terraform an entire planet to a desired state (desert planet, water world, ice ball, lush jungle world, etc.), and every time you activate it, you will get 20% progress towards that goal. The Terraforming Device may be used once per year.

Artificial Muscles: Drones carry two resources at once.

**-CP Purchase:** "Drone" type units gain double carry capacity.

Autonomous Hubs: Drone Hubs no longer require Power or maintenance. (Researched by default when playing as Inventor)

Cloning: New Spire Building: Cloning Vats - creates Clones over time. Cloned Colonists grow and age twice as fast.

**-CP Purchase:** Your Clones can be designed to stop aging at double speed when they reach a certain life span, or completely disable the growth speed bonus. You may also clone whatever sapient species and/or person you have the genetic material of.

Construction Nanites: Buildings construct themselves slowly without Drones. Nanites will seek out resources from nearby resource depots.

Core Metals: Uncovers extremely rich underground Metals deposits.

**-CP Purchase:** Also applies in future jumps, and you discover rich pockets of rarity-equivalent resources even if their location has already been gone over extensively beforehand. (The deposits basically spawn when you enter the jump).

Core Rare Metals: Uncovers extremely rich underground Rare Metals deposits.

**-CP Purchase:** Also applies in future jumps, and you discover rich pockets of rarity-equivalent resources even if their location has already been gone over extensively beforehand. (The deposits basically spawn when you enter the jump).

Core Water: Uncovers extremely rich underground Water deposits.

Cryo-sleep: Passenger Rockets can carry 20 more Colonists.

**-CP Purchase:** It's a safe method of cryo-sleep. You can be more space efficient when transporting people on spacecraft, can keep people on ice in cryo-storage facilities, and so on.

Designed Forestation: Newly grown forests have a chance to spawn Vistas and Research Sites. (Researched by default when playing as Geo Engineer)

**-CP Purchase:** Newly grown dense plant life has a chance to create interesting locations in the sense of awe-inspiring and/or interesting research bonuses.

Dome Streamlining: Domes cost 50% less basic resources.

Dry Farming: Water requirements of Food is reduced by 50%.

**-CP Purchase:** All sources of food require less water to grow to a harvestable stage. Plants, animals, etc.

Eternal Fusion: Fusion Reactors Upgrade (Eternal Fusion) - Fusion Reactors no longer require workers and operate at 150 performance.

Extractor AI: Metals Extractors and Rare Metals Extractors can work without crews at 50 performance.

Factory Automation: Factory Upgrade (Automation) - Lowers the amount of Workers needed in factories.

Forever Young: Seniors can work and have children.

**-CP Purchase:** No matter their age, your colonists will never suffer age-related issues that would prevent them from working or having children.

Frictionless Composites: Wind Turbines Power production increased by 100%.

Gem Architecture: New Dome: Diamond Dome - A diamond shaped Dome which has space for two Spires.

Gene Selection: Doubles the chance that a Colonist will have or gain a rare trait.

**-CP Purchase:** These rare traits will always be positive ones, though it depends on what you would view as "positive".

Giant Crops: Unlocks giant crops which have an increased Food output.

**-CP Purchase:** You can also figure out how to create super-sized crop products with relative ease, even in other settings.

Good Vibrations: Domes restore Sanity (+5) to their inhabitants every Sol.

**-CP Purchase:** The homes and workplaces of your colonists/subordinates/people will restore some of their Sanity/will every day.

Hive Mind: Residents in the Arcology get a bonus to work performance based on the number of unique Perks and specializations of colonists living in the Arcology.

**-CP Purchase:** The greater the variety of unique skills and professions your colonists/subordinates/people have, the greater a bonus each individual gets to their work performance.

Hull Polarization: Buildings require maintenance less often. (Maintenance bar build up speed reduced by 25%)

Hypersensitive Photovoltaics: Solar Panels and Large Solar Panels Power production increased by 100%.

**-CP Purchase:** All solar panel technology doubles their power production.

Inspiring Architecture: Colonists in Domes with a Spire have increased Morale (+20).

Interplanetary Learning: Schools can train the Workaholic and Hippie traits.

Landscaping Nanites: Landscaping projects progress without the need of Drones and are generally faster.

Lake Vaporators: Lake pumps are self-sufficient and no longer need to be supplied with Water.

Magnetic Extraction: Extractor upgrade - Production increased by 50%.

Martian Diet: All Colonists consume 25% less food.

**-CP Purchase:** All of your colonists/subordinates/people require less food to be optimally fed.

Martian Steel: Lowers Metals costs for building construction by 25%.

Martianborn Ingenuity: Martianborn gain 10 performance.

Multispiral Architecture: New Dome: Oval Dome - An elongated Dome which has space for two Spires.

Nano Refinement: All Extractors continue to extract small amounts when their deposit is depleted.

**-CP Purchase:** All Extractor/mine facilities can continue to extract smaller usable amounts of their resources, even after the deposit is played out.

Neo-Concrete: Dome Concrete costs reduced by 80%.

Neural Empathy: Unlocks Rare Trait - Empath. Empaths raise the Morale of all Colonists in the Dome. The effect stacks with other Empaths.

Nocturnal Adaptation: All colonists gain +20 performance during night shifts.

Overcharge Amplifications: Amplify upgrades grant a bigger boost to production.

Plasma Rocket: Rocket travel time to and from Earth reduced by 50%. [Subtracts 12 h from travel time. If the Long Ride rule is in effect, this reduces travel time from 75 h to 63 h.]

Plutonium Synthesis: Stirling Generator Upgrade (Plutonium Core) - Increased Power production while opened.

Prefab Compression: All Spires can be ordered as prefabs from Earth.

Printed Electronics: Allows Drones Prefabs to be constructed in the Drone Assembler using Metals instead of Electronics.

**-CP Purchase:** Drone factories require less complex materials to produce a drone of same quality as they would if they used complex materials. Iron instead of titanium, copper instead of gold, that kind of thing.

Project Phoenix: When a colonist dies there's a 50% chance he or she is reconstructed as youth with the same traits.

**-CP Purchase:** This also applies to the Jumper, and anytime they die, they have a 50% chance to be resurrected as a youth. However, no luck adjusting perks or powers can change their chance.

Rapid Sleep: Colonists need to sleep for only 1 hour and regain twice as much Sanity when sleeping.

Resilient Vegetation: Halves the Water and the Temperature requirements of grass, bushes, trees, and Open Farm crops.



Safe Mode: When a colonist suffers a Sanity breakdown, they fall asleep and wake up after 6 hours with 70 Sanity. Colonists can't commit suicide or gain flaws due to sanity breakdown.

Service Bots: Non-medical Service Buildings Upgrade (Service Bots) - service buildings no longer require workers and operate at 100 performance. Upgrade costs 10 Electronics at each building.

Soylent Green: Bodies of dead Colonists are converted to Food. (1 Food is dropped where a colonist dies)

Space Rehabilitation: Colonists have a 50% chance to lose a flaw on their journey to Mars.

**-CP Purchase**: This effect applies on any space journey, or sufficiently long planet journey. For on-planet journeys, it has to be at least 7 days long.

Superconducting Computing: Converts unused Power into Research Points. (The first unused 500 Power is converted into 1.5 Research each. Any unused power beyond 500 is converted into 0.375 Research each.)

**-CP Purchase**: This effect applies anytime you have excess power generation and are working on an idea, experiment, and so on. In a setting where you don't have power generation, excess mana/chakra/ki/etc can also be used for this effect.

Superfungus: Fungal Farm Upgrade (Superfungus) - Increases production while increasing Oxygen consumption.

Superior Cables: Instant and free power cable construction. Power cables do not suffer from power faults.

Superior Pipes: Instant and free pipe construction. Pipes don't suffer from leaks.

Sustained Workload: Doubles the performance bonus when Colonists are working on a heavy workload.

The Positronic Brain: Allows the construction of Biorobots in the Drone Assembler. Biorobots eat, sleep and can gain traits but can't reproduce and never die from old age. Cost: 5 Electronics each.

**-CP Purchase**: Biorobots are essentially synthetic humans that don't create babies or age. With this breakthrough, you can create them in non-workshop facilities, such as Drone Assemblers. If you want to do more with their technology, you'd have to research it. For example, uploading humans into Biorobots.

Vector Pump: Moisture Vaporator Upgrade (Vector Pump) - Water production increased by 100%.

Vocation-Oriented Society: Colonists gain 10 bonus work performance when all their stats are in the green.

Wireless Power: Recharge Stations service Drones in a 3 hex-range instantly.

**-CP Purchase**: You can broadcast power to receiving units over short distances without needing wires, and having no loss in power. Further research could expand upon this range.

Zero-Space Computing: Research Lab & Hawking Institute Upgrade (Zero-Space Computing) - Research points production increased by +25% Research. Upgrade cost: 5 Electronics / 10 Electronics

## **Credits:**

-Shout out to Haemimont Games for making a quality game with so much basis in actual Mars colonization science. Shame they aren't making "Surviving the Aftermath".

-Big thank you to all the modders of this game. ChoGGi, Silva, and many others.

## **Changelog:**

v1.0: Initial release.