Endworld PnP

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Chapter 1

The EndWorld

Years have gone by since the Great War. Many Years. Even though few remember how long it has been, the remnants of a time long gone still remind us that once, long ago, the world has been a nicer place. But, the world we know now ... is not a nice place. Such a shame. I have lived a long life, and I have learned to adapt to the new World, but just as the Contamination eats away at technology and the lives of those who come into contact with it, time eats away at me. Such a shame, there is so little of it left for me. But the plans are in motion, Immortality might be in my grasp.

I am ... well, it seems some Details are starting to slip my mind. I am Quaesitor, and yet again I am wrong, but not entirely. I was Quaesitor. I traveled from the great city of Terracina to the quaint outpost of Kodal to learn. A life time of learning of trying to protect what the Supervivo have protected so long. The ancient Knowledge and ancient Arts. Microelectronics. Quantum Physics. The like. We, the Survivors, the Triumphant, the Conquerors, forced to huddle in what were mere shelters for what would be a storm that has not blown over in centuries, it is such a shame. Marvels of modern technology have kept me from dying these past years since i retired, but no army of hightech mechs, no experimental biotech treatment seems to be able to extend my mind. I have forgotten so much.

Such a shame.

Of course we are not the only ones who survived. Beasts stalk the lands, ferocious beasts, Megafauna, sly, intelligent and hungry creatures. In some cases literally. But even Humanoids, a pale imitation of real Humans, the descendants of vile mutants, military personnel enhancement projects, the failed attempts of foolish hope, are vile mutants and savages themselves, such a shame to human kind. They raid caravans, keep to their barbaric cultures, forever cursed to harbor the very Contamination killing their chances of ever knowing the pleasures of technology. And it seems that they have adapted to the Contamination, so it does not even kill them as much these days. Such a shame.

Alacast can purify them just like anyone or anything else, it changes the Contamination back to more normal dangers, but dangers that can be dealt with by real humans. Tribals can live without the Contamination, if ever someone would invest in cleaning a Savage up that much, they still can not contribute. Such a shame. I have tried, yet they remained uncooperative, another sign of their inferiority. Some babble about cages and insults, barely comprehensible ramblings in their animalistic mockery of speech. They do not usually last long once they have gone through decon. Such a shame. Especially those infuriating individuals who seem to have allied with the Contamination trying to kill us all, wielding its Zones Of Normalcy Exclusion like weapons. Such a shame. Wide ZONEs of heightened gravity or brittleness, Oxygen free ZONEs or pure Oxidation. Such a shame that they have to appear at all even if caused by natural sources. Savages funneling Contamination into a ZONE until even the best seal breaks down and the Pilots are eaten alive ...

Such a Shame.

– Transcript of the only Conversation the oldest Document in the Great Library of Kodal - a severely damaged upload of the Brain of an ancient Scientist - will have.

1.1   Rules

1.2   The Selector System

This System uses ten sided dice. A Check is a roll of usually 5 dice interpreted in a certain way, with the result describing how successfull the attempted action was.

Whenever there is advantage or disadvantage of any kind, Bonus- or Penaltydice may be applicable. The Roll itself is interpreted by your *Selectors* which usually are defined by the applicable Attribute and Skill, but may be static, or Equipment based. The Dice in the Roll are ordered and given an order-number in ascending order by value. To get the Result of the Roll (or to *interpret* the roll), every selector *selects* a die with the appropriate order-number and adds them to the result. Selectors greater than the biggest order-number simply select the highest die. A Selector of 0 selects no die. The usual number of Selectors is 2.

The effects and result of the Check may then be further modified by Resonance.

1.3   Bonus- and Penaltydice

Bonus and Penaltydice cancel each other out, so 3 Bonusdice and 2 Penaltydice results in 1 Bonusdie.

They describe how many extra dice are rolled on a given Roll. If Bonusdice were rolled, remove the lowest dice from the Roll until the number of dice is as it was before the extra dice. For Penaltydice, the highest are removed instead. Neither Bonus nor Penaltydice ever change the number of dice being interpreted, just the relative Chances.

1.4   Resonance

Resonance is when in a Roll, more than one die, show the same Number.

The Resonance *amplitude* is the number of dice *that exceed 1*, meaning it is lower by 1 than the number of dice.

The Resonance *frequency* is the number those dice show. If no Effect states anything about a Resonance, they have no effect.

1.5   Skills and Attributes

Attributes represent in what aspects of the gameworld a character excels and in which he doesnt.

Depending on the Priorities picked during character creation it may be easier or harder to raise them, but every Attribute can be Applied to a multitude of general Actions, see the examples in the table below.

The Priorities and Attributes in the following Table are a not all that exist but they are the most common

	Priorities	Charisma	Wisdom	Body	Ability
Attributes shared by all humans.	Attributes	Resolve	Perception	Fitness	Competence
		Impression	Mind	Dexterity	Insight
		Sympathy	Knowledge	Agility	Theory

1.5.1   Charisma Attributes

- Resolve: reasoning, convincing, bartering, negotiating and similar interactions

- Impression: leadership, bluffing, acting, boasting, lieing

- Sympathy: chatting, pleading, resolving conflicts, being likeable

1.5.2   Mental Attributes

- Perception: gathering information, noticing details, being alert

- Mind: memory, assessing situations, processing information, menial mental tasks

- Knowledge: knowing, learning, posessing and storing information

1.5.3   Physical Attributes

- Fitness: general physical actions, applying strength, persisting, healing

- Dexterity: precise and/or speedy manipulation of objects using hands

- Agility: running, jumping, dodging, climbing

1.5.4   Ability Attributes

- Competence: repetetive or physically complicated actions

- Insight: creative or explorative actions

- Theory: applying knowledge or mentally complicated actions

1.5.5   Spiritual Attributes

- Intuition: knowing without thought

- Focus : the power of concentrated effort

- Discipline: to do things many times done before

1.5.6   Character Attributes

- Contamination Resistance: Supervivo - Outlander - Tribal

- TBA: ??

- TBA: ?

1.6   Skills

//TODO: General format and make words good yes. Every sublayer has up to 3 levels, only one sublayer can ever be on level 3, the rest are capped at level 2, transfer can be done. Every superlayer has up to 3 levels, and can only be increasedby 1 for every related sublayer that is at level 2 or 3

1.6.1   Mecha Weapons Expertise

Mecha Weapons means any weapon too big to be carried, including stationary turrets. Usually Weapons are fired with Focus.

1.6.1.1   Laser

Laser or technically "Directed Energy Weapons"
    are a group of weapons which typically do not use Ammunition, but raw Energy to inflict their damage. Their comparably low damage is made up for by being as accurate as a light beam, plus, the high amounts of particles in the air make for pretty lights.

1.6.1.2   Projectile

Projectile Weapons or sometimes just "Guns"
    are a group of weapons which discharge Projectiles towards a target. Ammunition has to be employed, but there are several different types available.

1.6.1.3   Missile

Missile Weapons are a weapons that travel to the target to inflict damage, the difference to Projectile Weapons is that Missile Weapons are usually self propelled instead of being accelerated at their startpoint. Missiles are comparatively heavy and expensive, but most of them ignore shields and/or deliver special devices or bombs to the target.

1.6.1.4   Attack Modes

- Direct Weapons are many and varied but share the characteristic of being pointed roughly at the target they are shooting. They require line of sight.

- Indirect Weapons are just as varied as Direct Weapons but have the key difference of not pointing at the target. Usually Up and in an angle, but not always. They require information about the targets position, but are free from line of sight restrictions, as long as the Attackstill has a valid way to travel to the target.

- Seeking Weapons have some sort of sensors or a dataconnection, and will follow a Target, as long as the Lock remains unbroken. This skill mainly deals with the correct usage and parametrization of such Weapons.

- Beam Weapons that emit long, sometimes even sustained streams, making them easier to aim and inflicting more damage, usually at the price of higher, sustained costs and less flexibility.

1.6.1.5   Melee

Melee Weapons of mech sizes are capable of inflicting utter destruction, but are usually limited to close ranges, which makes them not very useful at long distances.

- Sharp Melee Weapons have slightly longer range and are faster and usually do good damage. Most of them use the Movement System to get ready to attack again, so they may attack a lot of times on fast mechs. They also are the most precise of the melee weapons.

- Blunt Melee Weapons are usually slow, and easier to dodge, but their raw damage output is only matched by Artillery.

- Unarmed is not technically a category of weapon, but it represents being able to fight in melee without any special weapon, which allows for mostly disabling maneuvers.

1.6.2   Piloting Practice

1. Plain Terrain

2. Desert

3. Forest

4. Arctic

5. Mountain

6. Urban

7. Mud

8. Marine

9. Extreme

10. Exo is short for "Exoskeleton" and refers to Mechs that are barely larger than an extended Bodyarmor or Mechs that are generally not much bigger than their Pilot. (<1t)

11. Tiny a versatile spot for Contraptions between Exo and Very Light, these include buggies, cars and a lot of small, fast Vehicles. (1-5t)

12. Very Light include things like APCs and small fast walkers and light tanks.(5-15t)

13. Light is about as big as a medium to main tank. (15-50 t)

14. Medium is about as big as a heavy to superheavy tanks (50-150 t)

15. Heavy is above superheavy tanks. (150-500t)

16. Very Heavy LANDKREUZER (500t-1500t)

17. Massive ???

1.6.3   Aux

1.6.3.1   Biotech

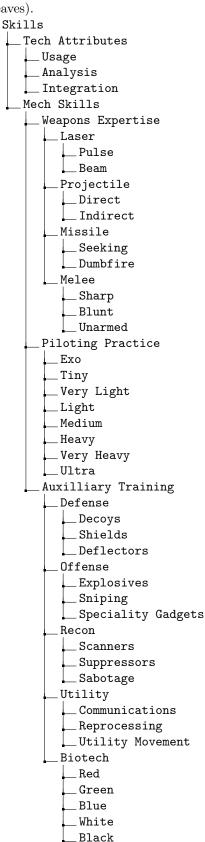Biotech is the Fusion of Biology and Technology

The ancient texts define Biotechnology as "any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use".

  - Red Biotechnology Encompasses genetics, genomics, pharmacology, but also medical advances like genetherapy and automedics and deconamination of living things.

  - Green Biotechnology is used every time the passive environment is exploited, from engineering high yield, low footprint farming to technologically harnessing the great and small Anomalies, including detoxification of materials and beings.

  - Blue Biotechnology has developed from being used for aquatic Biotech, to include Megafauna, since the first Megafauna is told to having been spottet in the ocean. It allows scanning, categorization and assessment of Megafauna, including in some cases, harvesting Megafauna specialities.

  - White or Industrial. It is used in Industrial processes and in handling some of the results of such processes. Creating and/or applying contamination-sealant is one of such processes.

  - Black deals with with integration of Biology and Technology from enhancements or replacements like Cyberware or more conventional Prosthetics to synthesizing life, ressurection and strong AI. Seldomly useful and the most dangerous brand of Biotechnology, it is not taught often.

1.6.3.2   Computer

1.6.4   Skilltree - Techside

Further Priorities might include Attributes, single Skills or Entire Skilltrees. A number in brackets indicates how many Skillpoints can be assigned, lacking a number implies being either a category (nodes) or an Attribute (leaves).

```
Skills
 └─Tech Attributes
   └─Usage
   └─Analysis
   └─Integration
 └─Mech Skills
   └─Weapons Expertise
     └─Laser
       └─Pulse
       └─Beam
     └─Projectile
       └─Direct
       └─Indirect
     └─Missile
       └─Seeking
       └─Dumbfire
     └─Melee
       └─Sharp
       └─Blunt
       └─Unarmed
   └─Piloting Practice
     └─Exo
     └─Tiny
     └─Very Light
     └─Light
     └─Medium
     └─Heavy
     └─Very Heavy
     └─Ultra
   └─Auxilliary Training
     └─Defense
       └─Decoys
       └─Shields
       └─Deflectors
     └─Offense
       └─Explosives
       └─Sniping
       └─Speciality Gadgets
     └─Recon
       └─Scanners
       └─Suppressors
       └─Sabotage
     └─Utility
       └─Communications
       └─Reprocessing
       └─Utility Movement
     └─Biotech
       └─Red
       └─Green
       └─Blue
       └─White
       └─Black
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1.7 Trade

These entries in the table below are usually equivalent, local supply and demand may vary them greatly. Rolling for price variance might be done if there is no in-world reason why certain things might be more or less expensive. If that is the case the prices vary by $((-1)^{1d10} \cdot 1d10 \cdot 5)\%$. Additionally everyone a character trades with has self interest and will keep $5 \cdot (11-[\text{Negotiation-Check}])\%$ of the tradevalue. Goods, at 100% value each line is

equivalent to one another and equivalent to 4 character creation points

1.7.1 Tradegoods

Storage	Article
10g	Elixir of Life (EOL)
100g	Alacast
500g	Experimental Tech Scrap (ETS)
1kg	High Tech Scrap (HTS)
1.5kg	Advanced Gene Therapy Medicine (AGT)
5kg	Medium Tech Scrap (MTS)
10kg	Potent Medicine
50kg	Low Tech Scrap (LTS)
50kg	Seeking Rockets
100kg	Processed Medicine
100kg	Basic Rockets
100kg	Artillery
200kg	Basic Medicine
500kg	Improvised/Herbal Medicine
hline 500kg	Base Tech Scrap (BTS)
500kg	Basic Ammunition
1000L	drinking Water (500days of drinking)
500L/35kg	Liquid Hydrogen
1t	Coal
350L	LiquidCombustionFuel
100kg	High Energy Rations (0.4kg/(day·person))
1t	Normal Food (2.5 kg / (day·person))
1	Medium Quality Blueprint

Open for more Suggestions Example:

    Character A wants to get rid of 5 tonnes of Base Tech Scrap in favor of more easily transportable Alacast in a local Dome.

    Since the Gamemaster is lazy there are no storyelements influencing the prices, so they are rolled. First, the value of the BTS is determined to be (Roll: 6, 4) $((-1)^6 \cdot 4 \cdot 5)\% = +20\%$. Then the value of Alacast is determined to be (Roll: 10, 3)$((-1)^{10} \cdot 3 \cdot 5)\% = +15\%$. The result is that the rate between BTS and Alacast is $500 \cdot 1.15/100 \cdot 1.2 = 4.79$

Which means character As scrap is worth $5000kg \cdot /4.79 = 1043g$ of Alacast. He barters (in which he has Proficiency) with a local merchant and manages to negotiate terms in which the merchant retains (Roll: 4, 9 $\Rightarrow$ 9) $5 \cdot (11 - 9)\% = 10\%$ of the Traded value. He decides to trade and gets 938 grams of Alacast.

1.8   Combat

1.8.1   Life

Every entity has a pool of Hitpoints, which describes how far away that entity is from its failure point. In the case of a Mech, Mount or Human, that would mean being unable to fight or act in an effective manner. Living entities start dying when they have twice as many wounds as hitpoints. How fast something dies is decided by the Gamemaster.

If an entity gets damaged, the result of the damage roll (or the number set by the Gamemaster) is compared the results of rolls made by the outermost layer of defense. If the result of the damage is higher, it, depending on the layer of defense, gets blocked, passes through or overwhelms the layer. If damage passes all layers of defense, it causes damage of a severity of the remaining result. Biological Entities for a Biological Entity this is called a wound.

1.8.2   Rounds

Combat is done in rounds. Each round is 5 seconds long. Every character present acts in turn (determined by circumstances or a Stealth, Perception, Willpower or other situational check) and can usually move and do an action (an attack or action that can be done in the remaining time).

1.8.3   Combat against Groups

The Group is treated as a single Enemy with its pool of Hitpoints being its members. It gets offensive/defensive Levels and modifiers assigned by the Gamemaster.
The fighting character decides (if possible, depending on gear and situation) to fight offensively, defensively or passively and rolls the respective combat stat, then the differences between each of the rolled dice of the combat roll and the groups performance value is calculated.

- Offensive style: For every step of severity in the damage dealt (with an appropriate weapon), a Group member is rendered unable to fight. On Offensive rolls, the group gets a sizebonus correlating to their size and an advantage.

- Defensive style: Dealing damage results in a group member being rendered unable to fight.

1.8.4   Detailed combat

The attacking character makes their to hit check (dexterity for example). The defending character Checks for the corresponding defense (agility for example). If the attacker wins, they hit, on a draw the attack grazes. On a hit, check for damage by rolling the damage level of the weapon, subtract the result of the armor roll and add difference in sizeclasses between weapon and target. If all levels of Defense are breached, the remaining result of the roll is the severity of the inflicted damage.

When sniping, The damage is not inflicted in general, but on a part of the target with a maximum depth equal to the severity of the damage. For the rest see sniping.

1.9   Health and Contamination

1.9.1   Healing

For Living entities Damage points are wounds with the severity being the remainder of the result of the damage roll after all defenses were subtracted +1 for each other wound.
Humans roll a fitness Check per day and compare it against the severity of each wound, while self healing is possible, success lowers the severity of the wound by one step, failure keeps the wounds where they are and depending on the wound and environment, a score much (usually 5) lower than the severity infects the wound. An Infected wound requires a success while selfhealing or treatment to remove the infection, Infecting an already infected wound leads to another wound with half the severity (rounded up) of the original being created. Infected Wounds gain an additional level of severity each day, starting the day they get infected without an upper limit. Treated Wounds not only heal one Level better, they remove the treatment instead of getting infected. Permanently treated wounds, can not infect.
While a Human has equal to or more wounds than their Lifepool allows for, they are unconscious. At Twice that amount they die.

1.9.2 Treatment

Treating of Wounds with a Profession[Medical] Check, where medecine and equipment can get modifiers or Advantages. Many Wounds require Medicine to be treated. Treating them without will not be possible or gen-

erate disadvantage

0-x	inflict a point of infected damage of severity $1+x$ and infect the treated wound
1, 2, 3	another wound of severity 1
4, 5, 6	nothing
7, 8, 9	treat the wound for a day
10	treat the wound until infection
11	treat the wound until infection and heal wound by 1
12	treat the wound permanently and heal wound by 2
13	treat the wound permanently and heal all wounds by 2
13+x	treat all wounds, the treated wound permanently and heal all wounds by $2+x$

Treating Contamination is not as easy and requires 10g of Alacast. Medicine provides no Advantages or Disadvantages but equipment and circumstances do. In all cases Alacast is used to precipitate Contamination from the body, the crudest way is to introduce Alacast to the bloodstream to precipitate it inside the body and hope the body expels it on its own, more refined ways are basically a dialysis or a very specific targetting of crystallization seeds and retrieval of precipitation clusters via for example highly precise syringes. It always lowers Contamination by 1. Roll might be Medicine or Red Biotech, depending on circumstances.

0-x	inflict a point of infected damage of severity $5+x$
1, 2, 3	inflict an infected wound of severity 4
4, 5, 6	inflict a wound of severity 3
7, 8, 9	inflict a wound of severity 2
10	inflict a wound of severity 1
11	lower Contamination by extra 1
12	lower Contamination by extra 2

1.9.3 Medicine

Medicine is used while making a Treatment Check. Each Treatment of a wound using Medicine consumes severity·100g of the medicine and provides the specific bonus. Improvised or unprocessed Herbal medicine requires a check of the related skill first (Herbal/Red Biotech/Blue Biotech and so on) and only works if the check has been successfull. Herbal Medicine provides a bonus based on the degree of success of the first roll, but if the roll fails the Treatment roll is made as if no medicine was present. Improvised Medicine always gives the Advantage of medicine being present but migt or might not help
Reliable Medicine processed in a modern way does not exhibit variation, though AGT Medicine requires a Red Biotech Roll and uses the lower value and the Elixir of Life requires a Black Biotech Roll and contaminates user and patient with 10-Result extra Levels of Contamination (even being able to lower Contamination). There is no strong requirement to make the rolls, not rolling however will result in a result of 0. Alacast used as a Medicine does nothing for the Treatment but does provide +1 on the next daily contamination Check per full Internal

Medicine	Bonus
Herbal	X
Improvised	0/1
Basic	1
Processed	2
Potent Medicine	3
AGT Medicine	5 or X
Elixir of Life	10 or X

Contamination Level*10g used. (if contamination changes, new value counts).

1.9.4 Categories

Every Character has a Category ranging from A to C. So called CatA Humans are usually Supervivo, CatBs are outlaws or for some reason living outside and CatCs are usually Tribals. Every Entity that can be affected by Contamination from buildings over technology to living things have Category ratings. The Contamination-resistances of Categories A, B and C are -1, 0 and 1 respectively.

Entity	Contamination Resistance Level	(internal) Resistance Bonus	Intrinsic Contamination
Cat A	3	-1	0
Cat B	4	0	2
Cat C	5	1	8
Experimental Tech	1	-1	
High Tech	2	0	
Mid Tech	3	1	
Low Tech	4	2	
Base Tech	5	3	

1.9.5 Contamination

Contamination is a term used to describe the amalgamation of technology destroying nanoweapons, radiation, pollution and general environmental hazard. Contamination is airborne, waterborne, bloodborne and permeates pretty much everything in the environment. It is usually assigned a level describing its intensity. Only within the Domes of the Supervivo, inside a Mech or in a similarily purified environment the Contaminationlevel is 0. Levels below 0 are necessary for taking apart Experimental Tech Technology, but getting an area so pure is hard.

Levels 1–3 are rare areas of low Contamination, like Mines, Airlocks, outdoor markets, outdoor settlements and so on.

Levels 4–6 are the most common and usually inhabited by Cat-B

Levels 7–11 are usually inhabited by tribals but sometimes a few Cat-B have to make Camp here

Levels 12–15 are sparsely populated by Hardy Tribals, but usually deserted.

Levels 16 and Higher are Oceans, Deserts, and other hostile areas. Weird Things happen here, but some say there is great treasure. . .

There is no upper limit for Contaminationlevels.

If an entity is in an area with Contamination, every hour it receives the local Contamination as Contaminationdamage.

1.9.6 Contaminationdamage

Anytime the an Entity receives Contamination damage, the character checks ther Contamination Resistance plus all applicable modifiers (external only for external Contamination/internal for both) against the level of damage. If the Check fails, the entity takes one point of Contamination damage (causing a wound with difficulty of the difference between check and Damage and raising Charactercontamination by 1, if applicable). If the check fails with a difference of 10 or more, 10 are split off as additional damage.

Charactercontamination is applied as an internal bonus on the Contaminationresistance Check.

Every day before healing a Characters Contamination is applied as damage. No Charactercontamination is caused, but wounds are taken as normal. If the result was a draw or worse, no selfhealing is possible that day. Once per hour (about 5 minutes into it) a character directly interacts with an entity, the Charactercontamination*2 (+Intrinsic Contamination if handling directly) of that character is applied as Contamination damage, resisted by a Contaminationresistance of the Entity. While directly contacting an entity only the internal resistance applies, direct contact might be piloting a mech, using a gun or shaking someones hand, but not being in a sealed cargo hold, handling a sealed gun, breathing near someone who wears a face mask, or being processed by a decon machine.

1.9.7 Seals

A seal of a level of X lowers the level of the Contamination behind it by X (they are usually from 6 upwards) Contamination still penetrates weak seals. Air has to be purified separately or enriched with oxygen. (One human consumes about 500–600 litres of oxygen per day.) The Domes of the Supervivo for example usually have a level 25 hermetical seal with purified and oxygenenriched air. Examples of human sized external contamination modi-

	1	An alacast infused rag or a shut wooden door (although oxygen may run out)
	2	a breathermask or a simple wooden door airlock (again, oxygen)
	3	a partial gasmask or an airtight airlock
	4	a heavy partial gasmask with Goggles or a basetech air filtering facility
fiers or in-place options	5	a full gasmask
	6	as above + sealed clothing or lowtech air filtering facility
	7	as above + midtech scrubber (a little backpack)
	8	as above + hightech air scrubber or midtech air filtering facility
	9	as above + full mask with air from a compressed air tank
	10+	specially sealed suit with airtank or hightech filtering facility

1.9.8 Average Death

Average death durations, mortality rate and average ending character contamination (with Fitness 3, 0,2,3 starting character contamination respectively and staying in same Contamination Level for one month):

	Category A				Category B				Category C			
C	death	mortality	wounds	con	death	mortality	wounds	con	death	mortality	wounds	con
0	none	0 %	0	0	none	0 %	0	2	none	0 %	0	3
1	none	0 %	0	0.93	none	0 %	0	2	none	0 %	0	3
2	398.40	0.5 %	0	2	none	0 %	0	2	none	0 %	0	3
3	360.86	25.2 %	1	3	none	0 %	0	2	none	0 %	0	3
4	262.98	82.2 %	3	4	none	0 %	0	2	none	0 %	0	3
5	145.98	99.2 %	4	5	none	0 %	0	2.5	none	0 %	0	3
6	74.76	100 %	5	6	none	0 %	0	3.6	none	0 %	0	3
7	40.91	100 %	4	7	302.00	1.2 %	0	4.7	none	0 %	0	3
8	24.86	100 %	4	7.6	314.20	14.2 %	1	5.8	none	0 %	0	3.3
9	17.93	100 %	4	7.9	283.16	61 %	3	6.7	none	0 %	0	4.2
10	14.29	100 %	4	8	195.13	92.9 %	4	7.5	none	0 %	0	5.3
11	11.63	100 %	4	7.9	107.89	99.1 %	5	8.4	358.00	1.2 %	0	6.4
12	9.80	100 %	4	7.7	65.74	100 %	6	9.3	265.29	13 %	1	7.4
13	8.52	100 %	3	7.4	47.70	100 %	6	10	229.25	45.1 %	2	8.2
14	7.42	100 %	3	7	34.66	100 %	6	11	183.48	85.1 %	4	9.1
15	6.59	100 %	3	6.5	25.85	100 %	6	11	117.52	98.7 %	6	9.9
16	6.00	100 %	3	6	19.90	100 %	6	12	70.58	100 %	6	11
17	5.54	100 %	3	5.5	15.58	100 %	5	12	53.38	100 %	7	12
18	5.21	100 %	3	5.2	12.50	100 %	5	12	46.93	100 %	7	13
19	4.84	100 %	3	4.8	10.28	100 %	5	11	37.97	100 %	8	14
20	4.56	100 %	3	4.6	8.95	100 %	4	11	27.45	100 %	7	14
21	4.28	100 %	3	4.3	8.11	100 %	4	10	21.14	100 %	7	14
22	4.09	100 %	3	4.1	7.32	100 %	4	9.3	16.15	100 %	6	14
23	4.00	100 %	3	4	6.59	100 %	4	8.6	12.41	100 %	6	14
24	4.00	100 %	3	4	5.97	100 %	4	8	10.36	100 %	6	13
25	4.00	100 %	3	4	5.54	100 %	4	7.5	9.18	100 %	6	12
26	4.00	100 %	3	4	5.20	100 %	4	7.2	8.24	100 %	6	11
27	4.00	100 %	3	4	5.01	100 %	4	7	7.42	100 %	5	10
28	4.00	100 %	3	4	5.00	100 %	4	7	6.79	100 %	5	9.8
29	4.00	100 %	3	4	5.00	100 %	4	7	6.32	100 %	5	9.3
30	4.00	100 %	3	4	5.00	100 %	4	7	6.04	100 %	5	9
31	4.00	100 %	3	4	5.00	100 %	4	7	6.00	100 %	5	9

1.10 Tech

Electrolysis splits 1 L H2O into 622.22 L Oxygen und 1244.4 using 3.7037 kwh

1.10.1 Blueprints

(rework on its way) Blueprints are required for building(engineering) tasks. To create a blueprint a character needs the appropriate materials (usually a computer of some sort) the time required is based on the complexity of the project. To find out if the blueprint is within the capAttributes of the character check their specific Knowledge against the difficulty of the project. If the Character does not have the Appropriate Knowledge he can check sufficiently similar knowledge with an appropriate disadvantage (1 per techlevel, 3 for different module classes on the same techlevel) The modifier the blueprint provides is the result of the Check/2(rounded up)−3. Even a blueprint with a negative bonus is useful, since it enables the Attribute to build the item in question at all.

A blueprint states the name of the Item, its category and the required materials.

1.10.2   Engineering

(rework on its way) Building something requires a blueprint, the required materials, a workshop or something similar. Check Engineering modified by the blueprint bonus and the conditions (having nothing but a makeshift wrench in the desert might be -5, having state of the art tools in an antigravpowered workshop might be +3). The finished product is [check result · 10%] Efficient. (for example damage per round, Coverage, poweroutput and so on)

1.11   Character Creation

[rework mostly done] First, get a general idea who your character is and what they do. Note your Character name, your name, the name of the Campaign and your concept for the character on the Sheet. This will help you choose in the following steps.

1.12   Step 1 - Categories

Choose Category:

If you have grown up without being in contact with Contamination you are probably a Dome dwelling Category A Supervivo.

Category A	low hp (4) barely any contamination resistance no tech restrictions social/educated skills more likely DNI possible
Category B	medium hp (5) slightly contamination resistant experimental and high tech tend to degrade fast practical/combat skills more likely able to pilot and survive outside
Category C	high HP (6) highly contamination resistant anything above basetech, degrades fast survival/physical skills more likely controlling contamination possible

Note your Category and Lifepoint maximum on your Sheet. You may choose your starting Contamination from 0–5 at no cost and note it as well. (although you will start dying if it is too much, read up on Character-contamination in the chapter Contamination)

1.13   Step 2 - Abilities

Prioritize Social, Physical, Mental, Experience and Training in the order that you think they are most usefull to your character concept in.
In your primary priority you get 25 points, in your secondary priority you get 20 points and in your tertiary priority you get 15 points. The remaining Two Priorities get 10 points.
Within Social, Physical and Mental you can spend your new rating in points to raise an ability by 1, You start with 1 in Everything. Raising Fitness From one to 4 would cost 2+3+4 = 9 points.
With Experience You can Pick a Profession, for example Engineer, Medic, Scientist, or a Knowledge for Example Geology, Local History Italy, Quantum Mechanics, High Tech Shields, and Note them on Your Character Sheet. They start at 0. Professions are Abilities, Knowledges are Skills and cost one point per Level. (Knowledges need to be narrow enough, Knowledge about Technology needs to be specified to Category of Technology and Techlevel. Related Knowledges might give a lesser advantage.)

In the Training Category you can apply your points to the Tech Abilities or the skills from the Skilltree. Every Skill is capped at the level of the node above it. If a Characters Weapon Level is 3, the Characters Projectile Level can not exceed 3. The Skill Direct(Projectile Weapons) itself, in turn can not exceed the Projectile Level.

Unspent Points remain. Every point requires some sort of mention in the Backstory of the Character, more than 3 points in something require a good reason which intertwines with the story of the Character.

Later Points are awarded to the categories depending on roleplay and successfull missions or can be bought from trainers. All such points need to have an ingame reason. Knowledges can only be learned through teachers, sources or years of study, a new Training either needs a Teacher or a long time

1.14   Step 3 - Finishing touches

You get 80 Credits, you can spend these on: Your Mech (see below)
Goods 1:4 (see table in chapter Trade)
XP (1 XP for 10 credits)

1.15   Mechs

1.15.1   Sizes

[human is roughly 0.75]

Sizeclass	Mechclass
0	Human
1-3	Exo
4-5	Tiny
6-7	Very Light
8-9	Light
10-11	Medium
12-15	Heavy
16-20	Very Heavy
21+	Beyond

Mechs have up to (SizeClass+(SizeClass+1))/2 Modules. Each modules weighs about 1 ton, Modules are listed below.

A Mech has an effective Tech Level of the Tech at the 80% point (of modules ordered by Tech Level). Contamination Damage applies to the highest Tech modules first. Each Module can be damaged individually. [rework in progress]

1.15.2   Systems

A Mech needs a movement system, a seal and energy and heat systems and should probably have weapons and Supportsystems
Armor, Shields and Movement Systems cant function together, You can switch between Movement Systems and designate the Order of Layers of Defense (damage taken by one armor, damages all armors though.) threshholds: percentage of movement system on mech for movement speeds. Cargo holds count as 8% lighter per free space Most Values given in the format A/B denote the passive value A / second and the active Value B/ second, for Fuel Consumption is given in Cargo per day / Cargo per minute. For Speeds are in km/h.

1.15.2.1 Costs

Systems(not all of these are in the game right now)

Tech	Credits Cost	Examples
B	4	Water Destillery, Rail based movement system, simple wheels, Manned gun, Ramshield, Floatation, Metal Armorplating , Extra Cargo (10), steam engine, passive cooling
L	5	Lowtech Detox-Decon Equip(LDDE; +1), suspended wheels, tracks, bipedal, Dynamo , Autoturret, Jumpjets, Mech sized Sword, water cooling circle, basicHeatsink
M	6	Shields, flexible/balanced bipedal, Boostjets, Deployable Solar Panel, Sensorarray, MDDE (+2), Base AI system, Mech sized Weaponry (Advanced (Vibro-/electro/Monofilament) Sword), Rocketlauncher, Water venting system, midtech Heatsink
H	7	BCI, Advanced AI, WeaponLaser, Sustained Flight, Advanced Shields, Nano Repair Cloud, Automedic, OVERDRIVE mode, Hightech Heatsink
E	8	Quantum Lookahead Sensors, Blink Teleporter, Timerift Shields (Delays Damage 1d10 rounds), EnergySword

1.15.3 Movement Systems

Type	Modes	Energy	Heat	Speed	Extra
Basetech					
railbased movement system	Rails	0.01/0.02	0/0	50/100	confined to rails
					Accelleration in 15 rounds
simple wheels	Roads	0.1/0.3	0.1/0.2	10/40	requires sufficiently flat terrain
	Offroad	0.5/1	0.3/0.5	5/10	might topple
floatation system	Water	0/5	0/0	0/1	allows movement on water
					Counts double For speed percentage
Lowtech					
suspended wheels	Roads	0.05/0.5	0.15/0.2	30/70	requires sufficiently flat terrain
	Offroad	0.2/.8	0.5/0.8	10/30	might topple
tracks	Offroad	0.5/1	0.5/1.2	30/120	Counts double For speed percentage
	Harsh Terrain	1/2	1/2	10/50	
bipedal	Ground	0.1/0.8	0.1/0.5	3/30	Full Dodge
					Min Tracking: Speed
					2 Arms with rough Gripper
jumpjets	Air	0/10	0/10	0/50	Counts triple for speed percentage
Midtech					
flexible bipedal	Ground	0.3/1.2	0.1/0.5	5/35	Maneuverable like a large Human
					Full Dodge
					MinTracking: Speed
					2 Arms with Robothands
boostjets	Air	0/15	0/20	0/150	acceleration in any direction
					Counts Triple for speed percentage
Hightech					
Spiderwalker	Surfaces	0.8/2	1/3	5/50	moves on any surface
					. . . many legs

1.15.3.1 Requirements

speed	Level	needed%	speed%
lumbering	1	5%	33%
slow	2	15%	75%
normal	3	25%	100%
fast	4	35%	150%
rapid	5	45%	200%

Accelleration is the modified maximum speed divided by 5 per round unless otherwise stated

1.15.4 Seals

Tech	Seal Level	Cost(round up)
Base	6	3+0.1*Module
Low	13	7+0.2*Module
Mid	21	12+0.3*Module
High	30	18+0.4*Module
Experimental	50	30+0.8*Module

1.15.5 Heatsystems

Type	Storage	Dissipation	Signature	Costs	Extra
Basetech					
Small Heatsink	15	0.2	Storage		
Lowtech					
Radiator Vent	3	1/6	Vented·2	0.2/0.8	
Large Heatsink	20	0.2[15]0.5	Storage		
Midtech					
Optimized heatsink	25	0.4[15]0.8[25]1	Storage		
Coolant Dump	30	1/15	Storage/30	0.3/1	Requires Decoy Rating of 3 uses 0.1 Water from Cargo and deploys 5m Thermal Wall of Strength 30 while active
Hightech					
fractal heatsink	30	0.5[15]1[30]1.5	Storage		
OVERDRIVE	80	0.5	Storage	Filling up	when at heatcap, enter Overdrive Mode able to act (including movement) at double speed while spending Heat instead of gaining When All heat is spent. Mech shuts down for 2d10(added) rounds and OVERDRIVE is damaged (requires 10 min, Check[8] to repair) (requires Level 4 Specialty Gadgets)

1.15.6   Energysystems

Type	Energy	Heat	Storage	Consumption	Special
Basetech					
Burner	-0.01/-0.5	0.1/5	20 H	0.1/0.01	Fuel:Coal
Steam Engine	2/5	-1/-2.5	5 Energy	Heat	10% Efficient with Heat under 50%
FlyWheel	0/1	0/X	10 E	0.01 of stored	retrieves half, generates
					Heat 2:1 while retreiving
Crank	0/0.001	0/0		Manual Labor	Size 0.01
Lowtech					
Combustion Motor	0.5/3	0.5/3		0.01/0.005	Fuel:CombustionFuel
Midtech					
PEM	0.5/3.5	0.1/0.5		0.05/0.02	Fuel: HFC
Solar Panel	0/0.03	0/0	50 E	Sunlight	Contamination might lower yield
					Deployment takes 1 Energy or
					5 Minutes outside Labor
					1 Heat per Energy Retrieved
Hightech					
Reactor	1.2/2	0.8/1.5	100 E	0.001/0.001	Fuel:Fuelrods
					0.5 Heat per Energy Retrieved
Capacitor		X	500 E		0.1 Heat per Energy Retrieved

a 10L-HydrogenFuelCell(HFC-10) Cylinder 20cm diameter, 38 cm height =11.94L(Midtech), used to power up

basic systems (like hydrogen gas pumps for the PEM Stacks)

1.15.7   Shieldsystems

ShieldModules can be dedicated to specific Tasks, usually Coverage (C) and Reboot(R), the total amount of Modules is referred to as M, while X relates to Special, see below the Table

Type	Level	Cost	Overwhelm	Coverage	Reboot	Coldboot
Basetech						
Applique-Armor	3	0/0	destroy F block	5+15·C	-	5 min + Check[Engineer](5)
Lowtech						
Deflector	X	1E/5E+3H	-	radius 2·C m	10s	instant
Basic Shield	1	0.5E/0.2E	5H, dampen, disable	12+C·8	C-R + 5E	5r
Midtech						
Shield	2	1/0.5(2H)	7H, dampen, disable	10+C·13	12/R (round up)	10 E
Hightech						
Advanced Shield	4	1/2(3H)	15H, block, disable	15+C·10	8-R + 10E	5r

Level: see 3d10 Table in the beginning of the Book
Cost: for Charging/Active states, per round
Overwhelm: Heat that might be released plus
      destroy X destroys X modules
      F means the difference by which the Layer of Defense Failed
      block means pass through no damage to the next Layer of Defense
      dampen means pass through F damage
      disable means that the system is disabled until it is booted again

Strain: Heat Costs in Parenthesis are generated everytime the shield successfully blocks damage. D is the Incoming damage.

1.15.8   Armor

Type	Level	HP	Coverage	Damage	Special
BaseTech					
Extended Cargo	1	$\sqrt{M}$ rounded down	14·M	destroy 1	7 Cargo Spaces (Cargo is destroyed with the modules)
Metal Plating	4	5	5+10M	destroy F	counts twice towards movement system percentage
Lowtech					
Composite	4	$2 \cdot \sqrt{M}$ rounded	$12 \cdot M$	destroy 1	
Midtech					
Active	1/4	5	12+10·M	short out 1	draws 10 Energy when hit 1h Check[Electronics] (>=8 to fix; <=2 to destroy)
Speed	2	3	20+7M	brick 50%	1E/50km/h; Vent 1H/ 50 km/h (increase signature by vented Amount) 30m 0.1MTS Check[Engineer] (>=9 to fix; <=5 to destroy)
Hightech					
Advanced	5	X	10+15·M	shorts out 1 Energy System	1h Check[Electronics] (>=8 to fix; <=2 to destroy)

1.15.9   Weapons

Weapon modules can also be dedicated

Melee weapons rely on the movement System, so their costs are in meters that are used to attack rather than move

Type	Level	Size	Size Class	Damage Type	Costs	Falloff	Check
BaseTech							
Metal Sword	2	M	2*S	P S	30 m	2m*S	Piloting
Manned Turret	X	1	X	X	manual labor +X	X	X
Lowtech							
Heavy Machinegun	4	1	3	P R	0.5H 0.005A	50/100/200/500/1000	Projectile.Direct
Light Artillery	3	4	15	P A	5E 10H 0.2A	1k/3k/5k/7k/10k	Projectile.Indirect
120mm Smoothbore	5	4	8	P S	5H 0.05A	500/1k/2k/3k/4k	Projectile.Direct
Midtech							
Autocannon	2/4	3	7	P/ P R	0E 2H 0.01A / 1E 5H 0.15A	per 400m	Projectile.Direct
Basic Pulse Laser	2	2	9	E S	5E 8 H	per 200	Energy.Pulse
Precision Cannon	2	3	13	P S	5E 10H 0.1A	per 1k	Projectile.Direct
Rocket Launcher	4	2	15	P S	5H 0.12A	per 300m	Rocket.Dumbfire
Hightech							
Rocket Platform	3	3	16	P S A	5H 0.2A	-	Rocket.Guided
Railgun	2	5	14	P S	15E 5H 0.01 A	100/1k/3k/8K/20k	Projectile.Direct
Advanced Pulse Laser	0	3	11	E S/R	7E 8H	per 400	Energy.Pulse
Ramping Beam Laser	X	2X	3	E R	XE 2XH	per 5k	Energy.Beam

Specials: Swords: Pierce Shields that are not modulated to their damage type

Manned Turret: X Depends on the mounted gun and the skill of the gunner

Light Artillery: Attacks take 1s per 300m distance, rounded up, minimum range 100m

120mm Smoothbore: Can only fire every second round, requires Indirect for targets further away than 2k

Autocannon: for Burst (alternative values) mode Mech has to stand

Basic Pulse Laser: only sizeclass falls off
Precision Cannon: Allows Sniping
Rocket Launcher: Ignores Shields
Rocket Platform: Ignores Shields, Will hit if Lock is sustained (Roll strengthens Lock)
Railgun: requires Indirect for targets further away than 2k, allows sniping
Advanced Pulse Laser: only sizeclass falls off
Ramping Beam Laser: X goes up when shooting, goes down when not shooting, X is capped at M, allows sniping, only sizeclass falls off

1.15.10   Misc Modules

If a Module is smaller than a Module slot its size is less than 1

1.15.11   Basetech

Water Distillery
Energy Cost: 2
Heat: 10
Size: 0.5
Turns 10L of Dirty Water into 10L of Contaminated Water per hour
Requires Detox Rating of 1

Cargo compartment
Cargo Space: 10

1.15.12   Lowtech

Basic Food Processor
Energy Cost per operation: 1800 (3e/s)
Heat: 5/s
Size:0.5
Detoxes 1kg of Food in 10 minutes
Requires Detox Rating of 2

Basic Air Filter
Energy Cost per operation: 2400 (4/s)
Heat: 2
Size:0.5
Decontaminates and pressurizes 5000 L of air in 10 minutes or double without pressurizing.
Requires Decon 1

Basic Decon Equipment
Energy Cost per operation: 18k (5/s)
Alacast Cost per operation: 10g
Heat: 10
Size: 0.5
Allows to turn Contaminated Objects into uncontaminated objects at the rate of 10kg/h, if suitable
Required Decon 2

Optical Sensors
Energy: 1
Size: 0.25
Rating: 100
Provides Targetting Lock is obtained
Visual Lock: Distance/Rating <= Target Size (+Camouflage and visual impairments)

Thermal Sensors
Energy: 1
Size 0.25
Rating 100
Thermal Lock: Distance/Rating $<=$ Target Thermal Signature

Basic Computer System
Size: 0.5
Energy: 0.1
Module: Processor or Memory

1.15.13   Midtech

ComputerSystem: Size: 0.1 Energy: 0.1 Module: Processor or Memory

Nondeterministic Computation Core:
Size 0.5
Energy: 0.5
Module: Processor
Requires Black Biotech 3

Extended Decon Equipment
Energy Cost per Operation: 36k (10/s)
Alacast Cost per Operation: 5g
Size: 0.75 Allows to turn Contaminated Objects into uncontaminated Objects at the rate of 100kg/h if suitable
If used on Humans, Roll Red Biotech, on 9 or more, removes one Charactertaint.
Always Inflicts Wound of Level 11-RollResult
Requires Decon 3

Extended Detox Equipment:
Energy Cost per Operation: 36k (10/s)
Size 0.75
Allows Detoxing and Preparing of up to 1t/h
If used on Humans, Roll Red Biotech, on 6 or more, remove all Infections and appropriate Toxins.
Always Inflicts Wound of Level 8-RollResult
Requires Detox 3

Automedic: Energy Cost: 6k(variable - 10/s for 10 min)
Size: 0.75
Supplies tools of Medic/ supplies good operating conditions for Medic / reduces the use of Medicine by half / allows stasis
Roll Red Biotech, if the roll surpasses the wound, supplies an operating character with a temporary Medic skill and double Advantage or autonomously attempts the procedure at Level 3 mod -1.
If not, Instead supplies one Advantage.
Software may supply the Red Biotech roll even autonomously.
Stasis is automatic and slows down the daily/hourly tickrate (including Healing and Contamination) by a factor of 10 (additive) for every energy point per second. This is a medical coma, not timedilation.

1.15.14   Hightech

Advanced Detox-Decon Equipment
Size: 1
Energy Cost per Operation 72k (variable 20/s for 1 h)
Alacast Usage per Operation if Detainting: 1g/t of raw material, 10g/human
Detoxes and Detaints up to 5t of material, including air and water.
Living Entities suffer no harm, and on a 4 or more on a Red Biotech Roll lose one Taint level. Furthermore all

Infections and Appropriate Toxins are removed.
Requires Detox 4 and Decon 4

Advanced AutoMedic
Energy Cost: 3k (variable - 5/s for 10 min)
size: 1
Allows Medic Rolls/ supplies very good operating conditions for Medic Rolls/ reduces the use of Medicine by 90%/allows Ressurection
To Treat a wound:
Roll Red Biotech, if the roll surpasses the wound, supplies an operating character with a temporary Medic skill and triple Advantage or autonomously attempts the procedure at Level 4 mod -1.
If not, Instead supplies one Advantage or autonomously attempts the procedure at Level 2.
Software may supply the Red Biotech roll even autonomously.
To Ressurect:
requires 1g of EOL per total spent points on a character (or 20* the average level of an NPC) Roll Black Biotech, every 15% missing from the corpse or order of magnitude in days that has passed since the time of death lowers the final score by 1. If the roll succeeds, place 5 wounds of severity 15-result on that character, they lose one level from the highest Ability and one from the highest Skill and are alive again. If the roll does not succeed, 5% of the total corpse and the dosage of EOL is lost.