

# THE RHYLANOR EXPRESS

A CAMPAIGN FOR TRAVELLER

HOUSE RULES

By David Nelson

# RHYLANOR EXPRESS RULES SUPPLEMENT

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## RHYLANOR EXPRESS:

# SECTION 1---SKILLS AND CHARACTER GENERATION

## 1.1--TASK SYSTEM

Consider the Standard Task System to be as follows: roll 2d6, add skill and attribute modifier

Easy	6+
Average	8+ (Effective Range in Combat)
Above Average	10+ (Long Range in Combat)
Hard	12+ (Extreme Range in Combat)
Very Hard	14+
Daunting	16+
Near Impossible	18+

## 1.2--ABILITY MODIFIERS

Ability Score bonus or penalty is standardized to the following:

1 or less:	-2
2-5:	-1
6-8:	0
9-12	+1
13 or more	+2

## 1.3--CAREER MODIFICATIONS

### 1.3.1--BONUS SKILLS (All Careers)

**Special Duty:** Each term, allow each character to roll once for "SPECIAL DUTY." The target number is 8+. If he succeeds, he gets 1 additional skill for the term. If his Education is 8+ he may roll this bonus skill from another career's skill list.

**High Results:** anytime a character rolls a "natural" 10, 11 or 12 on his Survival, Commission/Position, Promotion or Re-enlist roll, he gains a bonus skill for the term.

### Level 0 Career Skills

When character generation is otherwise complete, each character will get a level-0 in each of his chart 2 "Service Skills" skill that he does not already have (except Jack-o-T, but see J-o-T cascade). If he already has one example of a cascade skill, he may take level 0 in another. If a character does not have any gun combat skill when entering play, grant him Pistols or Rifles at level 0.

### 1.3.2---SPECIFIC CAREERS

**Army:** change ATV and Air/raft to Vehicle. Change Army's Rifle to Rifles and Army Lt.'s SMG to Machineguns.

**Marines:** change ATV to Vehicle and Marine Lt.'s revolver to Pistols.

**Scouts:** change Air/raft to Vehicle

**Flyers:** change the Brawling result in the Flyer career, table 2 (Service Skills) to Forward Observer, and allow it to be the Forward Observer Cascade listed below.

**Rogue:** change Ship Tactics to Tactics

**Scientist:** each scientist should choose 1 academic or scientific field of study. For each term he serves, give him 1 skill level in the named field.

## 1.4-- SKILL MODIFICATIONS

### 1.4.1---GENERAL SKILL NOTES

**Ship Tactics:** Ship Tactics and Fleet Tactics are folded into a single skill called Space Tactics.

**Forgery Skill:** Forgery Skill can be used for leaving fake information on computers.

**Navigation Skill:** navigation skill can be used to operate Battle-Scanners and the Spotting Sensors on Star-ships.

**Gravitics and Engineering:** Engineering is used to repair Jump Drive, Maneuver Drive and Power Plants. Gravitics is used to repair Grav Vehicles and Maneuver Drives. Engineering minus 1 can be used as Gravitics on Grav Vehicles.

**Gunnery:** Gunnery skill minus 1 can be used to fire Energy Artillery and TAC missiles. Energy Artillery minus 1 can be used to fire starship weaponry.

### 1.4.2---GUN COMBAT REDEFINED

When a "Gun Combat" skill is granted, the player should pick from one of the following cascade skills:

**Pistols:** includes body pistols, auto-pistols, revolvers and snub pistols

**Rifles:** includes shotgun, carbine, rifle, auto-rifle, ACR, accelerator rifle, assault rifle, light assault gun, rifle grenades and gauss rifles

**Machinegun:** includes SMG, auto-rifle, light machinegun, medium machineguns, heavy machinegun, Gatling guns, auto-cannons and VRF gauss gun

**Lasers:** includes all personal laser weapons, as well as minor laser vehicle weapons

**High Energy:** includes PGMP's and FGMP's and minor vehicle plasma and fusion guns.

**Launchers:** includes grenade launchers, recoilless rifles, rocket launchers and TAC missiles of all sorts.

**Field Artillery Gunner:** allows firing all sorts of large cannons, mortars, howitzers, multiple-rocket launchers (MRL), and mass drivers, as well as TAC missiles. This skill can only be taken by military characters (Army, Navy, Marines, Flyers, and Sailors).

**Energy Artillery Gunner:** allows firing vehicle mounted laser, plasma and fusion guns as well as meson accelerators. This skill can only be taken by military characters (Army, Navy, Marines, Flyers, and Sailors). This skill can act as Gunnery Skill, at a -1 level, for firing small craft and starship energy weapons.

### 1.4.3—Blade Combat Redefined

When a "Blade Combat" skill is granted, the player should pick from one of the following cascade skills:

**Dagger:** includes dagger, plastic knife and blade

**Sword:** includes sword, cutlass, broadsword, and foil (Marines call this skill **Cutlass**)

**Spear:** includes bayonet, spear, halberd, pike (after TL-4, this skill is called **Bayonet**)

**Cudgel:** includes cudgel, club, staff

**Axe:** includes hand axe, battleaxe and halberd

#### 1.4.4---Other New and Modified Cascades

**Electronics Cascade:** if a character gets Electronics skill, he may choose from Electronics, Gravitics, or Demolitions.

**Forward Observer Cascade:** if an Army or Navy character gets a Forward Observer skill result, he can choose any of these skills;

**Forward Observer:** allows directing distant fire onto targets

**Field Artillery Gunner:** allows firing all sorts of large cannons and missiles

**Energy Artillery Gunner:** allows firing vehicle mounted energy cannons

**Recon:** allows you to spot enemies and move stealthily

Note that both Recon and Forward Observer apply skill level to Spotting enemies, but Recon is also used for stealth but F-O for calling in Indirect Fire.

**Forgery Cascade:** if any character gets a Forgery skill result, he may choose Forgery, or Intrusion, or Disguise.

**Jack of All Trades Cascade:** after Jack-of-All Trades skill is received once, subsequent results of this skill can be taken as Space Tactics, Recon, or Survival.

**Leader Cascade:** if a character gets a Leader skill result, he may take either Leader, Recruiting, Instruction or Interrogation.

**Vacc Suit Cascade:** if a character has Vacc Suit 1, subsequent Vacc Suit Skill can be taken as Vacc-Suit or Zero-G Combat, or Battle-Dress

**Vehicle Cascade:** character may choose Aircraft, Grav, Wheeled, Tracked, Watercraft, or Ship's Boat. Once he has level 1 in one of those 6, subsequent result may also be taken as Vacc Suit.

#### 1.5—SKILL ADVANCES

Each time a character successfully uses a skill, he should put a small checkmark in pencil next to it. There is no need to put more than one check next to any one skill. At the end of the session, he picks 1 skill that has a check mark in order to try to advance the skill. He rolls 1d6 and if the number is higher than the current level of the skill, his skill improves one level. Whether he succeeds or fails, he erases the check mark next to that particular skill. Level 0 skills still fail to advance if a 1 is rolled. Occasionally, the referee may allow attempts at two skills for one session, but only if the session was very productive and covered a long period of game time (at least 3 months).

# RHYLANOR EXPRESS: SECTION 2--SPACE COMBAT

## 2.1 GAME SCALE:

- A. Time: each turn equals 20 minutes
- B. Distance: Each hex (or inch) equals 60,000km (1/5 light-second)
- C. Thrust: each G-factor is equal to 1 gravity.
- D. Units: each marker equals a single ship or small craft

- 0 Hexes: Boarding Range
- 1 Hex to 5 Hexes: Short Range
- 6 Hexes to 15 Hexes: Long Range
- 16 Hexes or Beyond: out of weapon range

## 2.2 DETECTION AND SURPRISE

When two groups of potentially hostile ships are within practical combat range of one another (say less than 60 hexes), a detection check is made. Each ship must declare whether they are attempting to be quiet or active. Any side that declares itself active (using active sensors) is automatically detected by the other. Then, the navigator of each ship may make a throw to detect each enemy ship. He rolls 2d6, adding his Navigation or Computer skill and his ship's computer rating. If he is active, he detects quiet enemies on an 8+, if he is quiet, he detects quiet enemies on a 12+.

If all the ships on one side are undetected, then that side is said to have gotten surprise. If a side has surprise, then it may either escape undetected, or it may set its ships at any point between 6 and 30 hexes from the enemy ships and begin the battle, declaring whether itself or the enemy is declared the Intruder or Native.

If each side detects at least 1 ship on the other side, then there is no surprise, and proceed to the Commencing Combat section below. If neither side detects any enemies, play another Detection round, and repeat until a result is obtained.

## 2.3--COMMENCING COMBAT

If neither side has surprise, the combat begins with 30 hexes between the squadrons, with each ship traveling at a vector of 4 hexes toward one another. If the role-playing scenario dictates differently, then adjust accordingly. Count the number of ships on each side and add the Space Tactics skill of the overall commander. The side with the higher total decides which side will be the Intruder and which the Native for the course of the combat.

## 2.4--TACTICS POOLS

**Fleet Pool:** The overall squadron commander of each side gets a number of chips equal to his Space Tactics skill and his Intelligence Bonus. He may spend a chip at any time to increase or decrease any roll made by either side. The chip must be spent before the roll is made, and no more than 1 Fleet Chip may be spent per side per roll.

**Ship Pool:** the captain, pilot, navigator, chief gunner and chief engineer of each ship total their Space Tactics skills, this is called the Ship Pool can be spent during the battle to give a modifier to any roll (before or after it is rolled). The modifier can be a positive or negative, and can be applied to any roll made by or against that particular ship. Any

number of available Ship Pool points can be spent per roll by each side. The only exception is that damage location rolls cannot be affected by tactics pool points.

## **2.5 TURN SEQUENCE**

### **INTRUDER PLAYER TURN**

- A. INTRUDER MOVEMENT: intruder moves his ships and small craft
- B. INTRUDER LASER FIRE: intruder may fire his laser weaponry.
- C. NATIVE LASER RETURN FIRE: native player may fire his laser weaponry against ships that have fired at him or at incoming missiles.
- D. INTRUDER ORDINACE LAUNCH: intruder may launch missiles, sand, or small craft. Missiles that contact enemy ships explode at this phase. Intruder may attempt damage control.

### **NATIVE PLAYER TURN**

- A. NATIVE MOVEMENT: native moves his ships and small craft.
- B. NATIVE LASER FIRE: native may fire his laser weaponry.
- C. INTRUDER LASER RETURN FIRE: intruder player may fire his laser weaponry against ships that have fired at him or at incoming missiles.
- D. NATIVE ORDINACE LAUNCH: native may launch missiles, sand, or small craft. Missiles that contact enemy ships explode at this phase. Native may attempt damage control.

## **2.6 MOVEMENT**

Ships and small craft all move using a vector movement system. The distance and direction moved during the movement phase is based on the distance and direction moved during the previous game turn. In addition to its current position marker, each ship must have a previous position marker and a future position marker.

- A. The past position marker is moved to the hex containing the present position.
- B. The current position marker is moved to the hex containing the future position marker.
- C. A line is visualized from the past position marker to the present position marker. It is extended in the same direction for an equal distance and the future position marker is placed on the end of that line. That is the predicted position on the next turn.
- D. If a course change is desired the future position marker can be moved 1 hex for each G-factor which the ship has.
- E. Gravity: if worlds appear on the map, each hex around the world has a 1-hex gravity vector. So each time a ship passes through a hex immediately surrounding a world, it must move its future position marker 1 hex in the direction of the world when it passed through that hex.

## 2.7 LASER FIRE

During a player's Laser fire phase, he may fire none, some or all of his laser weapons (including particle accelerators, plasma and fusion guns) at an enemy within 15 hexes or at any missiles locked on to a friendly ship within 6 hexes. During the Return Fire phase, a ship may only fire at ships that have fired at it, or missiles that are locked onto it. Each turret or battery may fire at only 1 ship during one phase, but many target multiple incoming missiles.

Roll to Hit: each gunner rolls 2d6 for each laser

Add: Gunner's gunnery skill

Add: Attacking Ship's computer rating

Add: 1 if the target is 1000 to 1900 tons

Add: 2 if the target is 2000 or more tons

Add: 1 if the weapon is a plasma gun

Add: 2 if the weapon is a fusion gun or particle accelerator

Add: +6 if the weapon is a beam laser battery

Subtract: Defending ship's Pilot Rating

Subtract: Defending ship's computer rating.

Subtract: 2 for each canister of sand protecting target (up to -6)

Subtract: 1 if attacking ship is protected by sand

Subtract: 1 if the weapon is a pulse laser.

Subtract: 2 if the target is a 20 tons or less (launch, fighter, missile, vehicle)

Subtract: 1 if the target is 30 to 95 tons (ship's boat, cutter, pinnace, shuttle)

Subtract : 1 if target has armored hull

Subtract: 2 if target has heavily armored hull

Target Number: Short Range: 8+

Target Number: Long Range: 12+

Any natural roll of 12 (box cars) automatically hits, any natural roll of 2 (snake-eyes) automatically misses.

Each Beam laser that hits will roll once on the damage table. Each Pulse Laser or Plasma gun that hits will roll twice on the damage table. Each Fusion gun or particle accelerator that hits scores 3 hits. Each laser battery that hits will roll 1d6 times on the damage tables.

## 2.8 MISSILE FIRE

Missiles are launched on the ordinance launch phase but the vector and position are not marked on the table. Instead, they are said to be "locked on" to a particular target. If the target was 5 or fewer hexes from the launcher, then the missile will impact on the ordinance launch phase of the firing ship's next turn. If the target was 6 to 15 hexes from the launcher, it will impact in the ordinance launch phase of the 2<sup>nd</sup> turn after the launch. If it passes through protective sand, it has a 1 in 6 chance of detonating early, causing no damage to the target ship. If it does impact the target ship, it inflicts 1d6 hits on the target, minus 1 hit if target is Armored, -2 hits if target is Heavily Armored. Missiles do not need to make a "to hit" roll.

## 2.9 COUNTER-MISSILE FIRE

During a ship's Laser Return Fire Phase, it may fire at any missile that has "locked on" to it. The gunner rolls a standard sort range attack, with modifiers listed in the chart, and, if he hits, 1 missile is destroyed. A laser battery destroys 1d6 missiles. When attacked by



laser fire, missiles are considered to have the computer rating of the launching ship at the time of firing, but to have no pilot rating, but missiles do of course count as being 20 tons or less. During the phasing player's Laser Fire phase, any ship within 6 inches of a friendly ship that has missiles locked onto it (including the target ship itself) can also attempt to destroy incoming missiles.

## 2.10 SAND CASTERS

When a canister of sand is launched on the ordinance phase, it creates a cloud of sand which protects the ship as long as it maintains its current vector. The sand imposes a -2 on enemy laser fire at the ship per canister of sand in effect, up to a total of -6, but also inflicts a -1 to laser fire shooting through the sand from the protected ship (-1 maximum). Each sand caster on board can launch only one canister of sand per turn, in the ordinance launch phase. Once the ship changes vector, all protective sand is lost. Missiles passing through a cloud of sand have a 1 in 6 chance per canister (up to 3 in 6 maximum) of detonating early and not affecting the defended ship. Particle Accelerators ignore the effects of sand.

**RELOADING:** each missile launcher or sand caster carries 3 missiles or canisters in ready position. Once they have been shot away, the weapon must be reloaded. It takes a gunner one turn per missile or canister to reload. So, for example, a triple turret with three missile racks carries 9 missiles. Once all 9 are shot away, the turret must be reloaded. A single gunner could then load 1 missile one turn, and fire 1 missile the next. 9 gunners could reload the entire turret in one turn.

## 2.11 DAMAGE

Each hit scored in combat requires a roll on the hit location chart:

2d6 Rolls	STARSHIP	SPACESHIP	SMALL CRAFT
2	Power Plant	Power Plant	Drive
3	Maneuver	Maneuver	Drive
4	Jump	Maneuver	Drive
5	Fuel	Fuel	Drive
6	Hull	Hull	Cabin
7	Hull	Hull	Computer
8	Hold	Hold	Cabin
9	Computer	Computer	Cabin
10	Turret	Turret	Weapons
11	Turret	Turret	Weapons
12	Critical	Critical	Critical

Power Plant: power plant is damaged, no laser fire, jump or maneuver until repaired. A second hit will destroy the plant.

Small Craft Drive: power plant and maneuver damaged, ship may not fire lasers or maneuver until repaired, second hit will destroy drives.

Maneuver: maneuver rating drops by 1-G until repaired. A drive that drops from 1-G to 0-G can still be repaired, but a further hit will destroy it.

Jump: jump rating drops 1 until repaired. A drive that drops from j-1 to j-0 can still be repaired, but a further hit will destroy it.

Fuel: 10 tons of fuel are lost

Hull: hull punctured and decompression occurs. Each ship has a number of hull points equal to 1 per 50 tons of hull. Each hull hit subtracts 1 hull point. Once all the hull points are gone, every subsequent hull hit is a critical hit. (See Armored and Heavily Armored hulls).

Small Craft Cabin: cabin is depressurized, all crew not in vacc suits killed. Subsequent cabin hits are considered critical hits.

Computer: computer drops 1 level. If it reaches level 0, no laser fire or jump is allowed until the computer is repaired. "Bis" computers are considered equal to their model number. If a computer drops from Model 1 to Model 0, it can still be repaired, any further hits will destroy it.

Hold: 10 tons of cargo destroyed or 1 carried vehicle or small craft damaged (2<sup>nd</sup> hit destroys).

Turret: one turret is damaged and unusable until repaired, if a damaged turret receives another hit, it is destroyed.

Weapons: all weapons on a small craft are damaged, second hit will destroy.

Critical: check the critical hit chart.

### CRITICAL HITS

1d6 Rolls	STARSHIP	SPACESHIP	SMALL CRAFT
1	Power Plant	Power Plant	Drive
2	Maneuver	Maneuver	Drive
3	Jump	Maneuver	Drive
4	Crew	Crew	Crew
5	Computer	Computer	Computer
6	Explode	Explode	Explode

Power Plant: power plant is permanently destroyed, no ship functions operate

Maneuver: maneuver drive is permanently destroyed, travel on this vector forever

Jump: Jump drive permanently destroyed

Crew: each crew member is attacked with a penetration 8 attack and has a 1 in 6 chance of being blown out of the ship into space.

Computer: the computer is permanently destroyed, no laser fire or jumps permitted.

Explode: the ship explodes killing all aboard.

### REPAIRS

Damage Control: during combat, engineers can attempt to repair battle damage. One attempt can be made per combat turn, during the ships own Ordinance Launch Phase. Roll 2d6, adding Skill and Intelligence Bonus to the roll. An 8+ means the item has been repaired one level. Engineering skill is used for Jump Drive, Maneuver Drive or Power Plant. Electronics Skill is used for Computer and Laser Weapon hits. Mechanical Skill is used for Missile launchers, Sand casters, and Hull hits. Damage control will hold until the end of the battle. Patched jump drives double the chance of miss jump.

Permanent Repairs: consider items that have taken only one hit to be repairable for free from spares on board. Items that are totally destroyed must be replaced for full build price. Items that were hit more than once, but not destroyed will be replaced at a price of 10-60% of new price (1d6x10%).

## 2.12--SHIP CONSTRUCTION AND SPECIAL FEATURES

**CONSTRUCTION DEFAULTS:** the LBB2 or Traveller Book ship construction is the method used for all ship constructions. Listed below are the modifications and special features. Most military ships are limited to 2000 tons, since they need to have Jump-3 and Maneuver 3, but merchant transports can be built to 5000 tons.

**COMPUTERS:** the computer programs are to be ignored and only the model number of the computer will have an impact.

**LASER BATTERIES:** a set of 3 triple beam laser turrets can be built as a linked unit called a Laser Battery. Rather than firing as 9 separate weapons, a single attack roll is made with a +6 to hit. If it does hit, it will inflict 1d6 hits.

**PLASMA TURRET:** plasma gun can be purchased for 1.5 Mcr and must be mounted alone in a single turret. It is fired as part of laser fire, but is +1 to hit and scores 2 hits. However, it has a maximum range of Short (5 hexes). All other rules and modifiers applying to lasers also apply to plasma guns.

**FUSION TURRET:** fusion gun can be purchased for 2 Mcr and must be mounted alone in a single turret. It is fired as part of laser fire, but is +2 to hit and scores 3 hits. However, it has a maximum range of Short (5 hexes). All other rules and modifiers applying to lasers also apply to fusion guns.

**PARTICLE ACCELERATOR:** a particle accelerator can be purchased for 3 Mcr and must be mounted alone in a single turret. It is fired as part of laser fire, but is +2 to hit, ignores sand, and scores 3 hits. All other rules and modifiers applying to lasers also apply to particle accelerators. A turret mounting a particle accelerator requires 5 tons for the power assembly and fire control, rather than the usual 1 ton.

**ARMORED HULL:** a ship can be built with an armored hull. The hull will cost double the normal hull price. An armored hull can take twice as many hull hits as a normal hull before further hits become critical. Also, laser fire suffers a -1 to hit against an armored hull, and the total number of hits a missile scores will be reduced by 1. Planetoid ships are always considered Armored Hulls. An armored hull ship must also have a power plant rated 1 step above what is normally required for the drives.

**HEAVILY ARMORED HULL:** a ship can be built with a heavily armored hull. The hull will cost four times the normal hull price. A heavily armored hull can take three times as many hull hits as a normal hull before further hits become critical. Also, laser fire suffers a -2 to hit against an armored hull, and the total number of hits a missile scores will be reduced by 2. For the cost of a hull of the same size, a planetoid ship can be "buffered" and is treated as an armored hull.

A heavily armored hull ship must also have a power plant rated 2 steps above what is normally required for the drives.

### SHIPS IN GROUND COMBAT

When ships and small craft enter the atmosphere and engage in combat (usually against vehicle weapons), use the Personal Combat rules for attacks. Standard Hulls are Armor

40, Armored Hulls are Armor 50, and Heavily Armored Hulls are Armor 60. Roll normal on the vehicle damage tables, ignore all surface hits and minor penetrations. Treat Major penetrations as a normal roll on the starship damage table. Starship weapons will need an 8+ to hit their targets, add in Computer model and gunnery skill. If a starship or small craft computer is operating, the attack ignores target's Vehicle movement penalties. On a hit, a Beam laser inflicts 1 major penetration, a Pulse Laser or Plasma Gun 2 major penetrations, a missile or laser battery 1d6 major penetrations, and a fusion gun 3 major penetrations.

# RHYLANOR EXPRESS:

## SECTION 3: PERSONAL COMBAT RULES

### 3.1--SCALE:

The weapon statistics in the gear book are all expressed in meters. On the table top, 1cm will equal 1 meter, or 2 inches will equal 5 meters. For published deck plans, use the 1 square equals 1.5 meters. Each combat turn is 15 seconds. For outdoor battles, especially those involving mostly vehicles, increase ground scale to 1 inch equaling 10m or 100m.

### 3.2-- SURPRISE AND SPOTTING

When two potentially hostile groups encounter one another, each side must be assigned one of five dispositions: Stealthy, Totally Concealed, Cautious, Concealed, or Noisy. General guidelines are given below, but the referee has the final word.

**Stealthy:** entire group is made up of pouncer animals, or military/mercenary light infantry with a Leader who has Tactics skill, or a small group of hunters, assassins, ninjas, sneak thieves all with Recon skill. If all characters are in Battle Dress or Combat Armor with Stealth Package, they are automatically Stealthy.

**Totally Concealed:** any group that is not moving, not firing, and cannot be seen at all with the naked eye is considered Totally Concealed. Only a scanner can spot the totally concealed.

**Cautious:** Group on foot, with less than 20 members, who are attempting to approach quietly. 1-2 grav vehicles, moving only 1-2 meters off the ground, going very slowly could also count as Cautious.

**Concealed:** any group that is not moving and is hidden by dense plants, curtains, camouflage netting, etc, which allows the possibility of being seen, even if difficult, is considered Concealed.

**Noisy:** any group that does not count as any of the other dispositions is called noisy.

Once disposition is known, each side rolls to detect the other. The character with the highest Recon, Hunting or Forward Observer skill on each side rolls (2d6+skill+scanner bonus) to spot the other. Also, if a Battle-Scanner is being used, the character may substitute Navigation or Computer skill to spot.

- If a character is wearing Reflec Armor, even under other armor, he will be automatically spotted by a scanner (hand or vehicle).
- Battle Scanners give +2 to Recon Roll (+4 for Advanced) and give the ability to spot targets that are otherwise totally concealed.
- Telescopes and Binoculars give a +1 to Recon roll, but only during daylight and give no help in spotting the totally concealed.
- Starship and Small-craft add their Computer Model Number to Spot roll.

Disposition	Recon
Stealthy or totally Concealed	12+
Cautious or Concealed	10+
Noisy	6+

If one side spots the other, without being spotted, it has gained surprise. If both sides spot one another, then move to begin the first turn of combat, at whatever range the scenario dictates (although a chance encounter outdoors will be 2d6x100 meters). If neither side detects the other, repeat procedure until one side is detected or they have both wandered off.

. The group with surprise can escape or choose the encounter range and make 1 movement phase and 1 direct fire phase (and/or melee) before regular combat begins.

### **3.3-- TACTICS POOL:**

All characters on each side total their Tactics skill levels. This total equals their Tactics Pool. The side whose Tactics Pool at the beginning of the battle is higher decides which side is the Intruder and which side is the Native for the battle.

Also, points in the pool can be spent during the combat to add +1 or -1 per point spent. Any number of points can be spent on any roll, and they can be spent before or after the roll is made. If a character is killed or injured, his Tactics points aren't subtracted from the pool and may be spent. The tactics points can be spent on any roll from "to hit" to "damage" to skill checks. A character with a hand Battle Computer or a vehicle commander with a vehicle Battle Computer has his Tactics Skill increased by 1 (+2 for Advanced).

### **3.4--TURN SEQUENCE**

#### **INTRUDER TURN**

- A. INTRUDER MOVEMENT: intruder moves none, some or all of his vehicles up to their movement allowance and his men by the movement options listed below.
- B. INTRUDER DIRECT FIRE: all of the intruder's units whose movement options allow them to fire may fire now, subject to movement penalties.
- C. NATIVE RETURN FIRE: native player's infantry who used the "stand" option last turn, and vehicles with fire control, may fire now, subject to movement penalties.
- D. INTRUDER MELEE ATTACKS: intruder infantry in contact with enemy infantry may attack with melee weapons.
- E. MORALE PHASE: either side that has lost 25% of its unit since the last morale phase must make a morale check now.
- F. COMMAND PHASE: leaders may attempt to rally, officers to give orders, technicians to repair objects, medics to treat wounds and forward observers to call in fire. Indirect Fire artillery ordered from previous turns may land now. Reloading takes place now.

#### **NATIVE PLAYER TURN**

- A. NATIVE MOVEMENT: native moves none, some or all of his vehicles up to their movement allowance and his men by the movement options listed below.
- B. NATIVE DIRECT FIRE: all of the native's units whose movement options allow them to may fire now, subject to movement penalties.
- C. INTRUDER RETURN FIRE: intruder player's infantry who used the "stand" option last turn, and vehicles with fire control, may fire now, subject to movement penalties.
- D. NATIVE MELEE ATTACKS: native infantry in contact with enemy infantry may attack with melee weapons.
- E. MORALE PHASE: either side that has lost 25% of its unit since the last morale phase must make a morale check now.
- F. COMMAND PHASE: leaders may attempt to rally, officers to give orders, technicians to repair objects, medics to treat wounds and forward observers to call in fire. Indirect Fire artillery ordered from previous turns may land now. Reloading takes place now.

### 3.5-- CHARACTER MOVEMENT:

Each turn the character must choose one of the four movement options:

Option	Move meters	Deck Plan squares	Fire	Cover	Notes
Stand	0	0	Normal	Yes	
Evade	9	6	No	Yes	-2 to be hit
Walk	18	12	-2	No	
Run	45	30	-4	No	

**Stand:** When the Stand option is taken, gunfire can be made without penalty and may be made both in the character's direct fire phase and his return fire phase. These shots are considered "Aimed Shots" and can benefit from telescopic sights, laser sights and electronic sights. The character can also benefit from cover and may add his Recon Skill level to the cover penalty to enemies shooting at him.

**Evade:** the character may not fire, but may move and still be protected by cover, plus an additional -2 to be hit. Evading is the only way to withdraw from melee combat without defeating your enemy.

**Walk:** the character moves at a steady pace and may make "Snap Shot" attacks, but only during his Direct Fire Phase (no fire during the Return Fire Phase). His snap-shot attacks are at -2 to hit. He is also not protected by cover. Walking characters may not fire high-recoil weapons. A personal targeting display reduces Snap Shot penalties.

**Run** the character moves at a quick pace and may make "Snap Shot" attacks, but only during his Direct Fire Phase (no fire during the Return Fire Phase). His snap-shot attacks are at -4 to hit. He is also not protected by cover. Encumbered characters may not Run. Running characters may not fire high-recoil weapons. A personal targeting display reduces Snap Shot penalties

**Reloading:** if a character wants to re-load a weapon, he may take any movement option, but may not attack with that weapon. The reloading will take place during his Command Phase.

#### Encumbrance

- A character can carry an amount of gear equal to his Strength Score in kilograms, without becoming encumbered.
- If he carries from 1kg over his Strength Score to 3 times his Strength Score, he will be considered Encumbered. If encumbered, he cannot use the RUN option in combat. His Strength, Dexterity and Endurance are all reduced by 1 each.
- Armor does not count for Encumbrance.
- A character may not carry more than 3 times his Strength in kilograms.
- A character wearing a Bomb Suit, or carrying another character or similar load is considered "Very Encumbered" and may only move at the Evade speed, but is considered "Walking". He also suffers -2 to all skill rolls except for defusing a bomb.

### 3.6-- FIRE COMBAT:

**Base to Hit:** Effective 8+, Long 10+, Extreme 12+

**Modifiers:**

Add Weapon Skill

Add Dexterity Modifier

Add Auto-fire bonus from weapon statistics

-2 if target is evading

-2 if shooter is walking

-4 if shooter is running

Target under cover: -1 to -4 as Referee decides, see section 3.15.

If target is a vehicle, consult the vehicle movement chart, 3.7.

**Targets:** the shooter can make an attack roll against a number of targets equal to the targets listed in the weapon statistics. Pick a primary target, and draw a line between shooter and primary target, all secondary targets must be within 4 meters of that line.

**Number of Hits:** if the modified “to hit” roll equals or exceeds the Base To Hit, then the attack hits. For each 2 points that the attack exceeds the Base, an additional hit is scored (not to exceed total number of shots fired).

**Ammunition Use:**

For personal and light crew served weapons, assume the following use of ammunition

# of Targets	Examples	Ammo per Turn	Notes
1 (ss)	Recoilless rifle, GL	1	Only holds 1 round, only 1 hit
1	Rifle, laser carbine	3	May reduce bullets fired, but this will reduce possible number of hits on target
1 (shotgun)	Shotgun	1	Multiple hits with 1 shot allowed
2	ACR, SMG	10	
4	Heavy MG	30	
8	Medium MG	100	
16	VRF Gauss, Gatling	300	

**Example:** Fantastic Steve fires a laser carbine at a cave spider at short range. Steve rolls 2d6, adds his +2 for laser carbine-2 skill. He rolls a 9, adds 2 gets an 11. This will result in 2 hits. Steve has used 3 shots from his carbine. If he had reduced his ammo use to 1 shot, he would only have scored 1 hit.

### 3.7--Vehicle Movement and Fire:

Each vehicle has a “Turn Speed” listed in its description and can move a number of meters equal to or less than that listed speed. When targeting a vehicle, chose the closest vehicle to those listed in size and speed. The cross-reference with the general action the vehicle is engaging to determine bonus or penalty to hit the vehicle.



Vehicle Class	Sitting	Cruising	Fleeing	Attacking
Car	+1	-1	-3	+0
ATV	+3	+2	+0	+0
Air/Raft	+1	-1	-3	+0
G-carrier	+2	+0	-2	+2
Speeder	+2	-9	-11	-7
Cargo Jet	+2	-5	-7	-3
Interceptor or Grav Fighter	+2	-12	-14	-10
Small Watercraft	+2	+1	-1	+2
Large Watercraft (100+)	+7	+6	+4	+6
Space Craft (10-95 tons)	+4	-11	-13	-9
Starship (100+ tons)	+7	-8	-10	-6

**Sitting:** the vehicle is not moving. **Cruising:** the vehicle is traveling on a steady course. **Fleeing:** the vehicle is attempting to escape; **Attacking:** the vehicle is moving toward the shooter.

- Penalties are cut in half if the firing weapon has an anti-aircraft pod in operation.
- A starship grade computer ignores Vehicle movement penalties

**Vehicle Weaponry:** vehicle mounted weaponry can fire during its side's Direct Fire Phase. If the vehicle did not move, it may fire during its side's Return Fire Phase. If it has "Fire Control" installed, it may fire during its side's Return Fire Phase even if it did move.

**Dog Fighting:** if 2 flying vehicles of similar speeds engage in combat, they need to dogfight for position (so bi-plane vs. bi-plane or helicopter is okay, but air/raft vs. grav interceptor is not). During the attacker's direct fire phase, he rolls 1d6 and adds his vehicle skill, and subtracts the vehicle skill of his target if he rolls 8+, then he has matched vectors in a position where he can get a clear shot, making a regular attack, ignoring the Vehicle movement penalty. If he fails, he gets no shot and the enemy may get a similar shot at him during the Return Fire Phase.

**Point Defense:** a weapon with an auto-fire bonus that is mounted with a Point-Defense Pod can shoot down incoming grenades, rockets, missiles, and artillery shells. The weapon must be set to "Point Defense" during the vehicle's command phase, and then may not switch to attacking offensively until switched back on another command phase. The weapon can shoot at a number of incoming attacks equal to its normal number of targets. It rolls a 10+ on two dice to hit, adding only the auto-fire bonus of the weapon. If it hits the incoming ammunition, that attack is defeated. If it fires at all, consider the weapon to have used twice its normal ammunition expenditure. The point defense can be used to defend the vehicle itself, or one chosen vehicle within Effective Range, or a given building or area of ground up to 50x50m within Effective Range.

### 3.8-- MELEE:

The attacker rolls 2d6 to hit, adding the weapon's attack bonus from weapon table, and his strength bonus, and his weapon skill. The defender subtracts his parry bonus from the weapon table, and his skill level from the attacker's roll. On the first turn of each melee contact, the attacker or defender may use the Reach value for his weapon in place of either the attack bonus or the parry bonus. This is reset each time contact is made with enemies.

If the total is 8 or greater, the attacker scores a hit. Melee attacks can score multiple hits, 1 additional hit for each 2 points the modified attack role exceeds 8. The maximum number of hits depends on weapon type, see the weapon table. If someone is in melee combat with an enemy, he may only leave contact by defeating the enemy or by choosing to Evade during his movement phase.

If the melee fighter is unarmed he should reduce the wound type he inflicts by 1 level, after the damage roll for penetration is made.

### **3.9--MORALE:**

Once a group has lost 25% of its number (either killed or wounded, including Light Wounds), it must check morale at the next morale phase. Every round thereafter it must check again, but only during the Friendly Morale Phase. Roll 2d6, get a 7+ for the group to stay and fight. Use the following modifiers:

If military or mercenary unit	+1
Leader skill of leader	+1 per level
If leader has Tactics skill	+1
If casualties are 50% or higher	-2
If leader killed or unconscious	-2 for 2 rounds

If the roll is failed, the group will flee if possible or surrender if not.

### **3.10-- ZERO-G COMBAT:**

When characters are in combat in a Zero-G environment, a control check must be made each round. Roll 5+ on 2d6 to avoid losing control.

-4 if firing a weapon (except low-recoil weapons)
-6 if swinging a melee weapon
Apply Dexterity Bonus or Penalty
+5 if using Handhold (cannot use 2-handed weapon, or dexterity bonus)
Zero-G Combat Skill add level

If the roll is failed the character ends up flailing around in the middle of the space, unable to attack or move. Re-roll each turn until control is regained. Lasers, snub pistols, and accelerator rifles are considered low-recoil weapons.

### **3.11--INDIRECT FIRE:**

During the Command Phase a Forward Observer can call in artillery fire. The distance between the gun and the target determines how long it takes for the attack to reach the target (assuming the gunners are ready to fire):

CLOSE: within 5km: rounds land the next friendly Command Phase
NEARBY: within 50km: rounds land 2 friendly command phases later
FAR: beyond 50km, including orbit: rounds land 2+1d6 turns.

Once a round arrives, check the following for target number (2d6):

First Shot: howitzer, mortar, unguided rockets, orbital laser: 18+
Subsequent Shots: howitzers etc., 14+
Homing Missiles 10+
Laser-Guided Missile, painted target 6+

The following modifiers apply to all these attacks:

Forward Observer Skill of Observer	+1 per level
Gunnery or Artillery Skill of Gunner	+1 per level
Observer has battle computer (or Advanced)	+1 (or +2)

Observer has map box	+1
Observer has Battle-Scanner (or Advanced)	+1 (or +2)
Gunner has battle computer(or Advanced)	+1 (or+2)
Gunner has ship's computer	+model number
Gunner has map box	+1
Each turn of correction	+1

### Dropping Bombs:

When air-craft drop unguided bombs, roll 2d6+vehicle skill to hit a 10+ to hit the target directly.

### Deviation:

If indirect fire or unguided bombs miss the target, roll 1d12 for direction of deviation (treat as a clock with 12 equaling: straight ahead far, 12 o'clock, 6 being straight and short). Roll 2d6x10m for the distance of deviation. For grenades, reduce the distance to 4d6 meters.

## 3.12--DAMAGE AND WOUNDS:

When a hit is scored in fire combat or melee, roll 2d6, adding the Penetration of the weapon and subtracting the armor value of the defender's armor worn and consult the table below:

Die roll	Wound	Effect
3 or less	None	No effect
4	Graze	Morale check or must evade next turn
5-7	Light Wound	-1 wound penalty to skills, movement and morale
8	Moderate Wound	-2 wound penalty to skills, movement, and morale
9-11	Serious Wound	Out of battle and unconscious
12	Mortal Wound	Out of battle, unconscious and likely to die
13-17	Dead	Out if battle, probably permanently dead
18+	Destroyed	Out of battle, body blown to bits

Hits caused by explosive rounds (HE, HEAP, laser and energy weapons) are increased one wound level after die roll with PEN/ARMOR modifiers are made, unless the result is No effect. This is for contact hits only, fragmentation effects to not increase.

Hits caused by an unarmed character (fists) reduce wound level by one after die roll with PEN/ARMOR modifiers are made.

**Graze:** the target has been grazed by the attack, he must make a standard morale check or will spend the next turn evading and searching for cover.

**Light Wound:** subtract 1 point from endurance, and apply a -1 penalty to his skills, attacks, movement rate and morale until it is treated or healed. The penalties are cumulative with other light and moderate wounds. If his Endurance reaches 0, he is exhausted and unable to move , attack or use skills.

**Moderate Wound:** subtract 2 points from endurance, and apply a -2 penalty to his skills, attacks, movement rate and morale until it is treated or healed. The penalties are cumulative with other light and moderate wounds. If his Endurance reaches 0, he is exhausted and unable to move , attack or use skills.

**Serious Wound:** character's Endurance goes immediately to 0. He falls unconscious and is unable to act for the rest of the battle.

**Mortal Wound:** character's Endurance goes immediately to 0. He falls unconscious and is unable to act for the rest of the battle. If he does not receive extraordinary medical treatment he will die.

**Dead:** character is dead and thus unable to act from then on. It is possible to revive him using advanced medical treatment under some circumstances.

**Destroyed:** character's body is blown to pieces, it is impossible to revive him under any circumstances.

### 3.13--DAMAGE TO VEHICLES

When a hit is scored on a vehicle, roll 1d6 add the Penetration values of the weapon, and subtract the Armor Value of the Vehicle, and then consult the damage result table. Once the type of hit is determined, roll on the Damage Effect Table.

#### Damage Result Table (1d6+PEN-ARMOR)

0 or less: No Effect  
 1-7 Surface Hit  
 8-13 Minor Penetration  
 14+ Major Penetration

2d6 Result	Surface Hit	Minor Penetration	Major Penetration
2	Engine impeded	Engine Jammed	Engine Destroyed
3	Minor weapon destroyed	Minor weapon destroyed	Engine Destroyed
4	Exposed crew attacked	1 Crew attacked	All Crew Attacked
5	Locomotion impeded	Locomotion Jammed	Locomotion Destroyed
6	Antenna destroyed	Electronic device damaged	Electronics Destroyed
7	Locomotion impeded	Locomotion Jammed	Locomotion Destroyed
8	Minor weapon jammed	Main Weapon Jammed	Main Weapon Destroyed
9	Minor weapon jammed	Main weapon Jammed	Main Weapon Destroyed
10	Exposed Crew attacked	1 crew attacked	All Crew Attacked
11	Minor Penetration	Major Penetration	Explode
12	Minor Penetration	Major Penetration	Explode

**Engine Hits:** impeded: movement halved, energy weapons half penetration until repaired (Mechanical-6+); jammed no movement, no energy weapons until repaired (Mechanical 8+), destroyed: engine destroyed, no movement, no energy weapons until replaced.

**Crew Hits:** exposed crew attacked: 1 crewman who is exposed to outside is hit with standard penetration of the weapon; 1 crew attacked: one crewman inside receives a wound (personal wound chart, straight 2d6, no penetration, no armor); all crew attacked: all crewmen in vehicle receive wound (2d6, no pen, no armor).

**Locomotion Hits:** locomotion impeded: move at half speed until repaired (mechanic 6+); locomotion jammed: no movement until repaired (mechanics 8+); Locomotion destroyed: vehicle movement is permanently stopped.

**Electronics Hits:** antenna destroyed: communicator limited to 1km, scanner non functional until spare antenna installed. Electronic device damaged: 1 radio, scanner, computer, map box chosen at random is non-functional until repaired (Electronics-8+); Electronics Destroyed: all radios, scanners, computers etc, are destroyed—one half can be repaired on Electronics 10+, the rest are permanently destroyed.

**Weapon Hits:** minor weapon jammed: one small weapon (machinegun etc) is non-functional until repaired (Mechanics 6+). Minor weapon destroyed: one small weapon (machinegun etc) is destroyed permanently. Major Weapon Jammed: the largest weapon on the vehicle is non-functional until repaired (mechanical 8+); Major Weapon Destroyed: largest weapon on vehicle permanently destroyed.

**Explode:** vehicle explodes and is permanently destroyed. Crew members can escape on an appropriate Vehicle skill roll (8+).

**Notes on Repairs:** a mechanics or electronics tool kit is needed to make respective repairs. Aircraft, Wheeled and Tracked vehicles must be stopped before Engine or Locomotion repairs may be made. Grav vehicles are designed to be repaired in flight from inside.

**Damage to Flying Vehicles:** air-craft can glide for several turns (as long as pilot makes his aircraft roll 8+) if engine or locomotion ceases to function. A helicopter can make an emergency landing (aircraft 10+) if locomotion or engine ceases to function. A grav vehicle falls like a stone if the engine or locomotion fails.

#### **Spacecraft:**

Space craft (star ships and small craft) attacked by ground fire are considered armor 40, armored hulls are armor 50, heavily armored hulls are armor 60. Make a standard attack, and ignore anything less than a Major penetration. Treat any Major penetration result as a standard hit on the Space Ship combat charts.

### **3.14--DAMAGE TO ROBOTS**

When a hit is scored on a robot, roll 1d6 add the Penetration values of the weapon, and subtract the Armor Value of the Vehicle, and then consult the damage result table. Once the type of hit is determined, roll on the Damage Effect Table.

#### **Damage Result Table (1d6+PEN-ARMOR)**

0 or less:	No Effect
1-7	Surface Hit
8-13	Minor Penetration
14+	Major Penetration

### Damage Effects

D6 Roll	Surface Hit	Minor Penetration	Major Penetration
1	Lose 1 turn	Lose 1d6 turns	Power Plant Destroyed
2	Skills -1	Skills -2	Brain Destroyed
3	Loco Impeded	Loco Jammed	Locomotion Destroyed
4	Attacks -1	Weapon/limb Jammed	Weapon/Limb Destroyed
5	Electronics Impede	Electronics Jammed	Senses Destroyed
6	Minor Penetration	Major Penetration	Explode

**Lose Turn:** multiple results of lose 1 turn are ignored if the first is still in effect. **Losing 1d6 turns,** no additional turns are lost while in this state. Skill penalties: **Skills minus 1** does not stack with like results, but a second **Skills minus 2** indicates brain destroyed. **Loco impeded:** move at half speed until repaired (mech 6+). **Loco Jammed:** cannot move until repaired (Mech 8+). **Attacks -1:** does not stack with multiple results. **Weapon/limb jammed:** 1 arm or weapon is jammed and will not function until repair (mech 8+). **Impeded electronics:** robot cannot communicate or make spotting rolls. **Electronics jammed:** robot is effectively blinded, suffering a -5 to all tasks requiring sight. **Senses Destroyed:** robot cannot detect anything outside its own body.

### 3.15—COVER, CONCEALMENT AND SHELTER

**Cover:** cover refers to hard obstacles that prevent attacks by hand weapons. If the fight involves nothing but personal weapons, then intervening concrete, brick, stone or metal walls or bulkheads provide cover, as do armored vehicles. If the target is completely sheltered by the wall, he cannot be attacked. If he sticks his head through a door or around a corner, then the referee should assess a -1 to -4 penalty to the attacker's hit roll, based on the portion of the body protected: -1 legs protected, -2 legs and lower torso, -3 legs and all torso, -4 all covered but head and 1 arm.

**Concealment:** concealment refers to obscuring material that makes it hard to see the target. Once combat has started, concealed characters must be spotted (using the same procedure as pre-battle spotting) before they may be attacked. A character may attempt 1 spotting check per his own command phase. Characters who energy or gun powder weapons are considered to be spotted by the enemy.

**Shelter:** shelter refers to the use of terrain or buildings to gain additional armor protection against heavy attacks. If the shelter is in the proper direction (e.g. a roof must be used against indirect fire artillery) combine the personal armor with the shelter's armor by adding the larger number to half the smaller number. Some typical shelter values are as follows:

Wooden Wall Ar- 4	Brick Wall Ar-8	Concrete Wall Ar-15
Starship Inner Door Ar-20	Earthen Bunker Ar-24	Starship Inner Wall Ar-25
Concrete Bunker Ar- 28	Starship Outer Hatch Ar-30	

## SECTION 4---MEDICINE AND SCIENCE

### 4.1--TREATING AND HEALING WOUNDS

Wound	Medic Roll	Time to Treat	If treatment fails	Required Equipment	If Lack Equipment
Light	8+	2 turns	1 day rest to heal.	Medic Kit or Bandages	-2 medic roll
Moderate	10+	Half hour	1 week bed rest	Medic Kit and Medic Drug	-4 medic roll
Serious	12+	Hour	1 week bed rest per point of Endurance	Medic Kit, Surgical Instruments and Medic Drug	-6 medic roll
Mortal	14+	Hour	Death	Medic Kit, Surgical Instruments, Medic Drug	-8 medic roll
Dead	16+	1 week	Death	TL 10+ Hospital	Impossible

**Light Wound:** a light wound can be treated on the battlefield. To treat: roll 2d6, add Medic Skill, Int bonus, get 8+. Treating character must have bandages or a medical kit. The wound penalty is removed and the point of Endurance returned. Each light wound can be attempted to be treated only once, and each wound must be treated separately. If they are not treated, 1 Light wound will heal on its own per day until all light wounds are healed.

**Moderate Wound:** a moderate wound takes a half hour to treat. To treat: roll 2d6, add Medic Skill, Int Bonus, get 10+. Treating character must have a medical kit and a dose of Medical Drug. If successful, the 2 points of Endurance are returned, and the wound penalties removed. If the wound is not successfully treated, the character must get bed rest. First, all light wounds must heal, and then each moderate wound will heal after 1 week of bed rest per wound.

**Serious Wound:** a serious wound takes an hour to treat. To treat: roll 2d6, add Medic Skill, Int Bonus, get a 12+. Treating character must have a medical kit, surgical instruments and a dose of medical drug. If successful, the character's endurance returns to 1, and he must rest 1 day per further point of Endurance to be recovered. If treatment fails, he must get 1 week of bed rest per point of Endurance.

**Mortal Wound:** a mortal wound will lead to the character's death in 1d6 hours if not treated. To treat, roll 2d6, add Medic Skill, Int Bonus, get a 14+. If successful, wound is converted into a Serious Wound, which then must be treated.

**Dead:** Character is dead without extreme intervention. The body must be treated as for a moderate wound within 10 minutes of death to preserve the body. The body must be taken to a hospital of Tech level 10 or above within an hour (or cold stored in a low berth on the trip). To revive the character: roll 2d6, add Medic Skill, Int Bonus and 1 for each Tech Level of the hospital over 10; get a 16+. It takes a full week of intensive medical intervention to achieve any result (which may involve organ cloning, cybernetic implants etc). If successful, the dead character becomes alive, suffering a serious wound.

**Destroyed:** there is no revival from this result.

## 4.2—MEDICAL EQUIPMENT

**Medical Kit:** a case containing bandages, wound sprays, disinfectant, a vial of 20 doses of medical drug, a medical drug tuner, and minor instruments. Required to treat most wounds. Various Tech Level versions differ only in weight and price.

**Surgical Instruments:** a set of more sophisticated scalpels, forceps, clamps, laser cutters, and various other cut, jab, probe and stitch items needed by surgeons for invasive work. A set of these instruments are required to treat Serious and Mortal wounds.

**Medical Scanner:** a system of detection devices used to analyze the bones, organs and blood. A medical scanner is required to treat a Novel Disease. Running a patient through a scanner will give the medic a +1 on his medical roll when treating wounds.

**Medical Computer:** a dedicated computer with the latest medical information and an A.I. to provide medical advice. The computer will give a character with medic skill a +1 on all his medic rolls if the computer is used.

**Advanced Medical Scanner:** is a small device that combines a medical scanner and a medical computer in a small package (either like a cell phone, tricorder, or even a wrist watch wirelessly attached to contact-lens display and nano-ear piece). It gives the medic a +2 on his medic rolls.

**Vehicle Medical Station:** a supply of medical instruments and provisions for fold-down bunk. Consider it to contain medical kit, surgical instruments, 100 doses of medical drug, 10 doses of medical slow drug and 10 doses of medical slow drug antidote.

**Medical Laboratory:** is a facility stocked with medical instruments and supplies, designed for a doctor to do research on novel diseases. The laboratory can be placed in a starship, and would take up 20 displacement tons.

**Advanced Hospital:** is a medical facility capable of rapid organ cloning, micro-electronic surgery and rapid gene correction. Such a hospital is necessary for attempts to revive the dead. Give these hospitals a +2 on all medical rolls, except reviving the dead. The hospital can be placed in a starship, but would take up 100 displacement tons.



## 4.3--DRUGS

**Medical Drug:** is actually a dose of standardized sophisticated nano-bots which are programmed to fight infections, reduce inflammation and repair tissue. Medical Drug is the first step in all modern medical treatment, and is ubiquitous in human and Vargr space. Doctors can use a medical scanner to tune the nano-bots inside the body to treat disease and injury more effectively than simply swallowing a capsule.

**Anti-Toxin:** similar to Medical Drug, this is a broad-spectrum anti-poison treatment. It will cure most know poisons on a 6+ on 2 dice (+ Medical Skill). Unknown or novel poisons require a 10+.

**Slow Drug:** is a metabolic accelerator that causes the universe to seem to slow down to the person who takes the drug. Three turns after taking the drug he will begin to operate twice as fast as before, moving twice as fast, shooting twice as often and striking twice as often for a full 40 combat turns. When the drug wears off, the user takes 1d6 Endurance points of damage, treat as a Moderate Wound, unless he goes to 0 or fewer Endurance, in which case treat as a Severe Wound.

**Medical Slow Drug:** is a metabolic enhancer that causes immediate unconsciousness and speeds healing dramatically. A character who is given a dose of this drug spends 1 day asleep, and is healed as if 30 days (or 4 weeks) have passed.

**Fast Drug:** induces a metabolic form of suspended animation. The world seems to fly past very Fast to the user, at a rate of 60 to 1. One dose lasts 60 days, which seems like only one day to the user. More importantly he only uses a day's worth of food and oxygen. Users are helpless while under the drug.

**Combat Drug:** used to boost physical abilities during combat. 2 turns after the drug is taken, the character's Strength, Dexterity and Endurance are all increased by 2 for 30 turns. The user will also ignore the first two Light Wounds or the first Moderate Wound he receives until the drug wears off. When the drug wears off, the user takes 1d6 Endurance points of damage, treat as a Moderate Wound, unless he goes to 0 or fewer Endurance, in which case treat as a Severe Wound.

**Anagathics:** are used to halt the aging process, as long as a regular monthly regimen is taken, the user ignores aging rolls and their effects.

**Truth Drug:** one dose forces a subject to tell the truth for about 2 minutes when questioned by someone with Interrogation skill. After two minutes, the subject falls unconscious for 1 day and suffers a moderate wound.

## 4.4—DISEASES

**Common Diseases:** for the vast majority of diseases common to humans across charted space, the cure is proper application of Medical Drug. The referee should set a target number for a medical roll, and set a consequence for failure.

**Novel Diseases:** are those which are unknown to medical knowledge. These can be radical mutations, foreign organisms or scientific constructs. Each disease should be created separately by the referee. The novel disease must have a "Research Target", for discovering a treatment, and "number of successes" required before a treatment can be administered. Someone trying to research a treatment must have a Scan of a patient and a Medical Computer and a Medical Laboratory to attempt research. He may make one attempt per week to get a success. If he ever rolls "Snake Eyes" all his progress is wiped out. Once he has succeed a number of times equal to the diseases

“number of successes” figure, he may begin to treat patients. The referee should assign a treatment number for the treatment.

**EXAMPLE NOVEL DISEASE:**

*Rhylanor Screaming Monkey Fever:*

Research Target: 10+      Number of Successes: 10

Treatment Target: 8+

Effects: patient screams uncontrollably and constantly, running a high fever and convulsions. Each day the patient loses 1 point of Endurance until he reaches 0 and dies.

**Play Example:** Chester Goodfellow suddenly falls ill, convulsions and screaming soon follow. Dr. Sanchez runs his Medical Scanner over Chester and discovers that the disease is dangerous and so far unknown to medical science. He takes some samples and places Chester into a low berth to prevent the disease progressing. He takes the scan and samples to his medical laboratory and begins work. Week one he fails his 10+ target and makes no progress. Weeks two and three he hits the target and moves closer to success. Week four he rolls snake eyes and finds he’s been following a false trail. Starting fresh, succeeds the next 10 weeks in a row and develops a treatment. He then thaws Chester out and administers the treatment, he fails the first day, and Chester screams the night away, losing 1 endurance. The next day the doctor succeeds and Chester is in the clear.

## 4.5—SCIENCE PROJECTS

**Creating Novel Devices:** novel devices are those which are unknown to scientific knowledge. These can be atomic monsters, awesome consumer products, new weapons, or improvements to standard devices. Each device should be described in detail by the creator. The novel device must have a “Research Target”, for creating a proto-type, and “number of successes” required before the proto-type is ready for use. These must be created by the referee in secret based on the nature of the device described and how it differs from standard items. The scientist must have general computer and a scientific laboratory (or Lab Ship) to attempt the project. He may make one attempt per week to get a success. If he ever rolls “Snake Eyes” all his progress is wiped out. Once he has succeeded a number of times equal to the devices’ “number of successes” figure, he may begin to use the proto-type.

**Solving Strange Questions:** Each question should be offered up in the adventure. The question must have a “Research Target”, testing a possible theory and “number of successes” required before the hypothesis is born out. These must be created by the referee in secret based on the nature of the question. The scientist must have general computer and a scientific laboratory (or Lab Ship) to attempt the project. He may make one attempt per week (or day, or hour depending on the question) to get a success. If he ever rolls “Snake Eyes” all his progress is wiped out. Once he has succeeded a number of times equal to the question’s’ “number of successes” figure, he has answered the question.

## SECTION 5---INTRUSION AND FORENSICS

### 5.1--Picking Locks

To pick a mechanical lock, you need a lock pick set. Roll 2d6, add Intrusion skill and dexterity bonus to the roll. If the roll equals or exceeds the lock's pick number the lock is open. One attempt can be made each 15 seconds. If a natural 2 is rolled, the lock has become jammed and no further attempts can be made. Bolt cutters can be used to cut off padlocks.

The same procedure must be done to pick electronic locks, i.e., those with password, retinal, finger print or voice code locks. A electronic lock-pick must be used.

### 5.2--Blowing Doors

Blowing through doors, walls and safes requires Demolition Skill and explosive charges. See the explosives and bomb chapter for the statistics for the various explosive charges and detonators. The explosive penetration must exceed the Armor value of the wall, door or safe that needs to be breached.

Item	Tech Level	Penetration to Breach	Penetration to Open
Building Door	1	4	1
Wooden Wall	1	4	--
Security Door	5	20	15
Brick Wall	2	8	--
Concrete Wall	3	15	--
Bunker Wall	5	28	--
Starship Outer Hatch	7	30	25
Starship Hull	7	40	--
Starship Internal Hatch	7	20	15
Starship Internal Wall	7	25	--
Starship Armored Hull	7	50	--
Starship Heavy Armor	7	60	--
Small Safe	5	40	30
Sturdy Safe	6	45	35
Bank Vault	6	50	40
High Tech Vault	10	60	45

The character must set his charge, roll 2d6+Demolitions skill. If he was attempting to breach the wall or door, he must roll a 6+ on his attempt. If he was attempting to merely blow the door open, it requires less explosive, but requires an 8+ to succeed. If the demolition roll is failed, doors will become jammed, and often access to the wall or door will become blocked. . If snake-eyes is ever rolled, there should be consequence for the demolition man (minor or serious). If a natural 3 is rolled when attempting to open a safe, the contents of the safe are automatically destroyed.

### 5.3—Hacking Computer Networks

Performing unauthorized actions on a computer system requires either having both Computer Skill and Intrusion Skill, or having Computer Skill alone and a Network Assault Key. Each network will have a Security Target number, and the hacker must beat that number using the better of his two skills on two dice. If he fails by more than 3 points, he

has been discovered, and probably located. A Network Assault Key gives the user a +2 on his roll if he has both Computer and Intrusion. An advanced Network Assault Key gives him +4. One attempt to Hack may be made per combat turn. To place convincing information onto a network or system, Computer and/or Intrusion is used to enter the system and Forgery is used to make the information seem credible.

## 5.4—Searching for Evidence

**Physical Evidence:** To find criminal trace evidence requires the Forensics Skill. The target number and the time for search and analysis are based on the Tech Level of the agents involved.

TECH LEVEL	TIME FOR SEARCH	TARGET NUMBER	ANALYSIS
0-4	No Dice	No Dice	No Dice
5-6	2d6 hours	10+	1d6 weeks
7-9	1d6 hours	8+	1d6 days
10-13	1 hour	6+	1d6 hours
14+	10 minutes	6+	10-60 minutes

The search will turn up the finger-prints, DNA, blood splatter, bullets, and fiber evidence. The search assumes a Forensics Kit and a Forensics Laboratory of the corresponding tech level. High Tech Forensics Scanners add +2 to the search roll.

**Electronic Evidence:** to find evidence of tampering with electronic information by a network assault, use the same time frame for a search as for physical evidence. However, the target number is 8 plus the Intrusion and Computer Skills of the Hacker, while the search is 2d6+the Forensics plus Computer Skills of the investigators.

**Accounting Evidence:** to detect forged information, accounting schemes and the like, uses the same method as for electronic evidence, but use the Forgery and Admin of the criminals +8, vs. the Admin and Forensics of the detectives plus 2d6.