

Introduction

Dust swirls in the dry wind of the desolate plain. A heat shimmer makes the horizon hazy. Through the hazy dust strides a solitary figure, the ground vibrating slightly at each step. As it draws closer, weapon mounts can be made out along the figure's arms and torso. From behind a hill, another figure steps forth, belching fire. The first staggers under the impact of multiple strikes from missiles. It raises an arm; a bright viridian beam lances out and slams into the second form high on its body. It takes a step. Another. And collapses to its knees, finally falling to lay on the ground.

The other warrior strides to his fallen opponent, and places another strike from the beam into the head of the fallen. The victor strides towards the small city on the edge of the plain, towering over the buildings. Welcome to combat of the future.

This is a game of futuristic warfare. The battlefield of the future is dominated by Mobile Battle Units (MBU's). These giant robotic machines tower over the battlefield.

Tech

Projectile Weapons

Characterized by high rates of fire, and low individual projectile damage, projectile weapons are used because they are cheap and lightweight. Their major drawback is the need for ammo.

Beam Weapons

Characterized by low rates of fire, beam weapons are useful because of their lack of ammunition requirements. Beam weapons are also heavy.

Missile Weapons

Long-range, medium to high damage, missile weapons are used in long range duels, or as opening salvos.

Artillery Weapons

Long range, high damage, inaccurate weapons. Usually used against fixed defenses.

Weapons

Machine Gun Used both for anti-personnel and anti-vehicular purposes. Medium ranged low damage weapon.

Heavy Machine Gun A heavy upgrade of the Machine Gun. Does more damage, and slightly shorter range.

Autocannon Heavy duty projectile weapon.

Flechette Cannon Used exclusively for anti-personnel purposes. Does massively decreased damage to armored units

Laser Primary beam weapon. Medium ranged, medium damage. Lowest power requirements of any beam weapon

Graser Big brother of the Laser. Long range, high damage.

Plasma Cannon Short ranged, high damage weapon.

Fusion Cannon Medium range, high damage weapon.

Missile Pack Very long range, low damage.

Rocket Pod Long range, medium damage.

Light Artillery long range, high damage

Medium Artillery long range, high damage

Heavy Artillery long range, high damage. Very heavy mounts are usually only found on specialized vehicles. Four regular mounts in any one location may be switched for a very heavy mount.

Units

There are a number of different unit types. These types are infantry, vehicles and Manned Battle Units (MBU). Infantry may only mount Class 1 weapons. Vehicles may mount Class 1 or 2 weapons. MBU may mount Class 1, 2 or 3 weapons.

Infantry

Infantry units are the cheapest and most fragile units available.

Vehicles

Vehicular units are cheaper than MBU and faster than infantry.

Manned Battle Units

MBU's are large robotic units. They tower over the battlefield.

Combat

Each side rolls a d10 for initiative. The highest roll has the initiative. Initiative can be rolled per side or per unit. Lowest initiative units move first. After all units have moved, units may fire. Units with high initiative rolls fire first. Combat is resolved by determining the range to the target, and rolling a d10. Modifiers, including gunnery skill are added to the roll. If the modified roll is 10 or higher, the weapon hits the target. Weapons with a rate of fire greater than 1 check on the Fire Spread table to determine how many shots hit. If the target is hit, a roll on the location table is made. This determines where the shot hits.

Missiles are explosive weapons and do damage to the unit as a whole rather than one specific location.

Missiles may be fired at a hex instead of a specific target. Any missile fired in this manner is considered Artillery and must roll for artillery deviation.

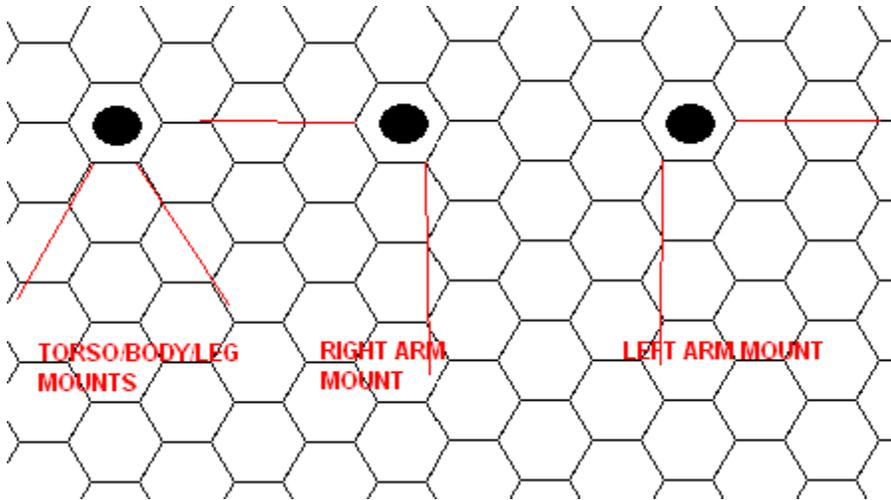
Armor reduces the amount of damage by the value of the armor. If the armor is penetrated, the value of the armor is reduced by one.

Critical hits

If a natural roll of 10 occurs, this is considered a critical hit. Critical hits apply $\frac{1}{2}$ of their damage as internal hits before checking against armor. A critical hit automatically reduces armor by 1 due to ablation. If the remaining damage is sufficient to breach the armor a second time, an additional point of armor is ablated. When dividing the damage in half, round up to the nearest whole. A spread weapon that gets a critical has all of the shots in its salvo hit.

Arcs of Fire

Torso/Body/Leg mount weapons may only fire in the direction the unit is facing, in a 60 degree arc. Turret mounts may fire in a 360 degree arc. Cockpit/Crew mount weapons have a 180 degree arc on the front facing of the unit. Arm mount weapons have a 90 degree arc down the front and side of their facing. Arcs are shown in the following diagram.



Weapon Modifiers

Anti-personnel – ¼ damage to armored units. 2x damage to unarmored units.

Accurate – Provides innate +1 to hit.

Inaccurate – Provides innate -1 to hit.

Spread – Spread weapons are fired in a salvo. Each hit is rolled for a different location. For each point above hitting, 1 shot in the salvo hits. Each hit to a particular location in a single salvo is cumulative for damage purposes versus armor.

Example: A rocket pod salvo is fired at a target 5 hexes away. The target has no ECM, and is moving at a speed of 4 and a Piloting skill of 2. The firing unit has an Advanced Targeting System. The firing unit has a Gunnery skill of 3. The total modifier for the shot is +3. The roll comes up a 8. This is 3 more than is needed, so 4 of the 5 rockets impact the target. Locations are rolled for the 4 hits. The rolls are for Torso, Left Leg, Right Arm, and Torso. The two torso hits will count as 16 damage when checking against armor breaching.

Artillery – Artillery deviates from the location fired at. Deviation is 1-5 hexes in range from target in a random direction.

Roll	Direction
1-3	Far
4	1 hex facing clockwise
5	2 hex facings clockwise
6-8	Short
9	1 hex facing counter-clockwise
0	2 hex facings counter-clockwise

Explosive – Explosive weapons do damage to the unit as a whole and have no need for location rolls.

Barrage – Weapon may fire in indirect mode (-3 to hit, determine actual hex as artillery). Splash effects two adjacent hexes (determine randomly).

Ammunition Types

Projectile

Standard – Standard projectile ammunition. No modifiers to range or damage.

Sabot – Sabot rounds are armor piercing. Armor counts as 2 less when determining a breach. Sabot projectile rounds are -2 range and +1 damage.

Anti-personnel – The round is effective against personnel. Damage is ¼ versus armor, and 2x versus infantry.

Tracer – The projectile weapon counts as Accurate with a -2 range. Also negates up to 2 points of RoF penalties.

Penetrator – The projectile has a shortened range (-2), but increased damage (+2).

Missile

High-Explosive (HE) – This warhead for missiles, rockets and artillery is the standard round.

Shaped Charge – This round has a shortened range (-5), but counts as a Sabot round for armor penetration. Missiles using this warhead MUST roll for location.

Cluster – A cluster munition is an anti-personnel warhead. It has a shortened range (-5).

Smoke – A smoke round creates an initial 1 hex of smoke. This grows by 1 hex radius each turn over the next 2 turns, and then begins to dissipate at 1 hex radius per turn.

Beam

While not strictly ammunition, the following enhancements are available for beam weapons.

Lens Focus – Increases the range by 4 while reducing the damage by 2. Power usage is increased by 2.

Power Booster – This mod decreases range by 2 while increasing damage by 2. Power usage is increased by 4.

Narrow-Band Beam – This mod decreases range by 2, increases the power usage by 2 and grants the beam “Sabot” for armor breaching purposes.

Defensive Modifications

There are some modifications to the defensive structures of the units.

Reinforced Structure – The structure of the unit is increased by 10%. Power of the unit is reduced by 1.

Advanced Reinforced Structure – The structure of the unit is increased by 20%. Power of the unit is reduced by 2.

Reflective Armor – This armor provides +1 value against beam weapons. Non-beam weapons treat the armor as its normal value. The reflective quality is removed if the normal value of the armor is reduced to zero.

Honeycomb Armor – This armor is honeycombed with a highly resistant polymer. This provides a +1 value against Projectile weapons. All other weapons treat the armor as its normal value.

Active Armor – This armor has small charges built into the armor. These charges are designed to force missile weapons to explode prior to contact. This results in a +1 value to the armor for missile weapons. Weapons other than missiles use the normal value of the armor.

Armor types are mutually exclusive.

Roll	Vehicle Location	MBU Location	Emplacement
1-4	Body	Torso	Body
5-6	Turret	Arms (R/L)	Turret
7	Motive Unit	Torso	Body
8-9	Drive Unit	Legs (R/L)	Body
0	Crew Compartment	Cockpit	Crew Compartment

If the damage done penetrates the armor, roll on the Internals table

Body/Torso – Main body of the unit.

Turret/Arms – Main weapon emplacement on the unit. Randomly determine left or right on the arms.

Motive Unit – Vehicles only. The main power source of the unit. Forces a pilot check for loss of control.

Drive Unit/Legs – Main propulsion of the unit. Randomly determine left or right for MBU legs. Forces a pilot check for loss of control.

Crew Compartment/Cockpit – Where the crew is during operation of the unit.

Location rolls are not necessary for Infantry units.

Roll	Vehicle Internal	Emplacement	MBU Internal
1-3	Structure	Structure	Structure
4-5	Weapon	Weapon	Weapon
6	Structure	Structure	Actuator
7	Electronics	Electronics	Electronics
8	Ammunition	Ammunition	Ammunition
9	Power Relays	Power Relay	Power Relays
0	Power System	Power System	Power System

MBU's roll on a slightly different table based on what location they were hit on.

Roll	Arm	Leg	Torso	Cockpit
1-3	Structure	Structure	Structure	Structure

4-5	Weapon	Weapon	Weapon	Weapon
6	Structure	Structure	Structure	Structure
7	Control Runs	Control Runs	Electronics	Electronics
8	Ammunition	Ammunition	Ammunition	Ammunition
9	Power Relays	Power Relays	Power Relays	Power Relays
0	Actuator	Actuator	Power Systems	Pilot

Structure – Supports or other internal structure of the unit. If all structure at a location is destroyed, the section is destroyed. For a torso location on an MBU, this results in the destruction of the unit.

Weapon – Randomly roll between any weapons located at this location

Actuator – Destruction of this component will render that location immobile. This could have the effect of rendering the MBU motionless it is in a leg. Forces a pilot check for loss of control.

Electronics – Fire control and targeting electronics.

Ammunition – Destruction of any ammunition in this location. Ammunition is explosive, and there is a cumulative 1 in 10 chance for each weapon with ammunition in this location for the location to be destroyed. For beam weapons, this disrupts the connection between the weapon and the high energy capacitors needed to fire. For each beam weapon, there is a cumulative 1 in 10 chance for the weapon to be destroyed.

Power Relays – Relays and conduits for power to the location. Renders the location powerless.

Power System – Main power generators. If this is destroyed, the unit is rendered helpless.

Control Runs – The control runs control how the limb is operated. If these are destroyed, the limb reacts in an uncontrolled manner. Forces a pilot check for loss of control.

Pilot – If the pilot is hit, there is a 5 in 10 chance that the ejection mechanisms function properly. The MBU is rendered non-functional, and the pilot is removed from the field. If the mechanisms fail, the pilot is killed.

Loss of Control

If a pilot check is forced by damage, the following procedure is used. The base chance for the check is 7. To the die roll, add the pilot skill. Subtract the amount of damage sustained (only internals, not any damage stopped by armor). If the check is successful, the unit remains in control, though in some cases may be still rendered immobile.

For MBU's, Loss of Control has two different effects based on the location. If a leg fails a Loss of Control check, the MBU is unable to move. If an arm fails a Loss of Control check, there is a 3 in 10 chance any weapon in there will fire at a random target in its range and arc.

Unit skills

Units have a number of skills.

Skills

Gunnery (Projectile) – Skill used with direct fire projectile weapons.

Gunnery (Beam) – Skill used with direct fire beam weapons.

Gunnery (Missile) – Skill used with direct fire missile weapons.

Piloting – Skill used to maintain control in adverse conditions.

Artillery – skill used with indirect fire weapons (artillery)

Modifiers

Range 10-15: -1

Range 16-25: -2

Range 26+: -3

Indirect Fire: -3

Active ECM: -1

Active Advanced ECM: -2

Active ECCM: +1 (to negate ECM only)

Active Advanced ECCM: +2 (to negate ECM only)
 Targeting Laser: +1
 Target Speed 4-6: -1
 Target Speed 7-9: -2
 Target Speed 10+: -3
 Targeting System: +2
 Advanced Targeting System: +3
 Accurate Weapon: +1
 Inaccurate Weapon: -1
 Smoke: -2
 Light Cover: -1
 Heavy Cover: -3
 Gunnery Skill: + 1 per rank, maximum +5.
 Artillery Skill: +1 per 2 ranks, maximum +3. Only indirect fire.
 Light Cover is defined as cover that blocks no more than 25% of the target.
 Heavy Cover is defined as cover that blocks 25% to 75% of the target.

Weapon Chart

Weapon	Rng	Dmg	Hits	Type	Mount	Ammo	Power	RoF	Notes
Machine Gun	10	1	5	Proj.	Class 1	250	1	5	Spread
Heavy Machine Gun	8	3	5	Proj.	Class 2	150	2	5	Spread
Autocannon	12	5	8	Proj.	Class 3	100	3	3	Spread
Flechette Cannon	5	2	3	Proj.	Class 1	500	1	5	Anti-personnel, Spread
Laser	15	5	5	Beam	Class 1		5	1	Accurate
Heavy Laser	12	8	6	Beam	Class 2		8	1	Accurate
Graser	20	10	5	Beam	Class 3		10	1	Accurate
Plasma Cannon	8	15	3	Beam	Class 3		15	1	Inaccurate
Fusion Cannon	10	12	5	Beam	Class 3		15	1	Inaccurate
Missile Pack	30	5	5	Missile	Class 3	30	3	3	Spread, Explosive, Accurate
Rocket Pod	20	2	5	Missile	Class 2	45	3	9	Spread, Explosive, Inaccurate, Barrage
Light Artillery	25	10	5	Artillery	Class 3	10	10	½	Artillery, Explosive
Medium Artillery	30	15	5	Artillery	Class 3	10	10	1/3	Artillery, Explosive
Heavy Artillery	35	20	5	Artillery	Class 4	10	10	¼	Artillery, Explosive

Unit Types

Unit	Type	Move	Power	Specials
Infantry	Infantry	3	5	
Jump Infantry	Infantry	3	5	Jump
Assault Infantry	Infantry	4	8	Jump, Class 2
Garrison	Infantry	3	5	Defense
Light Tank	Vehicle	8	8	
Hover Tank	Vehicle	8	8	Hover
Medium Tank	Vehicle	6	10	
Heavy Tank	Vehicle	5	12	
Mobile Artillery	Vehicle	3	15	Class 3

Unit	Type	Move	Power	Specials
Recon MBU	MBU	10	20	
Light MBU	MBU	10	30	
Medium MBU	MBU	9	40	
Heavy MBU	MBU	8	50	
Assault MBU	MBU	7	60	
Small Emplacement	Fixed	0	10	
Medium Emplacement	Fixed	0	20	
Large Emplacement	Fixed	0	40	Class 4

Jump – Allows the unit to cover up to 2 hexes by air, ignoring terrain. The jump is instead of normal movement.

Class 2 – This unit may carry Class 1 or 2 weapons.

Class 3 – This unit may carry Class 1, 2 or 3 weapons.

Class 4 – This unit may carry Class 1, 2, 3 or 4 weapons.

Defense – If this unit remains stationary, they are granted a defensive bonus of -1 to be hit. After 2 turns of motionlessness, they are granted 2 points of armor. Any movement removes these bonuses.

Hover – May cross terrain without penalties. Cannot traverse steep terrain.

Electronics

A unit may dedicate a certain portion of either body/torso or cockpit/crew compartment mounts for dedicated electronic suites. One mount will give 3 electronic slots. No more than ½ of the mounts may be dedicated to slots.

Item	Slots	Power	Notes
ECM	1	5	Decreases the chance to be hit (-1 to hit)
ECCM	1	5	Counters ECM
Stealth	2	20	Renders the unit invisible on detection systems (5 in 10 chance to be detected). Disrupted while jumping or firing.
Advanced Stealth	3	30	Renders the unit invisible on detection systems (3 in 10 chance to be detected). Disrupted while jumping or firing.
Advanced ECM	2	10	Decreases the chance to be hit (-2 to hit)
Advanced ECCM	2	10	Counters ECM/Advanced ECM
Targeting Laser	1	5	Aids targeting
Targeting System	1	5	Provides a bonus to hit
Advanced Targeting System	1	8	Provides a bonus to hit

The following hardware requires regular mounts.

Item	Mounts	Power	Notes
Jump Units	1	10	1 required per Leg
Ammo Pack	1	0	Increases the ammo amount for 1 weapon
Point Defense Unit	1	2	1 in 10 chance of destroying incoming missile/rocket
Advanced Point Defense Unit	2	5	2 in 10 chance of destroying incoming missile/rocket
Afterburner	1	10	Provides +2 speed for 5 turns

Vehicles

Vehicle	Body Armor	Body Struct.	Turret Armor	Turret Struct.	MU Armor	MU Struct.	DU Armor	DU Struct.	Crew Armor	Crew Struct.
Light Tank	5	8	5	9	5	5	2	2	5	5
Hover Tank	8	12	5	9	5	5	2	2	5	5
Medium Tank	10	15	8	14	8	8	3	3	5	5
Heavy Tank	15	23	10	18	10	10	3	3	5	5
Mobile Artillery	15	23	10	18	10	10	3	3	5	5
Small Emplacement	20	30	15	26					8	8
Medium Emplacement	30	45	20	35					8	8
Large Emplacement	40	60	25	44					8	8

Vehicle Mounts

Vehicle	Body	Turret	Crew
Light Tank	0	2	0
Hover Tank	0	2	0
Medium Tank	1	2	1
Heavy Tank	2	3	1
Mobile Artillery	1	1	1
Small Emplacement	2	2	0
Medium Emplacement	3	4	1
Large Emplacement	4	6	2

Manned Battle Units

MBU	Arm Armor	Arm Struct.	Leg Armor	Leg Struct.	Torso Armor	Torso Struct.	Cockpit Armor	Cockpit Struct.
Recon	8	16	10	20	20	40	5	10
Light	10	20	13	26	25	50	5	10
Medium	12	24	16	32	30	60	6	12
Heavy	14	28	19	38	35	70	7	14
Assault	16	32	22	44	40	80	8	16

MBU Mounts

MBU	Arm Mounts	Leg Mounts	Torso Mounts	Cockpit Mounts
Recon	1	1	2	0
Light	1	1	2	1
Medium	2	2	3	1
Heavy	2	2	4	1
Assault	3	3	6	2

Movement

Each unit may move up to its speed in hexes each turn. Crossing anything other than flat terrain imposes penalties on movement.

Terrain Type	Move Cost	Notes
Plains	1	
Light Forest	2	Light Cover
Dense Forest	4	Heavy Cover
Snow	2	
Shallow Water	2	
Deep Water	6	

Terrain Type	Move Cost	Notes
Shallow Slope	2	1 hex rise per 4 hex distance
Steep Slope	4	1 hex rise per 2 hex distance
Paved/Road	½	

Any slope greater than Steep is not traversable.

Balancing forces

To ensure an equal balance of forces per side, the following point structure is used.

Unit	Base Points
Recon MBU	4
Light MBU	5
Medium MBU	8
Heavy MBU	9
Assault MBU	14
Light Tank	2
Hover Tank	2
Medium Tank	4
Heavy Tank	6
Mobile Artillery	3
Small Emplacement	4
Medium Emplacement	8
Large Emplacement	12
Infantry	1
Jump Infantry	2
Assault Infantry	4
Garrison	2

The following modifiers are added to the base point cost for a final unit cost.

Modifier	Point Cost
Jump	+1
Hover	+1
Class 2 Weapon	+2
Class 3 Weapon	+3
Class 4 Weapon	+4
ECM/ECCM	+1
Stealth	+2
Adv. ECM/ECCM	+2
Adv. Stealth	+3
Targeting Laser	+1
Targeting System	+2
Adv. Targeting System	+4
Point Defense	+1
Adv Point Defense	+2
Afterburner	+1
Spread Weapon	+1
Accurate Weapon	+1
Explosive Weapon	+2
Barrage Weapon	+3
Inaccurate Weapon	-1

Modifier	Point Cost
Ammo Pack	+1
Artillery	+2
Vacuum Capable	+2
Skill ranks	+1/rank

All modifiers are cumulative. For example, a Missile Pack (Class 3 weapon, Spread, explosive, accurate) adds 7 to the cost of the unit.

Interface

Interface is the term for the junction of space and atmosphere. Units that operate in the interface must be able to survive space, and atmosphere, while providing a viable combat unit.

A normal unit may be configured for vacuum operations at the cost of one body/torso hard point to account for life-support and sealing. A unit that is vacuum-capable is also immune to nuclear and chemical effects.

Interface Units

Interface units consist of strike fighters, bombers, and trans-atmosphere fighters. Strike fighters are atmosphere only units. Bombers and Trans-Atmosphere fighters are atmosphere/space units.

Vehicle	Body Armor	Body Struct.	Wing Armor	Wing Struct.	DU Armor	DU Struct.	Crew Armor	Crew Struct.
Light Strike Fighter	2	3	1	2	3	3	2	2
Medium Strike Fighter	3	5	2	4	4	4	3	3
Heavy Strike Fighter	4	6	3	5	5	5	4	4
Light Bomber	3	5	2	4	5	5	4	4
Medium Bomber	4	6	3	5	6	6	5	5
Heavy Bomber	5	8	4	7	7	7	6	6
Light T/A Fighter	5	8	3	5	6	6	5	5
Medium T/A Fighter	6	9	4	7	7	7	6	6
Heavy T/A Fighter	7	11	5	9	8	8	7	7

Interface Unit Mounts

Vehicle	Body	Wing	Electronic Slots
Light Strike Fighter	0	2	1
Medium Strike Fighter	0	4	2
Heavy Strike Fighter	1	6	3
Light Bomber	2	2	2
Medium Bomber	2	2	2
Heavy Bomber	2	4	4
Light T/A Fighter	1	2	2
Medium T/A Fighter	2	4	4
Heavy T/A Fighter	3	6	6

Wing mounts are split evenly between left/right wings. All mounts on interface units are considered to be forward arc.

Unit	Type	Move	Power	Specials
Light Strike Fighter	Air	14	8	Class 2, Turn 3
Medium Strike Fighter	Air	12	10	Class 2, Turn 3
Heavy Strike Fighter	Air	10	12	Class 3, Turn 4
Light Bomber	Air/Space	12	10	Class 2, Turn 4
Medium Bomber	Air/Space	10	12	Class 2, Turn 5
Heavy Bomber	Air/Space	8	14	Class 3, Turn 6
Light T/A Fighter	Air/Space	12	12	Class 2, Turn 5
Medium T/A Fighter	Air/Space	10	14	Class 3, Turn 5
Heavy T/A Fighter	Air/Space	8	16	Class 3, Turn 6

Turn is the number of hexes (inches) a unit must travel in a straight line prior to making a 1 hex face turn.

Unit	Base Points
Light Strike Fighter	2
Medium Strike Fighter	4
Heavy Strike Fighter	7
Light Bomber	6
Medium Bomber	6
Heavy Bomber	8
Light T/A Fighter	5
Medium T/A Fighter	9
Heavy T/A Fighter	12

Base costs for the bombers and T/A fighters include vacuum capable cost.

Special Interface Unit Weapons

The following weapons are used by strike fighters, bombers and T/A fighters only.

Weapon	Range	Damage	Hits	Type	Mount	Ammo	Power	RoF	Notes
Light Bomb	0	8	3	Bomb	Class 2	5	1	1	Artillery, Explosive
Heavy Bomb	0	12	3	Bomb	Class 2	3	1	1	Artillery, Explosive
Cluster Bomb	0	12	3	Bomb	Class 3	9	1	3	Spread, Artillery, Explosive

Experience

Pilots gain experience through combat. Each combat that the pilot survives grants one experience point. Each kill grants an additional experience point. Skills may be increased by expending a number of experience equal to twice the new skill level.

Starting Skills

Each pilot begins with a Piloting skill of 1 and one Gunnery skill at 1.