RAILGUN: 2100

Science Fiction Armored Combat

By Ty Beard

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RAILGUN: 2100

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§ 1 Introduction

A. Scale

Railgun: 2100 is a fast and playable simulation of armored warfare in the far future. One inch equals 250 meters, one vehicle represents one real-world vehicle and an infantry stand equals one squad.

When the rules require that numbers be halved, always round the numbers up to the next whole number. This games uses ten sided dice.

B. Measuring

Players may not measure distances before they declare fire. They may never check front/flank angles until an attack is declared against them.¹

If a player declares an attack, measures the range and determines that the target is out of range, the attack is wasted.

§ 2 Sequence of Play

A. General

Each game turn is composed of two player turns. A game lasts a number of game turns as determined by the referee. A good limit is ten turns for a two hour game. Each player needs a Reference Card, a Troop Sheet and several ten sided dice.

B. Sequence of Play

1. Overview

a) Basically, the attacker moves while the defender fires. The defender can fire before, during, or after the attacker's movement.2 Then the defender resolves his artillery fire.

¹ Oh sure, we have advanced targeting systems, but allowing players to pre-measure slows the game to a crawl. If it makes you feel better, ascribe it to jamming, fog of war, etc....

² All vehicles have advanced stabilization systems that allow them to fire while moving as effectively as when standing still.

b) The defender resolves his turn.

2. Attacking Player Turn

(a) Command Phase

- · The attacker places reinforcements on the board and resolves any special scenario tasks.
- The attacker places orbital artillery strikes.
- (b) Defender First Fire: The defender fires any of his stands.

(c) Movement Phase

- **Movement Segment:** The attacker moves his stands, one at a time. At any time during the phase, the defender's stands may snap-fire. **Stands may not be "moved back"**; but the defender is to be given an opportunity to fire at all enemy stands while moving. Snap-fire is at –1.
- · Pivot: After the attacker completes his move, the defender may pivot any of his stands that qualify.
- Pin Segment. At the end of the phase, quality checks for pinned stands are made. No defender fire is allowed during this sub-phase.

· Close Combat Segment

 Begin this segment when all other movement is complete. No defender fire may be made, except for stands in close combat.

Defender Round

- Defender fires.
- Attacker resolves quality checks due to enemy close combat attacks.
- Defender pivots.

- Attacker Round

- Attacker fires.
- Defender makes quality checks due to enemy close combat attacks.
- Attacker pivots.

Final Round

- Reduce remaining movement by one.
- Repeat the close combat segment until there are no opponents within close combat range.
- **Complete movement phase.** Close combat units with movement remaing may complete their movement. Resolve additional close combats and defensive firing as necessary.
- Quality Check Segment. Resolve quality checks due to defensive fire during the "Complete movement phase.".

(f) Artillery Phase

- Defender's artillery lands.
- Resolve quality checks.

(g) Final Phase

- · Resolve any housekeeping chores.
- Make quality checks for unit losses.
- Remove pin markers on friendly troops.

3. Defending Player Turn

Use the same sequence for the Attacking Player Turn, but reverse the roles.

§ 3 The Forces

A. Markers

You will need the following markers in order to play Railgun: 2000.

Barrage templates indicate the area affected by an artillery strike.

Quality check markers indicate which units must take a quality check at the end of the phase.

Missile ammo markers indicate the status of units that have limited missile ammunition. Pennies make good ammo markers; heads indicates that one shot is left, tails indicates that no shots are left.

Engaged markers indicate that a stand has been fired at already in the turn.

Can't Fire markers designate stands that have already fired this turn.

B. "Units" and "Stands"

In these rules, the word "stand" refers to individual vehicles and infantry stands. "Unit" refers to the entire command unit (companies or battalions, depending on the army lists), which comprises several vehicles and/or infantry stands.

C. Vehicles

Vehicles stands have their characteristics listed on the Vehicle Data Chart. A sample listing looks like this:

Vehicle	PV	Armor	Move	Gun	Rng	Msl	Rng	Cap	Size	Notes
Grenadier IFV	5	L	12h	С	8	A *	10	1	L	

1. The Data chart abbreviations are:

- a) Vehicle: The vehicle's name.
- b) PV: Point value of the vehicle.
- c) Armor: Armor value.
- d) Move: Movement allowance. "a" means that the vehicle is amphibious. "w" is a wheeled class vehicle; "t" is a tracked class vehicle; "q" is a grav vehicle' "h" is a hovercraft.
- e) Gun: The type of gun (for use on the Combat Table).
- f) Rng: Effective range of the weapon.
- g) Msl: The type of missile carried by the vehicle. An asterisk means only two shots of ammo are carried.
- h) Carry: The number of infantry stands that the vehicle can carry.
- i) Notes: Any other data relevant to the vehicle.

D. Infantry

Infantry stands have their characteristics listed on the Infantry Table. A sample listing would look like this:

				SA	RPG	Cannon	MsI		
Type	PV	Armor	Move	Rng	Rng	Rng	Type	Rng	Notes
Powered Hvy Wpns	6	Α	4	2	2	8	B*	6	

1. The chart abbreviations are:

- a) Type: The type of infantry stand.
- b) PV: Point value of the stand.
- c) Armor: Armor value.
- d) Move: Movement allowance.
- e) SA Range: Effective range of small arms fire.
- f) RPG Range: The range of the stand's RPG's (a generic term for light antitank weapons).
- g) Cannon Range: The range of the stand's heavy cannon.
- h) Msl Type: The type of missile carries by the stand. An asterisk means the stand only has 2 shots.
- i) Msl Rng: The missile's range.

E. Artillery

Artillery stands are listed on the Artillery Data Chart. A sample listing looks like:

Туре	PV	Armor	Move	Dice	Template	Range	Notes
Apollo LMRL	10	L	6	1	3 inch	30	

1. The chart abbreviations mean:

- a) Type: Type of artillery.
- b) PV: Point value of the stand.
- c) Armor: Vehicle armor.
- d) Move: Movement allowance.
- e) Dice: Number of artillery dice rolled.
- f) Template: The area hit by the weapon.
- g) Range: The weapon's range.
- h) Notes: Any other data relevant to the vehicle.

F. Troop Ratings³

Stands in Railgun: 2100 are rated by class, quality and to hit adjustment. Class affects a stand's base quality rating and its base to hit adjustment. There are four classes:

Green troops are poorly trained, disaffected, and/or inexperienced. They have a base quality of 9 and have a to hit adjustment of -1. Militia and colonial units are usually green.

Average troops are trained, reasonably well-led, and effective. They have a base quality of 7, and no to hit adjustment. Regulars and front-line troops are usually average.

Veteran troops are well-trained, long term professionals who often have considerable combat experience. They have a quality of 5 and have a to hit adjustment of +1. Marine units, shock troops and the like are usually veteran. Veterans can use the **fire discipline** special rule.

Elite troops are superbly trained and superbly led professionals, often special forces. They have a quality of 3 and have a +2 to hit adjustment. Jump troops, special forces, and commandoes are usually elite. They can use the **fire discipline** special rule.

G. Racial Adjustments

A stand's race may affect its quality and its to hit adjustment.

One fundamental assumption of Railgun: 2100 is that troop quality is the most important variable on the battlefield. Accordingly, troop quality affects every major game system.

H. Quality Checks

1. General

Whenever a stand takes a quality check, it must roll its quality number or higher on one die. A natural "1" always fails. Unless stated otherwise, a failed quality check removes the stand from the game. The stand counts half for enemy victory conditions.

Stands take quality checks at the end of the phase in which the event requiring the quality check occurred.

A stand can take a maximum of three non-close combat quality checks in a player turn, excluding close combat. It can take one check from each of the following sources each turn:

- (1) fire combat (taken at the end of the movement phase);
- (2) artillery fire (taken at the end of the artillery phase in which the artillery hit was incurred); and
- (3) losses (its unit has taken 2/3 losses or the stand is the last stand in its unit).

Quality checks in close combat do not count against these limits, and a stand can take any number of quality checks in close combat (see Close Combat).

If a stand has already taken and passed a particular type of quality check in a turn, later quality checks of that same type during the same turn are ignored.

2. Quality Checks Due to Fire Combat

Quality checks that occur as a result of fire combat (or artillery strikes) are taken at the end of the fire phase. Only one fire combat quality check per game turn is permitted per unit.

For example, a Terran Phalanx is advancing in its movement phase towards a Bulrathi Grizzly. The Grizzly fires and hits the Phalanx, causing a pin, which requires a quality check. The quality check is taken at the end of the Terran movement phase.

3. Quality Checks Due to Losses

When a unit loses 2/3 (or more) of its stands, the entire unit must make a single quality check (one roll for the whole unit). This check occurs in the **final phase** of the turn in which the unit's losses reach 2/3.

A unit that has already lost 2/3 or more of its stands must make a quality check in the final phase of any turn in which it takes additional losses.

A stand that is the last stand in a unit must make a quality check during the final phase of the first turn in which the stand becomes the last stand in the unit.

4. Quality Checks Due to Artillery Fire

Quality checks from artillery fire are resolved at the end of the artillery phase, if the stand is hit in that phase. Note that if your own artillery hits one of your stands, you'll take the check during the phase your artillery lands. If a stand takes an artillery hit during its movement phase, the stand will make a quality check at that instant.

5. Quality Checks Due to Close Combat

A stand can take a maximum of one quality check per close combat round. In close combat, the **only** quality checks allowed are due to weapons fire. All close combat quality checks take place at the end of each close combat round.

§ 4 Movement and Cohesion

A. General

Players may move as many of their stands as they want during their movement phase. Stands may use as much of their movement allowance as the owning player wants.

There are two classes of movement, **normal** and **strategic**.

Stands may turn during movement at no additional movement cost. Turning is not movement for firing purposes. A vehicle (except gravs) may move backwards at 1/4 movement rate.

B. Movement Classes

A stand's movement class determines the effect that terrain has on that stand's movement. Movement class is noted after the movement allowance on the data charts.

All infantry stands have a **leg** movement class.

Stands with a "t" are tracked vehicles and have a **tracked** movement class. Stands with a "w" are wheeled vehicles with a **wheeled** movement class. Stands with an "g" are grav vehicles with a **grav** movement class. Stands with an "x" are towed weapons and have a **towed** movement class.

Stands with an "a" are **amphibious vehicles** and may cross impassable rivers (see below). Amphibious vehicles may cross rivers and streams at one quarter movement allowance. They may not fire while in the water. The referee may rule that some rivers or streams are impassable to amphibious vehicles because the banks are too steep.

Stands with an "h" are hovercraft.

⁴ The stand is not necessarily dead, but it is out of the current fight.

C. Terrain Effects on Movement

1. Clear Terrain

Clear terrain does not affect on movement.

2. Light Woods

Light woods do not affect movement, except for hovercraft. Light woods cost double for hovercraft. Grav stands may move through light woods in NOE mode at double their movement cost, or they may move over the terrain at normal movement costs. Light woods are cover for spotting and los purposes.

3. Heavy Woods

Heavy woods do not affect leg class stands. Heavy woods are impassable to hovercraft. Grav class stands may not move through heavy woods in NOE mode, but they may move over the terrain at normal movement costs. All other movement classes have their movement halved. Heavy woods are cover for spotting and los purposes.

4. Forest

Forest is impassable to all movement classes except leg class stands. Grav stands may move over the terrain at normal movement costs. Forest is cover for spotting and los purposes.

5. Swamp

Swamp does not affect leg class stands. Grav stands may move over the terrain at normal movement costs. Stands of all other movement classes (including gravs) have their movement rate quartered when moving through swamp. These stands must roll 1 die at the end of any movement phase in which they entered swamp. On a 1-3, the stand is stuck and cannot get out. Place the stand at the point it would have been at half of its movement allowance. If this takes the stand out of the swamp, place the stand on the edge of the swamp nearest to the halfway point.

An armored recovery vehicle may attempt to extract a stuck stand. It must move into contact with the stuck stand and stop. At the end of the movement phase the recovery vehicle must roll to get stuck itself. If it does not get stuck, it can extract the stuck stand on a 1-6 on 1 die. The stuck stand is no longer stuck. Both vehicles will have to roll for getting stuck again as they move out of the swamp.⁵

Swamp is cover for spotting and los purposes.

6. Streams

Streams have no effect on a leg class stand or a grav class stand. All other stands must spend half of their movement allowance to cross the stream. Stands that are behind a stream are in cover for spotting and los purposes, if the spotting stand must trace his los through the stream.

7. Rivers

Fordible Rivers have no effect on grav stands. All other stands may cross the river but their movement rate is halved.

Impassable Rivers have no effect on grav stands. All other non-amphibious stands may not cross the river. Amphibious stands may cross impassable rivers at 1/4 movement rate. These stands may not fire (except in close combat) while in the water. At the referee's discretion, infantry stands may have integral rubber rafts. They can cross impassable rivers at 1 inch per turn and may not fire while in the water.

Hovercraft treat rivers as roads.

8. Roads, Bridges and Paths

Roads or Bridges have no effect on grav stands. Wheeled class stands have their movement rate quadrupled when moving along a road. All other stands have their movement rate doubled when moving along a road.

Roads are blocked if a vehicle is destroyed on them.

An MBT may only be pushed out of the way by another MBT. A light vehicle may be pushed out of the way by an MBT or light vehicle. A vehicle spends half its movement allowance pushing a vehicle off of a road. Alternately, a vehicle can move past a blocking vehicle at a cost of 2 inches of movement (the moving vehicle is going around the blocking vehicle). This option is not available if a bridge is being blocked.

Paths cannot be used by gravs. All other stands are treated as if they were moving through clear terrain as long as they move along a path.

9. Cliffs and Ridges

Cliffs have no effect on grav stands. Cliffs are impassable to all other stands, except light infantry. Light infantry may cross cliffs after they have spent a full turn adjacent to the cliff.

Ridges have no effect on movement.

10. Towns

Towns are impassable to gravs in noe mode. Towns have no effect on leg class stands. All other class stands have their movement rate halved when moving through towns. Towns are cover for spotting and los purposes.

D. Carrying Infantry/Moving Towed Weapons

A vehicle may carry a number of infantry stands equal to the vehicle's capacity. The vehicle expends half of its movement allowance when it picks up or drops off infantry stands. The vehicle may pick up or drop off infantry at any time

⁵ The swamp rules are a lot of trouble. If you want, you can simply make swamp impassable to vehicles.

during its movement phase. The vehicle is not considered to have moved for firing purposes if it only drops off infantry. Infantry that is dropped off will lose a fraction of their movement allowance equal to the fraction spent by the carrier when it drops off the infantry. Round all fraction down to the nearest half inch. For example, a Hoplite MICV with a movement of 8 moves 2" and drops off an infantry stand. The Warrior has expended 6 inches of movement–2" for movement and 4" to drop the infantry off. This is 75% of its movement, so the infantry will lose 75% of its movement that turn. The infantry stand can move 3"; 75% of 3" is 2.25"; this leaves .75 inches for the infantry to move, which is rounded down to .5 inches. The infantry has 1/2 inch of movement left.

In close combat, mounted infantry can dismount after the first round of close combat. The carrier loses half or all of its movement allowance at the end of the close combat. The infantry may not move after close combat.

These same rules apply to towed weapons and their movers, except that towed weapons may be moved 1" per turn by their crews, if the towed weapon did not plot fire in the command phase.

E. Cohesion

To be in cohesion, all stands in a unit (usually a platoon) must remain within cohesion distance of another stand in the unit. Recon stands ignore all cohesion rules.

A stand that is out of cohesion must move towards the other stands in its unit, if the stand moves at all. A stand out of cohesion has its quality number increased by one until it restores cohesion.⁶

Players may intentionally move a stand out of cohesion, but the stand must move to re-join its unit if the stand moves in a later turn. Cohesion distance depends on troop quality:

Green troops have a cohesion distance of 1 inch.

Regular troops have a cohesion distance of 2 inches.

Veteran troops have a cohesion distance of 3 inches.

Elite troops have a cohesion distance of 4 inches.

F. Strategic Movement

Strategic movement is a special type of movement. A vehicle stand that makes a strategic move has its base movement rate doubled or increased to 12, whichever is greater. An infantry stand has its movement rate doubled. A stand must make a strategic move for the entire movement phase; it can't "mix and match" movement modes. But for the entire player turn and the following enemy player turn, the stand must obey the following restrictions:

- 1. It can't fire during its fire phase.
- 2. It can't move within 10 inches of any enemy stand, regardless of whether it can see the enemy stand or not. Of course, this means that it can't initiate a close assault.
- 3. All quality checks that the stand takes as a result of enemy anti-vehicle or small fire are at -1.
- 4. Enemy attacks against the stand are at +1 to hit, except for artillery attacks.
- 5. If close assaulted, the stand fights normally.
- 6. It must be more than 10 inches away from any enemy stands before it can make a strategic move.

§ 5 Seeing Your Opponent

A. General

Before a stand may fire, its target must be spotted. Before a stand can spot a target, the spotting stand must be able to trace an unblocked line of sight to the target stand.

B. Line of Sight (los)

Stands trace line of sight from any part of a stand to any part of a stand.

Los may be blocked by certain types of terrain as well as geographic features such as hills or towns.

Players may agree to use the **Carl Rule**, which provides that a stand on the edge of cover may only fire or be fired at through its front arc. Infantry is exempt from the Carl Rule.

C. Spotting

"Spotting" is a term used to describe detection of an enemy stand. The standard tools for spotting are satellites, electronic sensors and "sniffers" – unmanned reconnaisance drones. Modern vehicles and infantry have a wide variety of electronic countermeasures gear to spoof these systems.

A stand is spotted **the instant** it is within spotting range of an enemy stand. The spotting chart lists spotting ranges. If the spotting stand is a "low-tech" stand, then it must additionally trace an unobstructed line of sight to the enemy stand.

Once a stand is spotted by any stand, it is spotted by all stands.

A stand becomes unspotted during the beginning of any phase in which it is out of any enemy unit's spotting range.

D. Terrain Effects on Los and Spotting

1. Hills and Ridges

Hills are not shaped like wedding cakes. They regularly slope from the ridge of the hill to its base. Hills can be one or

⁶ This rule simulates the additional command and control burden of having a detachment running around the battlefield, as well as the brittle nature of detachments.

⁷ The Carl Rule is realistic, but painfully non-intuitive. Therefore, we made it optional. If you use the Carl Rule, you should allow players to check the angle of their stands before they finish moving, so that they can be certain that they can fire at a target.

more levels high. Ideally, hills should be at least two levels high, but you can make them as high as you want.

Ridges are linear obstacles. They block los, unless either the spotting stand or the target stand touches the ridgeline.

2. Cover

Woods, forests, towns and swamps are cover. Most cover is one level high, but towns and cities can be higher if you desire. A stand touching a ridge is in cover for spotting purposes only if the los must be traced through the ridgeline. Cover blocks line of sight. Stands in cover may see up to 2" in the cover. This stops at the edge of the cover. So a stand 1" inside a forest cannot see out of the forest. Its los stops at the forest edge.

E. Smoke

Smoke (actually multi-spectral particles with suspended nano-blockers) blocks line of sight just like cover. Smoke goes away during the command phase of each turn on a roll of 1-2 on one die. Roll during each player's command phase. A smoke barrage has the dimensions listed in the weapon data charts.

§ 6 Combat Overview

A. General

There are 3 types of combat:

Anti-vehicle combat: direct fire against vehicles usually using armor piercing ammunition.

Small arms combat: fire against infantry and soft stands usually using automatic weapons and high explosive warheads.

Artillery combat: fire delivered by indirect fire from artillery systems.

B. Cove

A stand must touch the edge of cover for the stand to fire out of the cover or be fired at by stands outside the cover. A stand in cover may trace a line of sight two inches in the same cover. It may fire at a target 2 inches or less away in the same cover.⁸

C. Infantry in Personnel Carriers

Infantry may fire from a vehicle, but the effective range is halved and a -2 adjustment is applied to the hit number. Infantry in a vehicle that is destroyed (not one that fails a quality check) must make a quality check. If they fail this quality check they're destroyed and removed with the vehicle. Infantry in a vehicle that fails a quality check are eliminated with the vehicle.⁹

§ 7 Fire Combat Eligibility

A. General

Stands execute fire combat during the opposing player's movement phase. A stand may fire at any point in the enemy movement phase – before, during or after movement – unless specifically excluded in the sequence of play. A stand may fire some of its shots and hold the remainder for later in the turn.

For playability purposes, players are encouraged to make as many shots as possible at the beginning or end of the enemy movement phase.

Vehicles with multiple weapons systems (i.e., both guns and missiles) must choose one weapon system to fire. Vehicles may conduct small arms fire or anti-vehicle fire, but not both.

Infantry may attack regardless of how far they moved. Infantry stands may use all of their weapons in the same turn, against different targets, if the owning player decides. Infantry missiles are an exception to this rule. They may only fire if the infantry stand did not move during its last movement phase. This applies to overrun combat as well.

Towed weapons may only fire if they did not move during their last movement phase.

B Procedure

A player may conduct fire with his stands in any order. The player indicates one or more firing stands, identifies the target, and states the type of weapon(s) being fired. The player then resolves the attack(s). The player then declares and resolves the next attack. Note that this allows a player to see the effect of the first attack before he declares the second attack. A stand that is fired at, but not destroyed, has an **engaged** marker or a **pin** marker placed on it.

C. Targeting Restrictions

A stand must fire at the nearest enemy stand, at the moment it fires, subject to the following exceptions:

- 1. Firing stands may ignore any stand with an Engaged marker or Pin marker on it.
- 2. Firing stands may ignore infantry in favor of vehicles or vice versa. A firing stand may ignore enemy stands in cover in favor of enemy stands in the open.
- 3. Firing stands may ignore a target in cover or behind an obstacle in favor of a target in the open.
- 4. Firing stands may ignore light vehicles to fire at main battle tanks (but **not** vice-versa).

⁸ All cover has this "hard edge" for playability purposes. If you like, you can delete this rule and allow all stands to see 1" into cover and see 1" out of cover.

⁹ The infantry are staying in the vehicle as it seeks "better firing positions" to the rear.

Artillery units (on-board and off-board) are not subject to this rule when making indirect fire attacks.

D. Movement and Firing; Stabilized Guns

All vehicles have stabilized guns, unless otherwise noted. Vehicles without stabilizaed (usually primitive vehicles) guns can't make attacks if they moved more than 1/2 of their move in their last movement phase.

A Vehicle may always make anti-infantry attacks, no matter how far it moved.

E. Pivot

A stand may pivot at the end of the enemy movement phase. The stand may only pivot when an enemy stand that began its movement phase in the friendly stand's front arc moves into the friendly stand's flank arc. The pivoting unit must pivot to keep at least one of the enemy units in the pivoting unit's front arc. ¹⁰

F. General

Fire combat requires the following:

- a) An unblocked line of sight from the firing stand to a spotted target stand (exception-los not required for missiles and artillery); and
- b) The target stand must be within range of the firing stand.

G. Angle of Attack

If there is an unblocked line of sight, determine the angle of the attack. An attacker wholly or partially in the target's front arc (the front 120° arc) uses the target's front armor value. An attacker not in the front arc uses the target's flank armor value. If the target does not have a flank armor value listed, assume that the flank is L.

H. Attack Procedure

1. Procedure

a) Roll 1d10 for the firing stand. Apply any modifiers and consult the Combat Chart.

2. Combat Chart Modifiers

- Range depends on weapon type. Close range is ½ effective; Long range is 1.5 times effective.
- Troop Quality: Green troops get a -1 to their roll, Veterans get a +1 to their roll. Elites get a +2 to their roll.
- Terrain: See chart, but light cover is -1 and heavy cover is -2.
- Snap-fire: -1 to the roll.

3. Missiles

Missiles get no range modifiers. Stands that are listed as having missiles (Msl on the data charts) may have a limited supply of missile ammunition. Stands with a limited missile supply have two shots. To represent this, place a penny under the stand (heads up) when it fires. Whenever the stand fires another missile, turn the penny tails up. The stand may no longer make missile attacks.

Stands with unlimited missile ammunition may fire as many shots as they wish.

I. Terrain To Hit Modifier

A stand firing at a target in certain types of terrain has a modifier applied to its to hit roll. In general, light cover is -1 to hit and heavy cover is -2 to hit.

Light Cover (-1 to hit)

Woods

Swamp

Heavy Cover (-2 to hit)

Forests

Towns

Smoke

Ridgelines

Streams

Trenches

J. Effect

A stand that is destroyed is, well, destroyed. A stand that is pinned must stop all movement for the rest of the turn. At the end of the phase it must make a quality check or be removed from the game. Multiple pins have no additional effect on vehicles, but each additional pin after the 1st results in a –1 to an infantry stand's quality check.

¹⁰ This prevents players from exploiting the sequence of play and "panzerbushing."

K. Fire Discipline

Certain stands can use this special rule. Here's how it works. When the stand fires at an enemy stand and scores a kill on a vehicle or a pin on an infantry stand, the firing stand may fire again in the same turn at a separate target. Veterans can make a maximum of 2 attacks (including the first shot); Elites can make a maximum of 3 attacks (including the first shot).

§ 8 Artillery Fire

A. Artillery

Artillery attacks occur in the artillery phase of the opponent's turn. Place an artillery template at any spot that can be seen by a friendly stand. All stands touching the template are affected by the barrage. Artillery templates are square templates. Roll 1d10 on the Artillery Column of the **Combat Chart** for your result. All artillery pieces fire individually. Additional hits have no additional effect.

B. Off-Board Artillery

Off board artillery can fire at any target on the board as long as a FO or unit spots for them. As a practical matter, most artillery will be off-board.

C. Self-Spotting

On board artillery stands (mortars usually) don't need an FO to place a barrage marker if they can spot their target.

D. Artillery Fire Against Unspotted Stands

An unspotted stand that is touched by an artillery template is only affected if the firing player rolls a 1-5 on one die. This roll is not made if there is a spotted enemy stand completely covered by the template.¹¹

E. Point Defense

Stands that have "point def" technology are capable of defending against enemy artillery barrages and aircraft. These stands may enter point defense mode in order to defend against enemy artillery barrages. Once in point defense mode, it may fire at enemy stands like any other stand. In addition, the point defense stand is counted as a point defense unit on the Point Defense Table.

To enter point defense mode, the stand may only move at half of its movement rate. At the end of the phase, it's in point defense mode.

Modify the PD roll by +3 when an artillery barrage lands on a PD vehicle.

F. Multiple Rocket Launchers

Multiple rocket launchers (MRL) are less accurate than tube artillery. Therefore, an MRL barrage may scatter and miss the target.

MRL barrages are placed and corrected like any other artillery mission. But an MRL barrage will only hit its target if the player makes a quality check for the firing stand. If the check misses, the barrage will scatter 1d10" in a random direction. Use scatter dice to determine the direction.

Self-homing MRL barrages are available. They don't scatter but they cost triple points.

G. Orbital Artillery

Orbital artillery barrages are pre-plotted in the artillery phase. They land during the enemy's next turn, in the artillery phase. They hit a 7 inch area.

§ 9 Close Combat

A. Procedure

A stand that moves in the same inch as an enemy stand must halt. The player places a die or a numbered marker beside the moving stand with its remaining movement allowance showing. During the close combat phase, units take turns firing at each other (nonmoving player first). After each round of close combat, decrease the remaining movement allowance by one. A unit completes close combat when it no longer has a target within one inch.

After the close combat is over, stands that have any movement left may continue moving.

B. Firing In Close Combat

In close combat, stands take turns firing (the non-moving stand fires first) until one side or the other has been destroyed.

Infantry firing at vehicles in close combat get to attack the vehicle's flank armor (regardless of facing).

C. Infantry In Close Combat

Infantry firing at vehicles in close combat get to attack the vehicle's flank armor (regardless of facing).

D. Pivoting in Close Combat

Stands may pivot before firing in the second and subsequent firing rounds. This pivot will **not** cause the stand to engage in other close combats.

¹¹ Do not use this rule if you are playing a scenario with completely hidden units and a referee.

E. Miscellaneous Close Combat Rules

When close combat is over, any of the moving player's stands that survive may continue to move if it has any movement remaining (check the movement die beside the stand). They may engage in additional close combats at this time. Stop and resolve each new close combat after all eligible units have moved.

Stands that participate in close combat may also fire normally in that turn.

Stands expend missile ammunition in close combat if they fire missiles.

§ 10 Gravs

A. General

A grav is treated for the most part as a very fast vehicle with special movement rules.

B. Movement

1. General

Gravs function in one of two modes: high mode or nap of the earth (noe). A grav enters one mode or the other at the start of its movement phase. It must spend the entire turn in that mode.

2. Nap of the Earth Mode

A grav in nap of the earth mode is flying very close to the ground. It is treated as an armored vehicle for all purposes. The Grav Data Chart lists the speed of the grav in noe mode. A grav in noe mode may either enter cover, or the grav may fly over it. All terrain moved over costs the same as clear terrain for movement purposes. Treat the grav as being 1 level higher than the cover for spotting and line of fire purposes.

3. High Mode

A grav in noe mode ignores terrain costs for linear obstacles and broken terrain. A grav in high mode has an unlimited movement allowance. All enemy units spot the grav and may trace a clear line of sight to the grav regardless of intervening terrain. At the end of the movement phase in which a grav flies in high mode, the owning player rolls one die. If the roll is 1-8, there is no effect. On a 9-10, the grav is destroyed by a strategic missile.

4. Coherency

Gravs have a coherency range of 4 inches.

C. Combat

1. General

A grav may attack with one of its weapons systems just like any other vehicle.

2. Pop-Up Attacks

The grav may also make a special pop-up attack. The grav executing the pop-up attack may fire through any intervening terrain and attack a target. AA guns may fire at the grav as it rises before the grav makes its attack. They have to be able to trace a los to the grav. The grav is treated as though it were at the minimum height level it would need to be to trace a line of sight to its target. This is a special AA gun attack. The AA gun may fire normally on its turn. An AA gun may divide its fire among several gravs. It simply saves some of its shots for later possible popup attacks.

3. Close Combat

Gravs are subject to the normal close combat rules, but only gravs in NOE can engage in close combat.

D. Firing At Gravs

Gravs in high mode are immune to artillery strikes.

Otherwise, fire against gravs is treated the same as fire against any other vehicle.

E. AA Guns

AA guns are specially designed to engage gravs, but they may also engage ground targets.

F. Rockets

Grav rockets are fired like any other direct fire weapon, except that no "to hit" roll is made. Instead, a 1 inch artillery template is placed and all stands in the inch are hit by the strike.

§ 11 Jumptroops and Dropships

A. General

Jumptroops drop on to the battlefield from orbit, in stealthy drop capsules. Dropships are stealthy spacecraft that drop from orbit and land on the battlefield, carrying troops and heavier equipment.

B. Landing Jumptroops

Jumptroopers land at the start of the movement phase. They can't move on the turn that they land. They can initiate close combat normally. Drop troops can't be fired at by enemy stands until they are on the ground. Even then, they are treated as stationary infantry and must be spotted normally.

To land jumptroops, place a counter corresponding to each stand in a company on a ruler. Tip the ruler over 12" above the play surface. Replace the counters with stands.

If the jumptroops land in woods, towns, forests, swamps, etc, make a quality check for each stand. If the stand fails the check, it is eliminated. Jumptroops can land in rivers, lakes, etc. safely.

C. Dropships

Dropships are high speed assault transports. They can land in any clear terrain that's at least 2 inches from woods, towns, forests, swamps, etc. They land at the beginning of the movement phase. They may be fired at by enemy stands once they land. In some scenarios, SAM batteries may exist, that can destroy dropships in the air.

Dropships carry 50 transport points of units. They can unload their entire cargo on the next movement phase. They then automatically return to orbit on the third turn. Stands that are unloaded expend 1/2 of their movement unloading.

While on the ground, dropships may attack and are attacked normally, except that a failed quality check or destroyed result only inflicts a hit on the ship. Three hits are necessary to destroy it.

If a dropship is destroyed before it unloads, all of its cargo is destroyed as well.

D. Remote DMRLs

Many drop units have remote DMRL (disposable multiple rocket launcher) stands attached. These are dropped along with other stands and obey the same rules for landing in terrain, etc. The friendly player reords how many DMRLs survived and removes the DMRLs from the board. Each surviving DMRL gives the owning player one LMRL barrage for the scenario.

DMRLs can be self-homing if triple the point cost is paid.

DMRLs can't be attacked.

§ 12 High Technology

A. Stealth

A stealth system halves the spotting range of all enemy stands.

§ 13 Charts

A. Combat Chart

Weapon	Light Armor	Medium Heavy Armor Armor		Superheav y Armor	Soft Vehicles	Armored Inf	Ran Modif Close	
S Small Arms	No Effect	No Effect	No Effect	No Effect	1-5: NE 6-7: Pin 8+: Kill	1-5: NE 6+: Pin	+2	-2
RRPGs	1-6: NE 7-9: Pin 10+ Kill	1-10: NE 11-12: Pin 13+: Kill	No Effect	No Effect	1-4: NE 6-7: Pin 8+: Kill	No Effect	+1	-1
C Cannon	1-2: NE 3-6: Pin 7+: Kill	1-7: NE 8-11: Pin 12+: Kill	No Effect	No Effect	1-2: NE 3-4: Pin 5+: Kill	1-3: NE 4+: Pin	+1	-1
H Hvy Missile	1-4: NE 5: Pin 6+ Kill	1-5: NE 6-8: Pin 9+: Kill	1-6: NE 7-9: Pin 10+: Kill	1-8: NE 9-11: Pin 12+ Kill	1-4:NE 5: Pin 6+: Kill	No Effect	+1	-1
Lt Missile	1-5: NE 6-8: Pin 9+: Kill	1-8: NE 9-10: Pin 11+: Kill	1-10: NE 11-12: Pin 13+: Kill	No Effect	1-4: NE 5-6: Pin 7+: Kill	No Effect	+1	-1
1 Lt. Railgun	1-5: NE 6-8: Pin 9+: Kill	1-8: NE 9-10: Pin 11+: Kill	1-9: NE 10+: Pin	No Effect	1-4: NE 5: Pin 6+: Kill	1-7: NE 8+: Pin	+1	-1
2 Md. Railgun	1-4: NE 5-6: Pin 7+: Kill	1-5: NE 6-8: Pin 9+: Kill	1-8: NE 9-10: Pin 11+: Kill	1-9: NE 10+: Pin	1-4: NE 5: Pin 6+: Kill	1-7: NE 8+: Pin	+1	-1
3 Hv. Railgun	1-3: NE 4: Pin 5+: Kill	1-4: NE 5-6: Pin 7+: Kill	1-5: NE 6-8: Pin 9+: Kill	1-8: NE 9-10: Pin 11+: Kill	1-4: NE 5: Pin 6+: Kill	1-7: NE 8+: Pin	+1	-1
4 SHv. Railgun	1-3: NE 4: Pin 5+: Kill	1-4: NE 5: Pin 6+: Kill	1-4: NE 5-6: Pin 7+: Kill	1-5: NE 6-8: Pin 9+: Kill	1-4: NE 5: Pin 6+: Kill	1-6: NE 7+: Pin	+1	-1
5 Mega Railgun	1-3: NE 4: Pin 5+: Kill	1-3: NE 4: Pin 5+: Kill	1-3: NE 4: Pin 5+: Kill	1-3: NE 4: Pin 5+: Kill	1-2: NE 3: Pin 4+: Kill	1-5: NE 6+: Pin (- 1)	+1	-1
A Artillery	9+: Pin	10+: Pin	10+: Pin	10+: Pin	8+: Pin	8+: Pin		

Terrain Modifiers: Soft Cover –1 Hard Cover –2 Quality Modifiers: Green –1 Veteran +1 Elite +2

Close range is ½ effective range. Long range is 1.5 time effective range.

B. Quality Chart

Troop Type	Quality Roll	To Hit
Green	9+	-1
Average	7+	0
Veteran	5+	+1
Elite	3+	+2

C. Point Defense Chart

PD Units	MLRS	Other	Meson Gun			
0	none	none	none			
1	none	9+	none			
2-3	9+	7+	none			
4-5	7+	5+	none			
6+	5+	3+	none			

D. Terrain Effects Chart

	Combat	Movement Class								
Terrain	Modifier	Tracked	Wheeled	Leg	Towed	Amphibious	Grav			
Clear	-	1	1	1	1	_	1			
Light Woods	-1	1	1	1	1 1		4			
Heavy Woods	-1	2	2	1	2	_	8			
Forest	orest -2 P P		1	Р	_	Р				
Swamp -1		See rules	See rules	See rules	See rules	See rules	Р			
Towns	-2	-2 2 2		1	2	_	4			
Streams	reams -2 ¹ 1/2 1/2 stand's stand's			1	1/2 stand's MA	_	1			
Rivers- Fordible	1	2	2	2	2	2	1			
Rivers- Impassable	1	Р	Р	P ²	Р	4	1			
Cliffs	_	Р	Р	P^3	Р	_	1			
Ridges	-2 ¹	_	_	_	_	_	_			
Roads	_	MA doubled	MA quadrupled	MA doubled	MA doubled	_	_			
Paths	-	1	1	1	1	_	_			

P = Prohibited -= No Effect

A number indicates that this is how many inches of movement it costs to move one inch through that type of terrain.

1 If target stand is behind and touching the terrain feature, it gets this modifier or saving throw. Otherwise, there is no effect.

2 At the referee's discretion, infantry may cross with rubber rafts at 1/4" per turn. The infantry may not fire while in the water.

3 Light infantry stands may cross a cliff by spending an entire movement phase beside the cliff.

E. Spotting Chart

	potting online	TARG	GET TYPE————————							
		ī	VEH	ICLE	ı		PERSO	ONNEL		
		Moving	Moving	Station.	Station.	Moving Moving Station.				
Spotting S	tand:	In Open o		ln	In	In Open o	r In	ln	In	
Quality	Туре	Firing	Cover	Cover	Open	Firing	Cover	Cover	Open	
GREEN	Personnel	auto	20"	10"	40"	auto	10"	1"	20"	
	Vehicle	auto	10"	5"	40"	auto	5"	1"	10"	
	Recon Vehicle	auto	20"	10"	40"	auto	10"	1"	20"	
	Recon Personnel	auto	30"	15"	40"	auto	15"	1"	30"	
AVERAGE	Personnel	auto	30"	15"	45"	auto	15"	1"	30"	
	Vehicle	auto	20"	10"	45"	auto	10"	1"	20 "	
	Recon Vehicle	auto	30"	15"	45"	auto	15"	1"	30"	
	Recon Personnel	auto	40"	20"	45"	auto	20"	1"	40"	
	_						-			
VETERAN	Personnel	auto	40"	20"	50"	auto	20"	1"	40"	
OR ELITE	Vehicle	auto	30"	15"	50"	auto	15"	1"	30"	
	Recon Vehicle	auto	40"	20"	50"	auto	20"	1"	40"	
	Recon Personnel	auto	50"	25"	50"	auto	25"	1"	50"	

§	14	Veh	icles	and	Troops
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Vehicle	Armor	Move	Gun	Rng	Msl	Rng	Cap	Size	Points	Notes
Tracked		0	4	40					4	
Peltast Lt Tk	L	8	1	10	-	-	-	L	4	
Phalanx Med Tk	М	6	2	14	-	-	-	М	8	
Paladin Hvy Tk	Н	6	3	16	-	-	-	Н	12	
Predator SHVY	VH	4	4	18	-	-	-	SH	16	
Tiger Tank Destroyer	L	6	3	16	-	-	-	М	2	
Obs Mbt	L	6	1	10	-	-	-	М	3	
Archer	L	6	С	8	Н	20	-	M	8	
Avenger AA	L	6	С	16	-	-	-	M	12	PD
Haven										
Hover	0	4.0 ls	0	4			4		1/	
Hovertruck	S	12h	S	4	-	-	1	L	1/2	
Dragoon APC	L	12h	С	8	-	-	1	L	2	
Grenadier IFV	L	12h	С	8	H*	10	1	L	4	
Hussar CFV	L	12h	С	8	Н	10	-	L	4	
Hammer Med Hover Tank	L	12h	2	14	-	-	-	M	8	
Rhino Hvy Hover Tank	М	12h	3	16	-	-	-	Н	12	
_										
Grav										
Gravsled	L	36g	S	4	-	-	1	L	2	
Hoplite IFV	L	36g	С	8	H*	10	1	M	8	
Falcon Gunsled	L	36g	2	14	-	-	-	M	16	
Hawk Gravtank	L	36g	3	16	-	-	-	Н	24	
Wheeled										
Hummer	L	6w	S	4	-	-	1	VL	1/4	
Hummer-C	L	6w	С	8	-	-	-	VL	2	
Hummer-M	L	6w	S	4	H*	10	-	VL	4	
Rhino	L	6w	С	8	-	-	1	L	1	
Lynx	L	6w	1	8	-	-	-	L	3	
Cougar	L	4w	2	8	-	-	-	М	6	

ARTILLERY

System	Armor	Move	Templat	eRange	Points	Notes		
Apollo LMRL	L	6t	2"	30 inch	10			
Athena Rck Hwz	L	6t	1"	40 km	6			
Zeus HMRL	L	4t	5"	30 km	20			
Mass Driver	L	4t	1"	50 km	20 I	No PD fire		
Longbow Tac Missile	L	4t	-	40 km	12	A-Msl		

INFANTRY

			SA	RPG	Cannor	1IVI	SI	•
Туре	Armor	Move	Rng	Rng	Rng	Type	Rng	Points
Militia	S	2	2	2	-	-	-	1/2
Lt Infantry	S	2	2	2	-	L*	4	1
Lt Inf Weapons	S	2	1	2	(6)	-	-	2
Armored Infantry	Α	2	2	2	-	L*	4	2
Armored Hvy Wpns	Α	2	1	2	(6)	L*	4	4
Armored Missile Infantry	Α	2	1	2	-	H*	10	4
Powered Infantry	Α	4	2	2	-	L*	6	4
Powered Hvy Wpns	Α	4	2	2	(8)	L*	6	8
Power Missile Infantry	Α	4	2	2	-	H*	10	8

Armies have standard organizational structures. Typically, the basic unit is the **platoon** of 3-5 vehicles and/or infantry squads. Platoons are organized into **companies** of 3-5 platoons, plus a heavy weapons platoon. Poorly trained armies often use the company as the basic maneuver unit. Companies are organized into **battalions** of 3-5 companies, often with a recon platoon and a mortar platoon. Battalions are organized into **Regiments** or **Brigades** of 3-5 battalions, usually with a heavy artillery battalion.

§ 16 Troop Reference Sheet

					venic	ies				
Vehicle /	Armor	Move	Gun	Rng	MsI	Rng	Cap	Size	Points	Notes
	•••••									
	•••••									
	•••••									
					Infan	try				
				SA	RPG	Cannon	Ms	s		
_										
Туре		Armor	Move	Rng	Rng	Rng	Type	Rng	Points	Notes
Type			Move	Rng	Rng	Rng	Туре	Rng	Points	Notes
				•	•					
					Artille					

Combat Chart

Weapon	Light Armor	Medium Armor	Heavy Armor	Superheav y Armor	Soft Vehicles	Armored Inf	Ran Modif Close	
S Small Arms	No Effect	No Effect	No Effect	No Effect	1-5: NE 6-7: Pin 8+: Kill	1-5: NE 6+: Pin	+2	-2
RRPGs	1-6: NE 7-9: Pin 10+ Kill	1-10: NE 11-12: Pin 13+: Kill	No Effect	No Effect	1-4: NE 6-7: Pin 8+: Kill	No Effect	+1	-1
C Cannon	1-2: NE 3-6: Pin 7+: Kill	1-7: NE 8-11: Pin 12+: Kill	No Effect	No Effect	1-2: NE 3-4: Pin 5+: Kill	1-3: NE 4+: Pin	+1	-1
Hvy Missile	1-4: NE 5: Pin 6+ Kill	1-5: NE 6-8: Pin 9+: Kill	1-6: NE 7-9: Pin 10+: Kill	1-8: NE 9-11: Pin 12+ Kill	1-4:NE 5: Pin 6+: Kill	No Effect	+1	-1
Lt Missile	1-5: NE 6-8: Pin 9+: Kill	1-8: NE 9-10: Pin 11+: Kill	1-10: NE 11-12: Pin 13+: Kill	No Effect	1-4: NE 5-6: Pin 7+: Kill	No Effect	+1	-1
1 Lt. Railgun	1-5: NE 6-8: Pin 9+: Kill	1-8: NE 9-10: Pin 11+: Kill	1-9: NE 10+: Pin	No Effect	1-4: NE 5: Pin 6+: Kill	1-7: NE 8+: Pin	+1	-1
2 Md. Railgun	1-4: NE 5-6: Pin 7+: Kill	1-5: NE 6-8: Pin 9+: Kill	1-8: NE 9-10: Pin 11+: Kill	1-9: NE 10+: Pin	1-4: NE 5: Pin 6+: Kill	1-7: NE 8+: Pin	+1	-1
3 Hv. Railgun	1-3: NE 4: Pin 5+: Kill	1-4: NE 5-6: Pin 7+: Kill	1-5: NE 6-8: Pin 9+: Kill	1-8: NE 9-10: Pin 11+: Kill	1-4: NE 5: Pin 6+: Kill	1-7: NE 8+: Pin	+1	-1
4 SHv. Railgun	1-3: NE 4: Pin 5+: Kill	1-4: NE 5: Pin 6+: Kill	1-4: NE 5-6: Pin 7+: Kill	1-5: NE 6-8: Pin 9+: Kill	1-4: NE 5: Pin 6+: Kill	1-6: NE 7+: Pin	+1	-1
5 Mega Railgun	1-3: NE 4: Pin 5+: Kill	1-3: NE 4: Pin 5+: Kill	1-3: NE 4: Pin 5+: Kill	1-3: NE 4: Pin 5+: Kill	1-2: NE 3: Pin 4+: Kill	1-5: NE 6+: Pin (- 1)	+1	-1
A Artillery	9+: Pin	10+: Pin	10+: Pin	10+: Pin	8+: Pin	8+: Pin		