**Introduction**

**Square Grenades** is a sci-fi war simulation game for two players. Each player controls an **army** composed of infantry and vehicle **units**, which can be moved over a tabletop **battlefield**, and used to attack opposing units. The goals of the game can vary depending on the chosen battle scenario, but typically consist on a combination of **destroying the enemy army** and**controlling key aeas** of the battlefield, without getting destroyed in the process.

**The battlefield**

The game is played on a battlefield, or game map divided into squares. A typical battlefield has a size of 36x24 squares. A unit on the battlefield is represented by one or more groups, each occupying an area of 2x2 squares on the battlefield (though exceptionally large units can have a group size of 3x3 squares or higher). For infantry units, each group typically represents 5 medium-sized humanoid fighters, or 3 individuals of moderate size, or 1 large monster. For vehicle units, each group represents an individual vehicle. All groups in a single unit must remain adjacent to one another at all times.

Battlefield representation

When playing the game, you can choose between several possible ways of representing the battlefield and the units on it. Your choice of battlefield representation has no impact on the game rules:

* **Small physical battlefield** (default): The battlefield is a game board with a size of 36x24 squares, each of which is 1"x1" (or 25mm x 25 mm), for a total size of 36"x24" (or 90x60 cm). Units are represented by tokens (e.g. cardboard pieces with the unit name on them). Using miniatures to represent units is also possible, though typical 25mm miniatures are double the scale of the actual battlefield in this mode - as a consequence, infantry groups can be represented by a single figure (or 4 figures packed together), whereas vehicle models will most often be too large to fit in a 2x2 squares space.
* **Large physical battlefield**: As above, but each battlefield square is 2"x2" (or 50mm x 50mm), for a total size of 72"x48" (or 180x120 cm). This is the same scale as typical 28mm figures and wargames, but with a 2"x2" square grid added.
* **Digital battlefield**: The battlefield is a game board on a computer system.

Battlefield distances

Distances are measured in squares.

For game purposes, diagonal lines of squares are considered to be the same length as horizontal or vertical lines of squares.

To measure the distance between two points in the battlefield, count the number of squares between both points using the shortest path available. [TODO: clarify].

To measure the distance between two unit groups in the battlefield, choose from the space occupied by each group one square that is closest to the other group. The distance between both groups is equal to the distance between both squares.

To measure the distance between two units in the battlefield, choose from each unit one group that is closest to the other unit. The distance between both units is equal to the distance between both groups.

*Adjacent units.*

Two units groups are considered adjacent if the distance between them is zero. Note: this includes groups placed in diagonal squares.

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TODO: Test diagonal adjacency, consider for removal.

**The game sequence.**

Players take turns to maneuver their armies and attack each other. Games last a minimum of 6 turns for each player, and can occasionally have a variable amount of additional turns.

Each turn is composed of 3 distinct phases: Move, Attack, and Morale.

* In the **move** phase, the player moves each unit in the army.
* In the **attack** phase, each unit within range of an enemy makes an attack using ranged or melee weapons.
* In the **morale** phase, the player determines if attacked enemy units become broken, and if broken friendly units regroup.

**Units in the battlefield**

Infantry Units

An infantry unit represents a squad of soldiers, usually fighting on foot. More exotic groups of combatants, like jump-pack infantry, cavalry, bike squads, packs of beasts, characters, and monsters, are also treated as infantry units.

In the battlefield, an infantry unit is composed of one or more infantry groups, each representing five or less soldiers. Each group occupies a space of 2x2 squares. Groups from the same unit deploy, move, and fight adjacent to each other.

*Tight Formation*

In some scenarios, the wide formations used by default by infantry units may not leave enough room to maneuver in the battlefield. During its movement, a unit can be arranged so that two infantry groups occupy a single 2x2 square space. This is called a **tight formation**. Note that a tight formation is a risky tactic that leaves the unit highly vulnerable to area attacks.

Vehicle Units

A vehicle unit represents any kind of vehicle larger than a bike, including tanks, buggies, grav speeders, mechs, and airplanes, among others. More rarely, a vehicle unit will represent a squadron of two or more vehicles fighting together. Vehicles from the same unit deploy, move and fight within 1 square of each other.

In the battlefield, a vehicle unit is composed of one or more vehicles. Each vehicle typically occupies a space of 2x2 squares, though exceptionally large vehicles exist that take up a space of 3x3 squares, or higher.

*Vehicle facing*

In addition to occupying a space, a vehicle in the battlefield has a facing, representing the direction the vehicle is oriented at. Eight different facings are possible: N, S, W, E, NE, NW, SE, SW.

A vehicle has a front arc and a rear arc. Front and rear arcs are illustrated in the following figure, with the front arc represented by 'f' characters, and the rear arc represented by '.' characters.

Vehicle facing N

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ffffff

ffVVff

..VV..

......

......

Vehicle facing NW

ffffff

fffff.

ffVV..

ffVV..

ff....

f.....

A vehicle can only make ranged attacks against enemies within its front arc. Against ranged attacks from its rear arc, the vehicle takes a -2 penalty to Armor, to a minimum of 7. Each group or vehicle within a unit counts as firing from the rear arc of an vehicle if any square in its space is within its rear arc.

Vehicle facing depends on the the direction of the last square moved. A player can choose to have the vehicle face in the same direction of its last square moved, or in any of the two closest directions:

* If the vehicle moved North for its last square, it can face North, North-East, or North-West
* If the vehicle moved North-West for its last square, it can face North, or West
* and so on...

Alternately, a vehicle can spend a square of movement to change its facing to any direction.

**Unit Statistics**

Each unit in the game is described, in rules terms, by a stat block that looks as follows:

Name Number Models Points Type

Tactical Marine 1-2 5 75 Inf

Ar Wi HP - mH mS mA - rH

7 5 1 - 1 1 1 - 1

Rules: No Fear, Combat Tactics, Combat Squads

Weapons: Boltgun, Boltpistol, Krak Grenades, Frag Grenades

Each field in the stat block is described below:

* Name - Name of the unit
* Number - Amount of groups that can be fielded for that unit
* Models - Number of individuals that compose each group in the unit. When attacking, the number of attacks generated by a unit depend on the current number of individuals. The number of individuals in a group goes down as its unit takes damage.
* Points - The point cost of each group for the unit, used when building an army. Point values of slain units are also taken into account when determining game victory.
* Type - The type of the unit. Units can be of basic types: Infantry or Vehicle. In addition, a unit can have secondary types, such as Bike, Artillery, Transport, or Demon.
* Ar - Armor. Value that an attacker needs to get on a wound roll to wound the unit.
* Wi - Will. Value that an attacker needs to get on a break roll to break the unit (forcing it to retreat or hunker down)
* HP - Hit Points. Number of wounds that each model in the unit can take before dying.
* mH - Melee Hit bonus. Modifier added to hit rolls for melee attacks
* mS - Melee Strength: Modifier added to wound rolls for melee attacks
* mA - Melee Attacks: Number of attacks in melee, per model
* rH - Ranged Hit bonus. Value added to hit rolls for ranged attacks.
* Rules: Special rule keywords for this unit. A list of rule keywords and their effect is provided [TODO - Missing section]
* Weapons: List of weapons equipped by models in the unit. Each infantry model can typically use a single ranged weapon or melee weapon at a time. Vehicle models, and some infantry models, can use multiple ranged weapons at once.

Each weapon in the game also has a stat block, which is used to resolve attacks with that weapon. In some cases, a weapon can also confer a rule keyword to the model using it, even when not attacking - as an example, a Sword grants its wielder the ability to Parry enemy attacks in melee. A weapon stat block looks as follows:

Name S rA Rn Type Rules

Lascannon 6 1 24 H Disrupt 1

Each field in the stat block is described below:

* Name - The name of the weapon
* S - Strength. Modifier added to wound rolls for attacks with this weapon.
* A - Attacks. Number of attacks generated when attacking at range with this weapon, per model.
* Rn - Range. Maximum distance, in squares, for ranged attacks with this weapon. Melee weapons have a range of 'M'.
* Type - Type of weapon. Weapons can be of type A (Assault), P (Pistol), R (Rapid Fire), H (Heavy), O (Ordnance) or M (Melee). These types are described in [TODO - missing section]
* Rules: Special rule keywords for this weapon. A list of rule keywords and their effect is provided [TODO - Missing section]

**Game Setup**

Before the game starts, players must select their armies, set up the battlefield, determine who will go first, and deploy their armies.

* **Army selection** is described *[somewhere to be determined]*
* **Battlefield setup**: Players arrange terrain on the battlefield and determine the position of the deployment areas.
* **Initial player selection**: Each player rolls a die, and the player with the highest roll chooses who will play the first turn and who will go second.
* **Army deployment**: The player going second chooses a side of the table to deploy. Then the player playing the first turn deploys his army on the other table side. The player going second then deploys.
* **Seize the Initiative**: The player going second may roll a d6 to try to Seize the Initiative. If he does, on a roll of 6, the player going second plays the first turn instead.
* **The game starts**. *Fog of War:* During the first turn of the player going first, units cannot charge, and all ranged attacks have a -1 defense penalty to hit.

Battlefield setup, in detail

Before deployment, the battlefield is divided into two deployment areas (one for each army), and one neutral area in between. The default battlefield distribution is as follows:

DDDDDD

NNNNNN

NNNNNN

DDDDDD

In a standard 36x24 sq. battlefield, each deployment area is 36x6sq. , and adjacent to a long edge of the battlefield. The neutral area is 36x12sq.

Other battlefield configurations are possible, depending on the battle scenario. In that case, the scenario description explains how to arrange the battlefield. For non-standard battlefield sizes, adjust deployment and neutral areas so that their length matches that of the battlefield, and the neutral area width is equal to 12 sq.

*Battlefield terrain*: The battlefield must include a variety of terrain elements to provide cover for armies and restrict movement. The distribution of terrain elements *[will be discussed elsewhere]*

Army deployment, in detail

Use the following rules for army deployment:

* In turns, each player chooses at least half the units in his army, and deploys them. Units not deployed this way are left in reserve, and enter the battlefield in subsequent rules (see Movement Phase section).
* To deploy a unit, place it in a battlefield position within the player's deployment zone. The position cannot include impassable terrain. Each infantry unit can be deployed embarked in a transport vehicle, if enough transport capacity is available.
* Deployed units with the *Infiltration* rule are not placed in the battlefield at this point. Instead, set these units aside. After both players have deployed their armies, the player going first can place Infiltration units within his deployment zone, or at a position in the Neutral Zone that is 9 or more squares away from an enemy. Like normal units, Infiltration units cannot be placed on impassable terrain. The player going second then does the same.
* Deployed units with the *Scout* rule can move their base speed at this point, before the battle starts. The player going first can choose to move any number of Scout units, then the player going second does the same.

**Movement Phase**

In the movement phase, for each unit in the player's army that is currently on reserve, the player determines if it joins the battle and, if so, deploys it on the battlefield. Then, for each unit in the player's army that is currently on the battlefield and has not been deployed this turn, the player chooses a move option, and carries out the chosen movement action.

The following move options are available:

* **Move**: The unit moves up to its base speed. *Variants: Move, Hold Ground*
* **Run**: The unit moves as fast as possible, sacrificing the ability to fire. *Variants: Run, Evade, Skirmish.*
* **Defensive Maneuver**: The unit sacrifices offense to protect itself from enemy fire. *Variants: Go to Ground, Evade, Smoke Bombs*
* **Charge**: The unit attempts to engage an enemy in close combat. Variants: *Charge, Vector Strike, Tank Shock.*
* **Retreat**: A broken unit flees from the enemy, losing the ability to return fire. *Variants: Retreat, Tactical Retreat.*
* **Embark/Disembark**: A unit enters or exits a transport vehicle. *Variants: Embark, Disembark, Mechanized Assault, Mechanized Insertion.*
* **Deployment**: A unit in reserve is placed in its deployment area in the battlefield. *Variants: Insertion, Flanking*

A unit engaged in melee has limited move options:

* (Do nothing, attack in melee)
* Retreat
* Tactical Retreat (No fear units only)

Vehicles that cannot attack in melee can automatically disengage from melee and move normally. The usual restrictions about entering squares adjacent to an enemy still apply.

Moving a unit

To move a unit, pick a group in the unit. You may move that group a distance equal to the movement speed; each square can be moved in any direction, including diagonals. The following restrictions apply:

* A group cannot be moved to a position adjacent to an enemy unit, unless the movement is a Charge, and the enemy unit is the charge target.
* A group cannot be moved to a space occupied by another unit. However, a group can move through the space of a friendly infantry unit, provided it does not end its movement there. Likewise, an infantry unit can move through the space of a vehicle unit, provided it does not end its movement there.
* A group cannot be moved through Impassable Terrain
* For each square moved, if the group crosses one or more squares of Difficult Terrain, treat that movement as costing two squares of movement instead of one. If a group attempts to cross Difficult Terrain on its last square of movement, make a Difficult Terrain roll: on a roll of 4+, the group successfully enters the last square of movement, otherwise, the group remains on the square before that one. Only one Difficult Terrain roll is made for each unit per turn, use the same result for all groups in the unit.
* In an infantry unit, a group can end its movement in the same space as one other group from the same unit. This is called a packed formation. In this case, groups must occupy exactly the same position - no partial overlap is allowed. It is possible to have some groups in a unit in a packed formation, and others occupying their own space. No more than two groups can occupy the same space this way.

Base speed

Most units have a base speed of 3. As an exception, the following units have a base speed of 6:

* Fast vehicles
* Bike infantry
* Jump Infantry

Move

Move base speed. Infantry can fire non-heavy weapons normally, and heavy weapons as snap shots. Vehicles can fire 2 weapons each.

* Relentless units: An infantry unit with relentless can fire heavy weapons after taking a Move action.

*Hold Ground*

Move 1 square. Infantry can fire heavy weapons. Vehicles can fire all weapons.

* Fast Vehicle: A fast vehicle can move 3 squares instead.

Run

Infantry: Move Base speed+1d3, can not fire.

* Quick N: Move N extra squares.
* Slow N: Move N less squares, to a minimum of base speed.

Vehicle: Move 9, can not fire

* Fast / Grav Vehicle: A vehicle with fast or grav moves 12 squares instead . During next turn, enemy units have an additional -1 defense penalty on ranged attacks against the vehicle. A vehicle with both fast and grav moves 15 squares instead.
* Walker: A walker vehicle moves 3+1d3 squares.

*Skirmish*

Infantry: Move base speed, place fire counter, move 1d3. In Attack phase, can fire from position of fire counter, or from its final position, as if the unit had taken a Move action.

* Quick N: Move N extra squares after placing fire counter.
* Slow N: Move N less squares (to a minimum of 0) after placing fire counter.

Defensive Maneuver

*Go to Ground* (Infantry units only)

Move 1 square. The unit can only fire Snap Shots this turn. During the next enemy turn, enemy units have an additional -1 defense penalty on ranged attacks against the unit.

*End of Turn Go to Ground (Infantry units only)*

Optionally, an infantry unit can choose to Go to Ground during its Morale phase rather than its Move phase. If it does, during the next enemy turn, enemy units have an additional -1 defense penalty on ranged attacks against the unit. In addition, during its next turn, the unit can only Hold Position and fire Snap Shots. If engaged in melee during its next turn, the unit is Shaken (-1 to hit) that turn.

* Unbreakable units: A unit with Unbreakable can never Go to Ground.

*Run* (Fast/Grav vehicle units only)

For vehicle units with Fast or Grav, Run (described above) is considered a Defensive Maneuver.

*Evade* (flyers) [TODO]

*Evade end of turn* (flyers) [TODO]

*Smoke Bomb* (vehicle units only, requires Smoke Launcher)

The vehicle moves 6, and can't fire. During the next enemy turn, enemy units have an additional -1 defense penalty on ranged attacks against the vehicle.

Charge

Only Infantry units and Walker vehicles can take a Charge action.

Choose an enemy unit and roll 1d6. The charging unit's charge distance is equal to base speed plus the die roll (e.g. 3+1d6 for most infantry units). If it is possible for the charging unit to move the charge distance and end adjacent to the enemy unit, do so, and in the attack phase, the charging unit can attack the charged unit with ranged attacks from Assault or Pistol weapons, and with melee attacks. Otherwise, the charging unit moves exactly its base speed towards the charged enemy unit, and can only atack with Snap Shots this attack phase.

* Quick and Slow charging units: Units with Quick N add N squares to their charge distance. Units with Slow N decrease their charge distance by N, to a minimum of their base speed.
* Relentless and Walker charging units: Infantry units with Relentless and Walker Vehicles can fire Heavy or Rapid Fire weapons during a charge.

Embark and Disembark

*Embark* (Transport vehicles only) Move 3 squares, choose a friendly infantry unit that has not moved or deployed this turn, and is within 2 squares of the vehicle and within its rear arc. You can have the infantry unit embark the transport if the transport has sufficient capacity left.

*Disembark* (Transport vehicles only) Move 3 squares, choose an infantry unit that is embarked in the vehicle. You can have the infantry unit disembark to a position within 1 square of the vehicle and fully within its rear arc, not adjacent to any enemy, and not in impassable terrain. The infantry unit and transport count as having taken a Move action this turn.

* *Special: Forced Disembark:* An infantry unit embarked in a transport that is destroyed is subject to a forced disembark. After removing the transport, place the infantry unit in the transport position (in packed formation, if necessary). The unit counts as having performed an end of turn Go to Ground: it gains a -1 penalty to ranged attacks against it, and can only Hold Ground and fire Snap Shots its following turn. If the unit is unable to Go to Ground due to the Unbreakable rule, it instead becomes Shaken (-1 to hit, +1 to be hit in melee). If the transport was destroyed in melee, the disembarked unit becomes engaged in melee upon disembarking, and becomes Shaken. In addition, the space previously occupied by the transport is now considered area cover and difficult terrain.

*Mechanized Assault* (Assault Transport vehicles only)

Move the transport 3 squares and choose an infantry unit that is embarked in the trasport vehicle. Choose an enemy unit and roll 1d6: the infantry unit's charge distance is equal to the die roll. If the enemy unit is within charge distance of the transport vehicle, you can have the infantry unit disembark to a position:

* Within charge distance of the transport
* Fully within the transport's rear arc
* Adjacent to the chosen enemy unit
* Not in impassable terrain

If the infantry unit disembarks this way, it counts as having moved this turn, and as having charged the enemy unit this turn. The transport count as having taken a Move action this turn.

*Mechanized Insertion* [TODO]

Retreat

*Retreat* (Infantry units only)

An infantry unit can Retreat when broken. In addition, the unit can choose to willingly retreat if engaged in melee. The unit makes a Run move with the following conditions:

* It must move its full run speed
* It must move as close to its table edge as possible
* It must move as far away from enemy units as possible, provided the previous two conditions are met.
* If the unit reaches its table edge, it is considered destroyed.
* Any unit that was engaged in melee with the retreating unit counts as having cover this turn.

A broken infantry unit must Retreat if there is an enemy within 3 squares of it. A unit with Unbreakable or No Fear can never Retreat.

*Tactical Retreat* (Infantry units with No Fear only)

An infantry unit with No Fear can make a Tactical Retreat when broken. In addition, a unit with No Fear and Combat tactics can make a Tactical Retreat when in melee, even if it is not broken. The unit makes a Move action with the following conditions:

* It must move its full base speed
* It must move as close to its table edge as possible
* It must move as far away from enemy units as possible, provided the previous two conditions are met.
* If the unit reaches its table edge, it stops its movement.
* Any unit that was engaged in melee with the retreating unit counts as having cover this turn.
* In addition, the unit is Shaken this turn.

**Deployment**

A unit in reserve is placed in its deployment area in the battlefield.

At the start of each Movement Phase, roll to determine how many units in Reserve will be deployed this turn.

* Turn 1 - No units deploy
* Turn 2-3 - Roll 1d6 per unit in Reserve, a unit arrives per roll of 3+.
* Turn 4 or later - Deploy all units in Reserve.

For each unit that can deploy this turn, choose a unit in Reserve. The unit makes a Basic Deployment or any other deployment option that is available. A unit cannot take any movement action the turn it deploys this way, and counts as having taken a Move action that turn.

*Early Deployment:* A unit in reserve that has Early Deployment can deploy on its first turn (no need to roll), using any deployment options available to it.

Basic Deployment

The unit can be placed in any position where each unit group is

* not adjacent to an enemy
* not in impassable terrain,
* within a distance up to its base speed from the table border.

Insertion (Units with Insertion only)

The unit can deploy in any position where each unit group is within its deployment zone and not in difficult terrain, impassable terrain, nor adjacent to an enemy. Alternately, it can use the following process to deploy:

* Choose one square within the neutral area
* The unit can deploy in any position where each unit group is within 2 squares of the chosen square, at least 1d6 squares away from any enemy, and neither in difficult terrain nor impassable terrain.
* If no valid deployment position is available that meets the above conditions for all groups in the unit, the deploying player can choose not to deploy any number of unit groups, which count as destroyed, and deploy the rest. If it is not possible to deploy at least a single unit group this way, the entire unit is destroyed.

Precise Insertion (Units with Precise Insertion only)

The unit can deploy in any position within its deployment zone *or the neutral zone* that is not difficult terrain, impassable terrain, nor adjacent to an enemy.

Insertion Homer (Units in reserve with Insertion, requires unit in battlefield with Insertion Homer)

If a unit with Insertion Homer is on the battlefield and has not deployed this turn, any unit deploying with Insertion this turn can instead use the following process to deploy: place the Insertion unit in any position where each unit group is within 2 squares of the Insertion Homer unit, and not in difficult terrain, impassable terrain, nor adjacent to an enemy

Precise Insertion (Units with Precise Insertion only)

Flanking (TODO)

TODO: Define move rules for flyers

**Attack Phase**

**Making an Attack**

The rules for making an attack can be summarized as follows. For each unit that can attack

* Choose a target
* Determine which weapons will be used, and how many attacks will be made with each
* Roll to hit for each attack
* Roll to wound for each attack
* Apply attack damage

Choosing an attack target

A unit not engaged in melee can choose an enemy unit to be the target of its ranged attacks if the enemy unit is within range of at least one of its ranged weapons, and is within Line of Sight (see Blocking Line of Sight below).

If both the attacking unit and the target unit are composed of two or more infantry groups or vehicles, you can choose to resolve separately the attacks from each attacking group, one group at a time.

*Focused fire*: If the target unit is composed of two or more groups, of which some are in cover from the attacker and some are not, the attacker can choose to focus fire. In that case, the attacker ignores the groups in cover, and attacks only those out of cover.

Choosing attack weapons, determining number of attacks

For each model in the attacking unit, choose one or more weapons, and determine how many attacks will be made. The following rules apply:

* A model attacking in melee can only choose a single melee weapon for its attacks. The number of attacks is equal to the model's Attack score. If the model is equipped with multiple melee weapons that are not Two-Handed or Specialist, the model gains an extra attack for dual wielding, but all attacks are resolved with the stats of the chosen weapon.
* An infantry model attacking at range can only choose a single ranged weapon for its attacks (unless otherwise stated). The attacked unit must be within range of that weapon, and the number of attacks is equal to the weapon's Attack score. (Rapid Fire weapons double their number of attacks at half range)
* Vehicle models, and Infantry Monster models can choose two ranged weapons to fire when making a ranged attack, or any number of ranged weapons if they Held Position that turn.
* A unit can only make Melee Attacks if engaged in melee, and only Ranged Attacks otherwise. As an exception, each model in a unit can make both a Melee Attack and a Ranged Attack if the unit made a successful Charge that turn.

**Rolling to hit**

To roll to hit for an attack, roll a d6, and apply hit modifiers. If the final result is 4 or more, the attack hits, otherwise, it is a miss.

*Open Rolls*

In some scenarios it is possible that, due to negative modifiers to it, a roll of 6 on a d6 is not enough to succeed on a hit roll. In that case, it is still possible to hit with an **Open Roll**. On a roll of 6 on a d6, roll a second die. The total roll result depends on the second roll:

* 6, then 1 or 2: Total roll of
* 6, then 3: Total roll of 7
* 6, then 4: Total roll of 8
* 6, then 5: Total roll of 9
* 6: then 6: total roll of 10

Hit modifiers, ranged attack

The following modifiers can apply when rolling to hit with a ranged attack:

* Attacker's Ranged Hit modifier
* Defender in Cover: -1 cover penalty
* First game turn of player going first: -1 defense penalty
* Defender has taken Defensive Maneuver: -1 defense penalty
* Defender has Stealth X and is in Cover or Gone to Ground: -X cover penalty
* Defender has Dodge X: -X evade penalty
* Defender has Defense X and has taken Defensive Maneuver: -X defense penalty.
* Defender is flying: -3 evade penalty
* Attacking weapon is Airbound and defender is not flying: -3 penalty
* Attacker making a Snap shot: -2 penalty
* Attacker Shaken: -1 penalty
* Attacking weapon is Twin: +1
* Attacking weapon is Overheating: -1
* Attacking weapon is Blast: -1
* Attacking weapon is Large Blast: +0
* Attacking weapon is Barrage: +1
* Attacking weapon is Master-Crafted: +1
* Attacker is using an Ordnance weapon: -1 to attacks with other weapons.

Some of these penalties can be reduced with certain abilities. In that case, determine the total penalty from a given category (e.g. the total cover penalty), and subtract the reduced amount from that total. A penalty cannot be reduced below 0 this way.

* Attacker has Tracking X: Reduce cover penalties by X. (cover penalties are granted by Cover and Stealth)
* Attacker has Guided X: Reduce evade penalties by X. (evade penalties are granted by Dodge and flying)
* Attacking weapon has Airfire and defender is flying: Reduce evade penalties by 3.

Hit modifiers, melee attack

The following modifiers can apply when rolling to hit with a melee attack:

* Attacker's Melee Hit modifier
* Attacker is charging and defender is in Cover: -1 cover penalty, unless attacker has Assault Grenades.
* Attacker is charging, enemy has Repeal Charge: -1
* Defender has Parry X and is in Cover or Gone to Ground: -X cover penalty
* Attacker is charging and has Rage: +1
* Attacker was charged last turn and has Counterattack: +1
* Attacker Shaken: -1 penalty
* Defender Shaken: +1
* Defender is Broken Vehicle: +1
* Attacking weapon is Unwieldy: -1
* Attacking weapon is Master-Crafted: +1

**Rolling to Wound**

To roll to wound for an attack, roll a d6, and apply wound modifiers. If the final result is equal or greater than the defender's Armor value, the attack causes a wound.

*Open Rolls*

In some scenarios it is possible that, due to a high defender Armor or to negative modifiers to wound, a roll of 6 on a d6 is not enough to succeed on a wound roll. In that case, if the defending unit is an infantry unit, it is still possible to wound with an **Open Roll**. On a roll of 6 on a d6, roll a second die. The total roll result depends on the second roll:

* 6, then 1 or 2: Total roll of
* 6, then 3: Total roll of 7
* 6, then 4: Total roll of 8
* 6, then 5: Total roll of 9
* 6: then 6: total roll of 10

Note that, unlike open rolls to hit, it is only possible to make open rolls to hit against infantry units. Vehicle units cannot be damaged through open rolls - if a vehicle's armor is too high to be wounded on a roll of 6 or less after modifiers, the vehicle is immune against that attack.

Wound modifiers

* Attacking weapon is Antipersonnel N, defender is infantry: +N
* Attacking weapon is Antitank N, defender is vehicle: +N
* Attacking weapon is rending, and dice roll is 5+: +2
* Ranged attack from half range or less, attacking weapon is Heat, defender is vehicle: +2
* Melee attack on a charge, attacker has Fury: +1

Other wound-related effects

* Defender has Invulnerable N+: the attack never wounds on a result lower than N.

**Applying attack damage**

After rolling to hit and wound for all attacks from a unit, count the number of inflicted wounds, and apply those wounds to the attacked unit. If the number of wounds equals or exceeds the number of remaining hit points of the attacked unit, that unit is destroyed. Otherwise, distribute these wounds between groups in the attacked unit in the followed steps:

* Choose one group in the attacked unit that is closest to the attacker unit (ignore groups in cover if using focused fire)
* Apply wounds until the group is destroyed or there are no remaining wounds.
* If the group is destroyed and there are any wounds remaining, repeat the process.

[TEMPORARY TEXT]Note that, for each group unit, the order in which models are removed is determined during army construction. For example, a Marine squad can be listed as "4 Marines, 1 Marine with Missile Launcher". In that case, the first 4 wounds will remove regular marine models, and only the last wound against that group will remove the Missile Laungher Marine.

**Attacks against units with different Armor values** [TODO]

**Cover Rules**

*Units behind covering terrain*

A unit adjacent to covering terrain defines a cover area in the battlefield. The unit gains cover against attacks from enemy units within its cover area. Each infantry group or vehicle in an enemy unit is considered to be within a cover area if more than half of its occupied space is inside the cover area. For a typical 2x2 group/vehicle, this means that 3 or 4 of the squares in its occupied space must be inside the cover area.

Cover areas are illustrated in the following figures. The unit is represented by 'M' characters, the covering terrain is represented by 'X' characters or '|' characters, and the Cover Area is represented by 'C' characters. Non-cover area is represented by '.' characters.

Basic Cover

.....CCCC

.....CCCC

...MMXCCC

...MMXCCC

.....CCCC

.....CCCC

Unit behind linear cover

.....CCCC

.....CCCC

...MM|CCC

...MM|CCC

.....CCCC

.....CCCC

Cover behind small obstacle

.........

.........

...MM....

...MMXCCC

.....CCCC

.....CCCC

Cover behind corner

....CCCCC

....--CCC

...MM|CCC

...MM|CCC

.....CCCC

.....CCCC

If a unit is adjacet to multiple sources of cover, combine the cover areas from each piece of covering terrain.

Multiple Sources of Cover

....CCCCC

....XCCCC

...MM....

...MMXCCC

.....CCCC

.....CCCC

*Units inside covering terrain*

A unit fully within covering terrain gains cover against all enemy units.

A unit partially within covering terrain defines a cover area, which works the same way as for a unit adjacent to covering terrain. Cover areas for units partially within covering terrain are illustrated in the following figures: [TODO]

[TODO]

Line of Sight Blocking

Some special terrain types, like hills and buildings, can block line of sight. We call this terrain blocking terrain.

*Units adjacent to blocking terrain*

Units adjacent to blocking terrain gain an area of blocked line of sight, or **blocking area**. Enemies **within the blocking area**of a unit **cannot attack that unit with ranged attacks, nor be attacked with ranged attacks from that unit**, though they can still charge that unit and attack IT in melee. (Note that a unit charging from an area of blocked line of sight would NOT get to make ranged attacks with assault weapons as part of the charge)

An enemy is considered to be within the blocking area if more than half of its occupied space falls within the blocking area.

The following figures illustrate blocking areas.

XXXXXXXXXX

XXXXXXXXXX

XXXXXXXXXX

XXXXBBBBXX

XXXXBBBBXX

.....UU...

.....UU...

XXXXXXXXXX

.XXXXXXXX.

..XXXXXX..

...XBBX...

....BB....

....UU....

....UU....

XXXXXXX.

XXXXXXX.

XXXXXXX.

XXXXXBB.

XXXXXBB.

......UU

......UU

XXXXXXXXXXX

XXXXXXXXXX.

XXXXXXXXX..

XXXXBBBX...

XXXXBBB....

.....UU....

.....UU....

XXXXXX..

XXXXXX..

XXXXXX..

XXXXBB..

XXXXBB..

......UU

......UU

*Blocking terrain not adjacent to units*

In addition, blocking terrain generates an area of blocked line of sight even for units that are not adjacent to it. This area is called a **blocked line** (though note that in some scenarios, it won't actually be shaped as a line), and is smaller than the areas of cover or blocked line of sight granted to units adjacent to a piece of terrain.

If the unit is in a horizontal, vertical, or diagonal line from the blocking terrain, the blocking area will also be in a horizontal, vertical or diagonal line, respectively.

Obstacle in Horizontal/Vertical line

.......BBB.........

.......BBB.........

.......BBB.........

.......BBB.........

.......BBB.........

.......XXX.........

.......XXX.........

...................

...................

........MM.........

........MM.........

...................

Obstacle in diagonal line

BBBB...............

.BBBB..............

..BBBB.............

...BBBB............

....BBBBB..........

......BXXX.........

.......XXX.........

...................

...................

............MM.....

............MM.....

...................

The most complicated position is when the unit does not fall within a horizontal, vertical or diagonal line from the obstacle. In that scenario, the unit will fall in an intermediate blocking line, between a diagonal line and a horizontal/vertical line drawn from the obstacle. The blocking area will be the area between those two lines, on the opposite side of the obstacle.

Obstacle not in horizontal, vertical or diagonal line.

::::BBB:...........

.::::BB:...........

..::::B:...........

...:::::...........

....:::::..........

.....::XXX.........

......:XXX:........

........::::.......

.........::::......

.........:::::.....

.........:.::::....

.........:MM::::...

.........:MM.::::..

Finally, there are scenarios where only part of a unit's space falls within a horizontal, vertical or diagonal line from the obstacle, or where the unit falls within the overlap between a diagonal line and a horizontal/vertical line. In those scenarios:

1. If half or more of the unit's space falls within one of the horizontal, vertical or diagonal lines, use that line to determine the blocking area.
2. If half or more of the unit's space falls in the overlap area from two horizontal, vertical or diagonal lines, use both lines, and the area between them, to determine the blocking area.
3. If more than half of the unit's space falls within an intermediate line, use that intermediate line to determine the blocking area.

Example 1: Half of unit space in vertical line

.......BBB.........

.......BBB.........

.......BBB.........

.......BBB.........

.......BBB.........

.......XXX.........

.......XXX.........

.......:::.........

.......:::.........

.......::MM........

.......::MM........

.......:::.........

Example 2: Unit in overlap between vertical and diagonal line

...XXXXXXX

...XXXXXXX

...XXXXXXX

...BBBBBX.

...BBBBB..

...,,,,...

...UU,....

...UU.....

**Morale Phase**

In morale phase, roll to break enemy units damaged this turn, and roll to regroup your broken and shaken units.

Rolling to break

For each enemy unit that has been wounded this turn, roll to break if:

* Unit was above 75% HP, drops to or below 75%
* Unit is at or below 50% HP

*Roll to break*: roll vs unit will, if roll equal or greater than will, unit breaks. Unit remains broken until it regroups at the end of any of its turns.

*Break check modifiers:*

* Wounded by melee attack, +1 bonus to break roll
* Infantry unit Wounded by pinning attack: +1, or +n if pining(n)
* Wounded by flaming attack: +1, or +n if flaming(n)
* Vehicle unit wounded by disrupt atack: +1, or +n if disrupt(n)
* Unit below 50% initial HP: +1

Rolling to regroup

Roll vs unit will, if roll equal or greater than will, unit remains broken or shaken, otherwise, the condition ends.

Break check modifiers:

* Unit below 50% initial HP: +1

Effects of the broken condition

*Broken Infantry*

* Broken infantry units always retreat if in melee
* In movement phase, broken infantry units can only choose to Go to Ground or make a Retreat move (run max. distance towards table border, as far from enemies as possible)
* - If within 3 squares of enemy, must retreat
* - If retreat reaches table border, unit is destroyed
* If an infantry unit is successfully charged while broken, it is destroyed

*Broken Vehicles*

* Can only Hold Ground, can only fire snap shots.
* A walker vehicle in melee cannot attack.
* Melee attacks against a broken vehicle gain a +1 bonus to hit.

Special rule: No fear.

Units with this rule behave differently while broken:

* Automatically regroup at the end of their turn (no need to roll)
* In movement phase, instead of retreat, can choose to make Controlled Retreat move (even if within 6 sq. of enemy):
* - Move max. distance towards table border, as far from enemies as possible
* - Unit is shaken.

Special rule: Unbreakable

Instead of broken, units with this rule become **shaken** until end of next turn. Units with this rule cannot go to ground.

Shaken:

* Shaken units have -1 to hit with attacks other than snap shots.
* Units attacking in melee have +1 to hit vs shaken units.
* Template weapons only fire on a roll of 3+.

**Rule Keywords**

* Name - Rules
* Airbound- Gain -3 to hit on ranged attacks vs non-flying units with this weapon.
* Antipersonnel N- Gain +N Strength vs infantry (default: +1)
* Antitank N - Gain +N Strength vs vehicles (default: +1)
* Armored N - Gain +N to armor vs attacks with Strength 4 or less (default: +1)
* Barrage - Gain +1 to hit on ranged attacks with this weapon, -1 to hit with other weapons fired the same turn, and template weapons can only fire on a 3+ roll.
* Beam - On ranged attack,choose 1 square, roll to hit and wound vs a unit in that square. If the attack causes a wound, choose an adjacent square that is further away from the attacker, and roll to wound vs a unit in that square, with a -1 penalty to Strength (the secondary attack hits automatically). A model group cannot be assigned more than 1 wound per model this way. Repeat the process, with cumulative penalties to Strength, until you fail to cause a wound.
* Charging - Weapon can only be used in melee when charging
* Combat Tactics - In melee, can make a voluntary Controlled Retreat, even if not broken.
* Counterattack - Gain +1 to hit on melee attacks after being charged
* Defense [N] - Any Defense penalty to hit this unit is increased by 1 [or N]
* Disrupt[N] - Gain +1 [or +N] to break checks vs vehicles wounded by this attack
* Dodge [N] - Ranged attacks against this unit have a -1 Dodge penalty to hit [or -N] unless the unit is broken
* Favored enemy (Unit type) - Gain +1 to hit vs units of the chosen type.
* Fear - Enemies in melee with this unit must roll a Will check at the start of their attack phases. If failed, -2 hit this unit that turn.
* Flaming [N] - Gain +1 [+N] to break checks vs units wounded by this attack.
* Fury - Gain +1 Strength on melee attacks when charging
* Grav - Treat difficult terrain as normal terrain, can move over vehicles and enemy units
* Grenade - When attacking at range, only 1 grenade per unit can be used each turn. Grenades can only be used in melee vs vehicles and monsters. In melee, 1 attack only regardless of attacker stats
* Guided [N] - Ranged attacks against units with Dodge reduce Dodge penalty to hit by 1 [or N]
* Hammer of Wrath - Gain +1 to hit on melee attacks when charging
* Hatred [Unit type] - Gain +1 to hit on melee attacks [vs units of chosen type]
* Heat - Gain +2 Strength on ranged attacks vs vehicles if target is within half maximum range.
* Heavy Vehicle - Can move 3 squares when Holding Ground. Cannot Move or Run.
* Hit and Run - At start of turn, if in melee and not broken, can Move or Run out of melee as if not engaged.
* Insertion - When entering from reserves, unit can use Insertion instead of deployment (see movement section)
* Interceptor - Gain +1 to hit vs units that entered the battlefield last turn
* Invulnerable [N+] - Attacks against this unit never wound on rolls lower than 3 [or N+]
* Jump - In last square of movement, difficult terrain costs 1 extra square to enter. In other squares of movement, treat difficult terrain as normal terrain, and move over vehicles and enemy units.
* Large - 2x Transport requirement
* Master-Crafted - Gain +1 to hit on ranged attacks with this weapon
* No Fear - While broken, can make Controlled Retreat move instead of Retreat. Automatically regroups at end of its turn. Cannot voluntarily Retreat. +2 Will vs Fear checks.
* One Use - Can only be used once per battle
* Overheating [N+] - Gain -1 [or -N] to hit on ranged attacks with this weapon
* Parry [N] - Melee attacks against this unit have a -1 penalty to hit [or -N]
* Pathfinder - Treat difficult terrain as normal terrain
* Piercing[N+] - On wound rolls vs vehicles, always wound on roll of 6+ [or N+]
* Poison [N+] - On wound rolls vs infantry, always wound on roll of 6+ [or N+]
* Quick [N] - When running or charging, move 1 additional square [or N additional squares]
* Rage - Gain +1 to hit on melee attacks when charging
* Relentless - Can move and shoot heavy weapons. Can assault and fire any weapon.
* Rending - Gain +2 Strength on wound rolls of 5+.
* Repel Charge - Melee attacks against this unit during a charge have a -1 penalty to hit
* Resilient [N] - Gain +N to armor vs attacks with Strength 1 or less (default: +1)
* Slow [N]- 1 [or -N] squares when running or charging, min base speed)
* Sniper - On ranged attacks, can target any group within target unit.
* Specialist Weapon - When using this weapon in melee, can only use additional weapon that is also Specialist weapon
* Split Fire - When shooting, unit can choose 1 additional target unit, and attack it with any number of weapons instead of main target
* Stealth [N] - While in cover, ranged attacks against this unit have a -1 penalty to hit [or -N]
* Stubborn - Ignore modifiers to morale break checks
* Stun [N] - Gain +1 [or +N] to break checks vs infantry wounded by this attack.
* Tracking [N] - Ranged attacks against units with cover reduce cover penalty to hit by 1 [or N]
* Twin - Gain +1 to hit on ranged attacks with this weapon. Template weapons gain +1 Strength instead.
* Two-Handed - When using this weapon in melee, cannot use additional weapon
* Unbreakable - On failed morale checks, not broken, but shaken (-1 hit) for 1 turn. Can't go to ground, evade, retreat. Transports cannot embark or disembark.
* Unwieldy - Gain -1 to hit on attacks with this weapon
* Very Large - 4x Transport requirement

**Army building**

Select a point cost. Choose units in the following slots, up to maximum point cost:

* 2-6 Troops
* 1-2 Command (Currently unsupported)
* 0-3 Elite
* 0-3 Fast
* 0-3 Heavy
* 0-1 allied contingent with
  + 1 Command
  + 1-2 Troops
  + 0-1 Elite
  + 0-1 Fast
  + 0-1 Heavy

Extra cost for repeated units.

- Troops:

1-2 units: 0p

3rd unit: +5p

4rd unit: +10p

5th unit: +15p

6th unit: +20p

- Non-troops

1 unit: +0p

2nd unit: +10p

3rd unit: +20p

Each allied unit: +5p

**Default Battle scenario:**

5 turns, 6th turn on 3+, 7th turn on 4+.

Objectives: Each objective grants a different amount of victory points. The player with most victory points at the end of the battle is the winner.

1- Occupy Battlefield Objectives: 2 victory points each

2 objectives are placed at the neutral zone of the battlefield at the start of the game. At the end of a game, a player controls an objective if:

* He is the only player with a Troops infantry unit, that is not broken or embarked, within 2 squares of the objective
* The opponent does not have any infantry unit (that is not broken or embarked) within 2 squares of the objective.

2- Kill points: variable victory points

At the end of the game, each player counts the point cost of each destroyed enemy unit. Players compare this points total. For each 100 points of destroyed units that a player has over the opponent, the player gains 1 victory point.

3- First blood

During the game, players record which units are destroyed, and in which order. At the end of the game, players count the point cost of each destroyed unit. The first player to destroy 100 points worth of enemy units in the game gains 1 victory point.

4- Linebreaker

At the end of the game, each player with one or more infantry units (that are not broken or embarked) in the enemy deployment zone gains 1 victory point.

**Future changes**

Give units destroying all engaged enemies in melee a +1 defense bonus next enemy turn. Make it the same as defense bonus (currently cover) for retreating enemies in melee.