

WAR LOGIC RULEBOOK

War Logic Rulebook

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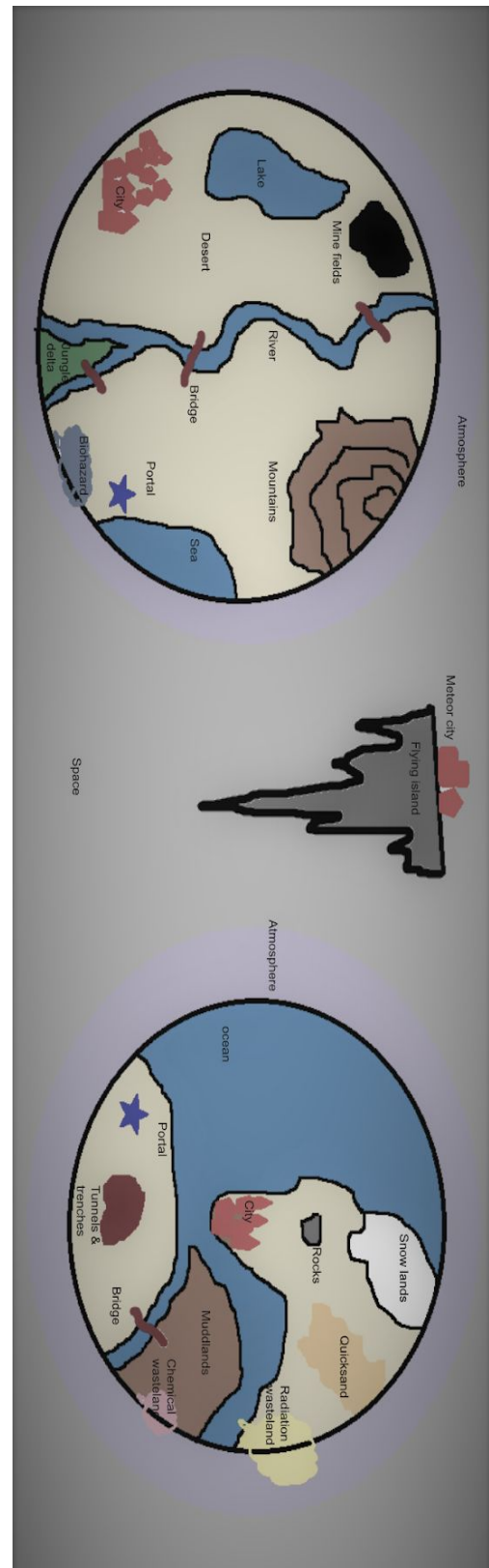


This rulebook is designed to be very short and efficient read. [Round 1] Read the Introduction (first 2 pages) and you will get a good idea of how the game is played. [Round 2] The following 6 pages (sections 1 to 5) are a must read to understand 80% of the game, and to be able to play right away. [Round 3] Section (6- Warlogic special rules) are interpretations for specific cases that are nice to know before hand, but can also be looked up on need. Each of those round will go through all stages of the game.

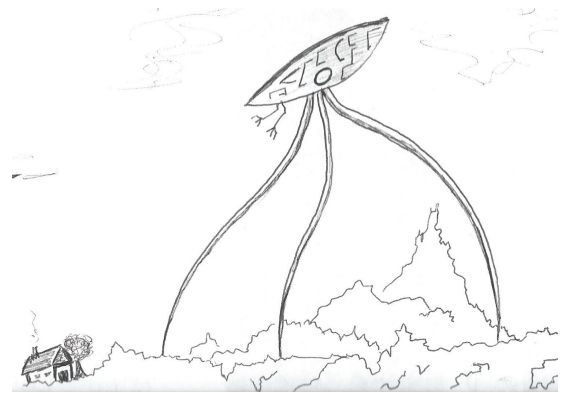
The last 15 pages, section 7 through 9, are full of helpful information that would definitely help. Section (7) has helpful links to make army building much easier. Section (8) has some design specifications. Finally section (9) is about some sample battle reports.

In general, there is little to ready if you want to play right away, and much more to read and explore once you are looking for more. If you read the whole rulebook, you will get the knowledge to build better armies and perform better strategies.

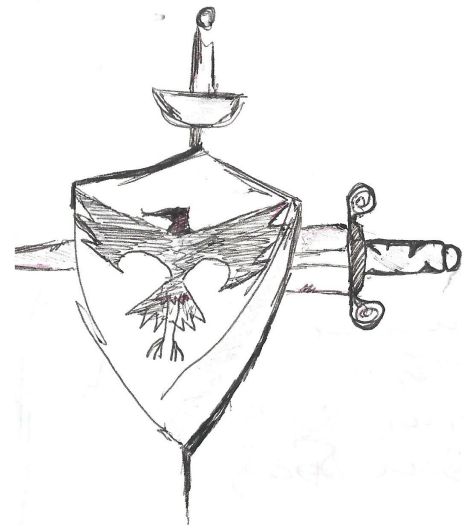
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- ***TCP/IP of war gaming.***
- ***Compatible with all types of figures and characters.***
- ***Open source of war gaming.***
- ***Develop your own weapons, armour, magic, and technology.***
- ***Simplified rulebase yet realistic.***
- ***Very easy to start playing, yet more interesting the longer you play.***



Introduction

Warlogic, an open source strategy war game. It is not dependent on any vendor, vendor-specific codex or figures. You can create your own army with whatever material you have. It can be played with figures of any scale, on table tops, in rooms, or gardens. It is fully dependent on an easy mathematical model that enables players to create any characters and skills they want. The game is played using figures, dice, measuring tapes, and an army sheet. The objective of the game can be complete enemy annihilation, capture and hold a critical position, protect a cargo, or anything the players agree to. The Five steps you need to play Warlogic are:



1- Strategy step :

Concerned with building your army and agreeing on general rules and exceptions. **Mostly executed once before each game by each player or team, but some strategy actions like reinforcement, and morale will be played at the very beginning of each turn.** Some specific strategic acts can be played at any time. At the beginning of each turn you might have some extra credit to spend. This would be the time to reinforce your army with new units. [Army sheets](#) hold all the army information. The output of the initial strategy phase is an army sheet which is a paper or online database of all the army units.

2- Control step ^

Concerned with using one commanding unit to order other units to move and attack if needed. Executed once at the beginning of each turn by the attacker(s). Uses a meter and the army sheet to identify the number of units that are within communication Range @, and can be controlled !. Also, the chain of command *. The ultimate objective of commanding multiple units is to pincer the enemy.

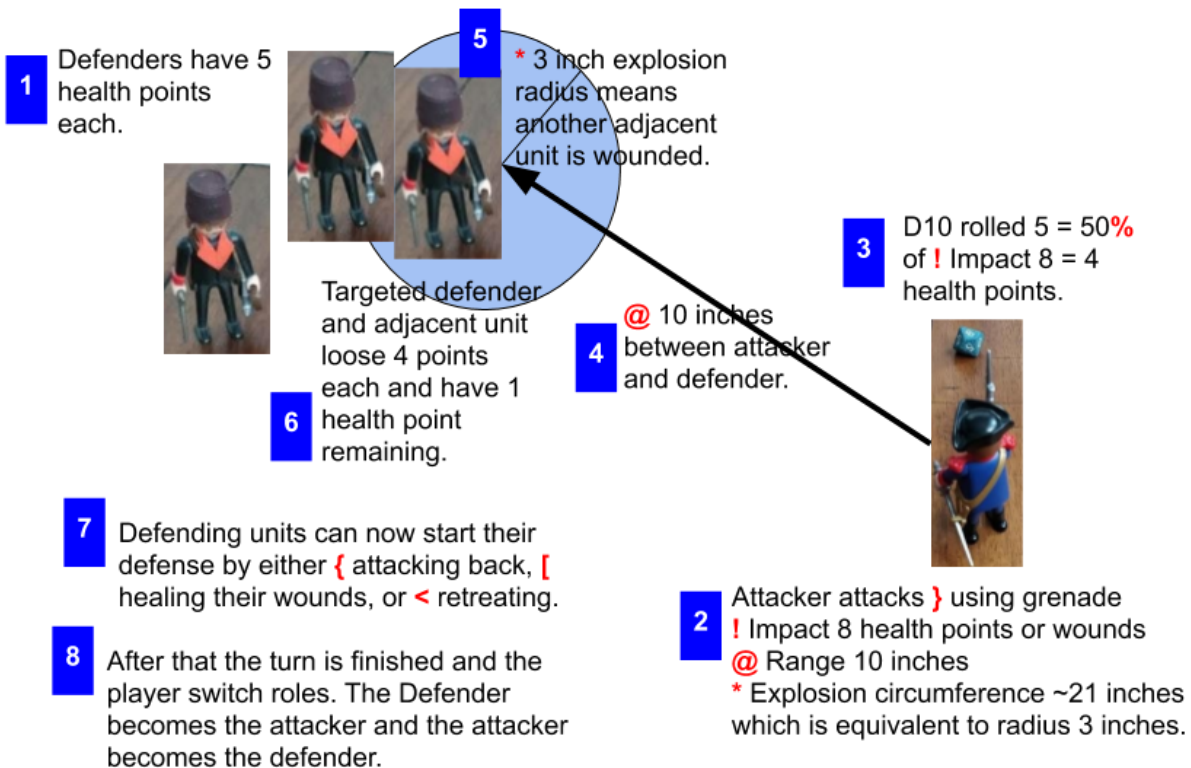


3- Movement step >

Concerned with Moving ordered units or a single unit. Executed once at each turn after the Control ^ step by the attacker(s). It uses a meter and the army sheet to identify the speed of each unit @, and its maneuverability whether it is height/elevation !, or depth *.

4- Offense step }

This is when the attack payloads are delivered by ordered the executing unit(s) against single or multiple units. Executed once at each role after the Movement > step. Uses a meter, 10 faced dice D10 and the army sheet to identify the range @, impact or damage !, and explosion circumference * of weapon(s) used in the attack.



5- Defense step [

Concerned with (only) the attacked units reacting to the attack. The defenders can use the same rules that apply to the offense step to return the attack. They might choose to retreat using the movement rules. They might also choose to treat their wounds. Executed once at each role after the offense. Only the defender's attacked units can perform it. Uses a meter and the army sheet to identify the Range @, Impact !, and circumference * of the medic or repair kit(s) used in repair and wound treatment.

1- : Strategy... How to build and reinforce an army?

You can think of credit value as how much you can use to purchase units. A unit can be anything from a soldier to an animal, a building, or a machine. A unit can be a soldier, troll, horse, tank, dragon, shark, submarine, bunker, obstacle or anything you can imagine. Each unit has strategic, control, movement, offense and defense skills that contribute to its total price.



1.1- Units and teams

As each unit has several skills, the same skill could be associated with many units. For example, if **Human_Health:(impact=1, range=0, circumference =0, number=5, probability=100)** is used by one or more units, it means that those units have 5 points of armor or health each. The enemy needs to attack them with effective accumulative impact that reaches 5 each to destroy them. Units in an army can be grouped in teams with cost equal to the sum of their costs. Grouping units into teams makes it much easier to reuse the teams in future games and finish the strategy step very fast (*Fast-play*). A unit's cost is the sum of the costs of all the skills the unit has. A skill is like carried weapons, hand to hand combat abilities, armor, health, communication ability, rank, movement ability on sea, in deep sea, in the sky, space, on land, and underground.



1.2- Skills

There are five types of skill categories. They are not to be confused with play steps even though they practically serve these steps.

- ❖ Defense [Like health, armor, potions, food, medic or repair kits.
- ❖ Offense } Like guns, weapons, hand to hand combat skills.
- ❖ Movement > Like land, sea, space, air move speed, and maneuvers.
- ❖ Control ^ Like rank, decorations, communication with technology, psyche, the ability to solve puzzles, pick locks, and hacking.
- ❖ Strategy : Some skills that are special and penalized like team morale, and manipulating time. This also includes costless administrative information like vendor, and team with purpose of making it easier for the player to organize his or her army.
- ❖ A skill cost is calculated as follows:

$$\text{\$} = (! + @ + *) \times \# \times \% / 100 + \&$$

$$\text{Cost}\text{\$} = (\text{Impact}! + \text{Range}@ + \text{extension}*) \times \text{Number}\# \times \text{Probability}\% / 100 + \text{Penalty}\&$$



Where !, @, *, #, & and % are properties of each skill.

1.3- Properties of a skill are:

- ❖ **Description ** This describes the skill usually by just giving it a name.
- ❖ **Impact !** Describes the impact of using a skill once. In other words, how much impact does the single application of this skill would have.
- ❖ **Range @** Describes how far can the impact of this skill go.
- ❖ **Extension *** Does it have a depth, an explosion, or propagation effect?
- ❖ **Number #** How many times can this skill be applied.
- ❖ **Probability %** determines the usage probability of this skill.
- ❖ **Use Conditions ~** Can be used to define limitations on skill use.
- ❖ **Penalty &** It should be avoided as much as possible and it is directly representing credit value to deal with very small corner cases.
- ❖ **Cost \$** How much does this unit cost based on the values of all its properties.

1.4- Benefit of teams

Organizing troops in teams increases morale which means dice + bonus when the team charges or defends. Attack speech **!** gives the unit bonus (!+1) in attack. Range **@** is how many people in a team. ***** is sacrifice speech which gives the unit bonus (!+1) in defense. Here are two ARC troopers team. Note the different skills that the two units have.

(UName)	url	(UPicture)	TS	US	(SkillName)	!	@	*	#	%	\$	Picture	(P)	(H)	US	(SkillName)	!	@	*	#	%	\$	Picture	(P)	(H)
Blitz	BLZ-IMG		1148	1020	human kit	0	2	0	0	20	10	4	20	ARC	0	1	7	1	2	50	10.2	2	20	2	20
					human health	0	1	0	0	5	100	5	5	Generic plasma	0	4	5	0	20	20	38	38	20	20	
					human hand move	0	2	6	0	20	80	102	30	medic kit	0	5	0	0	3	100	15	15	3	3	
					clone full body armor	0	1	0	0	6	100	6	6	repair kit	0	20	0	0	2	100	40	40	2	2	
					Physical Armor 3	0	3	0	0	1	100	3	1	burnal	0	0	0	0	0	100	0	0	0	0	
					do-17	0	12	10	0	20	20	80	20	Two Grenades	0	5	5	6	2	20	6.4	6.4	2	2	
					ARC trooper Blaster rifle	0	10	15	0	20	20	100	20	Two Grenades	0	5	5	6	2	20	6.4	6.4	2	2	
					Sergeant	0	7	2	1	30	70	210	30	empty slot	0	0	0	0	0	0	0	0	0	0	
					radio	0	0	20	0	30	70	420	30	empty slot	0	0	0	0	0	0	0	0	0	0	
					bimolecular or memolecular	0	1	60	0	0	100	0	0	Heads	0	0	0	0	0	0	0	0	0	0	
Blue	BLU-IMG		2220	903	human kit	0	2	0	0	20	10	4	20	ARC	0	1	7	1	2	50	10.2	2	20	2	20
					human health	0	1	0	0	5	100	5	5	Generic plasma	0	4	5	0	20	20	38	38	20	20	
					human hand move	0	2	6	0	20	80	102	30	medic kit	0	5	0	0	3	100	15	15	3	3	
					clone full body armor	0	1	0	0	6	100	6	6	repair kit	0	20	0	0	2	100	40	40	2	2	
					Physical Armor 3	0	3	0	0	1	100	3	1	burnal	0	0	0	0	0	100	0	0	0	0	
					do-17	0	12	10	0	20	20	80	20	Formal backpack	0	50	2	5	30	70	1197	30	30	30	
					DC-15A Heavy Blaster Rifle	0	10	10	0	20	20	80	20	Two Grenades	0	5	5	6	2	20	6.4	6.4	2	2	
					Corporal	0	2	2	1	30	70	190	30	Two Grenades	0	5	5	6	2	20	6.4	6.4	2	2	
					radio	0	0	20	0	30	70	420	30	empty slot	0	0	0	0	0	0	0	0	0	0	
					bimolecular or memolecular	0	1	60	0	0	100	0	0	heads	0	0	0	0	0	0	0	0	0	0	

ARC troopers: <https://drive.google.com/open?id=1X7zeJCcmN-i9SkANIUvBjd-xeq76BQvWymfoOwzW2mY>

1.5- Starting the battle

Fighting parties agree on a credit value. For example, 20,000 credit points for each team. One team chooses the terrain and the other takes the first turn. If conflicting roll for it. Teams can agree on objectives instead of complete annihilation. Who starts first, who picks terrain, extra credit, treasure chests, who picks budget? This is all defined in the battle template and it makes sense to divide it between contenders.

1.6- Reinforcement at the beginning of each turn

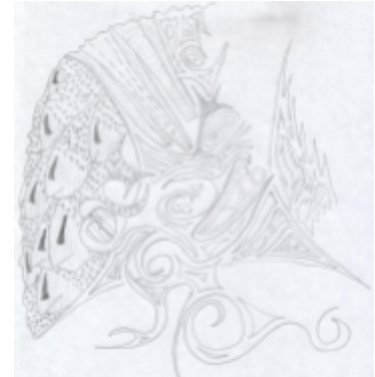
Some units can hold some extra credit to deal with smugglers and smuggle more units or resources into the battlefield. They do pay a much higher rate, but the purchase items are delivered in the middle of the game.



2- ^ Control... Commanding the army.

If Attacker has high ranking or decorated personnel s/he can choose one of them to order many units to move and attack. Here is an example:

- ❖ Attacker choses Sergeant Whoever to communicate with 2 Corporals and 5 Privates to launch a coordinated attack on an enemy tank.
- ❖ The Sergeant has !=7, *=2 as properties of his Sergeant rank skill. This means he can order up to 7 soldiers directly or through corporals and he can give up to 2 unique command streams.
- ❖ He also has @=20 for his radio range property. This is also true for all the Corporals and Privates.
- ❖ All soldiers except for one Private are within radio range so the Sergeant orders all 6 within radio range to: "Close in on the enemy tank and attack it with your heaviest weapon".
- ❖ Decrease attackers' radio energy # by 1.
- ❖ Decrease Sergeant and Corporals command energy # by 1.



Note: In puzzles and smartness decisions rank is equivalent to education level. So, for example, if someone is faced with a challenge, like outsmarting another entity or picking a lock, if her rank is higher than that of the puzzle then she can solve it. Then decrease her command energy by # 1. She can keep at it multiple times until the puzzle energy # is depleted.

Signal flag, Banner, Trumpet, smoke signals, and Horn are all types of simplex communication. Computer, radio, sci-fi comm, etc. are all types of duplex communication.

Here are samples of Control skills.

Name	Description		?	~	&	!	@	*	#	%	\$	Picture	(URL)
(Name)	(Description)	^	Control	effective against	Penalty	Popu	Distan	Chair	Energ	Usage	Cost	(Picture)	
mineMap	You can buy outside i	Information	Control	Information	10000	0	0	0	0	100	10000		http
Break in tools	to break into a tank house, etc. lock pick information or solve puzzles (like hacking open a lock)	Override	Control	doors, locks, built	0	10	0	0	10	100	100		http
Formal Decoration	Decoration that was g	Decoration	Control	soldiers usually k	0	50	2	5	30	70	1197		http
computer and internet	computer and internet duplex		Control		0	0	100	0	30	70	2100		http
Telepathy	Telepathy	duplex	Control		0	0	20	0	30	70	420		http
monocular	adds d10+5 to the sni	Information	Control		0	50	0	0	30	100	1500		http
Load5		load	control		0	5	0	0	30	70	105		http
Colonel General	OF 8	Rank	Control		0	300	2	10	30	70	6552		http
Sergeant	RF 9	Rank	Control		0	7	2	1	30	70	210		http
Messenger bird	Messenger bird. They	simplex	Control		0	0	10	0	30	70	210		http
hacking or mind readin	hacking or mind readin	Override	control		0			10	30	100	300		http

3- > Movement... Maneuvering in the battlefield.

To follow up on the previous example, the attacking units move closer to the target enemy tank. Each to its maximum speed per role @ but considering staying within radio range @. In this case they are ground troops and their movement elevation ! is basically how tall they are. This could give them a dice + bonus point while attacking if it is higher than the target unit. Some important points:



- ❖ After the move, decrease attackers' unit(s) move energy # by 1.
- ❖ Elevation gives the unit bonus (!+1) in attack. It is interpreted as air superiority.
- ❖ Depth gives the unit bonus (!+1) in attack. It is interpreted as stealth by tunneling or sub-marine, or maneuverability in deep space.

Here are samples of Movement skills.

Name	Description		?	~	&	!	@	*	#	%	\$	Picture	(URL)
(Name)	(Description)	>	Move	effective against	Penalty	Depth	Speed	Eleva	fuel c	Usage	Cost	(Picture)	
Plane Move		Air	Move	Air	0	0	20	100	30	80	2880		http
X-Wing low atmosphere speed		Air	Move	Air	0	50	0	50	20	80	1600		http
Transforming	Transforming, shapes!	All	Move	All	0	1000	0	0	30	90	27000		http
Diverkit Move	Diverkit	Dive	Move	Dive	0	10	5	0	30	80	360		http
Submarine small Move		Dive	Move	Deep	0	20	20	0	30	80	960		http
HyperJump	in-skip, HyperJump, w	All	Move	Space	0	1000	1000	100	30	90	29970		http
Horse Land Move		Land	Move	Land	0	0	12	10	30	80	528		http
Digger move	Digging Speed In Land	Land	Move	Land	0	5	10	0	30	80	360		http
Boat Move		sea	Move	sea	0	0	30	10	30	80	960		http
human sea move		sea	Move	sea	0	1	5	1	30	80	168		http
Space craft Move		Space	Move	Space	0	50	50	20	30	80	2880		http
X-Wing Speed	1,050kph. since max	Space	Move	Air,Space	0	50	175	50	20	80	4400		http

4- } Offense... Delivering the damage.

4.1- General rules of engagement

Offense is the only step in the game the requires throwing a 10D or more (10 sided dice). Let's continue the example:



- ❖ Attacker announces that its unit(s) will attack defenders' unit(s) with specific weapon(s).
- ❖ Attacker rolls the 10-sided die and decide the impact accuracy.
- ❖ Attacker might choose to use one die for all weapons, one for each, or one for every type of weapon.
 - If the attacker has higher ground, we add 1 to the dice number.
 - In land, sea or sky if a unit is higher than another it gets a +10% impact reward. Similar underground, under the sea surface, and in deep space, if a unit is maneuvering deeper it is awarded the same impact leverage. If one unit is higher















while the other is deeper, the deeper gets the reward as deeper is usually more stealthy.

- If the attacker is attacking from behind, attacking fleeing enemy, or has stealth capabilities add 1 to the dice results.
- If the weapon is a sniper rifle or a guided missile with high accuracy, you add (1-9) points to dice based on the modified probability of that weapon. For example, if a nipper rifle has a modified probability % of 110, this means its original % 30 (for medium range weapons) was upgraded to % 110 because we will add 8 points to the die for accuracy.
- If defender is behind an obstacle we subtract 1 from the dice number.
- If defender is inside a house or vehicle we subtract 1 from the dice number.
- If defender is on higher grounds we subtract 1 from the dice number.
- If defender is inside a house or vehicle and the attacker just moved inside this same house we still subtract 1 from the dice number till the attacker kills enough units in the house to have the upper hand and then the situation is reversed.
- ❖ Attacker verifies the distance with a measuring meter. (To speed up the game verify the distance just before rolling dice and roll only if it is going to reach.)
- ❖ Attacker decreases attacking units' ammunition.
- ❖ Decrease defenders' unit(s) armor then health by the weapon's single impact ! multiplies by weapon's accuracy (die value divided by 10 and rounded up).
 - If defenders' unit(s) health + armor reaches 0 it dies or is destroyed.
 - If a unit dies it cannot exercise the defense step.

4.2- Zero range combat

The range @ of hand to hand (H2H) or face to face (F2F) combat is 0 because they must be in direct contact. The probability % is 10% because it is unlikely to travel that far without being killed. At the same time, we want to make it cheaper to encourage the use of such fantasy weapon. The number # is called durability and is equivalent to ammunition.

Here are samples of Movement skills.

Name	Description		?	~	&	!	@	*	#	%	\$	Picture	(URL)
(Name)	(Description)	}	Offense	effective against	Penalty	Hit	In	Range	Expl	Amm	usage	Cost	(Picture)
flame thrower		Biological	Offense	Biological	0	10	10	10	20	30	180		http
DH-17	pistol_lazer	Blaster	Offense	All	0	4	5	0	20	20	36		http
abrams bolter		Bolter	Offense	All	0	10	20	5	20	30	210		http
Three Medium Missiles		explosive	Offense	All	0	20	70	20	3	20	66		http
axe		Face to face	Offense	All	0	9	0	0	30	10	27		http
Scimitar		Face to face	Offense	All	0	6	0	0	30	10	18		http
Light sabre		Face to face	Offense	All	0	100	0	0	30	10	300		http
revolver	pistol_revolver	firearm	Offense	All	0	3	4	0	6	20	8.4		http
hydra automatic pistol		firearm	Offense	All	0	5	10	0	20	20	60		http
Dog H2H		Hand to hand	Offense	All	0	4	0	0	20	10	8		http
Hydra H2H		Hand to hand	Offense	All	0	10	0	0	20	10	20		http
battle droid gun		laser	Offense	All	0	6	8	0	20	30	84		http
GoW COG Retro Lancer		plasma	Offense	All	0	9	10	0	20	30	114		http
chin turret		turret	Offense		0	10	20	0	60	30	540		http

5- [Defense... Taking the hit and fighting back.

If the defender unit was a house, vehicle, obstacle and got destroyed. All the units protected by it will suffer a penalty. Any remainder impact from attackers' fire power will impact all of them. If Defenders' unit(s) is not dead, it can choose to react by:



- ❖ Attack back: Same attack rules apply.
- ❖ or Retreat: Decrease energy as per move rules.
- ❖ or Recover: apply healing, fixing, refueling. Decrease recover energy exactly like ammunition.

For example, the target tank driver has a repair kit that can be used 3 times #=3 and each time it adds 10 health points !=10. He used that to fix the tank health by re-adding 10 health points # to the tank and decreasing his repair kits # by 1.












5.1- Extra armor

Any unit typically has health which is not really different from armor. It makes sense to have one type of health for all humans, for example, but different armor depending on the character. Armor can be extra body plating, extra shoulder, extra side shield, extra side shield, full body armor, force shield, magical barrier and more.

5.2- Crashing

One unit can move and crash into another unit as a desperate act. Simply the attack impact ! becomes the health(+armor) of the attacking unit. It gets reduced by the amount of damage it makes to the target unit. Think of health(+armor) as the weight of that unit.

Here are samples of Defense skills.

Name	Description		?	~	&	!	@	*	#	%	\$	Picture	(URL)
(Name)	(Description)	]	Defense	not effective again	Penalty	Potic	Range	Diam	Potio	Obsta	Cost	(Picture)	
full body medieval armor	head, face, neck, right	Armor	Defense	Biochemical	0	1	0	0	6	100	6		http
Armor100		armor	defense		0	1	0	0	100	100	100		http
Food	food, water	food	Defense	machinery	0	5	0	0	50	100	250		http
medic kit	Medic	healing	Defense	machinery	0	5	0	0	3	100	15		http
Health 10	health points and crash	health	Defense	All	0	1	0	0	10	100	10		http
Cloning	Cloning (Impact is the	Miracle	Defense	machinery	0	1000	0	0	10	100	10000		http
Resurrection	Resurrection (Impact	Miracle	Defense	machinery	0	1000	50	50	3	100	30300		http
repair kit	Repair	repair	Defense	biological	0	20	0	0	2	100	40		http
Fire extinguisher		Repair_Healing	Defense	None	0	10	0	0	5	100	50		http

6- Warlogic special rules

Special rules can make the game more interesting. You can come up with your own rules if all players agree, for example, "Two pistols can be fired together gangster style."

6.1- : Strategy special rules

6.1.1- Binocular, infrared vision, map, and compass

This is still a work in progress. Maps and compasses can be interpreted as a move bonus @ in inches. It applies to the number of persons ! in a team. Binoculars and monoculars can be interpreted as a way to see further as "you can only target what you can see." If a unit sees something, it can target it, by attacking it or otherwise. If this unit is within reporting range from high ranking unit, the high ranking unit can see or know the same thing, and can order multiple troops to target it. Range @ will be the range of vision, * will be how far we can see through visual obstacles (ie, behind a mountain), and there is no use for impact ! yet. This, however, required that there is a defined range for sight which is unidentified for now. There should be two, one for the morning, and one for nights.

6.1.2- Turning back time

Undo the dice and re-rolling. This skill should be penalized to make it very expensive.

6.1.3- Predicting the future

Rolling the dice forward and recording the outcome. This skill should be penalized to make it very expensive.

6.1.4- Changing the future

Setting up the next n dice rolls. This skill should be penalized to make it very expensive.



6.1.5- Using different scales or genres

There is absolutely nothing that limits what you can mix and match. Whatever you feel comfortable with can be done. For different scales you can treat them as is, or multiply by a factor to make them less or more powerful (also more or less expensive). In general though, try to keep some sort of aesthetics to make the game more attractive. Same scale, nicely colored, properly propped and articulated figures would make a good game much better.









6.1.6- Intelligence, education, and information

This is a work in progress but most probably it will relate to the monocular, compass and maps rule since they give information. And it will add to the mental capacity in hacking and psychological takeover rule.

6.1.7- Using different types of dice

To limit the odds you can use D2(flip a coin), D3(D6 split into 3), D4, D6, or D8. This will make the game unnecessarily slow but can be a way to apply some magic to your opponent. To speed up you can use D20 with impact ! that goes up to 200%. **The recommended way** to use different dice is to position them around the field so players can obtain or find them and use them as an extra

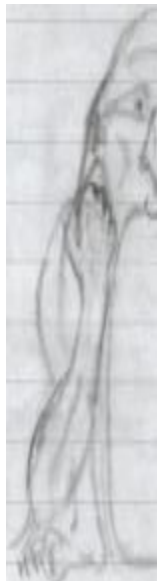
attack roll and speed up the game. The dice could be zone related and can only be used if a player has the upper hand in that zone. Any extra die is rolled once per turn and it is up to the player to choose with which other die to roll it.

Dice	Suggestions for creative use (Dice images are all from https://www.dicegamedepot.com)	
D2	Either flip a cool coin, or roll any dice with odds=head, and evens=tail.	
D3	Similar to D6 but each number from 1-3 is repeated twice. Use to add extra kick to units who take over a small strategic location like an energy resource. These units will fire the weapons with impact $!x(D10+D3)/10$.	
D4	Use to add extra kick to units who take over a small strategic location like a magic vault. These units will fire the weapons with impact $!x(D10+D4)/10$.	
D6	This is the most common D6. Use to add extra kick to units who take over walled strategic location or ruins. These units will fire the weapons with impact $!x(D10+D6)/10$.	
D8	Use to add extra kick to units who take over a medium strategic location like a hill. These units will fire the weapons with impact $!x(D10+D8)/10$.	
D10	This D10 is only used for calculating the hit percentage. It is not used for any bonus points.	
D12	Use to add extra kick to units who take over a small strategic location like a second level in a castle. These units will fire the weapons with impact $!x(D10+D12)/10$.	
D20	Use to add extra kick to units who take over a small strategic location like the highest level in a castle. These units will fire the weapons with impact $!x(D10+D20)/10$.	
D30	Use as bonus dice when taking hold of an important critical point that has some sort of energy or magic source. These units will fire the weapons with impact $!x(D10+D30)/10$.	
Online tool	https://www.google.com/search?q=dice+roller	

6.2- ^ Control special rules

6.2.1- Force or magic

- ❖ If a force user uses the force to move something into another, it is like making then crash (force user can just relocate it without crashing). The moved and object and the target have to be both within range @ of the force user. The ability impact ! must be equal to or higher than the weight of the moved object. If the moved object does not have a specific weight (i.e. not a unit but rather some obstacle on the field), a D20 is rolled to determine the weight and then it can be used once.
- ❖ The * extension of the force user's ability to move an object must be equal or higher than the remaining (health + armor) of the object being moved. Impact ! is how high it can be moved and @ range is how far.
- ❖ When the Jedi makes a force jump, or moves an object to safety, it is more or less the same thing without crashing at the end. Do not smash it into something else.
- ❖ Jedi lightsaber is used as: i- a deflective shield, ii-a remote weapon that can reflect specific ammunition back to its initiator, and iii-a face to face super sword weapon. Those are registered as three different skills.
- ❖ Jedi can do a Jedi mind trick and control another creature with inferior control ^! skills (communication + rank + decoration). This is the same as outsmarting a puzzle or a lock.
- ❖ Jedi skills (mind trick, force moves, force shields, etc) can be countered/disabled by Ysalamiri. This is the same as using distortion technology to disable communication.



6.2.2- Hacking or psychic

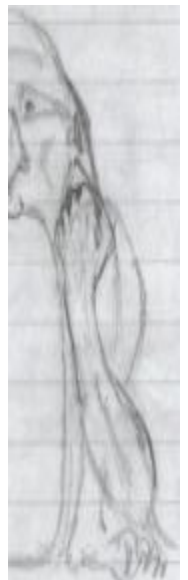
Hacking an electronic unit (like a robot) could affect its confidentiality, integrity and availability. Hacking impact ! (after applying a D10 percentage) is the highest mental capability of the target unit you can order or override. Range @ is the range of communication and extension * is the chain of command. Number # is how many times the unit can pull such an attack. Hacking, digital or psychological, takes 3 shapes:

- ❖ Hacking Integrity means you can order a unit to move or attack its same team units.
- ❖ Hacking Confidentiality means that you can leak information out of the attacked unit about its subordinates.
- ❖ Attacking Availability means you can freeze enemy unit(s) for one role.

The mental capability is the sum of impacts, ranges, and chain of command for any control skills a unit has. For example to control a Sergeant who has a radio range of 20, impact of 8, and chain of 2, you need a hacking impact of 30 and

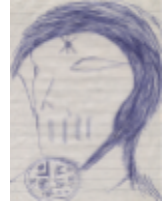
above. So if the hacking capability is 100 and you get 2 on the D10, it wont work. But 3 on a D10 would work. of course the range has to reach too. If the targeted unit has a firewall with an impact of 20 then it is added to the mental ability and the attacker will need at least 5 on the D10.

Probability % for such skill (Control/Override) should be very high (100) to limit its use. The penalty & is set to 1000 for the same reason. If a unit has a firewall (or protection talisman, Yasalamiri, etc), which is another skill you can buy, its impact is subtracted from the hacking impact !. Psychic attacks are the same as hacking but against biological units. Mind reading, Jedi mind tricks, etc.



6.2.3- Capture buildings or machines

If an enemy unit is hiding in a house or behind an obstacle your attacking impact gets a (-10%) penalty. In other words, you subtract 1 from the 10-sided dice (D10) result. To flip this penalty to your side, you need to have the upper hand when it comes to this house or obstacle. This means that you need to have more units in that house or hiding behind that obstacle. Obstacles and houses can have health and can turn into rubble if attacked. You can also choose to decrease their health by the same amount the (-10%) caused. This slows down the game though. Obstacles should be divided into reasonable sections each with its own health, so the game would be faster and more exciting. *(Fast-play)*



6.2.4- Taking prisoners

Depending on the ultimate objective of the game a player might choose to surrender some units to prevent them from being killed. Prison cells or coughts are control ^ skills with specific impacted ! prisoners.

6.2.6- Distortion

Distortion skills are skills that interrupts communications, force fields, etc. It is yet to be decided how it will apply but most probably it is a control (hacking or counter controls) skill. The simplest implementation is to cause the adversary to lose the command step in her or his next role.

6.2.7- Spartans' take over

This is a work in progress but most probably it will be a mix of offense and control.

6.2.8- Infestation

Plague, zombie, zerg, or xenomorph infestation can be similar to hacking of psychological mind tricks in the sense that you need to overpower the unit self awareness by a virus, nanomite, etc. . The unit can be marked as infested or replaced with another infested figure. The cost of the infested figure must be less than the remaining value of the victim unit. Since the infestation will go on till the end the ammunition should be 30.

6.3- > Move special rules

6.3.1- Ghost or spy

Ghost or spy units can move along enemy lines without being detected until they make an action. The player does not do anything with the figure, just write on a piece of paper which spy unit he moved and how far. The other player should conclude that since the opponent did that, he is moving a spy unit. When it is time for the unit to act, attack or break radio silence, the unit is moved according to the path that was estimated multiple times depending on how many times it was skipped. the unit is exposed. For now, there is no special price for that but the fact that the player cannot move any other units is a limiting factor.

6.4- } Offense special rules

6.4.1- Pincer attack and flanking

Attacker does not get D10+1 for a frontal attack, but as already mentioned, if the defending troops are retreating, attacker gets a D10+1. If the Attackers pincers the defenders by attacking from 2 sides, they get D10x4. Attackers get D10x9, D10x16, D10x25, or D10x36 if they attack from 3, 4, 5, or 6 sides. The maximum is D+6 because it is easier to break a three dimensional space into six sides.

6.4.2- Quick life or death roll *(Fast-play)*

If both or all players agree they can do quick elimination rolls to wrap up parts of the game fast. Basically, they decide which units will fight each other one to one and roll a dice each, the higher dice kills the other with no effect on anything else.



6.4.3- Quick play *(Fast-play)*

If both or all players agree they can ignore deducting ammunition, energy, communication, etc.. This speeds up the game significantly, and since move energy, offense ammunition and control communication all have a value of 30, it should still be fair. The exceptions to this are defense and special limited ammunition weapons like missiles. This should make the game go much faster.

6.4.4- Dual *(Fast-play)*

If two units get into a dual situation where they keep attacking and defending against each other, you can just roll two D10 dice every time. One is for defense and one is for offense.

6.4.5- Damage maximization *(Fast-play)*

If you roll multiple dice for multiple units or weapons you can assign the results of the dice to the weapons and target that maximizes the damage to the enemy. The more dice you roll the better the odds. Since for the attacks that were in range you can assign the highest dice values and leave the low dice for the misshots that were out of range. If you go by the default maximum weapons ammunition being 30 then make sure you do not abuse this rule.

6.4.6- Weapons that actually shoot

If players agree on this house rule it can be activated. Some figures come with weapons that actually shoot, for example, catapults and ballistas with elastics, spring cannons, squirt guns, or any thing with a projectile. Players can shoot the weapon instead of rolling the dice. If the projectile touches the target it is considered a 100% hit. if not it is 0% hit.

6.4.7- How does the yasalamari stop force skills

If the force-skill is offensive like lightsaber throw, blue lightning, force choke, reflect, and lightsabre face-to-face, the Yasalamari impact is deducted from the impact of the offense impact (precisely after it has been modified with the Dice roll). If the force-skill is control override like force mind trick, and force move object, the Yasalamari impact is added to the mental capability of the unit it is protecting. Force jump, lightsaber deflect, and force shield are not affected by Yasalamari protection.

6.5- [Defense special rules

6.5.1- Hazard terrains

Mine field is a defined surface with several # mines in it. It has a center point that is used as a reference to calculate the mine range @. If a unit moves into a minefield one mine explodes. One mine explodes per unit landed on surface. As usual the mine's impact ! and circumference * takes effect. A minefield could be a piece of cardboard with range as the distance between its center and furthest edge, or it could be a sign representing the center of an imaginary circle. All friend and enemy units are affected and mitigate using special mine detectors and chemical and gas masks. It is safe to cross a minefield once it is depleted.

6.5.2- Mine detection and automatic turret

If a unit has a mine detector with sufficient impact ! it will detonate the mine without hurting the unit. If a single mine detection impact ! charge has less impact the rest is subtracted from the unit's health. Nuclear waste, barbed wire, and magic death spell fields are treated the same way. Since minefields and automatic turrets and other defensive mechanisms are installed by the defender to



protect against attacking units, the defender loses the right to defend against these attacking units that were targeted by the defense mechanisms. The difference here compared to the regular scenario, is that the defenders attack back just after the attackers move in, and not in response to the attack. This is an extra leverage for the defender with the drawbacks of being a static weapon and that it would attack the defenders if they try to cross it without a map.

6.5.3- Sinking

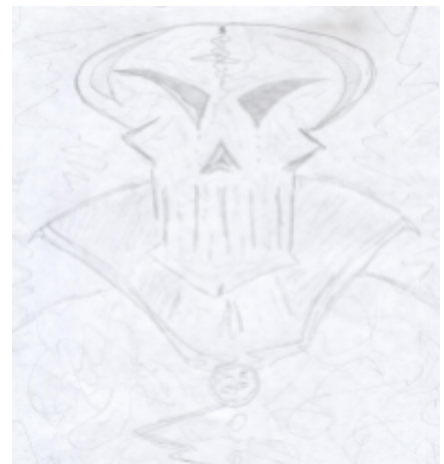
Drowning, quicksand, gas, fire, and other hostile environments can be treated like a minefield with some standard damage points to units that are not equipped to be in it. These are mostly defined as part of the map but adversaries can buy their own and use the as obstacles.

6.5.4- Cloning and resurrection

When a unit dies, it can be resurrected provided there is enough credit to do so. So a cloning facility is just a facility that has credit to create characters (including armor, weapons, etc.) on the fly. A resurrection facility/skill is similar but with the extra skill of transporting the "cloned" character to the place where it died. If the dead character is out of range of transport, it can not resurrect it.

6.5.5- Regenerative armor *(Fast-play)*

Some units can have armor that automatically kicks in every time a unit is attacked. The impact ! is usually more than 1, number # is how many times it can be used, and the whole impact ! charged is used every time soe there is some waste. It makes automatic healing easy and it is easy to spot if healing was forgotten. This means, however, that this unit has defense automatically set to recharge until all the charges are finished.



7- Army sheet database

A battle depends on having teams which depends on having units. Units are defined and priced based on their skills which in turn are partially defined by global defaults that pertain to the skill's class.

7.1- Where are the global defaults

Default values of skill classes and terrain bonuses and weaknesses are hosted in the armory sheets https://drive.google.com/open?id=1ArmVkHAETavtG2G4RJOvtD0O7aHcD-Mw5_hnf3zDPdw . Check the two tabs called "DefaultValues" and "OtherDefaults".



7.2- Where is the list of all skills?

There is a "skills" sheet, in the armory sheet mentioned above, that has around 500 skills. When you add skills to any unit all skills are lookable from that sheet.

7.3- Where is the template to create new units and teams?

Use the following file link as a template. You'll need to copy it rename it, rename the "Template" sheet inside it. Then fill it with units.

<https://docs.google.com/spreadsheets/d/1eT4zLPkhiZbHsw1IPRzeK-p3x2dxzyX2qU1w5gpj27g/edit?usp=sharing>

7.3- Where are the current teams?

All teams are hosted on the following google drive folders. Make sure you use the grid view to be able to see the price and picture of every team

<https://drive.google.com/drive/folders/1SXkgMNzgy2qRnIRJs4AXH7KaCDCigC35> .

7.4- Where are the battle sheets?

A battle sheet template exists here

<https://docs.google.com/spreadsheets/d/1zSV7ycJpH2yBrOYPUqzd78thu47k6YVwBSlyjH6KwQ/edit?usp=sharing> .

7.5- Where should one host the pictures of units?

Anywhere public where a direct link to the image can be generated. We recommend flicker.

7.6- Can you help me with the army sheets?

Also, Can you host my figure database? and can I use the same skills database? Can you do data entry for me? The general answer is yes. If you send us public links to the pictures we can accomodate for that.

7.6- I have an old figure, how do I identify it?

G.I. Joe: <https://www.yojoe.com/action/identify/> , Star wars: <http://jedibusiness.com/IDFigures>
 , Transformers: <http://www.transformerland.com/identify-transformers.html> , Lanard Corps
<https://www.linkedin.com/in/jsvazic/>

7.6- Where can figures be bought?

Any toy or hobby shop. You can also make them yourself. They can be just cards if needed. If you live in Waterloo, Ontario, here are some cool places you should check out:

J&J	Waterloo		
Toy soup factory	St Jacob		
Just by chance	closed		
Phoenix	Kitchener		
Antiques	St Jacob		
Roadside antiques	St Jacob		
The Toy Society	Cambridge		https://www.google.com/maps/place/The+Toy+Society/@43.395492,-80.3582289,15z/data=!3m1!1e3o0!4m2!3m1!1s72aoY&ved=2ahUKEwl8cao8K3nAhXCV50KHVB0UQ_BiwCqgECAD0QCA
Maurader Gun Runners	Online		
Acid rain	Online		
Master Mind	Waterloo		

8- Justification of some design decisions

There are a couple of ideas that govern how the rules are developed. On one side we want the game to be as detailed and simulating real and fantasy universes as much as possible, but on the other side we do not want it to be boring. We want to put emphasis on deterministic mathematical operations without losing the randomness and excitement that is brought in by the dice. And above all we want one open source equation to calculate everything so anyone can develop new skills and armies while keeping the game balance in check. While calibrating anything, we try to compare with the defense category, particularly the health points since they are the baseline for everything. They have a 100% probability, are discharged in an impact ! of 1, and they are the main objective for everyone. By objective, we mean that we want to kill the enemy units by removing all their health points. So whenever, we create new, or recalibrate old skill, we compare with health points and see if it makes sense.

8.1- Potential loopholes in the gaming system

8.1.1- Weapons explosion circumference

We're always on the hunt for loopholes that can make the game imbalanced or too slow. For example we've had a loophole where the extension of offence * was interpreted as a radius. That turned out to be too much and we now interpret it as the circumference. The easiest way to approximate the diameter from the circumference is divided by 3

$$\text{circumference} = 2 \pi r, \text{ so } r = \text{circumference} / 2 \pi, \pi = 3.14, \text{ so roughly diameter} = \text{circumference} / 3$$

This, along with other factors, can lead to a small loophole where a player intentionally aligns the impact and the circumference of their weapons to always (or more often than not) land on the lower end of a fraction. And since the general rule of thumb is always round up and go for the kill this could add up to significant advantage.

Another intentional loophole is that it is much cheaper to invest in weapons than it is to do so in health and armor. This is intentional to make the game go faster. After all it is a war game. (*Fast-play*)

8.1.2- Pilot vs Robot

Why is it better to use a pilot or drive vehicles rather than AI robotics? Even though it is cheaper to exclude the human move, control, defense, and offense capabilities, it is not significant. Having a human or other

creature driving / piloting the machine is not too bad since they can leave to do other missions and prevail after the destruction of the machine. Both can be hacked digitally or psychologically.

8.1.3- Why operate a vehicle with multiple units?

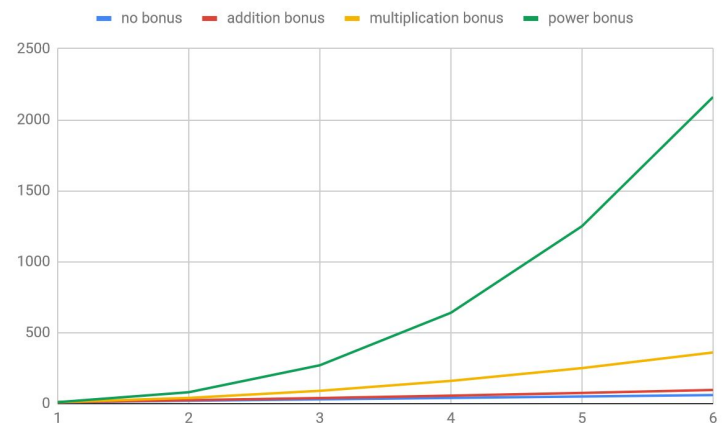
Large vehicles might have multiple persons manning the different guns and equipment on it. If they are set in a rank hierarchy they can fire multiple guns at the same time which would increase the fire power density of this vehicle.



8.1.4- Multiple vs one unit

Why is it better to use multiple units instead of just beefing up one unit with weapons and armor? One reason is that multiple units can shoot at the same time from multiple areas maximizing the pincer bonus and diversifying the attack. The command cost overhead and multiplication of the cost movement skills makes it very feasible to just use one unit. To counter that we use $D10 \times 2^2, 3^2, 4^2, 5^2$, or 6^2 depending on how many sides are in the pincer attack.

- Issue: one beefed up halo spartan unit is undefeatable. This is true unless the opposing team is another one unit team. It looks like consolidating the budget in one unit tilts the game towards the team with less units.
- Analysis: Create a mock up scenario with 2 teams having the same budget. One team is just one unit and the other is 10 units. From the table you can see that the diversified team is weak even without wasting money on control. The diversified team has to be distant enough not to be impacted by explosion but still be within the range of healing and communication. chain of command is a very vulnerable concept.
- Pro consolidation: Way more powerful (range and impact). With extension the damage is even better on diversified teams. Way faster. No control cost. if bosses die the individuals become very weak.
- Pro diversification: can do pincer moves, up to $D10+6$. better odds as you can roll more dice and choose the highest. Since there is one target unit, no offence impact units are lost except for the last offense before the target dies. can hold multiple critical locations and use multiple bonus dice. get multiple dice rounded up.
- Conclusion: Diversified units are much weaker. we need to amplify the effect of pincering to compensate for that. maybe, for every extra unit attacking you get $D10+n$ for each.
- Solution: use $D10 \times 4, 9, 16, 25$, or 36 instead of $D10 + 2, 3, 4, 5$, or 6. By doing this multiple units are a match for a single consolidated unit including the communication and extra movement overhead.



8.1.5- Benefit of Movement Maneuver leverage

Movement Height and Depth (Maneuver leverage) is very expensive compared to investing in Armour. What is the benefit? The cause of inflated investment is that it gets multiplied by the default energy value. To fix this loophole everytime the higher unit attacks, the difference in leverage is added to the impact before the dice are rolled. For example, a chopper with elevation of 15 inch attacking a walker with height of 10 with impact=10 and $D10=7$ will yield: $(6+(15-10)) \times 7/10 = 7.7 \sim 8$ effective impact.

8.2- Defaults and probabilities

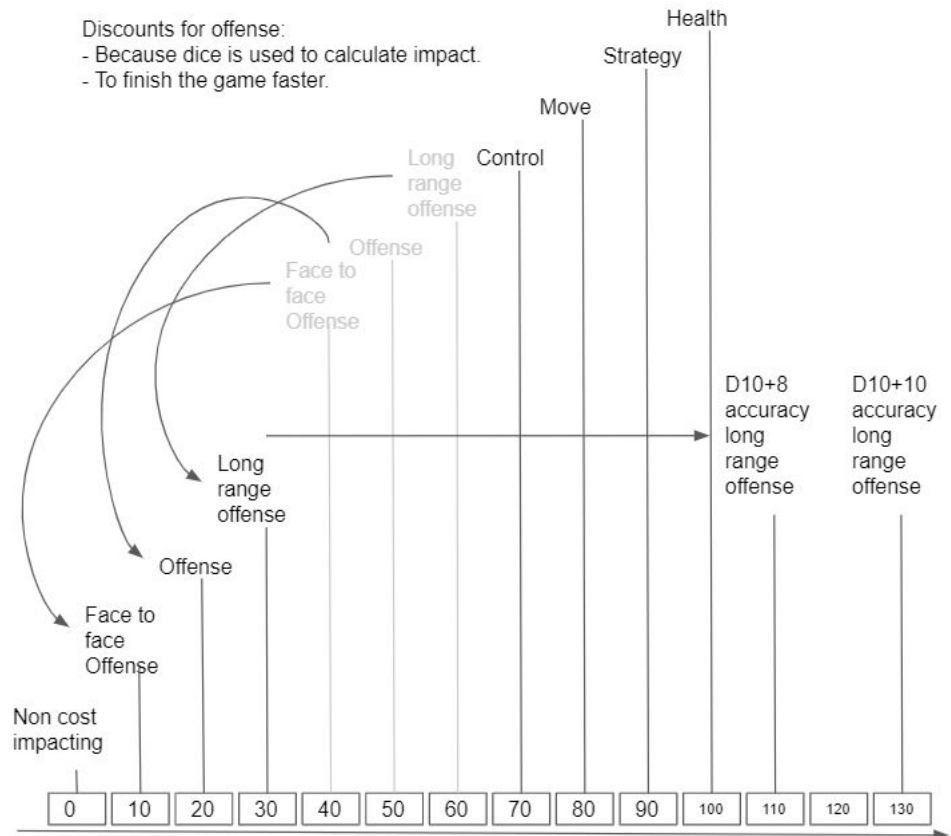
8.2.1- Default values for different classes of skills

Why is the default ammunition # and probability of use % different between different skills? The following table shows categories and subcategories of skill, their default values, how many units are using them and justification for probability.

8.2.2- Allowed themes, races, and objectives

Objective can be capture a flag (object, or cargo) and keep it for some number of turns. It could be control a critical position and hold it for a number of turns. It could be a race, complete enemy annihilation or whatever players agree to. Theme or universe could be ancient, historical, modern, futuristic or mixed. Vendors could be anything, scale could be anything. Whatever range players are

comfortable in is a go. Races can be anything and can be found in the skill database as each will have different health points, but the common ones are: undead, elves, orcs, trolls, goblins, dwarfs, humans, hobbits, smurfs or any comic creatures, aliens of all types, cyborgs, augmented humans, clones, robots (different types), animals, zombies, werewolves, vampires, wizards, cyclops, minotaurs, centaurs, Satyrs, Fauns, pegasus, Any anthropomorphic animals, deities, and demigods. Here is a fun matrix of different archetypes https://docs.google.com/spreadsheets/d/1ADnyE_p4YkN1Y7ncrQm0FC_HU9bJBMrXGUa5R8A-D2s/edit?usp=sharing.



8.2.3- Maximum ammunition and energy of 20

Unless the players have reasons to do otherwise, we can consider the maximum number # of ammunition, fuel, and energy to be 20. 20 is also the default value. This helps make the game faster since you'd only need to keep track of skills that does not have #=20, like a couple of grenades for example. A game will probably finish before any of the units communicates, moves, or attacks 20 times with the same weapon. However, in case the game does not finish in this range, it is safe to assume that units can collect ammunition and other resources from other dead units that never got to finish all their resources.

8.2.4- Figure Quality

You can use the figure quality to decide some of it's skills but that should not prevent you from assigning whatever skills needed to any figure if needed. For example, The points of articulation of a figure can help decide it's hand to hand offense abilities.

	Head		Shoulders		Elbows		Hands		Fingers	Jaw	Total PoA	Skill Name	Description	Impact !
	vertical	horizontal	vertical	horizontal	vertical	horizontal	vertical	horizontal						
Left			1	1	1	1	1	1	1		35	Judu	5+ Points of Articulation	1
Right	1	1	1	1	1	1	1	1	1	1		Karate	10+ Points of Articulation	2
Left	1	1	1	1	1	1	1	1	1	0		Kung Fu	15+ Points of Articulation	3
Right	1	1	1	1	1	1	1	1	1	0		Tae Kwon do	20+ Points of Articulation	4
	vertical	horizontal	vertical	horizontal	vertical	horizontal	vertical	horizontal		Extra		SciFi Martial arts	25+ Points of Articulation	5
	Torso		Hips		Knees		Ankles		Feet					

Another example would be the quality of the manufacturing and the condition of the figure:

Category			Properties	Can guide how you determine the
Material	Defect	[	The condition of the plastic (brittle, melty, hollow, flexible, fragile).	negative health points to make the unit cheaper and show that it is somehow injured.
Paint wear	Good	:	This could reflect that this is a veteran unit.	Could mean that it is smarter and more informed.
Paint, Sculpt	Good	:	Colors (gradients, shadows, weathering), Logos,	Charisma which is type of Morale
Paint	Defect	[	Uncolored areas.	Negative health points
Sculpt	Defect		Extra plastic, seams, ignored areas	Morale
Character	Good	:	LoB character, demanded character, rare.	Morale
Function			Power features, back and feet pegs (can stand)	possibly movement.
Props			Weapons, bags, armor, hats, coats, skirts, holster, sheaves,	

8.2.5- Skills' properties

Property	Description	Impact	Range	Extension	Number	Probability	Effective against	Penalty	Cost
Symbol	\	!	@	*	#	%	~	&	\$
Use	This describes the skill usually by just giving it a name.	It is an integer value usually describes the impact of using a skill once. In other words, how much impact does the single application of this skill would have.	It is an integer value usually describes how far can the impact of this skill go.	At the destination, does it have an explosion or propagation effect? How much?	How many times can this skill be applied.	Probability or modified probability.	Use Condition		
Strategic :		!; In the case of teams, it shows the offensive morale level.	@; in the case of teams, it shows the maximum number of team members affected by the morale level.	*; in the case of teams it shows the Defensive morale level.	#; in the case of teams, it shows how many times you can use morale bonus.	Determines the usage probability of this skill.	Can be used to define limitations on skill use. For example, biochemical weapons only affect living creatures and not machine.	It should be avoided as much as possible and it is directly representing credit value to deal with very small corner cases.	How much does this unit cost based on the values of all the other properties.
Control ^		!^, the impact value would usually represent the maximum number of units that can take orders from the commanding unit.	@^, the range value would be the radio or communication range.	*^, the Extension value represents the depth of the chain of command. How many layers can this order be passed through or how many unique command streams can be issued at the same time.	#^, the number of times unit can order a command. Also, could be how many energy cells in a communication technology.				
Movement >		!>, the impact value would usually represent 'Height, or elevation'. For example, unit height or jet altitude.	@>, the range value would be the units speed. How far it can go in a role.	*>, the Extension value would usually represent depth points. For example, unit digging, diving or space depth.	#>, the number energy cells or effort.				
Offense }		!}, the impact value would usually represent the weapon's damage points.	@}, the range value would be the weapon range.	*}, the Extension is the explosion Circumference. An approximation to get the diameter is divide by 3.	#}, the number of ammunition.				
Defense [		![, the impact value would usually represent health, armor, or medical kit impact points. It is almost always 1 to minimize the damage to the unit.	@[, the range value would be a health spell reach-ability for example.	*[, the Extension is the coverage Circumference of a medical potion. An approximation to get the diameter is divide by 3.	#[, the number of health points. Impact is usually 1 and Number would have all the juice.				

8.2.6- Defaults' table

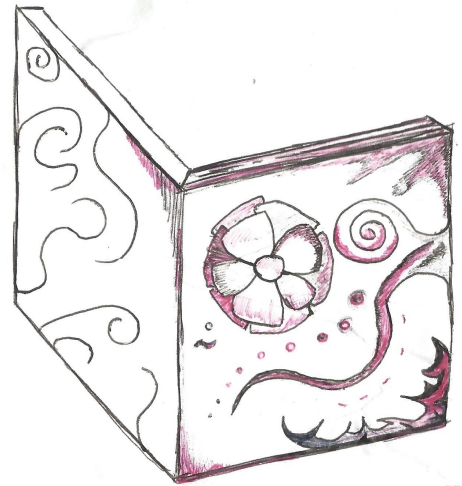
	/ Sub-Category	?=:^>[Category	~ & Penal ty	! Impact	@ Range	* Extension	# Number	% Proba bility	\$Co st	
Most Control skills can be used # 20 times and have 70 probability % of use. Some super skills have 100 probability % and potential penalty & as a deterrent against abuse. Override is "Hacking, psychic abilities." it does not cost money to receive orders. but you can add the range of a simplex sender (flag) and simplex receiver (bicolcular)	Decoration	Control		How many can you order?		chain of command	20 communication energy or ability to command without lack of morale.	70	Price	
	Rank									
	Simplex			How far can you communicate?						
	Duplex									
	Load			How many can you carry			100			
	Information			Spying						
	Intelligence			Puzzle solving, lock picking.						
	Override		D10+1000	How many can you order?	How far can you communicate?	chain of command				
All defense skills have a probability % of 100 since total enemy annihilation is the default objective of this game. But in terms of the number of times they can be used #, it is different since we set the impact ! to 1 and use the number # to show the health points. An exception to that are all the repair, food, medic types.	Armor	Defense		1			Health points	100		
	Health			1			Armor points			
	Repair				How far can you reach	circumference	20 Number of packs or kits			
	Healing									
	Food									
	Miracle									
	Energy			Healing or repair impact	How far can you reach	circumference	20 Number of packs or kits			
	Repair_Healing									
All movement types have a probability of 80% except for very cool moves that have 90%.	Dive	Move			How far (fast) can you move per turn?	Diving Depth	20 Fuel	80		
	Dig					Digging Depth				
	Space					Space travel				
	Air			Altitude						
	Land			Hight, can it climb?						
	Sea			Elevation from sea						
	All			Elevation	Maneuverability	20				
	Miracle									
Biological warfare weapons should have lower probability since it does not apply to all target units (similar with countermeasure like gas masks and hazmat suits), but the weapons gives the attacker the possibility of capturing buildings and vehicles that are not destroyed which should increase the probability again. If the probability is the same, then the weapon can also be used as regular weapon if the special weapons rules do not apply in a simplified battle.	Bolter	Offense	D10	Weapon damage	Weapon range	Explosion circumference	20 Ammunition	30	Price	
	Explosive		D10					20		
	Biological		D10					30		
	Blaster		D10					20		
	Firearm		D10					20		
	Face to face		D10				20 Durability	10		
	Hand to hand		D10					20 Ammunition		30
	Laser		D10							30
	laser +plasma		D10							30
	plasma		D10							40
	Exotic		D10				40			
	projectile		D10				110			
	Snipe		D10				30			
	Turret		D10				40			
	Nanomite		D10				40			
	uranium		D10				40			
Strategy skills are mostly organizational to make it easier to set troops in different groups and deploy them quickly when it is time to battle. Teams, however, can be set to boost morale and increase the dice score by 1 (accuracy) point in attack or defense.	Actionable	Strategy						90		
	Administrative		0	0	0	0	0			
	morale		0	How many D10+x bonus points for attack (Bugle)	How many people in the team	How many D10+x bonus points for defense (flag)	2	90		
	Manipulation		1000	Prediction (Rolling ahead)	Turning back time (undo)	Controlling the future (deciding the dice)	How many dice/tims?	100		
	Vendor		0	0	0	0	0			

8.3- Recap on types of bonuses

Move and command bonuses are related using farsight rule (maps, compass, magic, binocular, advanced troops that can report back using comm). Still work in progress (not tested)

Offense weaknesses and defense bonuses

- ❖ Offense gets to be used less than 50%, and much less for melee weapons.
- ❖ Offense gets 55% of the impact on average because we use an impact dice that gives 10 to 100 percent.
- ❖ Offense gets spent in batches that overflow (using a weapon with 10 impact to kill a unit that has 3 health points left in # will waste the rest of the impact).
- ❖ Offense gets one dice point deducted if the other unit is hiding and another if the unit is higher up.



Offense bonuses and defense weaknesses

- ❖ Offense is much cheaper.
- ❖ Offense can use extra dice on the field.
- ❖ If a unit gets resurrected it gets to use the same weapons.
- ❖ Offense gets an extra dice point if the defender was retreating/taking cover.
- ❖ Offense can get extra d10 x4, x9, x16, x25, or x36 for pincering or flanking the defenders. That depends on how many sides the enemy is outflanked at. Theoretically, in space, or 3D any space, there are 6 sides.
- ❖ Team morale offense and defense speeches apply to the attack only.
- ❖ (This rule is not active because it complicates things.) some units can pick up weapons and ammunition.
- ❖ Sniper and high accuracy attack bonus.
- ❖ Always round up and always go for the kill general rule of thumb.
- ❖ The difference in maneuvering leverage (height, elevation, depth, etc) between the attacking and attacked unit is added to the impact before the D10 is rolled.

Field bonuses

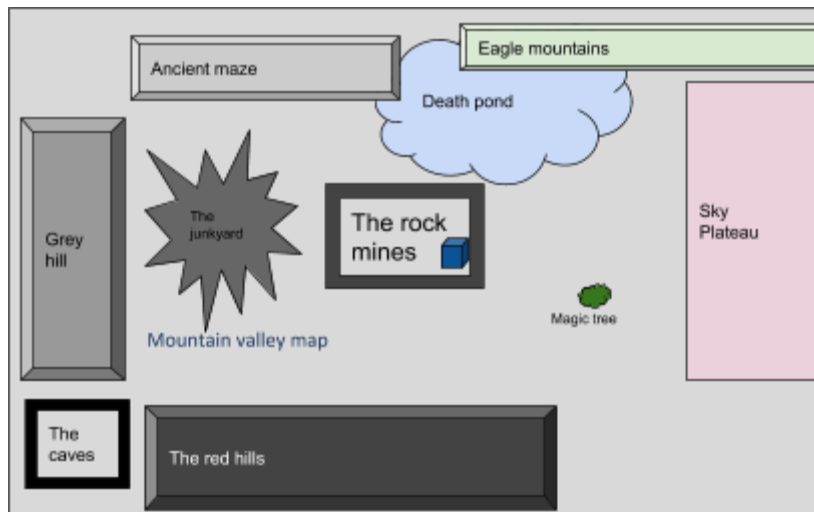
Players can find extra dice, inactive neutral units, treasure chests, medic packs, ammunition packs, and weapons on the field that they can take over and use.

9- Sample battle

9.1- Sample Back Story

The Rock hill has mines inside it. The mines produce radiating minerals that amplifies armies' abilities by a factor of 1000 rendering any battle a conclusive victory to the team that takes over the mines. For decades there has been a defacto opsenance from trying to take the Rock. Nation of the Beasts governed by the Elves withdrew into the sky plateau after the dark age of the last Rock mine's dispute.

retreated
lick their
still sore
what
No one
what
tried to
mines last
the "dark
Things
mission
village*"



The space pioneer
to the fire cave to
wounds. They are
and weary from
happened last time.
remembers exactly
happened when they
control the Rock
time. They just call it
age of rock dispute".
changes when a
sent by the "Cave
dwellers arrived after
successfully opening
from the cave to the

a portal
mountains valley right on top of the ancient maze. Armed to the teeth, and with no cognition of what might become of them, they prepare for a full assault on the Rock mines. Weary of the consequences, yet forced into the race, the space pioneers and the people of the beast prepare for battle. "Either we take the Rock or no one does." The miners make the first move...

9.2- Adversaries and battle card

Objective: Take a critical point and and hold. The first army was the Halo spartans team at a cost of 9934. The Second Army was Joker squad plus some extra gundam unit at a cost of 9300.

Budget			\$10,000			Who decided			Player2			Battle Log
Objective			Hold strategic point for 5 turns			Who decided			player2			
Do the effective against rules apply?			No			Who decided			Player2			
Who reached the field first?			Player3			Who decided			Player3			
Who attacked first?			Player1			Who decided			Player1			
Do the fast play rules apply?			Yes			Who decided			Player3			
Strict budget			No			Date			1/1/2020			
Battle of:			the cliff			Location						
team	Groups	Group Cost	team	Groups	Group Cost	team	Groups	Group Cost	team	Groups	Group Cost	1
	Left	\$700		Left	\$66		Left	-\$50		Left	\$10,000	2
	Spent	\$9,300		Spent	\$9,934		Spent	\$10,050		Spent	\$0	3
Player1	Jocker squad	9000	player2	Halo	9934	Player3	Pirties	6050	None			4
Player1	Extrask	300	player2		0	Player3	eagles	4000	None			5

Joker Squad: https://drive.google.com/open?id=1o42EP5S_UuJXQ6FZdxmkY9cAWg-Kw4nKCCs9aXUY1AY

Halo team: <https://drive.google.com/open?id=1YH2SZQBEO5ZqEK4WFLwLX3Lwiu6cX9OJpOpuvHcSec>

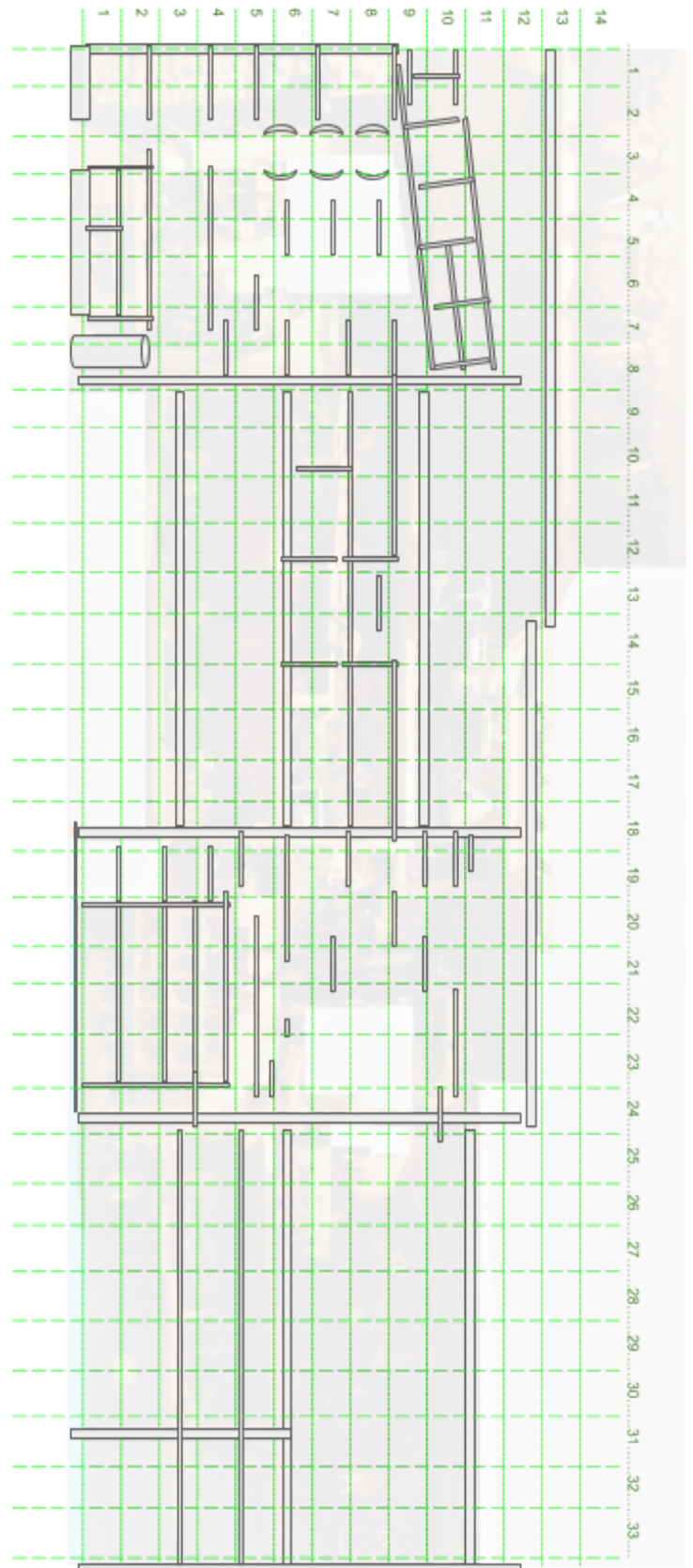
*Cave village shown in the next page is a sea port with space pad maintenance and portal technology. The village economy is based on trade, minig, fishing, agriculture (mostly seaweed), weapons smuggling, lodging, and vessel maintenance.

9.3- battle log

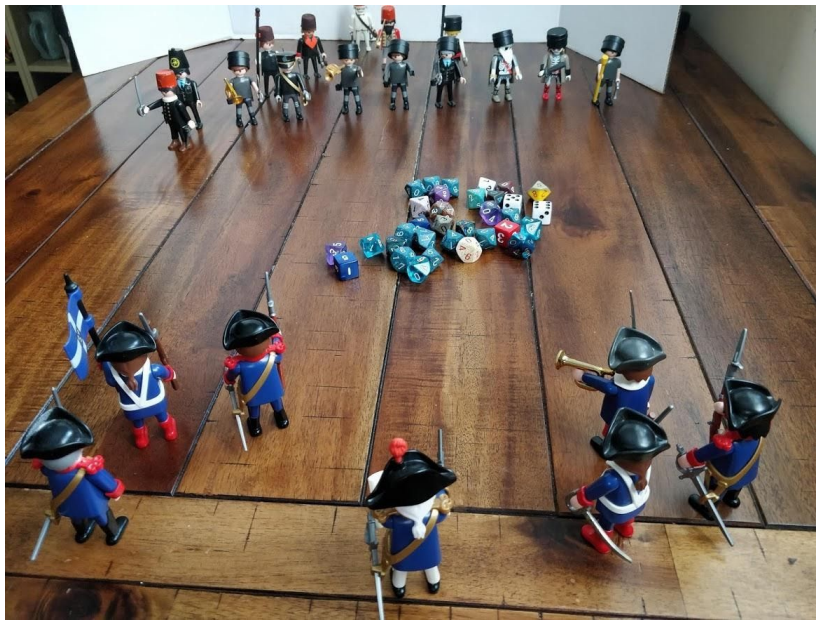
Troops from three adversaries reached middle ground in the valley. There were a magical tree in the middle of the field that gives magical offensive powers to whomever controls it. It has been heard that troops controlling the tree by having more individuals in touch with it than others get +D4 in their offenses. Tha is, in addition to the protection it gives by providing elevation and cover.

While the battle was ensuing on the fields, the space pioneer army was attempting to throttle the “Cave village expedition” from gaining air superiority over the valley. Two starships and an imperial knight came face to face with deadly consequences.

The three armies sent their best warriors to fight by the junkyard...



9.4- Sample skirmish



The British and Cossacks are almost the same cost. The Brits are less but they are very well equipped compared to the Cossacks. Cossacks arrived first and chose the land, while Brits will start their attack first.

The objective is annihilation of the opposing team and keeping control of the sky plateau.



They roll 9, 8, and 3 killing one guy and severely injuring the other two.

British go first. Commander orders the corporal with bugle to move his team forward 6 inches and fire their muskets at the tree Cossacks in the middle to try to break their lines.



First the fire range of the rifles was verified and the three targets were within 10 inches range @.

A rifle's impact ! is 5, so for the three rolls, the outcome was:

$5 \times .9 = 4.5 \sim 5$, the first Cossacks health points is 5, he is dead.

$5 \times .8 = 4.0 \sim 4$, the second Cossacks health points is 5, he is injured with $5 - 4 = 1$ health point left. You can use dice to note that.

$5 \times .3 = 1.5 \sim 2$, the third Cossacks health points is 5, he is injured with $5 - 2 = 3$ health points left.

Cossacks don't defend for the following reasons:

- No medic is available to heal injured units.
- They can tell from the enemy's attack that the range was 10 inches and they know their flint locks have 5 inch range, so it is not worth it to waste any ammo.
- Retreat is a very bad move since they can only win if they get nearer to the enemy depriving them from their long range rifle range.



On their turn, Cossacks move forward 6 inches bringing the Brits into their flintlocks' range and fire the 5 flintlocks that seem to be in range.

They target the bugle teams' 3 guys and roll 9, 8, 7, 4, and 3. flintlocks' range is verified and only the two guys in the middle (who happen to be the two injured guys) are in range. We consider the highest 2 dice and ignore the other 3.

The outcome was:

$5 \times .9 = 4.5 \sim 5$, the British corporal health points is 5, he is dead.

$5 \times .8 = 4.0 \sim 4$, the Other British private health points is 5, he is injured with $5 - 4 = 1$ health point left.



The two british soldiers defend themselves by firing back at the Cossacks that attacked them rolling a 9 and a 1. Similar to the impact calculations shown above they score impact of 5 and 1 which will kill both Cossacks. The corporal cannot respond because he is dead.

Ottomans teams: <https://docs.google.com/spreadsheets/d/13hqz4pSBG7hPzVPcAZIUgc0b1XLPdQsIHvzDjNktKE8/edit?usp=sharing>

British teams: <https://docs.google.com/spreadsheets/d/1d17kKEc9tYcNA4oD9zNOuTwh7fwQMnK6UIYwmku2N1s/edit?usp=sharing>

9.5- Sample battle reports

9.5.1- Minotaurs vs Orcs



A battle between the Orcs and the minotaurs. The orcs have tried to take out the individual minotaurs by ganging up against them one by one while the minotaurs tried to weaken every orc a bit. Then the minotaurs' commander Tyr decided to attack the Uruk Hai orc commander to prevent them from launching these coordinated attacks. Once the orc commander died the Minotaurs picked on the orcs one by one but soon it was just Tyr alone fighting the orc gang. Tyr was able to win the battle because all the orcs were previously injured and it was easy to kill them all. The hill remains with the Minotaurs.

Minotaurs team:

https://docs.google.com/spreadsheets/d/1FryjshXU-YWjVjK3cYCxZfmgSuGbwMj0Bvh_AlYzqA/edit?usp=sharing

Orcs team:

https://docs.google.com/spreadsheets/d/17OPTJbeh9P2ymD3j3sorCHSB4f_MoNgOV6yPJ_Ww9XA/edit?usp=sharing

9.5.2- Shock troopers vs centaurs

This battle was a standoff between the ancient Centaur clan and the most likely to be the new guard of the sky plateau. The dragon castle and old ruins on the plateau provided coverage and attack superiority to whomever controls them. The ruins provided a +D6 while the three stages of the castle provided +D6, +D8, and +D12. The objective was to grab and hold the dragon castle for 3 consecutive turns to win the battle. The Centaurs arrived first to the plateau and setup in a cavalry line formation 20 inches away from the castle. The shock trooper arrived later and setup 20 inches from the castle and 5 inches from the ruins. The troopers strategy was to keep the distance and inflict as much damage as possible on the advancing cavalry, preventing it for taking control of the castle and from damaging too many troopers. Part of that strategy was to relocate the suppression gun in the ruins and gain the +D6. The Centaur strategy was to close the gap as soon as possible using their speed (x2 that of a trooper) and leave a uni or two behind to grab and hold the castle for 3 rounds. For a while it looked that the Centaurs had a chance to implement their attack since the troopers almost lost their only light missile attack due to a 1 on a D10 that targeted the Centaurs commander. The Centaurs closed the gap pretty quickly but to do so, their troops had to come close together to pass the corridor between the cliff and the castle. The troopers saw and used an opportunity to launch all their thermal detonators at the commanders of the centaur clan. The commanders eventually died and the command hierarchy was disabled and it was up to individual units to act. The centaurs clan lost all its archers too. One of the centaurs managed to take control of the castle for 2 rounds and defend it against a team of troopers. Alone, he managed to chop down a sergeant and a private. However, the counter for grab and hold was reset. As the rest of the



troopers advanced cleaning up the rest of the remaining cavalry the managed to target and kill the centaur holding the castle and win the game by annihilating the whole clan and taking control of the castle.

Even though the centaurs were more expensive than the shock troopers there were three main issues with them that lead to their defeat. They lacked range weapons and depended mainly on melee. They lacked explosive weapons. They go cramped in the corridor with the two commanders and two archers too near to each other. The magic potions they had were designed very poorly and it didn't help much.

Centaurs team: https://docs.google.com/spreadsheets/d/1fN_dhxdx7-9sLklCihU6f_QZ0PRW1zAbth8m26nFVbQ/edit?usp=sharing

Shock troopers team: https://drive.google.com/open?id=1XBaT397zrDcDUGMGiIPZFfT2YarU0zhqTuhem_9EEyk