

DOWN RANGE

A sand table game for small-unit leaders



CONTENTS

1. Introduction	4	3.2. Weapons	17
1.1. What is Down Range?	4	3.2.1. Limited ammunition	17
1.2. What is Down Range not?	4	3.2.2. Small arms	17
2. Gameplay	5	3.2.3. Automatic weapons	17
2.1. Core concepts	5	3.2.4. Explosives	17
2.1.1. Dice	5	3.2.5. Artillery and mortars	21
2.1.2. Measurements	5	3.3. Equipment	21
2.1.3. Units	5	4. Vehicles	22
2.1.4. Success and failure	5	4.1. Vehicle crews	22
2.1.5. Advantages and disadvantages	6	4.2. Vehicle weapons	22
2.2. Rounds and turns	6	4.3. Carrying passengers	22
2.2.1. Initiative	6	4.3.1. Attacking passengers and crew	23
2.2.2. Unit actions	6	4.3.2. Overloading passenger capacity	23
2.3. Movement	6	4.4. Unmanned vehicles	23
2.3.1. Impaired movement	6	5. Command and signal	25
2.4. Actions	7	5.1. Signals	25
2.4.1. Checking visibility	7	5.1.1. Voice communication	25
2.5. Checking range	9	5.1.2. Electronic warfare	25
2.5.1. Attacking flying units	9	5.2. Command	26
2.6. Rolling for skill	9	5.2.1. Enhanced initiative	26
2.6.1. Attack advantages	9	5.2.2. Main efforts	26
2.6.2. Attack disadvantages	9	6. In-depth example	27
2.6.3. Crew-served weapons	10	6.1. Friendly forces	27
2.6.4. Rolling for damage	10	6.2. Friendly turn: Preparing for combat	27
2.6.5. Suppression	11	6.3. Enemy turn: Reacting to contact	28
2.7. Non-attack actions	11	6.4. Friendly turn: Setting the ambush	28
2.8. Medicine	11	6.4.1. Check visibility	28
2.9. Environmental damage	13	6.4.2. Check range	28
2.9.1. Falls and crashes	13	6.4.3. Check difficulty	29
2.9.2. Damaging effects	13	6.4.4. Check damage	29
2.9.3. Fire	14	6.5. Enemy turn: Contact	29
3. Units and equipment	15		
3.1. Basic units	15		

6.5.1. Automatic fire - the ZBL-09 autocannon	29
6.5.2. Marine reaction	30
6.5.3. Enemy infantry attacks	30
6.6. Friendly turn: Holding back the enemy	31
6.6.1. Treating the wounded	31
 7. Legal and contact info	 32
7.1. Copyright and license	32
7.2. Public domain elements	32
7.3. Disclaimer	32
7.4. Contact	32

INTRODUCTION

1.1. What is Down Range?

Down Range is a fast-paced tactical wargame intended for anyone interested in learning the basics of modern tactics, with a heavy emphasis on allowing players to learn through intuition and gameplay experience.

The game mechanics are designed to be simple, easy to pick up, and grow in complexity - you can start in the first chapter and reasonably work through a simple scenario just with that. Each chapter introduces mechanics of greater complexity.

Down Range includes flexible, accessible mechanics that allow players to explore:

- Smart employment of direct-fire, indirect-fire, automatic, and explosive weapons
- The entire “kill chain” to deliver fires on target, from observation to targeting to the judicious application of high explosive
- Command decision-making and ensuring an effective, resilient command and communication concept for one’s forces
- The role of unmanned systems, electronic warfare, and cognitive influences on the battlefield

When in doubt, the intent is always to allow players freedom of action. Remember that “possible” and “smart” are not synonyms; wherever possible, players should feel free to bend, reinterpret, or break rules in service of their goals in playing, whether for entertainment or education.

1.2. What is Down Range not?

Down Range is intended to be quick to pick up, reasonably fast to play, and abstract enough to be interesting.

Players are not expected to understand the mechanics of wave propagation in order to be aware that activating a radio to communicate is potentially dangerous - the rules are there to get them to that realization based on their troops being mortared due to an electronic warfare unit locating them because of it.

Many of the mechanics seasoned wargamers may be familiar with, like hit points, skills, special abilities, etc. are not present in Down Range. A design goal was to reduce the amount of recordkeeping required - apart from reference cards if needed, players should be able to understand the complete state of the game by looking at the play space itself.

More specifically, Down Range is *not*:

- An exhaustive introduction to modern military theory. The themes, concepts, and trends of 21st-century war are what Down Range focuses on.
- Exactly to scale. Distances are compressed to allow players to have an interesting engagement with a reasonable amount of space.
- A role-playing game. Individual characters and units can die at any time, instantly, and without saving throws, hit points, or other protections. You are either in the fight, or you’re not.
- Intended to handle regiment and above operations. Down Range is squarely focused on the tactical level of war as experienced by small unit leaders.

2.1. Core concepts

2.1.1. Dice

Dice in Down Range come in four types:





- Four-sided dice (). The side with the numbers on the “base” or bottom of each side is the result.
- Six-sided dice (). The side that lands face-up is the result.
- Eight-sided dice (). The side that lands face-up is the result.
- Ten-sided dice (). The side that lands face-up is the result. Note that the “0” indicates a result of 10, not 0.



Figure 2-1: The types of dice used. From left to right, this is a four-sided die with a result of 4, a six-sided die with a result of 6, a 4-sided die with a result of 4, and a 10-sided die with a result of 3. Note that colors may differ.

2.1.2. Measurements

All measurements are given in inches on the playing area. The scale of Down Range is abstract - some movement speeds, weapon ranges, etc. are deliberately shortened in order to let players explore the use of different weapons and tactics without requiring a huge playing area.




2.1.3. Units

A unit in Down Range is anything that can act independently - troops, crewed vehicles, and unmanned systems.

There are two types of units:

- **Troop units:** These represent human beings.
- **Vehicle units:** These represent anything else.

Units have three basic statistics:

-  **Movement:** How fast the unit can move. This is given in inches.
-  **Skill:** How capable the unit is at accomplishing tasks. This is given in terms of a dice the unit rolls to try things.
-  **Defense:** How capable the unit is of avoiding or lessening damage. This is given as either a set of dice or a static number.

2.1.4. Success and failure

Every action in Down Range has its success or failure determined in one of three ways:

- An automatic success.
- A dice roll against a target number.
- One dice roll against another.

In the latter two cases, success occurs when the dice roll is equal to or greater than the target number or roll - it’s “**meet or beat**” in all cases.

2.1.4.1. Automatic failures

A roll of all ones, on any roll, is an **Automatic Failure** - whatever a player was attempting to do, they fail. The shot doesn’t land, the explosive fails to detonate, or the surgery kills the patient.

2.1.5. Advantages and disadvantages

Certain weapons, capabilities, and conditions can give units an 🎲 **Advantage** or 🎲 **Disadvantage**.

- 🎲 **Advantage:** Whenever a unit rolls its 🎲 **Skill**, the player rolls the 🎲 **Skill** dice twice and uses the **higher** result.
- 🎲 **Disadvantage:** Whenever a unit rolls its 🎲 **Skill**, the player rolls the 🎲 **Skill** dice twice and uses the **lower** result.

These don't stack, and any number of advantages and disadvantages cancel each other out completely. For example, two advantages mean the same as one; twenty disadvantages and one advantage cancel out to have no effect at all.

2.2. Rounds and turns

A **Round** is one complete set of **Turns**, one per each player. On a player's turn, they activate each of their units, handling all of the forces they control before the next player takes their turn.

2.2.1. Initiative

At the start of each round, every player rolls a 🎲 10. The player who rolls the highest goes first, then the next-highest-rolling player, and so on. Ties should be resolved by a method the players agree on before starting the game.

Players may wish to use an alternate method for determining initiative. The most recommended way to do this is to determine initiative per group of units, for example per squad, allowing units from both sides to act in quick succession.

2.2.2. Unit actions

On a player's turn, each of the units they control get one ➡ **Movement** and one 🎲 **Action**. The unit can take these in any order, if at all - units can act then move, move then act, just act, just move, or do nothing at all.

Some weapons or abilities require 🎲 **Focusing**. To 🎲 **Focus**, a unit must give up any other movement and actions, staying still and concentrating completely on making the Focused action.

2.2.2.1. Assisting other units

Troop units can 🎲 **Focus** to aid another unit in a context where it makes sense, like operating crew-served weapons, assisting in medical treatment, and other tasks where an extra pair of hands can help.

2.2.2.2. Reactions

A unit may elect not to take an action on its turn, instead saving that action as a 🎲 **Reaction**. This allows the action to be used at any point until the controlling player's next turn. This can be done only once per unit, and can't be saved up over multiple turns. The exact nature of the action does not need to be declared in advance until the 🎲 **Reaction** is triggered.

Marking this with a token is recommended for ease of remembering.



Figure 2-2: An example of a reaction token

If the 🎲 **Reaction** is in response to an enemy action, the 🎲 **Reaction** occurs first before adjudicating the results of the triggering action.

2.3. Movement

A unit can ➡ **Move** in any direction up to the number of inches in its ➡ **Movement** statistic. The type of movement depends on the vehicle or troop type: infantry can't suddenly fly; aircraft are unable to swim underwater, and so on.

2.3.1. Impaired movement

Some conditions cost twice as much to move through. These conditions include:

- Traveling through deep snow or mud.
- Swimming through water.
- Climbing up or down surfaces (for troops on foot).
- Moving up steep inclines.

- Vehicles designed for roads moving off-road.
- Troops crawling or dragging themselves to stay behind cover.

Certain types of terrain are completely impossible to move through for some unit types. Infantry may be able to move through thick jungle at half speed, for example, but tanks may not be able to move through it at all.

Certain types of units may be able to ignore the ➡ **Movement** penalty associated with certain terrain types. For example:

- Tracked vehicles ignore penalties for moving through mud or off-road conditions.
- Troops with skis or snowshoes ignore penalties for moving through deep snow.

Example 2.1: Impaired movement

Alice decides she wants to move her infantryman through a mud pit. The infantryman has a ➡ **Movement** of 8". The mud pit is 2" away from where the infantryman starts.



Moving him to the edge of the mud pit costs 2" of ➡ **Movement**, but when he begins to slog through the mud, his speed is cut in half. He's already used up 2" of his 8 ➡ **Movement**, so he can only move $\frac{6}{2} = 3$ " through the mud for the rest of his turn.

Troops can carry each other - one troop unit can carry one other troop unit (even dead ones) at half speed. Neither unit can use its equipment, weapons, or take any other ⚙ **Action**.

Vehicle units can carry or tow other units, whether troops or vehicles, with no additional restrictions. Use common sense - a small warehouse forklift can probably not push a tank, but one tank could perhaps push another disabled tank out of an ambush area.

2.3.1.1. Sprinting

Troop units, but not vehicles, can sacrifice their ⚙ **Action** for a turn to ➡ **Move** twice, subject to all the same rules as normal movement.

2.4. Actions

Actions are usually, but not always, used to make attacks. An action involves a unit using one of its weapons, equipment items, or special abilities to produce an effect or hit a target.

Attacks follow this sequence of steps:

1. **Check visibility:** Can the attacker see the target and hit it?
2. **Check range:** Is the target in range of the weapon?
3. **Check difficulty:** Does the result of the unit's ⚙ **Skill** roll meet or beat the ⚙ **Difficulty** of the weapon?
4. **Check damage:** Does the ★ **Damage** of the weapon meet or beat the 🛡 **Defense** of the target?

2.4.1. Checking visibility

Units must be able to see a target in order to attack it. If players can reasonably draw a straight, uninterrupted line from the eyes or sensors of the attacking unit to the target, the unit has **Line Of Sight** and can continue making an attack.

2.4.1.1. Cover and concealment

2.4.1.1.1. Cover

Cover is anything that can completely stop the weapon from getting through. This depends on the

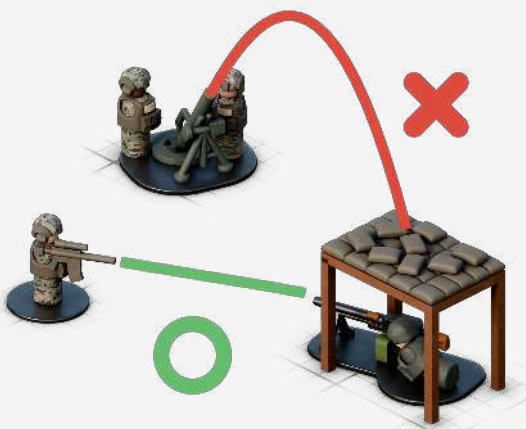
weapon - a concrete wall is good cover from a rifle round, but may not stop a tank round. Cover will block line of sight and prevent units from making attacks against the covered target.

Example 2.2: Cover

Bob's infantry are moving to assault Carl's machine gun position. The position is well-entrenched, with substantial overhead cover. However, it's exposed from the sides.

The machine gun nest has cover from any overhead attacks - mortars, air strikes, grenade launcher attacks, etc.

However, Bob's infantry are free to fire at the machine gunners inside the position due to the lack of cover for direct fire.



Note that the mortar-men may still be able to target a point in front of or behind the machine gun position, and still produce effects on it due to the area of effect of their weapon.

2.4.1.1.2. Concealment

Concealment is anything that obscures the sight of a target, even if it can't physically stop the weapon. There are two types:

- **Total Concealment** completely obscures the target. This blocks line of sight, and an attack cannot be made through total concealment. This includes pitch-black, total darkness - most often this only occurs beneath dense foliage or indoors.

- **Partial Concealment** obscures enough of the target to make an attack, but not enough to make the target impossible to hit. Attacks can be made against a target that's partially concealed, but the attacker gets a 🚩 **Disadvantage** to their 🧠 **Skill** for the attempt. This includes partial darkness, typically outdoors at night.

Use common sense for concealment, in the context of the scenario. A soldier hiding behind a bush in a forest may have total concealment; enemies will find it difficult to locate him. A soldier hiding behind a single bush in the middle of the desert will not be concealed - there's only one place he can be and enemies can simply target the bush, knowing they'll hit the soldier in doing so.

Use common sense for which types of sensors may ignore concealment created by darkness. For example, standard image intensification night vision may ignore partial concealment from darkness, but not total concealment. Thermal sensors may allow units to ignore even total concealment from darkness, but "stop" at the first object in their way - units behind windows, even if they would be visible in daytime, cannot be detected easily by thermal optics.

Example 2.3: Concealment



Dave's fireteam conceals themselves from overhead observation using camouflage netting and local vegetation.



Ellie's helicopter overhead will be unable to fire at them directly, but if they are spotted, the netting will do nothing to provide them cover.



The team leader pops a smoke grenade to avoid observation by an enemy machine gun team, creating a cloud of smoke that billows out. The team can cross the gap in partial concealment, giving the machine gun team off to the right a 🚩 **Disadvantage** to hit them.

It's not total concealment, as the enemy can reasonably guess that the smoke is intended to cover an advance and that troops will be crossing somewhere in the billowing smoke.




It's theoretically possible to have cover that provides no concealment - bulletproof glass, theoretical force fields, etc. Use common sense in adjudicating this. If concealment is so small or sparse that it doesn't meaningfully offer any sort of obscuration, treat it as not having any effect. A soldier hiding behind a bush in a forest, for example, likely benefits from its concealment; a soldier hiding behind an identical bush that's the only one of its kind in a desert is still able to be targeted if enemies saw him run behind it.

2.5. Checking range

The attacker measures the  **Range** from the attacking unit to the target, using the  **Range** of the weapon. Measure from the muzzle or tip of the weapon to the closest point of the target. If the target is out of range, the attack can't be made.



For weapons with an explosive  **Radius**, an attack can be made even if the center of the blast can't reach the target, as long as the range plus the blast  **Radius** will include any part of the target.

2.5.1. Attacking flying units

Any unit attempting to attack a  **Flying** unit with a weapon that doesn't have the  **Anti-Air** property must make the attack at a  **Disadvantage**, regardless of any advantages it may also have.

2.6. Rolling for skill

If the target is visible and in range, the attacker then rolls their 🎲 **Skill** rating, applying any 🟢 **Advantage** or 🔴 **Disadvantage**.

This  **Skill** roll must equal or beat the  **Difficulty** of the weapon, which is a static value indicates in the weapon's statistics.

This determines whether the weapon physically hits the target. Some factors can give the attacker an 🍀 **Advantage** or 🚩 **Disadvantage**, depending on the situation.






2.6.1. Attack advantages

- The target is stationary, having not moved on its most recent turn.
- The attacker is ambushing an unaware target.

2.6.2. Attack disadvantages

- The attacker is not trained on the weapon it's using to make the attack.
- The attacker can't see well due to poor illumination.

Example 2.4: Attacks

Henry's rifleman takes aim at an enemy soldier in the open. His rifle has a  **Difficulty** of 3, and he has a  **Skill** of  6 . Rolling his  6 , he gets a 5. This meets or beats the  **Difficulty**, and the shot lands.



On his next turn, Henry's rifleman picks up an anti-tank missile the enemy infantryman dropped, attempting to use it to destroy an enemy tank.

The enemy tank is partially concealed by vegetation, and Henry's rifleman isn't entirely sure how to use the missile.

These factors both give him **Disadvantages**, so he'll have to roll his 🎲 **Skill** twice and take the lower result.

The missile launcher has a 🎲 **Difficulty** of 6. Henry rolls his 🎲 twice, for a 2 and a 6 - unfortunately, he has to take the 2, and the shot misses.

2.6.3. Crew-served weapons

Some weapons are just too difficult to reliably use alone. To counteract this, units can give up their 🎲 **Action** to assist another unit. Both the assisting and the assisted unit must 🎲 **Focus** to do this, remaining still for the turn and taking no other action. For each unit assisting the primary gunner, the primary gunner gets a static +1 to the attack.

The number of assisting units is limited to the number of additional troops that can reasonably help operate the weapon - a mortar team might have one primary gunner with two other crew assisting, but a rifleman won't benefit from assistance at all.

2.6.4. Rolling for damage

If the attack hits, the next step is to roll for 🎲 **Damage** against the target's 🛡️ **Defense**. This is determined entirely by the weapon used.

The attacker rolls the appropriate 🎲 **Damage** dice; if the target has a 🛡️ **Defense** value that has dice, they roll those as well. If the 🎲 **Damage** result is equal to or higher than the 🛡️ **Defense** result, the attack succeeds in killing or destroying the target.

Example 2.5: Combat

In a desperate action, Inigo charges the man who killed his father with a bayonet. With a

🎲 **Skill** result of 5 from his 🎲, and a bayonet 🎲 **Difficulty** of 2, Inigo hits.

The bayonet has a damage of 🎲, and the man has a 🛡️ **Defense** of 5. Inigo rolls a 6, and the attack succeeds in killing the man, who was not prepared to die.

Nearby, Rick the machine gunner sets in his gun and begins laying down fire, without an assistant gunner. The gun has a 🎲 **Difficulty** of 6, and Rick has a 🎲 **Skill** of 🎲, so he's not going to land many shots.

The next turn, Inigo moves to assist Rick in mowing down their enemies. Because he's moved, he can't 🎲 **Focus** to assist Rick this turn.

The next turn, however, Inigo is able to assist him so long as both 🎲 **Focus**, and Rick will roll 🎲 + 1 for 🎲 **Skill** to his attacks.

The sound of combat alerts an enemy unmanned ground vehicle, however, which arrives on the next turn. Facing it with his sniper rifle, Inigo is able to 🎲 **Focus** and successfully hits with a 🎲 roll of 5 against the rifle's 🎲 **Difficulty** of 5. The rifle has a 🎲 **Damage** of 🎲, and the UGV has a 🛡️ **Defense** of 🎲. Inigo rolls a 4 for 🎲 **Damage**, and the UGV rolls a 6 for its 🛡️ **Defense**. The shot may have hit, but it bounces harmlessly off the UGV's armor plating, leaving Inigo's fate uncertain.

2.6.4.1. Weapons vs. armor

Some targets are simply too heavily armored to affect with some weapons.

This is reflected by the type of dice used for 🛡️ **Defense** and 🎲 **Damage**:

- If the 🛡️ **Defense** of a unit is a static number, any weapon can damage it.

- If the **Defense** of a unit has dice, only weapons whose **Damage** have the same or greater number of sides can damage it. The number of dice doesn't matter.

For example, if one has a truck with a **Defense** of 8 8 :

- A rifle with a **Damage** of 6 **can't** damage the truck at all.
- A directed energy weapon with a **Damage** of 4 4 4 **can't** damage the truck at all.
- A machine gun with a **Damage** of 8 **can** damage the truck.
- A missile with a **Damage** of 10 10 **can** damage the truck.

2.6.5. Suppression

Players may wish to keep enemy units suppressed, instead of aiming carefully with an intent to kill. In order to **Suppress** a unit, the attacking unit must meet the following criteria:

- The attacking unit need not be able to see the suppressed unit, but must be able to aim within 6" of it.
- The attacking unit's weapon must be able to damage the suppressed unit; one can't suppress a tank with a pistol, but a tank gun can suppress a pistol-wielding soldier easily enough.
- The target must be within the attack **Radius** of the weapon, or within a 45-degree cone extending from the business end of the weapon out to the weapon's maximum distance.
- If the weapon has a **Fan**, only up to this many units can be suppressed.

If these are met, a unit can forego its attack to instead **Suppress** the target. The unit must still roll its **Skill** as normal, but doesn't need to roll **Damage** - if the attacking unit meets or beats the **Difficulty** of its weapon, the unit is **Suppressed**. Mark this with a token. The sup-

pressed unit will now be at a **Disadvantage** until the start of the suppressing unit's next turn. This applies even if the suppressed unit moves out of the fan on its own turn.

2.7. Non-attack actions

Not all actions are attacks. In any case where an action could plausibly be difficult to accomplish, or where success or failure in it could affect the outcome of the game, players should use the **Skill** of the attempting unit against a static **Difficulty** value. Use Table 2-1 as a guideline for appropriate **Difficulty** values.

2.8. Medicine

Troops that are "dead" for game purposes can be revived by other troops with the appropriate medical equipment that are directly adjacent and **Focusing**. Other medical units may assist as noted in Section 2.2.2.1 on page 6.

Use Table 2-2 to determine the effect of the medical treatment, based on the result of the **Skill** roll.

Once a unit is back in the fight but injured (with **Disadvantage** and moving at half speed), it can't be brought back to full health. A roll of 9 or above will do nothing to it if it's downed again, simply restoring the unit back to its injured but active status. Marking this with a token is advised.

Table 2-1: 🌀 Difficulty ratings

Difficulty	Description	Examples
-	Trivial; no roll is required	Talking, breathing
2	Can easily be done untrained	Driving a car in peacetime, activating pre-placed explosives
3	Can be done untrained	Unaimed fire, operating an already set-up radio
4	Difficult, usually requires training	Aimed rifle fire, applying a tourniquet under stress, vehicle maintenance
5	Complex, requires training	Mortar gunnery, setting up secure communications, aircraft maintenance
6	Highly complex	Basic surgery, long-range fires
8	Requires complex and highly specialized skills	Open-heart surgery, cyberwarfare, getting a travel claim approved
10	Extremely difficult	Landing a plane with no functioning engines, self-surgery, convincing guards you're allowed into the nuclear facility

Repairing vehicles is handled the same way, with mechanically-inclined troops equipped with the right tools.



Figure 2-3: The corpsman (center) is close enough to heal the downed Marine (left), but has already healed the injured Marine (right).

Example 2.6: Medicine

Albert's medic rushes to an injured soldier. On the next turn, the medic can 🇳🇵 **Focus** on the task of reviving the downed man. In this case, the medic is a highly-trained trauma specialist whose medical expertise far outstrips most combatants. As a specialist, the medic rolls a 🟡**8**, resulting in a 6.

As a result, the injured soldier is back in the fight, albeit moving at half speed and with a 🚩 **Disadvantage** to everything he does. The players duly mark this status with a token, and the fight continues.

Table 2-2: Medical results

Roll	Results
1	The target is dead and removed from the play area entirely
2	
3	
4	No effect
5	
6	
7	The target is back in play, but for the rest of the game, it has a 🚚 Disadvantage to do anything, and moves at only half its normal speed. Mark this state with a token.
8	
9	The target is back in play fully with no ill effects
10+	

Moments later, an enemy mortar hits the injured soldier again, and the medic attempts to treat the soldier again. Rolling a 10 this time, the medic is unable to do more than patch up the soldier once more and getting him back in the fight at a disadvantage.

For example, a truck with 🛡️ **Defense** 8 8 that has traveled 16" before impact will take 🚚 **Damage** of 8 8. A person with a 🛡️ **Defense** of 4 falling 8" off a cliff will take 🚚 **Damage** of 8 8.

Use common sense in adjudicating this. A soldier jumping 2" at scale from a helicopter is unlikely to take damage and shouldn't be subjected to a damage roll.

2.9. Environmental damage

2.9.1. Falls and crashes

Fall damage should generally be handled with common sense - a fall that, at scale, would be too high for a human being to survive should kill any units on foot and the occupants of vehicles.

For handling crashing vehicles and other falling objects, the process is simple: For every 10", rounded up, traveled without changing direction before impact, add one dice of the same type as the object's 🛡️ **Defense** to the damage, minimum 6.

For objects with a numeric 🛡️ **Defense**, use 8.





2.9.2. Damaging effects

For areas of persistent hazardous effect, like radiation, poison gas, etc. players should decide on a good 🚚 **Damage** value for it, and then apply it once per turn to any unit that's both vulnerable to it naturally and lacks proper protective equipment.





Some effects may not be lethal, and are instead merely disabling. Players may want to rule that these effects may slow any affected unit's movement and prevent it from taking actions (or at putting it at a 🚚 **Disadvantage**) during turns in

which the effect's  **Damage** has overtaken its own  **Defense**.

Use Table 2-3 as a reference for common (and not-so-common) dangerous effects.

Table 2-3: Dangerous effects		
Type		Notes
Tear gas		Disabling
Mustard gas		Lethal
Nerve gas		Lethal

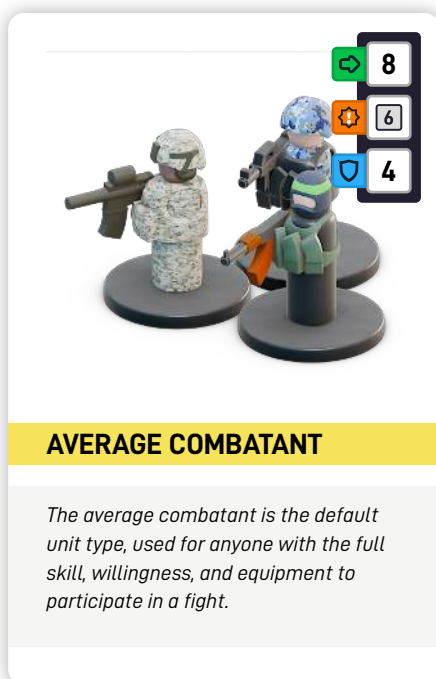
2.9.3. Fire

For each flaming object on a turn, roll  . Any flammable object within the resulting distance will catch on fire too, and will take the  damage automatically. Units that are on fire will continue to incur  damage per turn until extinguished. Troop units may extinguish themselves by  **Focusing** for a turn on stopping, dropping, and rolling.

Chapter 3

UNITS AND EQUIPMENT

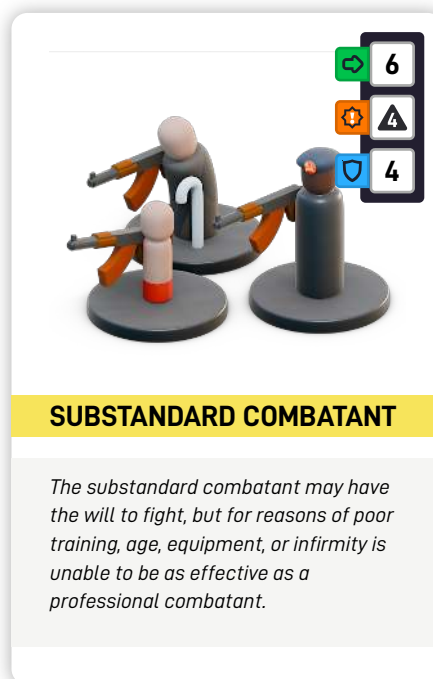
3.1. Basic units



Most troops in Down Range have the same basic statistics. If in doubt, use the “average combatant” statistics to represent most military members.

This type of unit is also appropriate for trained paramilitaries, hardened insurgents, and other professionals who are trained and/or experienced in combat techniques. Even if a soldier’s primary duty is not direct front-line combat, they are still likely to be average combatants.

Players should be wary of creating individual combatants whose statistics exceed the average combatant statistics. Even the best-trained soldier is still subject to human limitations, and even exceptional skill and training are likely to regress to a mean in the inevitable chaos of combat.



The substandard combatant unit type is appropriate for representing members of slapdash militias, poorly-trained conscripts, child soldiers, armed mobs, and the like.

Generally, substandard combatants may be motivated, well-equipped, or willing to die for their cause, but lack the technical acumen, coordination, or discipline to do things like utilize cover well, take well-aimed shots, or conduct maneuvers that require timing or precision.

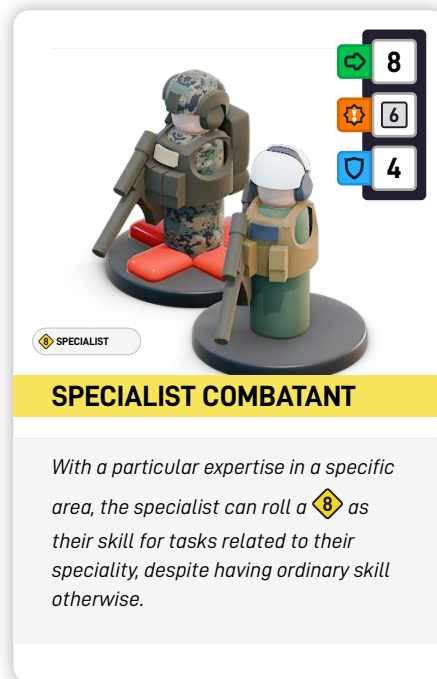
This does not make them useless - a savvy commander may employ substandard combatants to exhaust the enemy, conduct reconnaissance, or free up professional troops for more demanding duties.



For those whose actions when bullets start flying are likely to be limited to immediate self-preservation, and who lack the ability to meaningfully contribute to combat efforts, use the non-combatant statistics. This can be used to represent scared and wholly untrained civilians, as well as young children, the very elderly, and those too ill or infirm to fight even in self-defense.




Note that this does not necessarily align with “non-combatant” status as defined in international law - doctors, clergymen, children, and the like may well be considered average or substandard combatants in Down Range based on their abilities, training, and inclination (whether willing or not) to fight.

No special game penalties are applied for targeting non-combatants. When using Down Range in an educational setting, players should consider the larger operational and political effects of such an action, however, and exercise judicious use of force accordingly. Depending on the force they’re playing as, players are also advised to make creative use of non-combatants to further their objectives.





Some troops have an unusual level of training and experience in a particular task or tasks. These troops are similar to the “average combatant” statistics, but have a higher level of skill in their specialty.

Players should be sparing about designating a unit as a specialist combatant; this designation should reflect genuine expertise or significant additional training, not merely assignment to a particular military specialty or branch. For example:

- A soldier trained in basic first aid is not a specialist in medicine. A medic or corpsman with extensive additional training and access to specialized medical equipment, however, might be.
- A generic special operations soldier may be considered a specialist in relevant skills, using a  for  **Skill** in close-quarters marksmanship or negotiating book deals. However, they’ll still use a  for most tasks outside their very narrow area of unusual expertise.

3.2. Weapons

The following sections present weapons that players can use to equip their forces, starting with small arms and then introducing special rules for machine guns, explosives, and artillery.

Note that weapons with a  **Focus** icon mean that the operators of the weapon must  **Focus** to use it - if they move during the turn, they cannot fire that weapon.

3.2.1. Limited ammunition




Most explosives have a limited  **Ammunition** - if the statistics for a weapon indicate  **Ammunition**, then it may only be used that number of times. If not specified, the weapon may be used indefinitely. The ammunition is consumed regardless of whether the attack is successful or not. Players may wish to mark units that are out of ammunition with a token.




Figure 3-1: An example of a “no ammunition” token

3.2.2. Small arms

Small arms have no special rules associated with them. A list of sample small arms is presented in Table 3-1. Note that sniper rifles must have a unit  **Focus** to use effectively.




3.2.3. Automatic weapons




Automatic weapons allow a unit to make multiple attacks per turn, against the same or multiple targets. This is handled by giving each weapon a  **Fan** of fire. This is a static number indicating the number of attacks the weapon allows.

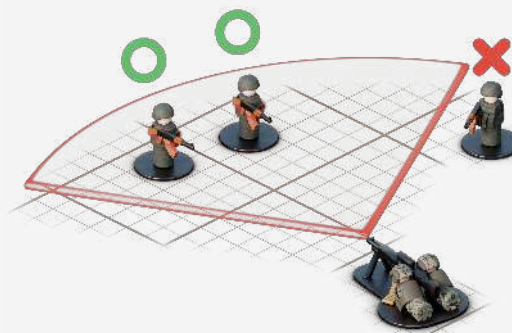
These attacks need to all be within a 45-degree cone of each other - a unit can't attack one target in front of it and another behind it, for example, in the same turn. When in doubt, use your index and middle fingers, spread apart, as the cone.


Each shot is resolved in turn; players cannot combine the damage from multiple shots on one target.

Example 3.1: Automatic weapons


An M240 gun team takes aim. In this example, one target is outside the gun's  **Fan**, but two are within it and will have the gun team's  **Skill** and the gun's  **Damage** rolled against them individually.

The operators have set in their gun, and both are  **Focusing**, giving the gunner a total  **Skill** of  + 1 to hit.



The team may instead elect to simply suppress their targets - if the gunner can meet or beat the gun's difficulty, the two targets within his fan are suppressed, and will suffer a  **Disadvantage** to any roll until the gunner's next turn.

3.2.4. Explosives

Explosives operate in a  **Radius** - all targets, enemy or friendly alike, within the radius of a successful hit are affected. Players may attempt to target a point in space, not a unit, to maximize casualties.


The player making the attack makes only one  **Skill** roll for it - but for each target in the radius



















































































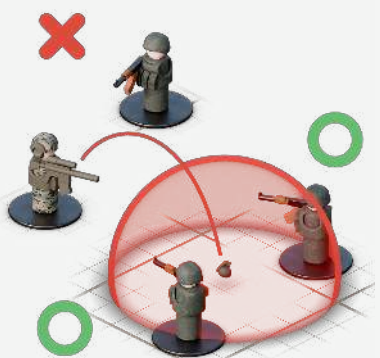
Table 3-1: Small arms					
Type					
Pistol		8	3		
M4/M16		36	3		
QBZ series		36	3		
AK series		28	3		
type_81		28	3		
M7		36	4		
M110/other DMR		48	4		
Sniper rifle		64	5		
Unarmed combat		1	2		
Automatic weapons					
M249 SAW		36	4		2
QBB LMG		36	4		2
RPK		28	4		4
M240		48	5		4
QJ series GPMG		48	5		6
PKM / Type 80		32	5		6
M2 .50 cal		64	5		8
QJ series HMG		56	6		8
Autocannon		64	6	 	4

Table 3-2: Explosive weapons

Type						
Hand grenade		8	3	4		1
Underbarrel grenade launcher		24	3	4		
Mk19		64	5	4		
QLZ series grenade launcher		48	4	6		
QLU-11		56	4	4		
120mm tank gun		72	6	2	   	
AT-4		36	4	6		1
Carl Gustaf / MAAWS		38	4	2	 	4
RPG-7 and variants		36	3	8		1
MANPAD 		48	5	5	 	1
Top-attack antitank weapon		48	5	2	  +3	1
Artillery and mortars						
60mm mortar		72	5	6	 	
81/82mm mortar		96	6	9	  	
120mm mortar		-1	7	12	   	
Tube artillery		-1	8	10	    	
MLRS		-1	8	16	     	1

Example 3.2: Explosives



Bob's infantryman lobs a hand grenade at Carl's team. Bob chooses a point that catches 2 of Carl's infantrymen in the blast. Rolling a 10 for 5 damage, two of Carl's infantrymen are downed by the attack.

of an attack, a separate **Damage** roll is made to reflect differing patterns of fragmentation and overpressure.

Explosives are single-use only - track their expenditure using tokens placed next to units on the play area, if needed.

Explosives can damage anything in their blast **Radius**. Players can damage or kill their own units if they're not careful about where they're using explosives.

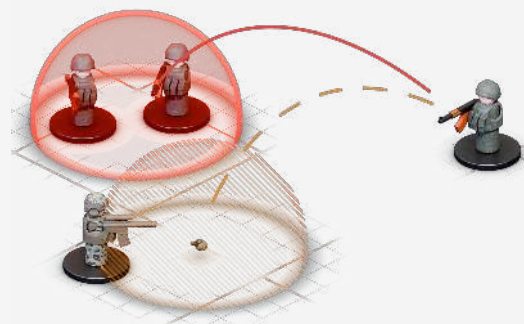
3.2.4.1. Missing explosive attacks

Explosives are, by their nature, imprecise, and will still have an effect even if they miss.

If an explosive attack misses:

1. Place a token on the attacker's intended point of impact.
2. Divide the blast **Radius** of the weapon by 2, then multiply by the number **Skill** roll missed the target by. This is the miss radius.
3. The player who had the most targets in the intended blast radius gets to pick a point for where it lands instead. This point has to be within the miss radius, in inches, from the intended point of impact.
4. From here, roll damage and resolve the attack as normal.

Example 3.3: Missing explosives



Ivan the unlucky conscript attempts to lob a hand grenade at Carl's Marine. Being a substandard combatant, Ivan has a **Skill** of only 4, and rolls a 1 on the attempt. This is an **Automatic Failure**.

Since the hand grenade has a **Difficulty** of 2 and a **Radius** of 3, the miss radius is $\left(\frac{4}{2}\right) \times (3 - 1) = 4$ inches.

Carl had the most units - one - caught in the blast initially, so he gets to decide where the grenade lands. He picks a point 3 that handily catches two of Ivan's comrades in the blast.

3.2.4.2. Explosive variants

Many types of explosive launchers can use multiple payloads. While listing all of these is impossible, use the following list as a general guide:

- **High explosive** is the standard option - a target location is marked, and the resulting skill and damage rolls proceed as usual.
- **Smoke** does no damage, but creates a cloud equal in radius to twice the usual damage radius. This cloud lasts until the same player who created it ends their *emph{next}* turn, and completely blocks line of sight for all units in or through the cloud.
- **Illumination** does no damage, but removes the effects of darkness for all units within the smoke radius (twice the damage radius). This effect lasts until the end of the *next* turn of the player who created it.
- **IR illumination** is the same as illumination, but removing the effectness of darkness only applies to units equipped with night-vision devices.

3.2.5. Artillery and mortars

Artillery with an indefinite range (indicated by the ∞ symbol) can cover the entire play area by default. For unusually large games, players are encouraged to use whatever range value is appropriate for their goals.

By default, players should use the same rules to handle air strikes from fixed-wing aircraft, especially jets; the speed of these platforms means that handling them as units on the map is impractical, and countermeasures against them are outside the scope of the small unit focus of Down Range.

Naval gunfire from a ship “off the map” can be handled in the same manner.

Like other explosive weapons, artillery and mortars are subject to the same miss rules.

3.3. Equipment

Table 3-3 contains common equipment that players can equip their units with.

Players should exercise common sense to determine when a unit is overburdened with equipment and can’t feasibly carry any more. Generally speaking, this should be judged based on a reasonable real-world carrying capacity. If a unit is








carrying weight that it theoretically can carry, but that exceeds its normal capacity, players should generally consider the unit’s  **Movement** as being halved and apply a  **Disadvantage** to any actions it attempts to take.

Table 3-3: Common equipment

Type	Effect
NVGs	Unit ignores all  Disadvantage due to darkness
Body armor	Unit has +1  Defense
Radio	Target can  Signal other units. (See Section 5.1 on page 25)
White light	Unit ignores all  Disadvantage due to darkness when activated, but attacks against it get an  Advantage .

Chapter 4

VEHICLES

In most respects, vehicles are handled the same ways as troop units.

Vehicles require one primary 🧑 **Crew** - in almost all cases, this is the pilot or driver of the vehicle. If a vehicle doesn't have an active, living operator actively controlling it, it doesn't move. Aircraft will crash, ground vehicles will sit in place, and so on.

On the primary operator's turn, the primary operator can ➡ **Move** the vehicle up to the maximum ➡ **Movement** rating of the vehicle, just like troop units. The primary operator can use their ⚙️ **Action** to operate one weapon or equipment item controllable from where they're at in the vehicle.

This is subject to common sense and the design of the vehicle. An attack helicopter pilot is able to operate anything mounted on the vehicle, for example, but the pilot of a transport helicopter is not going to be able to operate a swivel-mounted machine gun intended to be operated by the crew chief.

An exhaustive list of all types of vehicles would be impossible, so generic sample vehicles are presented in Table 4-1 on page 24 as a starting point for players to create their own.

4.1. Vehicle crews

A vehicle can have multiple crew members. As long as they're performing a function, they can't ➡ **Move**, and must stay at their controls and perform ⚙️ **Actions**. These actions can include:

- Using a vehicle on a weapon to make an attack. Every weapon can only be used once in a turn. On a tank, for example, the tank commander can use a top-mounted machine gun, the driver can

control a remote weapons station, and the gunner can use the main gun, but the player can't use each crewman to fire the main gun three times.

- Assisting another crew member, if applicable, using the same rules for crew-served weapons described in Section 2.6.3 on page 10.

4.2. Vehicle weapons

Many vehicles have weapons that are designed and intended to be operated linked together: twin guns on a fighter aircraft, a multiple rocket pod on an attack helicopter, and so on.

These weapons can be used together to make an attack as part of a single ⚙️ **Action**, as long as all of them:

- Are of the same type
- Are being used by the same operator
- Are being fired at the same target

Use common sense to determine the firing arc of weapons - turreted weapons can generally traverse at least 180 degrees, and weapons fixed in place will generally require the entire vehicle to reorient. In Down Range, you should assume vehicles can reorient freely unless unusually constricted terrain is in play.

4.3. Carrying passengers

Some vehicles can carry 🧑 **Passengers**. Troop units can get on or off a vehicle as part of normal movement, as long as they're doing so through the means that the vehicle was designed to easily take on passengers. Boarding trucks, getting in cars, or jumping off landed helicopters costs nothing extra.

Once units get on board a vehicle, take them off the playing area. When they get back out, they start their movement from the hatch, door, or ramp they would reasonably leave the vehicle from.

Non-standard means of getting on or off vehicles requires a unit to 🟡 **Focus**, not moving or taking 🟡 **Actions** otherwise. If getting out, place them next to the appropriate door, ramp, or hatch. The vehicle must remain still for this to occur.

All crew and passengers of a vehicle (or a “vehicle” that consist of multiple infantrymen grouped together as a gun team in one token) are considered to be killed if the vehicle is destroyed, unless they had 🟡 **Reaction** ready to bail before the attack was declared.

4.3.1. Attacking passengers and crew

For most vehicles that completely enclose their occupants, attacks cannot be made on the crew and passengers directly, and must attack the vehicle as a whole. For vehicles in which occupants are exposed, attacks may be directed at specific occupants. Any passenger riding in a compartment exposed to the exterior - truck beds, opened hatches, etc. - may be attacked, albeit at a 🟡 **Disadvantage**. For vehicles that expose the entire passenger, such as motorcycles, attacks may be made without any 🟡 **Disadvantage**.

4.3.2. Overloading passenger capacity

Vehicles can carry more passengers than they were intended to, subject to what they can reasonably take and player agreement. Infantry might hitch a ride on a passing tank, for example, but players may rule that this makes the tank unable to use all its weapons or move as fast as it normally would, in order to avoid dislodging its passengers. When in doubt, halve the ➡ **Movement** of the vehicle and apply a 🟡 **Disadvantage** to any actions it takes.

Use the rules for nonstandard embarking/disembarking of vehicles if a vehicle is overcrowded internally.

Example 4.1: Carrying passengers

Sam’s team of four troops boards a landed helicopter. The helicopter is intended to carry up to six troops. The team is able to move to the helicopter and board it without any special actions.

Once they’re at the target, the team leaves the helicopter by fast-roping. This is *not* a standard means of easily getting on or off a vehicle, so the team will need to 🟡 **Focus** on getting out. Once they rope off, the team will be placed on the playing area next to each other, and next to the end of the rope they came in on. The helicopter will need to remain still, hovering in place, in order for this to be completed successfully.

4.4. Unmanned vehicles

For totally autonomous vehicles, the unit itself will have a 🟡 **Skill** and behave identically to any other unit representing an individual person.

To operate a remotely-piloted vehicle (RPV), a unit must 🟡 **Focus** and ⚡ **Signal** (see Section 5.1 on page 25), and may then move the RPV up to the RPV’s maximum ➡ **Move** range for every turn that they maintain their 🟡 **Focus** and continue to ⚡ **Signal**.

RPVs that are armed may make attacks using the operator’s 🟡 **Skill**, as long as they are currently being controlled.

It’s possible to combine both autonomous and remote control for many platforms - for example, most unmanned aerial systems must be operated manually, but can enter an autonomous mode to return to their launch location if they lose contact with their operator. Assuming UAS will do this is likely a safe bet for most players.

Table 4-1: Example vehicles

Type			Weapons			Mobility
Motorcycle	36	1	None			No off-road
Civilian car	36	1	None		3	No off-road
Military truck	40	2	Machine gun		12	Off-road
Light tactical vehicle	40	2	Machine gun/ grenade launcher		4	Off-road
Amphibious vehicle	24	3	Machine gun/ grenade launcher	 	8	Off-road; $\frac{1}{2}$ speed in water
Armored reconnaissance/ IFV/AFV	36	3	Autocannon	  	3	Off-road
Light tank	30	4	Tank gun	  	0	Tracked
Tank	24	4	Tank gun	   	0	Tracked
Self-propelled artillery	24	4	Artillery gun	  	0	Tracked
Attack helicopter	∞	2	Autocannon, rockets	  	0	Aerial
Transport helicopter	∞	2	Machine guns	  	12	Aerial
Tilt-rotor	∞	2	Machine guns	  	20	Aerial
Small UAS	48	0	Grenade, laser designator	3	0	Aerial
Combat UAS	∞	0	Rockets, laser designator		0	Aerial
Loitering munitions	64	0	Explosive payload	3	0	Aerial
Rigid hull inflatable boat	24	2		6	0	Water only
Speedboat	30	2		12	0	Water only

COMMAND AND SIGNAL

5.1. Signals

Modern communications open up possibilities, but also create risks. Units equipped with radios can ⚡ **Signal** as their 🛠️ **Action** in a turn. Place a token on the unit **Signaling** to indicate that it's **Signaled**. This token is removed at the start of the same player's next turn.



Figure 5-1: An example of an emission token

Any unit with a radio can ⚡ **Signal** to provide either **situational awareness** or **fires observation**:

- **Situational awareness:** A radio-using unit can use its 🛠️ **Action** to communicate to all other friendly units with radios, allowing them to target any unit the radio-using unit can see. The other units still need to be able to plausibly hit the target with their weapons (usually indirect fire weapons), but no longer require line of sight.

- **Fires observation:** A radio-using unit can use its 🛠️ **Action** to provide detailed observation of a single point or enemy target unit, giving all friendly units an 🎯 **Advantage** to any attack against the targeted unit or point until this unit's next turn. Place a token on the targeted unit or point to indicate this.

5.1.1. Voice communication

Units with a radio can automatically communicate to any friendly unit within their own ➡️ **Movement** distance, without **Signaling** any further. This simulates shouting, speaking, or communications using local communication devices that are difficult to intercept. This occurs throughout a chain of units so long as they're within their ➡️ **Move** distance of each other.

5.1.2. Electronic warfare

Units equipped with specialized electronic warfare (EW) equipment can do everything ordinary radio-using units can do, or use their 🛠️ **Action** to perform one of the following:


- **Signals intelligence:** An EW unit can use its 🛠️ **Action** to analyze radio signatures in the area. This allows the EW unit to “see” any unit that has a ⚡ **Signal** token next to it. This action


Example 5.1: Signals



In this situation, the lone scout ahead of the rest can signal back. The receiving unit with a radio will automatically pass on the information to the mortarmen and the machine gunners within his own movement radius, but the heavy machine gun team further afield is too far away to receive the information.



Example 5.2: Advanced signals




Steve the forward observer uses his  **Action** to call in a situation report. This allows any friendly unit with a radio to see what Steve sees, including an enemy platoon in the open.

Dave the platoon commander, with a radio of his own, receives Steve's report. Dave can now use his M203 grenade launcher to target the enemy platoon if it's in range, even though he can't see it. While most of Dave's platoon is in his  **Movement** distance of 8 and can thus also attack the enemy platoon if they have a suitable weapon, Dave has one squad further away.


The closest member of that squad is within 8 of one of Dave's platoon members that can hear him directly, and so the rest of the squad can get the information passed to them automatically via word of mouth.

The two scouts Dave sent ahead, however, are more than 8 away from the rest of the platoon, and thus don't learn about the enemy platoon.




does not make the EW unit  **Signal** however, as part of the same action, the unit can choose to  **Signal** for free and let every friendly unit with a radio know what they've picked up, similar to normal radio communication.


- **Jamming:** An EW can use its  **Action** to  **Signal** and jam any enemy radio users within 36. This means the enemy cannot use their own radios to provide situational awareness or fires observation. However, enemy EW units can still perform signals intelligence or jamming actions of their own. Enemy unmanned systems that are remotely controlled will also not operate within a jamming  **Radius**: flying ones will crash, and ground unmanned systems will stop moving and taking actions.

5.2. Command





Units designated as **Commanders** can use their  **Action** to produce a number of special effects.


5.2.1. Enhanced initiative



The most senior commander a player controls can use their  **Action** in a turn to grant the player an additional  to roll for **Initiative** on the next round. This is added to the usual  roll result,

allowing the player to roll a total of  to determine **Initiative**.





5.2.2. Main efforts

One per turn, a **Commander** can use an  **Action** to designate one of their subordinate units as the  **Main Effort**. This gives that unit a  **Advantage** to its  **Skill** for the remainder of the turn.

If the subordinate unit is outside voice communication range, the **Commander** will need to use a radio to  **Signal** for this.

If that unit is a **Commander** itself, the subordinate **Commander** can use their  **Action** to pass on the effect to all their subordinate units within their own  **Movement** rating, identical to the rules for voice communication. (See Section 5.1.1 on page 25.)

Example 5.3: Main efforts

Dave the platoon commander uses his  **Action** to designate one of his squad leaders, Tim, as the main effort. Tim, in turn, uses his  **Action** to pass on the effect to his squad members within 8. On all their  **Skill** rolls, they will get an  **Advantage**.

Chapter 6

IN-DEPTH EXAMPLE

This section aims to provide a start-to-finish example of a simple Down Range scenario, showcasing many different aspects of the rules.

Note that all through this example, distances are displayed smaller than they would be in real life to allow for depicting the scenario in the limited space available on the page.

6.1. Friendly forces

For this example, we follow the exploits of a small group of Marines. Consisting of one MAAWS gunner, a two-man mortar team with their NCO, and a corpsman, the group has made their way to the location in question on a UTV, with the MAAWS gunner riding tenuously in the back cargo area, the group's Black Hornet UAS tucked in his pack.

Thanks to this precarious transportation decision, players have agreed the UTV is only able to move at half-speed when anyone is in the cargo area.



Figure 6-1: Friendly forces used in this example.

At the outset, the Marine player rolls his **10** for initiative, resulting in a 5 to the other player's 3. This allows the Marine player to go first.

6.2. Friendly turn: Preparing for combat

Deciding to scope out the area, the Marines set up - the mortar team creates a firing position, while the MAAWS gunner assists in filling sandbags around the mortar position to provide a degree of cover. The players agree that the sandbags provide both cover and concealment, although not total - enemies will have a **Disadvantage** to hitting the protected Marines with direct-fire weapons and indirect-fire weapons that land anywhere but head-on.

The sergeant in charge, however, decides to risk the emissions associated with remotely piloting a UAV in contested territory. The player places an emission token next to the sergeant, following the rules in Section 4.4 on page 23, and allows the Black Hornet to enter the field from directly adjacent to the sergeant.



Figure 6-2: Deploying reconnaissance

The Black Hornet, beginning its turn immediately after the sergeant, is able to move up to its maximum **Move** of 24". Moving over a hill (depicted by players on their sand table, appropriately, with a mound of dirt), the UAS immediately sights an enemy squad, some of its members loitering out-

side its ZBL-09 infantry fighting vehicle. The squad is about 30" away from the Marines, and about 15" from the UAS.



Figure 6-3: Encountering the enemy

Importantly, the sergeant piloting the UAS realizes that the group loitering outside includes a PLANMC officer, likely to be in charge of the whole group. The enemy has already noticed the Black Hornet overhead, alerting them to the Marines' presence nearby - but With the mortar team already set in, the opportunity is ripe to establish an ambush.

The MAAWS gunner and corpsman set in behind nearby cover, while the sergeant, unable to move thanks to using his 🟡 **Focus** to pilot the UAS, remains in place. The mortar team stays in place, too, allowing them to be ready to fire at a moment's notice.

Thankfully, the enemy doesn't have any electronic warfare specialists with them, or the location of the Marines would be pinpointed immediately on the enemy's turn, thanks to the sergeant emitting.

6.3. Enemy turn: Reacting to contact

Realizing there's a Marine presence in the area, the enemy player realizes he had best establish a foot-mobile screen of infantry for his IFV. Because the troops are dismounting through the rear hatch as designed, both the ground troops and the IFV can move at full speed and require no 🟡 **Focus**.

The IFV deploys its full passenger complement. Each individual soldier rushes out, using part of their maximum move of 8" to form a semi-circular screen around the IFV. The officer, mirroring the actions of the Marine sergeant, decides to forgo

moving and 🟡 **Focus** to launch his own UAS, which moves off in the direction of the Marines. In the meantime, the ZBL-09 and its screen begin moving toward the last known direction of the Black Hornet sighting.

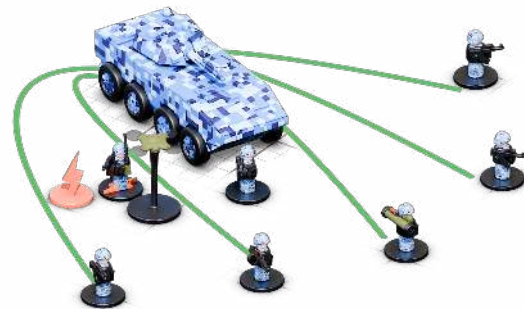


Figure 6-4: The enemy deploys

This round is over. The Marine player again wins the initiative roll, allowing him to go next.

6.4. Friendly turn: Setting the ambush

Observing the enemy deployment through the Black Hornet, the sergeant decides it's time to act. Stopping his ⚡ **Signal** and allowing the UAS to return to him automatically, the sergeant orders the mortar team to fire on the enemy force. Using the process of determining an attack:

6.4.1. Check visibility








Even though the mortar team can't directly see the enemy, they can still make the attack, as the sergeant was able to remotely observe them through the Black Hornet.

The sergeant can pass on this observation without another ⚡ **Signal**, as he is within his ➡ **Move** of 8" to the mortar team and can simply use his voice.

6.4.2. Check range

The leading edge of the enemy is within the mortar's 🟢 **Range** of 72", so the the mortar is easily able to attack the enemy, who are all about 60" away.

Looking to maximize casualties, the player selects a point of impact that will catch five of the enemy

troops in the mortar's 12"  **Radius**. The ZBL-09 is within the radius, but because the mortar's  **Damage** is  8  and the IFV's  **Defense** is  10  , it can't be affected.

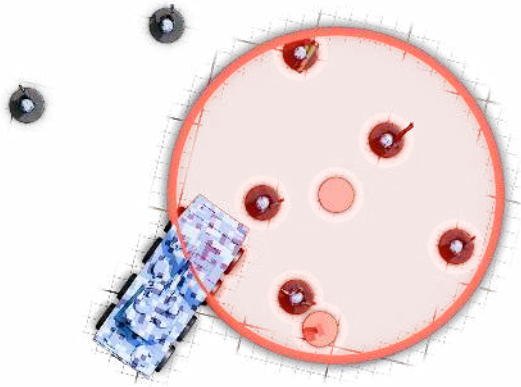













Figure 6-5: Mortar shot placement

6.4.3. Check difficulty

The assistant mortar operator  **Focuses** to give the gunner a better chance of hitting, adding +1 and allowing the gunner to make a  **Skill** roll of  6 +1. The mortar has a  **Difficulty** of 5, making this a difficult but not impossible shot.



The player rolls a 4 on the dice - adding the +1, this becomes 5, meeting the mortar's  **Difficulty**. While the player could elect to suppress the enemy instead, giving them a  **Disadvantage** on all their rolls for the next turn, this time the player is looking for lethality.

6.4.4. Check damage

Each enemy soldier has a  **Defense** of 5 - the basic 4 for being an average combatant, and an additional 1 point of  **Defense** for wearing body armor. Caught in the blast are the officer, an automatic rifleman, an anti-tank missileman, and two riflemen. The mortar has a  **Damage** of  8 .

Rolling for each, the player rolls a 4 for the officer, a 4 for the automatic rifleman, a 3 for the anti-tank gunner, and a 16 for the other two. As a result, the two unlucky rifleman are killed instantly, and the players upend their tokens on the board.

If they keep moving, the enemy will likely be close enough - and over the hill enough - to be seen and

targeted directly. The mortar gunners, having both had to  **Focus**, can't move. The sergeant and corpsman reposition to allow for a better vantage point, off to the side of the likely approach, and ready a  **Reaction**.







The MAAWS gunner moves his full  **Move** of 8" to take up a position on the side of the likely avenue of approach of the ZBL-09, readying a  **Reaction** to fire when the ZBL-09 comes in range.








Figure 6-6: State of the scenario currently


6.5. Enemy turn: Contact

The enemy moves closer to the Marines, and as they crest the next hill, the opposing forces make contact, with every unit in range of every other. As it has the best firepower by far, the officer uses his  **Action** to designate the ZBL-09 his  **Main Effort**.

The MAAWS gunner then uses his  **Reaction** to fire on the ZBL-09 - but with a  **Skill** roll of 1, he automatically fails, and the rocket sails off harmlessly.

6.5.1. Automatic fire - the ZBL-09 autocannon

The ZBL-09 traverses its turret, bringing to bear an autocannon with a  **Fan** of 4, a  **Difficulty** of 6, and a  **Damage** of  10  . The focus of this firepower is the Marine mortar team.

The ZBL-09 has an  **Advantage**, however, the partial cover afforded by the sandbag emplacement and dug-in mortar location gives

it a 🚩 **Disadvantage**, canceling out the 🏠 **Main Effort** effect.

The UTV is under no such protection, however, and is within the 45-degree cone of fire, and so the ZBL-09 commander elects to fire two shots on the mortar team and two at the UTV. With the gunner inside the ZBL-09 applying his 🎯 **Focus** to the commander's attack for a total 🎯 **Skill** of [6] +1, the attack commences.

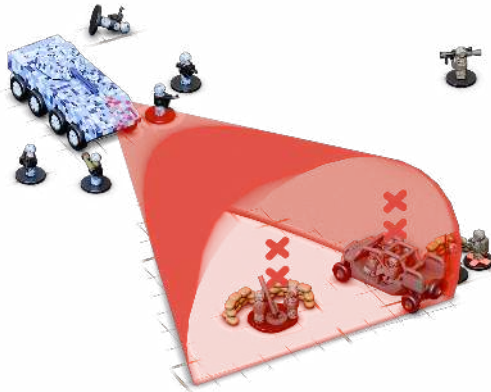


Figure 6-7: Automatic fire targeting, two shots per target

The commander rolls two pairs of dice thanks to the 🎯 **Advantage**: (6, 2) and a (4, 1) for 🎯 **Skill** on the UTV shots. Taking the best of each and adding one, this results in a 7 and a 5. As a result, the ZBL-09 lands one shot on the UTV.

The UTV, with a 🛡️ **Defense** of [6] [6], is helpless, rolling a total of 8 to the ZBL-09's damage roll of 🎲 🎲 that ends in a 12. On the field, a round slams into the UTV and detonates, reducing the vehicle permanently into a heap of twisted metal.

For the first shot on the mortar team, the commander rolls a 2 - even bumped up to 3 by the gunner's assistance, this fails and the shot goes wide. The second roll is a 7, however - hitting even without the extra aid. With a damage roll of 10, it's enough to easily overwhelm the mortar team's 🛡️ **Defense** of 5.

The mortar team is taken out on impact, and the mortar itself is completely destroyed.

6.5.2. Marine reaction

The remaining four enemy infantrymen advance, coming within line-of-sight of the surviving Marine forces. The sergeant uses the 🎯 **Reaction** he had ready to fire on the enemy automatic rifleman with his M4, and rolls a 6 on his 🎯 **Skill** to the carbine's 🎯 **Difficulty** of 3, and a 6 on the [6] damage roll. This meets or beats the automatic rifleman's 🛡️ **Defense** of 5, and he drops like a rock.

The corpsman uses his 🎯 **Reaction** to sprint, dashing up to 8" behind the UTV wreckage, trying to get close to the downed mortar men while also taking cover.

6.5.3. Enemy infantry attacks

The enemy anti-tank missileman, seeing an opportunity to take out two Marines, levels his weapon at the sergeant and the corpsman. He'll be at a 🚩 **Disadvantage** thanks to the partial cover, but elects to engage anyway, especially given that he's within 8" now of his targets.

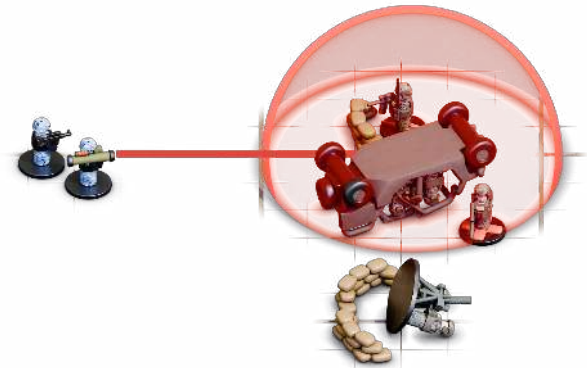


Figure 6-8: The enemy missileman takes aim

Rolling his 🎯 **Skill** of [6] twice, he gets a 6 and a 2, and has to take the 2 due to the 🚩 **Disadvantage**. His weapon has a 🎯 **Difficulty** of 4, and so he's missed by 4. The weapon has a blast radius of 8". Per the rules on explosive misses (see Section 3.2.4.1 on page 20), this allows the Marine player to choose a point $(\frac{8}{2}) \times 2 = 8"$ or less from the original impact point.

Handily, this is within the distance of the missileman and one of his compatriots. Since the Marine

player had the most units in the blast radius, he picks that point.

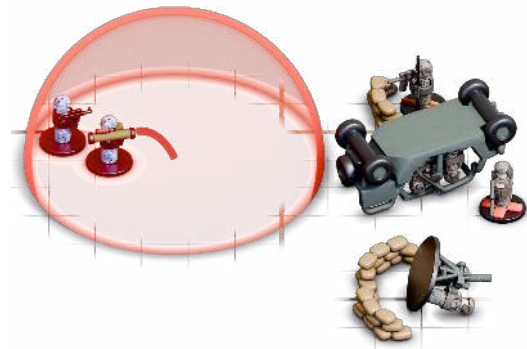


Figure 6-9: The effects of not considering that you're firing an area effect weapon

Rolling the weapon's **Damage** of 10 10 for the missileman, he gets an 8, and for the nearby rifleman he rolls a 7 - enough to take them both out of the fight.

The two remaining enemy infantrymen decide to reenter the ZBL-09, using up their **Move** and having their tokens removed from the board by players. The enemy officer, seeing that the situation is rapidly evolving, does the same.

The Marine player again wins the initiative roll.

6.6. Friendly turn: Holding back the enemy

The sergeant, realizing that the only path to survival is taking out the ZBL-09, uses his **Action** to designate the MAAWS gunner as his **Main Effort**, and moves behind the cover over the wrecked UTV.

The MAAWS gunner, now with the corresponding **Advantage**, rolls two dice for his 6 **Skill**. He's already down to only three **Ammunition** remaining, and uses one more for this.

Getting (6,2), he takes the highest, and the MAAWS shot is successful, impacting the ZBL-09. The IFV has a **Defense** of 10 10, and the MAAWS rocket has a damage of 10 10 too.

The Marine player rolls a 14 for the **Damage**, and the enemy player rolls a 13 - the ZBL-09 explodes into flames, the ammunition inside cooking off and leading to a grisly sight as enemy troops stagger out, burning.

Since no more enemy troops are left, the Marine player may now take as many turns as he likes.

6.6.1. Treating the wounded

The corpsman, seeing that the immediate threat has passed, moves to the downed mortarmen. On the next turn, he'll be able to **Focus** to treat the wounded, and does when the time comes.

As a medical specialist, he can roll 8 for his **Skill** on this roll, and rolls a 6. Using Table 2-2 on page 11, this means that the injured Marine is back up, but will suffer a permanent **Disadvantage** and move at half speed for the remainder of the scenario.

The players duly mark this status with a token, and the sergeant moves to the site of the treatment.

The next turn sees the sergeant **Focus** to assist the corpsman, representing, perhaps, applying pressure dressings and tourniquets while the corpsman conducts more involved care. This assistance bumps the corpsman's **Skill** on the next roll to 8 +1, resulting in a 9 - miraculously, the Marine is restored close enough to full function for the purposes of Down Range.

On the last turn, the sergeant uses his radio to **Signal** and call for extraction, receiving an emission token and hoping that no enemy EW personnel pick up on the transmission.

LEGAL AND CONTACT INFO

7.1. Copyright and license

Down Range is © 2025 Nicholas Royer.



Except where otherwise noted, the content in this publication is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike license.

The terms of this license are available at <https://creativecommons.org/licenses/by-nc-sa/4.0/>.

In short, you are free to share this material in any medium or format, and to remix, transform, or build upon this material, subject to the following restrictions:

- You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
- You may not use the material for commercial purposes.
- If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original.
- You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

7.2. Public domain elements

Elements of this work are in the public domain due to their status as work created in the course

of employment with the U.S. government. For this work, these elements are limited to the following:

The text, but not the graphics, layout, or examples, of:

- Section 2 on page 5 up to but not including Section 2.8 on page 11.
- Section 3 on page 15.
- Section 5 on page 25.

7.3. Disclaimer

The views and opinions presented herein are those of the author and do not necessarily represent the views of any employer, organization, or entity, to include the U.S. Department of Defense. Appearance of or references/links to any commercial products or services does not constitute Department of Defense endorsement of those products or services. Markings, names, and other means of identifying a military force are used in Down Range materials for the purposes of teaching and commentary only and do not imply any endorsement or affiliation.

7.4. Contact

Visit downrangewargame.com to contact the author or learn more.