

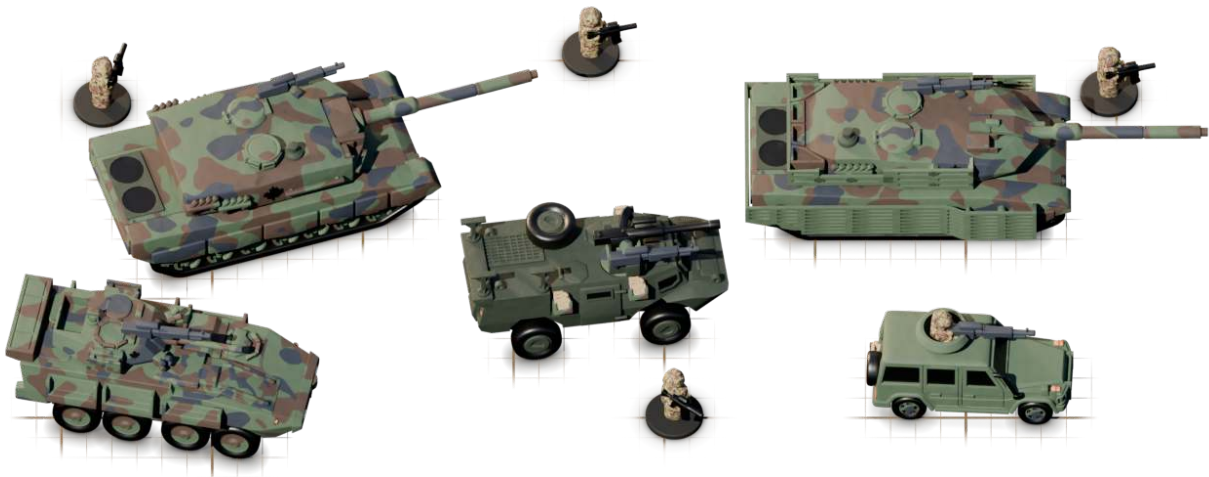
The image features a collection of LEGO Star Wars minifigures. In the foreground, there are several tan-colored tanks with various weapons and details. One tank has a white cross on its turret, another has a black maple leaf. In the background, there are more tanks and a soldier minifigure in a camouflage helmet and uniform, holding a rifle. The scene is set against a red background with a white grid pattern on the ground. The text 'DOWN RANGE' is written in large white letters, with 'ADVANCED ARMOR RULES' below it. To the left of the text is a vertical bar with four colored icons: a green arrow, a purple circle, an orange star, and a red star. To the right of the text is a white silhouette of a tank turret. In the upper right corner, there are several floating LEGO parts, including a tan turret and a tan antenna.

DOWN RANGE

ADVANCED ARMOR RULES

**An optional supplement to
add more depth to vehicular
combat**

INTRODUCTION



1.1. What's this document?

This is a set of optional rules for Down Range that give more depth to vehicle combat. Originally developed at the request of a unit that wanted to support their armor school with more specific wargaming, this module is broad enough for players to integrate into their games even if they're not trying to run a training pipeline for tankers.

You don't need these rules to include vehicles in your Down Range scenarios, and using them will add complexity, bookkeeping, and some extra annoyance to players' experience. Using this module is recommended only if your goals in playing Down Range include the following:

- Training for armored warfare and counter-armor tactics where degrading or disabling specific vehicle systems is a key focus
- Indulging in masochism and/or simply an unnatural fondness for more dice, more recordkeeping, and more numbers

Treat these rules as an *a la carte* menu of additional mechanics. Use only the ones you find useful to

your reason for playing Down Range, and ignore the others. There is no difference between base Down Range units and those using the advanced vehicle rules; all the cards and miniatures you have for the base game still work perfectly.




This module also includes specific rules for a variety of advanced mechanics that are likely to be of interest to those with a focus on vehicular combat, including rules for minefields, vehicle recovery, and so on. These can be used with the base Down Range game without the advanced vehicle rules.

Chapter 2

ADVANCED VEHICLE RULES

The biggest change from the basic Down Range rules that vehicles are no longer treated as monolithic entities that are either fully in the fight or downed completely. Instead, each vehicle is split into three systems, each of which can either be:

-  **Operational**
-  **Degraded,**
-  **Disabled**

The three systems for vehicles are  **Mobility**,  **Firepower**, and  **Control**. A complete table of vehicle statuses per system is provided in Table 2-1 on page 5.

These systems can be either attacked individually, or be damaged as part of a holistic attack on the vehicle.

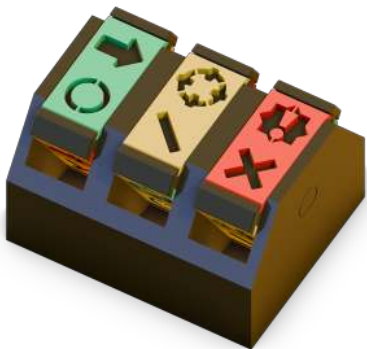






Figure 2-1: Players can use 3D-printed dial trackers or other items if they want to keep track of system statuses. Keeping these next to the unit models is recommended for ease of play, although players should keep in mind that they don't "exist" in-game and cannot be used for cover and concealment.

2.1. Vehicle systems

2.1.1. Mobility

The  **Mobility** of a vehicle represents its ability to  **Move**. It's the sum of all the wheels, tracks, rotors, etc. as well as the power plant and drive train of a vehicle.

2.1.2. Firepower

The  **Firepower** of a vehicle represents its ability to effectively use its weapons systems. This includes everything from the weapons themselves to fire control systems and the crew's ability to use both. This includes any  **EW** systems the vehicle has.

2.1.3. Control





























The  **Control** of a vehicle represents the ability of the crew to coordinate everything effectively. It's more abstract than the other two, but generally can be thought of as the sum of the crew's morale, communication systems, and the integration of all the technical systems.

Table 2-1: Vehicle statuses

 Mobility	
Status	Effect
 Operational	The vehicle can use its full  Move .
 Degraded	The vehicle's  Move is cut in half. Round down to the nearest whole number. The vehicle can no longer move through difficult terrain at all, if that terrain would cut its movement in half under the ordinary rules.
 Disabled	The vehicle can no longer move at all.
 Firepower	
Status	Effect
 Operational	The vehicle makes attacks as normal.
 Degraded	The vehicle makes all attacks at a  Disadvantage .
 Disabled	The vehicle can't make any attacks at all, to include the use of any  EW systems.
 Control	
Status	Effect
 Operational	The vehicle operates normally.
 Degraded	All communication is limited to the vehicle's  Move distance. It can't benefit from being the  Main Effort and can't attack at an  Advantage for any reason. If the unit has a commander inside, the commander can't designate a  Main Effort . Any  EW actions are done at a  Disadvantage .
 Disabled	The vehicle can no longer communicate at all or use any  EW actions. It can't benefit from being the  Main Effort . If the unit has a commander inside, the commander can't designate a  Main Effort . The vehicle makes all actions at a  Disadvantage . All attacks against the vehicle get an  Advantage .

2.2. Damaging vehicles

2.2.1. Holistic damage

For normal attacks not targeting a specific vehicle system, conduct attacks as per the normal rules.

Once **Damage** is rolled, compare it to the result of the **Defense** roll and do the following:

1. If the **Damage** is less than the **Defense**, nothing happens.
2. If the **Damage** is equal to or greater than the **Defense**, set one system of the attacker's choice one step down, whether from **Operational** to **Degraded** or from **Degraded** to **Disabled**.
3. If the **Damage** is twice as much as the **Defense**, the attacker now has two steps to use. They can set an **Operational** system to **Disabled**, set two **Operational** systems to degraded, and so on.
4. If the **Damage** is three times as much, the attacker has three steps to play with, and so on.

If all three systems are disabled, the vehicle as a whole is destroyed and any crew inside are killed.

Example 2.1: Holistic damage



Chuck's Javelin team has landed a shot with against David's T-80, which is currently fully-operational. The Javelin has a **Damage** of

10 **10** +3, and the T-80 has a **Defense** of **10** **10**.

Chuck rolls the damage and gets an 8 and a 9, for a total of 20 damage. David rolls a 4, a 2, and a 1 for his defense, for a total of 6. $\frac{20}{6} = 3.33\dots$, so Chuck has three steps of damage to play with. He decides to reduce the T-80's **Firepower** two steps, rendering it disabled, and reduces the T-80's **Control** one step, rendering it degraded.

2.2.2. Targeting systems

Sometimes, vehicle systems can be attacked individually. The tires of a truck can be shot at from close range; sensor systems on a tank can be targeted by drones, and so on.

Players should exercise their judgment on what can be reasonably targeted, considering factors like how precise the weapon system is to begin with, how close the attacker is, and whether the damage can feasibly be concentrated on a single system. It's probably pretty hard to attach a bicycle with a hand grenade and only hit the wheels, but attacking the propulsion of a ship with naval gunfire and leaving everything else intact is a lot more doable.

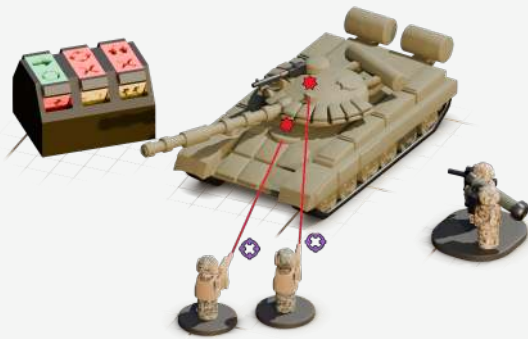
These attacks are executed as per the normal Down Range rules, with two changes:

1. Due to the difficulty of hitting a specific part of a vehicle, all attacks to specific vehicle systems are made at a **Disadvantage**. (Remember that if there's something else that grants an **Advantage** on the same attack, these cancel each other out.)
2. The usual rule about needing a weapon whose **Damage** uses a dice type at least as big as the target's **Defense** does not apply. A rifle doing **6** **Damage** can be used to attack the optics with a tank whose **Defense** is **10** **10** **10**, for example, damaging its **Control**.

The specific system being targeted needs to be visible as per the normal rules, too; for example, a tank in a ditch may not be able to have its mobility targeted due to the ground providing cover to its tracks.

If the attack hits, the rules for damage are the same as for holistic damage above, but limited to the specific system being attacked.

Example 2.2: Targeting systems damage



With David's T-80 rendered unable to fire and its sensors damaged by Chuck's Javelin team, Eric sends his infantrymen in. The four of them have M27 rifles, which do **6** **★ Damage**. With their fire concentrated on the T-80's periscopes and cameras, three of them hit, getting a 6, a 4, and a 3 respectively.

Whether due to poor maintenance or simply bad luck, David's T-80 comes up with another roll of 6 for its **4 Defense**, meaning that one of the rifle shots hits. Due to the targeting of the cameras and periscopes, the resulting effects knock the T-80's **Control** down one more step, rendering the control system completely disabled.

At this point, the T-80 can no longer communicate or attack, can't benefit from **Main Effort** designation, and makes all actions at a disadvantage. Any further attacks against it will be made with an **Advantage**.

2.2.3. Targeting crew

Targeting specific crew members of a vehicle is conducted identically to the normal Down Range rules. The attacker must be able to hit the crew or passengers directly using the intended weapon system, and the attack is made at a **Disadvantage**. A tank commander standing in an open hatch or a truck driver visible through the windshield in an unarmored commercial truck can be targeted directly with rifle fire, for example. The driver of a buttoned-up tank or passengers in the back of a descending helicopter can't.

Example 2.3: Targeting crew

On David's turn, he decides that his T-80 is unlikely to survive another round, and decides to have the tank commander and gunner open their hatches and engage the Javelin team with their pistols. The players agree this is plausible and allow it.

However, Chuck has kept a C6 medium machine gun team ready with a **Reaction**. The gun's **Fan** is 4, and Chuck allocates two shots to each enemy crewman. Since the attack is made at a **Disadvantage**, only one shot each hits. However, the damage of **8** is enough to produce a 6 and a 5 against the enemy crew's **Defense** of 4, and the T-80 turret's interior is handily redecorated with the splattered remnants of its erstwhile operators.

Players should exercise their judgment on what constitutes visibility. Unless Down Range is being played with models that have individual crew, opening hatches, etc., this is a question that requires some imagination. A good rule of thumb is that if the defending player is using crew members to take actions that would require them to be visible from outside (e.g. shooting through an open window), they're visible.

2.3. Vehicle recovery

A vehicle specifically designed to recover other armored vehicles can be used to pull even destroyed vehicles out of harm's way.

A recovery vehicle must spend one full turn completely stationary next to the vehicle it's recovering to attach the appropriate equipment. The recovery vehicle or its crew can take no other actions on that turn. Any passengers are free to act as normal.

Once the recovery equipment is in place, the recovery vehicle moves at half its usual **Move**, rounded down, and moves the downed vehicle with it. Players should determine the position of the downed vehicle with common sense based on the design of the recovery vehicle. If the recovery vehicle tows things, for example, put the downed vehicle behind the recovery vehicle model.

Downed vehicles can be used as cover, and nothing stops players from using recovery vehicles to move other things so long as they agree on what's plausible for their game scenario.

2.3.1. Improved recovery

Vehicles that are not designed as recovery vehicles can try to push other vehicles out of the way. The target vehicle must be friendly; otherwise, treat it as a vehicle crash per the base rules.

The pushing unit must have a **Defense** with at least the same number and type of dice as the target. For example, a truck with a **Defense** of 8 8 cannot push a tank with 10 10 10, and neither can an armored vehicle with a **Defense** of just 10 10.

The pushing unit can use all of its **Move** on a turn to push the other unit up to 8" or the pushing vehicle's **Move**, whichever is less. The movement must be in a straight line.

Only one vehicle can push a given other vehicle in a round.

2.4. Vehicle repair

When using the advanced vehicle rules, repairs are handled differently from the base Down Range game.

Units with a specialty for mechanics and the appropriate tools can **Focus** on their turn, sacrificing their movement and using their action to attempt to repair a single vehicle system.

The repair attempted must be plausible given the situation in the game, taking into account the tools and repair parts available. For example, a tank with a broken track can be repaired if spare links are available, a gun truck can have its fire-power restored if another gun can be salvaged from a downed vehicle, and a vehicle with a malfunctioning computer system can be fixed with a sufficiently capable software expert.

To execute the repair, the specialist picks the system they want to repair and rolls their specialty **Skill** of 8, applying any advantages and disadvantages or extra +1 values from adjacent mechanic units **Focusing** to assist. (Common disadvantages include working on a moving vehicle or being suppressed by enemy fire.)

- If the system is **Disabled**, the **Difficulty** is 7.
- If the system is **Degraded**, the **Difficulty** is 5.

On a success, the vehicle system's status improves by one step: **Disabled** systems become **Degraded**, and **Degraded** systems become fully **Operational** again.

A given vehicle can only have one step worth of repair performed on it per turn, regardless of how many mechanics are available.

Chapter 3

TARGETING STRUCTURES

Occasionally, players may want to target a structure, instead of troops inside. Structures may also be caught in the blast of sufficiently powerful vehicle weapons that they themselves might be damaged.

To handle this, treat a weapon attack as normal as far as aiming goes and making the attacker's **Skill** roll.

If a structure has multiple stories, the attacker must declare which story they intend to attack. Handle larger structures where one attack can't plausibly hit the entire story with its blast radius with common sense and player agreement.

Use the Table 3-1 of **Defense** values based on the structure's materials.

Table 3-1: Structure defense values	
Material	Defense
Drywall or light wood	10
Default	10 10
Brick, stone, packed earth, or reinforced timber	10 10 10
Concrete	10 10 10
Reinforced concrete	10 10 10 10 10
Buried reinforced concrete	10 10 10 10 10 10

Short of dropping a bunker-buster munition on a portable toilet, it's almost impossible to truly destroy all the materials that go into a building.

As a result, a successful attack against a structure has the following effects:

The targeted floor and all floors above it, if applicable, collapse, creating a field of rubble. This rubble

becomes impassable to vehicles and difficult terrain costing double **Move** to units on foot. Rubble acts as partial cover; units attacking other units in rubble make their attacks at a **Disadvantage**.

If units are caught under a collapsing floor, make one roll equal to the structure's **Defense** rating, as shown in Table 3-1, as **Damage** against every affected unit's **Defense**. The units are killed or destroyed if the damage meets or beats their defense.





For other units more than two stories up, apply the rules for crash damage in the main ruleset. Otherwise, the only effect on units not under the collapsing building is that any unit with a **Reaction** readied has that reaction canceled.





Note that for an explosive weapon, players still choose a point of impact, and the weapon has the normal effects on exposed units outside the building but within the blast radius.

Example 3.1: Attacking structures



Alex's infantry team has barricaded themselves inside the lower story of a two-story concrete building. One of the soldiers has perched in the upper story to act as a lookout.

Boris's tank, noticing the infantry, decides that the most effective means of removing them as a threat is to reduce the building to rubble. The tank gun has a **Difficulty** of 6 and a **Damage** of 10. The tank has a crew of four. Boris decides to make an attack with the gunner, loader, and commander all **Focusing** on gunnery, making the total **Skill** roll $\boxed{6} + 2$.

Boris rolls a 4, making the total result a 6 and succeeding on the shot into the lower floor. The tank round impacts, and Boris rolls for damage, resulting in a total of 18. Since the building is concrete, the  **Defense** is    . Alex rolls a total of 12, and the building collapses under the blast.

The three soldiers underneath all have    damage done to them by the collapsing floor, and the result of 7 kills them outright. Alex's soldier on the top floor survives, but loses the  **Reaction** he had readied.

3.1. Clearing rubble

Players may decide to allow specialist engineer units to mark a clear path through a minefield. To do this, a dismounted engineer specialist, or engineer in an appropriate construction-type vehicle, can use an  **Action** to roll  . The engineer can then clear a patch of rubble up to that many square inches from rubble, making it no longer difficult terrain. If the patch cleared overall is large enough, vehicles can now pass through the field.

Chapter 4

MISCELLANEOUS ADVANCED RULES

4.1. Cope cages

Many armored vehicles in modern combat come equipped with anti-drone cages, intended to provide enough standoff that the explosions from first-person-view drones won't penetrate the hull of the vehicle.

Attacks made by explosive weapons against vehicles mounted with cope cages are made at a 🛡️ **Disadvantage**.

4.2. Mines and obstacles

Distinguished by a general pattern of going off only when something sufficiently heavy and/or metallic rolls over them, anti-tank mines are usually buried in the ground. Their anti-personnel counterparts have no such restriction and often detonate when someone steps on them, regardless of their status as a combatant.

Since many Down Range setups don't have terrain you can bury things in, players can use an area marked out with string, paper, etc. to denote a minefield.

Every turn that a unit with dice in its 🛡️ **Defense** moves through any part of an anti-tank minefield, roll 🎲. On a result of 1, the mine triggers and automatically deals a 🌟 **Damage** of 🎲 🎲 to the vehicle. If a unit remains stationary in a minefield, don't roll the dice until and unless it moves again. Only one minefield roll is done per vehicle per turn.

If using the advanced vehicle rules, treat the damage as holistic damage, with 🌀 **Mobility**, ⚙️ **Control**, and 🔥 **Firepower** systems targeted in that order.

Treat anti-personnel mines similarly, but with no 🛡️ **Defense** restrictions on which units will trigger them. However, anti-personnel mines only have a 🌟 **Damage** of 🎲, and can be safely ignored by any vehicle with a 🛡️ **Defense** that includes at least one 🎲 in its 🛡️ **Defense**.

A vehicle can avoid triggering the mine roll if it moves no more than 4" per turn through the minefield. For units on foot, the threshold is 2".

4.2.1. Mobility obstacles

Treat tank traps, sea wire, etc. as difficult terrain for units on foot, costing double ➡️ **Move**, and restricting vehicle movement to 4" or its own ➡️ **Move**, whichever is less, for the turn in moves through the obstacle.

4.2.2. Clearing and avoiding obstacles

Players may decide to allow specialist engineer units to mark a clear path through a minefield or other obstacle. To do this, a dismounted engineer specialist can use an ⚙️ **Action** to roll 🎲.

The result is the distance it can add to the safe path, starting from the engineer's position; for example, if an engineer unit rolls a 4, players can mark another 4" of safe path on the playing space.

Units following the safe path do not trigger the minefield even if moving at full speed.

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