

DCS-Dismounts Script

Preface



DCS-Dismounts is a lua script library for DCS World missions to easily provide suitable vehicles in a mission to have infantry squads they can deploy and pick back up. This is both a fun project for me, as well as an opportunity to improve DCS missions for myself and the community.

My main idea has been providing vehicles with squads that would be mostly realistic for them, that are of proper size for the vehicle and proper composition for the country. There is also an element of randomness to keep things interesting for DCS pilots and Combined Arms users alike: vehicles may drop a bunch of riflemen that usually won't be a big issue, or it may include one or more MANPADS and/or RPG operator, so you should always assume the worst and adopt good practices for your attack runs.

This initial version already provides these functionalities, with more features I plan/hope to include as I keep updating the script. You can see the list of these on the issues section of the project's Github page, and you can even add suggestions there.

My thanks to:

- Developers of MIST script library, which this script makes use of.
- MBot and Igneous01 for their work on the earlier dismounts script which I've realized existed after starting this one, and used it for guidance/inspiration/straight up nicking bits of code :))
- Eagle Dynamics and 3rd party developers who give us DCS World and its modules so we can enjoy our sim sandbox!

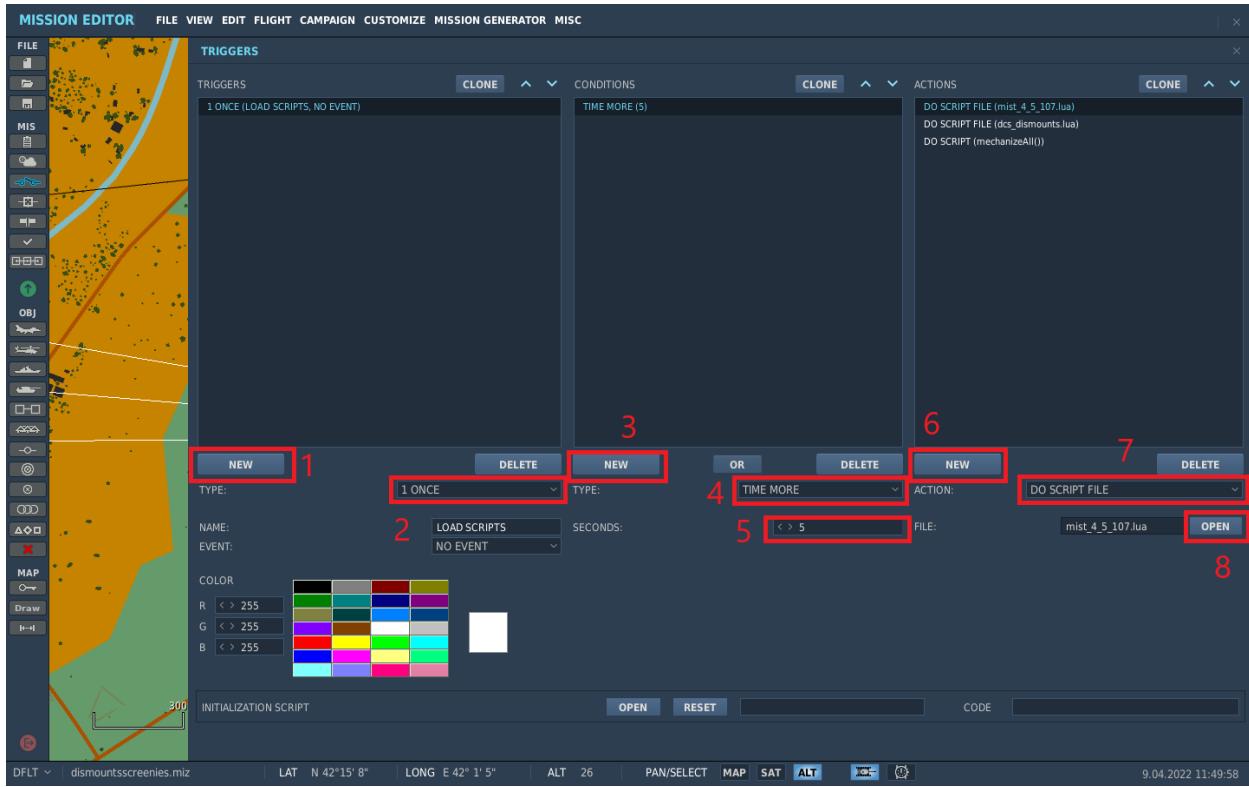
USING DCS-DISMOUNTS

Adding the script to your mission

As said, DCS-Dismounts uses MIST, thus we first need to download and load up MIST into the mission. And then, DCS-Dismounts itself.

To achieve this, you need to add a trigger to load the scripts from files after the mission starts. A good practice is to do this after about 5 seconds into the mission.

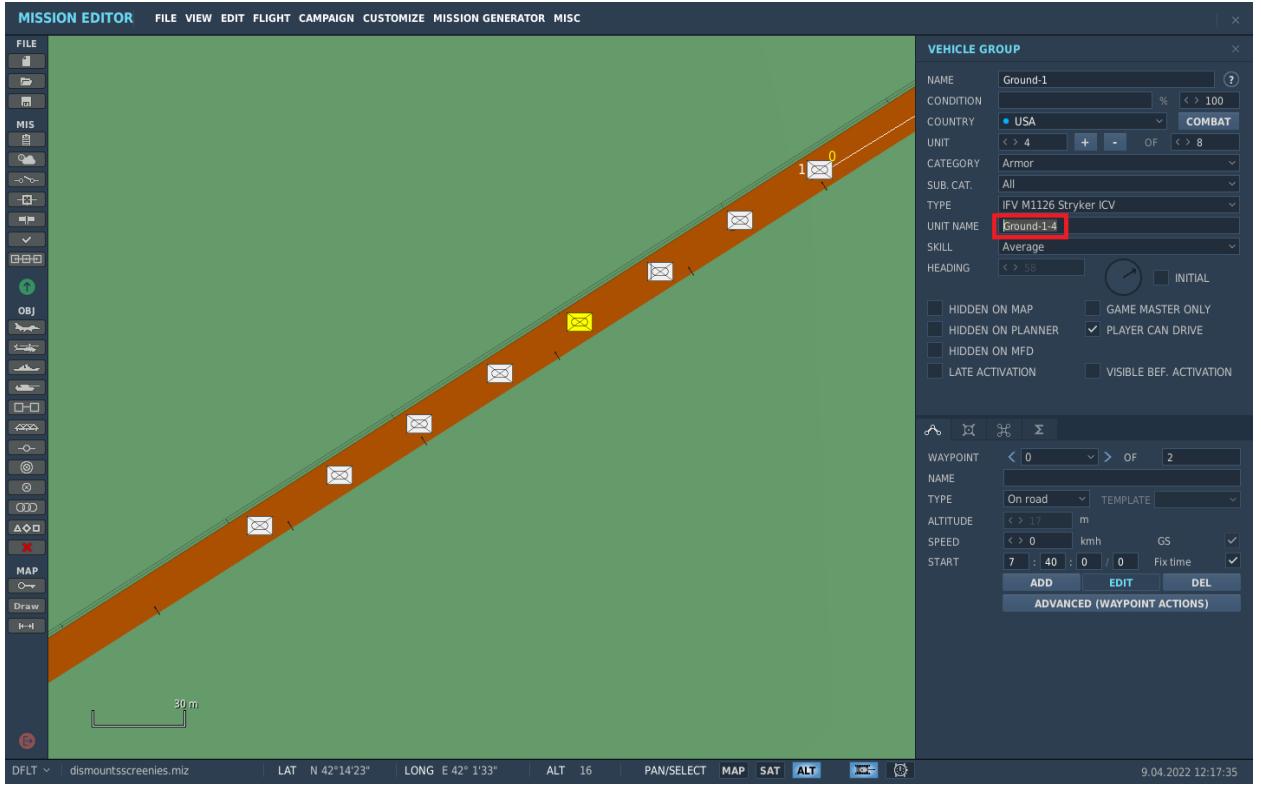
So, go to TRIGGERS, create a new one with type “ONCE”, then create a new condition, choose type “TIME MORE” and set the value to 5, this will make the system wait 5 seconds after mission starts before loading the scripts to ensure things won’t go wonky. Finally, under the actions click “new”, choose “DO SCRIPT FILE”, and click “OPEN” to choose your MIST script. Click “new” under the actions again, and choose “DO SCRIPT FILE” again, and this time choose your dcs_dismounts script. Add one more action, this time choose “DO SCRIPT” instead of do script file. This will give you a text area for the script. Typing there “mechanizeAll()” is enough to have the script working in the mission.



Getting transports to have some squads!

There are 3 main ways to tell the script how to populate vehicles in the mission. In this current version the great majority of post WWII APC and IFVs are supported, except the German TPz Fuchs and Chinese ZBD 04A, both of which I will add soon. Back to the 3 ways of adding dismounts, they are:

- **mechanizeAll()** This one is the automagic way to do it. Script will go through all the ground vehicles in the mission, pick the supported transport vehicles, and assign them a random squad that is available for that vehicle/country combination.
- **determineRandomSquad('hostVehicle')** This does what mechanizeAll() does, but only for one given vehicle. Replace hostVehicle with the unit name for the vehicle as seen in the mission editor.



This way, if you wish, you can have only the specific vehicle(s) you want to have squads in them, rather than all of them in the mission.

- **assignSetSquadTypeToVehicle('hostVehicle', 'squadType')** This one also lets you to add a squad to the specific vehicle(s), but also allows you to specify the type of squad you want. Currently partially implemented, it only works for 7 and 11 passenger capacity vehicles, and certain type of squads, well, I'm sure you know the deal by now, early access and all :P

Currently working options for squadType are:

- rifleWest: Squad of US riflemen
- rifleRu: Squad of Russian riflemen
- rifleIns: Squad of insurgent riflemen
- manpadsWest: Squad of US riflemen including a MANPADS
- manpadsRu: Squad of Russian riflemen including a MANPADS
- manpadsIns: Squad of insurgent riflemen including a MANPADS

Other options I will add are mortarWest, mortarGrg, mortarRu, mortarlIns, rifleGrg, vdv, rpgIns, antiAir, special, specificGroupNameFromMEditor:[groupname]. The last one in particular will let you to use a squad you have created yourself in mission editor to be used as the basis for the squad that will disembark from this vehicle.

Unlike the other two options, using this method you can have a squad of American riflemen come out of a BMP-2, or Russian ones out of a Bradley, if you feel so inclined!

How and when the infantry dismount and re-embark?

Right now it is quite simple: script checks the list of transports every 5 seconds, and see if they have come to a full stop. If they are stopped, the infantry squad spawns next to the vehicle, and starts moving away from it, to a point roughly 20ish meters away.

Similarly, if the vehicle is moving, and its speed is greater than about 10 km/h, the squad will de-materialize and is considered mounted again. If however, the squad was killed before the vehicle moves, they will not spawn when the vehicle stops again. Similarly, if some of the members of the squad were killed, when the vehicle stops again only the surviving ones at the moment of embarking will spawn.

This simple mechanism allows for many meaningful cases:

- In DCS, unless otherwise specified in the editor, when a vehicle column is attacked, they will scatter around and stop, which means they can drop their infantry when attacked, who may have RPGs or MANPADS to aid defending the convoy! When they start moving again, any surviving infantry will be re-embarked for...
- When the final waypoint is reached, the vehicles naturally stop, and thus release their troops at the destination.
- Any Combined Arms player can order vehicles to move/stop, thus can manually get the infantry to dismount/mount.
- Thanks to only mounting after a certain speed is passed, Combined Arms players can also drive the vehicles around slowly to reposition them without despawning the squad.

Later on, I am hoping to add more capabilities like using zones, map markers etc to control the behavior of squads, investigating some possibilities with advanced waypoint actions, giving combined arms players an F10 menu to directly command troops disembarked from the vehicle they are directly controlling etc. However, no ETA for these just yet.

VEHICLES AND SQUAD TYPES

BTR-80, BMP-2

The staple APC and IFV types for eastern militaries, as well as some insurgencies, these vehicles all can support 7 passengers in addition to their crews. Thus, with DCS-Dismounts script, they all have access to the same squads. There is a catch though. If the vehicle's country is "Insurgents" it will only get insurgent squads, if it is "Combined Joint Task Force Red" it will have a %50 chance of getting either Russian or insurgent type squads, and otherwise they will get Russian squads.

The list of available squads are as follows:

- RU Rifle squad: 7 AK-74M riflemen
- RU MANPADS squad: 6 AK-74M riflemen and 1 Igla-S MANPADS
- RU Anti-air squad (immobile): 4 AK-74M riflemen, 2 Igla-S MANPADS, 1 MANPADS command
- INS Rifle squad: 7 AK guys

- INS Squad: 6 AKs and 1 RPG-7
- INS MANPAD: 6 AKs and 1 Igla
- INS Anti-air: 4 AKs, 2 Igla, 1 MANPADS command
- INS RPG: 4 AKs, 3 RPG-7s



BTR-82A, BMP-3, ZBD-04A

These later IFVs aren't as common to find in the hands of insurgencies than the older ones above. However they also have a 7 troop capacity. Thus, they share the same Russian squad types as them, however, they will not get insurgent squads even in CJTF Red.



BMP-1

Another staple, and often named as the first IFV, this old warhorse can actually transport one more passenger than the more modern vehicles above, thus getting similar, but one member larger squads. Same condition applies with regards to the country of the vehicle: Insurgents get insurgent squads, CJTF Red get either insurgent or Russian ones, and otherwise it will be Russian squads.

These squads are:

- RU Rifle squad: 8 AK-74M riflemen
- RU MANPADS squad: 7 AK-74M riflemen and 1 Igla-S MANPADS
- RU Anti-air squad (immobile): 5 AK-74M riflemen, 2 Igla-S MANPADS, 1 MANPADS command
- INS Rifle squad: 8 AK-duddes
- INS Squad: 7 AKs and 1 RPG-7
- INS MANPAD: 6 AKs and 2 Igla
- INS Anti-air (immobile): 4 AKs, 3 Igla, 1 MANPADS commander
- INS Squad RPG: 5 AKs, 3 RPG-7s



MTLB

This perhaps somewhat ungainly vehicle offers relatively little in terms of protection and firepower. Yet, with its mobility and 11 passenger capacity it is also a versatile vehicle that has found favor with the Russian military even after its initial design role of towing artillery pieces went out of the window. Like the other Russian vehicles so far, composition of squads depends on the country chosen in the editor: Insurgents get insurgent squads, CJTF Red gets either Russian or insurgent ones with 50-50 chance, and other red countries get Russian squads.

Available compositions are:

- RU Rifle squad: 11 AK-74M riflemen
- RU squad: 8 AK-74M riflemen, 3 RPG-7s
- RU MANPADS: 10 AK-74M riflemen, 1 Igla-S
- RU RPG + Igla: 8 AK-74M riflemen, 2 RPG-7s, 1 Igla-S
- RU anti-air: 8 AK-74M riflemen, 3 Igla-S
- INS Rifle squad: 11 AKs
- INS squad: 9 AKs, 2 RPG-7s
- INS MANPADS: 9 AKs, 1 RPG-7, 1 Igla
- INS anti-air (immobile): 7 AKs, 3 Igla-S, 1 MANPADS commander
- INS RPG squad: 8 AKs, 3 RPG-7s
- INS RPG+Igla: 8 AKs, 2 RPG-7s, 1 Igla



BMD-1 and BTR-D

These relatively tiny and lightly protected AFVs were designed for airborne and marine infantry's use. Still, BMD-1 can drop 6 troops, while providing the same main armament as a BMP-1 to support them. BTR-D is a later development that, according to some sources, took the troop capacity up to a surprising 10 for a small vehicle, but right now it is implemented with the same 6 troop capacity, pending further research to take it up to 10 in a later update. BTR-D we have is the ATGM carrier version with Konkurs missiles, so this version may not have the full 10 passenger capacity. Composition of dismounts, again, depends on the country: Insurgents get, well... insurgents, surprising, I know. Combined task force Red gets either insurgents or Russian VDV, 50-50 chance, and other countries get VDV.

Possibilities are:

- RU VDV: 3 AKS-74 paratroopers, 3 RPG-7s
- INS squad: 4 AKs, 1 RPG-7, 1 Igla



M2A2 Bradley, Marder II, MCV-80 Warrior

Coming to the western side of things, these are the staple AFVs for USA, Germany, and UK. Similar to their red counterparts, they also provide a 7 passenger capacity, and it is more straightforward here, with the limited options of infantry models we currently have in DCS they will have the same compositions below:

- Rifle squad: 5 M-4s, 2 M-249s
- Rifle squad with MANPADS: 5 M-4s, 1 M-249, 1 Stinger



Stryker ICV

This 8x8 APC/IFV has found favor with the US Army as the ride for its extremely quick response forces, sitting between Hum-vees and Bradleys. With its 9 passenger capacity, Stryker hosts 3 types of squads in the DCS-Dismounts script:

- Rifle squad: 7 M-4 riflemen, 2 M-249 gunners
- Rifle squad with MANPADS: 6 M-4 riflemen, 2 M-249 gunners, 1 Stinger
- Fireteam: 3 M-4 riflemen, 4 M-249 gunners, 2 Stingers



LAV-25

This wheeled IFV brings a powerful 25mm autocannon to support its 6 man strong dismounts.

The two squad types it can get with the script are:

- Rifle squad: 4 M-4 riflemen, 2 M-249 gunners
- Rifle squad with MANPADS: 4 M-4 riflemen, 1 M-249 gunner, 1 Stinger



M113

This old vehicle, also known as Gavin, breadbox, shoebox, etc, is just what comes to many people's minds when they hear APC, and is used all over the world. While its protection and firepower may not be awe-inspiring, 11 men strong squads it can carry distinguishes it from most other western vehicles we have in DCS, bar one, but we'll get to that too. Back to M113 and its squads, which are:

- Rifle squad: 8 M-4 riflemen, 3 M-249 gunners
- Rifle squad with MANPADS: 8 M-4 riflemen, 2 M-249 gunners, 1 Stinger



AAV-7

This odd looking, big, amphibious USMC APC is quite striking as being something else compared to most other vehicles. Armed with a .50 caliber M2 as well as a 40mm automatic grenade launcher, it can carry around a whopping 21 marines with it! To quote some space dwarves: “it’s like she’s bigger on the inside!” Speaking of 21 marines, currently they can come in combinations of:

- Rifle squad: 13 M-4 riflemen, 8 M-249 gunners, much dakka indeed
- Rifle squad with MANPADS: 11 M-4 riflemen, 7 M-249 gunners, 3 Stingers



TPz Fuchs

German 6x6 wheeled amphibious APC with a capacity of 10 passengers. Thus, it provides relatively sizable squads, which are:

- Rifle squad: 8 M-4 riflemen, 2 M-249 gunners
- Rifle squad with MANPADS: 8 M-4 riflemen, 1 M-249 gunner, 1 Stinger



Trucks

Right now, the script works with Russian GAZ-66 and KAMAZ trucks, as well as the American M 939. The way random squad assignment works with trucks is a little different. They are more likely to not get anything assigned to them! Rationale behind this is, they are usually more necessary for logistics, carrying around munitions, rations, supplies, equipment etc. When they do get something though, there are, at least currently, two possibilities: a mortar team, or a rifle squad. The only thing that changes between truck types is going to be the aesthetics of these squads: GAZ and KAMAZ will either get Russian or insurgent riflemen, depending on the country, and M 939 will get US M-4 riflemen.

Later on, I am planning to enable trucks to carry some heavier equipment with setup times, like AA guns and artillery pieces for WWII, as well as eventually enabling a group of UK Land Rover 101FCs to build a Rapier site. But these are going to take a while to come. Current composition of truck dismounts are:

- Mortar team: 2 x 2B11 120mm mortars, 4 riflemen
- Rifle squad: 11 x riflemen

In near future, pending some research, I will try to enable every military truck to carry squads of suitable sizes to their carrying capacities, like it is with APCs and IFVs above. Similarly, WWII trucks, French Pack trucks, and SAM Sites Asset Pack technicals will be supported by script, hopefully sooner than later.

