

## Documentation

# Controlled Spawn & Waypoint Randomizr Script (CSWR)

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## What is this script?

*Controlled Spawn and Waypoint Randomizr (CSWR)* is a simple and limited spawn and waypoints solution where groups of units and ground vehicles will be randomized through marks in your mission, moving among them forever in life.

## Can I use it for multiplayer missions?

Yes, CSWR was mainly built for multiplayer missions such as PvP, Coop/PvE, TvT.

## Can I use it on Hosted and Dedicated servers?

Yes, the script was built for both server types, mainly dedicated ones.

## Can I use it for single-player missions?

Yes.

## Can I spawn only civilians to populate my missions?

Yes and easily. You could spawn just a faction, or two, or all of them. As you wish.

## Is it compatible with ACE?

Yes.

## Is it compatible with content mods like RHS or CUP?

Yes! You can call whatever classnames of units and vehicles in

*fn\_CSWR\_population.sqf* file.

## Can I spawn through CSWR air or nautical vehicles too?

Not tested with nautical vehicles, but for sure it won't work properly if you spawn helicopters or planes through CSWR script.

## Loadout of the spawned faction units are customized?

Yes.

## How to just run the script for a first look?

1. Go to <https://steamcommunity.com/sharedfiles/filedetails/?id=2740912514>
2. Subscribe and wait for Steam to download it;
3. Open Arma 3, go to Multiplayer > Server browser > Host server > click Host Server button;
4. Select "Stratis" map and, after that, select "CONTROLLED SPAWN AND WAYPOINTS RANDOMIZR";
5. Play.

**Important:** if you want to apply this script in your own missions, [check this out](#).

## How to install the script in my own mission? ★★ ★

1. Go to:  
<https://github.com/aldolammel/Arma-3-Controlled-Spawn-And-Waypoints-Randomizr-Script>
2. Download the zip and open it;
3. In zip, find the folder “CSWRandomizr” and copy it to your mission folder root:  
DRIVE:\Users\yourName\Documents\Arma 3\yourProfile\missions\yourMission\
4. In the mission folder root, if you don't have a “description.ext” file, create one and there add the code down below:

```
class cfgFunctions
{
    // CONTROLLED SPAWN AND WAYPOINTS RANDOMIZR
    #include "CSWRandomizr\THY_CSWR_functions.hpp"
};
```

5. Still in your mission folder, open [fn\\_CSWR\\_population.sqf](#) file and perform all customs you need.

## How do I create a faction team?

In Arma 3, factions are built by groups that are built by units (soldiers/people).

In CSWR is the same logic, but we will create all of it through two files that we will see down below:

### 1) Defining the factions to spawn:

Path: `\Your_Mission_Folder\CSWRandomizr\fn_CSWR_spawnAndWaypoints.sqf`

At first, define what faction(s) you wanna spawn in your mission:

```
// PARAMETERS OF EDITOR'S OPTIONS:  
  
CSWR_debug = false;  
CSWR_spawnBlu = true;  
CSWR_spawnOp = true;  
CSWR_spawnInd = false;  
CSWR_spawnCiv = false;  
CSWR_unlimitedFuel = false;  
CSWR_unlimitedAmmo = false;
```

### 2) Defining the group's size and specialties:

Path: `\Your_Mission_Folder\CSWRandomizr\fn_CSWR_population.sqf`

After that, the next step is to define with soldier classes and vehicles that must be part of the faction:

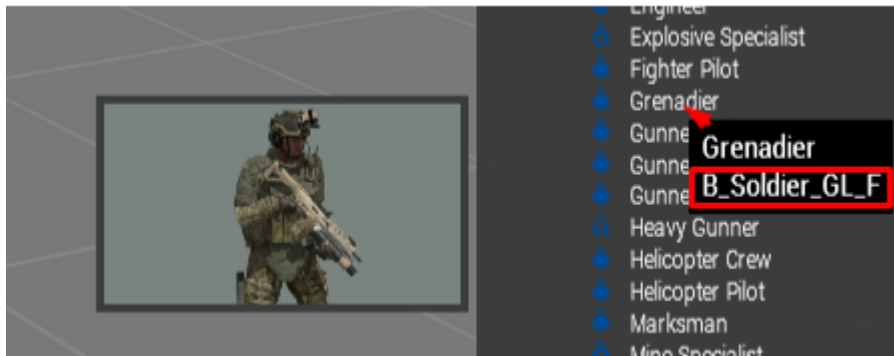
```
// DEFINING GROUPS: BLUFOR  
// Define the number of soldiers and who is who in each type of group.  
  
// Vehicles  
private _bluVehLight = ["B_G_Offroad_01_armed_F"];  
private _bluVehRegular = ["B_MRAP_01_hmg_F"];  
private _bluVehHeavy = ["B_MBT_01_TUSK_F"];  
  
// Soldiers  
private _bluSquadLight = ["B_Soldier_TL_F", "B_Soldier_F"];  
private _bluSquadRegular = ["B_Soldier_TL_F", "B_Soldier_F", "B_Soldier_F", "B_soldier_AR_F"];  
private _bluSquadHeavy = ["B_Soldier_TL_F", "B_Soldier_F", "B_Soldier_F", "B_soldier_AR_F", "B_soldier_M_F", "B_soldier_AT_F"];
```

Use only classnames to build each group of the faction:

THIS IS A CLASSNAME

```
// Soldiers  
private _bluSquadLight = ["B_Soldier_TL_F", "B_Soldier_F"];  
private _bluSquadRegular = ["B_Soldier_TL_F", "B_Soldier_F", "B_Soldier_F", "B_soldier_AR_F"];  
private _bluSquadHeavy = ["B_Soldier_TL_F", "B_Soldier_F", "B_Soldier_F", "B_soldier_AR_F", "B_soldier_M_F", "B_soldier_AT_F"];
```

In Eden Editor, here is how you figure out what soldier classname or vehicle classname you want to, just putting your mouse arrow over the unit/vehicle:



**Important 1:** you can use whatever loaded mod's units by the server. For example, if you wanna use RHS or CUP units in blufor, add the unit's classnames over there.

**Important 2:** You can do the same with vehicles, **although is NOT recommended to create a "vehicle group"** (with more than one vehicle) because Arma AI doesn't work well with vehicle groups when moving through the map.

## How do I define how big must be a faction on the map?

Now, let's request CSWR to spawn the faction [groups already configured](#). In `fn_CSWR_population.sqf` file, search the section "SPAWNING GROUPS" of the faction you want to populate in your mission:

### 1) Each line is a group that will spawn:

Each line represents a group that you wanna spawn right after the match starts. You will see the vehicle groups separated from the soldier's groups just to make it easier.

```
// Soldiers Groups
// [ faction, faction's spawnpoints, faction's squad size, initial squad behaviour ("SAFE", "AWARE", "COMBAT", "CHAOS"), THY_fnc_CSWR_wpGoToAnywhere ] call THY_fnc_CSWR_people;

[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "CHAOS", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "CHAOS", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "COMBAT", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "COMBAT", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadHeavy, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadHeavy, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadHeavy, "AWARE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadHeavy, "AWARE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
```

Don't forget to change (or not) with a specific group you want in each line:

```
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
```

### 2) Increase or decrease the faction size:

Super easy: just add or remove one or more lines in "Spawning Groups" section in the same file.

## How do I manipulate the initial behavior of groups?

CSWR is limited to defining only the **initial behavior** of each faction's group. As the match unfolds, the original Arma 3 AI will make its own decisions. Let's take a look through the possible customizations. Let's check the `fn_CSWR_population.sqf` file.

### 1) Define the group personality:

For example, go to "Spawning Groups: Blufor" section and check it out:

```
// SPAWNING GROUPS: BLUFOR
// Define each group and their features and destination.

// Vehicles Groups
// [ faction, faction's spawnpoints, faction's vehicle size, initial crew behaviour ("SAFE", "AWARE", "COMBAT") ]
[BLUFOR, CSWR_bluSpawnPoints, _bluVehLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_vehicle;
[BLUFOR, CSWR_bluSpawnPoints, _bluVehLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_vehicle;
[BLUFOR, CSWR_bluSpawnPoints, _bluVehRegular, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_vehicle;
[BLUFOR, CSWR_bluSpawnPoints, _bluVehHeavy, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_vehicle;
```

Above, each line represents a group that will spawn, and each group has its initial personality configured. Below, the options you can use for one or more groups, up to you:

#### For people:

"SAFE"	Group starts walking with the guns low, looking around and feeling safe. (More natural, highly recommended for the most)
"AWARE"	Group starts walking but with guns ready, looking around and concerned.
"COMBAT"	Group starts running, ready to fight and keep the formation.
"STEALTH"	Group starts like combat mode, but much more in a cautious manner, moving always along cover.
"CHAOS"	Group starts running, ready to fight and loose the formation.

#### For vehicle:

"SAFE"	Vehicle goes slow, crew feel safe, try to ride only on streets/roads. (More natural, recommended)
"AWARE"	Vehicle goes slow, crew aware, try to ride only on streets/roads.



"COMBAT"	Vehicle gets speed, rides everywhere, keeping the formation.
"STEALTH"	Vehicle as in combat mode, but much more in a cautious manner, where wheeled vehicles will still follow roads if available, but no longer convoy. Tanks will avoid knocking down trees.
"CHAOS"	Vehicle gets speed, rides everywhere, losing the formation.

## 2) Define the group destination on the map:

Another behavior point to set for each group is its destination (waypoints) through the map: [let's check how the waypoints work here](#).

## How do Waypoints work?

In CSWR, there is no end-point, which means after the group spawns, it will move through the map directly to the predefined waypoints, randomly, and can take a break just for a while before to the next waypoint.

Each faction's group configured to spawn can have a different destination (group of waypoints predefined).

### 1) Define how many waypoints will be available:

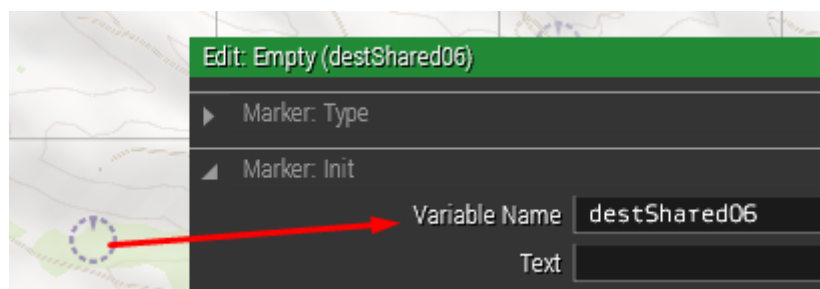
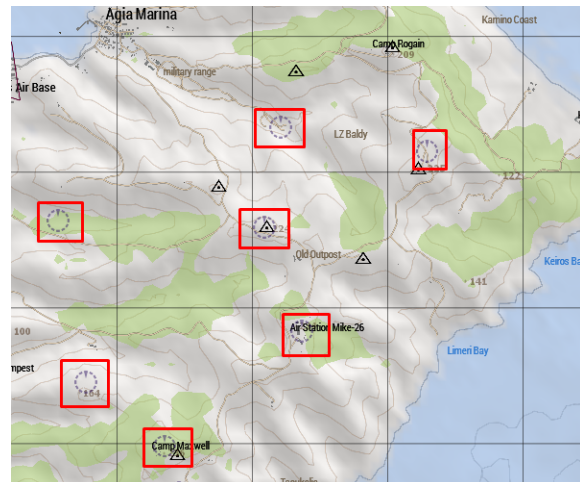
Let's open this file again:

Path: `\Your_Mission_Folder\CSWRandomiz\rfn_CSWR_spawnsAndWaypoints.sqf`

The waypoints are already defined in that file above. The only thing you must do is define them in your mission, so in Eden Editor, drop "Empty" markers on the map and rename each of them:

```
// WAYPOINTS: SHARED
// Define where anyone (including civilian)
// For new destination, add a new "empty marker"

CSWR_destinationShared =
[
    "destShared01",
    "destShared02",
    "destShared03",
    "destShared04",
    "destShared05",
    "destShared06",
    "destShared07",
    "destShared08",
    "destShared09",
    "destShared10"
];
```



To find in Eden Editor “Empty” marker, in the Assets menu, click on “Markers” (F6) and, after that, “System” on the category list. There, you will find out “Empty” marker.

Back to the .sqf file, by default, you have 10 waypoints “destShared” to drop and to name in your mission. Of course, you might add or remove waypoints “destShared” as much as you want, since you don’t forget to sync them between Eden Editor and *fn\_CSWR\_spawnsAndWaypoints.sqf* file.

## 2) Define where each spawned group will move:

Back to the file: *fn\_CSWR\_population.sqf*

```
// Soldiers Groups
// [ faction, faction's spawnpoints, faction's squad size, initial squad behaviour ("SAFE", "AWARE", "COMBAT", "CHAOS"), THY_fnc_CSWR_wpGoToAnywhere ] call THY_fnc_CSWR_people;

[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "CHAOS", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "CHAOS", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "COMBAT", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "COMBAT", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "COMBAT", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
[BLUFOR, CSWR_bluSpawnPoints, _bluSquadLight, "SAFE", THY_fnc_CSWR_wpGoToAnywhere] call THY_fnc_CSWR_people;
```

Particularly, I like to use the same configuration for all combat factions, changing it just for the civilian faction. Let’s check what options you have to change in *fn\_CSWR\_population.sqf*:

<i>THY_fnc_CSWR_wpGoToAnywhere</i>	Group goes to any waypoint. (Highly recommended to be used by armed factions)
<i>THY_fnc_CSWR_wpGoToDestShared</i>	Group goes to where anyone may go, including civilian waypoints. (Highly recommended to be used for civilian faction)
<i>THY_fnc_CSWR_wpGoToDestBlu</i>	Group goes to Blufor special waypoints. (Recommended to be used only by Blufor)
<i>THY_fnc_CSWR_wpGoToDestOp</i>	Group goes to Opfor special waypoints. (Recommended to be used only by Opfor)

<i>THY_fnc_CSWR_wpGoToDestInd</i>	Group goes to Independent special waypoints. (Recommended to be used only by Independent)
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**Important:** NEVER set a waypoint out of the map limits. Arma 3 no recognize positions beyond the map edges.

Can the groups move free, with no waypoints?

No. In CSWR, the idea is the Editor has total control of the areas where the troops should visit.

## How do Spawnpoints work?

In CSWR, the AI will use some predefined points as Spawnpoints, where they will use them randomly only once right before the mission gets started. It can take a while like 1 or 2 minutes, depends how many units CSWR will create for you. Each faction should have its own spawnpoints, never sharing them.

## Define how many spawns will be available:

Let's open the file:

Path: `\Your_Mission_Folder\CSWRandomizr\fn_CSWR_spawnsAndWaypoints.sqf`

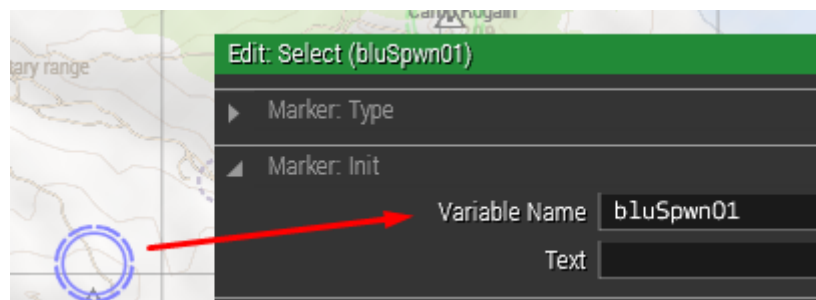
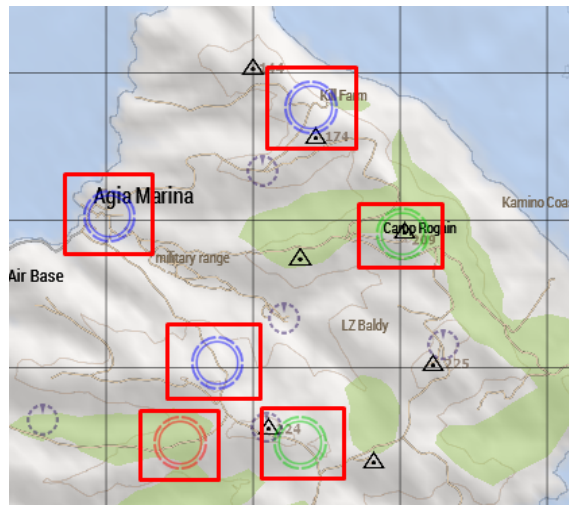
The spawns are already defined in that file above. The only thing you must do is define them in your mission, so in Eden Editor, drop "Select" markers on the map and rename each of them:

On file:

```
// FACTION SPAWNPOINTS:
// Define where each faction in-game
// For new spawnpoints, add a new "em

// BluFor spawnpoints:
if ( CSWR_spawnBlu ) then {
    CSWR_bluSpawnPoints =
    [
        "bluSpwn01",
        "bluSpwn02",
        "bluSpwn03"
    ];
};
```

On Eden:



To find in Eden Editor “Select” marker, in the Assets menu, click on “Markers” (F6) and, after that, “System” on the category list. There, you will find out “Select” marker.

Back to the .sqf file, by default, you have 3 spawnpoints by default for each faction (including Civilian) to drop and to name in your mission. If you don’t wanna spawn civilians and independents through CSWR script, for example, make sure you set those factions as “FALSE” in the file:

```
// PARAMETERS OF EDITOR'S OPTIONS:  
  
CSWR_debug = false;  
CSWR_spawnBlu = true;  
CSWR_spawnOp = true;  
CSWR_spawnInd = false;  
CSWR_spawnCiv = false;  
CSWR_unlimitedFuel = false;  
CSWR_unlimitedAmmo = false;
```

Of course, you might add or remove spawnpoints as much as you want, since you don’t forget to sync them between Eden Editor and *fn\_CSWR\_spawnsAndWaypoints.sqf* file.

## How do I define who the enemy of whom is?

CSWR works with what you have defined through Eden Editor:

1. On Eden main menu, go to Attributes > General;
2. In the “General” window, look for “Misc”:



3. As BluFor and OpFor always are enemies of each other, you only need to define who is the Independent enemy, clicking over the side flag.

## How do I customize the faction army loadout?

With CSWR you can easily customize the **uniform**, the **helmet**, the **goggles**, but I discourage you to change the **vest**, **backpack** and **weaponry** of spawned units because all items originally inside these containers will disappear, including the unit ammo. About the weaponry, keep in mind if you change the primary weapon, for example, you will remove specialized weapons from specific soldier classes such as machine-gunners, marksmen, and crewmen, adding the same gun for everyone in the faction.

## So, what can I really do?

Usually, scripts that generate units dynamically can't manage simple loadout customization such as removing Night Visions Goggles or GPS devices from each spawned unit. Imagine you want to spawn an insurgence faction and suddenly when the night falls you realize those penniless soldiers got Night Visions Goggles. Yeap, Arma 3 adds NVGs automatically to the units at night, but with CSWR you're allowed to remove at once all unwanted items from them.

`fn_CSWR_globalFunctions.sqf` file:

```
case INDEPENDENT: {  
    //_unit unlinkItem "NVGoggles_INDEP";  
    _unit unlinkItem "FirstAidKit";  
    _unit unlinkItem "ItemWatch";  
    _unit unlinkItem "ItemCompass";  
    _unit unlinkItem "ItemRadio";  
    _unit unlinkItem "ItemGPS";  
    _unit unlinkItem "ItemMap";  
    _unit removeWeapon "Binocular";  
};
```

By default, all armed units you spawn with CSWR will get NVGs if the unit class got one by default as well. If you wanna force the CSWR to remove the NVGs from one or more armed factions, **uncomment the line** about it as exemplified above.

Use loadout editing wisely, remembering that anything you add or remove will impact ALL units in that faction.



Can I remove and add things to each unit as much as I want to?

Yes, until you reach the limit weight that a soldier can carry. If there's no more space in their inventory, items start to disappear.

What happens if I change the vest or the backpack?

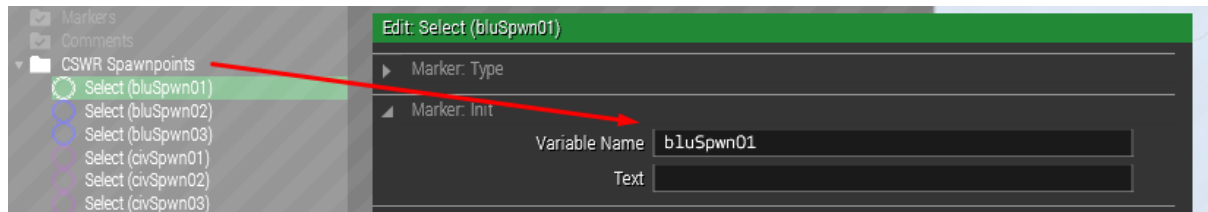
All items originally inside those containers will disappear, making your unit has no ammo, for example. When you run a test, will see your units asking to rearm.

**(Not recommended edition):** Make sure you are adding each magazine after adding the new vest or backpack, for example. If you know what you're really doing, make sure you always remove the backpack (*removeBackpack\_unit*) before adding a new one. Otherwise, the old backpack will be on the spawn floor of your units.

**Important:** if [something is wrong in your loadout changing tests or you want to learn how to see the original unit loadout code, check this out.](#)



If you are facing the same problem, it's because some spawnpoint is missing on map. Make sure all spawnpoints are declared in the `fn_CSWR_spawnsAndWaypoints.sqf` file also are correctly dropped and named on your mission map.



See: if you want to use less than those spawnpoints declared, make sure to comment the spawnpoint line to avoid that weird line problem:

Before:

```
// FACTION SPAWNPOINTS:
// Define where each faction in-
// For new spawnpoints, add a ne

// BluFor spawnpoints:
if ( CSWR_spawnBlu ) then {
    CSWR_bluSpawnPoints =
    [
        "bluSpwn01",
        "bluSpwn02",
        "bluSpwn03"
    ];
};

// OpFor spawnpoints:
if ( CSWR_spawnOp ) then {
    CSWR_opSpawnPoints =
    [
        "opSpwn01",
        "opSpwn02",
        "opSpwn03"
    ];
};

// Independent spawnpoints:
if ( CSWR_spawnInd ) then {
    CSWR_indSpawnPoints =
    [
        "indSpwn01",
        "indSpwn02",
        "indSpwn03"
    ];
};
```

After (solution):

```
// FACTION SPAWNPOINTS:
// Define where each faction in-
// For new spawnpoints, add a new

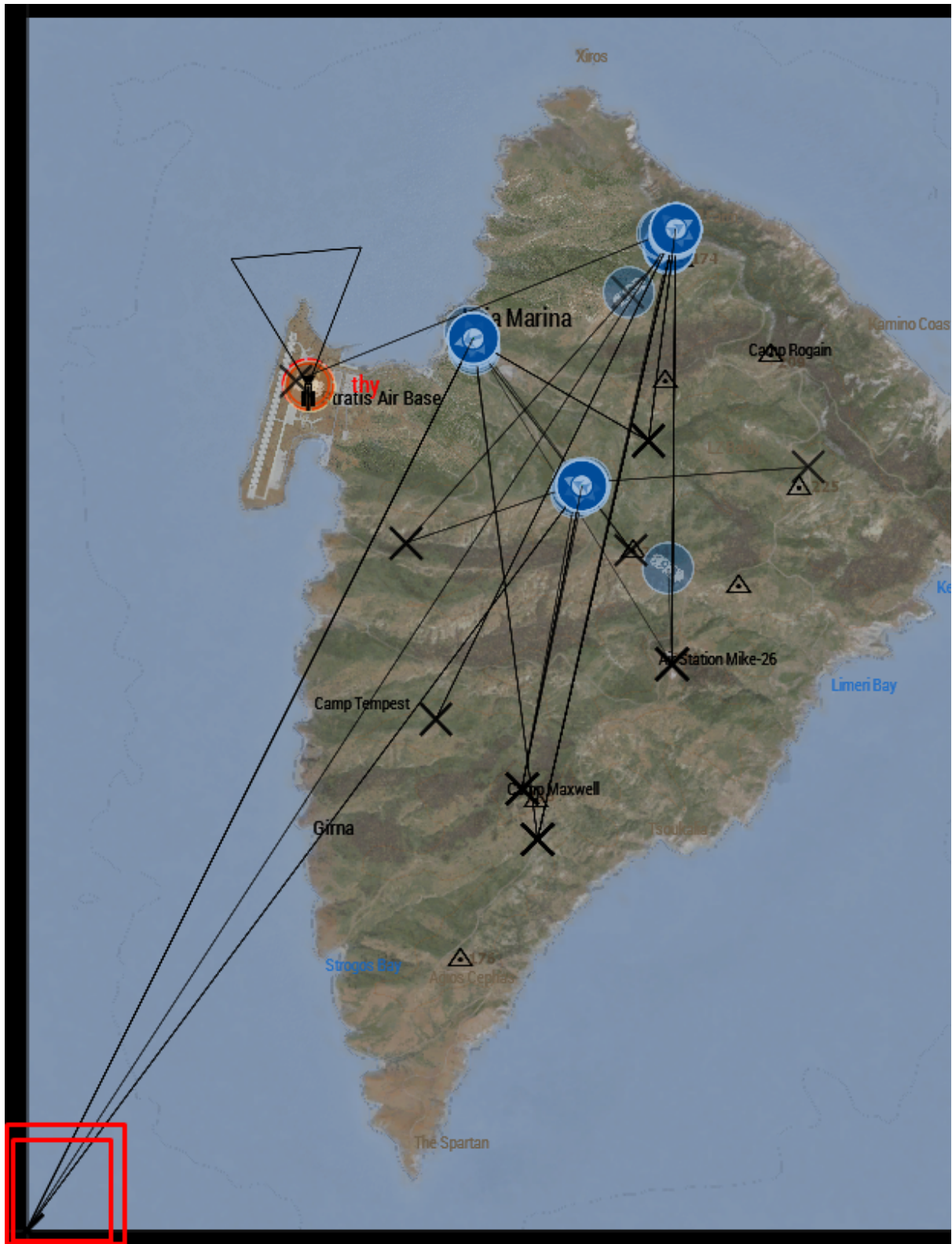
// BluFor spawnpoints:
if ( CSWR_spawnBlu ) then {
    CSWR_bluSpawnPoints =
    [
        "bluSpwn01",
        // "bluSpwn02",
        // "bluSpwn03"
    ];
};

// OpFor spawnpoints:
if ( CSWR_spawnOp ) then {
    CSWR_opSpawnPoints =
    [
        "opSpwn01",
        // "opSpwn02",
        // "opSpwn03"
    ];
};

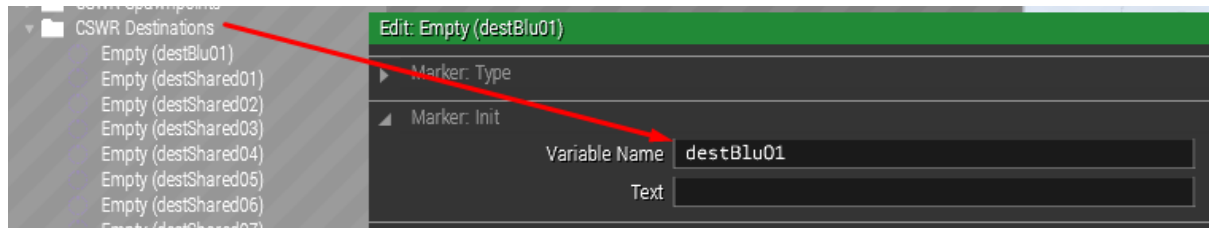
// Independent spawnpoints:
if ( CSWR_spawnInd ) then {
    CSWR_indSpawnPoints =
    [
        "indSpwn01",
        // "indSpwn02",
        // "indSpwn03"
    ];
};
```

## Fixing: weird waypoint out of map

Look to the image below and notice those nowhere waypoints on the lower-corner:



If you are facing the same problem, it's because some waypoint is missing on map. Make sure all waypoints are declared in the `fn_CSWR_spawnsAndWaypoints.sqf` file also are correctly dropped and named on your mission map.



See: exclusive faction waypoints sometimes are not used, so you should comment on them to avoid that weird line problem:

Before:

```
// WAYPOINTS: BY FACTION
// Define where each faction in-g
// For new destination, add a new

// BluFor destination:
if ( CSWR_spawnBlu ) then {
    CSWR_destinationBlu =
    [
        "destBlu01",
        "destBlu02"
    ];
};

// OpFor destination:
if ( CSWR_spawnOp ) then {
    CSWR_destinationOp =
    [
        "destOp01",
        "destOp02"
    ];
};

// Independent destination:
if ( CSWR_spawnInd ) then {
    CSWR_destinationInd =
    [
        "destInd01",
        "destInd02"
    ];
};
```

After (solution):

```
// WAYPOINTS: BY FACTION
// Define where each faction in-g
// For new destination, add a new

// BluFor destination:
if ( CSWR_spawnBlu ) then {
    CSWR_destinationBlu =
    [
        //"destBlu01",
        //"destBlu02"
    ];
};

// OpFor destination:
if ( CSWR_spawnOp ) then {
    CSWR_destinationOp =
    [
        //"destOp01",
        //"destOp02"
    ];
};

// Independent destination:
if ( CSWR_spawnInd ) then {
    CSWR_destinationInd =
    [
        //"destInd01",
        //"destInd02"
    ];
};
```

## Fixing: vehicles blowing up at the match start

Different from soldiers, vehicles need a big empty space on the map to spawn safe, with no collisions. So, if it happens yet, make sure the faction spawnpoints are using them in clear and flat ground, for example, over a road or in an empty field. Urban streets can be a challenge for vehicles, resulting in explosions.

**Important 1:** the more spawnpoints available, the fewer accidents such as infantry being run over and vehicles colliding.

**Important 2:** NEVER set a spawnpoint out of the map limits. Arma 3 no recognize positions beyond the map edges.



## Fixing: I'm trying to edit the unit's loadout

If you are facing a hard time editing your unit's loadout, maybe you are trying to remove a thing that doesn't exist or calling weird commands. Let's investigate:

- 1) On Eden Editor, drag and drop on map one unit of the original faction you are trying to make changes;
- 2) After that, go to unit Attributes and click "Edit Loadout" > "BI Virtual Arsenal";
- 3) Now, just click on "Export" button;



- 4) Open your Notepad and CTRL+V;

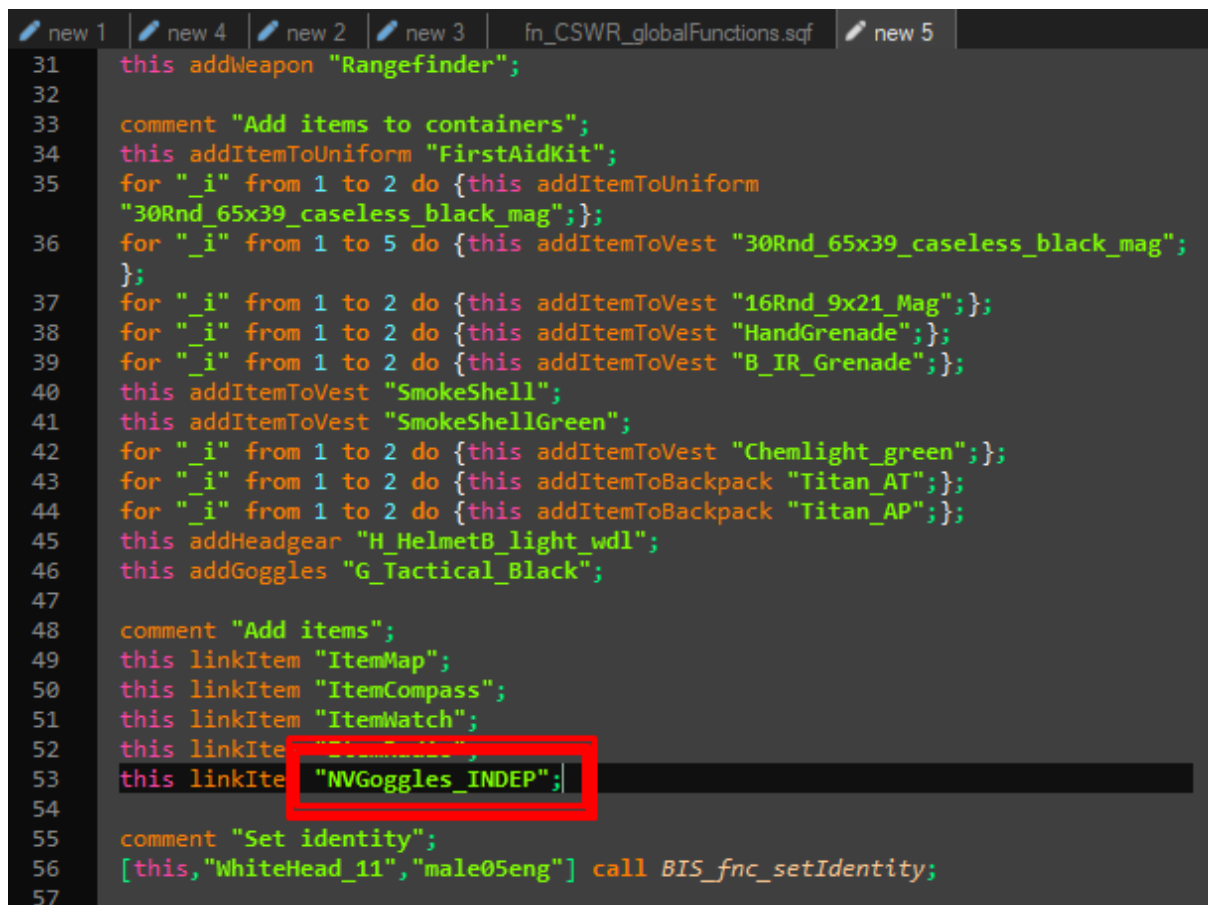
5) Now, check carefully if you are editing the same items the original unit brings.

Keep reading:

### An item does not want to leave:

In the example below, I've tried to remove the NVG from my units but somehow I couldn't. So I checked the unit exporting their attributes and I realized that the BLUFOR unit was originally using the INDEPENDENT NVG.

Original attributes from *Blufor B\_W\_Soldier\_AAT\_F* unit:



```
new 1 | new 4 | new 2 | new 3 | fn_CSWR_globalFunctions.sqf | new 5
31  this addWeapon "Rangefinder";
32
33  comment "Add items to containers";
34  this addItemToUniform "FirstAidKit";
35  for "_i" from 1 to 2 do {this addItemToUniform
36    "30Rnd_65x39_caseless_black_mag";};
37  for "_i" from 1 to 5 do {this addItemToVest "30Rnd_65x39_caseless_black_mag";
38    };
39  for "_i" from 1 to 2 do {this addItemToVest "16Rnd_9x21_Mag";};
40  for "_i" from 1 to 2 do {this addItemToVest "HandGrenade";};
41  for "_i" from 1 to 2 do {this addItemToVest "B_IR_Grenade";};
42  this addItemToVest "SmokeShell";
43  this addItemToVest "SmokeShellGreen";
44  for "_i" from 1 to 2 do {this addItemToVest "Chemlight_green";};
45  for "_i" from 1 to 2 do {this addItemToBackpack "Titan_AT";};
46  for "_i" from 1 to 2 do {this addItemToBackpack "Titan_AP";};
47  this addHeadgear "H_HelmetB_light_wdl";
48  this addGoggles "G_Tactical_Black";
49
50  comment "Add items";
51  this linkItem "ItemMap";
52  this linkItem "ItemCompass";
53  this linkItem "ItemWatch";
54  this linkItem "ItemRadio";
55  this linkItem "NVGoggles_INDEP";
56
57  comment "Set identity";
58  [this,"WhiteHead_11","male05eng"] call BIS_fnc_setIdentity;
```

Then the issue has been solved in *fn\_CSWR\_globalFunctions.sqf* file:

```
//_unit unlinkItem "NVGoggles";
_unit unlinkItem "NVGoggles_INDEP";
```



## How can I contribute to the CSWR script?

Discussion on Bohemia Forums

<https://forums.bohemia.net/forums/topic/237504-release-controlled-spawn-and-waypoints-randomizr/>

Changelog on Github

<https://github.com/aldolammel/Arma-3-Controlled-Spawn-And-Waypoints-Randomizr-Script>

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