



Enemy Spawning System (ESS)

by Enigx

Enemy Spawning System (ESS) is a simple, stable and powerful script that allows mission makers to spawn AI units on areas previously placed on map from editor.

Units will be created when players are at a defined distance from the area edges.

This is useful for multiplayer missions where it is needed to activate enemy when necessary, so to save server resources.

Simply place marker areas on the map while editing mission and ESS will activate them with enemies when players are close to them.

Particularly useful for creating patrolling infantry units and inside buildings.

Vehicles and static turrets can also be created.

It works both in SP and MP.

Procedure to define the ESS system:

1. Copy all the folder "ESS_system\" into the mission folder



2. Create the file "*initServer.sqf*" in mission folder and copy in it the following string:

```
[]execVM "ESS_system\ESS_Call.sqf";
```



3. Place on map from editor one or more marker areas where to spawn enemies. It is not necessary to hide the areas with a transparent color. The areas will be hidden automatically when the mission starts



4. Name each marker (ie: MarkerAreaESS1, MarkerAreaESS2,)



5. Compile the "ESS_Call.sqf" file to generate the single ESS spawning zone by following call

```
null =  
[FACTION,SIDE,"MARKER",[NUM_TEAM_ROAD,MAX_UNITS_PER_TEAM_ROAD],[NUM_TEAM_HOUSE,MAX  
UNITS_PER_TEAM_HOUSE],[STATIC],[LIGHT_VEHICLE,BEHAVIOR_LGH,CHANCE],[HEAVY_VEHICLE  
BEHAVIOR_HVY],DISTANCE] execVM "ESS_system\functions\ESS_Launch.sqf";
```

NOTE: * ONE CALL FOR EACH ESS MARKER AREA PLACED ON MAP FROM EDITOR !! *****



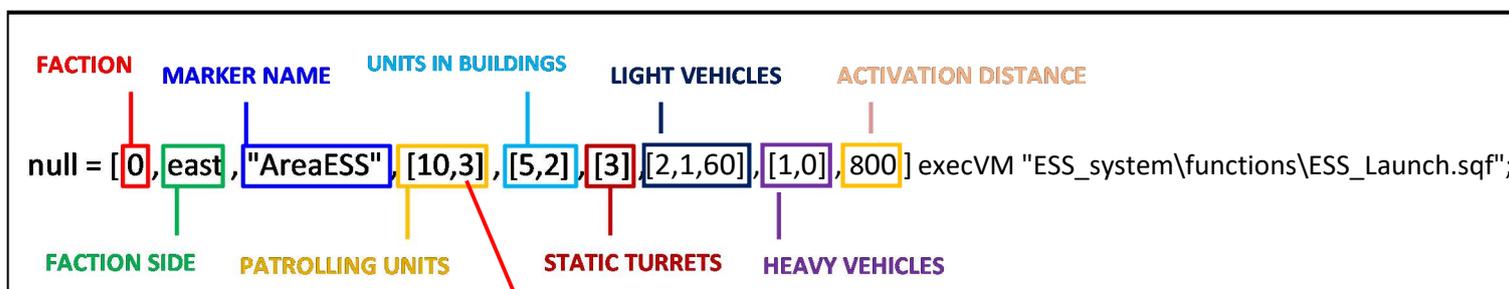
Arguments:

- 0 - **FACTION**: Faction used for enemy - <NUMBER>. This is defined in "ESS_Units.sqf" file. The units classname must be defined in that file. The number corresponds to the selected faction.
- 1 - **SIDE**: Type of faction - < east / west / civilian / independent >
- 2 - **"MARKER"**: Name of the marker area defined in editor where to spawn ESS enemy zone - <STRING>
- 3 - **NUM_TEAM_ROAD**: Number of fire teams patrolling roads - <NUMBER>
- 4 - **MAX_UNITS_PER_TEAM_ROAD**: Max number of units of the single fire team on roads - <NUMBER>
- 5 - **NUM_TEAM_HOUSE**: Number of fire teams into buildings - <NUMBER>
- 6 - **MAX_UNITS_PER_TEAM_HOUSE**: Max number of units of the single fire team in the buildings - <NUMBER>
- 7 - **STATIC**: Number of static turrets - <NUMBER>
- 8 - **LIGHT_VEHICLE**: Number of light vehicles - <NUMBER>
- 9 - **BEHAVIOR_LGH**: It defines if the light vehicle must patrol or not - <NUMBER> (0 or 1): 1 for patrolling, 0 to simply spawn it on position
- 10 - **CHANCE**: chance (percentage) that single spawned light vehicle has of being full of infantry - <NUMBER> (from 1 to 100): Set 1 to have only driver and gunner
- 11 - **HEAVY_VEHICLE**: Number of heavy vehicles - <NUMBER>
- 12 - **BEHAVIOR_HVY**: It defines if the heavy vehicle must patrol or not - <NUMBER> (0 or 1): 1 for patrolling, 0 to simply spawn it on position
- 13 - **DISTANCE**: Distance in meters of player from marker within which the units spawning begins - <NUMBER> (meters)



6. Open the file "ESS_Units.sqf" to check the faction to be used. If needed insert a new specific one (if not included in the file)

General scheme of the call of the SINGLE ESS zone

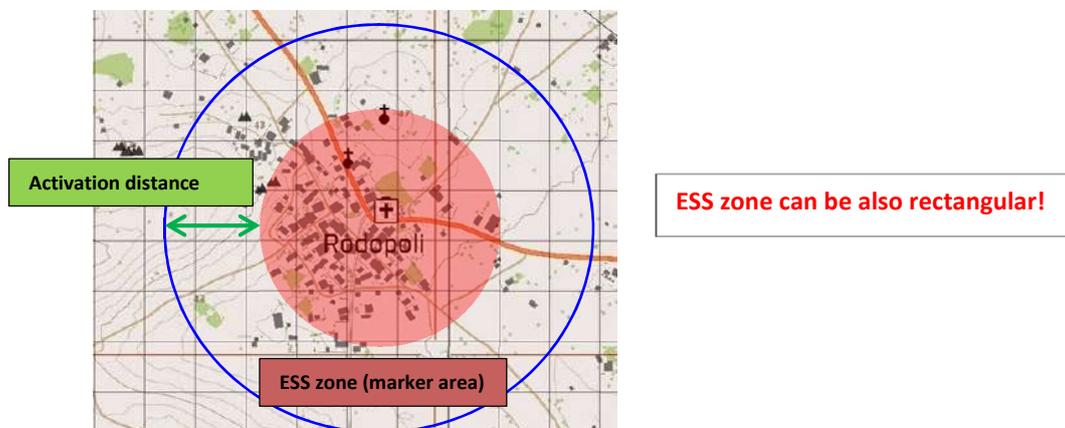


**The number of units per fire team will be random from 1 to 3 !!
The same for the units in the buildings**

*** NOTE/TIP: spawn of vehicles should be done in area with no or limited presence of buildings and objects. A procedure is present in the script to select a "safe" spawning position for vehicles, in order to avoid their placing on building, trees, walls... but that's Arma!! and it is not excluded that on some



maps and conditions, spawning could interfere with objects on map with "explosive" consequence.



Example

- Create an ESS zone on area "AreaESS" defined in editor, using:

-) The faction number 0 of file ESS_Units.sqf
-) Faction defined as EAST
-) 10 fire teams that patrol roads with max 3 units per team (random from 1 to 3)
-) 5 fire teams stay into buildings with max 2 units per team (random from 1 to 2)
-) 3 static turrets
-) Two patrolling light vehicles
-) Each light vehicle has 60% chance of being full of infantry units
-) One heavy vehicle simply spawned on random position
-) The spawning starts when one of the players is at 800m from the area edges

```
null = [0,east,"AreaESS",[10,3],[5,2],[3],[2,1,60],[1,0],800] execVM  
"ESS_system\functions\ESS_Launch.sqf";
```



FILE "ESS Units.sqf"

```

14
15 private ["_UnitListFac","_StaticListFac","_LgtVehListFac","_HvyVehListFac"];
16 _faction = (_this select 0);
17
18 // ** CSAT Vanilla
19 if ( _faction==0) then {
20   _UnitListFac =
21   ["O_soldierU_repair_F","O_soldierU_medic_F","O_sniper_F","O_Soldi
22   "O_soldier_AAT_F","O_soldier_AR_F","O_soldier_AT_F","O_soldier_exp_F","O_soldier_F
23   "O_recon_JTAC_F","O_recon_LAT_F","O_recon_M_F","O_recon_medic_F","O_recon_TL_F"];
24   _StaticListFac = ["O_HMG_01_F","O_HMG_01_high_F","O_Mortar_01_F","O_static_AT_F","C
25   _LgtVehListFac = ["O_Truck_02_covered_F","O_Truck_02_transport_F","O_MRAP_02_F","O
26   _HvyVehListFac = ["O_APC_Tracked_02_AA_F","O_APC_Tracked_02_cannon_F","O_APC_Wheel
27 };
28
29 // ** Islamic State Classnames Project OPFOR
30 if ( _faction==1) then {
31   _UnitListFac =
32   ["LOP_ISTS_OPF_Infantry_Engineer","LOP_ISTS_OPF_Infantry_Corpsman","LOP_ISTS_OPF_Ir
33   "LOP_ISTS_OPF_Infantry_Rifleman_6","LOP_ISTS_OPF_Infantry_Rifleman_4","LOP_ISTS_OPF
34   "LOP_ISTS_OPF_Infantry_AR_Asst_2","LOP_ISTS_OPF_Infantry_AR_2","LOP_ISTS_OPF_Infant
35   "LOP_ISTS_OPF_Infantry_Marksman","LOP_ISTS_OPF_Infantry_Rifleman_8","LOP_ISTS_OPF_I
36   _StaticListFac =
37   ["LOP_ISTS_OPF_Static_AT4","LOP_ISTS_OPF_AGS30_TriPod","LOP_ISTS_OPF_Static_DSHKM",
38   "LOP_ISTS_OPF_Static_M2_MinTriPod","LOP_ISTS_OPF_Static_Mk19_TriPod","LOP_ISTS_OPF
39   _LgtVehListFac = ["LOP_ISTS_OPF_Landrover_M2","LOP_ISTS_OPF_M1025_W_M2","LOP_ISTS_C
40   _HvyVehListFac =
41   ["LOP_ISTS_OPF_T34","LOP_ISTS_OPF_T55","LOP_ISTS_OPF_T72BA","LOP_ISTS_OPF_BMP1","LC
42   "LOP_ISTS_OPF_M113_W"];
43 };
44
45 // ** Middle Eastern Militia Classnames Project OPFOR
46 if ( _faction==2) then {

```

FACTION REFERENCE

... ..

```

98 // ***** INSERIRE DI SEGUITO ALTRE CLASSNAMES DI FAZIONI PER LA MISSIONE CHE SI STA EDITANDO
99
100 // ** USER DEFINED 1
101 // CLASSE ATTUALMENTE INSERITA - NAPA Independent RHS-GREF
102 if ( _faction==10) then {
103   _UnitListFac =
104   ["rhsgrf_nat_rifleman","rhsgrf_nat_machinegunner_mg42","rhsgrf_nat_rifleman_mp44","rhsgrf_nat_commander","rhsgrf_nat_machinegunner",
105   "rhsgrf_nat_rifleman_akms"];
106   _StaticListFac = [];
107   _LgtVehListFac = ["rhsgrf_nat_uaz","rhsgrf_nat_uaz_dshkm"];
108   _HvyVehListFac = [];
109 };
110
111 // ** USER DEFINED 2
112 // CLASSE ATTUALMENTE INSERITA - FIA Independent Vanilla
113 if ( _faction==11) then {
114   _UnitListFac =
115   ["I_G_Soldier_F","I_G_Soldier_exp_F","I_G_Soldier_lite_F","I_G_Soldier_AR_F","I_G_engineer_F","I_G_Soldier_SL_F","I_G_medic_F","I_G_Soldier_M_F"];
116   _StaticListFac = ["B_G_Mortar_01_F"];
117   _LgtVehListFac = ["B_G_Offroad_01_F","B_G_Offroad_01_armed_F","B_G_Van_01_transport_F","B_G_Van_01_fuel_F"];
118   _HvyVehListFac = [];
119 };
120
121 // ** USER DEFINED 3
122 // CLASSE ATTUALMENTE INSERITA -
123 if ( _faction==12) then {
124   _UnitListFac = [];
125   _StaticListFac = [];
126   _LgtVehListFac = [];
127   _HvyVehListFac = [];
128 };
129
130 // ** USER DEFINED 4
131 // CLASSE ATTUALMENTE INSERITA -
132 if ( _faction==13) then {
133   _UnitListFac = [];
134   _StaticListFac = [];
135   _LgtVehListFac = [];
136   _HvyVehListFac = [];

```

ADDITIONAL USER FACTIONS

Faction arrays composition

- Infantry units classname
- Satic turrets classname
- Light vehicles classname
- Heavy vehicles classname

Insert here your specific classnames if needed

Index "0" Index "1" Index "n-1"

_Array = [element_1, element_2, ... , element_n];



How to compile the arrays:
General form (i.e. units)

```
_UnitListFac = ["rhsoref_nat_rifleman", "rhsoref_nat_machinegunner_mg42",,,,,,"rhsoref_nat_rifleman_akms"];
```

Classnames in double quotes " " separated by commas

Note: The last element is without a final comma !!

HOW TO FIND UNITS CLASSNAME FOR THE ADDON (MOD)

The easiest way to find the Classnames of the specific MOD elements (units, vehicles, statics, objects ...) is to use the EDITOR directly.

Once the editor is opened with the MOD loaded:

1. Place on map the units, vehicles, etc... whose classnames you want to find



2. Select all units, either vehicles, or statics. Note: copy them separately !!



3. Right mouse button and select the "Log" submenu in the window



4. Select "copy class to clipboard"



5. Open the Notepad (or your text editor) and paste.

You will have something like this (example):

```
O_SoldierU_SL_F  
O_soldierU_repair_F  
O_soldierU_medic_F  
O_sniper_F  
O_Soldier_A_F
```

The classname identifies a unit of the game, provided with the default loadout and all its "characteristics".
The same is true for vehicles, static, objects,... etc





6. Modify by adding the double quote, the commas, putting them on a single line

"O_SoldierU_SL_F","O_soldierU_repair_F","O_soldierU_medic_F","O_sniper_F","O_Soldier_A_F"



7. Copy and paste into the array of the "ESS_Units.sqf"

```
117
118 // ** USER DEFINED 3
119 // CLASSE ATTUALMENTE INSERITA -
120 if (_faction==12) then {
121     _UnitListFac = [];
122     _StaticListFac = [];
123     _LgtVehListFac = [];
124     _HvyVehListFac = [];
125 };
126
```

8. The same for static and vehicles (NOTE: they must be WITHOUT crew!)

Special thanks:

Special thanks to BangaBob for sharing his EOS system. This ESS system is inspired by that, using a simplified general configuration, but with a spawning core developed by me.

Special thanks to Shuko for sharing his SHK_pos - Random position generator system.

Special thanks to Zenophon for sharing his Infantry Occupy House system.