

# Mission Editor 3D v0.25

Real time mission editor; by Faguss (ofp-faguss.com)

## 1. Overview

Mission Editor 3D is a prototype script for editing the `mission.sqm` file (for the **Operation Flashpoint / ARMA: Cold War Assault**) while the mission is being played so that the changes can be immediately previewed.

## 2. Requirements

Fwatch 1.16 beta

<http://ofp-faguss.com/fwatch/116test>

## 3. Installation

- Copy `MissionEditor3D` folder to the game directory
- Backup mission that you want to edit
- In the mission's `init.sqs` write: `[] exec "..\MissionEditor3D\Start.sqs"`
- Preview mission. You'll be prompted to add dialogs to the `description.ext`. Press OK.
- Reload mission and preview

**Optional:** you can load `MissionEditor3D` as a mod which will enable marker texture preview.

## 4. Controls

<b>WSAD, QE</b>	Move camera
<b>1, 2, 3, 4, 5</b>	Change camera zoom and speed
<b>LMB</b>	Hold and move mouse to move current unit
<b>LMB + RMB</b>	Hold and move mouse to move current unit in Z axis
<b>LMB + SHIFT</b>	Hold and move mouse to rotate current unit
<b>RMB</b>	Open menu
<b>DELETE</b>	Remove current unit
<b>2x LMB or ENTER</b>	Double-click on the window to edit unit/waypoint properties or to add a waypoint if the current group doesn't have any or to insert object from the addon object list
<b>C</b>	Place object on the ground level
<b>V</b>	Switch between absolute / relative height
<b>M</b>	Move object to a position on the map
<b>F1</b>	Keyboard shortcuts list

## 5. Saving

Changes are immediately written to the `mission.sqm`. I recommend to make a backup of this file beforehand.

To see the results in the 2D Mission Editor you'll have to reload the mission (data is transferred from the `mission.sqm` to the game memory). To revert modifications use „Save” button (data is transferred from the game memory to the `mission.sqm`).

If you add an item via 2D Mission Editor you'll have to save the mission before it will appear in the 3D Mission Editor.

Script saves objects with `this setPos` command in the initialization field. There are two reasons for it:

- You cannot set Z axis in the `mission.sqm`
- Game features a bug where static objects position will shift a little bit initially and when using the `setPos` command (but not `setPosASL`). Because this offset is different for different angles the position will be inaccurate again when you rotate the object in the 2D Mission Editor

## 6. Remarks

- I recommend to name units in the mission so that the script will find them easier. In the future there will be an option to do this automatically.
- Script disables all AI units so that they will stay right where they are.
- Soldiers and vehicles added by using „Insert unit” and „Insert group” are non-functional. Reload the mission to update them.
- Script suspends currently selected unit in the air. Once you select different unit it will suspend the new one and release the old one. If you come back to the previous it will restore Z axis position.
- Script settings for the current mission are saved to the `me3d.db` file in the mission folder.
- Game will crash if the mission has mines (because using `camCreate` on a mine crashes the game) – to be solved in the future

## 7. Object List

ME3D can read currently used addons in order to create a list of available objects. Press right mouse button to open menu and select „Read Addon Configs”. Addons are converted and stored in the `fwatch\tmp\me3d\<modline>\` directory. Afterwards an object list is generated and saved in the `fwatch\idb\me3d` folder. The entire process might take a long while.

Object list is automatically loaded when you start the script (provided you have launched the game with the identical set of mods). Objects can be browsed in the main display or by using the „Search Object List” via the right-click menu.

If you modify any addons then select „Read Addon Configs” option again. Script compares modification dates to detect which files were updated. Then reconverts addons and creates a new object list.

List of classes read by the MissionEditor3D script:		
<b>Mod configuration:</b>		
	<code>CfgAddons</code>	Used to determine addon load order
<b>Mod resource:</b>		
	<code>RscTitles</code>	Edit Effects → Titles Resource
<b>Addon configuration:</b>		
	<code>CfgPatches</code>	Used to determine addon load order
<b>Mod/Addon configuration:</b>		
	<code>CfgVehicles</code>	Object list
	<code>CfgCameraEffects</code>	Edit Effects → Camera Effect
	<code>CfgSounds</code>	Edit Effects → Sounds Anonymous/Voice
	<code>CfgEnvSounds</code>	Edit Effects → Sounds Environment (no preview)
	<code>CfgSFX</code>	Edit Effects → Sounds Trigger (no preview)
	<code>CfgMusic</code>	Edit Effects → Music Track
	<code>CfgTitles</code>	Edit Effects → Titles Object
	<code>CfgMarkers</code>	Edit Marker → Icon
	<code>CfgMarkerColors</code>	Edit Marker → Color
	<code>CfgMarkerBrushes</code>	Edit Marker → Fill

#### Known limitations:

- If an addon config includes a file from a PBO without a config and you modify the latter then the update process will not be triggered. Same goes for files included by a mod config. In such cases I recommend to delete `fwatch\tmp\me3d\<mods>\info.db` and select „Read Addon Configs” again.
- Script rejects objects with missing properties (even though they might not be used in game). For example: `MineE` doesn't have `transportSoldier` and so it will not appear in the object list.
- Inheritance from a top-level class is not handled (e.g. if soldier class was inheriting from a class outside of `CfgVehicles`)
- Effect classes without a `name` property are ignored (even though it might be inherited).
- Property `access` is not handled for effect classes.
- Config instructions such as `enum`, `__EXEC`, `__EVAL` are not handled.
- Keyword `__original` is reserved for the original game assets so you should not have a modfolder with that name.

Object list can also be exported to the [Set-Pos-In-Game](#) script (requires installed version 1.54 and Fwatch 1.16). Open right-click menu and select „Export Object List to SPIG”. Script will create one file for each PBO and save it to „Set-Pos-In-Game\db\_autogenerated”. Once it's done leave ME3D, execute SPIG script and click on the „Insert Object” button. It will automatically read files from that folder.

The more files in that folder the more time loading will take. ME3D will not generate databases for the default addons (like `xms.pbo`) and for the addons that SPIG already has the pre-made databases (like editor update).

## 8. Description.ext

Script will process `description.ext` file in a similar fashion to the addon configs but it is done automatically when the script is launched. Files `description_processed.ext` and `description.sqm` will appear in the mission folder. Parsed classes are: `CfgSounds`, `CfgEnvSounds`, `CfgSFX`, `CfgMusic`, `RscTitles`, `CfgCameraEffects`. Entries will appear on the bottom of the drop-down list (after the mod/addon effects) in the Edit Effects menu.

## 9. Version history

### 0.1 (2021.06.27)

First release

### 0.11 (2021.07.05)

- ENTER key opens edit properties window
- added option to edit markers

### 0.12 (2021.07.17)

- added option to edit waypoints
- saving delay when editing units/triggers/waypoints/markers is now half a second instead of quarter of a second
- script will terminate if there's an error while reading mission.sqm on startup

### 0.13 (2021.07.18)

- added option change unit's position in Z axis
- limited to 1.99

### 0.14 (2021.07.19)

- fixed error when removing unit from a group
- fixed error when mission.sqm contains an empty group

### 0.15 (2021.08.16)

- object height is loaded from the object's init line in the mission.sqm
- side selection list shows all sides so that it's possible to create a group even if the mission.sqm doesn't have groups of that side
- LMB on soldier/waypoint list will make camera focus on soldier/waypoint (so that you can select soldier even if there's only one in the list)
- LMB double-click opens Edit Unit window only if cursor is over soldier listbox (instead of anywhere in the dialog)
- LMB double-click on the waypoint list now opens Edit Waypoint window
- LMB double-click adds a waypoint if the group doesn't have any

### 0.16 (2021.08.17)

- Effects menu is now functional (except for titles type/effect on the bottom)

### 0.17 (2021.08.18)

- added option to change object position in the „Edit Unit” menu
- added option to switch between absolute and relative object height

### 0.18 (2021.08.19)

- in the „Edit Unit” menu „Init” field is refreshed when changing object’s height value and type
- title selection in the „Effects” menu is now functional
- added optional addon `me3d_helper` that displays marker and trigger texture
- 1.96 compatibility
- fixed bug with trying to move object when object list was empty
- fixed bug with changing object’s height when added a new group

### 0.19 (2021.10.20)

- added option to change object’s class in the „Edit Unit” menu
- added option to change waypoint order in the „Edit Waypoint” menu

### 0.20 (2022.04.12)

- added right click menu
- F1, F2, F3 keyboard shortcuts have been removed (use right-click menu instead)
- added option to read addon configs
- added menu for searching objects
- effects are read from the mission `description.ext`
- object list is loaded before opening dialogs
- scripts saves last unit selection, camera position to the `me3d.db` in the mission folder
- global settings are now saved to `fwatch\idb\settings.db` (instead of `settings.bin`)
- removed premade objects and effects database (`db`, `me3d_cfg.sqf`)
  
- Edit Unit – player control is based on vehicle’s available seats (if object list is available)
- Edit Waypoint – waypoint type list is sorted alphabetically
- Edit Effects – effects lists are sorted alphabetically
- Edit Effects – added preview
- Edit Effects – fixed transition option (plain, fade etc.) not being saved to the mission.sqm
- Edit Intel – fixed „Resistance friendly to” not displaying current value correctly
  
- blocked moving object with mouse when left click was pressed while the cursor was still over menu
- camera position is not reset when you change preview object
- when you execute the script by pressing ENTER key it will now wait for you to release the key so that it doesn’t go immediately to the „Edit Unit” menu
- fixed issue with newly created object being underground when you start moving it
- fixed issue with not being able to move preview object when the current side doesn’t have any objects
- fixed error with trying to move last selected object while current side doesn’t have any objects
- fixed issue with not being able to add first entry to the „Vehicles” or „Markers” or „Triggers”
- fixed list box having blank entries when triggers have no names

### 0.21 (2022.06.01)

- command `this setpos` in the initialization field is now the default method for saving position of the objects

- new objects are created exactly in the same position as the currently selected object
- preview object's altitude can be absolute or relative depending on last selected object
- double-clicking on the addon object list in the main menu will insert a new unit
- proxy object is used when selected parachute from the addon object list in the main menu
- fixed error when trying to add a new group to the marker/trigger side
- fixed issue where it wasn't possible to add an object to a side without any objects
- script will start if there's a scripting error message displayed on the screen that is unrelated to the functioning of the script

#### **0.22** (2022.06.14)

- clicking on the listbox will change selection to the unit from that listbox
- if the new preview object is a soldier or a vehicle and last position was underground then it will be placed on the ground instead
- added option to export object names to a text file
- C key will place object at a ground level
- M key will open a map where you can change position of the object
- F1 key displays list of keyboard shortcuts
- fixed issue where a modfolder without addons would stop the addon reading process
- fixed issue where a preview object would be created at sea
- removed unnecessary message informing when update check failed

#### **0.23** (2022.09.22)

Addon Reading:

- addon configs without `class cfgPatches` are ignored (instead of stopping the operation)
- now properly extracts configs from Arma-style PBOs
- if there's more than 3000 objects then sorting script is used (instead of sorting function) – it's slower but the game is not frozen
- if effect class (e.g. `cfgSounds`) has empty `name` property then class name is used instead

#### **0.24** (2024.02.26)

- added „V” key shortcut to switch between absolute / relative Z position
- added text display with object coordinates on the bottom of the screen
- script now saves „this setpos” (in the object's init field) with relative coordinates (`getpos this`) instead of absolute coordinates (numeric) so that now it's feasible to move objects in the 2D Mission Editor
- Search Object List – selected object can now be inserted with a double-click
- Search Object List – fixed a bug where adding new object would result in an insert waypoint error
- Edit Unit – fixed a bug where „Class” drop-down wasn't showing the correct object class
- fixed a bug with options from the right-click menu being triggered without user's intent
- fixed a bug with changes not being saved after pressing „C” key
- Addon Reading – if the addon config has a syntax error then error description is displayed

#### **0.25** (2024.07.08)

- added option to export object list to the SPIG script