



# Director Beta 0.2

A camera and movie addon for ArmA2

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Director is a camera and movie mod for ArmA2 that makes it easy to watch battles or generate some generic or even specific footage for your own Arma movies. It has been designed primarily to run in a completely automated fashion with a high degree of randomization. Left to just run on its own it will cycle between subjects and camera settings to deliver a very dynamic experience. Grab a beverage pick your favorite mission, launch Director, set your preferences then sit back and watch!

The feature set will continue to expand so keep checking back for updates leading up to the final release.

## Installation:

1. Extract the files to a location of your choice, but not into the ArmA2 game folder.
2. In your ArmA2 game folder, create a folder to contain the addon (ex: @gzl)
  - a. In the mod folder you just created, create a new folder and name it *addons*
  - b. Copy or move the file *gzl\_director.pbo* into the *addons* folder you just created.
3. In your ArmA2 game folder, if you don't already have a userconfig folder, create one.
  - a. In your userconfig folder, create a new folder and name it *GZL*
  - b. Copy or move the file *GZL\_Director\_config.hpp* into the *GZL* folder you just created.
4. Edit the shortcut for the game to add the mod to the target line using the example below.

```
...\\arma 2\\arma2.exe -mod=@gzl
```

Where @gzl is the name folder you created in step 2.

If you have other mods, just add it to the end of your mod list. (ex: -mod=@cba;@jtd;@gzl)

5. Place the program FinalCut.exe in a location of your choosing. This is only used for saving camera scripts so if you don't intend to use it, you don't need to extract it.

If you have problems or questions with installation [visit the thread](#) for this addon at bistudio forums.

## UserConfig:

The file *GZL\_Director\_config.hpp* contains settings for key mappings that can be adjusted to your preference. It can be opened using notepad or any text editor of your choice. The default settings are listed below but you can edit the numeric values using the key code values from [this page](#).

The purpose of each key is explained in the section of this document entitled **Using Director**.

GZL_KEY_DIALOG_SHOW 82;	NumPad 0
GZL_KEY_SKIP_SCENE 78;	NumPad +
GZL_KEY_HOLD_SUBJECT 156;	NumPad Enter or =
GZL_KEY_TOGGLE_VIEW 74;	NumPad -
GZL_KEY_HOLD_SCENE 83;	NumPad .

You can ignore the *GZL\_DEBUG\_SCENE\_SHOW* *false*; setting.

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## Change Log:

### Beta 0.2

- Updated Orbit Subject to work with fast moving vehicles. The speed of the orbit is still random so when it's fairly slow the effect may not be entirely apparent.
- Fixed a bug with preload.
- Fixed a bug with the dialog.
- Tweaked some functions and scenes for better performance
- Rearranged a few things on the main dialog
- Added a **More...** button for future use (options and what-not)
- Updated subject list to fix some issues. Bias slider is now ignored if the bias subjects do not exist in the subject list.
- Fixed – Main dialog now only movable using the top of the dialog (click anywhere on or above the mission name)
- Setting the scene length to 0 (zero) now means infinite length. To switch to a new scene, you will need to use the **skip** key.
- All selections are now executed in real-time – this includes scene selection which previously only switched when the scene timed out or the skip key was hit.
- Added a slight horizontal offset to the **Fly By** scene so the camera isn't centered on the subject as it passes over. Most noticeable when men are the subject.
- Added the ability to create movie scripts for mission intro and outro. This requires a separate windows application to capture the movie data so it can be saved to an SQF file. This will be included with the next release. It is written in C# and will require .NET 2.0 runtimes if you don't already have them installed.

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## Using Director:

Director is launched via the action menu. Scroll your mouse wheel or use whatever method you normally use to access the action menu. Highlight “Director” and left click. Once the mod is launched this way you can bring up the main dialog again using the 0 key on your numpad (or the key to which you mapped the `GZL_KEY_DIALOG_SHOW` value in the config file.) This is important to note because when you are watching the scenes you won’t have access to the action menu.

## Keyboard Commands

While watching the ‘movie’ there are several keys that will give you some control over what you are viewing.

**Dialog** - NumPad 0

Open the main dialog.

**Skip** - NumPad +

Skips the current scene and moves on to the next

**Hold Subject** - NumPad Enter or =

If you like the subject you are viewing, hit this key to keep the camera on them. The scenes will continue to switch but the subject will remain. Hit the key a second time to return to other subjects. Note: It’s easy to forget you’ve hit this key so if you keep seeing the same subject when you don’t expect to, just hit it to release the hold.

**Toggle View** - NumPad -

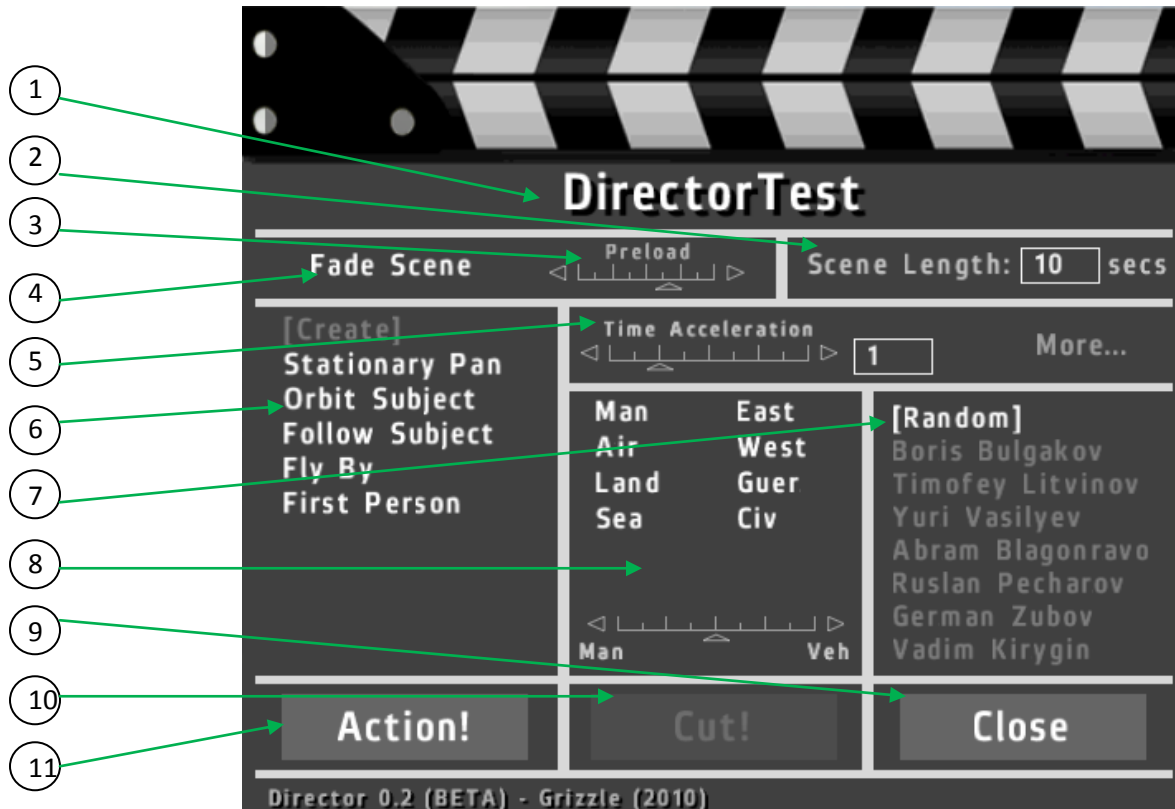
If you are in first person view, this key will toggle between first and third person.

**Hold Scene** - NumPad .

This key will keep the same scene playing until you hit the ‘skip’ or numpad + key. Good for extending the current scene if something cool is happening.

## The Main Dialog

The main dialog gives you real time control over many aspects of the camera scene and subjects you are viewing. This dialog will appear as soon as you launch Director from the action menu and can be further accessed using the 0 key on your numpad (or the key to which you mapped the `GZL_KEY_DIALOG_SHOW` value in the config file.)



1. **Mission Name** – The name of the mission you have loaded is displayed here.
2. **Scene Length** – Enter a value in seconds for how long each scene will run before switching to a new one. A value of 0 (zero) allows a single scene to run until you Cut! or use the skip key.
3. **Preload** – Controls the amount of time spent preloading the scene before showing it. This setting depends very much on the performance of your system.
  - a. The lowest setting – all the way to the left – does not do any preloading at all.
  - b. The highest setting is full preload and may result in very long times between scenes. I've experienced up to 20 seconds of delay at this setting.

- c. The second to lowest setting does preloading, but spawns it as a separate function to speed things up slightly.
- d. The second highest is the default setting and also spawns the preload as a separate function but waits about two seconds before continuing allow some more preload to occur before the scene switches.

The time it takes to preload a scene lessens the longer the game is running and if you have a lot of video memory. Play with it to see what suits your system best. You will likely notice some texture and object popping on all but the highest setting. After a while, you may even be able to set it to the lowest value and not experience any popping at all.

4. **Fade Scene** – In order to hide some potentially ugly artifacts while the camera switches scenes, you can enable this if you so desire. It's not necessary and again, on more powerful systems you may be able to leave it off and get nice clean cuts. Also, less stressful islands allow greater chance this can be turned off and still get nice cuts between scenes.
5. **Time Acceleration** – Should be self explanatory, but you can create a 'slo-mo' effect by setting this lower than 1. Higher settings speed up the action. You can set the value by moving the slider or entering a value directly into the edit box. A value of 0 will pause the action but allow you to continue to use the dialog to change settings. Just be sure to set it to 1 or some other value before hitting the Action! button.
6. **Scene List** – Select one or more scenes in this section. If you select more than one they will be randomly selected using the scene length value to determine when to switch to a new scene. Left click selects a single scene. Shift-Left click selects all scenes between the current selection and the one you click while shift is held down. Ctrl-Left click allows you to select more than one without selecting the scenes in between.
7. **Subject List** – This list is populated based upon the settings in the **Filter** section. It will display the name of each subject available based upon the filter. You can select a specific subject to view or leave it on 'Random' to have the application randomize selections for you. This operates in real time so if you are in 'Action!' mode, selecting a subject will immediately switch to that subject.
8. **Filter Section** – This section allows you to add or subtract potential subjects using high level filters. You should be careful to turn off those items that you know do not exist in your mission. Having **Guer** selected when there are no guerilla factions present may result in the scene dropping back to the player. Note that dropping back to the player is a default behavior whenever the randomization routines can't find a match to your filter and bias settings.

The slider in this section allows you to control the bias of subjects selected through randomization. If you just want to see vehicles move the slider all the way to the bottom. Do the reverse if you just want to view men and units. Anything in between will randomize the mix favoring the type the slider is set closest to.

If you find that it's not picking the type of subject you expect, double check the filter buttons and slider setting to make sure you have subjects that will pass the filter.

9. **Close** – Hides the dialog, nothing more.
10. **Cut!** – Stops the automation and returns view and control to the player.
11. **Action!** – Start the automation and begin showing scene(s).

## The Scenes

**[Create]** - Not a scene. When selected, this will allow you to create your own scene. If you select this item it will override all other selections and force you into the **Create** module. For more information on this feature, see the section of this document entitled *Creating a Scene*.

**Stationary Pan** – Places the camera at the subjects location and pans the surrounding area. While you will often get just scenery, you will also occasionally get some unexpectedly nice shots as well.

**Orbit Subject** – Places the camera some random distance from the subject and orbits in a clockwise or counter-clockwise direction.

**Follow Subject** – Places the camera some random distance and angle around the subject and does not itself move, but moves with the subject.

**Fly By** – Places the camera some random distance and angle from the subject and moves towards and past it keeping focus on the subject. This works for both men and vehicles but gives distinctly different results due to the speed of the subject. With aircraft it will look more like the subject is “flying by” whereas with men it appears as more of a “fly through”.

**First Person** – Switches the camera to the subjects first or third person view. You can toggle between first and third person using the numpad ‘-’ key or the key to which you have mapped the **Toggle View** command. Since this scene actually involves destroying the camera when switching to first person, you may see the effects of that if you have **Fade Scene** disabled. It’s worse sometimes than others but with the current method it is inevitable.

**Hidden Scenes** – There is a “missile-cam” that is only active in First Person or Follow Subject scenes. It will activate if the subject you are viewing fires a missile or has a missile fired upon itself. This works for both men and vehicles. It only works for ammunition of the missile class. It still needs some work, and I will provide an option to disable it as well. *[Note: At this time not all missile classes are working. This will be addressed in future releases]*

## Some things to know

If your mission contains the ACM module you may notice some subjects suddenly disappear. This is a normal function of ACM and has nothing to do with Director. In such a case the application will recognize the subject is no longer valid and will automatically switch to a new subject and scene.

All of the values used to create a scene are randomized. Distance, FOV, angle, height and speed of camera movement are set to random values between preset extents.

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## Creating a Scene

No doubt some of you are very good at creating a scene, but we're not talking about a Friday night at the local pub. This feature will allow you to create movies for use in Intro and Outro missions or just simply scripted camera movements. At this time the method used to execute the camera changes employs the camera 'Prepare' statements. This was the easiest way to implement the feature and comes with some limitations, most notably the fact that the camera cannot follow moving objects. This is due to the fact the the camera 'Prepare' statements use an interpolation method to move the camera from one location to another given the starting and ending points regardless of the location of the camera's subject. ***This can be quite limiting at first and as a result I will be adding a more dynamic feature similar to what one can experience using the automated scenes available in the default behaviour of Director.***

**Note:** Due to lack of keyboard control when the mission type is set to Intro or Outro you will need to setup the objects while in the default Mission type and do all of your scene creation there. Once completed and the script has been saved, you can copy paste all of your objects to the Intro/Outro mission type for use in your missions. You will then edit an objects initialization section to execute the script you just created. If you have questions about this feel free to ask in the forum thread.

**Note:** *There is currently no way to reload movies that you create. Once you exit Arma or switch missions all scene and movie data is lost!*

## The Create Interface

The interface used during scene creation is accessed by selecting the **[Create]** scene in the scene list on the main dialog, selecting a subject from the subject list and clicking the **Action!** Button. When you do this, a new dialog will appear:



When this dialog is visible, hitting the escape key on your keyboard or clicking on the **X** in the upper right corner will hide the dialog. To open the dialog again use the key which is assigned to the **Dialog** (NumPad 0 by default) function that normally opens the Main Dialog.

1. **Main Dialog** – Clicking this will close the Create Dialog and open the Main Dialog. This will allow you to select new subjects or play back the scene you created. To return to the Create Dialog, select **[Create]** from the scene list and click the **Action!** button. Your movies and scenes will remain intact.

2. **Movies** – Clicking this will open the Movies Dialog where you will be able to create one or more movies to contain the scenes you create using this tool. More information on this dialog is available further in this document.
3. **Slider Range** – Enter a value for the numeric range of the sliders that control camera distance.
4. **D/X** – This slider controls the distance of the camera relative to the subject on a positive and negative axis. If the slider range is set to 50 this slider will range from -50 to +50.
5. **A/Y** – This slider controls the angle of the camera relative to the subject from -180 to + 180 degrees.
6. **H/Z** – This slider controls the height of the camera relative to the subject.
7. **Dir** – This slider controls the direction (0 – 360 degrees) that the camera is facing but is only active when the subject has been ‘unlocked’.
8. **Duration Secs** – Enter a value for the duration of the scene.
9. **Script Name** – If you want to execute a script at the start of a particular scene, enter the name of the script here with the fully qualified path if necessary.
10. **Smooth** – This button switched between smooth and abrupt camera movement when switching subjects. In smooth mode the camera will move between subjects in regardless of the distance between them. In abrupt mode the camera will switch instantly from one subject to the next. You can mix and match this feature throughout your movie.
11. **Cuts** – This button brings up an additional dialog that allows you to create scene cuts such as fade in/out as well as display text on the screen. More information on this dialog is available further in this document.
12. **Lock Subject** – This button toggles between the camera looking at the subject or not looking at the subject. The camera’s position remains relative to the subject but this allows you to move the camera along the X/Y/Z axis as well as manually set the camera rotation. You can mix and match locked vs. unlocked throughout your movie and various subjects.
13. **F** – This slider controls the FOV value for the camera. The range is from 0 to 1 but you may enter any value you wish into the text box to the right of it.
14. **Save Scene** – This button commits all current settings to the scene and is also used when making changes to previous settings for a particular scene.
15. **Scene List** – This list box will display all of the scenes you have created. Selecting **[New]** will add a new scene and selecting a specific scene will allow you to edit the settings for the selected scene.
16. **X** – This button closes the dialog. To open the dialog again use the key which is assigned to the **Dialog** (NumPad 0 by default) function that normally opens the Main Dialog.





## The Movie Dialog

The image above shows the movie dialog that appears when you click the **Movies** button. This dialog allows you to create one or more movies to contain multiple scenes.

1. **Movie** – Enter the name of you movie here (after clicking the **New** button)
2. **Movie List** – This list nox will contain the names of the movies you have created.
3. **New** – Click this button to create a new movie.
4. **Del** – *Not yet implemented.*
5. **Copy** – Allows to to save your movie using the external program **FinalCut** included with this release.
6. **Save** – Saves the movie and associates any scenes in the scene list with the movie itself.
7. **Close** – Closes the movie dialog. You may also close the movie dialog by selecting the **Movies** button in the create dialog.



## The Cuts Dialog

The image above shows the cut dialog that appears when you click the **Cuts** button. This dialog allows you to add scene fades and text to any scene you create. It is important that you select **[None]** if you don't want to have a scene cut associated with a particular scene. For example if you simply want to fade in on the first scene, choose your settings and click Save Scene but remember to select **[None]** before you save your next scene. You can always go back and change it if you forget.

To close this dialog when it is open just click on the **Cuts** button again.

1. **Cut Text** – Enter the text you wish to appear during the cut in this box
2. **Duration Secs** – Enter a value for the number of seconds this cut should last.
3. **Cut Type** – This list box contains all of the various cut types supported by ARMA. Select which one you want to apply to the current scene.

As you can see in the image below, you can have both the movies and cuts dialogs open at the same time.



It may help to watch [this video](#) before attempting to create your first movie.

### Quick steps to create a movie

1. In the Arma Mission Editor, add your 'actors' and vehicles while in the MISSION type (not Intro or Outro)
2. Once you have done this and are ready to start filming, select [Create] from the Main Dialog scene list and select a subject from the subject list.
3. Click Create.
4. Click Movies.
5. In the Movie dialog click **New**.
6. Enter a name for your movie and click **Save** <- **Important!**
7. Close the movie dialog if you wish.
8. If you want to add a fade cut click the **Cuts** button.
  - a. In the first text box enter the text (if any) you want to appear during the cut.
  - b. Enter a value for the duration of this cut (zero is acceptable and will still perform the cut)
  - c. Select a type from the list box.
  - d. Click **Save Scene**.
  - e. Select [None] in the cut type list.
  - f. Close the cuts dialog by clicking the **Cuts** button again.
9. Move the camera using the sliders and selecting the other options as desired.

10. Make sure **[New]** is selected in the scene list then click **Save Scene** when you are happy with the camera position.
11. Repeat as often as desired until you have set all of your scenes.
12. Open the movie dialog and click **Save**.
13. Click on the **Main Dialog** button.
14. You should see your movie listed here, click it and watch the playback.
15. When finished viewing the playback, hit the key you have assigned to the **Dialog** (default NumPad 0) to return to the Main Dialog and click **Cut!**. The movie won't end immediately but will end when the current scene finishes.
16. You can return to adjust the movie if needed or to save it to a script by selecting **[Create]** again. This will return you to the create dialog.
17. If you want to output the movie script, make sure **FinalCut** is running and that you have clicked on the 'Start Capture' button... Once this is done click on the **Movies** button then click on **Copy**. Minimize or alt-tab out of Arma to see your script listed in FinalCut. Save it to a file!