



## V1.2 - Plugin Overview

# Overview

Tired of wrestling with the default AE camera? HandyCam simplifies every aspect of animated cameras in AE.

HandyCam has been designed to bring the best aspect of previous plugins like *Malty's Camera Rig* and the default After Effects rig together with our own little twist in order to get the most control with the least issues.

The following Sections cover installing HandyCam and setting it up, for a guide and breakdown of each of the controls please head to the next page.

Thank you for purchasing HandyCam and we at PluginEverything hope you enjoy. If you have any questions, concerns, comments or considerations please feel free to email us at [hello@plugineverything.com](mailto:hello@plugineverything.com), tweet us at [@plug\\_everything](https://twitter.com/plug_everything) or submit a support ticket through [aescrpts.com](https://aescrpts.com).

# Installation

**HandyCam** by **Plugin Everything** uses expressions and an AE Effect and so must be installed as an effect

## Mac:

/Applications/Adobe After Effects [version]/Plug-ins/

## Windows:

\Program Files\Adobe\Adobe After Effects [version]\Support Files\Plug-Ins\

# Setup

- Create a Null layer
- Apply the Effect **HandyCam** and click the **Setup** button to initialise HandyCam
- If you have not already, click the *Register* button at the top of the effect to register your copy and get access to the full featured **HandyCam**.

# Controls

## Orbit

- X, Y, Z
- Cam Orients Controller
- Advanced
- Order

## Look At

- Target
- Offset
- Local Transform
- X, Y, Z

## Position Offset

- X, Y, Z

## Lens

- Depth of Field
- Enable
- Aperture
- Blur
- Blur Quality
- Focus Distance
- Focus Layer
- Focal Length (mm)
- Dolly Zoom

## Wiggle

- Frequency
- Amplitude Handheld
- Amplitude Focus

## Utility

- Refresh Expressions
- Bake Expressions
- Duplicate Rig
- Link Selected Camera

## Setup

fx HandyCam		Reset	Register	About...
Orbit	X	0x+0.0°		
Orbit	Y	0x+0.0°		
Orbit	Z	0x+0.0°		
	Cam Orients Controller	<input checked="" type="checkbox"/>		
Advanced	Order	YXZ		
Look At	Target	2. Handy	Source	
Look At	Offset	0.0, 0.0, 0.0		
Local Transform	X (Truck)	0.00		
Local Transform	Y (Pedestal)	0.00		
Local Transform	Z (Dolly)	0.00		
Position Offset	X	0.00		
Position Offset	Y	0.00		
Position Offset	Z	-2666.67		
Lens	Depth of Field			
Lens	Enable	<input type="checkbox"/>		
Lens	Aperture	25.30		
Lens	Blur	100.00%		
Lens	Blur Quality	Fast Rectangle		
Lens	Focus Distance	2666.76		
Lens	Focus Layer	None	Source	
Lens	Focal Length (mm)	50.0		
Lens	Dolly Zoom	<input type="checkbox"/>		
Wiggle	Frequency	0.00		
Wiggle	Amplitude Handheld	0.00		
Wiggle	Amplitude Focus	0.00		
Utility				
Utility		Refresh Expressions		
Utility		Bake Expressions		
Utility		Duplicate Rig		
Utility		Setup		

## Orbit

### X, Y, Z

- The X, Y and Z controls give the user the ability to orbit the camera around the controller object, much like Maltys camera rig the orbit controls rotate or pivot to allow fluid and easy orbiting shots.
- You may notice that the Orbit controls don't rotate in quite the same way as the standard orientation controls on an AE object, that is because normal AE objects and layers use a rotation order of X>Y>Z
  - This means that they rotate on the X axis first, then the Y, then finally the Z axis, while this works fine, it does mean that orbiting around (left and right) the object would not work correctly the moment you orbit up and down
  - HandyCam solves this problem by using the rotation order of Y>X>Z, meaning that rotating the X will never affect the way Y works
  - You will always orbit left and right on the Y, and up and down on the Z

### Cam Orients Controller

- This checkbox specifies whether the Cameras controls affect the Controller's orientation
- If the Control is on, then the Controller null will rotate to always look at the camera, if it is off then the Controller will use it's standard orientation
- The reason this exists is to allow the user to move the entire rig (moving the controller) in "local space", i.e when the controller faces the camera you can easily move the camera left or right ect, without having to mess around too much
- And vice versa, if the Control is turned off, then moving the camera in "world space" becomes very easy.

## Advanced

### Order

- This controller is one that users should not touch unless they understand rotation orders and gimbals very well.
- That subject is beyond this guide and so it won't be explained here, however you have the ability to control the orbit rotation order using this Control

## Look At

### Target

- The Target Control specifies what the camera should look at

- If set to none then the camera looks straight ahead, with it's rotation and orientation properties being the only thing affecting the cameras rotation
- If it's set to a layer, then the camera will look at that layer no matter where it is in 3D space
  - Note that the rotation and orientation properties of the camera itself will still work, applying rotation relative to the cameras rotation from the target Control

## Offset

- The Target Control gets the position to look at from the layer's root, while this works great most of the time it means that sometimes it's not looking exactly where you want it
  - For example a solids root is in the bottom right corner, not the center
- The Offset controls allow you to offset the look at position relative to the target, i.e you can adjust the target so that the camera looks at the center of a solid and not the corner

## Local Transform

### X, Y, Z

- What if you want to be able to track the camera left or right, or dolly in and out, without the camera rotating? That's where the Local Transform Controls come in
- The X (Truck), Y (Pedestal) and Z (Dolly) sliders allow you to move the camera in local space (the way the camera is looking) without rotating it
  - I.e if you had the look at target set to a layer, and moved the Controller (moving the camera as well), the camera would rotate to continue looking at that target
  - While that may be helpful in a lot of situations, the Local Transform controls give you the ability to move the camera in the same way without it continuing to try and look at the target
- Note that all controls here are relative to the cameras orientation, X always moves Left and Right, Y is always Up and Down, and Z is always In and Out from the perspective of the camera

## Position Offset

### X, Y, Z

- The Position Offset controls act as the cameras relative position
- If all set to 0, the camera will be in exactly the same position as the Controller, by using these controls you specify the cameras position in relation to the Controller

- This works much like a child object of a parent layer, in this case the Camera is effectively parented to the Controller and the Position Offset controls are how you specify it's child position

## Lens

### Depth of Field

#### Enable

- This control enables the DoF, i.e specifies whether to apply it

#### Aperture

- This controls the aperture of the camera

#### Blur

- Controls the blur percentage amount

#### Blur Quality

- A drop down list allowing you select the quality of blur you want

#### Focus Distance

- The specified Focus distance (i.e the point that doesn't blur when the camera is using Depth Of Field)

#### Focus Layer

- The focus layer works much like Target in the Look At group
- It specifies the layer you want the camera to always focus on, the Controller calculates the distance between the camera and the target layer, and adjusts the Focus Distance to always keep that object in focus
- With this turned the Focus Offset Controller becomes active, allowing you adjust the relative offset of the calculated focus distance

### Focal Length (mm)

- Something unique to HandyCam is the ability to control the focal length, or lens length, of the camera using a slider that specifies millimeters
- By default it's set to 50mm (standard film shooting), but this can be altered to give you extreme FoV, or orthographic

## Dolly Zoom

- With this control ticked, the Focal Length will affect the cameras position
- What this means is that while the lens length is changed, what is in frame stays exactly the same
- This allows you to very easily pull off shots like the classic vertigo created by Hitchcock and used throughout many films to show danger or extreme emotion

## Wiggle

### Frequency

- HandyCam comes shipped with some very nice wiggle presets out of the box
- Using the wiggle controls the user can quickly and easily create the kind of wiggle you'd see in something like a handheld shot or when the operator is trying to adjust focus quickly

### Amplitude Handheld

- This control specifies how much handheld wiggle you want in your camera's position
- Note that the handheld wiggle moves the camera in relation to it's orientation, i.e left, right, up and down, never in relation to world space
- This helps to keep the camera looking grounded and making sure it looks handheld, it also moves very little forwards and backwards as this motion is not seen very often in handheld shots

### Amplitude Focus

- This controls how much you want the focus distance to shift

## Utility

The Utility group has a set of buttons that give extra functions the rig

### Refresh Expressions

reapply the expressions underlying HandyCams functionality in case a bug has occurred or something has been modified

## Bake Expressions

give the user the ability to bake the expressions, remove the effect, and send the project off, this is useful for situations such as sending to a render farm, where you don't have 100 copies of HandyCam to use

## Duplicate Rig

Does what it says on the tin and duplicates the rig. Unfortunately due to the way the rig is setup, duplicating it with Cntrl\Cmd+D will not work correctly, and so you must use this if you wish to copy the HandyCam rig

## Link Selected Camera

HandyCam's control data (values and keyframes) are stored on the effect itself and are applied to any camera via expressions. For this reason you can easily swap out the current camera. With the new camera you want to use selected, click this button. This will link up all the expressions and now you're good to go.

## Version 1.2 - 2020 / 05 / 27

- Fixed expression error when no target is selected and using the new javascript expression engine
- Duplicate Rig now intelligently renames the duplicated rig to avoid expression errors

## Version 1.1 - 2019 / 07 / 31

- Added *Local Transform Controls* allowing the rig to track left and right
- Added *Cam Orients Controller* checkbox to create easier movements in the camera's local space
- Added depth of field quality controls



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