

Virtual Camera Plugin Quick Start Guide

This document describes the operation of my Virtual Camera plugin.
I will use VC for Virtual Camera from now on.
This plugin will allow you control over the camera.
It also works during replay mode.

Installation

Copy the plugin into the Resources/plugins directory.

VC Control Panel



These buttons are fairly straightforward and logical to use.

- X Increase/Decrease camera X offset.
- Y Increase/Decrease camera Y offset.
- Z Increase/Decrease camera Z offset.
- Hdg Increase/Decrease camera Heading offset.
- Ptc Increase/Decrease camera Pitch offset.
- Rll Increase/Decrease camera Roll offset.
- Zm Increase/Decrease camera Zoom Ratio.

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These require a bit more of an explanation.

Set VC Data	This updates the VC with the current camera location.
Clear All Data	This clear all the VC data so that you can start from scratch.
Start	This start the VC operation.
Stop	This stops the VC operation.
Load	This will load a previously saved state file for all cameras
Save	This will save the state of all cameras to a file.
[Note the file is called VirtualCamera.dat and is saved in the current aircraft directory.]	
Create INI File	Create INI file from current camera data. This also writes any hotkey defines. If you have changed these using PluginAdmin then the new ones will be written to the file. (This is created in the current aircraft directory.)
Clear Data	This only clears the X, Y, Z, P, H and R offsets.

The camera Up/Down arrow selectors will allow you to cycle through the cameras.
The camera type Up/Down arrow selectors will allow you to cycle through the camera types.

The camera types are currently defined are :-

NOT_SET
TOWER
RUNWAY
CHASE
FREE1
FREE2
SPOT
FULLSCREEN1
FULLSCREEN2
AIRCRAFT0
AIRCRAFT1
AIRCRAFT2
AIRCRAFT3
AIRCRAFT4
AIRCRAFT5
AIRCRAFT6
AIRCRAFT7
AIRCRAFT8
AIRCRAFT9

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The Look At Up/Down arrow selectors will allow you to cycle through an aircraft that can be used as a camera target.

NOT_SET
AIRCRAFT0
AIRCRAFT1
AIRCRAFT2
AIRCRAFT3
AIRCRAFT4
AIRCRAFT5
AIRCRAFT6
AIRCRAFT7
AIRCRAFT8
AIRCRAFT9

The Cont/Step check box operates in this manner.

If it is checked then pressing a movement button will move the camera continuously. You need to press either middle blank button to stop it. You can press the same button again to speed up the movement.

If it is unchecked then pressing a button will step the camera by the value defined in the Size edit box.

If the cycle check box is checked then the camera will cycle and wait for the time in the Delay edit box.

The delay time is in seconds.

If the type of camera is NOT_SET then that camera will be skipped.

The Camera Offsets fields show the current VC offsets.

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VC Camera Select Panel

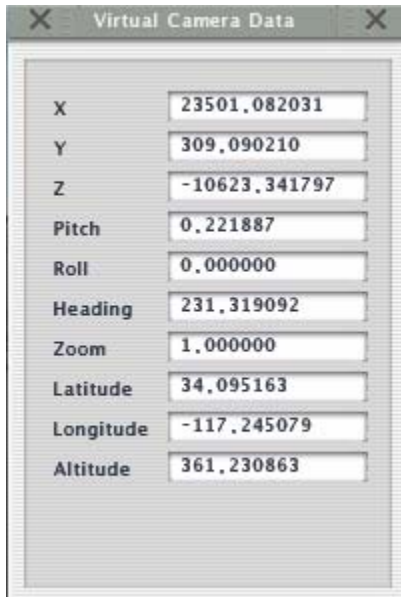


This allows for the quick selection of a camera and does not take up much screen space. Any cameras that have a type of NOT_SET will be grayed. The title will show which camera is currently selected. The first button will be either Indicate On or Off depending if the camera is running or not.

Clicking on it will toggle its state. When it is Off all camera buttons will be disabled.



VC Camera Data Panel



This shows the current camera data offsets and I will be adding to this if required. I added Lat/Lon/Alt so that you know where you are.

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Virtual Camera Navigation Panel



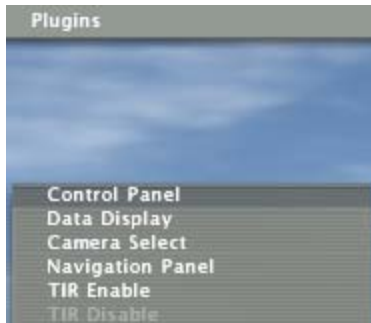
This panel will allow the camera to be located at an Airport, VOR etc. For example set the Nav Type to Airport by using the up/down arrows. Type KSBD into the ID text field and press the Find button. The panel will be updated with the Altitude, Latitude and Longitude. Press the Go To button and the camera will be positioned at that Airport location.

You can also go to any Latitude and Longitude by setting the Nav Type to Unknown. Just type in the Latitude and Longitude and press the Go To Button. Enter a minus value for a Western Longitude.

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TrackIR (NOTE This will not work until my profile has been activated)

On Windows there are 2 extra menu options, TIR Enable and TIR Disable.



Selecting TIR Enable will change the VC Control Panel as shown below. It adds a check box beside the X, Y, Z, P, H and R text fields. It also adds a Multiplier text field.



When a check box is enabled the TrackIR data is used to update that field.

This allows 1 to 6 Degrees of Freedom.

The example above shows that only the Pitch, Heading and Roll are being updated from the TrackIR data.

The TrackIR multiplier is applied to the X, Y, and X fields only.

This allows for fine control of the X, Y and Z camera movement.

On non windows systems or if TrackIR is disabled the TrackIR Multiplier text is replaced with the "TrackIR not found or it is disabled" text.

If you forget to start the TrackIR Application then the Enable will fail.

There is no need to exit XPlane.

Just start the TrackIR Application and then try the Enable again.

Written by Sandy Barbour – 11th December, 2005

Updated by Sandy Barbour -Saturday, 15 April 2006

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Mode of Operation

Select Plugins/Virtual Camera/Control Panel

You will see this panel.



Use the Up/Down Camera Select arrows to select the camera.
Use the Up/Down Camera Type Select arrows to select the camera type.
The camera will switch to that view.

This only applies to the non aircraft types.
If you select a non aircraft type then you need to wait until the camera stops moving.
Then press the Set VC Data Button to load that data into the VC.

It is a good idea to setup all the non aircraft type with the camera stopped.
If the camera is running then setting up these types will not work properly.

The aircraft types are different and need to be setup with the camera started.

Use the movement keys to position the camera the way you want it.
Enable the Cont/Step check box if you want the camera to move continuously.
Disable the Cont/Step check box if you want to step the camera.
Change the Size edit field to vary the step size.

All of this data can be loaded from a VirtualCamera.ini text file or a saved VirtualCamera.dat binary file, see later in the document.

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Once you have setup your cameras press the Save button.

This will save all the camera data to the VirtualCamera.dat binary file.
This file is located in the current aircraft directory.

Now you can press the Start button to start the VC.

If you are happy with your selections close the panel by clicking on either cross on the title bar.

Select Plugins/Virtual Camera/Camera Select

This will display the mini panel used for camera selection.

Use this to switch cameras.

Only camera buttons that are enabled will select a camera.

If you want to see what the camera data is, select Plugins/Virtual Camera/Data Display.

Use Look At to select an aircraft for the camera target.
The camera will now track this aircraft.

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Using the VirtualCamera.ini text file

If you want the cameras to be setup when you load an aircraft or at startup you can achieve this by creating a VirtualCamera.ini text file.

This should be placed in the Aircraft directory that it is intended for.

Note

If the VC plugin can't find a VirtualCamera.ini in the aircraft directory it will look for one in the plugins directory.

The format of this file is shown below.

Use ; for a comment line

Do not use comments in a definition line.

```
[CONFIG]
CameraStopSelectsFrontView = 0
HotKey = F9
HotKeyModifiers = Shift+Down
```

```
[CAMERA1]
Type = 9
XOffset = 10
YOffset = 0
ZOffset = 10
HeadingOffset = -40
PitchOffset = 0
RollOffset = 0
ZoomRatio = 0
LookAtAircraft = 0
HotKey = F1
HotKeyModifiers = Shift+Down
```

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NOTE

CameraStopSelectsFrontView = 0

This is the default mode, when the camera is stopped the view will be the external view before the camera was started.

CameraStopSelectsFrontView = 1

In this mode, when the camera is stopped the view will be set to the cockpit front view. Also the zoom cannot be changed from 1.0.

This mode was introduced so that camera stations could be setup in a custom cockpit. Stopping the camera will now allow the aircraft to be flown from the cockpit. Start the camera and select a station camera and it will go back to that position.

HotKey = F9

Use this to define the hotkey to be used.

If this is defined in the CONFIG section then it will be the hotkey used to toggle the camera on and off.

HotKeyModifiers = Shift+Down

Use this to define any modifiers that will be used with the hotkey.

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Notes

You only need to include cameras that you want to use.
Any camera not in this file will default to NOT_SET for its camera type.

When using the VirtualCamera.ini text file you need to perform this procedure at startup or after loading a new aircraft.

If the camera type is not an aircraft type you need to select that camera and then wait until the camera stops moving then press the Set Camera Data button.

Failing to do this will mean that non aircraft camera types will not display the correct view.

Once you have done that you can press Save to save that to the binary file.

If you have only the VirtualCamera.dat binary file you don't need to do this, as long as you are at the same airport that the VirtualCamera.dat file was saved at.

If you change the location, stop the VC and then use the Set VC Data button to update the VC for that location. (Only applies to Non Aircraft camera types).

There is a mechanism that if there is no VirtualCamera.ini file it will load the VirtualCamera.dat binary file if it is present.

If the plugin can't find either file in the current aircraft directory it will look for these files in the plugins directory.

If no files can be found it will report a warning in the Error.out or Log.txt file.

You can ignore this if you don't have any files for that aircraft or in the plugins directory.

However if you do have a VirtualCamera.ini file and you don't see the proper cameras, check the Error.out or Log.txt file for parsing errors.

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Example VirtualCamera.ini file.

```
; For Type use
; 0 NOT_SET
; 1 TOWER
; 2 RUNWAY
; 3 CHASE
; 4 FREE1
; 5 FREE2
; 6 SPOT
; 7 FULLSCREEN1
; 8 FULLSCREEN2
; 9 AIRCRAFT0
; 10 AIRCRAFT1
; 11 AIRCRAFT2
; 12 AIRCRAFT3
; 13 AIRCRAFT4
; 14 AIRCRAFT5
; 15 AIRCRAFT6
; 16 AIRCRAFT7
; 17 AIRCRAFT8
; 18 AIRCRAFT9

; For LookAtAircraft use
; 0 NOT_SET
; 1 AIRCRAFT0
; 2 AIRCRAFT1
; 3 AIRCRAFT2
; 4 AIRCRAFT3
; 5 AIRCRAFT4
; 6 AIRCRAFT5
; 7 AIRCRAFT6
; 8 AIRCRAFT7
; 9 AIRCRAFT8
; 10 AIRCRAFT9
```

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; For HotKey use
; BACK
; TAB
; CLEAR
; RETURN
; ESCAPE
; SPACE
; PRIOR
; NEXT
; END
; HOME
; LEFT
; UP
; RIGHT
; DOWN
; SELECT
; PRINT
; EXECUTE
; SNAPSHOT
; INSERT
; DELETE
; HELP
; 0
; 1
; 2
; 3
; 4
; 5
; 6
; 7
; 8
; 9
; A
; B
; C
; D
; E
; F
; G
; H
; I
; J
; K
; L
; M
; N

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; O
; P
; Q
; R
; S
; T
; U
; V
; W
; X
; Y
; Z
; NUMPAD0
; NUMPAD1
; NUMPAD2
; NUMPAD3
; NUMPAD4
; NUMPAD5
; NUMPAD6
; NUMPAD7
; NUMPAD8
; NUMPAD9
; MULTIPLY
; ADD
; SEPARATOR
; SUBTRACT
; DECIMAL
; DIVIDE
; F1
; F2
; F3
; F4
; F5
; F6
; F7
; F8
; F9
; F10
; F11
; F12
; F13
; F14
; F15
; F16
; F17
; F18

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; F19
; F20
; F21
; F22
; F23
; F24
; EQUAL
; MINUS
; RBRACE
; LBRACE
; QUOTE
; SEMICOLON
; BACKSLASH
; COMMA
; SLASH
; PERIOD
; BACKQUOTE
; ENTER
; NUMPAD_ENT
; NUMPAD_EQ

; For HotKeyModifier use
; Separate with a +
; e.g. Shift+Down
; Shift
; Alt
; Control
; Down
; Up

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[CONFIG]

CameraStopSelectsFrontView = 0

HotKey = F9

HotKeyModifiers = Shift+Down

; Tower

[CAMERA1]

Type = 1

XOffset = 0.000000

YOffset = 0.000000

ZOffset = 0.000000

HeadingOffset = 0.000000

PitchOffset = 0.000000

RollOffset = 0.000000

ZoomRatio = 0.000000

LookAtAircraft = 0

HotKey = F1

HotKeyModifiers = Shift+Down

; Runway

[CAMERA2]

Type = 2

XOffset = 0.000000

YOffset = 0.000000

ZOffset = 0.000000

HeadingOffset = 0.000000

PitchOffset = 0.000000

RollOffset = 0.000000

ZoomRatio = 0.000000

LookAtAircraft = 0

HotKey = F2

HotKeyModifiers = Shift+Down

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```
; Chase  
[CAMERA3]  
Type = 3  
XOffset = 0.000000  
YOffset = 0.000000  
ZOffset = 0.000000  
HeadingOffset = 0.000000  
PitchOffset = 0.000000  
RollOffset = 0.000000  
ZoomRatio = 0.000000  
LookAtAircraft = 0  
HotKey = F3  
HotKeyModifiers = Shift+Down
```

```
; User Aircraft  
[CAMERA4]  
Type = 9  
XOffset = 0.000000  
YOffset = 0.000000  
ZOffset = 0.000000  
HeadingOffset = 0.000000  
PitchOffset = 0.000000  
RollOffset = 0.000000  
ZoomRatio = 0.000000  
LookAtAircraft = 0  
HotKey = F4  
HotKeyModifiers = Shift+Down
```

```
; User Aircraft looking at multiplayer aircraft 1  
[CAMERA5]  
Type = 9  
XOffset = 0.000000  
YOffset = 0.000000  
ZOffset = 0.000000  
HeadingOffset = 0.000000  
PitchOffset = 0.000000  
RollOffset = 0.000000  
ZoomRatio = 0.000000  
LookAtAircraft = 2  
HotKey = F5  
HotKeyModifiers = Shift+Down
```

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; Multiplayer Aircraft 1 looking at multiplayer aircraft 2.

[CAMERA6]

Type = 10

XOffset = 0.000000

YOffset = 0.000000

ZOffset = 0.000000

HeadingOffset = 0.000000

PitchOffset = 0.000000

RollOffset = 0.000000

ZoomRatio = 0.000000

LookAtAircraft = 3

HotKey = F6

HotKeyModifiers = Shift+Down