

Time	Subject – Total video time 01:02.00
	Introduction: <ul style="list-style-type: none"> - creation: VC dashboard (dummy instrument panel placeholder) - creation: VC instrument panel (where the gauges are placed upon by FSX) - creation: VC dashboard texture – name: - creation: VC instrument panel texture – name:
00:00	GIMP - Creating an dummy texture for instrument panel:
	<ul style="list-style-type: none"> - [File],[New] - perfect square 512x512 - Indexed 8 bit – bitmap format - background color: black (000000Hex) - put some text on it for orientation purposes later on - [File],[Export] - export the file to the ..\textures folder - name it \$P1.bmp ← \$ is place holder image on which the gauges are positioned
05:00	Start FSX-SDK Imagetool:
	<ul style="list-style-type: none"> - [File],[Open] \$P1.bmp from Blender project textures folder - [Image],[Format],[8 bits indexed] - [File],[Save as] \$P1_IT.bmp to the ..\textures folder - [Image],[Format],[DXT1] - [File],[Save as] \$P1_IT.dds to the ..\textures folder
07:50	Gimp - Create pilot visible texture for the dashboard:
	<ul style="list-style-type: none"> - [File],[New] - perfect square 512x512 – RGB - 24-bit bitmap - resolution 320 DPI - give it a brown background (894219 hex) - [Filter],[Noise],[RGB noise filter] - [_] Independant RGB, [0.15], [Ok] - [Image],[Mode],[RGB] – check if this is in RGB mode - [File],[Export as] panel1Texture.bmp - advanced option, 24 bit r8g8b8 → into your textures folder Close Gimp
	Open Imagetool: <ul style="list-style-type: none"> - [File],[Open]panel1Texture.bmp - [Image],[Format],[24 bits RGB] - [File],[Save as]panel1Texture_IT.bmp → into your textures folder Close Imagetool:
12:50	Start Blender:
	<ul style="list-style-type: none"> - open previous model file
15:00	3D View, Toolbar-Left,[Blender2FSX],[FSX File Properties]: <ul style="list-style-type: none"> - [Initialize Toolset] - Apply mirror modifier to body - Save copy of this file to : testplane_Vxx_VC_BASEMODEL.BLEND - Save copy of this file to : testplane_Vxx_EXTERIOR_BASEMODEL.BLEND This gives you 2 files to work from: 1 for the outside of the aircraft and 1 for the virtual cockpit
17:00	Continue to work – only in the VC model from here on!
	3D View: <ul style="list-style-type: none"> # Get rid of all elements of the aircraft that you can not see from the VC-viewpoint. - This is done, since modeling the inside of a VC can be very polygon consuming! - Remove: landing gear(struts, rims, tires)

20:00	Installation VC instrument panel: - add cube as dashboard
28:00	- add an inset for the instrument panel - [Ctrl-P][Object] to parent the instrumentpanel → dashboard -> fuselage
33:00	UV-unwrapping the instrument panel to apply dummy texture
35:15	3D View: - select panel1, - [Tab] edit mode - [A] select all Panel-Properties,[Material]: - [New] to add new material to the instrument-panel - Name: \$panel1Color - Diffuse 100% - Specular:0,10 [FSX Material Parameters]: - Frame buffer blend: transparent
35:00	
35:20	[Enhanced parameters]: - [x] No Base Material Specular [Aircraft material Params]: - [x] is virtual cockpit panel texture >
36:10	Panel-Properties,[Texture:] - [New] to add new texture to the instrument-panel material - Name: VC_\$P1Texture - Type : image or movie, - [Open] : \$P1(_IT).bmp TIP: Go to the [Preview] section: Check if it is the right texture file! [Mapping]: - Coordinates : UV - Map : UVMap
37:20	3D View: - Create a 2 nd window and make it an UV/Image-Editor Window: UV/Image-Editor Window: {??}[New] - select \$P1(_IT).BMP from the list >> texture alignment issue - [A] to select all - [R][Z] to rotate the Uvmap image around the Z-axis and align the texture with the panel. - [Ctrl-A][Scale] to reset the model scale back to (1,1,1)
	Save the file

39:00	Export the virtual cockpit model with XToMDL to the FSX ...\model folder
43:00	Open Windows Explorer: - copy the ...vc_model.mdl-files to the ..\model folder
44:00	- adapt model.cfg, interior entry for the “Virtual Cockpit model”.mdl-filename Copy the created virtual cockpit textures to the relevant FSX-texture folders: - panelTexture1(_IT).bmp to the ..\panel folder - \$P1(_IT).bmp to the ..\Texture and the ...texture.1 folder - \$P1(_IT).dds to the ..\Texture and the ...texture.1 folder ← not really needed
45:00	FSX – Panel.cfg adjustment
50:00	# Just leave everything in relation to the [Windows] sections in there for your convenience # For now only modify the [VCockpit01] entries. Search the [VCockpit01] entry: file= panelTexture1(_IT).bmp // the name of visible the dashboard texture background_color=0,0,0 // the default background color (black = transparent) size_mm=512,512 // texture size visible=1 // is this texture visible (1) or not(0) pixel_size=1024,1024s // ?? texture= \$P1(_IT).bmp // the name of invisible FSX placeholder texture // gauge00=Cessna172!Airspeed, 20,30,100,450 // top_x, top_y, width_x, width_y #Set the gauge width/height ratio to match the width/height ratio of your Blender instrument-panel object you have used inside the virtual cockpit.
51:30	FSX opening and testing of the VC
54:00	Blender: re-exporting exterior model - copy the newly exterior model to the ...model folder
57:00	FSX – Aircraft.cfg – viewpoint location, modification: - find [Views] - eyepoint= -4.0, 0.0, 1.3 // (feet) Y,X,Z - longitudinal, lateral, vertical distance from reference datum
	TIP: If you want an exact eye (x,y,z) coordinate, here is how you can do it: 3D View: - add an Empty to the virtual cockpit (this will not be visible inside your model or virtual cockpit) - move this empty to the 3d location where your virtual eyes are going to be - [N] to bring up the Toolbar-Right 3D View,Toolbar-Right,[Transformation],[Location]: - here you can read the exact X,Y,Z coordinates of the (viewpoint) Empty - put these coordinates in the aircraft.cfg file, behind the [Views],eyepoint parameters.. format Y,X,Z
	FSX - Testflight
1:02:00	End of this video