BJ Camera Manager

Toggle Aux		Start Render	
Iray Preview Main		Iray Preview Aux	
Rename Cameras		Group Cameras	
+ Camera		Hide Cameras	
	>		
Camera 1	Main	Aux	Focus
Camera 2	Main	Aux	Focus
Camera 3	Main	Aux	Focus
Camera 4	Main	Aux	Focus
Camera 5	Main	Aux	Focus
Camera 6	Main	Aux	Focus
Camera 7	Main	Aux	Focus
Camera 8	Main	Aux	Focus
Camera 9	Main	Aux	Focus
Camera 10	Main	Aux	Focus

User Manual

BJ Camera Manager

Figure 1: Overview of the plugin.

Figure 2: Aux Pane toggled off results in related buttons being disabled.

Overview

BJ Camera Manager is a plugin that gives you faster, more direct access to all your cameras. It comes in its own pane and can be placed or docked anywhere. It is fully integrated into the UI of Daz Studio and interacts seamlessly with your scene in an efficient way (see **Figure 1)**. It is meant to be open most of the time and become an integral part of your work-flow.

Select a camera, send it to the Main or Aux viewport or set the focal distance of the camera to the item selected in your scene. Quickly clean up your clutter by grouping all the cameras, renaming them or hiding them, all at the press of a button.

Additional functionality includes setting your viewports to Iray preview, toggling your Aux pane and creating a new camera in one click.

This plugin was born out of my own productivity needs as a long time Daz Studio content creator. I am confident that this will bring considerable convenience to you as well. Let's dive right into its functionality in detail.
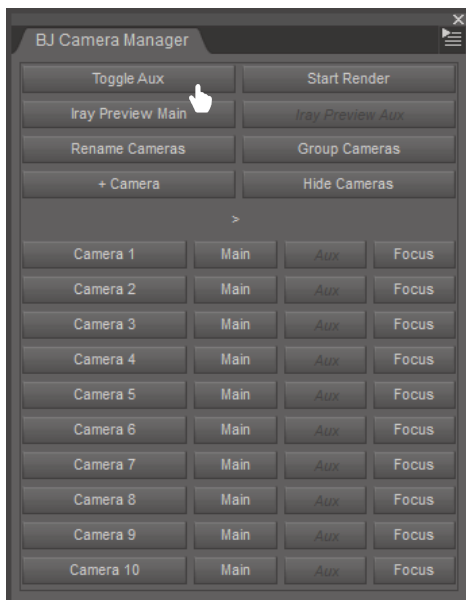
Toggle Aux

This button hides or shows the Aux pane . If it is hidden, all the related buttons in the plugin UI will be disabled (see **Figure 2**).

How is this useful? If you have your Aux Pane open on another monitor, you could quickly hide it to see whatever is behind it. Maybe your saved renders or reference images in your image browser of choice, or a web page. There is another advantage which I will show you once we get into keyboard shortcuts later in the manual.

The case for the Aux viewport

This is better demonstrated in a video. But the main advantage is faster interaction speed while Iray Preview is running. If you do everything in the Main viewport while it is set to Iray Preview, interacting with your scene, i.e. posing your figure, is very sluggish. On the other hand, if the Iray Preview is running in the Aux viewport while you're working in the Main viewport, it is a much more pleasant and snappy experience. It is still slower than interacting with your scene when nothing is rendering (more so in complex scenes), but it is still a lot faster and makes it viable to work and preview at the same time. If you have the space to put the Aux pane

somewhere at a reasonable size, especially if you have multiple monitors, you will surely love this improved workflow.

Depending on your setup, it may also allow for a larger preview than what you have in the main viewport, which helps with getting a better view of your scene.

Never interact with your scene inside of the Aux viewport. This is extremely slow. Use it purely as a preview and never touch it.
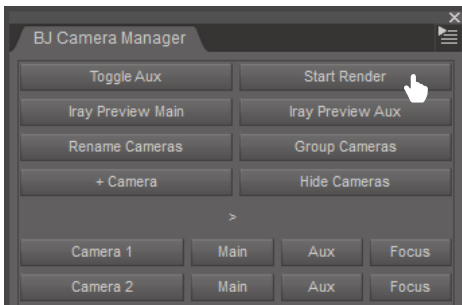
Start Render

This button starts a full render using intelligent behavior. If one of your viewports is set to Iray Preview, the render will always use the camera that is set there. Otherwise, if the Aux pane is open, the render will start from the Aux viewport. If it is hidden, the render will start from the Main viewport.

In conjunction with the Toggle Aux button, this also allows to start a render from the Main viewport even when the Aux pane is currently open. Just toggle it off and hit the Start Render button. Toggle it on again afterwards.

I don't recommend doing this. Just use the Aux viewport for anything related to rendering and the Main viewport for interaction. You will be much happier!
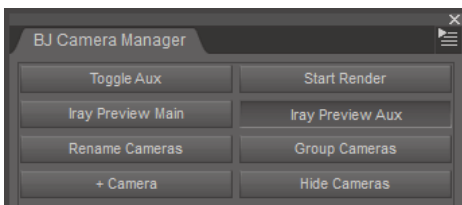

Figure 3: Start Render button starts a render based on what is going on in your viewports.

Iray Preview Main / Aux

Set your Main or Aux viewport to Iray Preview. The presumption is that you don't want to render in both at the same time, so I am toggling Aux off when you start Main and vice versa. You can also "stop" by hitting the button again. The respective viewport will be set back to Texture Shaded.

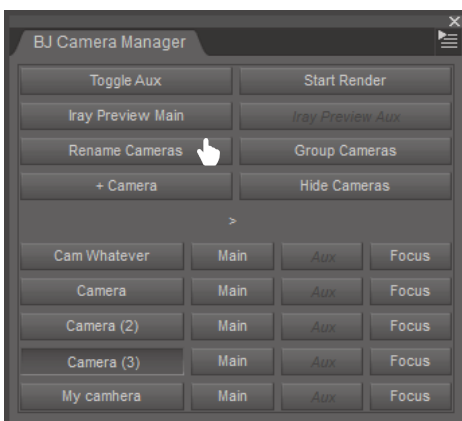**Figure 4**: Iray Preview is currently on in the Aux viewport, easily visible by the checked button.

Rename Cameras

Made a bit of a mess with your cameras? Or maybe you imported a scene that came with prenamed cameras. Hit this button and all your cameras will be renamed Camera 1, Camera 2 and so on. This changes their labels **and** their names. If you were ever bothered that the camera name and label didn't correspond, or perhaps Daz Studio told you that a camera with that name already exists even though you didn't see one in the Scene tab? Hit the button and rejoice!
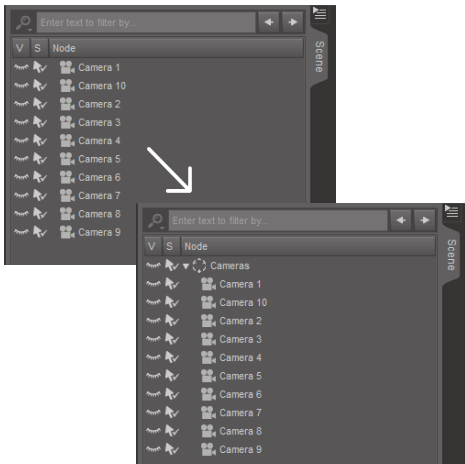

Figure 5: The Rename Camera button gives you a quick rename of all cameras in the scene.

Figure 6: Cameras have been grouped.

Figure 7: Add a new camera to the scene based on Perspective View.

Figure 8: The Hide Cameras button and Main/Aux Swap button. Main and Aux columns have been swapped here, which also swaps the Iray Preview buttons at the top.

Group Cameras

This button adds all the cameras to a group called Cameras. Another measure to declutter the Scene pane in Daz Studio a little bit with one convenient button click.

Note that cameras will be added to that group no matter where it is in your scene. If you made the group a child of some other item, it will remain there. Naturally, if a group called Cameras already exists, no new group will be created.

Be careful if you have cameras that are parented to other items. Say you parented a camera to the head of a figure for some reason. If you hit this button, the camera is unparented from the head and moved to the group instead. While I have made sure that the position of the camera doesn't change, if you move the head now, the camera will no longer move with it. Surely an edge case, but something to keep in mind.
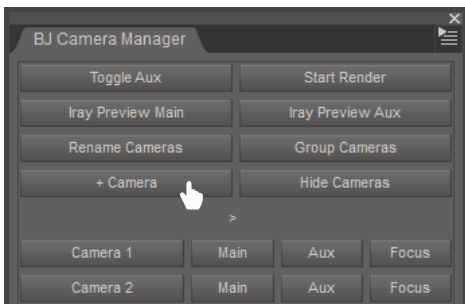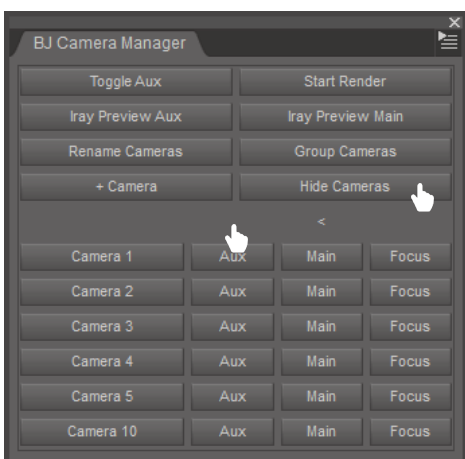
+ Camera

This button adds a new camera based on the Perspective View. Instead of manually adding a new camera, setting its name and label, and telling it to be based on your Perspective View each time, do it all in one click. It will be named Camera 1, Camera 2 and so on, minding all the cameras already in your scene. If a group called "Cameras" exists, the new camera will be added to it right away so you don't have to "Group Cameras" over and over.

The resulting work-flow is satisfying and efficient. Move the Perspective View to an interesting angle, hit the button. Move the Perspective View again, hit the button. You will end up with a slew of cameras in no time. Use the cameras for renders or even just as a reference to check out your work from various angles as you create your scene.

Hide Cameras

This hides all the cameras in the scene. There is no need for them to be visible, it's just visual clutter.

>

This button swaps the Main and Aux columns of the camera list, and the Iray Preview Main / Aux buttons at the top. I noticed that my brain always rebelled a tiny little bit with my Aux pane open on the left monitor and the Aux buttons on the right side. Since I cannot know where you will place or dock your plugin, and where that is in relation to your Aux pane, it seemed sensible to make this configurable. This setting is saved once you set it.

Figure 9: A messy list of cameras to illustrate the sorting algorithm.

Figure 10: Select head and press Focus button.

Camera list

This is the meat and potatoes of the plugin. All your cameras are listed here. Each camera results in a row of 4 buttons. This list is sorted intelligently at all times. It is sorted alphabetically and alphanumerically, with numbers having the precedence. Even multiple groups of numbers are supported (see **Figure 9**).

Not that it matters much, quite frankly. Just rename this mess! Hit that Rename Cameras button.

Note how one glance is enough to know what's going on. Camera 2 is selected. Camera 4 is set in Main viewport. Want to change a setting of the camera active in the Aux viewport? Find the row where the Aux button is checked. It's Camera 5. Select it by clicking on Camera 5 and change your setting.

Let's see what the buttons do in detail.

Select camera

The first button simply selects the camera. This allows for quick access in case you need to change a setting on the camera, say the Focal Length. Or to delete it.

If a camera is currently selected, the corresponding button will appear checked.

Main

Set this camera in the Main viewport. If the camera is currently set there, the button will appear checked. If you click a checked button again, the camera will be "unloaded", meaning the viewport will be set to Perspective View. Use this to easily toggle back and forth between the camera and the Perspective View.

Aux

Same as previous, just for the Aux viewport. This whole column is disabled if the Aux Pane is hidden.

Focus

Sets this camera to focus on whatever item you have selected in the scene. The Focal Distance of the camera is calculated on the fly. The button also enables Depth of Field in the camera settings, as it makes no sense to set the Focal Distance otherwise.

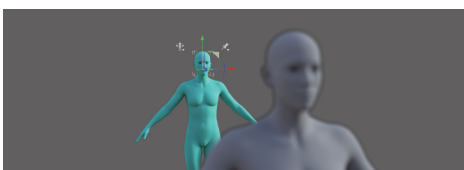**Tip**: For portraits, focus on an eye for best results.

BJ Camera Manager	
Open PDF Manual	
Toggle Aux	;
Toggle Iray Preview	`
+ Camera	Shift+=
Start Render	Ctrl+R
Camera 1 to Viewport	1
Camera 2 to Viewport	2
Camera 3 to Viewport	3
Camera 4 to Viewport	4
Camera 5 to Viewport	5
Camera 6 to Viewport	6
Camera 7 to Viewport	7
Camera 8 to Viewport	8
Camera 9 to Viewport	9
Camera 10 to Viewport	0
Camera 11 to Viewport	Shift+1
Camera 12 to Viewport	Shift+2
Camera 13 to Viewport	Shift+3
Camera 14 to Viewport	Shift+4
Camera 15 to Viewport	Shift+5
Camera 16 to Viewport	Shift+6
Camera 17 to Viewport	Shift+7
Camera 18 to Viewport	Shift+8
Camera 19 to Viewport	Shift+9
Camera 20 to Viewport	Shift+0
Camera 21 to Viewport	Ctrl+Alt+1
Camera 22 to Viewport	Ctrl+Alt+2
Camera 23 to Viewport	Ctrl+Alt+3
Camera 24 to Viewport	Ctrl+Alt+4
Camera 25 to Viewport	Ctrl+Alt+5
Camera 26 to Viewport	Ctrl+Alt+6
Camera 27 to Viewport	Ctrl+Alt+7
Camera 28 to Viewport	Ctrl+Alt+8
Camera 29 to Viewport	Ctrl+Alt+9
Camera 30 to Viewport	Ctrl+Alt+0
Camera 31 to Viewport	Ctrl+Alt+Shift+1
Camera 32 to Viewport	Ctrl+Alt+Shift+2
Camera 33 to Viewport	Ctrl+Alt+Shift+3
Camera 34 to Viewport	Ctrl+Alt+Shift+4
Camera 35 to Viewport	Ctrl+Alt+Shift+5
Camera 36 to Viewport	Ctrl+Alt+Shift+6
Camera 37 to Viewport	Ctrl+Alt+Shift+7
Camera 38 to Viewport	Ctrl+Alt+Shift+8
Camera 39 to Viewport	Ctrl+Alt+Shift+9
Camera 40 to Viewport	Ctrl+Alt+Shift+0
Aux Camera To Main	Ctrl+Alt+Left
Main Camera To Aux	Ctrl+Alt+Right
Persp Camera To Main	Ctrl+Alt+Shift+Right
Persp Camera To Aux	Ctrl+Alt+Shift+Left

Figure 11: Top menu view.

Keyboard shortcuts

The plugin uses a comprehensive set of predefined keyboard shortcuts. The keys used are unassigned in Daz Studio by default so they should work for you out of the box unless you have manually assigned other functions (see **Figure 11**).

You can see these shortcuts in the "BJ Camera Manager" menu that appears in the Daz Studio top menu. These are optimized for a ANSI/US keyboard layout. If you are using a different layout, you may want to reassign some of them.

Camera 1 to 40 shortcuts load the camera into the Main or Aux viewport, again depending on whether your Aux pane is hidden or not. And just like the buttons, these also toggle a viewport from a camera back to Perspective View. So hit 4 once, Camera 4 loads into the viewport. Hit 4 again, the viewport is set to Perspective View.

Note that your camera names may not correspond to the numbers used here. A camera called "My Camera" that after sorting ends up in row 7 of the camera list, is going to correspond to the "Camera 7" shortcut. Use the Rename Cameras button to make it less confusing.

Helper shortcuts

The last 4 shortcuts in **Figure 11** do not have any dedicated buttons in the plugin. They exist as an additional way to quickly get whatever camera is set in the Aux viewport to the Main viewport (and vice versa), and to do the same for loading the Perspective camera.

If you have swapped the Main and Aux buttons in the plugin, these shortcuts will also swap their key. So "Aux Camera To Main" will become Ctrl + Alt + Right instead, and so on (this will not be reflected in the menu seen here, however).

This is all in the hopes that the direction of the arrow key makes sense since it feels utterly strange to "move something to the right" when the actual viewport you're moving to is on the left. Still, there is no certainly that this will make sense in every layout. If it doesn't for you, assign your own custom shortcuts to these functions.
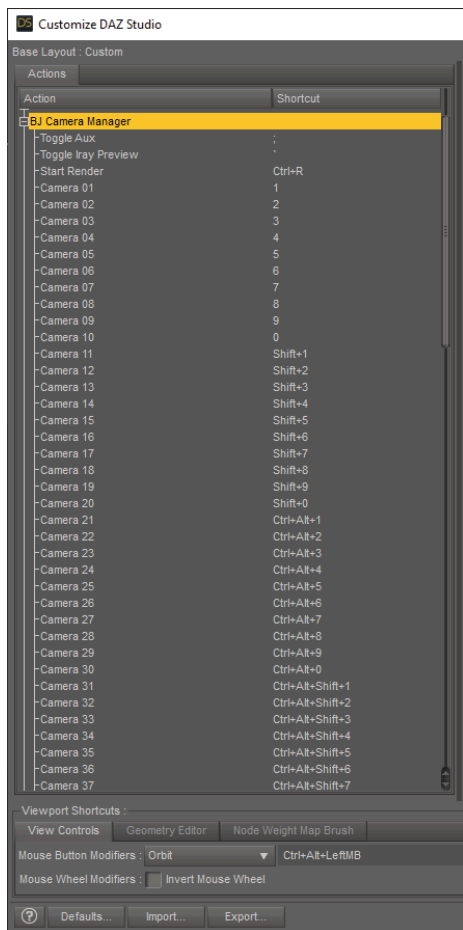
Figure 12: Customizing keyboard shortcuts.

Assigning custom keyboard shortcuts

1. Hit F3 or go to Window → Workspace → Customize…
2. Find the column called "Actions" on the left
3. Find "BJ Camera Manager"
4. Double-click on it
5. Left-click on desired shortcut
6. Click on "Change Keyboard Shortcut"
7. Enter a new shortcut

Assign "Start Render" keyboard shortcut

Plugins cannot overwrite existing shortcuts, so I recommend you assign the Daz Studio default Ctrl-R shortcut to the plugin's "Start Render" instead. Do this as described above.

Double usefulness of shortcuts

Keyboard shortcuts behave just like the buttons and always load the desired camera into the Aux viewport if it's open. Since toggling the Aux viewport (by default set to **;**) is a thing, you can use this to set a camera in the Main viewport by hitting multiple keys.

Let's load Camera 5 into the Main viewport even though the Aux pane is open:

> Press **;**
> Press **5**
> Press **;**

With a bit of practice you can spam this at lightning speed. Of course you can just use the buttons instead of doing finger gymnastics, but it's there if you want it.

Other features

The plugin is fully in sync with Daz Studio. If you manually show or hide the Aux pane, it will be reflected in the plugin. If you delete cameras, rename cameras in the Scene pane, manually add new cameras or import new cameras, the plugin will reflect all of that and keep the cameras sorted at all times. It behaves as if it was a part of the Daz Studio user interface as much as possible.
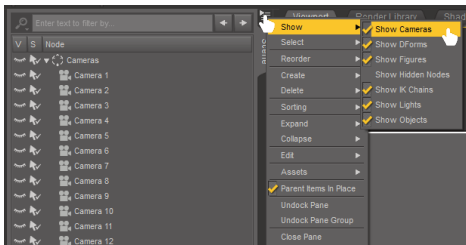
Figure 13: Filtering out cameras in the Scene pane.

Additional workflow tip

Once you're used to the plugin, you can filter out Cameras in the Scene pane and lessen the chaos there at least a little.

There is really no need to see cameras in the Scene pane anymore. The only cases I can think of would be to rename a camera (but only if you wanted to give it a specific name, otherwise just hit that Rename Cameras button), or if you wanted to select multiple cameras for some reason. Maybe to change a setting on all of them in one go, or delete them all. These seem like very rare cases. Rare enough that it would be acceptable to remove the filter, do your thing, then put the filter back on. To me at least, the positives of filtering them out far outweigh the negatives. Try it sometime and see if it works for you.

Limitations

If you select multiple cameras in the Scene pane, none will be selected in the plugin. Only single camera selections will be reflected.

The plugin will only work on Windows. I have no Mac computer and no expertise in Mac development. I apologize for the inconvenience.

Acknowledgments

Special thanks go to ManFriday who has graciously answered many a misguided question about C++ and the Daz Studio API and getting the project built in Visual Studio and probably the weather as well. Thanks also go to the other people in the Discord who have participated.

The plugin uses some code (or if not that, at least concepts) of the samples provided in the Daz Studio C++ API documentation. Thanks to the people who have created these.

Some icons in this manual are from the free and open-source Bootstrap collection (getbootstrap.com).