
Shot-Manager- Documentation

Release 0.7.5

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CHAPTER 1

Getting Started

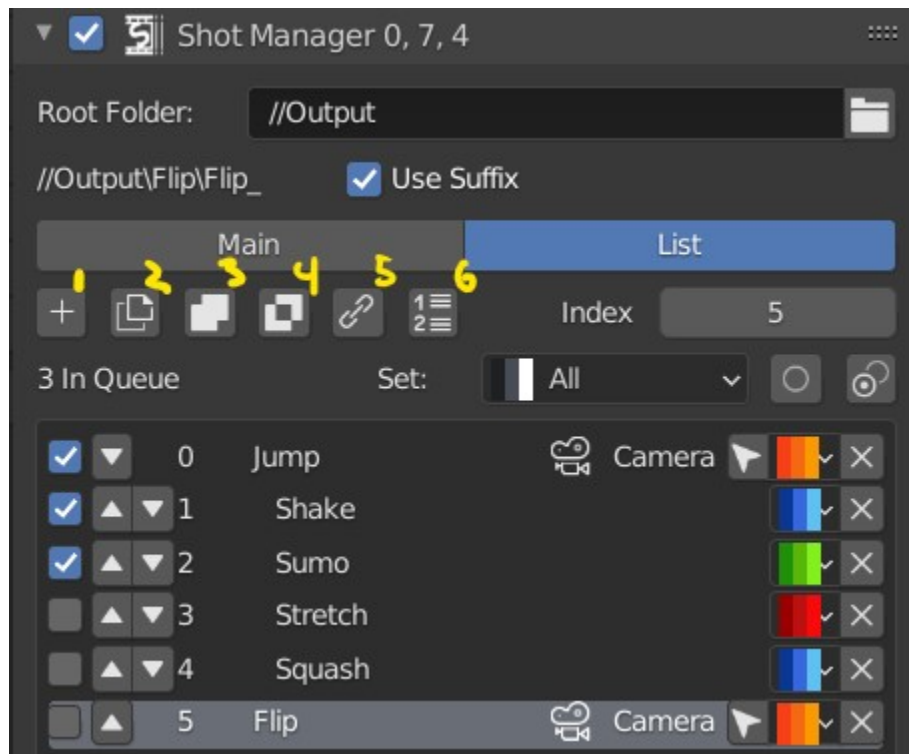
Shot Manager is an add-on for Blender 2.90 and above. Created as a tool by myself Pablo Tochez A. [contact@pablotochez.com] in order to assist in the organization of complex files containing multiple shots, view layers and cameras. I am an artist with some coding knowledge for making time saving tools and digital artworks. Shot Manager should be installed like any .zip add-on [Blender 2.8 Install Add-ons 00:38-https://youtu.be/14G_YIVdBd0?t=38]. **Make sure you remove any previously installed versions first and restart Blender.** You will not lose shot data un-installing the addon/ This documentation is intended for the paid version available on Blender Market.

Version 0.7 and above do not support versions of Blender below 2.90. Material overrides are now legacy and will only work if legacy mode is enabled.

1.1 Main vs List

The 'Main' shot is intended for general editing and previewing and is not considered for batch rendering or exporting. Settings can be copied to and from the Main shot and Shot List. Some 'List' shot defaults are inherited from the Main shot.

1.2 Creating A Shot



The main interface is found in the Properties panel under the Output tab.

- **Enable.** The first tick box will toggle the affect of Shot Manager on your scene. Un-tick if you need to turn off its influence, particularly if rendering alternative frame ranges or View Layers.
 - **Root Folder** will be the starting directory for shots.
 - **Use Suffix** Add the shot's suffix to the shot's filepath.
1. **Add new** , adds a new shot to your list.
 2. **Duplicate** , Duplicate active shot.
 3. **Join** , Combine two shots including frame ranges and options for view layer, rules and whether or not to delete the target.
 4. **Split** , Divide a shot, creating a duplicate at the given frame.
 5. **Alias** , Make a new alias shot.
 6. **Move Shot to index** Move the active shot to another index for fast reordering.
- **Main/List** Select the shot type. Main is for general editing and not bound to shot data however some shot properties are inherited from the Main if not set. To activate a shot simply select it in the list. Shot names are appended onto this path in subfolders.
 - **Index**, An alternative way of defining the active shot.
 - **Queue All/None Toggle** , add all shots to the output/render queue.
 - **Invert Queue Toggle** Invert the enabled shots.
 - **Enable/Queue Shot** The Tick Box on the Left of your shot name will add it to the output/render queue.

- Arrows Up and Down will sort your shots, but ultimately have no affect on your project.
- **Camera Select** Select the camera if it has been defined in its properties.
- **Colour Set** Assign a colour tag to the shot for filtering.
- Click 'X' to delete the shot.

CHAPTER 2

Filtering and Colour Sets

Shots can be filtered from the list by keyword or by colour set. Filtering does not affect the render queue and is only for visibility, sequence playback and scrubbing.

Colour sets can be assigned to each shot within the list panel and filtered in the dropdown below the list (properties panel) or above in the quick panel. They will also determine the strip colour in the Shot Overlay.

CHAPTER 3

Still Mode

Found in first shot creation popup and Settings tab.

For rendering single frames and works with batch renderers. It uses an alternative frame to the normal start and end parameters. Will output from all available output nodes.

CHAPTER 4

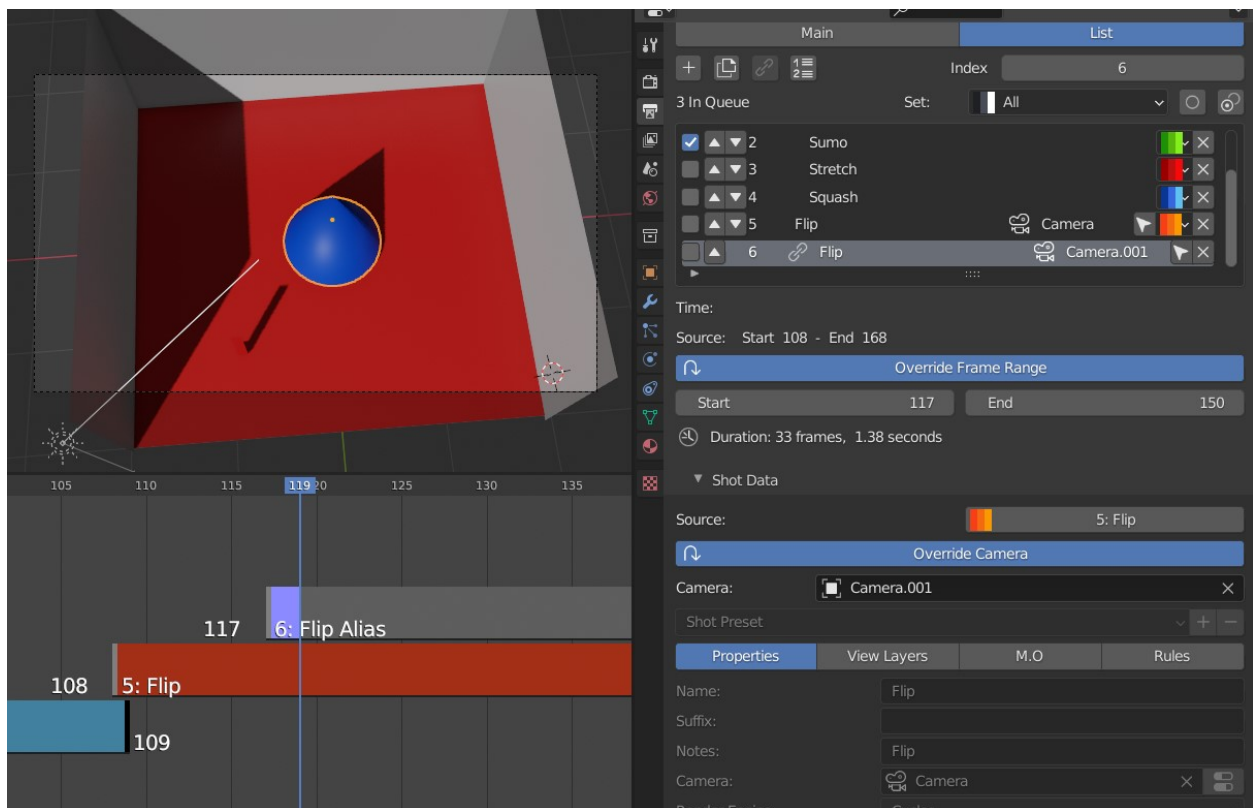
Generated View Layers Mode

Found in first shot creation popup and Settings tab.

This mode enables settings; Switch to Primary Layer, Generate Primary Layers and Unsaved View Layers Default to 'Primary Layer'. The workflow is designed for users who wish to create unique View Layers for each shot and to have different collections visible. This workflow is most commonly used in product rendering and visualization. The newly created view layer will be set as the layer's Primary layer. The primary layer in combination with the other settings mentioned, will become the active View Layer and default as renderable when the shot is selected. It is therefore not necessary to alter the View Layer save/render states for the shot.

CHAPTER 5

Alias Shots



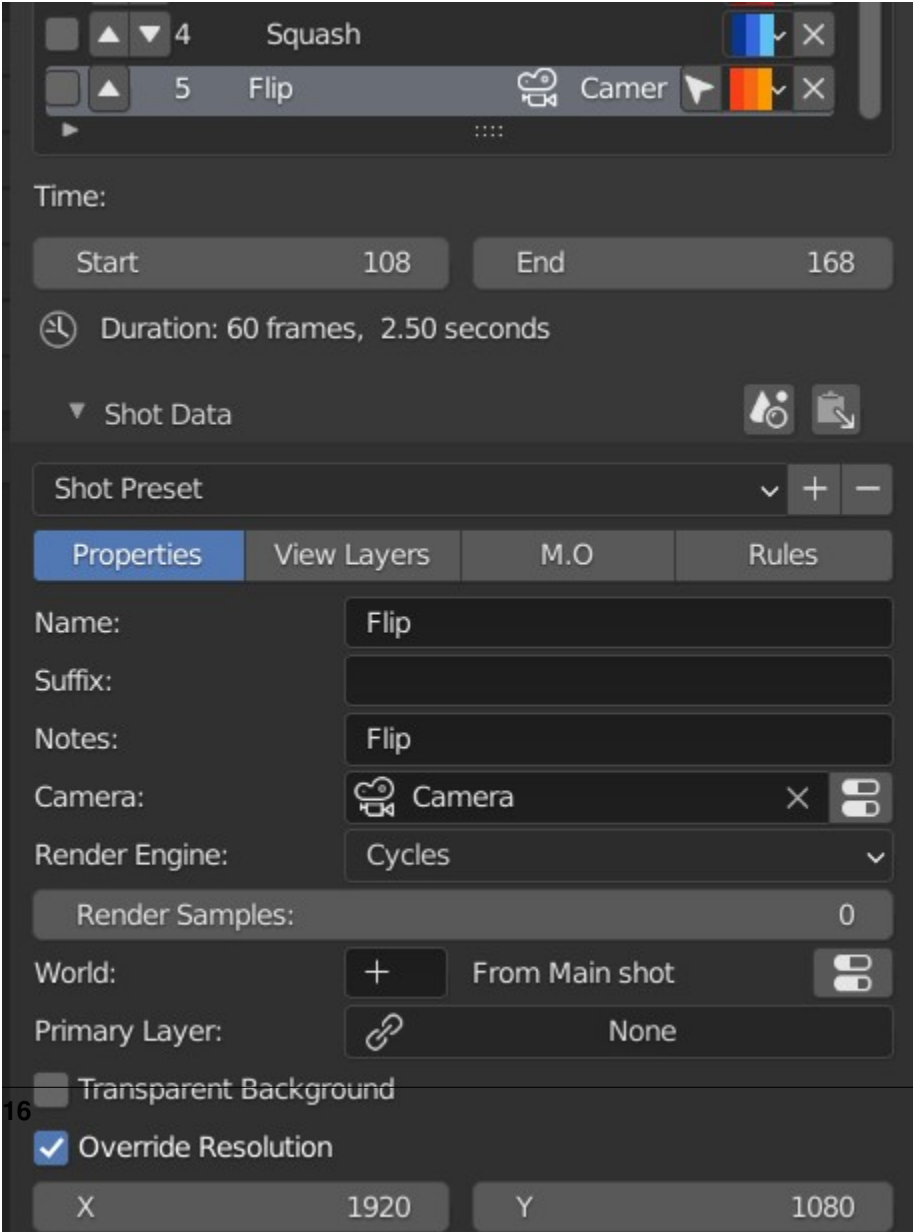
Alias shots reference an existing shot for all properties unless they use overridden start and end frames (single frame in Still Mode) or camera. These can be used for multi-cam setups where multiple cameras are used to render a scene but retain the same base filename and filepath.

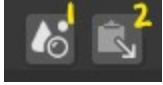
NOTE: If not overriding frame range to unique frames, these images will save over each other when batch rendering unless path constructor nodes are used, in which case using the camera name input can give a unique path or filename.

Alias shots can also be used to re-render sections of shots without losing their original frame range.

CHAPTER 6

Shot data





1. **Apply Settings** Use the current scene settings to pre-fill shot data
2. **Copy From Shot** Copy data from another shot. Select source shot name followed by specific data or 'All'. **Apply to all queued shots** will copy the source data to all queued /enabled shots.

6.1 Time

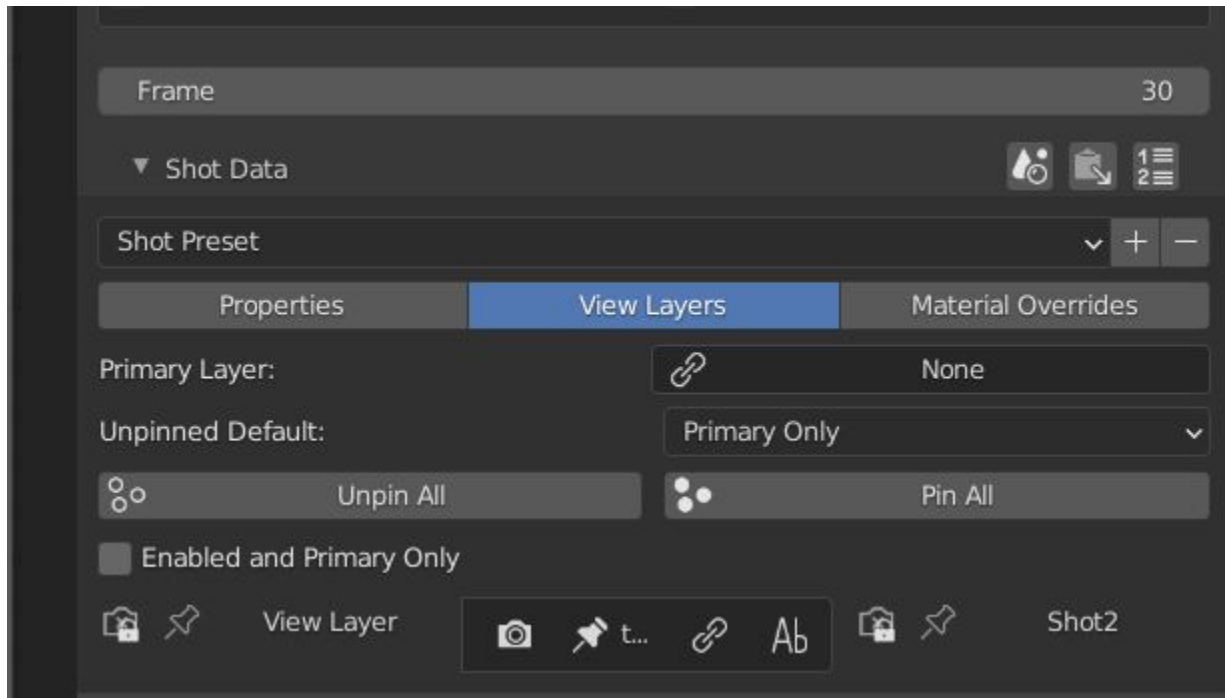
Each shot contains its own data set that may include any of the following:

- **Start Frame**
- **End Frame**
- **Single Frame**, Still Mode.

6.2 Properties

- **Shot Name**, A unique name for your shot, this will also be an output sub-directory and filename for the shot.(Best practice is to avoid spaces)
- **Use Suffix** Add a suffix to the shot's filepath.
- **Notes**, for shot descriptions.
- **Camera object**, automatically set as the render camera when shot is selected. Arrow button, select as active object.
- **Render Engine**, set render engine for specifically for the shot, now supports addon engines.
- **Render Samples**, If using Render Engine override. Override samples, 0 = no override.
- **World** , World data, inherits from Main if empty.
- **Primary Layer**, select a View Layer that will become activated when selecting the shot if 'Switch to Primary' is enabled in settings. Also used as a default render layer if 'Unpinned default' is set to 'Primary Only' (View layer tab).
- **Transparent Background**, set film transparency for the shot.
- **Override Resolution** , shot specific output resolution.
- **Bloom**, Eevee only.

6.3 View Layers

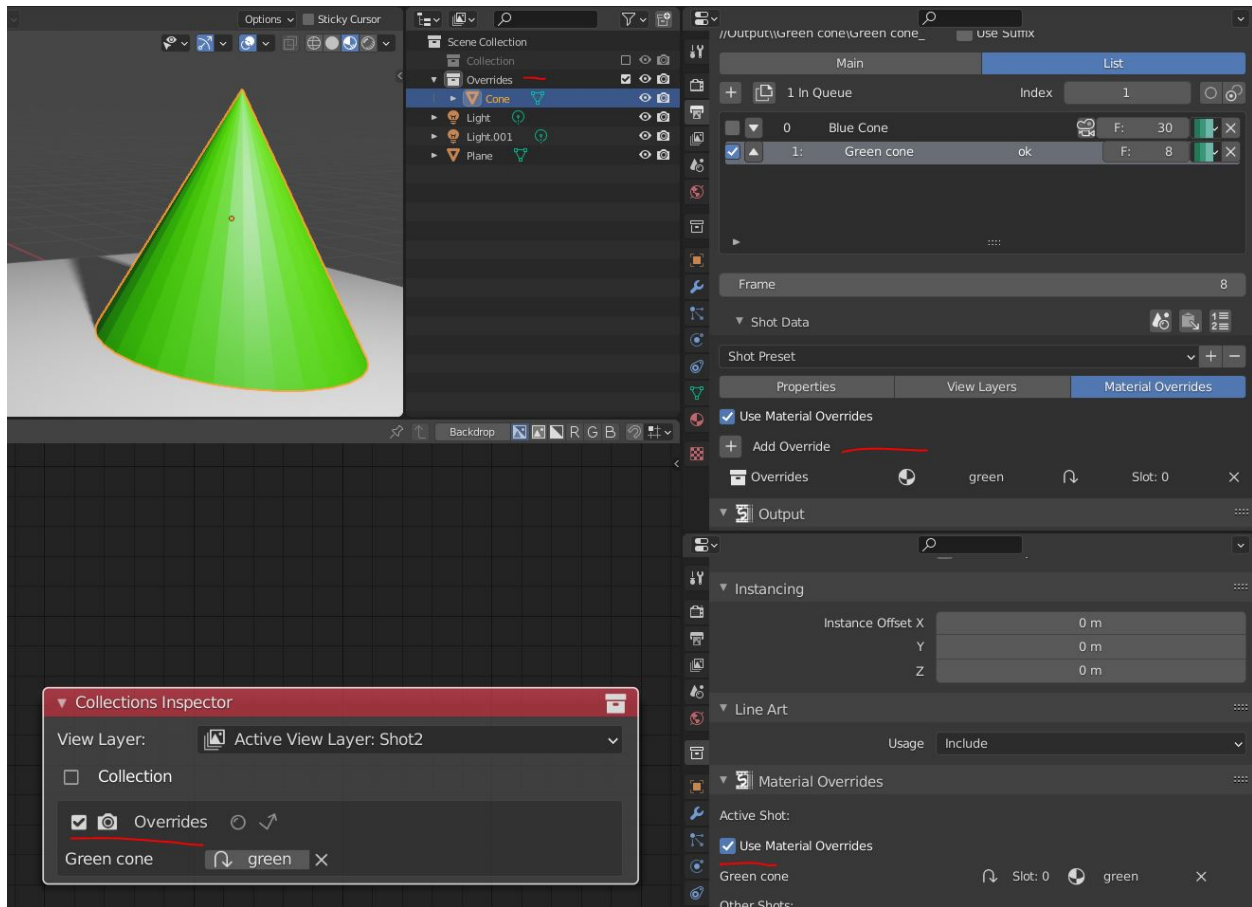


- **Primary Layer**, select a View Layer that will become activated when selecting the shot if 'Switch to Primary' is enabled in settings.

View layers pinned states include ;unpinned/not renderable ,unpinned/renderable,pinned/renderable, pinned/unrenderable.

- **Unpinned default**, See **Settings** > View Layer Default.
- **Un/Pin All** Save or unpin all view layer states.
- **Enabled and Primary Only** Only displays the renderable view layers for the active shot.
- **'AB' icon** means: Rename the Primary Layer to match the shot's name.
- **Link** icon indicates the view layer is the shot's primary layer and can be clicked to reassign the layer.
- **'Broken Link'** icon means: the shot has an identical name to this View Layer, set as Primary.

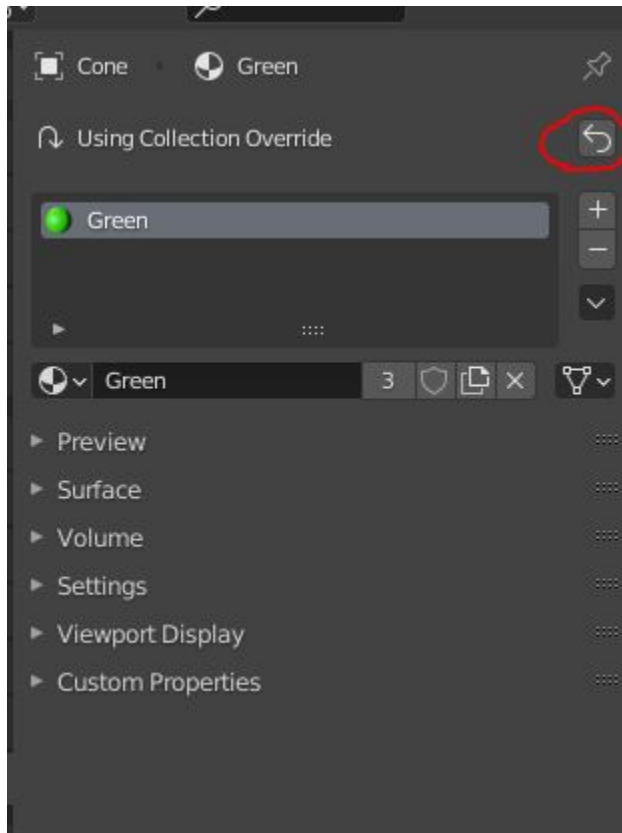
6.4 Material Overrides (LEGACY)



Legacy mode must be enabled in the ‘M.O.’ tab in shot data.

- **Material Overrides**, toggle use of collection overrides.

Ensure that the Collection Overrides property is enabled. Only **first level** view layer collections are available not the scene collection or child collections. Material overrides are available per collection, per shot. Add and override and select collection, then add a material and slot. Override data is stored in the collections not shots, therefore can't be exported as a Json file or copied from another shot. Also editable in the Collections Inspector Node including overrides for all shots. Using overrides may be slower when switching shots and there are large amounts of collections and objects. **Note:** If using multiple scenes and collections are linked, some unexpected overrides can occur if the scenes have shot names that are identical.



Restore The original material can be restored using the revert button found in the objects material tab. Useful if an object has been moved out of a collection and you want to restore its pre-override material.

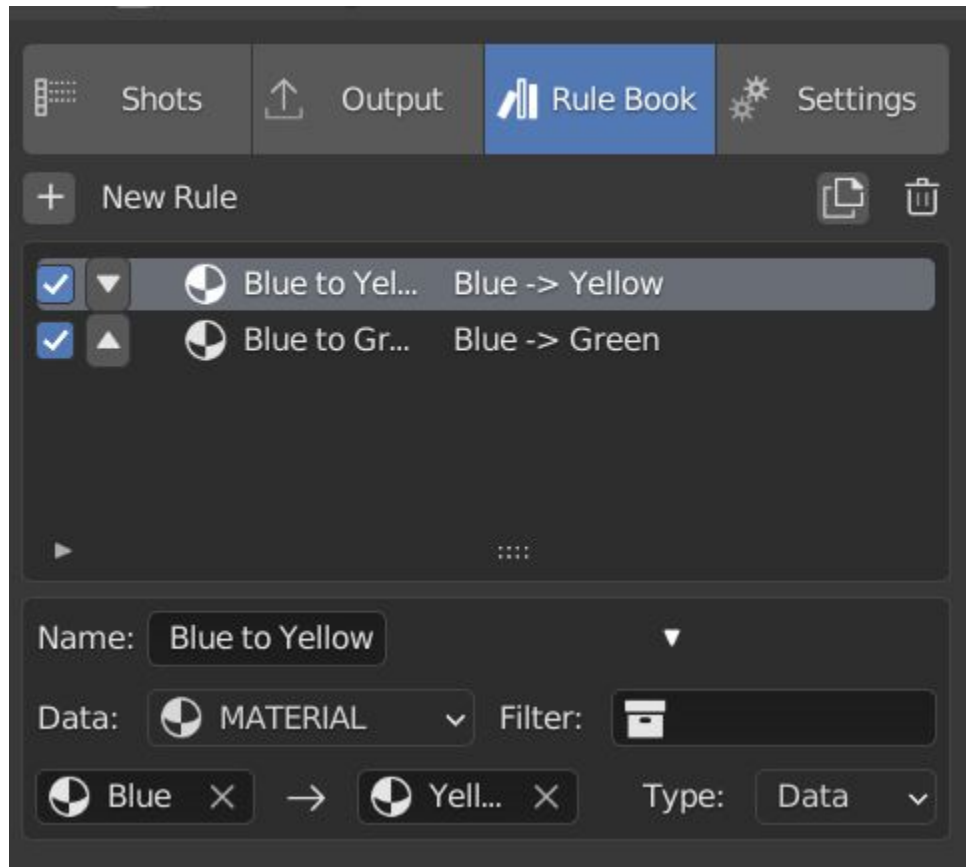
CHAPTER 7

Rule Book

Shot rules are a powerful way to override data blocks in Blender. Rules are defined in the Rule Book panel. Once created in the Rule Book, they can be assigned to shots. There are many different types of rules which target various data types.

Most rules follow the principle of; override data A with data B, if a collection is defined, the affect will be restricted to that collection. Rules defined in the Rule Book can then be re-used by assigning them to the shots individually. If the following shot doesn't have a rule, the data block will be reset to its original or default state. Caution: large scenes with many objects may take longer to switch between shots.

7.1 Material,Light, Camera & Mesh Rules



These rules follow the principle of override data A with data B. Therefore, you are provided with two data slots, left (a) and right (b). A is considered the original data and will serve as the default fallback. When assigned to a shot, all objects containing data A will be overridden to contain data B.

- **Filter**, use the collections filter to limit overrides to objects within the filter collection.
- **Type**, Material overrides have two source types. ‘Data’ refers to materials stored in the objects mesh data block. ‘Object’ refers to the containing object data. See Blender’s documentation for material link. <https://docs.blender.org/manual/en/latest/render/materials/assignment.html#material-slots>

7.2 NLA Rules

NLA rules override animation tracks,strips and actions per shot, therefore, enabling the possibility of re-timing shots more easily without using the NLA editor. It is recommended to animate in the dopesheet editor or action editor as the correct animation timing is displayed. Note; multiple strips per track is not supported and can cause spacial errors, only the first strip will be considered.

In the Rule Book

- **Isolate Tracks** , mute all tracks except for those used by this rule
- **Tweak** , switch all instances of the rule tweak mode on/off
- **Actor** , required, a single actor object to be assigned.

- **Type** , data type to derive animation data (Object/ShapeKeys)

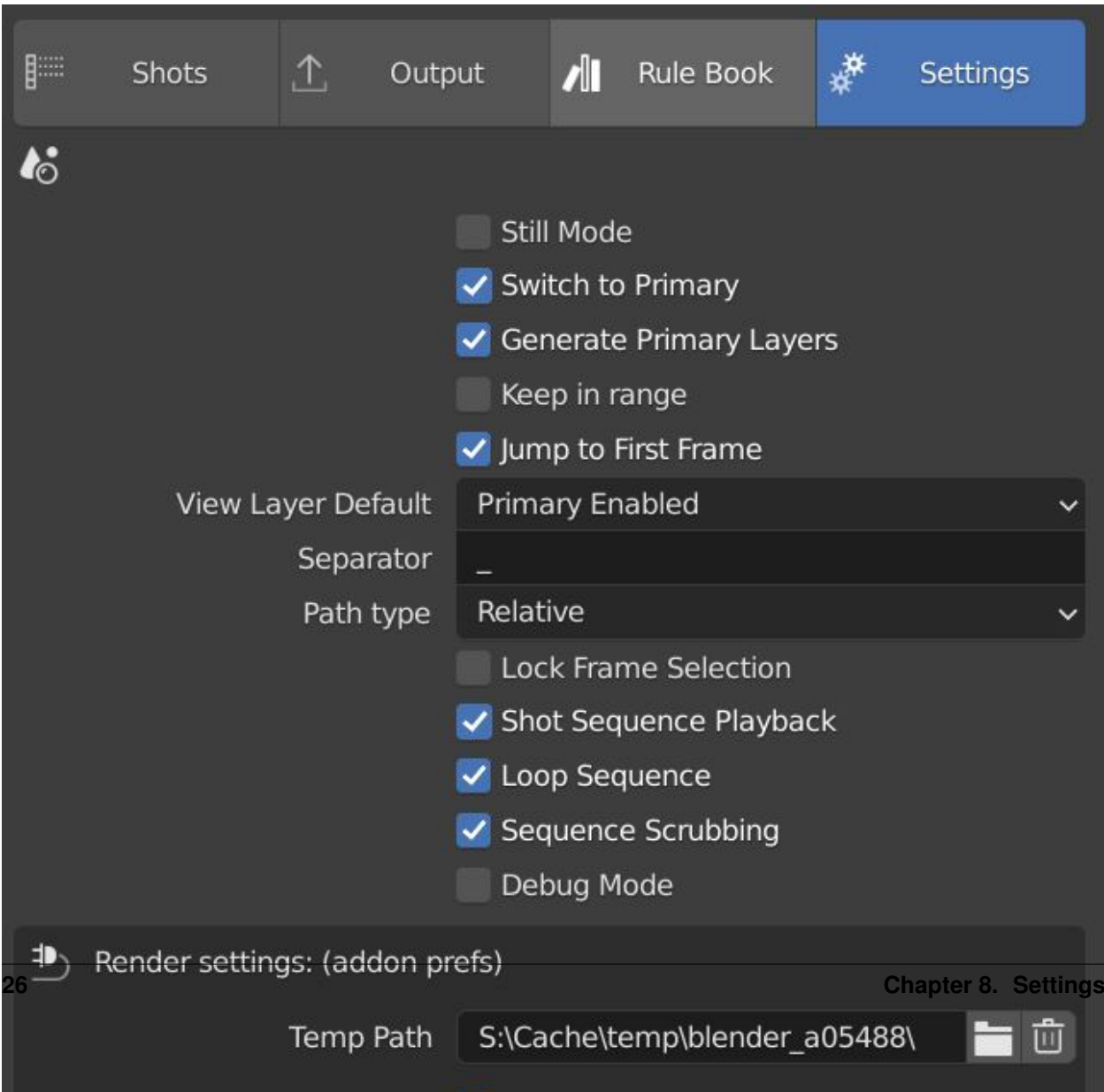
In Shot Rules NLA rules are more specifically defined in the shot's rule tab are also the only type that supports multiple assignments on a single shot.

Action = The holding data block for any animation.

- **Show All Tracks** ,List all of the actor's NLA tracks that haven't been overridden by this rule
- **Tweak Default** , Automatically set the tracks strip to tweak mode for editing in the action editor.
- **Track** , The NLA track to override. Note, only one Action (first strip) is used per track. Multiple Actions should be stacked on separate tracks rather than inline as strips.
- **Tweak** , Enter Tweak Mode allowing edits to the associated action.
- **Override Action** , Actively override the action, otherwise use existing.
- **Replace Action** , The Action to be associated.
- **Link Timing(left Arrow)** , If enabled the animation is offset with the shots start time.
- **Offset** , add additional timing offset.
- **Fit End(right arrow)** , extend the action to the shot end time
- **Repeat** , NLA repeat function
- **Scale** , NLA scale function

CHAPTER 8

Settings



8.1 Scene

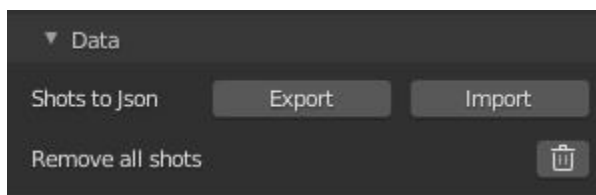
- **Still Mode** , Use a single frame for shot timing.
- **Switch to Primary**, make primary layer the active view layer when choosing shots.
- **Generate Primary Layers**, a new View Layer will be created with the name of the newly made shot and associated as a Primary Layer
- **Keep in range**, view timeline to playhead when choosing shots.
- **Jump to First Frame**, place playhead at start of frame range when choosing shots.
- **View layer default**, (On, Off, Primary Layer and None). The default state of View Layers if they have no saved state for the active shot. 'On' will make all unsaved layers renderable by default with each shot change/trigger. 'Off' will default to unrenderable, choose 'Off' to prevent unsaved view layers from rendering. 'Primary Layer' will also switch all unsaved layers to un-renderable, except for the Shot's Primary Layer. 'None' leaves the current state, no influence from the add-on.
- **Separator** , a custom separator to add between filenames and frame suffix, default is '_'
- **Path Type** , Absolute or relative output path creation.
- **Limit Playhead** , Don't allow frame to be selected with mouse outside of frame range
- **Shot Sequence Playback** , Switch shots in sequence while playing animation.
- **Loop Sequence** , After playing through each shot, loop back to the start.
- **Sequence Scrubbing** , Allow scrubbing through shots in sequence. Not compatible with 'Limit Playhead'
- **Debug Mode** , For displaying extra debug messages in console

8.2 Render

These settings are stored in your addon preferences.

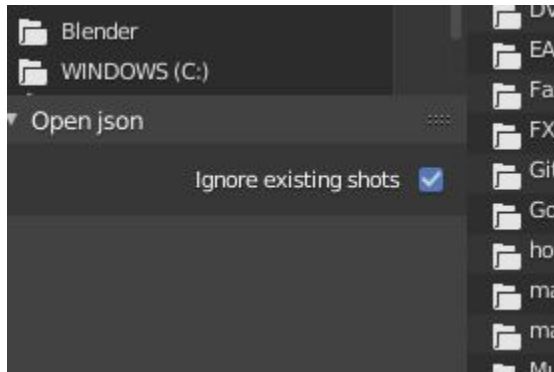
- **Temp Path** , The directory that will store temporary job files for the integrations/ submitters. Click trash can to clear files recognised by Shot Manager.
- **Render As Copy** , Save a Blend file when using SM render specifically for rendering. Large files make take more time however it will prevent inconsistencies if the file is changed.
- **Safe Mode** , When batch rendering, Blender will be run using factory startup settings, disabling 3rd party addons that might interfere with the render process. Render devices are then forced and addons in the exceptions white list will be enabled.
- **Add Exception** , Allow specific 3rd party addons to be enabled during batch render.

8.3 Data



Export JSON, Export shot data to json to backup or transfer shots. Does not include collection overrides. **Include Shot Manager Settings**, include settings from the settings panel.

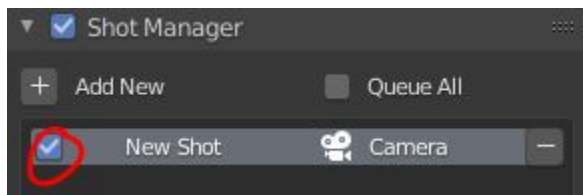
Import JSON, Import shot data from a saved json file. Missing linked frame markers will be converted to manual frame ranges.



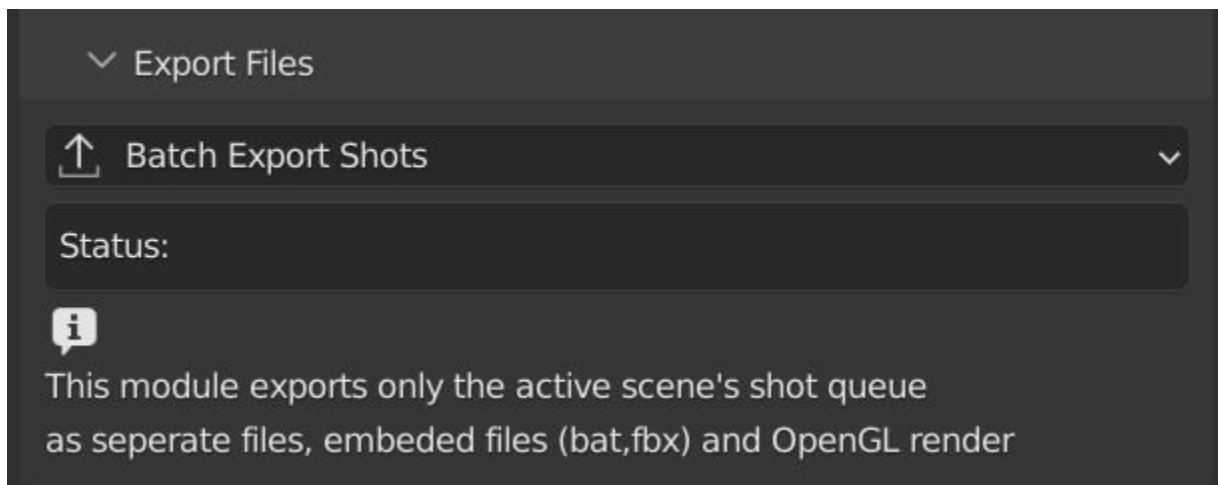
Ignore existing to only import shots with names that don't match your scenes' existing shots. **Delete All Shots**, will clear all your saved shots.

9.1 Export As Files

Export shots enabled in the shot list sequentially as a given format.

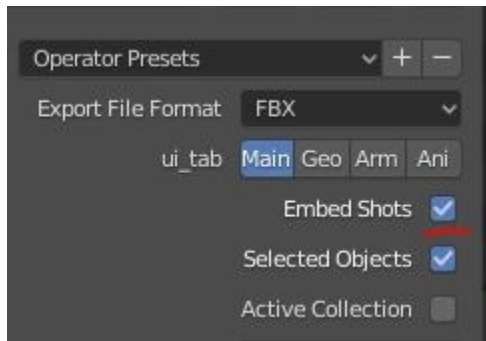


Export formats currently include OpenGL, fbx, obj, abc(Alembic), usd(Universal Scene Description), dae(Collada), .blend as well as .bat(Windows) files for command line rendering, either as separate files or single batch file. Batch export only uses the active scene's queued shots and does not support shots from external Blend files.

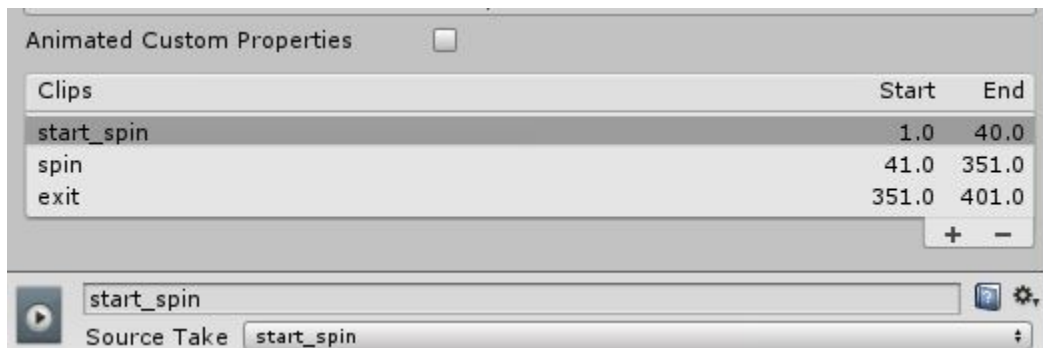


Choose output format and setting in the directory window. The settings panel appears on the left in Blender 2.80.

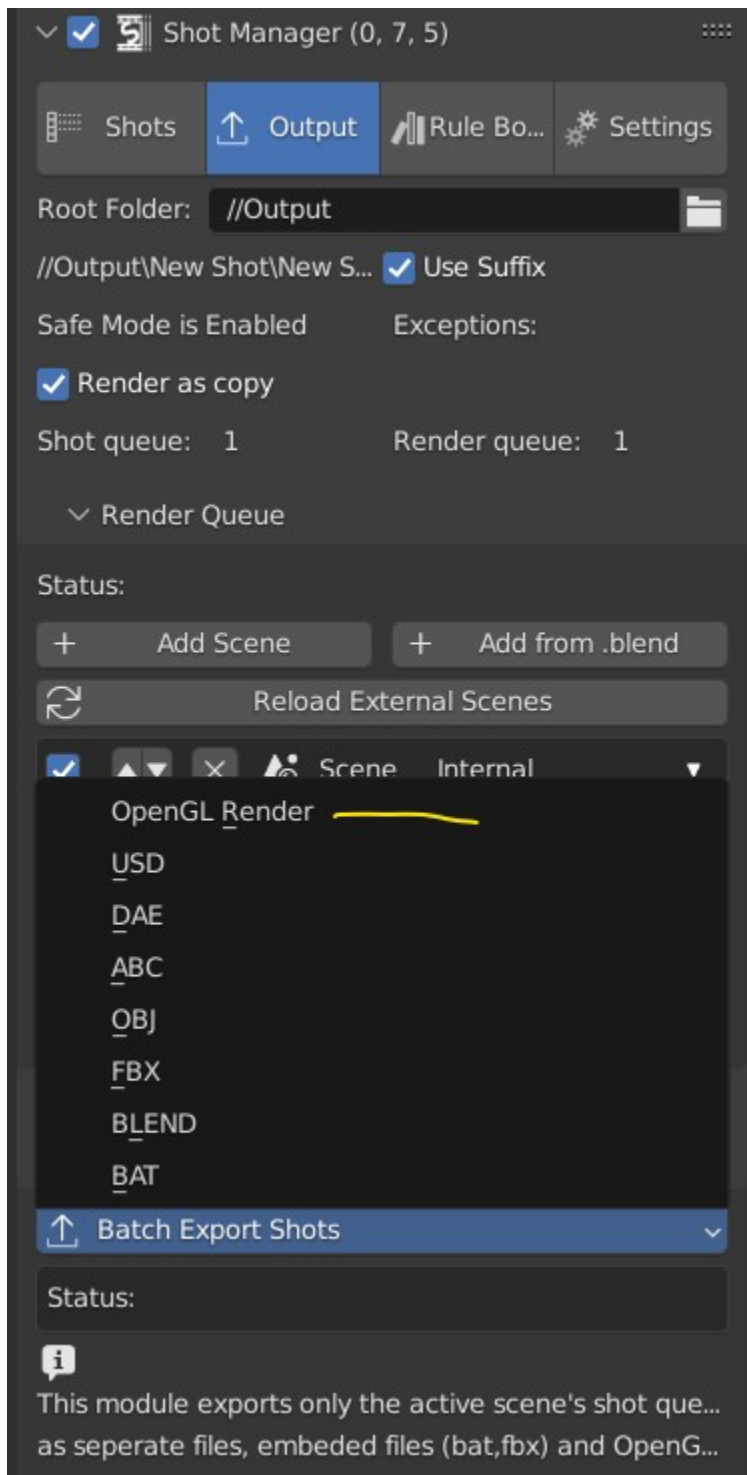
FBX exporter does not use the FBX export/import addon but rather a modified export script.



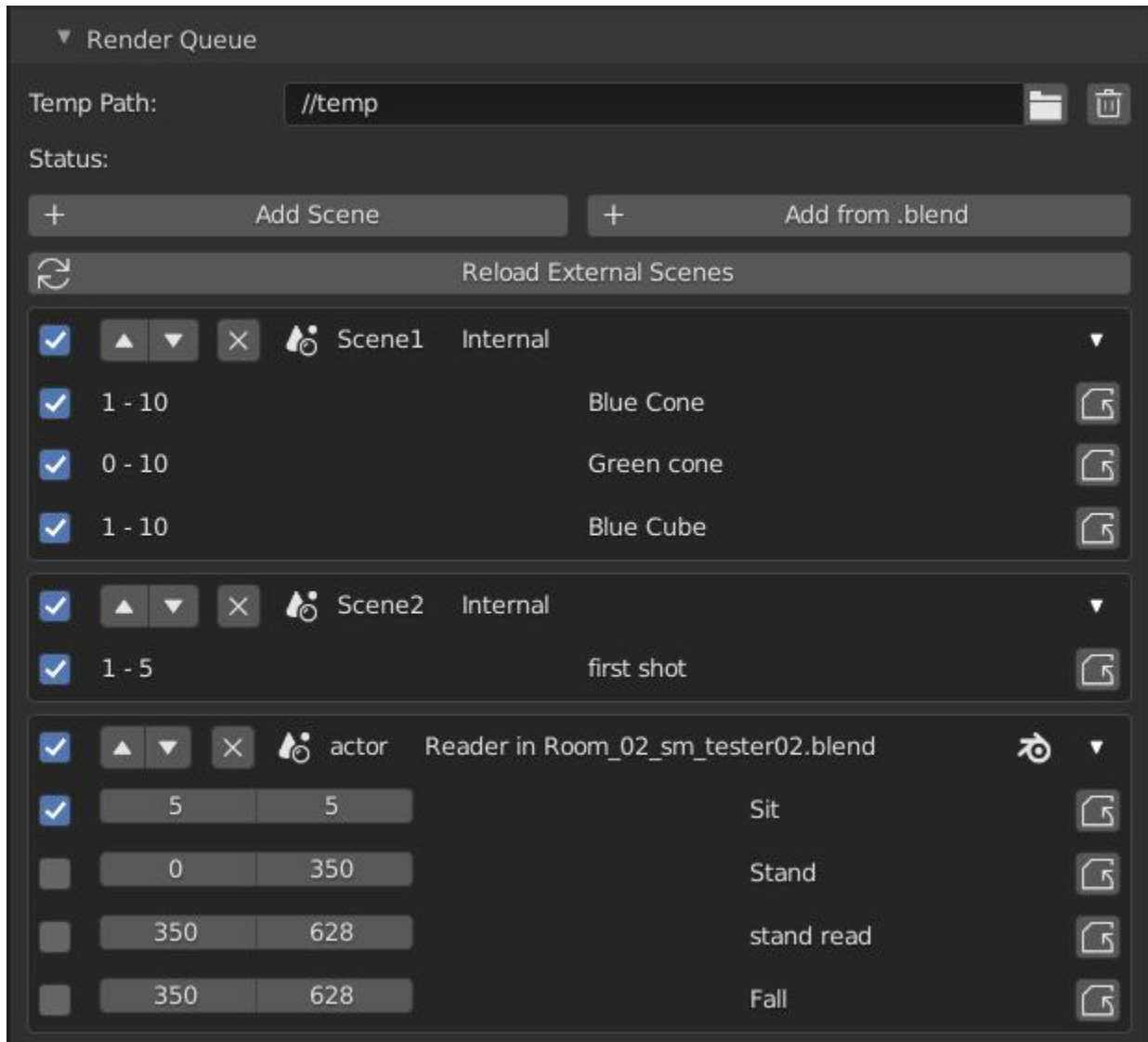
Embedded shots can store frame ranges and shot names as animation layers and extracted in other software,i.e. Unity.



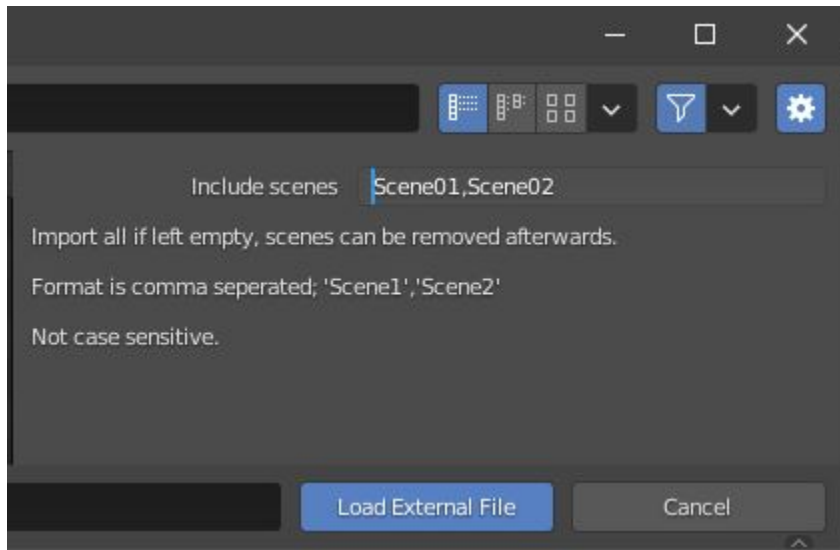
OpenGL viewport render also uses the export module as it cannot be done using the batch render function.



9.2 Render Queue



- **Add Scene/Add Blend** Either add scene's and their associated shotlists from the open project or another external Blend file via json. Local shots will be automatically linked so any changes will be reflected in the queue.



External Scenes can be filtered by listing names to include.

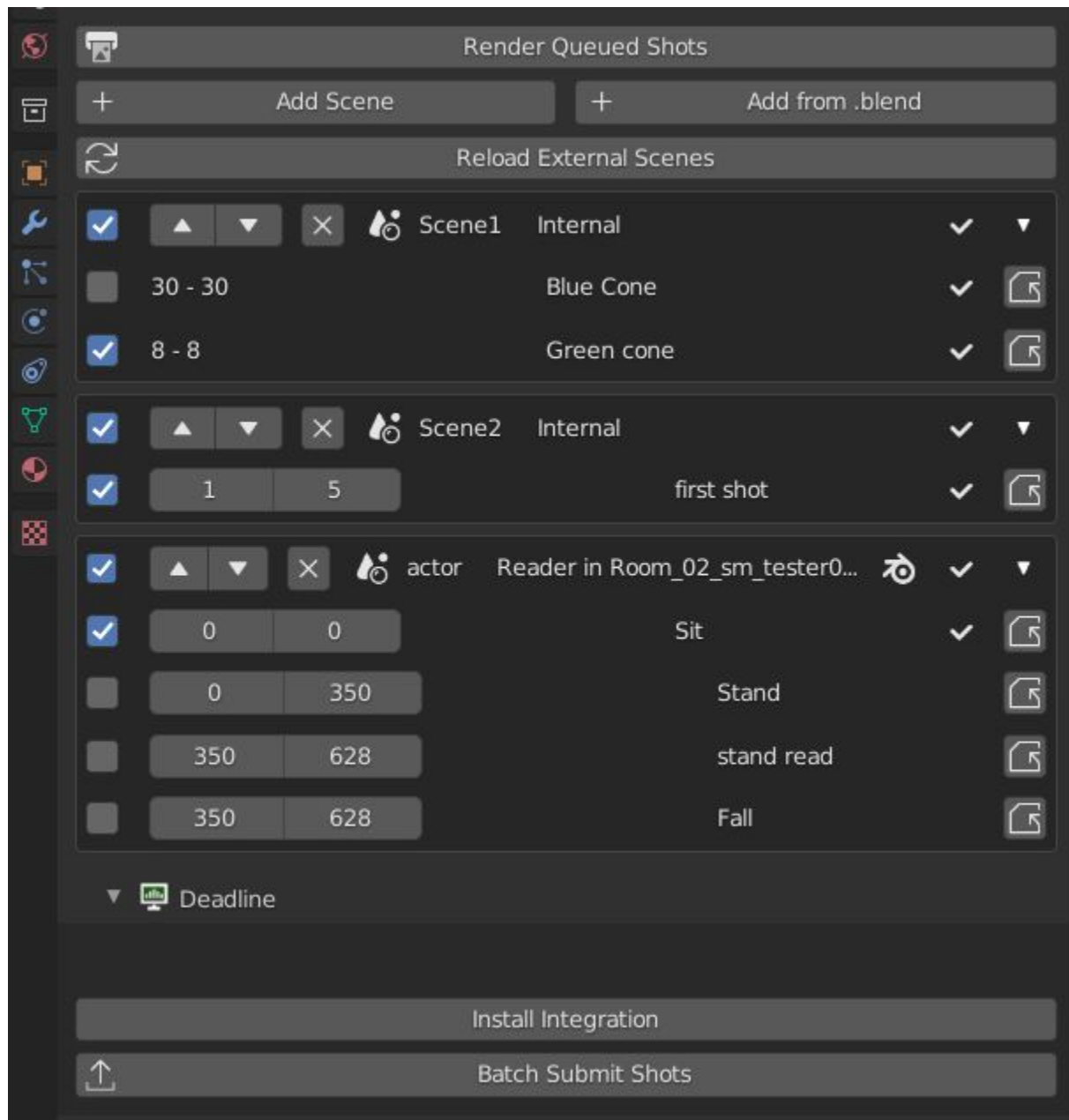
- **Reload External Scenes** External shots must be reloaded to reflect any updates to the shotlist and frame ranges. Only already loaded scenes will be included and any shot list overrides will be reset.

9.3 SM Batch Render

Shots can be rendered using the regular render animations or still operators (ctr+F12/F12). However only the active shot will be rendered. To batch render simply use ctr+shift+F12 or use the 'Render Queued Shots' Button. This will perform a background render thread for each shot sequentially in the render queue. For single machine rendering. TIP: If RAM is an issue, make an empty Scene as the master scene for queueing and rendering.

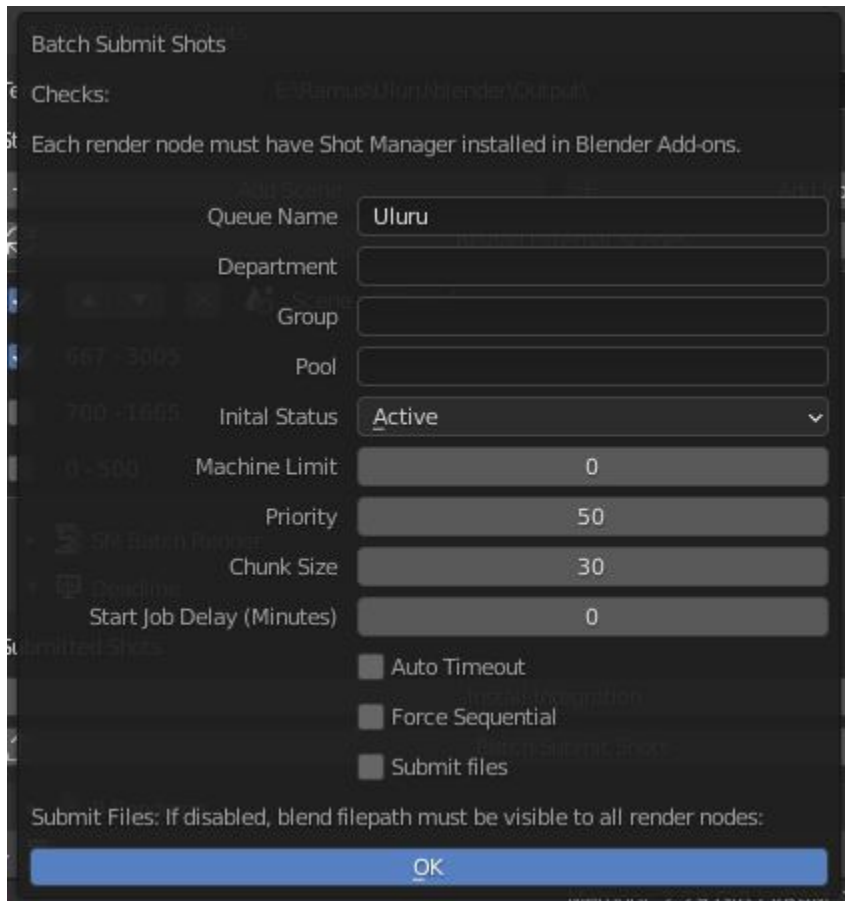
9.4 Deadline 10.0+ Integration (Windows)

Thinkbox Deadline is a distributed rendering and management software. Shot Manager provides a custom plug-in for Deadline and submitter within Blender.



The Deadline Repository must be installed on a shared location. The Deadline render Client must be installed on all machines. Simply click **Install Integration** in the Deadline subpanel to install the plugin. This will transfer required files to the repository>custom>plugins folder.

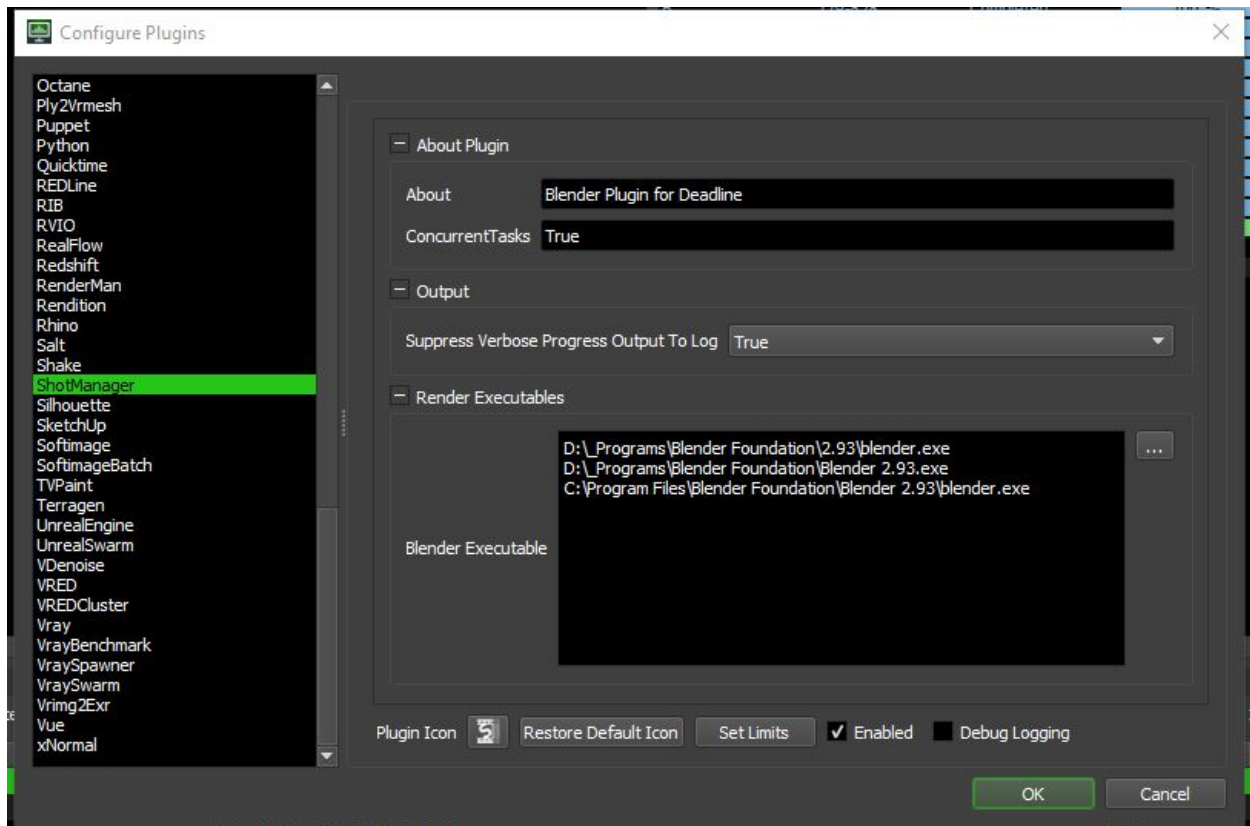
Each render node should have the most recent version of Shot Manager installed.



Submitting a Shot All enabled shots for enabled scenes in the render list will be submitted. Ensure that the **Temp Path** is not empty and set to the desired location. This does not need to be a shared directory.

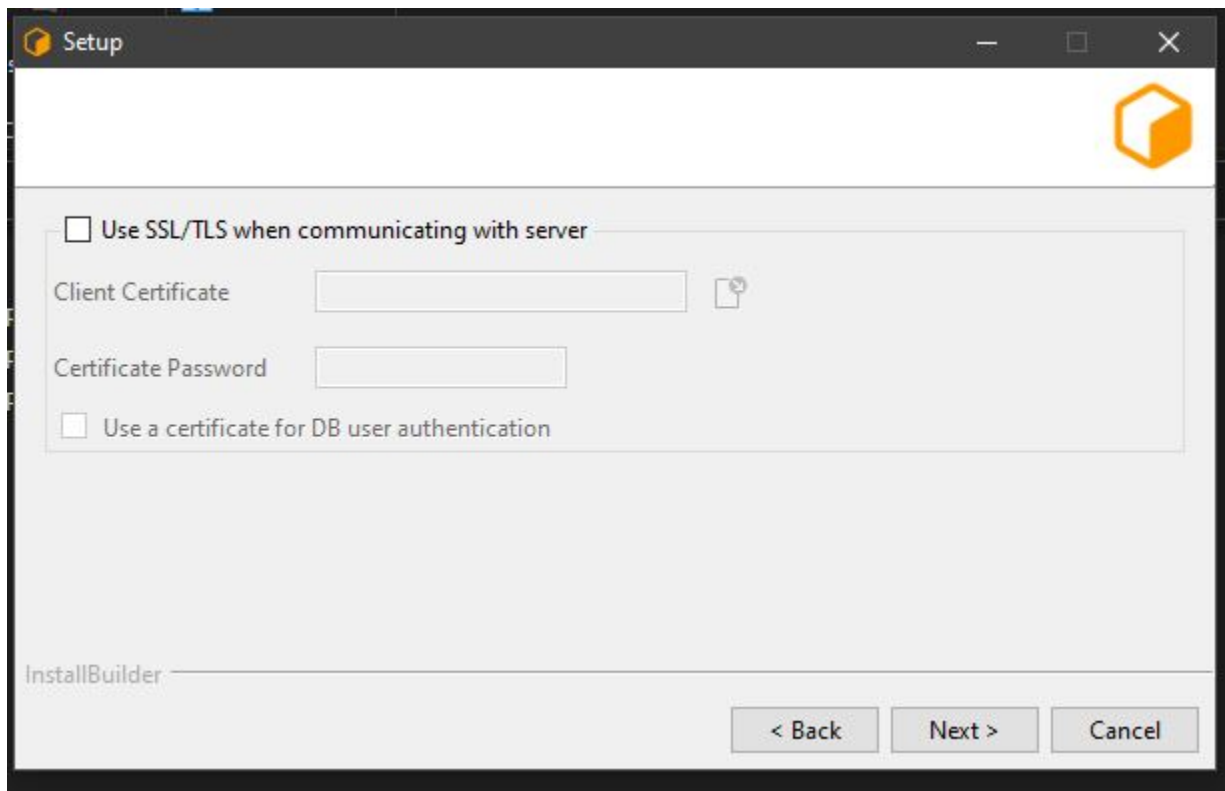
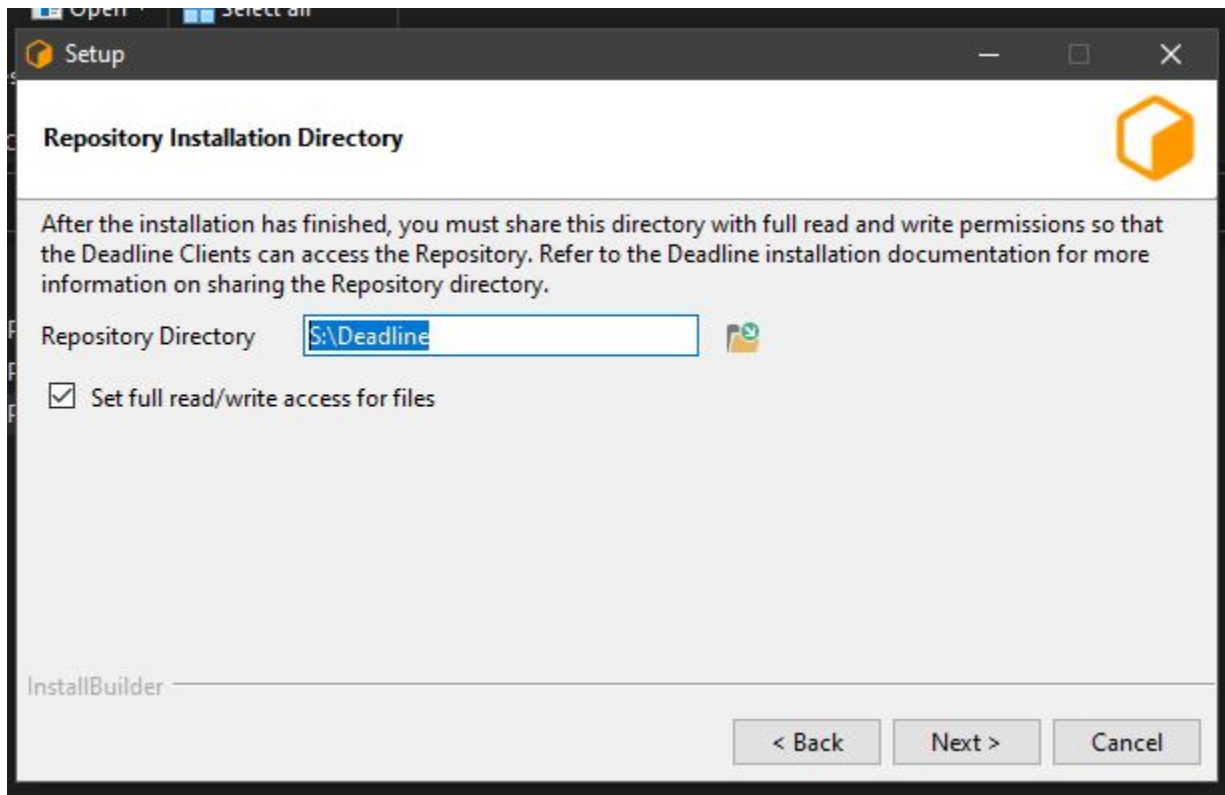
- **Queue Name** The folder name for containing job files, using unique names avoids overwriting older submissions.
- **Initial Status** Determines the initial status for jobs. Active will start rendering immediately.
- **Department** Extra info visible in Monitor.
- **Machine Limit** Limit the number of machines dedicated to the submitted jobs.
- **Priority** Determines the order in which renders will execute. Lower values indicate higher priority in the job list.
- **Chunk Size** The number of frames to render per task. Less means more sharing across render nodes. Use higher values for simulations and larger files with long build times
- **Start Job Delay** Specifies the time, in minutes, a Slave has to start a render job before it times out.
- **Auto Time-Out** Automatically figure out if it has been rendering too long based on some Repository Configuration settings and the render times of previously completed tasks.
- **Force Sequential** Forces a slave to render the tasks of a job in order. If an earlier task is ever requeued, the slave won't go back to that task until it has finished the remaining tasks in order.

Choosing Blender Version This is configured in Deadline Monitor > Tools > Configure Plugins. You must enable Super User Modes to access these settings.



9.5 Errors

- **‘Error encountered when loading the configured Client Certificate’** This is a certificate issue with your install of Deadline, please see: <https://forums.thinkboxsoftware.com/t/basic-setup-issue/24229/9> When installing the Deadline repository it is simplest to leave ‘use SSL’ unticked, and set ‘full read/write access’ in the install wizard.



9.6 B-Renderon! Integration

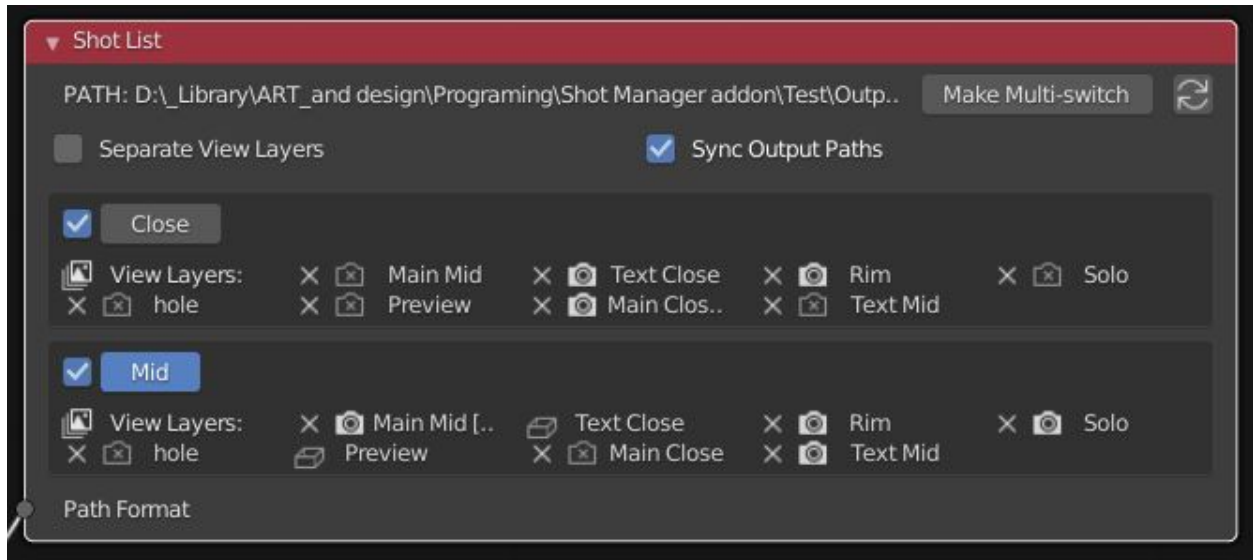
Launch B-Renderon with shots loaded as separate blend files. Requires B-renderon v2.2 or above. The executable path for B-renderon must first be entered in Blender Preferences -> add-ons -> Shot Manager settings **Force Cycles Device** to ensure the correct CPU/GPU configuration is applied to renders, assuming the submission machine is or is identical to the render machine.

CHAPTER 10

Compositor Nodes

10.1 Shot List Node

IMPORTANT! For compositor nodes to have any effect, compositor ‘Use Nodes’ must be enabled. Node groups containing Shot Manager nodes are currently unsupported.



The Shot List node is central to the Shot Manager nodes and is required for Constructor nodes and Multi-Switches. **A maximum of one shot list node should exist.**

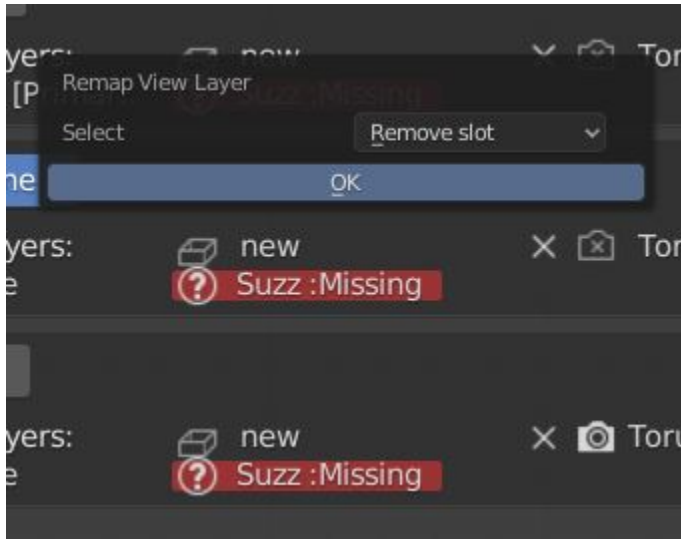
Path: The displayed path is the project's output directory. The target folder and filenames are automatically named after the active shot. File paths are converted to absolute paths. If the Constructor nodes aren't connected to the Path Format socket, the path consists of; Root directory + shot name(folder)+ shot name + '_'(filename). However the scene render path in Blender's output settings will vary when 'Separate Layers' is active.

Multi-Switch will create a new node group dynamically linked to active shots. **Primary-Switch** will create a new

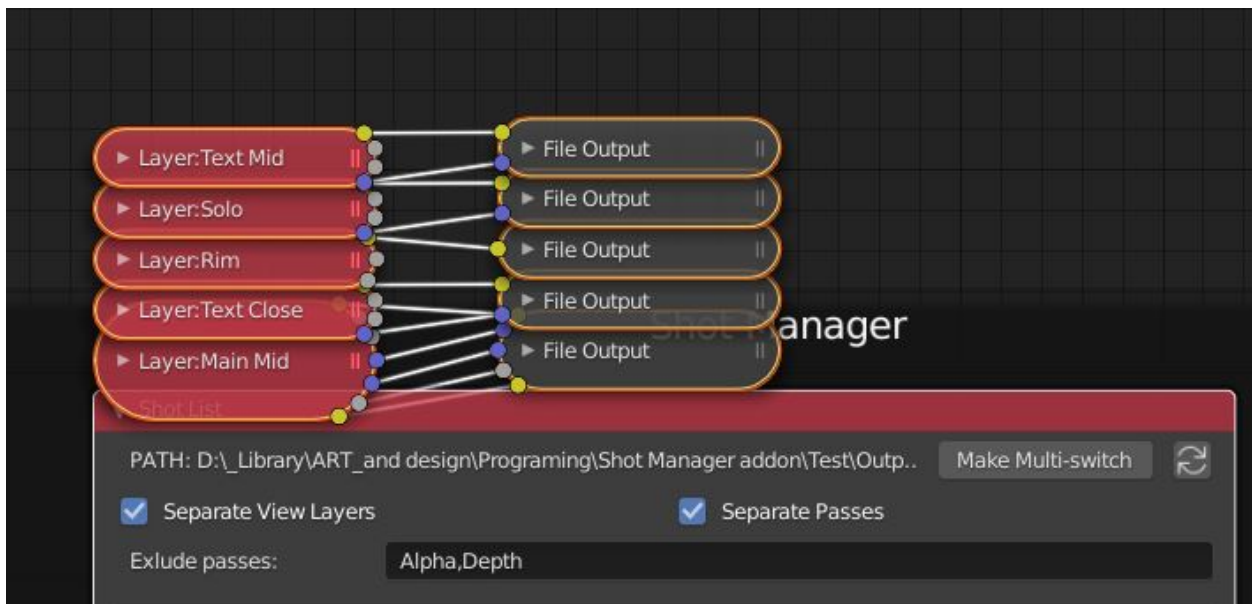
Render Layer node which automatically switches the input View Layer to the active Shot's Primary Layer, else mute. **Refresh**, non-essential node update. Although shot Manager nodes are updated upon shot change, setting or property changes, changes outside of Shot Manager won't be reflected immediately. For example adding new light passes to a View Layer. Shot Manager will update before any rendering.

Sync Output Paths. Only Available if Separate Layers is disabled. Output nodes created by the user are updated so their base path matches the output path set by the Shot List node and the active shot.

Shot List and saved states. Here you can select and queue shots for bath export. Each shot displays the saved states for View Layers. These states can be toggled (renderable/non-renderable), removed or added.



Path Format. String input socket for path 'Constructor' nodes.



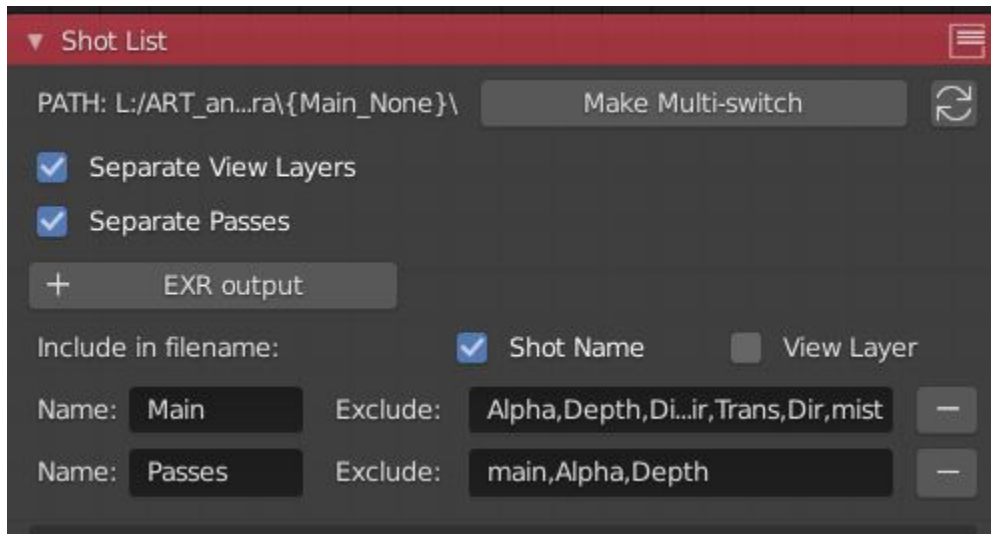
Separate View Layers Automatically generate nodes to output view layers for external compositing. NOTE: nodes are generated upon any update made within the add-on, therefore generated nodes should not be directly edited. Output files will be named according to the layer name. **You May want to delete the Composite node** when separating layers.

Separate Passes Optionally separate view layer light passes. **Shot Name in Prefix (non-EXR MultiLayer)** if using Separate View Layers, the option to add the shot names into the output file prefix is available.

Preview Make the output group an 8 bit png for preview renders.

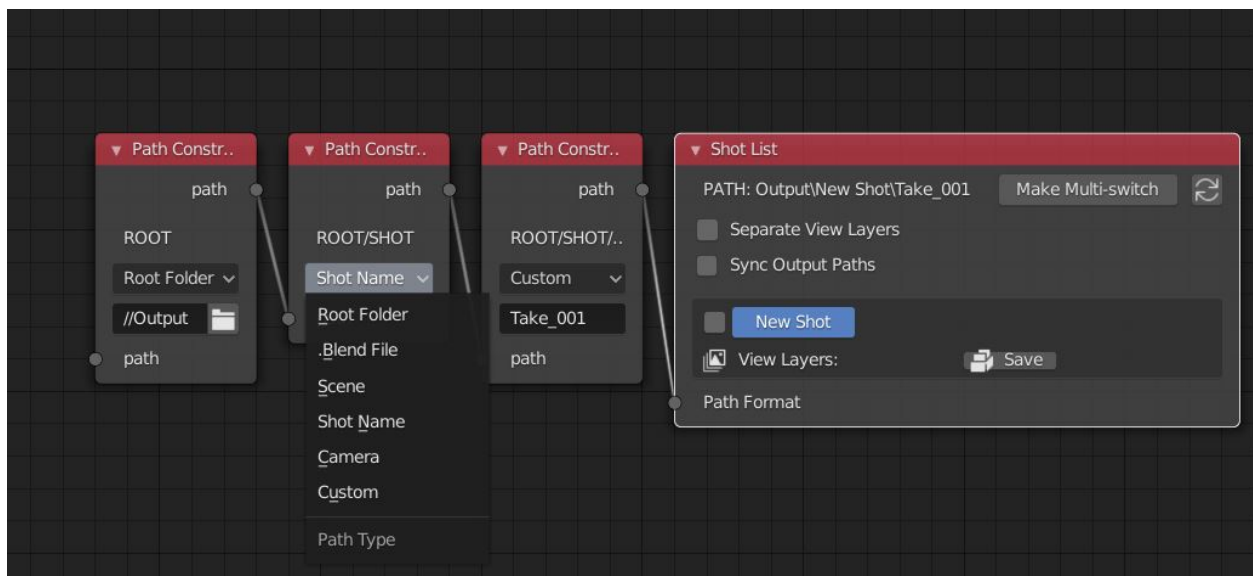
Exclude/Include passes from being output, not case sensitive. Pass names should be separated by commas.

EXR MultiLayer output



When using “Separate Passes”, Output Groups add and define output file names. Filter Render Passes using exclusion keywords separated by commas, no spaces, not case-sensitive. Including filename options ‘Shot Name’ and ‘View Layer’ name will be added to the given filename.

10.2 Path Constructor Node



Use Path Constructor Nodes to create your own render path format, followed by the shot name. Connect to the Shot List ‘Path Format’ socket. Options;

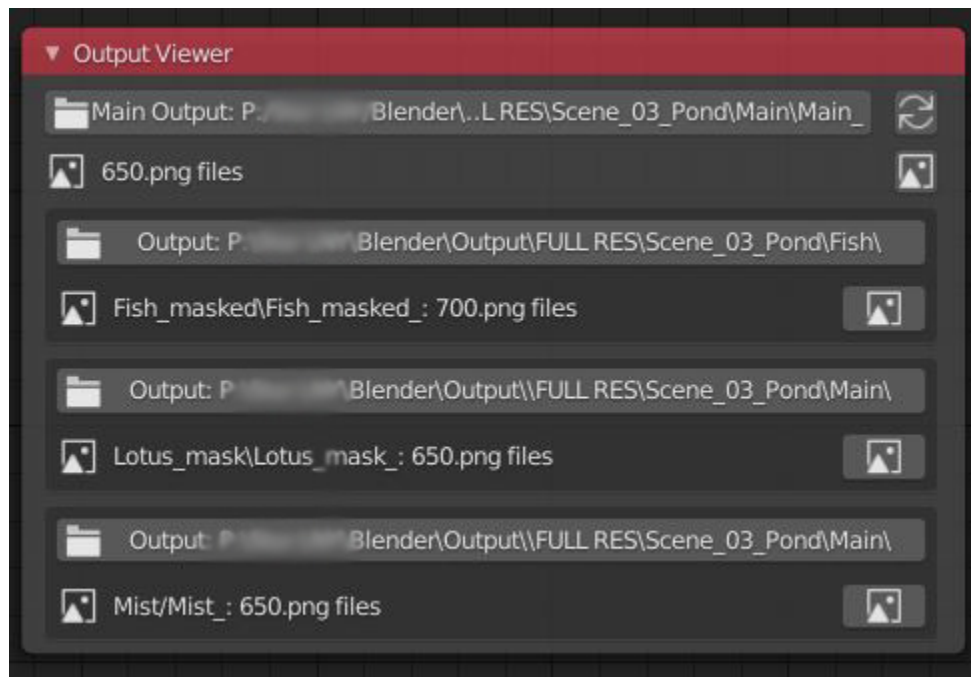
- Root Folder, the same folder set in the main panel. Must only be used as the first linked node.
- .Blend File, add the Blender filename to the path. Useful for iterations.

- Scene, scene name
- Shot Name
- Camera, render camera name
- Custom, enter a custom name. (Best practice is to avoid spaces)
- Output Node, uses the custom name of the output node, useful for exporting EXRs without overriding the default output/composite (which will use the custom 'main output text'), or to avoid duplicate filenames when using multiple output nodes.

10.3 Collections Inspector Node

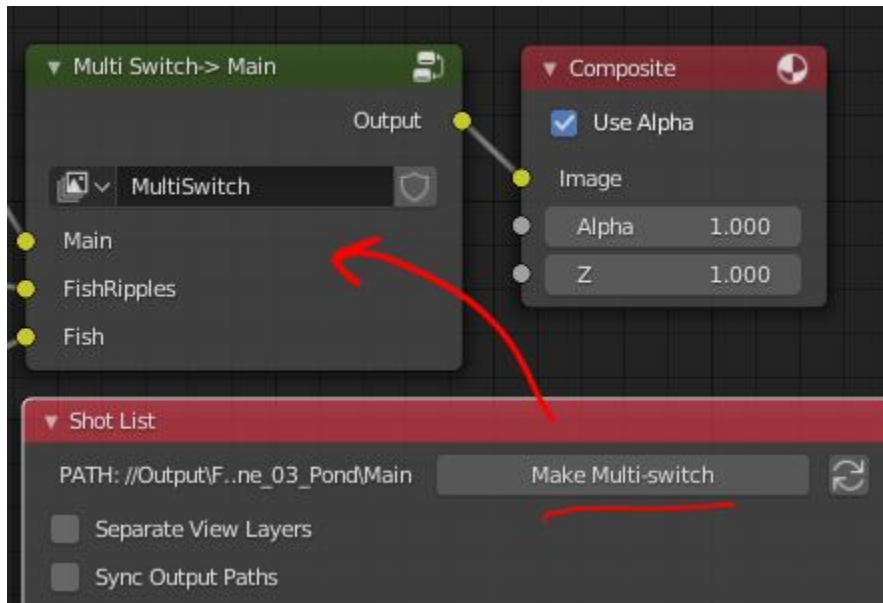
An alternative interface for overseeing and modifying collection states per View Layer. This aims to bring back the kind of oversight possible in Blender 2.7 where layer visibility, holdout and indirect states were laid out in view layer settings. It can also be used to keep track of very complex scenes with many nested collections. Setting the View Layer to 'Active View' will use the currently active view layer. Changing the view layer in the drop down menu will not change your currently active view layer. This can be quicker in large scenes to avoid loading objects.

10.4 Output Viewer Node



Used to count matching output files in all output paths. If a folder or file is detected you may click the folder icon to open the directory in your OS explorer or click the image icon to load it in an open Blender Image Editor. Files are counted after rendering or when the refresh button is clicked.

10.5 Multi-Switch



The Multi-Switch is a handy node group that generates inputs per shot. The active input is connected internally depending on the active shot. This allows the user to have multiple node graphs pointing to the Composite Node and only render the relevant one to the active shot. **Do not modify this node's name, group name or internal nodes. Requires a Shot List Node**

CHAPTER 11

Known Issues

Pandora Submitter. ‘Cannot read json file’ error may occur, has no impact on the render.

Missing file explorer options . This can occur when going between versions of Blender. SOLUTION- Restart Blender , disable ‘Load UI’ first when opening.

