Advanced

Many of the settings in the **Advanced Tab** you will never need to edit. However, for the more advanced user who wants fine tuned control over RenderMan for Maya, they are here.

Render Settings

Render Layer masterLayer ▾

Render Using RenderMan ▾

RENDER MAN

| Common | Sampling | Features | Passes | **Advanced** | Workspace |

▼ **Render Options**

☑ Enable Object Instancing
☑ Procedural Reentrant
☐ Linearize Colors
☐ Lazy Render
☑ Image Plane As Sample Filter
☐ Adapt All

Output Shadow AOV Off ▾

Bucket Order spiral ▾

Bucket Size 16x16 ▾

Z Threshold [____]

O Threshold [____]

Reference Frame 0

▼ **Dice**

Micropolygon Length 1.00

☐ Dice Watertight

Dice Camera world camera ▾

Reference Camera [_____] ▣

▼ **Hair**

Min Hair Width 0.50

▼ **Trace**

Trace Decimation Rate 1 ▾

Trace Displacements All ▾

☑ Trace Auto Bias

Trace Bias 0.00100

▼ **Crop Window**

Crop Window 0.000   1.000
             0.000   1.000
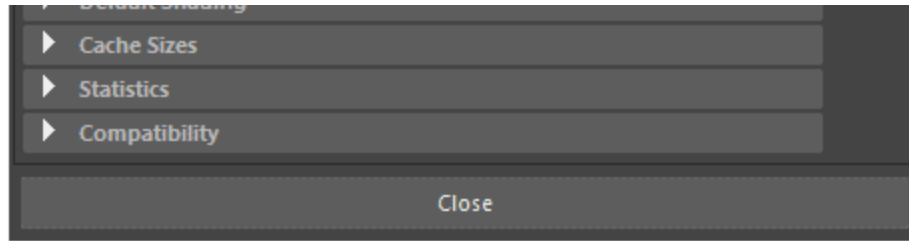
▼ **IES Lights**

Scene Units to Meters 1.000

▶ **Cleanup**

▶ **RIB Options**

▶ **Ri Injection Points**

▶ **Ri Filters**

▶ **Default Shading**

Render Options

Enable Object Instancing: Instanced Maya DAGs will be emitted as object instances, providing significant speed and memory benefits. However, shading variation in Maya instances will not be recognized.

Procedural Reentrant: This allows procedurals to run simultaneously in multiple threads and greatly speed up renders with procedurals (hair). You most likely want to leave this on.

Linearize Colors: Automatically converts colors and swatches on shaders to sRGB. You can also do this on an individual basis.

Lazy Render: Enable the *Lazy Render* mode to skip all passes that have existing outputs.

Output Shadow AOV: When using the Holdout workflow, you can specify the output location of the shadow collection. The options are: In Beauty Alpha or As Separate AOV. The former option matches traditional workflows.

Bucket Order: RenderMan subdivides the output image into small rectangular regions called buckets, and renders a single bucket at a time. This allows a small portion of the image to be in memory at any one time. The drop-down list allows users to choose the order in which buckets are displayed in "it" or the Render View.

Bucket Size: Specify the size of the buckets. Larger buckets will require more memory to render. Conversely, smaller buckets are less efficient for shading, but will use less memory during rendering. If your scene is using a lot of memory, you may want to try setting this field down to 8 by 8 or even 4 by 4 buckets, but most likely you will not change this.

Z Threshold: Control for adjusting the threshold of Z.

O Threshold: Controls the O Threshold.

Reference Frame: Once per job passes and static objects are evaluated at the frame designated here.

Dice

Micropolygon Lenth: Controls the tessellation rate for displacement. The default setting of 1 will dice displacements to 1 pixel's size. (As seen from the dice camera).

Dice Watertight: Closes pinholes in diced geometry.

Dicing Camera: Enables the use of a reference camera for dicing. This can be done globally, or restricted to specific objects (e.g. objects with displacements that "sparkle" as the camera moves) by also attaching this as a per-object attribute.

Reference Camera: Specify the camera to be used as your dicing camera here. Click on the widget to create a new camera, or right click in the field to select an existing camera. Note that the Reference Camera needs to be different from render camera.

Hair

Min Hair Width: Sets a minimum width for hairs/RiCurves. Narrower hairs will be clamped to this value and their opacity will be reduced to compensate for the difference in visual weight.

Trace

Trace Decimation Rate: Controls the tessellation of ray-traced surfaces. A value of 1 dictates no decimation.

Trace Displacements: *None* turns off displacements; *All* (the default) displaces the entire surface before ray-primitive intersection tests; *Fine* tells the renderer that the surface should only be displaced when near the ray origin or when the ray differential is narrow.
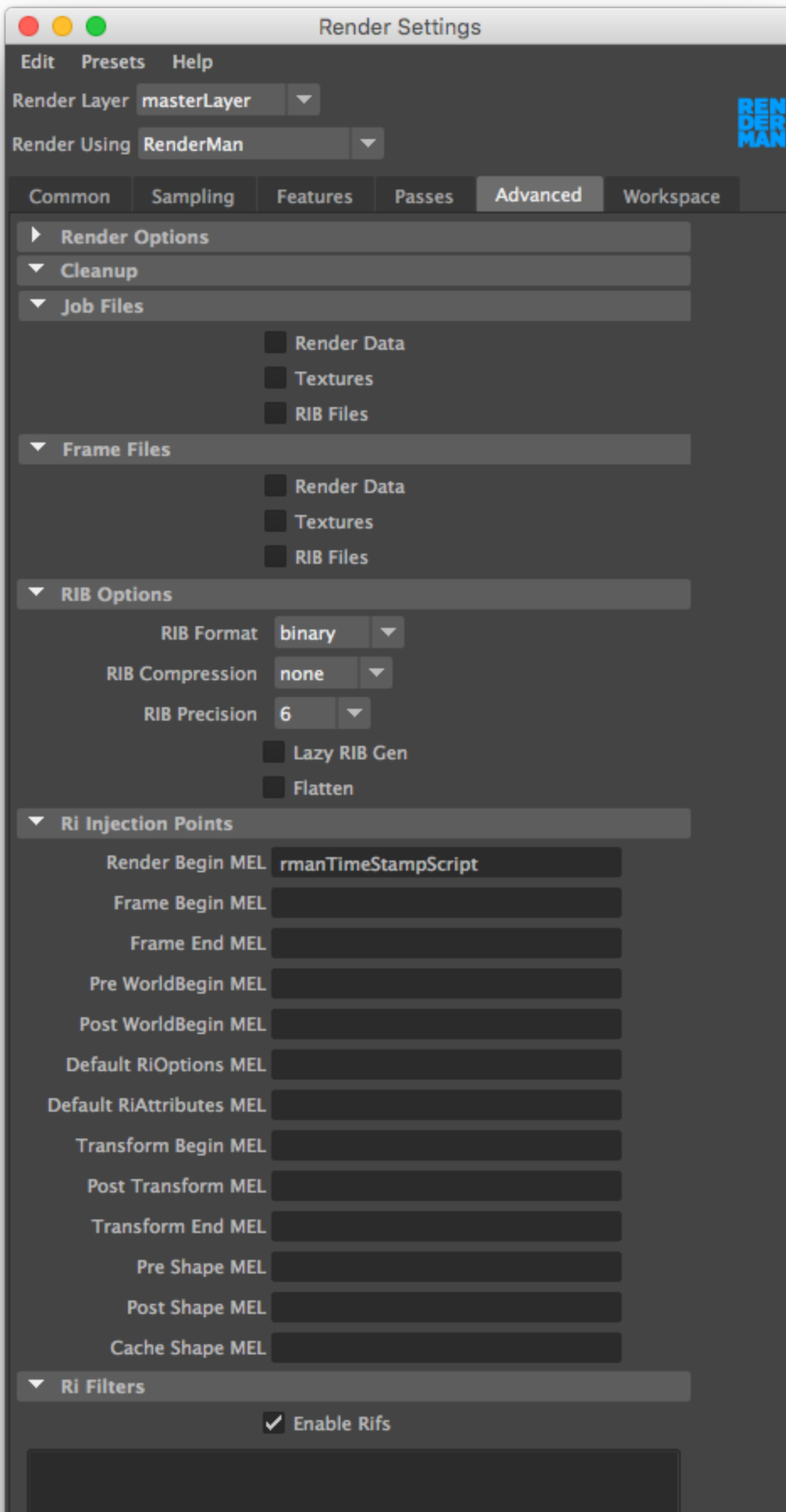
Trace Auto Bias and Trace Bias: RenderMan will automatically compute a trace bias for displacing ray origins off a hit surface. However, if you wish to turn off the auto bias, you can set the bias manually here.
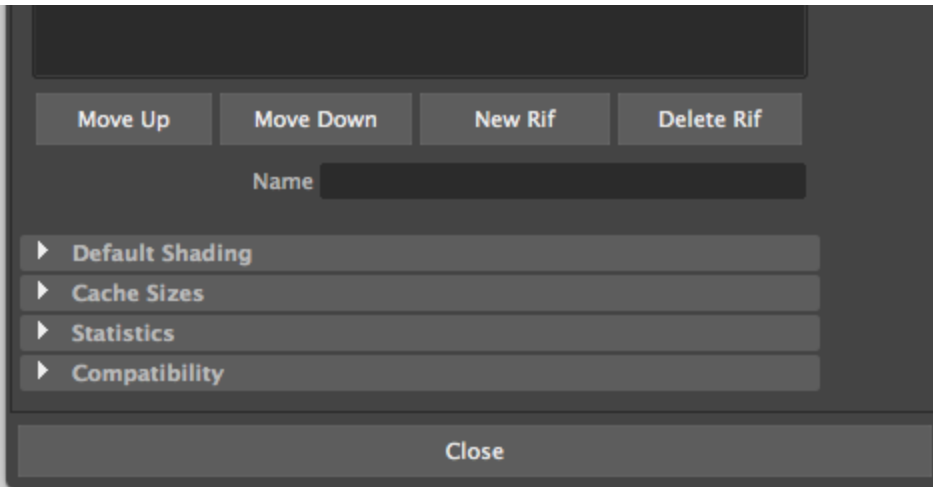
Crop Window

Specify the coordinates for a crop window to render. This can be useful when rendering many iterations for debugging or lookdev when only a specific region is under consideration.

IES Lights

While scenes are exported to rib "unitless", IES files specify a unit measure. Use this setting to specify the scene unit to meter conversion factor. For instance, if 1 unit = 1 meter, use 1. If 1 unit = 1cm use 100.

Render Settings

Edit   Presets   Help

Render Layer   masterLayer   ▾

Render Using   RenderMan   ▾

RENDER MAN

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▸ **Render Options**

▾ **Cleanup**

▾ **Job Files**

☐ Render Data
☐ Textures
☐ RIB Files

▾ **Frame Files**

☐ Render Data
☐ Textures
☐ RIB Files

▾ **RIB Options**

RIB Format   binary ▾

RIB Compression   none ▾

RIB Precision   6 ▾

☐ Lazy RIB Gen
☐ Flatten

▾ **Ri Injection Points**

Render Begin MEL   rmanTimeStampScript

Frame Begin MEL

Frame End MEL

Pre WorldBegin MEL

Post WorldBegin MEL

Default RiOptions MEL

Default RiAttributes MEL

Transform Begin MEL

Post Transform MEL

Transform End MEL

Pre Shape MEL

Post Shape MEL

Cache Shape MEL

▾ **Ri Filters**

☑ Enable Rifs

Cleanup

Select the types of files that will be cleaned up on a per-job and/or per-frame basis.

RIB Options

Allows users to choose between ascii and binary RIB output (binary rib is smaller and faster but ASCII is readable), whether or not to apply *gzip* compression, the number of places past the decimal for floating point numbers in RIB, and whether or not RIB is generated "lazily", with full paths, or flattened.

Ri Injection Points

Provides Ri entry points for inserting MEL scripts which will be run during ribgen.

Ri Filters

Provides an interface for enabling, inserting, and arranging **RIFilters.**
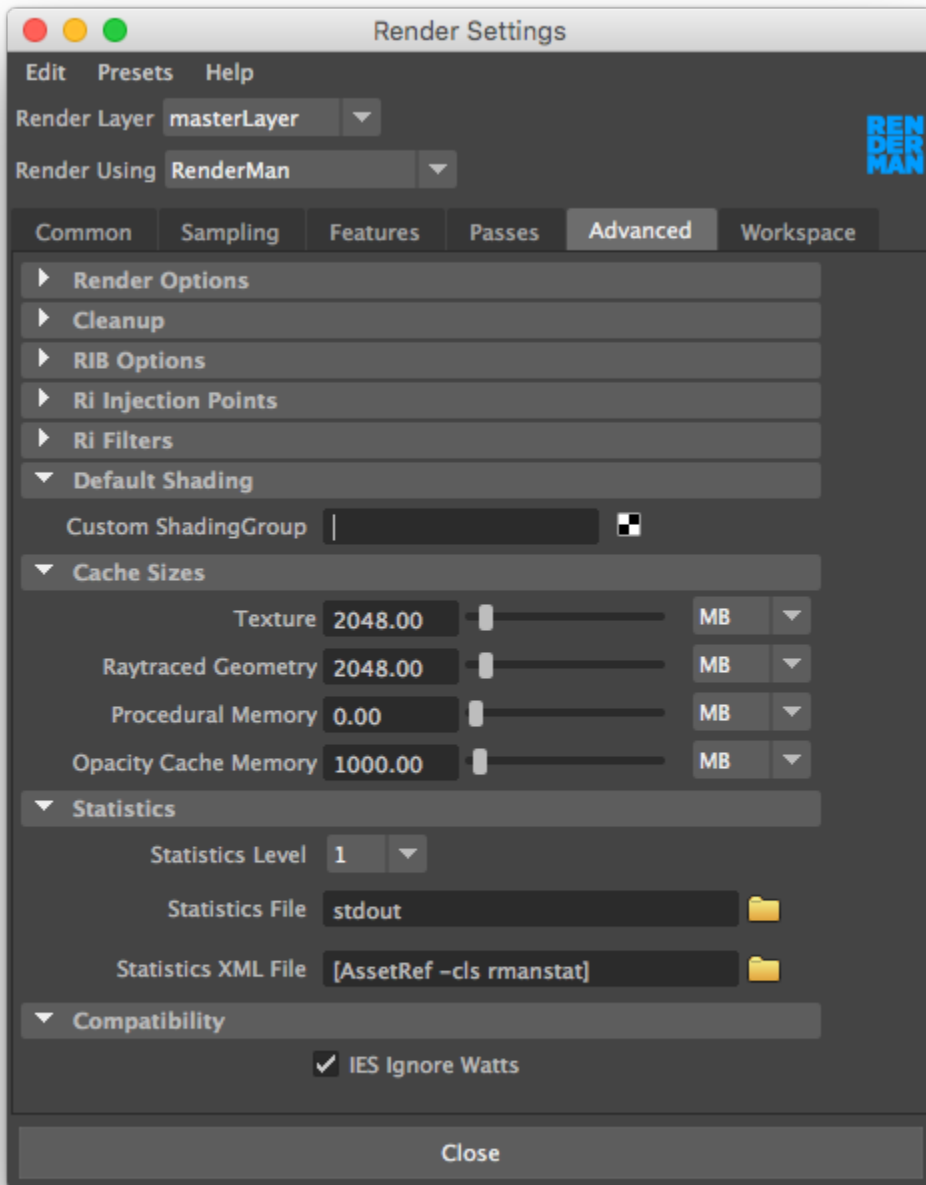
Default Shading

Allows users to specify a global default custom shading group (as opposed to per-pass shading groups specified via the Passes tab).

Cache Sizes

Allows users to customize the cache sizes for various assets, including textures, brick maps, ray-traced geometry (specifically the tessellation cache), and procedurals. The values are in megabytes, and the renderer will automatically unload data from the cache when the limits specified here are reached.

Statistics

Enable this to output diagnostic information from render jobs. Useful for timing, debugging, and seeing what RenderMan is doing. You can specify a target destination for both "Old School" and XML statistics.