

Batch Rendering

Maya's 'Render' Command Line

3Delight renders can be launched using *Maya's* **Render** command line. When launching renders this way, many command line parameters are supported to control just about every aspect of the rendering process. The following command lists the supported parameters specific to the *3Delight for Maya* plug-in:

```
Render -r 3delight -help
```

Issuing the **Render** command with only the `-r 3delight` option will render the *Render Pass* that is active in the [Render Settings](#) window when the scene was saved (see also [The Render Pass](#)). But most of its rendering attributes can be overridden with the command line interface. The available parameters to override these attributes are listed below. If you need to set a *Render Pass* attribute that is not listed, please send a request to technical support. Refer to [The Render Settings](#) for more information about the effect of each *Render Pass* attributes.

Render Pass Selection	
<code>-rp</code> <string>	<p>Specify the <i>Render Pass</i> or a comma-separated list of <i>Render Passes</i> to render. Specifying "all" will sequentially render all <i>Render Passes</i> defined in the scene. Examples:</p> <pre>-rp pass1 -rp pass1,pass2 -rp all</pre> <p>Because this option defines which <i>Render Passes</i> will be edited by subsequent flags, it should be specified right after the <code>-r 3delight</code> option.</p>
Scene Elements	
<code>-cam</code> <string>	Select <string> as the camera to be rendered.
<code>-sc</code> <string>	Set the shader collection to render. Specify an empty string to use no shader collections.
<code>-ors</code> <string>	Set the object set to render. Specify an empty string to render all visible objects.
<code>-lrs</code> <string>	Set the light set to render. Specify an empty string to render all visible lights.
<code>-cprs</code> <string>	Set the clipping plane set to render. Specify an empty string to render all visible clipping planes.
<code>-lr</code> <boolean name(s)>	Specify the <i>Maya</i> render layer to render. It is possible to specify multiple layer names, as long as they are separated by a space and the list is surrounded by double quotes. If this parameter is set to 'on', 'true' or '1', all renderable layers will be rendered. If an empty string, 'off', 'false' or '0' is specified, the <code>defaultRenderLayer</code> (or <code>masterLayer</code>) will be used. When this parameter is not specified, all renderable layers will be rendered, unless the selected <i>Render Pass</i> specifies which layer is to be rendered with its <i>Layer To Render</i> attribute. In this case, only this layer will be rendered, provided it is renderable. If it is not renderable, nothing will be rendered.
Search Paths	
<code>-shp</code> <string>	Specify the shaders search path.
<code>-txp</code> <string>	Specify the textures search path.
<code>-prp</code> <string>	Specify the procedural search path.
Frame Range	
<code>-an</code> <boolean>	Toggle the rendering of the specified frame sequence (animation) on or off.
<code>-s</code> <int>	Set the first frame to render.
<code>-e</code> <int>	Set the last frame to render.

-inc <int>	Set the frame increment.
-skipframes <bool>	Toggle frame skipping when all image layer files for that frame already exist. Ignored when -an is turned off.
Image Resolution and Crop	
-x <int>	Set the X resolution of the rendered image.
-y <int>	Set the Y resolution of the rendered image.
-resm <int>	Specify the resolution multiplier. The following values are available: <ul style="list-style-type: none"> • '0' Full resolution. • '1' One half of the specified resolution. • '2' One quarter of the specified resolution. • '3' One eighth of the specified resolution.
-par <float>	Specify the pixel aspect ratio of the rendered image.
-crop <boolean>	Controls if the specified crop window is used for rendering.
-crminx <float>	Set the top right corner position of the crop window in X.
-crminy <float>	Set the top right corner position of the crop window in Y.
-crmaxx <float>	Set the bottom left corner position of the crop window in X.
-crmaxy <float>	Set the bottom left corner position of the crop window in Y.
-is <boolean>	Toggle the use of imager shaders attached to the specified camera.
Displays	
-rpd <boolean>	Toggle the rendering of the primary display on or off.
-img <string>	Set the image file name of the primary display.
-of <string>	Specify the primary display output file format (i.e. the display driver to use). The following values are available: idisplay, tiff, iff, exr, cineon, zfile, bmp, epx, psd, radiance, shadowmap, texture and null.
-pdm <string>	Set the primary display output variable.
-pdbd <int>	Set the primary display bit depth. The following values are available: <ul style="list-style-type: none"> • '0' 8 bits int • '1' 16 bits int • '2' 32 bits float • '3' Custom Quantize
-pdqzero <int>	Set the primary display "zero" value for quantization.
-pdqone <int>	Set the primary display "one" value for quantization.
-pdqmin <int>	Set the primary display minimum value for quantization.
-pdqmax <int>	Set the primary display maximum value for quantization.
-pdqdit <float>	Set the primary display "dither" value for quantization.

-rsd <boolean>	Toggle the rendering of the secondary displays on or off
Render Engine	
-rmode <int>	Specify the render mode. The following values are available: <ul style="list-style-type: none"> • '0' Render • '1' Save RIB • '2' RIB Archive
-bo <int>	Specify the bucket order to be used. The following values are available: <ul style="list-style-type: none"> • '0' Horizontal bucket order. • '1' Vertical bucket order. • '2' Zigzag bucket order. • '3' Spiral bucket order. • '4' Circle bucket order.
-ribfile <string>	Specify the RIB filename to create.
-ribbin <boolean>	Toggle binary RIB output.
-ribcomp <boolean>	Toggle compressed RIB output.
Performance	
-cpus <int>	Define the number of threads to use.
-txm <int>	Set the size of the texture memory cache, in megabytes.
-unc <boolean>	Toggle the use of network cache on or off.
-ncdir <string>	Set the network cache directory.
-ncs <int>	Set the network cache size.
Statistics	
-stat <boolean>	Toggle output of the rendering statistics.
-statf <string>	Specify the statistics file.
Quality	
-psx <int>	Set the pixel samples to use in X.
-psy <int>	Set the pixel samples to use in Y.
-sr <float>	Set the shading rate to use.
-pft <int>	Set the pixel filter type. The following values are available: <ul style="list-style-type: none"> • '0' Box filter • '1' Triangle filter • '2' Gaussian filter • '3' Catmull-rom filter • '4' Bessel filter • '5' Sinc
-pfx <float>	Set the pixel filter width in X.
-pfy <float>	Set the pixel filter width in Y.

Indirect Illumination & Reflections and Refractions	
-rtmaxd <int>	Set the ray trace maximum depth.
Depth of Field	
	None available.
Motion Blur	
-cmb <boolean>	Toggle the camera blur on or off.
-cmbs <int>	Set the number of samples for camera blur.
-tmb <boolean>	Toggle the transformation blur on or off.
-tmbs <int>	Set the number of samples for transformation blur.
-dmb <boolean>	Toggle the deformation blur on or off.
-dmbs <int>	Set the number of samples for deformation blur.
-mbp <int>	Set the motion blur position. The following values are available: <ul style="list-style-type: none"> • '0' End on frame • '1' Centered on frame • '2' Start on frame
-soe <float>	Define the shutter opening efficiency.
-sce <float>	Define the shutter closing efficiency.
-sa <float>	Set the shutter angle for motion blur. <float> should be between 1 and 360.
Shadows	
-rsm <boolean>	Toggle automatic shadow map rendering on or off.
-shdlnk <int>	Shadow linking. The available values are: <ul style="list-style-type: none"> • '0' Use Light Links. • '1' Use Shadow Links. • '2' Ignore Light and Shadow Links.
Caustics	
-rpm <boolean>	Toggle the rendering of the photon maps on or off.
-nbp <int>	Set the number of photons to use.
RIB Archives	
-arl <int>	Specify how to archive lighting. The following values are available: <ul style="list-style-type: none"> • '0' No Lighting. • '1' Light Linking. <p>Light Sources & Light Linking</p>
-arw <int>	Set the archive write mode. The following values are available: <ul style="list-style-type: none"> • '0' Reuse existing archive. • '1' Overwrite existing archive.

-grar <boolean>	Generate RIB archives toggle.
-iao <boolean>	Ignore archived objects toggle.
-art <boolean>	Archive transforms toggle.
-cgt <boolean>	Concatenate geometry transforms toggle.
-args <boolean>	Archive geometry shaders toggle.
-args <boolean>	Archive geometry attributes toggle.
RIB Fragments	
	None available.
MEL Scripts	
-preRender <string>	MEL script executed before rendering.
-postRender <string>	MEL script executed after rendering.
-preFrame <string>	MEL script executed before each frame.
-postFrame <string>	MEL script executed after each frame.
-postOption <string>	MEL script executed after RenderMan Options are output (using <code>RiOption</code>).
-postWorld <string>	MEL script executed before <code>RiWorldBegin</code> .
Misc Options	
-bsx <int>	Set the bucket size in X.
-bsy <int>	Set the bucket size in Y.
-gs <int>	Set the grid size.
-es <int>	Define the eye splits.
-tms <boolean>	Toggle the translation of <i>Maya</i> materials on or off.
-ums <boolean>	Toggle the use of <i>Maya</i> materials on or off.
Shave & Haircut	
-3dfmshave <boolean>	Load or unload the 3dfmShave plugin.

3Delight's 'renderdl' Command Line*

Batch rendering can also be launched using *3Delight's* standalone renderer **renderdl** provided the scene have been exported to a RIB File using the [Render Engine's](#) *Render Mode : Export RIB File Only*. When rendering using the command line **renderdl**, many parameters are supported to further control aspects of the rendering process. The following command lists the available parameters:

```
renderdl -h
```

For a complete description of 3Delight's standalone renderer **renderd1** refer to [3Delight Studio Pro User Manual.pdf](#) (in the PDF: chapter 3.1 Using the RIB Renderer - renderd1).

**Available with 3Delight Studio Pro package*