

User interface and menus

The core rendering engine offers a complete user interface which is easy to use, flexible and visually attractive. The UI is made of up of different types of panels such as the Render Options panel, the Camera Options panel, the Multilight panel etc. All the panels are dockable so it is easy to customize the interface.

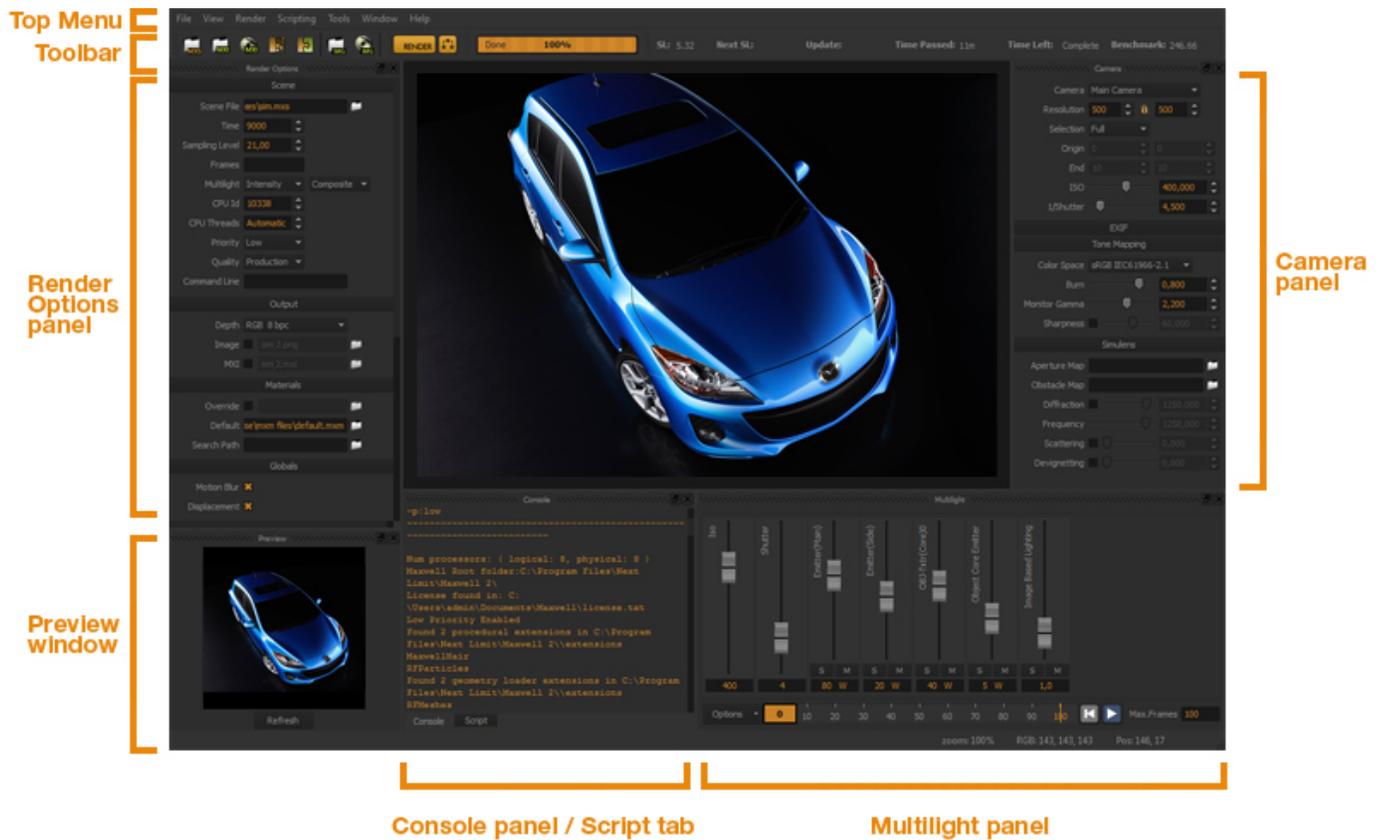


Image courtesy of Dan Abrams

Re-arranging the layout

- Click and drag on a panel title to place it in another part of the UI. The other panels will automatically adapt to fit the new panel placement.
- Drag a panel border to re-size it. Fields and sliders will reshape to fill spaces.
- You can display the panels as floating panels by clicking the Detach icon. To re-attach it to the UI just drag & drop it in the appropriate area until the rest of the UI slides to make room for the panel.

When you close and re-open Maxwell, it will remember the layout from the last session.

Creating tabbed panels

Tabbed panels can be a very efficient way to keep most of the panels open but without them taking too much space from the main render area. Click and drag on a panel title and release it on top of another panel - two tabs will be created at the bottom of the panel allowing you to quickly switch between the two panels. More than two panels can be tabbed together.

Top menu options

File

Menu item	What it does
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Open MXS	Opens an MXS file generated from the plugins or from Studio. You can then set the render and output options from the Render Options panel and click the Render button to start rendering.
Open MXI	Opens an MXI file which you can then adjust using Multilight, or add Simulens effects to it, change ISO/Shutter Speed to alter the exposure.
Save MXI as	This menu option can be used to convert a bitmap to the MXI format for use as an Image emitter in your scenes. For more details, see the Load Image menu option.
Merge MXI	Selects several MXI files that were rendered on different computers and merges them together to obtain a higher Sampling Level. This is normally done automatically when using network rendering, but this option can be useful if you are using computers for rendering which are not connected in network.
Merge MXI Sequence	In certain situations you may have several MXI files (i.e. several frames in an animation sequence) rendered by multiple computers, each with the complete sequence of MXI frames. In this case you may want to merge each frame with the same frame in the other computers to obtain the final sequence. This option allows you to specify all the folders to merge (with its "Add Folder" tool), and each frame will be merged with the same frame in the other folders, obtaining a single, complete sequence.
MXI Batch Processing	This tool allows you to edit a group of MXI files, applying the same modifications to all of them. You can change the ISO, Shutter, Tone Mapping, SimuLens, and Multilight settings. You can also extract the render images and the channels from the MXI files, export the emitters as separate images, and make changes in the emitters' intensity (overwriting original files, or not). Simply select the input folder where the MXI files are located, and specify an output folder. You can use the "File Name Filter" to filter the file selection, and use the "View affected files" option to review the MXI files that will be processed.
Resume MXI	Selects an MXI file to resume rendering. After specifying an MXI file, the corresponding MXS file will be loaded into Maxwell Render and rendering will resume automatically from where it left off. Please note that the resume render will not work if you have made any changes in the MXS or if the location of the MXS has changed. Please see the How to resume a render page for more info.
Load Image	Loads an image in any of the supported image formats. It can be useful for changing an image file from one format to another. You can convert a bitmap into an MXI which can then be used as an Image emitter in your scenes. See the Textured emission (HDR emitter) page for more info. Please note that if your bitmaps are in HDR or EXR format they do not need to be converted to the MXI format - you can use these formats directly as Textured Emitters.
Save Image	Saves a bitmap of the currently displayed render channel (Render, Alpha channel, Shadow etc). After clicking Save in the dialog, a second menu will appear, allowing you to choose the bit depth. Depending on the format you have chosen in the Save Dialog, you can save in 8, 16 or 32 bit output. Please see the Output formats page for more info about the capabilities of each image format.
Preferences	Opens the preferences dialog. Please see the Preferences section further down on this page for more info.
Recent MXS/ Recent MXI	Displays a list of recently opened MXS/ MXI files
Quit	Closes Maxwell Render.

View

Menu item	What it does
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Select/Pan	Pan: Click & drag on the render to pan through the render. Select: Revert to the normal cursor behaviour.
Zoom/Rotate	Allows you to zoom and/or rotate the render. Please note that zooming also works with the mouse wheel.
Full size	Makes Maxwell fullscreen, and hides all panels. Keyboard shortcut: F
Show/Hide panels	Hides/unhides all panels. Keyboard shortcut: H
Display Render	Enables/disables the continuous refresh of the render on the display. When disabled, the latest refinements won't be displayed on screen or saved to disk - useful when you need to save that image reconstruction time.
Clear Console	Clears all messages in the Console panel.
Channels	Sets the display of a particular channel (Render, Alpha, Fresnel etc). Please note you can also switch the display of channels by hovering your mouse over any of the channel buttons in the main render area.

Render

Menu item	What it does
Start/Stop	Starts or stops the render process. If you start a render that has already been run once and Maxwell finds the render MXI file, it will ask if you want to re-start or resume the render.
Render via network	Launches a Monitor (or uses the existing Monitor if there is one running on the same machine), and opens the Job Wizard automatically, lining up a new job with the current scene. Of course there must be one Manager and at least one Rendernode running to be able to render in network. Please see Network Rendering chapter for more information.

Scripting

Menu item	What it does
Load script	Loads and runs a script file to automate the rendering process. Please see the Scripting chapter for more information about Scripting.
Scripts	Shows a list of the scripts available in the "scripts" folder in the Maxwell installation folder. For quick access to scripts you should save any scripts you use regularly in this folder.

Tools

Menu item	What it does
Render Calculator	Provides a very useful calculator to obtain an accurate estimation of the time needed to finish a render at a certain resolution. It also can output the Sampling Level reached after a given render time. It can work both from a previously rendered MXI, or from a given MXS scene file.
Run Benchwell	Runs Benchwell, the official Maxwell benchmarking test that allows you to check your computer's performance and compare your render power with other hardware configurations. It first automatically downloads the Benchwell scene from the Next Limit server (the next time you run the test, the system will detect if the scene is already present in your computer, and will skip this download). Then it automatically runs the Benchwell test, rendering the provided scene, and outputting a benchmark value that represents the rendering power of your computer. You can publish your performance value together with your system configuration to the Benchwell webpage , which represents a valuable hardware comparison chart. For more information, see this page about the Benchwell test .

Window

Opens or closes the different panels available (Render Options, Edit, Preview, Console, Script, Multilight)

Help

Menu item	What it does
Help	Opens your default web browser to support.nextlimit.com
What's this?	Allows you to click a parameter and get a small pop-up text explaining what the parameter does.
License Info	Opens the License Info window where you can see all your current licenses and also add/remove licenses. Please see Licensing section for more info.
Visit Home page	Opens your default web browser to www.maxwellrender.com
Resources	Opens your default web browser to support.nextlimit.com/display/resources/Resources+home where you can find different Maxwell Render resources (tools, scenes, models, scripts etc).
MXM Gallery	Opens your default web browser to resources.maxwellrender.com where you can browse and download over 4000 free Maxwell Render materials.
Check for updates	Checks if any new updates are available (internet connection required).
About Maxwell Render	Switches Maxwell Render to "turbo" mode providing a 50x speed increase. Just kidding. Displays the About message including version number.

Preferences

General

- **Always force automatic threads:** This sets the CPU threads parameter in Render options to Automatic for any loaded MXS file, even if that file specified a different thread number. Setting CPU threads to Automatic ensures Maxwell Render will use all available cores.
- **Min. time for saving to disk:** Automatic/nr of minutes. This setting determines how often Maxwell Render should write the MXI file to disk while rendering. *Automatic* saves the MXI when a new SL is reached at the beginning of a render and then every 10 minutes if the next SL will take more than 10 minutes to reach. Sometimes it may be useful to set this timer to a larger number because especially in the beginning of a render, going from SL 1,2,3 etc. will be very quick but Maxwell has to pause rendering while the MXI is being written to disk. Setting the timer to 10-20 minutes for example ensures the render process doesn't pause frequently at the beginning of a render (or afterwards every 10 minutes) during MXI writing, which can take a moment for large renders.
- **Save to disk only at end:** When enabled, Maxwell skips the saving of the render image and MXI at each new SL and saves them only when the process is finished. Useful when you need to save that extra writing time that under certain circumstances (saving to a network location, to a slow disk or particularly on big renders) can take some time.
- **Fast Multilight Preview:** Enables the fast preview driven by the GPU, which displays the interactive Multilight adjustments in the main image at full resolution, rather than in the small preview window.
- **Automatic Update After Editing:** When the Fast Multilight Preview option is enabled, the GPU is automatically showing you an instant preview of your changes while you are editing a slider, and when the slider is released, the CPU (more accurate) displays the final result. When this option is enabled, the CPU updates the final images automatically when you release the slider; otherwise the image is updated by hitting the **Update** button.
- **Temp Files:** Determines where the temporary MXS file that is used for rendering is stored. *Project folder* will save it in the same folder where the MXS is located. *Temp folder* will save it in the systems temp folder. *User folder* will save it in the current logged on users folder.

Notifications

- The different options here are pretty self-explanatory. In this section you can also set where Maxwell Render should save the Render Logs and their verbosity level (varying from None to Debug mode). In case of problems during the render, it is highly recommended to set this parameter to Debug Mode, to get more in-depth information of all the events happening during the render. Set it to a lower mode during normal usage to get cleaner logs.

Paths

- Allows you to set up to 4 different alternative texture paths, where Maxwell Render will look for missing textures. This is useful to minimize the "missing textures" error when Maxwell Render can't find a texture used in the scene and will not render.

Appearance

- Choose whether scrollbars should be displayed in the UI or not, and which color scheme the UI should have. "Maxwell classic look" is the default dark grey color scheme.

Keyboard shortcuts

You can download the Maxwell Render Suite keyboard reference chart here: [Maxwell_shortcuts.pdf](#)