

Note: This document has been updated as of June 30, 2018.

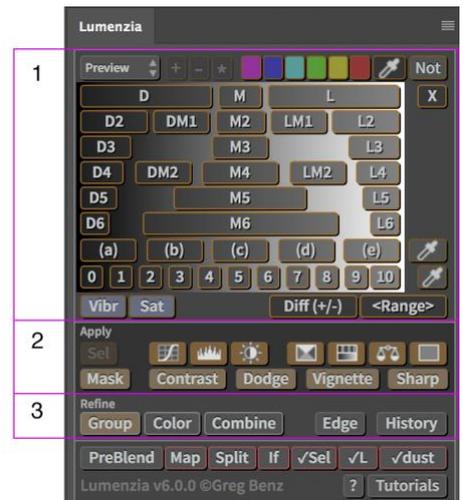
Lumenzia Overview

For a detailed video tutorial on Lumenzia's features, please click the **"Tutorials"** button in Lumenzia, this will take you to a [private support page](#) with more information and numerous training videos.

To get started, I recommend watching the [Quick Start](#) video.

Lumenzia is specifically geared towards making luminosity masking as easy and powerful as possible. In keeping with this, it has three primary functions. Nearly all buttons in the panel fall into the following categories

1. **Create.** These buttons (such as L5, Range Picker, etc) allow you to identify which tones/colors to select. Each of them either uses a default selection or asks you for input to create a preview of the mask/selection. The normal mode creates orange temporary layers to generate a preview, which may be customized and then applied via the orange buttons below. Using the mode buttons (Photoshop CC only) or shortcut keys (CS6 and CC) enables other options, such as "BlendIf" masking, which is applied directly to the active layer. Note that the alternative modes (LIVE-M, etc) are only available on CC.
2. **Apply.** Once you have a preview that selects the desired tones/colors, it is time to apply it. These buttons allow you to apply the preview as a selection or to mask existing or various other custom options (such as a sharpening layer).
3. **Refine.** While you can customize the masks during the first (creation) phase, it is often helpful to further refine the masks once they have been applied. This may include refining the edges for a smoother transition, applying the mask only to certain colors in the image, or applying the mask only to certain parts in the image.



In addition to these primary functions, Lumenzia includes **PreBlend** and **Visualizations** at the bottom of the panel.

*Note for CS6 users: Your interface looks different, but the vast majority of the functionality is available to you by using modifier keys (such as <cmd/ctrl>) to access extra functionality. Please see the **"Button Reference"** document in the ZIP, as well as seeing the tooltips that appear when you hover over the buttons in the panel. And note that you should <ctrl/cmd>-click the Tutorials button to access the panel preferences and Utilities (CC users have access to this instead via the menu as shown in the tutorial videos).*

Video tutorial: [Notes on interface differences for Photoshop CS6 users](#)

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A note for beginners....

Luminosity masks are both complicated and extremely powerful. My goal with Lumenzia is to make luminosity masking much simpler and even more powerful. But no matter how easy it becomes to create luminosity masks, there will always be a bit of a learning curve to use them (especially if you are new to Photoshop as well). The training included with Lumenzia is designed first and foremost to help learn how to use the software. While many luminosity masking techniques are covered in great detail, it is beyond the scope of the included training to cover every possible subject, technique, or workflow. Please be sure to utilize our [private Lumenzia G+](#) group and the [general luminosity masking group on Facebook](#) for additional support, and I'm always happy to take suggestions for future tutorials.

If luminosity masks are new for you, I recommend you start with simple tasks and then move to more complicated ones over time. Trying to understand everything all at once can be frustrating and slow down your ability to really learn the process.

Specifically, you may wish to consider the following learning agenda as you begin. There are no right or wrong ways to get started. This suggestion is simply based on the idea that you'll probably learn the fastest by starting with basic topics first, before trying to learn complex topics like exposure blending:

1. Watch the "[Quick Start](#)" video included with Lumenzia.
2. Refer to this **manual**, the **button reference** guide file (also included in the ZIP download), and other videos available by clicking "tutorials" in the order that suits you.
3. Before starting to make real adjustments, take a look at your image and write down what you would like to do with it (areas to fix, enhance, etc). One of the most challenging aspects of luminosity masking is that it is open-ended. You can do almost anything, but you do have to have an idea of what you'd like to do. This is very different from using filters, HDR, or other software that have a limited number of sliders/options. Exploring is a good thing to do with luminosity masking, but making arbitrary adjustments is not likely to produce the results you want.
4. **Target some part of an image to adjust with "Curve" or "Level"**. You might use a lights mask to target the sky (such as L3), or a midtone mask (such as M4 or the zone pickers) to adjust contrast. Use the "Mask" button to change masks on an existing layer.
5. Try using the **BlendIf** masks for color and curve/level adjustments.
6. Try further refining that mask with the "**Group**" button. Paint white and black on the group mask to see how you can hide or show the underlying adjustment. Then use the "**Combine**" button to see how group masks can be combined with luminosity masks.
7. Try refining another mask using the "**Color**" button.
8. Play with the "**Contrast**", "**Vignette**", and "**Sharp**" (high pass) buttons to get a sense of how they work. Don't use any luminosity masks with them for now (though you can do that later).
9. Try using the 50% gray pixels option in "**Dodge**". Spend some good time here. Dodging and burning is a very deep subject, and extremely powerful for giving something more/less attention in the image. Trying dodging and burning without any luminosity masks or selections first, just to get the hang of how the process works freehand. Then try dodging with a luminosity mask, and then finally try dodging by painting through selections.
10. After you have mastered the topics above, try **blending multiple exposures** to increase dynamic range. Try the "PreBlend" tool to help arrange the layers. Then try blending exposures by painting through selections based on L2-L6. Blending through luminosity selections will almost always yield superior results to simply applying masks or BlendIf.

Changes from v5 to v6...

There are numerous improvements from Lumenzia v5 to v6. For a full list, please see the [release notes](#). The goal for this update was to improve capabilities without disrupting existing workflows. As a result, the interface changes are very minimal.

There are a few notable changes in the user interface:

- There is a new “?” button at the bottom of the main panel. Click it and then any other button to get help specific to that button. This makes it easier to find the tutorials you need.
- There are a few new configurable menu options, “**Use legacy vibrance/saturation**”, “**Dodge/Burn Orange Previews**” and “**Keep independent layer/vector masks when possible**”. See the next section on Configuring Lumenzia for more details.
- **Vector mask options** have been moved from the configuration menu into the dialogs that popup when you are applying selections or paths. This allows you to easily switch between using them or not. Additionally, you now have control over the tolerance used for creating vector masks from selections (so that you may have fewer path points to edit or more accuracy in the path).
- If you click “Dodge” while an existing pixel-based Dodge/Burn layer is active, you will see a **visualization of the dodge/burn layer**. This can make it easier to understand what has been done, and to find any potential problem areas (such as subtle changes in unintended parts of the image). Click again to clear the visualization.
- **CS6 support** for new capabilities introduced in the v5 has been expanded. This includes many of the options previously only available in the CC menu. CS6 users may configure these options by **<ctrl/cmd>-clicking the “Tutorials”** button for advanced options.
- Other new capabilities have been added within popup menus. See the release notes (linked above) for a full list of changes.

Setup, Menus and Preferences: (updated in v6)

Like any panel in Photoshop, Lumenzia can be docked and moved around the screen in Photoshop. Please see this video on [configuring the workspace](#).

Preferences

- On Photoshop CC, there is a configuration menu under the three bars icon at the very top-right of the panel. This includes options for:
 - **Use legacy vibrance/saturation (slower)**. The legacy algorithm is slower but selects extremely dark saturated pixels if desired. Most users should use the new (unchecked) option, which is faster and equal or better for most use.
 - **Show properties for new adjustment layers**. Opens the properties panel immediately after creating curves, HSL, etc.
 - **Paint on Orange Previews**. Creates a blank pixel layers in the temporary orange layer stack when previewing masks. This allows manual refinement of the mask preview with a paint brush. You may use this, for example, to paint black to remove an unnecessary part of the mask.
 - **Dodge/Burn Orange Previews**. Similar to the blank pixel layer, but in overlay blend mode. This is helpful for pushing gray pixels toward black or white, while protecting the opposite. For example, paint black on this layer to help remove partially selected areas, without affecting the most fully selected areas.
 - **Keep independent layer/vector masks when possible**. This controls the behavior of the “Mask” button. When this option is enabled, Mask will not replace both the layer and vector mask if it does not have to. For example, if you have a layer with an L3 layer mask and a vector mask created with a selection, you can apply an L4 mask without removing the vector mask.
 - **Hide marching ants**. This determines whether marching ants should be shown after creating a luminosity selection via the “Sel” button. You can always hold the <cmd/ctrl> key while clicking “Sel” to select the behavior opposite this setting. Note that the ✓ Sel (visualization button at the bottom of the panel) ignores this setting, and instead keeps the visibility you were using at the time you last clicked the button to create a preview.
 - **Large User Interface**. This makes Lumenzia compact, or larger.
 - **Tool tips**. This allows you to turn on and off tool tips and the new “panel tips”. Panel tips allow you to see help descriptions immediately while hovering over the buttons and are displayed at the bottom of the panel (be sure to click and drag down the lower edge of Lumenzia in order to see the text).
 - **Reset notifications**. Some of the dialog boxes have an option to fix the settings so that you don’t need to see the dialog box again. Resetting the notifications will allow you to see these dialogs again to change preferences.
- On CS6, you can access these same preferences by <ctrl>-clicking the “tutorials” button in Lumenzia.

Utilities:

- In the panel menu [Photoshop CC], you can select “Utilities” for a popup window of additional tools. In CS6, just <ctrl/cmd>-click on “Tutorials” for the same dialog as above.
- “Optimize Photoshop” will check your Photoshop settings and make any necessary recommendations. Nothing will be changed without your permission. You may see a recommendation to change your gray working space to Gray Gamma 2.2. This does not affect

editing of images (including black and white) in RGB or LAB - but it can slightly improve the quality of your luminosity masks/selections in those spaces.

- “Load Lumenzia Actions” is described in detail later in this guide.
- There are options to show the folders for the panel or plugins. This can be a helpful way to manually install/upgrade/uninstall panels. Just be sure to close Photoshop after showing the folder, as the files for open panels may be locked until Photoshop quits.
- “Reset popup notifications” will bring back options and warnings that you previously dismissed.
- “Reset panel preferences to default” will reset Lumenzia to its original settings.
- “Copy system info to clipboard” will allow you to paste your system info into an email if you need support.

Convert Content to Linked PSB (updated in v6)

Luminosity masking files often get very large, due to layer masks and multiple source images. Lumenzia offers many ways to reduce file size (Combine, BlendIf, and Vector masks are all great ways to do this). However, you may still create some very large files. If you are using Lightroom to view and manage your images, you will not be able to view files larger than 4GB (the maximum size for a TIF file, or 2GB for a PSD). Ideally, Adobe will add support for the PSB format natively in Lightroom at some point in the future. However, there is still a way to save large layered files in a way that can be viewed in Lightroom, and Lumenzia’s new “Convert Content to Linked PSB” makes it very easy.

The solution is to put some or all of the layers of your image into a PSB file (which can be nearly unlimited in size) and then create a linked Smart Object from a TIF file that points to that PSB file. In other words, you’re making a small TIF file (which can be viewed in Lightroom) by moving its content to a second image file. Both files should be saved in the same folder, and only the TIF will show in Lightroom (since PSB is not supported).

Here’s the workflow to use this option in Lumenzia:

- In Photoshop CC, go to Lumenzia’s menu (three bars at top right) and choose “Convert Layer(s) to Linked PSB”.
- In Photoshop CS6, <ctrl/cmd>-click the “Tutorials” button to open the Utilities dialog and choose “Convert Layer(s) to Linked PSB”.
- You will have the option to send all content (including channels/paths), all layers or just the selected layers to an external file. It is usually best to send everything if you plan to edit inside the Smart Object.
- If prompted (or you request to set the save name/location), make sure you save this PSB in the same folder as the parent document (the working file you started with).
- If you have paths (or channels when using “everything”), you will have the option to keep or remove duplicates items in the parent document.
- If you use “selected” be careful if you don’t select lower layers. Adjustment layers and layer blend modes only affect content within the same document.
- Save your parent document (as it has been updated to point to the external PSB). You can save the parent document as a TIF (highly recommended due to larger 4GB limit) or PSD (no advantage over TIF and has a 2GB limit).
- To edit the file, you would open the TIF file as normal, and then you can double-click the Smart Object if you need to edit the content that has been placed into the external PSB file. When done editing the Smart Object, just hit <ctrl/cmd>-S and close the tab. The changes will be written to the PSB and the Smart Object in the parent document will reflect the updates. You should never need

to open the PSB file directly (i.e., always open the parent TIF document and then double-click into the Smart Object to edit the external layers).

- The parent file points to the external PSB as a relative path. So as long as you always keep them in the same folder, everything will work automatically (even if you move or rename the folder). If you rename the external PSB or move it to another folder, you will break the relative link and the Smart Object will show a red question mark on its thumbnail. But even that is fairly easy to fix. If you double-click with a broken link, you will be prompted to point to the external PSB file.

Additionally, there are other steps you can take to keep your TIF files within the 4GB limit to minimize how frequently you might need to use external PSB files:

- Delete any unused layers or masks.
- Use BlendIf instead of layer masks where possible. Any mask that you are applying directly without customization is probably a good candidate. This can have a substantial effect when used on several layers.
- Use the “Combine” function in Lumenzia when you no longer need group masks to be independent.
- Use the Vector Mask preference to render lasso selections as vector masks.
- Note that you can use the file size indicator at the bottom of Photoshop as a guide to get a sense of whether you are within limits before you save. But the file size estimate at the bottom of Photoshop is just that, an estimate. Estimates as low as 1.6GB can yield a TIF file that exceeds the 4GB limit (if saved without ZIP compression). So you’ll have to get a sense of what predicted file size typically hits the 4GB limit for you. If you are saving with ZIP compression, an estimate of 2-3GB is probably the upper limit (as the estimate always seems to be quite a bit smaller than the smallest ZIP-compressed TIF file you can create).

If you ever wish to reimport your layers (i.e., undo this export), you can use Convert Layers to Linked PSB again (with the master file active in Photoshop), and there will be a new option to “Re-import External Content”. This will allow you bring back layers, paths, and channels – subject to the limitations noted below.

Limitations to Re-importing:

- The option to re-import will not work properly if you have resized or rotated the linked Smart Object. If you need to align the external content, it is therefore best to do so before creating the external PSB.
- Any Smart Filters applied to the Smart Object will be ignored.
- Channels can be re-imported, but only areas which are visible within the parent document. Beyond the edges, channels will be clipped. You will be warned of this situation and may wish to review the channels to know if you should undo, or if it is ok to save. If you keep the channels in the parent document during export, they will of course not be affected by the re-import. You may also increase the size of the parent canvas before re-importing if you wish to fully preserve the external channels while re-importing them.

Video tutorial: [Convert Layers to Linked PSB](#)

Lumenzia Actions

Lumenzia is written in JavaScript and does not use any “actions”. That means that it is incredibly powerful, but it also means that it is too complex for its buttons to be recorded as actions in Photoshop.

In order to give you the ability to create specific light and dark selections/masks, Lumenzia comes with a limited set of actions. They may be used to create L-L6 and D-D6 masks or selections as part of an action. **The actions are not used by Lumenzia itself in any way**, and do not need to be installed to do anything with the Lumenzia panel.

Note that Lumenzia is very sophisticated, and the actions just approximate some basic functionality. The actions *mimic* the D-D6 and L-L6 buttons run in “traditional” mode (which is available when holding <ctrl/cmd> for advanced options). **You should not expect an exact match between the result of the actions and the results created with the Lumenzia panel.** The biggest differences will be in the treatment of saturated colors, and the 5-6 masks/selections. The results are very close and well suited for work using actions.

Installation of the Actions (optional):

- If you are using Lumenzia on Photoshop CC, just click the three bars icon in the top-right of Lumenzia and choose Utilities/Load actions. See the tutorial link below for a video.
- If you are on CS6, you do not have the same menu. Instead, <ctrl/cmd>-click on the “Tutorials” button in the panel and then click the “Load Lumenzia Actions” button. Other than this initial step, the use of the actions is the same on CS6 and you should see the video tutorial linked below.

Using the Actions:

1. Open the Actions panel (Window/Actions)
2. Select the action you wish to use by opening “Lumenzia Actions (c) Greg Benz”, expand it by clicking the arrow, and then select one of the main actions inside (such as “L4 Mask”)
3. Use <shift>-click to select all of the steps (at the same time, as they must remain in order) to the action where you would like them used.
4. Hold <alt/option> to drag and drop them into the action where you would like to use them. Holding <alt/option> will create a copy of the action (otherwise these steps will be moved). Be sure to insert them at the exact point in your script where they should be used.
 - Alternatively (if you forget the keyboard shortcut to copy), you may either reload the actions each time or click on the three-bars at top right of the Actions panel and choose “Duplicate” to duplicate the selected action before moving them.
 - If you ever accidentally change the master actions, you may simply use the installation steps again to reload a clean copy.
 - Note that the Lumenzia actions are designed to be easier to identify when placed in another action. Each action begins and ends with a “Stop” (which has been deactivated so it does nothing, but it clearly marks the beginning and end).

Removal of the Actions:

- If you wish to uninstall the actions, simply select them and then click on the trash can icon at the bottom of the Actions panel.

Video tutorial: [Lumenzia Actions](#)

Section #1: Create Masks

Standard masks: D/M/L

These buttons are “dark”, “midtone”, and “light” luminosity masks. When you click on one of them, you’ll see a preview of the mask. You can keep clicking to find the right mask, apply the mask using the orange buttons below, or click “X” to cancel the preview.

For black and white images, Lumenzia creates masks that are the same as my free actions. However, Lumenzia is optimized for color images (channel-based masks tend not to select pixels which are bright but saturated). If you’d like to make selections that are identical to my channel-based actions, just hold the <ctrl/cmd> key while clicking on the button. You’ll see the bottom of the three orange layers is a BW Adjustment Layer in the default mode and is a black and white image labeled “Traditional” when you use the modifier key.

Video tutorial: [Standard and Zone masks](#)

Video tutorial: [Traditional masks](#)

Video tutorial: [Exposure blending](#)

Video tutorial: [Exposure blending](#)

Zone masks: (a),(b),(c)...1,2,3

These masks target specific tonal ranges in the image. They are not similar to a channel-based approach, they are optimized to provide a better selection. They are designed to fully select the target zone and provide a natural feathering around that tone. The 5-zone system represented by letters includes a wider selection of tones than the 11-zone system represented by numbers.

Zone pickers:  or 

There are two zone picker icons. The top one next to the wide zones helps you automatically select a wide zone, while the bottom one next to the narrow zones helps you select a narrow zone. Not only does this tool eliminate the need to know what zone corresponds to your intended target, but it also creates zones centered on the tone you pick (i.e., you could select the equivalent of zone 5.5 with this approach).

The color picker “sample size” can be adjusted in the tool options. I recommend 5x5 sampling for most selections. Please note that much larger sample sizes (31x31 and larger) can produce average samples which do not accurately represent the tones you ultimately want to select (for example, this would be a problematic choice if you wanted to select a halo around a dark edge).

Alternatively, you may use a selection to pick the target zone. Simply lasso a selection first and then click on the zone picker. Lumenzia will find the middle value in the selected area and automatically use that to create a zone mask. This enables a faster workflow, and the ability to easily sample different sized areas. Just as with the manual sample option, you should be targeted in order to get good results, so lasso a

small sample area (otherwise, you'll get the average of a larger area, which may not represent the zone you wish to select).

Video tutorial: [Zone pickers](#)

<Range>

Like the “zone pickers”, the “range picker” allows you to select tones by clicking on the image, or by analyzing the tones selected with a lasso. However, instead of selecting a range of tones centered around a single value, the range picker uses two inputs and selects everything between them. If you wish to change feathering, hold <ctrl/cmd> while clicking on the range picker. If you wish to invert the mask to protect a range of tones, hold <alt/option> while clicking on the range picker.

As with the zone pickers, it is best to use a small sample size for accurate tonal selection.

Just like the zone picker, you may also use a lasso selection to target a range of tones. You may also wish to create two small lasso selections to more accurately select the range of tones (hold the <shift> key to lasso multiple areas).

Video tutorial: [Range picker overview](#)

Video tutorial: [Range picker](#) (example edit)

Diff(+/-) (aka Lighter/Darker)

These masks are completely unlike other luminosity masks. They do not simply consider the luminosity of a given pixel on its own, but rather how much lighter or darker it is than the pixels surrounding it. The radius value determines how far from a given pixel it should be compared. If you wish to try other radius values, simply double-click the Gaussian blur smart filter in the bottom orange preview layer. You may then adjust the radius and see an interactive preview of the mask. Because this mask selects pixels which are different from their neighbors, it tends to work ideally with small objects or for selecting edges. The recommended workflow is to create the preview, load it as a selection with the “Sel” button, and then use a paintbrush to paint through the selection onto a mask (the mask should be created before using +/-, otherwise the selection will be turned into a mask when creating the mask).

Video tutorial: [Lighter/Darker](#)

Vibrance/Saturation (updated in v6)

These create a selection based on pixel vibrance or saturation. A vibrance map can be used to create color specific vibrance adjustments (when applied to an HSL adjustment layer). A saturation map can be helpful in desaturating over-saturated colors, without diminishing other colors.

You can customize these masks by adjusting the temporary curves layer. Drag the center of the curve down to make the mask more specific to saturated or unsaturated (vibrance) values.

The saturation masking method has been significantly improved in v6. It is much faster, and no longer treats very dark colors as saturated. This also eliminates the need to install the “Optional Multi-plugin” from Adobe for CS6 users to use vibrance and saturation masks. If you wish to use the old method, just check the “Use legacy vibrance/saturation” option in the panel menu (<ctrl/cmd>-click Tutorials in CS6).

Video tutorial: [Saturation masks](#)

Section #1a: The Mode Buttons (Special options)

The following options modify how the mask creation buttons above operate. These are available as buttons in the top row of the CC panel, or **as modifier keys in CS6**. *(Note that modifier keys are also available in CC, but the buttons are preferred, as CC has a bug that may cause Photoshop to lock up if you hold a modifier key down too long inside an extension panel. If you run into this, switch to another program and then back to Photoshop in order to regain control).*

Normal mode:

If you’ve been watching the videos above, you’ve already been exposed numerous times to the normal blending mode. When you create a mask preview, Lumenzia creates several orange adjustment layers. *These temporary orange layers not only enable a live preview of the exact mask or selection you will get when you apply them, but you can manually tweak these layers to get completely custom masks.* To customize them, it is best to adjust from the bottom up (as needed):

- ***BW Mix (bottom orange layer):*** Adjust the sliders of the BW Mix layer to select more or less of a given color range for light or dark masks.
 - Sliding to the left or right may increase or decrease selection based on the orange curve layer and the brightness of target color, just slide left and right to visually select the best value for a given color slider.
 - This layer is not created when working in the LAB color mode (as Photoshop does not allow B&W adjustments in LAB). If you are working in LAB, please use the “Color” option to mask color as desired.
 - You may use alternative color filter options by holding <ctrl/cmd> while clicking on a mask preview button. This will allow you to use the channel mixer (which offers more complete exclusion of a specific color channel) or traditional masks (which create more separation between whites and bright colors). Note that these options are only available while working in the RGB color space.
- ***Curve (middle orange layer):*** Adjust the curves to make specific tonal adjustments. Slide the curve points up to include more of a given tone in the mask. This allows you to make very precise refinements.
 - For example, you can grab the far-right curve point of an L2 curve and drag it down in order to create a mask that protects the brightest highlights (if you are used to a traditional channels approach, this would be similar to subtracting an L5 selection from L2).
- ***Levels (top orange layer):*** At default settings, this layer has no effect. Its purpose is to provide a simple way to make custom global adjustments to the mask preview (which is much faster and simpler than editing multiple points on most of the curves)
 - For example, you might drag in the right (white) levels slider for a DM1 mask, so that the dark midtones are completely selected (as the default mask is a fairly weak selection).

- **PAINT (optional, disabled by default):** You can paint on this blank layer to directly modify the preview. This is a quick way to remove extraneous selections with a black brush or add areas other areas with a white brush. [To enable this option, use the top-right menu in the CC panel, or <ctrl/cmd>-click the “Tutorials” button in CS6].
- **DODGE/BURN (optional, disabled by default):** You can paint on this blank layer (which is set to overlay blend mode) to directly modify the preview. This is a quick way to push gray pixels in the mask toward black or white. [To enable this option, use the top-right menu in the CC panel, or <ctrl/cmd>-click the “Tutorials” button in CS6].

Note that with nearly all the creation options, holding <alt/option> when clicking the preview buttons will create an inverted (“not”) mask by inverting the curve. This is a helpful way to protect specific tones. For example, you can load an inverted L4 (aka “Not L4”) to protect bright highlights.

These temporary orange preview layers are only used in “normal” mode (live/BlendIf masks are applied immediately).

Video tutorial: [Customizing luminosity masks](#)

“X”

This option removes any orange or red temporary layers. It will also offer to clear a BlendIf mask on the active layer.

“LIVE-M” mode (formerly just “Live”)

When active, clicking on any of the mask buttons will create the respective mask immediately on the active layer. If you wish to tweak the result, you may wish to select the new mask and use the keyboard shortcut <ctrl/cmd>-L to perform a levels adjustment. Note that the live mask will be based on the visible layers below the active layer (as using the currently masked layer would adversely impact the live mask when it is updated).

Alternatively, if you <ctrl/cmd>-click any preview buttons in “live” mode, the corresponding selection will be loaded instead of a mask. This allows you to more easily work with selections while using live mode for masking, as well as for complex tasks that use multiple selections (such as dodging and burning). Note that the live selection is based on all visible layers.

In LIVE-M mode, the active layer and layers above are ignored when creating the mask (this is analogous to the If:Under mode).

LIVE-M mode is available in Photoshop CC only. CS6 users should use the normal mode and “Mask” button to achieve the same results.

Video tutorial: [Mode buttons](#) for the Photoshop CC panel

Video tutorial: [Live mask mode](#)

“LIVE-S” mode

When in LIVE-S mode, click any preview buttons to immediately create a luminosity selection. If you wish to create complex selections, you may use the modifier keys to add (<shift>), subtract (<cmd/ctrl>) or intersect (hold both modifier keys). Marching ants will be hidden in LIVE-S mode if you have set the panel menu preference to “hide marching ants”. You may also use the new “✓ Sel” button to confirm the selection if desired.

In LIVE-S mode, all visible layers are used to create the selection.

LIVE-S mode is available in Photoshop CC only. CS6 users should use the normal mode and “Sel” button to achieve the same results.

Video tutorial: [Subtract Selections in LIVE-S mode](#)

BlendIf “Masks”

CC users can switch to “If:Under” (or “If:This” if enabled in the panel preferences) to access the BlendIf modes. CS6 users should use the <shift> modifier key for BlendIf under (or <ctrl/cmd><shift> for BlendIf this) when clicking on the various mask options. The keyboard shortcuts are also available to CC users in “Normal” mode.

All of the standard masks, zone masks, zone pickers, and range picker may also be used to create BlendIf “masks”. Compared to using layer masks to create luminosity masks, this approach offers two important benefits: BlendIf masks **do not increase file size** and are **dynamic** (meaning that they are always current, even if you change the layers below for removing dust spots, cloning, etc). But they have some limitations: they are not as easy to visualize, cannot create some masks, and cannot be customized as much. But they are an incredibly useful tool that should be used along with layer masks. I find them helpful to apply color correction to specific tonal ranges, sharpening to highlights, blend city lights, etc.

To create a BlendIf mask:

- For CC users: Click the “Mask” mode button at top left to cycle between mask (to create layer masks), and the If modes. You may also use the shortcut keys described for CS6 users.
- For CS6 users: hold <shift> while clicking on the masking buttons (such as L2, 1, etc). To create a BlendIf mask based on “this” layer, hold <ctrl/cmd><shift> while clicking the button.

BlendIf masks can be case on “underlying (layers beneath) or “this” (the active layer). The underlying method is best for adjustment layers, and either may be appropriate for pixel layers (depending on your purposes).

BlendIf masks can be applied to groups or to multiple layers at the same time. Whatever is selected will receive the BlendIf. Note that BlendIf does nothing when applied to the lowest layer, so Lumenzia will warn you if you attempt to do this.

BlendIf is able to nearly exactly match many masks, but there are some limitations in what is possible with BlendIf. For this reason, the offset midtone ranges (DM1, zone 9, etc) match the normal luminosity masks to varying degrees of accuracy, though the general tonal range targeted is consistent. Neither approach is technically “better”, but you should be aware that they may be different (i.e., if you don’t see desired results with an offset-midtone BlendIf, try the normal mask to see if you can achieve better results).

To **customize** a BlendIf mask, double-click the overlapping squares icon on the right side of the layer in the layers pallet. At the bottom of the window that pops up, you’ll see sliders to adjust the BlendIf. Hold <alt/option> to split the sliders and create a transition zone between what is 0% selected and that which is 100% selected.

To **remove** a BlendIf mask, click on “X” (<shift>-click “X” to remove BlendIf without the confirmation prompt).

To **visualize** the active layer’s BlendIf, click on the “If” button. This creates a preview where bright green shows the areas that are effectively active (same as white in a mask). When you are done with the visualization, click “If” again (you may also click or <shift>-click the “X” button). Photoshop treats BlendIf very differently depending on whether it affects “this” or the “underlying” layer. Therefore, Lumenzia uses a different preview method depending on which type of BlendIf was used. The preview for “underlying” layers is dynamic (will update if you change the active layer or layers below). The preview for “this” layer is a new static layer colored red. You can effectively update that static red layer by clearing and recreating it if needed.

Video tutorial: [BlendIf masks and visualization](#)

Video tutorial: [BlendIf technical details and customization](#)

Color Mask modes (red, yellow, ... buttons)

Available via mode buttons in CC, CS6 users should use the <ctrl/cmd> modifier key when clicking on the various mask options.

Enabling this mode will filter the luminosity masks to the selected color. This is based on color saturation, not color channels, for a much more targeted and intuitive result. For example, desaturated colors contain some amount of R, G, and B – making channel masks difficult to target. (Note that if you wish to actually target R/G/B channels, you can do this by using the channel mixer in the advanced mask options (just <ctrl/cmd> click on the desired mask).

The default color targeting is wide enough to bleed into adjacent channels (targeting green will pick up a little yellow, targeting magenta will pick up a little blue). If you wish to target more broadly or narrowly, you may customize the mask by adjusting the appropriate color sliders in the B&W base of the orange preview layers.

If you want more control, click the color picker (+) to select a specific hue.

Video tutorial: [Color Mask Mode](#)

“Not” mode

Available via mode buttons in CC, CS6 users should use the <alt/option> modifier key when clicking on the various mask options.

The “Not” button will invert the mask/previews, which is useful to protect tones. For example, clicking “Not”, then “D3”, then “Sharpen” will create a sharpening layer which does not sharpen the shadows in the image.

Changes in the “Not” button status affect the next preview button click (i.e., any existing preview is not affected).

Section #2: Apply

The tools in this section turn the orange preview layers you have created/customized into a mask or selection. There are numerous ways in which you may apply a mask, selection, or path.

Sel

The “Sel” button allows you to create, save, and load selections:

- **If the temporary orange preview layers are active:** “Sel” will convert them into a selection. This is useful for creating selections for painting (especially for dodging and burning). It can also be used to help create other types of adjustment layers that are not built into in the Lumenzia panel (for example, click “Sel” and then create a Color Lookup layer to apply the orange preview as a mask).
- **If there is an active selection and no temporary orange preview layers, you may be prompted with multiple options:**
 - **Save selections.** Allows you to save the active selection. Note that the selections are saved as channels so that they are available even if you close and reopen the image.
 - **Load/Rename/Delete selection.** Allows you to work with your saved selections. Once you no longer need a saved selection, it is recommended to delete it in order to reduce the size of the saved file (the Sel button will turn red when there is a saved channel).
 - **Modify (+/-).** If you have an active selection and a saved one, you may use these options to add or subtract the saved selection with the active selection.
 - **Convert the active selection to a path.** Lower tolerance values create more points for a more accurate path. Low tolerance values should probably be avoided when converting luminosity selections, as they may cause Photoshop to run very slowly. You may use a tolerance value between 0.5 and 10, and whatever value you use will be remembered for the next time. To delete a path, you can use the Paths pallet in Photoshop (Window/Paths), or just click “Sel” to convert it back to a selection (and you can then deselect to discard it).
- **<shift>-click Sel** to quickly save the active preview/selection. This skips the selection/naming step. The saved selections are accessed the same (by clicking “Sel” when there is no active preview or selection).

The “Sel” button also changes color to indicate selection status (*requires Photoshop CC 2015 or later*):

- The Sel button turns **green** if there is an active selection, which is a helpful warning if there are no visible marching ants.
- The Sel button turns **red** if there is a saved selection created by Lumenzia, which is a helpful reminder to delete any saved channels when you are done, in order to reduce the size of the saved file.

Video tutorial: [Applying the masks](#) (also covers curves, etc)

Video tutorial: [Load/Save Selections](#)

Adjustment layer icons (Curve, Levels, etc)

Create an adjustment layer with the luminosity mask applied. If no mask is defined, any current selection will be loaded as a mask. If neither is present, an adjustment without masks will be created.

The adjustment layer buttons are grouped with tonal adjustments to the left (curves/levels) and color adjustments to the right. They are also arranged in terms of how specifically they target their adjustments (from most specific on the left to most general on the right).

Curves are particularly useful for adjusting brightness and contrast. HSL is helpful for adjusting saturation (or vibrance if applied through a vibrance mask). Solid Fill is helpful to correct color balance or add color to parts of the image (such as to warm up a sunset). Selective Color is helpful for enhancing color (such as a sunset sky).

If you wish to create other types of adjustment layers, just load the masks as a selection and then create the desired adjustment layer (the selection will be converted to a layer mask on the new layer).

Hold <ctrl/cmd> while clicking on the adjustment layers to use alternative blending modes (see the "Lumenzia Button Reference" or tooltips by hovering over buttons in Lumenzia for more information).

Hold <shift> while clicking "Levels" to use an alternative Gradient Map adjustment layer. This uniquely configured layer is designed to give slider control like levels, but with greater control (5 primary sliders instead of 3).

Shortcut key notes (see the button reference document or tooltips for all shortcuts relevant to this section):

- Hold <shift> while clicking "Curves" to generate a series of curves with all zone masks.
- Hold <shift> while clicking "Levels" to create a gradient map which allows you to make more targeted adjustments. Click into the gradient to adjust it.
- CS6 users can access more adjustment layer types by holding <shift>. See the button reference or tooltips for more info.

Video tutorial: [Applying the masks](#)

Video tutorial: [Curves & dark masks](#)

Mask

This will load the current luminosity mask preview or active selection to the selected layer. This is a convenient way to replace or add a luminosity mask on any existing layer. If there is no mask preview or selection, a white mask (or black if you <alt/option>-click Mask) will be loaded.

Normally, this button will replace any layer or vector mask on the active layer. However, if you choose the "Keep independent layer/vector masks when possible" option in the panel preferences (top-right menu in CC, or <ctrl/cmd>-click Tutorials in CS6), then Mask will only replace what it needs to. For example,

with this option enabled, you can keep trying different luminosity masks without affecting a vector mask on the active layer.

The Mask command can be combined with “PreBlend” to rapidly blend multiple exposures. If multiple layers are selected, masks will be applied to all layers (excluding groups). This is a quick way to blend multiple exposures to darken highlights by using L2-L5 masks. All selected layers will temporarily get a black mask so that any mask preview may be applied iteratively from the bottom layer up (so if the selected layers have masks, the preview does NOT reflect the mask that will be applied – if you wish to get an accurate preview, <alt/option>-Mask the layers with no mask preview or selection active, and then proceed). This iterative approach allows the contribution of each layer to be considered in the layer mask above (i.e., the L3 mask applied to the top level likely won’t be the same as the L3 mask applied to the bottom layer, as that layer has already helped reduce some of the highlights).

Combination modes (+ / -/)*

Lumenzia allows you to add (+), subtract (-), or intersect (*) any selection or mask. This allows for the creation of advanced masks. Some potential uses:

- Add: Combine multiple zones to cover a broader range of midtones.
- Subtract: Protect highlights by subtracting L6. Or remove an extraneous section of a mask by drawing a lasso selection around it and then subtracting that from the mask.
- Intersect: Draw a lasso selection around part of a mask and then only keep that portion of the mask.

Note that the CS6 and CC versions of Lumenzia have different interfaces for +/-/*.

CS6

In CS6, + and – are available as buttons to the right of “Sel” and “Mask”. The +/- buttons for Mask were introduced in v4, and the +/- buttons for Sel are new in Lumenzia v5. There is no * option in the CS6 panel.

Example workflow to create a lights mask that protects the brightest highlights: L2, Mask, L6, - (this will create an L2 preview, convert it to a mask, create an L6 preview, and subtract it from the existing mask).

CC

In CC, these combination buttons are options at the top of the panel. They are only available once there is a masked layer active or an active selection (as there needs to be something to work on), and they then can be used affect the behavior of the “Sel” and “Mask” buttons. These options are also available in the LIVE-S and LIVE-M modes.

Example workflow to create a lights mask that protects the brightest highlights: L2, Mask, L6, -, Mask (this will create an L2 preview, convert it to a mask, create an L6 preview, and then subtract it from the existing mask).

Demo: [Subtracting D6 from D3 for better contrast when enhancing shadows](#)

Video tutorial: [Mask](#)

Path support

Paths are now supported nearly anywhere you can use a selection. Paths may be used to target areas of the image (just like using lasso selections, but with a different set of tools that may make it easier to create complex shapes, especially architecture). Your active path will be converted to a selection (or vector mask if using the options described in that section).

Simply create a path using the pen tool and make sure it is active (the path will show onscreen in blue when active). Then, when you click on any button that would normally use a selection (such as curves, vignette, etc), that path will be treated as a selection.

If you have both an active path and an active selection, they will be combined (areas that are common to both the path and selection will be treated as selected).

Note that you can also create paths from a selection, which is described above in the “Sel” section (basically, create a selection, click “Sel” and choose the option to convert the selection to a path).

Tips for working with paths:

- View the Paths pallet by going to Window/Paths
- Create paths with the “Pen” or “Curvature Pen” tools. These are complex tools, so please search YouTube for many great videos on how to use it. (Note that you can safely ignore the “freeform” and “add anchor” tools).
- Use the “convert points tool” (looks like an upside-down V, hold <alt/option> while hovering over a point with either pen tool to quickly access this tool) to convert from a smooth point to a corner by clicking on a point. Or convert a corner to a smooth point by clicking and dragging it to add handles.
- Use the path selection tool (black arrow, shortcut <a>) to move a path.
- Use the direct selection tool (white arrow, shortcut <a>) to change the shape of a path. You can move the path points, or the handles that determine path shape. Hold <alt/option> if you want to split the handles at a point. If you have split handles, hold <alt/option> again in order to move both as a pair.
- Hold <ctrl/cmd> to switch between the path and direct selection tools. The opposite tool will be used, and after you use it will become the active tool.

Video tutorial: [Paths \(input\)](#)

Advanced Path options (multiple paths)

If you are not familiar with the pen tool, it is recommended to work with a single active path. But if you leave the pen tool in its default “Combine” mode, then you can select overlapping path areas by using multiple shapes on the same path or select all path areas by using multiple shapes on different paths. Things can get confusing here quickly if you use other settings in the pen tool...

If you have multiple active shapes on different paths (what looks like layers in the paths palette), they will be intersected (the area of overlap will be used). The exception to this is if any of the paths are set to “Subtract Front Shape” in the pen tool settings.

If you have multiple active shapes on the same path, they will be added by default (assuming your “path arrangement” is set to the default “Combine” option in the pen toolbar). Only the blue paths showing anchor points are active if there are multiple shapes on the same path. They will be combined according

to the “path operations” and “path arrangement” settings in the toolbar (make the Pen tool active and click on the overlapping squares icon in the middle to choose combine/subtract/etc). And the results are also affected if there are multiple shapes in the same path vs on different paths.

- “Combine” will generally select all the areas selected by any path.
- “Subtract Front Shape” will select the shape designated in front (the “path arrangement” icon in the pen’s toolbar can be used to change the stacking order of paths – similar idea to layers, but there’s no easy way to see the order of the paths)
- “Intersect Shape Areas” will select the area where the paths overlap.
- “Exclude Shape Areas” selects the areas where the paths do NOT overlap

Vector Mask support (updated in v6)

Vector masks are beneficial because they do not add to file size (unlike layer masks) and may be edited with pen tools after you create them (allowing more precise refinements). Vector masks can also simplify your layers by avoiding the need for many group masks (as you can apply a lasso selection as a vector mask on the same layer that has a luminosity mask). And they can achieve the same effect as a group mask on a single layer (since a layer can have both layer masks and vector masks).

When creating a mask (any of the solid orange buttons in Lumenzia other than “Sel”), you will be presented with the option to convert an active selection/path into a vector mask. If you have previously dismissed this dialog permanently, you can show it again by using “reset popup notifications” in the panel menu (CS6 users should instead <ctrl/cmd>-click Tutorials to find the option).

When creating a vector mask, you are also given the option to choose a tolerance. Select a larger number for fewer path points, which is often easier to refine later. Or select a smaller number for a more precise match to your selection.

It is strongly recommended that you **DO NOT USE LUMINOSITY SELECTIONS TO CREATE VECTOR MASKS – vector masks are intended to be used with normal selections (lasso, marquee, etc) or paths.** Luminosity selections will create vector masks with thousands of points. This will either cause a very long delay, or *possibly crash Photoshop*. If you would like to create a vector mask for an edge defined by a luminosity selection, you should save your image first. Proceed by creating and refining a mask preview which is as simple and high contrast as possible. You may do this by using levels to push all pixels fully black or white and use the optional paint layer in the orange layer stack to paint out any unnecessary details. Then load it as a selection and proceed to use that selection to create your vector mask.

Just like layer masks, vector masks restrict which pixels are visible in a layer. But they differ in a couple of significant ways. Layer masks are grayscale images. Vector masks are paths. That means that vector mask either fully reveal or conceal pixels. There is no partial selection (unless feathering is active on the vector mask).

And vector masks can also be feathered for smooth transitions (Lumenzia will feather vector masks that same way it does with layer masks when working with lasso selections). You can refine vector masks at any time using Photoshop’s various pen tools.

Pixel masks are shown in Photoshop as a black and white thumbnail. Vector masks are shown as gray and white thumbnails (even if feathering is applied, it is not shown in the thumbnail). If you are unsure,

you can right-click the thumbnail and the pop-up menu options will clearly tell you which type of mask you are using.

Tips for working with vector masks:

- Be careful if you have an active luminosity selection. Unless you deliberately want to render a hard-edged luminosity selection as a mask, converting luminosity selections to vector masks is generally not useful (the vector mask feature is only intended to convert simple selections like lasso selections). If you have enabled the option to convert selections to paths, the luminosity selection may take a long time to render as a vector mask. So be sure to watch-out for a green “Sel” button or use the “ignore” option when asked what to do with the active selection if you have a luminosity selection.
- When you try to modify an existing vector mask with Lumenzia, it will be converted to a layer mask (as there are too many cases where an equivalent vector mask is not possible, so Lumenzia converts to layer masks for consistency).
- To edit the path behind a vector mask, select the vector mask (click on it so that there are white brackets around it) and choose one of the pen or path tools. When you have done both of these, the path will be shown in blue and may be edited.
- See the tips above for working with paths. The direct selection tool (white arrow, shortcut <a>) is very useful for refining the shape of a vector mask.
- <ctrl/cmd>-click the vector mask to load it as a selection. If the mask is feathered, so will the selection be.
- If you want to convert a vector mask to a layer mask, click “Combine” (hold <ctrl/cmd> when doing this on a group to prevent the mask from being applied to layers inside the group).
- Vector masks are paths (they are just in active use). All the same tools apply:
 - Use the “path selection tool” (black arrow) to move a vector mask.
 - Use the “direct selection tool” (white arrow) to change the shape of a vector mask.
 - Use the pen tool to create additional areas to include.

Video tutorial: [Vector Masks \(output\)](#)

Contrast

“Contrast” will enhance **local contrast**. In other words, it increases contrast over a specific tonal range, while minimizing adverse effects (loss of contrast) in other areas of the image. This tool will automatically use the range of tones in your mask preview (if you have orange preview layers active) or selection. If there is no mask preview or selection, you will be prompted to select a tonal range over which contrast should be increased. By design, the new contrast layer has a moderate opacity, so that you may easily increase or decrease the contrast by adjusting the opacity slider. You may also tweak the curve if desired.

If you are applying an orange preview, you will be asked if you would like to apply a BlendIf mask instead of a luminosity mask (to save file size and allow a more non-destructive workflow). This is recommended in most situations, but BlendIf masks are not identical to luminosity masks in all situations. Note that if you customize the orange layers, the BlendIf will ignore the customizations.

Video tutorial: [Contrast](#)

Dodge/burn & Sponge (updated in v6)

This creates a layer(s) ready for dodging/burning, applies any luminosity mask/selection, and activates the paint brush tool. You may choose from several options:

- *50% gray layer:* This is an ideal option for landscape work, as you can dodge and burn in a single layer and can work in color. Click <d> to load the default black/white paint for darkening/lightening. Click <x> to swap between them. Click <e> to load the eraser (or paint with 50% gray) to undo as needed and to re-activate the paint brush.
- *Transparent layer:* Functions the same way as the 50% layer but has the advantage that you can select the adjusted areas by <ctrl/cmd>-clicking on the layer's thumbnail, or by clipping a layer to this layer. This is a convenient way to further refine just the areas that were dodged and burned – for example, by changing contrast.
- *Luminosity curves:* This is an ideal option for portraits, as it will not cause unwanted color shifts in skin tones. The curves are masked black, just paint white on the dodge/lighten layer to lighten the image, or paint white on the burn/darken layer to darken the image. Paint black to reduce the effect.
- *Sponge:* This tool is designed to affect color (typically to boost saturation).

If the active layer is a gray or transparent dodge/burn layer, you will be given the option to **visualize** the layer. This creates a temporary red layer which shows the dodge/burn pixels against a gray background in normal blend mode. Any layer or vector mask is applied to the visualization to show the effect as accurately as possible, however, BlendIf settings are ignored.

Video tutorial: [Dodge & Burn](#)

Video tutorial: [Sponge](#)

Vignette

If a selection is active, a vignette will be applied to the areas outside the selection. If no selection has been created, a default vignette is used. To increase/decrease the effect, use the opacity slider. To change the transition/feather, click on the mask and use the “feather option”. To refine the area darkened, paint on the mask.

Note that holding the <ALT> / <OPTION> key while clicking “vignette” will do the inverse action and lighten the area inside the selection. This can be helpful for highlighting the center.

Video tutorial: [Vignette](#)

Sharpen

The “Sharpen” button in Lumenzia offers several sharpening methods (three optimized for landscape work, and one for portraits), as well as an “edge protection” option designed to help remove sharpening halos from high contrast edges.

Deconvolution (new in v6)

This method of sharpening is designed to offset softness at the capture stage created by lens blur, anti-alias filters, etc. It can help extract a substantial amount of additional small detail and texture from the image and is therefore very helpful for images which are intended to be viewed at a large size (such as large prints).

While deconvolution sharpening may be applied in LR or ACR, applying it in Photoshop has some advantages. The main one is that you can apply it selectively (only where needed), so that you can extract more detail without creating noise in smooth areas like blue skies or water.

Tips for obtaining good results:

- *This method should only be applied to layers created with 0 sharpening at the RAW stage, otherwise unwanted artifacts are likely to occur.*
- This method should not be applied to layers which have been resized, only use it on the native resolution.
- This method is intended to be used on images with a lot of texture or detail. Images which have a lot of smooth areas (blue sky, water, etc) will show noise in the smooth areas. Paint black on the filter mask to remove the sharpening in any areas that appear noisy.
- It may be used with Smart Sharpen or High Pass, but those forms of sharpening should be applied AFTER deconvolution.
- As with all methods of sharpening, be sure to zoom in close to close to evaluate the results. You should not expect to see an effect with this method when zoomed out (if you do, there are very likely artifacts that will be visible when viewed more closely).

Note that Lumenzia uses a different method for deconvolution sharpening in CS6 than in CC, as ACR is not available in CS6. Both produce great results, but the sharpening in CC can be pushed a bit further.

Smart Sharpen (updated in v6)

This method is ideal for creative sharpening of landscapes non-destructively. The image may be converted to a Smart Object and sharpened with settings designed to both improve detail and avoid halos. This generally reduces the need for edge protection. However, if you do see any halos (most likely at high contrast edges in dark areas, such as the point where rocks and sky meet in a photo taken during the blue hour), use “Sharpen” again to apply edge protection.

High Pass (updated in v6)

This method is ideal for creative sharpening of landscapes. It creates a sharpening layer using a high pass. This method is distinctly different from Photoshop’s built-in sharpening algorithms and can produce very nice results in many situations. If a luminosity mask / selection is available, it will be loaded as a mask, which can be helpful for avoiding sharpening areas of noise. Lumenzia will set a recommended default radius based on the resolution of the image. Adjust radius to change the appearance of sharpening as desired, or just click “ok” for the default settings. Once the layer has been created, change the opacity of the layer to increase/decrease sharpening.

High pass is also available as a Smart Object. This is the simplest way to work non-destructively and the results are nearly the same. The only notable difference in results is that highly saturated colors are treated slightly different between these two methods, and the BlendIf options are not available for the

Smart Object (though you can use luminosity selections with the filter mask to target the result in a similar way).

If you wish to update an existing high-pass sharpening layer (and aren't using the new Smart Object option), select it and then press "sharpen". Lumenzia will ask if you wish to update the layer, select "yes". This will update the sharpening layer based on anything below the sharpening layer and effectively turns this feature into "non-destructive" sharpening, as you can always update the sharpening effect. The updated layer will retain the existing mask and opacity.

Enable the BlendIf option to help minimize halos or use the edge protection options below.

Video tutorials: [Sharpening and Edge Protection](#)

Surface Blur (ideal for portraits):

This method is ideal for portraits. It helps sharpen by discriminating between surface texture and edges, which may help enable a greater degree of sharpening without artifact.

Note that the surface blur filter is very complex and tends to respond very slowly when previewing a large image. If you have an active selection (before clicking "sharpen"), you will have the option to use the "rapid" preview method. Use the marquee selection tool to create a selection around a small area you wish to preview. The rapid preview will be done using just this small area, and then the same settings will be applied to sharpen the entire image. This is especially helpful if you wish to customize the radius and threshold, as it provides for a much more responsive interface while changing the options in the preview.

How the surface blur filter works:

- Blur the image using the specified radius.
- Compare each pixel's before and after state. If the difference between is less than the threshold, use the blurred pixel – otherwise keep the original pixel.
- This has the effect of preserving high contrast areas of the image (edges), while blurring areas of lower contrast (surfaces).
- In portraits, skin is essentially a surface – whereas details like eyes are edges.
- Areas that are blurred in the preview will be sharpened in the final output.
 - A small radius (5-15) is usually ideal. Increasing radius too much will cause odd lighting patterns on the face.
 - A threshold of 5-15 is usually ideal. Increase threshold for more edge definition. Larger amounts (50-100) can also work when used with very small radius values (larger radii will cause halos with a large threshold).

Surface blur has a few options for speed/quality (these are only shown when available):

- Default: This provides a preview of the whole image. The sharpening will be done in 8-bits for speed.
- Rapid Preview (available if you have selected some portion of the image): Similar to default, but the preview will only show you the selected area. This allows you to refine radius/threshold much more quickly. The settings will be applied to the entire image in 8-bits, so the result is identical to the default option. It is recommended to use the rectangular marquee when working with this preview option.

- 16-bit (only available for 16-bit images). This operates similarly to the default mode, but in 16-bit. This may theoretically provide higher quality but is unlikely to create visible improvements in the image, even when there will be more processing done later. I recommend sticking with one of the previous options, which are much faster and yield similar high-quality results. To use this option, hold <alt/option> while clicking the surface blur button in the sharpen dialog (noted in the button's tooltip)

Video tutorial: [Surface blur sharpening](#)

Edge Protection

Sharpening halos often occur at high contrast edges (such as where a building meets the blue sky). The “edge protection” feature in Lumenzia is designed to help minimize or eliminate such halos by masking them out. There are two methods available.

The automatic method will look for edges and black them out. This approach may work well for landscapes or images with minimal edges. However, it may detect too many edges, and you will likely want to use a white brush to paint back in any areas of detail that should be sharpened.

The manual method allows you to quickly tell Lumenzia what to protect by creating a quick selection. The edges of the selection will be converted into black on the mask. If no selection is available, you will be prompted to create one before proceeding.

Video tutorial: [Avoid sharpening halos with edge protection](#)

Section #3: Refine

Group

Puts the selected layer into a group. This group mask controls the masks inside of it. This is a great way to apply a luminosity mask just to specific parts of the image. If you have a luminosity mask preview, it will be applied. If you have an active selection, it will be applied and automatically feathered. (Lumenzia analyzes the selection and automatically selects an optimal feather, but you can further adjust it if desired by double clicking on the mask to change the feather in the mask properties).

Hint: When you create feathered mask, you may find that it is hard to manually paint on the mask (because your brush strokes are being feathered). A quick solution is to select the layer with the mask, then click “Group” (which adds a white mask that does nothing), and then “Combine” (which will then rasterize/bake-in the feather so that you may paint normally on the mask). Doing this of course prevents you from further adjusting the feather.

Hold <shift> while clicking Group, and the Combine function will be run on the new group (which produces the same result, but without leaving a new group mask).

Video tutorial: [Group masks](#)

Color (formerly known as “Color Group”)

Like the group tool, this creates a group mask to control the selected layer(s). However, whereas the group tool refines by location within the image, the color group tool refines by color. This is a great way to apply a luminosity mask just to specific colors in the image, which can be very helpful when two different colors have similar luminosity. The tool has two major modes:

- Preset color (red, yellow, green, cyan, blue, magenta): Just choose the desired color you wish to isolate, and a group mask will be automatically created. A few notes on the preset color tools:
 - Foliage in landscapes is often better selected with “yellow” than “green”.
 - Results in LAB color are different than in RGB. In my testing, selection of blue skies yielded best results when the Color tool was used in RGB mode. If you need to work in LAB, you may see better results using the Interactive tool than the color presets.
 - Color channels can be noisy in blue skies. Some noise in the mask is expected and generally won’t impact the blended image quality. But if you see noise in the blended image, try using the Interactive tool instead of the color presets. Alternatively, you may try to smooth out the mask manually or open the mask properties to apply a moderate feather.
- Interactive (custom): Adjust the fuzziness to select more/less related colors. Adjust the range to increase/decrease the how far the mask extends from the area you click (this can be helpful to isolate one block of color from another). When selecting, hold the <shift> key to add to the selection, or <alt>/<option> to remove colors from it. If you find that the subtraction isn’t narrowing your selection sufficiently, I recommend clicking without any modifier keys to start over.

Video tutorial: [Color](#)

Note: Color Group vs Color Masks

You can target color by using the color masks discussed in section 1a (the top row of buttons in CC panel, advanced masks in CS6) or via the “Color” (group) button. If you use the preset colors in these options, you can get the exact same results. For example, both of the following sequences will create the same mask:

- Red mode, L3 preview, Mask
- L3 preview, Mask, Color group with the red preset

But you can use these tools in other ways and there are some differences that make both useful. The color masks allow you to visualize and create the final mask in one step.

The color group tool can be helpful to make more advanced custom masks based on multiple colors, tones, and location within the image. They also allow you to refine an existing mask. Ultimately, the color group tool offers more capability.

Combine (formerly known as “Un-Group”)

This button can do two different things:

- Combines group masks by applying the mask on the selected group to the layer(s) inside. This is a helpful way to reduce the number of layers, understand the interaction of masks, and reduce the size of the saved file. This is a very sophisticated operation which can properly manage opacity,

fill opacity, feather, density, etc. This is the default action if the active layer is a group and requires that the group is in the default “pass through” blend mode (as there is no way to combine the group in other modes without affecting the way the image looks).

- Rasterize any layer/vector masks and their feather/density properties. This is the default if the active layer is not a group. You may also rasterize the masks on a group (without combining them with child layers) by holding <ctrl/cmd> while clicking “Combine”.

Video tutorial: [Combine](#)

Edge (updated in v6)

This tool utilizes the Refine Mask/Edge tool to create more natural transitions at the edges of a mask or selection. This is very useful to avoid artifacts that may occur when blending exposures (particularly sharp transitions such as buildings/trees against the sky) or when cutting a subject from the background (such as selecting hair on a model to be placed on a new background). “Edge” will use the layer mask on the active layer if one exists (and get rid of any selection if there is both a mask and selection). If the active layer has no mask, the active selection will be refined, if such a selection is active.

For Photoshop CC 2018 users, Edge will offer to automatically find and **cut out a subject** (people, animals, etc) if there is no active selection or layer mask on the active layer. This is designed to help work more efficiently, but you should expect to take additional steps to finish the cutout for precision results – such as using luminosity selections to refine the edges or decontaminate to remove background color casts. [Note that this feature is not available on older versions of Photoshop, and you will simply be warned that there is nothing to do].

When working with masks, you will be offered an option to “paint in the refined edges via brush” (if you are in Photoshop CC, not available on CS6). This allows you to selectively paint in the refine edge adjustments only where needed. This is a great way to avoid unwanted changes to edges which do not need refinement, or to use different refine edge settings in different parts of the image.

The default behavior of “Edge” is optimized for landscapes / exposure blending. Hold <alt/option> when clicking “Edge” to use settings optimized for portraits / cutting objects from a background.

The Refine Mask/Edge dialogue box in Photoshop contains many options. Here is the approach I use to optimize the settings when needed:

View mode

You need to see what you're doing, and this is where you get to determine how to visualize the changes that are being made. These settings only help you visualize the refinements, they don't actually do anything to change the output of the Refine Edge tool. There are many options here, I only use a few of them:

- “On Layers”. This is what your layered image will look like after applying the refinements and is therefore the most important view. Press <L> for a shortcut to this view.
- “Black and White”. This is your mask, plain and simple. Press <K> for a shortcut to this view.
- If you are trying to cut an object out from the background, then the “On black” and “On white” visualizations are helpful to see if you've accurately selected your subject.

- If you are trying to brush in areas that weren't originally in the mask (such as strands of hair), "Reveal Layer" can be helpful to see where to brush.
- "Show Original" checkbox. This shows your layered image before any refinements. Press <P> to turn this on and off to check how much your refinements have improved the image.
- "Show Radius" checkbox: This shows where the edge/smart radius are refining the mask. If you don't see important edges here, it is likely that they are low contrast (which is common with luminosity masks). This is your queue to use the brush tool below to make sure these edges get cleaned up as well. Press <J> to turn this view on and off to check that you are refining important edges.

And, just like elsewhere in Photoshop, you can use <space> to get the hand tool to move around the view and <ctrl/cmd> +/- to quickly zoom in and out.

Edge Detection

This is the "magic" in Refine Edge. By magic, I mean both the incredible power to make stunning masks that you could never make by hand, as well as a black box full of confusion. I'll do my best to demystify the options here, as using them correctly will allow you to make some funny looking masks look amazing. My general approach is to tweak the radius for the best overall look, try the smart radius, and then brush in areas that were missed by the radius, or erase out areas that should be protected from it. ***The edge detection tools evaluate both the image pixels and the mask pixels (i.e., image pixels will be used to refine the mask in mask areas that are either within the radius or have been painted).***

- **Radius.** Determines how far from the edges to refine the mask. Within this zone (which you can view by turning on "show radius"), Refine Edge will try to add and remove areas of the mask automatically. For manual exposure blending of high contrast edges, I tend to keep this value pretty low, around 1-3 pixels, depending mostly on the resolution of the image. For hair selections and other messiness, a larger radius may be needed. Radius will typically do a pretty good job finding and fixing high contrast edges, but will tend to ignore subtler edges, which can mean that it misses edges in luminosity masks if the mask edge is more gray than white. You can quickly spot missed edges by turning on "show radius". When radius isn't finding these edges, the brush tool comes to the rescue...
- **Smart radius.** This option can improve masks when the edges are a mix of hard and soft. In a nutshell, when this is on, Refine Edge will use a smaller radius in areas with a clean edge, and a larger radius (larger area of refinement) in areas with complex/messy edges. When in doubt, just turn it on and off to see which works best on your mask. I typically leave this off for cityscapes (since buildings have clean edges), but occasionally use it when I have trees, hair, or other complex edges.
- **Refine Radius Tool (the brush).** This allows you to selectively tell Refine Edge to target areas outside the radius (rather than increasing the radius globally). This will include more edge details (lightens stuff that was missed). This is a critical tool for smoothing edges in luminosity masks if the mask isn't white enough at the edge. This is also a great option for extraneous details such as a railing or antenna on top of some building or random strands of hair in a portrait. Use a brush width large enough to brush over the target edges, but don't make it so large that you start adjusting non-target areas. If you make a brush stroke and don't like the result, you can always press <cmd/ctrl>-Z to undo.
- **Erase Refinements tool (the eraser).** This is the opposite of the brush and will cause Refine Edge to leave these targeted areas alone (i.e., this tells Refine Edge to keep the original mask edge in the erased areas). Note that not only will the erase cause Refine Edge to ignore anything you brushed in, it will also cause the tool to ignore anything detected with the radius. If you erase the wrong area, <cmd/ctrl>-Z is your friend, or you might consider cancelling and starting over. While you can click and hold on the brush to switch to the

eraser, a much easier option is to always leave the brush on and just hold <alt/option> when you need to use the eraser.

Adjust Edge

These tools are a little more straight-forward. Most of the time, I just use a tiny bit of feathering and leaving the rest of these settings alone. ***The adjust edge tools evaluate only the mask pixels.***

- **Feather:** Blurs (softens) the edges of the mask. Unlike the radius tool (which analyzes the edges to try to include just the right detail), feather is a dumb tool that affects all edges - so you typically don't want to use much here. But a little can be helpful, so I try 0.5-1 pixels when manually blending exposures at a hard edge (such as a bright sunset sky at the edge of a building/trees).
- **Shift edge:** Positive values increase the white area (expand the mask), and negative values decrease it (make the mask smaller). This can be helpful in some scenarios, such as when working with translucent objects, when trying to remove the impact of colored backgrounds in a cutout, or when blending two exposures where the bright edge shifts slightly in the brighter image at a high contrast edge. I generally leave this in the 0-10% range for my landscape work.
- **Smooth:** Reduces sharp areas of the mask. I never use this and can't think of a good reason to (maybe to tweak a "sloppy border" effect?)
- **Contrast:** Creates a sharper edge to the mask. I never use this, but you might find a scenario where you want to tighten up a loose/blurry edged mask.

Output

- **Output to:** Leave this on "layer mask" or "selection" (and Refine Edge should generally show these as the defaults, so you shouldn't have to do anything).
- **Decontaminate Colors:** Used to get rid of fringing (not just color cast) when cutting something out from the background. Adjust the amount as needed. If you use this, you will be forced to output to a new layer or document, as Photoshop is going to change the pixel data, not just the mask.
- If you don't want Photoshop to create a new layer or make destructive changes to your pixel layer, Lumenzia will offer to create a non-destructive decontaminate layer for you after you apply refine edge. This new layer is clipped to your adjusted layer (so that it only affects that layer) and is set to color blend mode (so that you can easily update the color without affecting tonality). To use it, click "yes", then use the eye dropper tool <I> to sample colors you want to use and the brush to paint color on the decontaminate layer.

Video tutorial: [Using the Edge tool to clean up edges/transitions](#)

History (formerly "Undo" or "Restore")

The History command harnesses the power of snapshots and the history brush in Photoshop to give you incredibly powerful ways to work non-destructively on pixel layers and masks. First, it allows you to make a change at any time (so long as you don't delete/merge the target layer or close the document). So, even if your history panel is limited to 50 states and you made a change 75 steps ago, you can still undo it. Second, it allows you to easily undo just that one step, even if you made several more changes after it. And third, it allows you to make the undo just in the part of the image you want to change - you don't have to undo everything.

The first time you click “History”, Lumenzia will store a snapshot of the current image state. The button will turn green to indicate that a saved snapshot is available. When you want to undo something, just click “undo” again or use the <Y> or <shift>-<Y> to activate the history brush. Then just start painting on the pixels/mask that you want to restore. Update the snapshot to the current state of the image at any time by clicking on “History”. The snapshot is cleared when a document is closed, or you may manually remove it by <ctrl/cmd>-clicking “History” (which will get rid of the green color in the button).

Video tutorial: [Using History to refine masks non-destructively](#)

Section #4: PreBlend and Visualizations

Pre-Blend

PreBlend is designed to help simplify the process of combining multiple exposures for manual blending. This feature sorts exposures, aligns, provides black masks to start blending, protects pixels from accidental changes, and even offers BlendIf blending capability.

There are three ways you can provide source material to use with PreBlend: layers, documents, and variants.

Layers:

Prepares existing layers in the current document for blending. This is the recommended method for Lightroom users, as it allows for high quality and an easy way to save the blended file back to the same folder as the source images. Just select the desired exposures and right click to Edit In / Open as Layers in Photoshop. If you are working with a single RAW file in Lightroom, create virtual copies to send multiple versions to Photoshop.

Documents:

Combines open (single-layer) documents into layers in a new document and prepares them for blending. If you are working with Smart Objects from Lightroom, changing the output to use one of the open documents (instead of a new document) makes it easy to save the file back to the source folder (if the source file has been previously saved).

Variants:

You will be presented with the option to create exposure variants from -3 to +3 stops. After selecting the exposures you want, they will be automatically created and stacked with the original on the bottom. The source image will be converted to a smart object (you may still edit it by double-clicking the smart object).

Note that “Blend Variants” uses the Camera RAW Smart Filter (for technical reasons), which is inferior to RAW adjustments made by double-clicking the Smart Object’s thumbnail or exporting multiple layers from Lightroom. So Blend Variants is a convenient option, but if you want the ultimate quality (especially when making significant adjustments to recover details), you should manually create multiple variations of your RAW image and then use the other PreBlend options (Layers/Documents) to get everything

ready. See the 8 minute mark of this video for more details: [3 Common Misconceptions about Camera RAW Smart Objects](#)

Note:

- **Align** will let Photoshop attempt to automatically align the images. Good for handheld photos, unless there is a lot of motion in the image (water, etc). Automatic alignment of the images is not possible with Photoshop CS6 due to limitations of Photoshop scripting. The images will only be stacked as layers and sorted by exposure.
- **Check alignment (difference)** will put the upper layers into “difference” blend mode. This makes it easy to verify or manually align edges in the image. When you are doing manually aligning, just switch the layers to “normal” blend mode (you can <shift>-click multiple layers to change them all at once).
- **BlendIf** is designed for quick blending. Click on the various options (L2, L3), etc to find the best blend and then use a white brush on the group mask to paint in the final result as desired.
- **Add black masks** leaves the upper layers ready to start painting through a luminosity selection.
- Variants (single exposure) requires RGB color mode and Photoshop CC (as they are required to use the Camera RAW filter). If you attempt to use single document pre-blend, Lumenzia will offer to put the LAB image into a smart object and convert to RGB. This retains all image quality. If you wish to subsequently edit further in LAB, you will need to either rasterize/flatten the exposure layers or put them into a smart object and then convert to LAB.

Video tutorial: [PreBlend](#)

Video tutorial: [Blend exposures with BlendIf in PreBlend](#)

Map (updated in v6)

The “zone map” function creates a visualization layer which shows where each of zones 0-10 are within your image. This gives you a visual way to help determine which zones may need to be targeted/adjusted. While the zone map is active, the wide and narrow zones in the panel are shown in color for easy reference. You may of course use any of the previews in the panel (only the zone buttons are colored, to avoid visual confusion or clutter by coloring all the available buttons).

Note that “zone map” is intended to show where a given zone is MOST selected; it does not show how the zone masks feather. The zones in Lumenzia are designed to naturally feather for smooth selections, and therefore overlap significantly. So, while the zone map will show zone 9 in a dark red, an actual zone 9 mask will include some of zones 8 and 10, and even a little bit of 7. The zone map is effectively showing which zone mask best selects a given area but does not tell you about how that mask feathers at the edges. You can always adjust the levels slider in the orange previews to tighten up your zone mask if desired (just pull in the black and white sliders, or move the middle slider to the right), which would create more of a match between the visualization and the mask. However, high contrast masks are generally best to avoid, as that reduces the natural feathering that makes luminosity masks ideal in many situations.

New in v6, you may now use the zone and range pickers while the Zone Map is active. When using this approach, the generic zones will be used. So, using the pickers while the zone map is hidden allows for more precise targeting between the zones when needed.

Video tutorial: [Zone Map](#)

Split

This button splits the screen and allows you to simultaneously view the layer mask and the actual image. This is extremely helpful for refining existing masks (for example, when you want to brush to clean up the mask). Hold <alt/option> while clicking "Split" to toggle between the default horizontal/vertical split. You can close either view at any time (closing all views closes the document and you will be prompted to save any changes). Click "Split" again to sync the views if you have zoomed or moved around one of the views.

If you click outside your mask in the layers pallet, you will see two copies of the layered image. Simply <alt/option> click the mask to see it in the active view, or close one view and click "Split" again.

Video tutorial: [Split-screen overview](#)

Video tutorial: [Split-screen luminosity masking](#)

Video tutorial: [Split-screen luminosity masking #2](#)

If

The "If" button lets you see BlendIf masks. These are shown as a green overlay on top of your image, rather than as a black and white mask. This allows for live selection or adjustment of BlendIf:Under, so that you can get exactly the mask you need. BlendIf:This is visualized differently and is not live, but you may simply click "If" twice to remove and update the If visualization when working with BlendIf:This.

Video tutorial: [If](#)

Video tutorial: [If](#)

✓Sel

This button serves two purposes: (1) to visualize selections, and (2) to refine selections visually.

To visualize selections, click this button to see the active selection previewed full screen in black and white (just like a layer mask). This is very helpful to see your exact luminosity selection, when trying to confirm the true edges of the current selection, modify selections, or other situations where the current selection is not obvious. Click "✓Sel" once to see the preview, and a second time when finished with the preview.

To refine selections, you may adjust the new red layer in any way you wish before clicking "✓Sel" a second time. Whatever the image shows will be reloaded. You can paint with a brush on the selection, modify it with a levels adjustment, or pretty much anything you can do with a mask. The only real difference from editing a mask is that you cannot use the Refine Edge tool (since you are working on a pixel layer, not an actual mask). In addition to refining the pixels, you can also overlay a selection just like when working with orange preview layers. If there is an active selection when you reload the red layer, it will be used to constrain the selection. This is a convenient way to quickly and visually remove portions of the selection with a lasso.

Video tutorial: [Visualize Selections \(and how marching ants work\)](#)

✓L (updated in V6)

This button is designed to help see luminosity, saturation, or hue in the image by itself, which can be very helpful for retouching getting good matches in composites, finding and fixing subtle problems, or simplifying adjustments by allowing you to separate tonal adjustments from color adjustments.

The default behavior is to show luminosity. Alternatively, you may use this tool to view saturation in the image by holding <alt/option> or hue by holding <shift>.

When creating a visualization for luminosity, you have a few additional options:

- Boost contrast to better visualize midtone luminosity by holding <ctrl/cmd>-click the button to select a range of tones to highlight. When you use ✓L, a red group will be created in the layers pallet
- Or boost contrast over a custom range. First, create a lasso selection and then click ✓L. The selected area will automatically be analyzed to boost contrast between the darkest/lightest tones selected

Click the “X” button to delete any of the visualizations.

Video tutorial: [Check luminosity](#)

✓Dust

This button is designed to help find dust spots and other subtle blemishes. While it is usually preferable to use the dust spot visualization tools in Lightroom or Adobe Camera RAW on the image initially, these tools are typically not helpful once you have created a layered image. Just click on “dust” to get a temporary red layer that boosts contrast to show dust. You may click on it a few times to get different visualizations. To clear the dust visualization, click the “dust” button a few times, click the “X” button in Lumenzia, or simply delete the red layer manually. When you use clone stamp or healing layers with an active dust visualization layer, be sure to set your tools to same “current / below” rather than “all layers” (as the latter would cause the visualization to be included in the cloning/healing).

Tutorial: [Remove dust spots](#)

“?”

Click this button once to make it change color, then click on any other button to pull up help specific to the selected button. This makes it easy to find the tutorial video you need. This feature is only available on Photoshop CC.

Tutorials (formerly “Help”)

The Tutorials button will open the private Lumenzia support page in your web browser. The help page is where you will find all of the included Lumenzia training videos. The help button is somewhat limited in Photoshop CS6 (provides a link for you to manually open the web page).

Tips for selecting the “right” mask

There are no absolutely right or wrong answers, but some masks are clearly much better than others for a given purpose. I recommend the following decision process to help quickly find the best mask (in normal / live mode):

1. Determine which general type of mask you need.
 - a. The D/M/L masks are best for general adjustments.
 - b. The L masks are best for exposure blending (assuming darker exposures are stacked on top).
 - c. The zone masks/pickers and range mask are best for targeted adjustments.
 - d. Diff (+/-) is useful for dealing with variation in the light source on a subject and selecting edges.
 - e. Vibrance/Saturation is best when adjusting vibrance/saturation
 - f. The color options (both the color masks and the “Color” group button discussed later) are best for separating pixels which have the same luminosity but different colors (such as a yellow building in front of a blue sky)
2. Click on your best guess and evaluate the preview. A good preview should be:
 - a. Relatively light or white in areas targeted for adjustment. If some interior areas are dark, that’s typically easy to fix by painting white in the mask.
 - b. Very dark or black in areas adjacent to the areas you want to adjust. You can safely ignore areas that are some distance away from your subject, as it is very easy to add a lasso selection to target the preview or otherwise refine the mask to eliminate these issues. What is important is that the edges have good separation, because it is very hard to fix a poor edge.
3. If the result doesn’t look close, click on other similar preview options (i.e., if zone 8 isn’t right, try zone 9, etc).
4. Customize the preview as needed (see details in section 1a above). This can often take a decent preview based on the presets and turn it into exactly the mask you need.

When using BlendIf masks, I recommend the following process to help quickly find the best mask:

1. Determine which general type of mask you need (DML or zone/range)
2. Click on your best guess and evaluate the blended result. If the result is hard to evaluate or you haven’t yet made any, click the red “If” button at the bottom of the panel to get a preview of the BlendIf’s mask.
3. As with normal/live masks, iterate as needed to find the closest fit. And you can again ignore areas removed from your subject, as you can easily remove them from the mask by using a group mask.
4. Once you have the closest fit from the presets, you may wish to customize the BlendIf (see details in section 1a above).

General info:

- Lumenzia will remember the settings you last used for most dialog boxes in order to work more quickly. For example, if you last clicked to use a hard mask instead of feathering, that button will become the default next time you apply a lasso selection. Note that some dialog options are intentionally not remembered (such as the radius used for Lighter/Darker masks, as the optimal setting varies from document to document).
- Lumenzia natively supports both the RGB and LAB color modes. Functionality in either mode is nearly identical (which is to say you should choose whichever color mode you generally prefer, and Lumenzia will offer the same functionality and interface either way). You may use other color spaces (such as CMYK) by enclosing your layers in a smart object and then converting the document to RGB or LAB (the content inside the smart object will remain in its original color space).
- Lumenzia has had numerous improvements over the past few years. For a full list of changes, please see the [release notes](#).