



# ON1 Photo RAW

From A to Z

**The Official ON1 Photo RAW User Guidebook**

Version 2024

Photo © Hudson Henry

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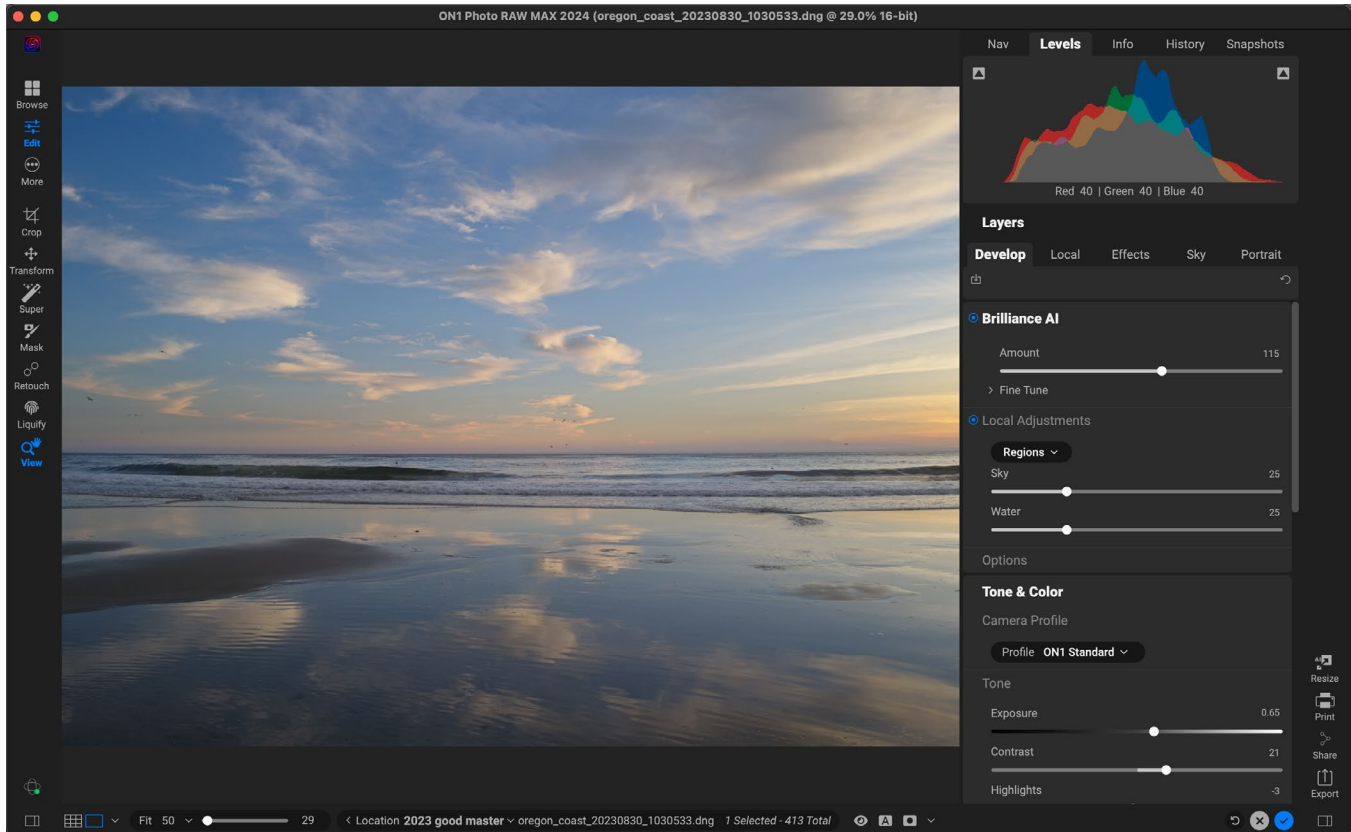
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# PART 1: ON1 PHOTO RAW 2024 OVERVIEW



ON1 Photo RAW 2024 is a complete photo editing solution, built around a full-featured photo organizer, a sophisticated raw processing engine, and modern image enlargement technology. It is infused throughout with modern AI-based, machine learning technology, all designed to make your photo editing and organization efficient and worry-free.

With Photo RAW, you can apply quick edits and stylized effects to your photos, remove noise easily with NoNoise AI, sharpen out-of-focus details with TackSharp AI, and perform expert portrait retouching with Portrait AI. Nearly all of your edits can be made globally or locally to specific regions of a photo, and the new Brilliance AI feature (see [page 136](#)) takes this to a whole new level, using AI-powered color, tone, noise, and detail adjustments to uniquely interpret all of your photos, delivering results that reflect the original vision for your photograph. With Brilliance AI you remain in complete control of the adjustments and can control each setting with one slider, and you can tweak any and all adjustments further to refine the photo to your taste and intent.

Photo RAW's masking capabilities are powerful, yet easy to use. The Super Select AI tool lets you point to an area of a photo – sky, people, foreground or background, or other objects – and automatically apply effects, sky replacements or other adjustments to those specific areas. The Mask AI feature, found throughout Photo RAW, lets you apply effects and local adjustments to specific areas automatically, while still preserving your ability to tune the masks further. You can even create presets that will only be applied to specific regions of any photo, without having manually to create complicated masks or layers.

For more complex projects, Photo RAW includes advanced masking tools that let you create and refine complex selections with a few clicks, as well as layering functionality for compositing and blending images quickly and easily. You can also combine a series of photos into beautiful panoramas, stunning HDR images,



and perfectly focus-stacked photos with the click of a button, or use the time-lapse feature to create flicker-free movies from hundreds of still images. You can even use many of the image-processing plugins created for Adobe Photoshop in your ON1 Photo RAW 2024 workflow.

With all of this, Photo RAW lets you work in a fully non-destructive workflow: you can import, sort and view raw photos in Browse, and finish them in the Edit module without having to worry about saving your edits. The next time you open your photo, all of your settings will be remembered, and you can easily change settings, add new ones, or start over from scratch, all without having to save additional versions of your photo. Photo RAW 2024 is even non-destructive when working with such non-raw formats as JPEG, Photoshop (PSD), PNG and TIFF.

When you're done editing, you can use Photo RAW's Resize AI technology to perform industry-standard image enlargement on your photos—with full printing capabilities. Resize AI uses AI neural networks to create the highest-quality photo enlargements of any resizing tool on the market. Its super-resolution technology enlarges photos while maintaining and recovering detail and sharpness.

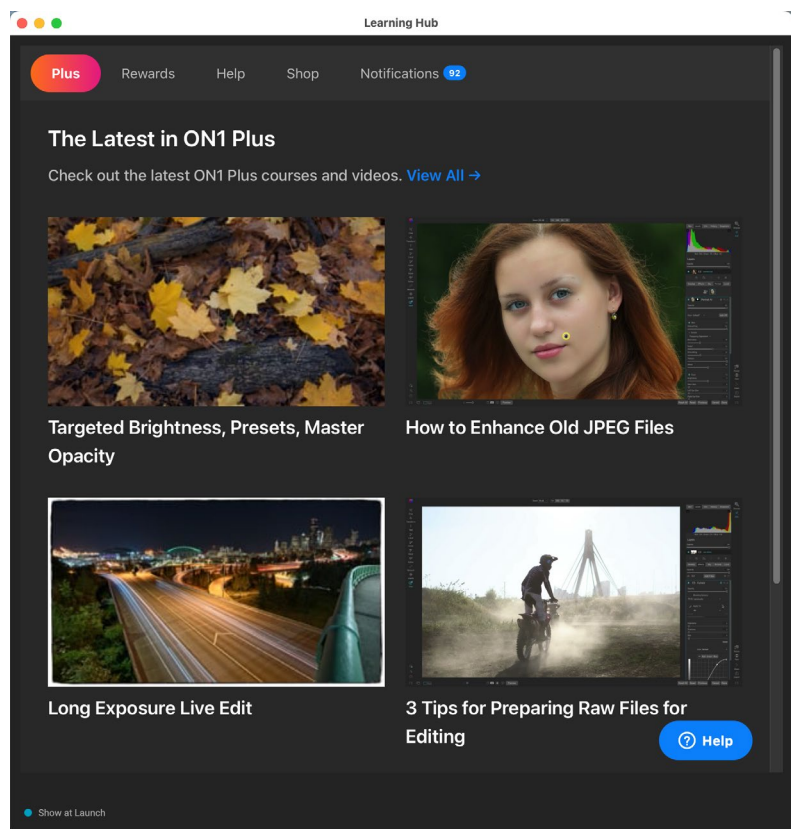
And, when Photo RAW 2024 is used in conjunction with the optional ON1 Cloud Sync service, you can capture, view and edit your photos across multiple computers and mobile devices without worrying about their location. You can share presets and extras like backgrounds and textures, between two computers.

## Getting Help

You can find an extensive collection of video tutorials and help documents in the Help section of the ON1 website ([on1help.zendesk.com](https://on1help.zendesk.com)). This is the best and quickest way to dig into the entire ON1 workflow and discover new techniques that will help you with your photo editing and organizing. There, you can search our [Knowledge Base](#) for frequently asked questions, common issues and more.

Inside ON1 Photo RAW 2024, you can use the Learning Hub to directly display videos for getting started with the app, search the ON1 online help system—including with an online chat assistant—and the ON1 Shop, where you can purchase add-ons and courses for Photo RAW. If you're a member of the ON1 Plus community, you'll also find access to Plus content and loyalty reward downloads.

The Learning Hub is accessible via the Help menu or from the Help icon at the bottom of the left bumper panel.



*The Learning Hub is available directly from within ON1 Photo RAW 2024, and includes links to videos (which can be played directly in the Hub window), ON1's online help system, and the ON1 store.*

# System Requirements

	MINIMUM	RECOMMENDED
<b>OPERATING SYSTEM</b>	macOS 10.15.6, 11 or 12 Windows 10 or 11 <i>current maintenance releases, 64 bit only</i>	macOS 12 and above Windows 11 <i>current maintenance releases, 64 bit only</i>
<b>PROCESSOR</b>	Four-core (minimum) or eight-core (or more) Intel or AMD processor, 2GHz or faster, or Apple Silicon processor	
<b>RAM</b>	8 GB	16 GB or more
<b>HARD DRIVE</b>	6 GB for installation	6 GB for installation and SSD drive
<b>DISPLAY</b>	<p><b>Windows:</b> DirectX 12, DirectML, Vulkan 1.1, and OpenGL 4.2 compatible video card with 4GB VRAM, 1920x1080 resolution (at 100% scale factor)</p> <p><b>macOS:</b> Metal, Vulkan 1.1, and OpenGL 4.2 compatible video card with 4GB VRAM, 1920x1080 resolution (at 100% scale factor)</p>	<p><b>Windows:</b> DirectX 12, DirectML, Vulkan 1.1, and OpenGL 4.2 compatible video card with 8GB VRAM, 1920x1080 resolution (at 100% scale factor)</p> <p><b>macOS:</b> Metal, Vulkan 1.1, and OpenGL 4.2 compatible video card with 8GB VRAM, 1920x1080 resolution (at 100% scale factor)</p>
<b>MOBILE APP</b>	Apple iPhone/iPad with iOS 15 or higher; Android phone or tablet with 64-bit Android 10 or higher <i>current maintenance releases, 64 bit only</i>	
<b>INTERNET</b>	A high-speed internet connection and active account for ON1 Cloud Sync, activation, auto-update checking, content downloads, and tutorials.	
<b>SUPPORTED OPTIONS</b>	Supports pressure-sensitive tablets for controlling brush size and/or opacity, and external control devices (such as those from LoupeDeck and El Gato). Supports ICC/ICM profiles for camera input, display, soft-proofing, and printing. Hardware display calibration tool is recommended.  Photo RAW 2024 also supports many plugins designed for use with Adobe Photoshop.	
<b>OPTIONAL APPLICATION INTEGRATION (PHOTO RAW MAX ONLY)</b>	Photoshop CC Photoshop Elements 2020 and above Photoshop Lightroom Classic Apple Photos Affinity Photo Corel Paint Shop Pro Capture One <i>current versions for all</i>	
<b>LANGUAGES SUPPORTED</b>	English, German, Spanish, French, Japanese, Korean, Simplified Chinese, Russian, Portuguese, Italian, Dutch	

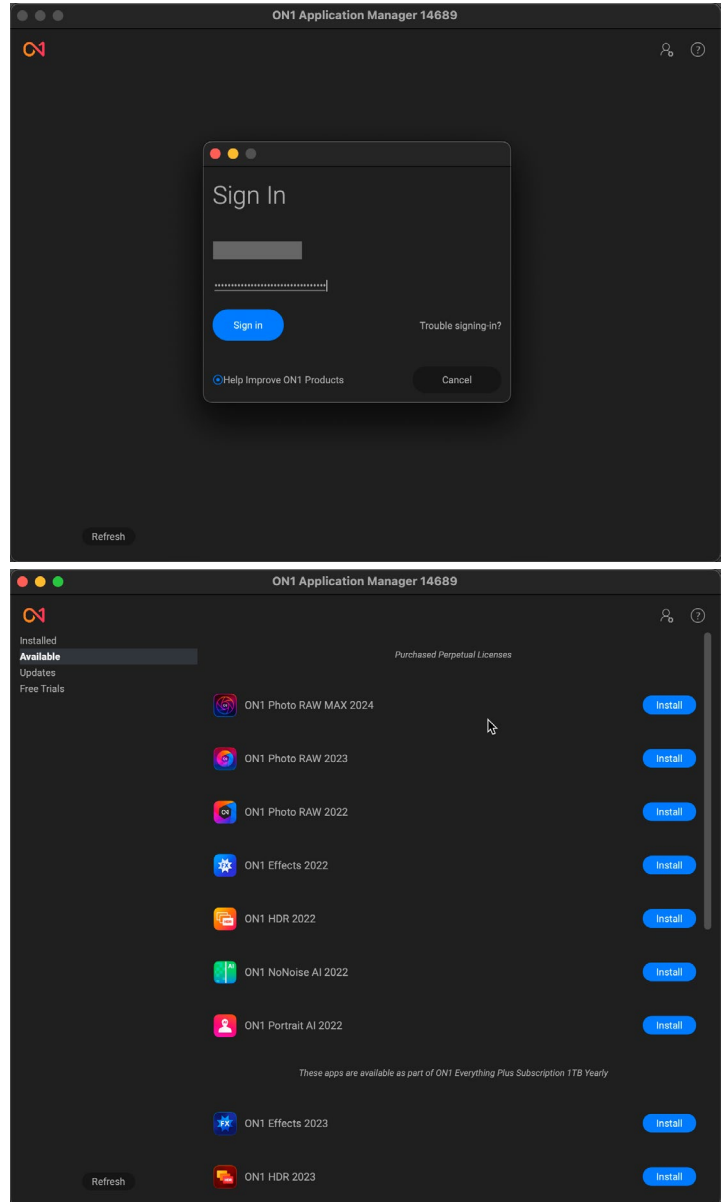
# Installation

To install ON1 Photo RAW 2024, you must first download and install the ON1 Application Manager, which manages your ON1 applications and free trials. Once you've installed the Application Manager, double-click on the app icon. You will first be prompted to sign in to your ON1 account. The Application Manager will then communicate with the ON1 servers, and display any apps you already have installed, as well as any newer apps that are available for your account.

Your license lets you install Photo RAW on two computers. When you enter your ON1 account info, Photo RAW communicates with the ON1 activation server and registers your software for that computer.

If you wish to move your copy of Photo RAW from one registered computer to a new one, and you are not going to be using the older machine, it is best to sign out of the old computer first. Open Photo RAW and select Sign Out from the Help menu. This will deactivate Photo RAW 2024 on the current machine, and you can install and sign in on another machine from the Application Manager.

You should receive a link to the ON1 Application Manager in your receipt email. You can also find it online via this [Application Manager](#) link.



*When you first install the ON1 Application Manager, log in to your ON1 account (shown at top). Once signed in, you'll be able to see which ON1 apps are available for installation (even older versions), and can install any of those apps directly.*

## FREE TRIAL VERSION

ON1 Photo RAW 2024 can also operate as a fully featured trial version for 15 days from when you first launch it. This gives you time to evaluate the product and see if it fits your needs. To install Photo RAW as a trial, click on the Free Trials label in the Application Manager, and click on the Install button. The Application Manager will display the number for days left in your trial; to purchase Photo RAW, click on the Buy button in the Free Trials section.

## MAC INSTALLATION LOCATION

On a Mac, the application is installed in the ON1 Photo RAW 2024 folder in the Applications folder.

If a previous version of ON1's Photo RAW is found, it will be maintained or replaced based on your preference during installation.

Support files are installed into */Library/Application Support/* and *~/Library/Application Support/* folders.

## WINDOWS INSTALLATION LOCATION

The application is installed in the ON1 Photo RAW 2024 folder in the *\Program Files\ON1\* directory.

If a previous version of ON1's Photo RAW is found, it will be maintained or replaced based on your preference during installation.

Support files are installed into *\ProgramData\ON1\*.

## UPGRADING FROM PREVIOUS VERSIONS

If you have earlier versions of ON1 Photo RAW on your computer, the installation process will move over any cataloged folders, albums, and metadata presets.

## BACKING UP YOUR PHOTO RAW CONFIGURATION

ON1 Photo RAW 2024 includes a back-up and restore function for most of the app's settings, presets, extras, all edits, made to any image and much more (your photos are not backed up, however). To learn more about this feature, see [“Backing up Your Work in Photo RAW” on page 285](#).

**NOTE:** If you have Adobe Lightroom Classic CC installed on your Windows or Mac system, the Installer will add a Lightroom plugin for migrating your Lightroom catalog to Photo RAW. See [“Moving Your Lightroom Catalog to Photo RAW” on page 298](#) for information on this process.

## USING PHOTO RAW MAX AS A PLUGIN TO OTHER EDITING APPS

In addition to working as a standalone editing and organizational app, ON1's Photo RAW MAX version can operate as a plugin to Adobe Photoshop, Lightroom, Photoshop Elements, Capture One and other photo editing apps. For information on installing and using Photo RAW MAX as a plugin, see [page 285](#).

# Launching ON1 Photo RAW 2024

## MAC

Navigate to the ON1 Photo RAW 2024 folder, which is inside the Applications folder in the macOS Finder. Double-click the ON1 Photo RAW 2024 application icon to launch the product.

You can add ON1 Photo RAW 2024 to your dock for easy access by clicking and holding the icon in the dock and selecting the Keep In Dock option. If you use Launchpad it can be found there as well.

## WINDOWS 10

Open the Start screen by pressing the Window key. Select ON1 Photo RAW 2024.

If you selected the “Add Icon to Desktop” option during installation you can also access ON1 Photo RAW 2024 from there.

## VIEWING YOUR ACCOUNT INFO ONLINE

In addition to the Application Manager, you can log into your ON1 user account area ([www.on1.com/login/](http://www.on1.com/login/)) at any time to download the software, see the number of computers you have registered, and make basic changes to your account information, including your email address, password, and notifications.

If you have issues related to installing or activating Photo RAW, please contact ON1 customer support, which can be reached by clicking on the ON1 website’s Support tab ([on1help.zendesk.com](http://on1help.zendesk.com)).

# Uninstalling ON1 Photo RAW 2024

To uninstall Photo RAW, first deactivate your product: open ON1 Photo RAW 2024 and select Sign Out... from the Help menu. This will allow you to transfer your license to another computer.

On a Mac, go to the *Applications/ON1 Photo RAW 2024/Documentation* folder, and double-click on the Remove ON1 Photo RAW 2024 application.

On a Windows computer, go to Control Panels, and under Programs select ‘Uninstall a program.’ In the list that comes up select ON1 Photo RAW 2024 and then click on the Uninstall button.

# Working with Files

ON1 Photo RAW 2024 can view and open the following file types, in RGB color mode, at either 8 or 16 bits per pixel:

- Raw files from most major camera manufacturers (file extension varies by manufacturer)
- Digital Negative (DNG)
- Photoshop (PSD)
- Photoshop Large Document (PSB)
- Tagged Image File Format (TIFF)
- Joint Photographic Experts Group (JPEG)
- Portable Network Graphic (PNG)
- High Efficiency Image Format (HEIC)
- ON1 Photo format (ONPHOTO)

Photo RAW can export files in PSD, PSB, TIFF, JPEG, DNG and PNG format.



ON1 Photo RAW 2024 uses your camera manufacturer's raw format as the default format when editing your photos. Photo RAW's non-destructive editing capabilities let you view your raw files—or any other supported file type from the list above—in Browse, and work on them in the Edit module without having to create any intermediary files. There are no multiple versions of images cluttering up your directory; Photo RAW remembers the edits you've made to your photos and applies them non-destructively to your original.

This means is that there is no need to “open” the files to edit them; you just work with them as desired, and ON1 Photo RAW 2024 will remember your edits as you travel across the modules, even when you are working with a layered photo. You'll only need to save them in a different form when you wish to export or share them in non-raw formats, or when you wish to work with the Resize module.

**NOTE:** ON1 Photo RAW 2024 can also view and catalog most standard video formats inside the Browse module. While you cannot play or edit video from within Photo RAW, you can perform file management tasks and edit metadata. Double-clicking on a video file in Photo RAW will launch the default video player for your computer.

## ON1 Photo RAW 2024 Modules

Photo RAW 2024 has three modules: Browse, Edit, and Resize. Each module focuses on one task, giving you access to just what you need to get that task done. Browse handles file-management operations, Edit performs non-destructive pixel editing—in a layered workflow, if you choose—and Resize is used to enlarge images, primarily for printing to large-format printers.

Browse is the default module. It is used to navigate through your drives and cloud services to find images, as well as to import photos and perform specialized image-combination tasks: assembling panoramas, creating high-dynamic range (HDR) images, creating focus-stacked images, and building time-lapse movies from a sequence of photos.

When you take an image from Browse to the Edit module, Photo RAW 2024 works in a non-destructive manner, preserving your edits as you work. When you return to Browse, you'll see your edits applied in all of the various viewing modes. (Thumbnail, Detail, Filmstrip, Compare and Map.

Within the Edit module are five tabs, Develop, Local, Effects, Sky Swap AI, and Portrait AI. Each tab has a specific area of functionality: Develop for basic editing, Effects for stylization, Sky Swap for replacing skies in an image, Portrait for retouching portraits, and Local for targeted editing of specific areas in your images.

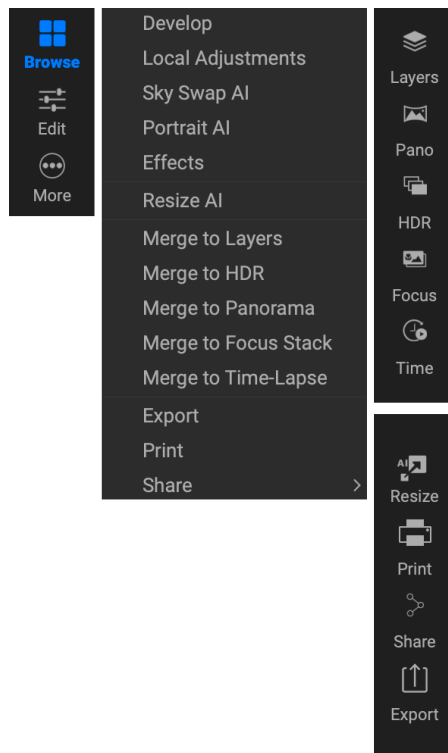
When working in the Resize module, the end result is a new, scaled file, usually intended for printing, Resize creates a copy of the image (generally saved in the .PSD format) and saves that to the same directory as your original image.

### THE MODULE SELECTOR

The Module Selector is on the left side of the screen by default, visible at all times. At the top of the selector are icons for Browse and Edit. Clicking on one of those icons will take you to that module.

Underneath the Browse and Edit icons is the More menu, which lets you go to any specific component of Photo RAW with a single click. These items include links to Resize AI; the different Edit module tabs (Develop, Local, Effects, Sky Swap, Portrait); Layers, Pano, HDR, Focus and Time, for time-lapse. Note that some of the More menu items might be grayed out, depending upon how many files are selected in Browse. The More menu is covered in detail on [page 21](#).

Previous versions of Photo RAW had the module selector on the right side of the main window, and included the Resize icon and icons for printing, sharing or exporting an image or group. (see [“Output and Sharing” on page 213](#)) If you would like to display the right-side icons, choose “Show Right Bumper” from the Window menu in Browse. Selecting “Show Bumper Labels” from the Window menu will add text labels underneath each of the items, similar to older versions of Photo RAW.



*On the left bumper (left) are the module selectors for going between Browse and Edit, along with the More pop-up menu.*

*The More menu (center) has links to all of Photo RAW's primary functions. Some of the items might be grayed out, depending upon the number of photos selected in the Browse window.*

*You can select the Window menu's "Show Right Bumper" to display Photo RAW's legacy icons (right) for many of the items in the More menu. The bumper is hidden by default in ON1 Photo RAW 2024.*

## Using Photoshop Plugins with Photo RAW

ON1 Photo RAW 2024 has the capability to run many plugins created for use with Adobe Photoshop, even if you don't have Photoshop installed on your system. When you process an image in the Edit module, and want to run it through a plugin, you are creating a new layer in your image document.

To set up Photo RAW to use Photoshop plugins, you open Photo RAW's Preferences and click on the Plugins tab. There, you can open Photo RAW's default folder for Photoshop plugins and copy the plugins to that location, or you can select a secondary folder that contains plugin files, by clicking the Choose button. You'll have to restart Photo RAW for the plugins to become available; once active, you can open a photo in the plugin by choosing Filters from the Layers menu in the Edit module. Photo RAW will launch the plugin; once you're done, and the plugin returns the edited photo to Photo RAW, it will appear as a new layer, where you can apply any of the Edit module's functions.

To learn about working with the Layers feature in Photo RAW, see [page 195](#).

## WHICH PHOTOSHOP PLUGINS WORK WITH PHOTO RAW?

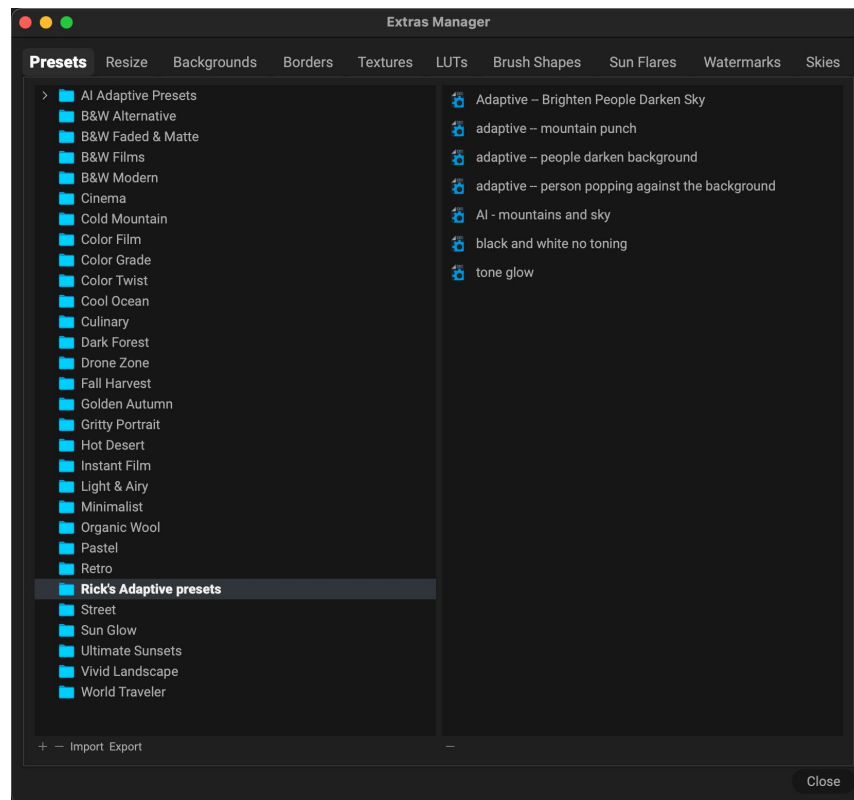
When checking to see if a Photoshop plugin is suitable for use in Photo RAW, note the following exceptions:

- Photo RAW does not support Photoshop automation plugins. That includes plugins that create layers or change the canvas size such as interpolation applications.
- It also does not support Photoshop panels.

Even without those exceptions, we cannot guarantee that all Photoshop plugins will work properly with ON1 Photo RAW. You should test each added plugin to make sure that it functions as intended. A current list of supported plugins can be found in the Help section of the ON1 website ([on1help.zendesk.com](https://on1help.zendesk.com)).

## Extras

ON1 Photo RAW 2024 supports a number of additional file types that can be used in various modules. These files are called Extras, and the file types include:



*The Extras Manager is used to import (and remove) everything from presets to replacement skies, watermark files and more.*

- Presets for use within the Edit module.
- Paper presets (type and size) for use within Resize.
- Backgrounds that can be imported and used with Photo RAW's Layers feature.
- Borders than can be imported and used in Layers and Effects.
- Textures that can be imported and used in Layers and Effects.

- Look-up tables (LUTs) for use with Effects' LUTs filter.
- Custom brush shapes, which are generally saved as black-and-white TIF files. Photo RAW can also import brush shapes saved in the Adobe Brush Preset format (.abr).
- Sun flares, which can be imported and used with Effects' Sun Flare filter.
- Watermarks, image files (transparent PNGs) that can be used with Export and Print.
- Skies, replacement skies for use with Photo RAW's Sky Swap AI feature in the Edit module.

ON1 includes a number of extras in the product when you install Photo RAW, and you can create your own, or add extras downloaded from the ON1 website. You can use the Extras Manager to import and manage your own extras, creating categories for each type, and deleting extras that you no longer want.

## HOW TO IMPORT EXTRAS

To import extras, choose Manage Extras from the File menu in Browse and Edit, then follow these steps:

1. Select the type of extras you wish to import from the list of tabs at the top. You can only import extras of one type at a time.
2. Click on the Import button in the footer of the left column. A dialog box will open; select the files to import. If you want to import an entire folder, open the folder, select the first file, then shift-click on the last file. Click Import when your selection is complete.
3. Select a category for your extras to live in. This is where you will be able to find it inside ON1 Photo RAW 2024. When importing presets, you can select from a preexisting category or create a new one (which will show up in the Presets list). For other extra types, the first time you import, you'll need to create a new category; after that, any time you import that type, you can choose that original category, or you can create another one.

When your extras have been imported, they will be displayed in the appropriate Extras Manager category.

**NOTE:** Most extra types mentioned here will have a corresponding Import button in their respective panes or windows. (For example, watermarks in the Export panel, or skies in the Sky Swap AI pane, and so on.) Clicking the Import button in these instances will open the Extras Manager. To import backgrounds and custom brushes, choose Manage Extras from the File menu.

### Organizing presets

The Presets tab of the Extras Manager gives you additional options for working with large groups of presets inside Develop and Effects. When you are using the Presets tab, you'll see '+' and '-' buttons, which let you add or delete categories to the list of your presets.

You can also add subfolders to any of the Presets categories, which can help organize and manage large collections of presets. You can use drag-and-drop to move existing categories into another, or you can add a category subfolder to an existing category by clicking on the category and then clicking on the '+' button in the Extras Manager window. (When you are importing presets, Photo RAW gives you the opportunity to add presets to any category folder or subfolder.)

The Presets section of the Extras Manager will also let you export presets, for sharing with other users, or

to save seldom used presets for archiving purposes. To export a complete category, click on the category in the list on the left side of the window and click on the Export button. This will export a folder that contains a single .ONpreset file, which includes all of the presets from that category. If you would like to export a single preset, click on the preset from the list on the right side of the window and click Export.

## What type of images can I import as Extras?

Here is a breakdown of the different file types that can be used with the various extras categories:

- Backgrounds and textures may be JPEG, TIFF, or Photoshop files.
- Border files must have a large central area that is transparent, so only files that support transparency, such as PNG, can be imported as borders.
- LUTs can be in either .3DL or .CUBE format.
- For custom brushes, Photo RAW can import Photoshop-compatible brushes saved as black-and-white TIF files, or files saved in Photoshop's .abr file format.
- Sun flare files are usually JPEG files with a black background.
- Since most watermarks are overlays on top of an image, those files are usually PNGs with areas of transparency, although JPGs can also be used.
- Sky-replacement images may be any image file that Photo RAW can open, including JPEG, TIFF, or Photoshop files, although the most common types are JPG or TIFF. (See [“Replacing Skies with Sky Swap AI” on page 182.](#))

**NOTE:** If you download an .ONPreset or .ONP file (for use with Develop or Effects), you can simply double-click on it to install it. For more information, see the Presets section of this guide, starting on [page 121.](#)

## USING EXTRAS WITH LAYERS IN THE EDIT MODULE

You can view and add extras to any open document in the Edit module by adding a new layer. Just click Layer > Add Layer from the File menu to open up a file browser window on-screen, where you can choose installed extras or any file from your computer. For more on this, see [“Working with Layers” on page 195.](#)

## USING EXTRAS IN EFFECTS

You can access your imported borders, textures, LUTs and sun flares in Effects, as you would any of the default extras installed with Photo RAW. To use them follow these steps:

1. Open an image in Effects.
2. In the Filter Options pane, add the filter type you wish to work with from the Add Filter button (Borders, Textures, LUTs, or Sun Flare).
3. From the Category pop-up, select a category you have imported. User-added extras categories will appear at the bottom of the category list.
4. Choose an extra from the imported category.

**NOTE:** Each filter will have a different method for choosing its extras. Specific information on the different filters can be found in the Effects section of this guide: [page 166](#) (Borders), [page 174](#) (LUTs), [page 178](#) (Textures), and [page 177](#) (Sun Flare). For information on working with custom brush shapes, see [“Using Custom Brushes to Add Overlays To Photos” on page 153](#).

## USING OTHER EXTRAS: WATERMARKS AND SKIES

Imported watermark files will be displayed in three locations: in the Logo section of the Watermark panes in Photo RAW’s Export (see [page 234](#)) and Print (see [page 245](#)) functions, as well as in the My Extras tab when you add a new layer to a document in the Edit module (see [page 195](#)).

When you add replacement skies to the Extras Manager, each category that you added will be added to the Sky category list at the top of the Sky Swap AI pane. All skies in that category will be listed in the Skies pop-up menu under the Sky category menu.

## HOW TO DELETE EXTRAS

You can remove imported extras using the Extras Manager. Follow these steps:

1. Open the Extras Manager in any module (File > Manage Extras).
2. Click on the extras type that contains the content you wish to remove. This will display categories within that type.
3. To delete an entire category, select in the left column and click on the Delete button in the footer of the left column.
4. To delete individual extras, select them in the right column and click on the Delete (‘–’ in the Presets tab) button in the footer of the right column.

Deleting extras is permanent and cannot be undone.

**NOTE:** If you are using Photo RAW as a subscription, the Cloud Sync option will sync all of your imported extras between your licensed computers. See [“Using ON1 Cloud Sync with Photo RAW” on page 72](#) for more about this service.

# Customizing ON1 Photo RAW 2024

Photo RAW has a number of parameters you can change within the app, including the creation of custom keyboard shortcuts; customization of various panes; setting the interface's font size; and how the app works with a mouse scroll wheel.

## KEYBOARD SHORTCUTS

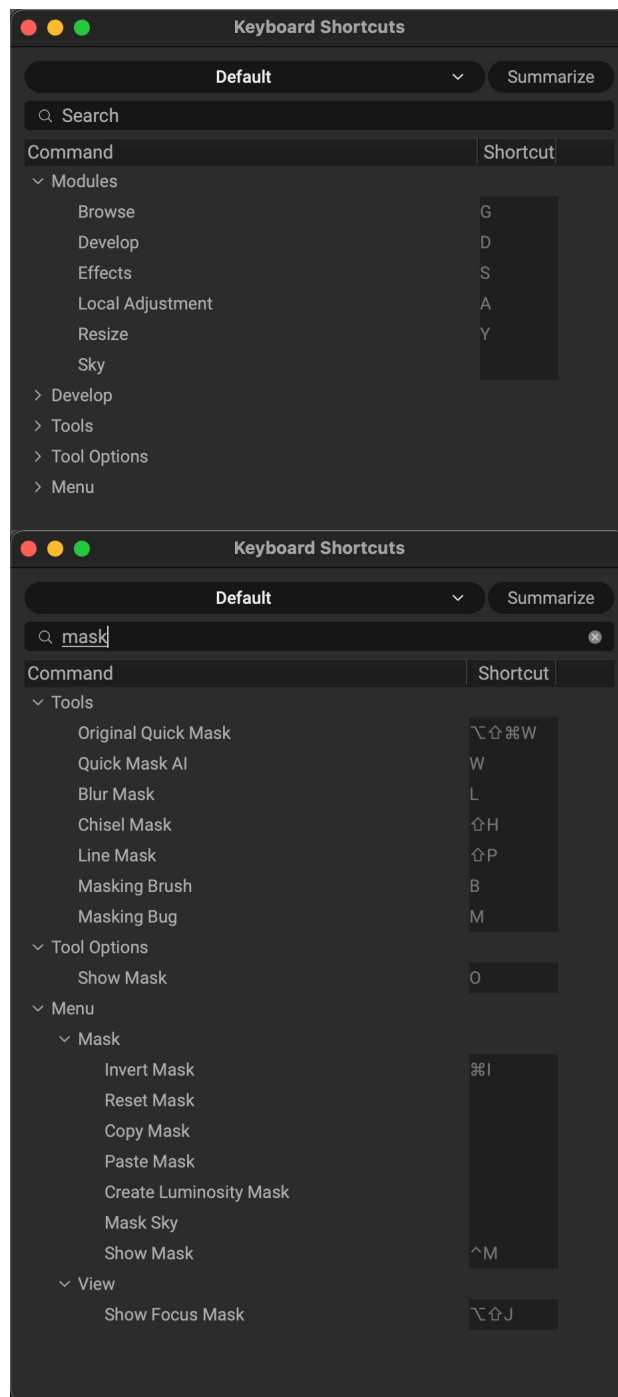
You can customize ON1 Photo RAW 2024's hotkeys via the Keyboard Shortcuts window. This window lets you view and change the shortcuts for any tool, tool option, module, or menu item inside Photo RAW. You can assign shortcuts to menu items that don't yet have a shortcut, build multiple sets of shortcuts as preset styles, and create a summary of your shortcuts that can be viewed in any web browser.

To view or change Photo RAW's hotkeys, choose Keyboard Shortcuts from the Edit menu in any module. By default, Photo RAW's shortcuts will be displayed, organized hierarchically by the following groups:

- **Modules**, commands for switching between Photo RAW's different modules.
- **Develop**, for applying tone and color adjustments directly from the keyboard while you are working in the Edit module. (See [“Adjusting Tone & Color settings via hotkeys” on page 139](#) for details on working with this feature.)
- **Tools**, for the 18 tools available in the Edit module.
- **Tool Options**, for the brush and mask viewing options available in any masking tool's Options Bar.
- **Menu**, which includes all of Photo RAW's menu items in each module.

You open each group by clicking on the triangle to the left of the group name, or you can use the search field at the top of the Keyboard Shortcuts window to search for a command in any of the groups (right).

Each command that has an assigned key will display that key in the Shortcut column. The Shortcut field



The search field at the top of the window lets you quickly find commands based on keywords.

will be empty for any command that doesn't have an assigned key, and any field with a grayed-out shortcut means that you cannot modify that command's keys.

**NOTE:** Some keyboard shortcuts cannot be changed. These include menu commands used by the operating system (Cut, Copy, Paste), and the Browse module shortcut (G). Also, you can't use the Escape, Return/Enter, or Delete keys as a shortcut.

## Modifying hotkeys

The Default preset style's hotkeys cannot be modified, but you can create your own set of shortcuts by double-clicking on any command you wish to add or change. You'll be asked if you want to create a new preset. Clicking Yes will let you name the new preset style, and Photo RAW will make a duplicate of the Default set.

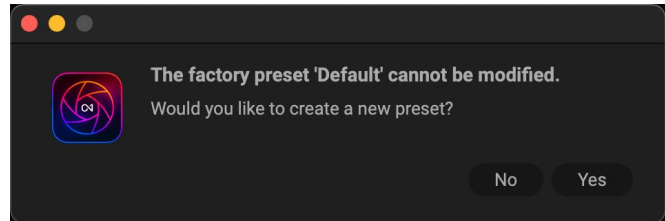
At this point, you can change any existing hotkeys, or add your own to commands that don't have them, by double-clicking in the Shortcut field for that command. The field will be highlighted, and you can press the key or key combination you wish to use. If that key is used by another command, a dialog will inform you of that, and giving you the option of either keeping the existing hotkey/command combination, or changing it to the new command.

When you change a default shortcut to a new key combination—even for commands and options that didn't initially have a shortcut—a Reset arrow will appear to the right of the Shortcut field. Clicking the icon will reset the command to its original state, from the Default preset style.

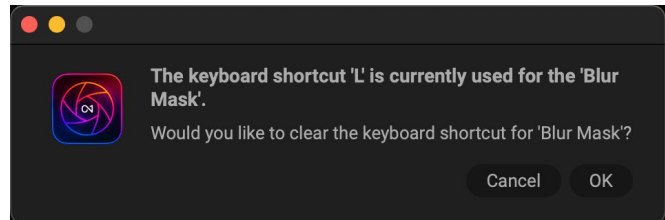
To delete a shortcut, double-click in the Shortcut field and press the Delete key.

The Summarize button at the top of the Keyboard Shortcuts window will create an HTML table of the current set of hotkeys. You'll be asked where to save the file, and double-clicking on it will open that table in your default web browser, where you can view or print the list.

You can return to the original Photo RAW shortcuts by clicking on the pop-up menu at the top of the Keyboard Shortcuts window, and choosing Default from the list of preset styles. That menu can also be used to create a new preset or to delete an existing one that you created. The Default preset cannot be removed, however.



*When you add or change a hotkey the first time, Photo RAW will prompt you to create a new preset style, which makes a duplicate of the Default preset. You can switch between preset styles—including back to Photo RAW's Default set—by using the pop-up menu at the top of the Keyboard Shortcuts window.*



*If you try to add a shortcut key combination that is already in use, Photo RAW will let you know, and give you the option of keeping (Cancel) or removing (OK) the other command/shortcut.*



## CUSTOMIZING THE DISPLAY AND ORDER OF TABS AND PANES

You can show or hide and rearrange certain aspects of Photo RAW's interface via the Tab option pop-up menu, which is found in the primary photo information panes at the top of the right panel in the app (in both the Browse and the Edit modules); in the Edit module's tabs; or in the Properties window (or pane).

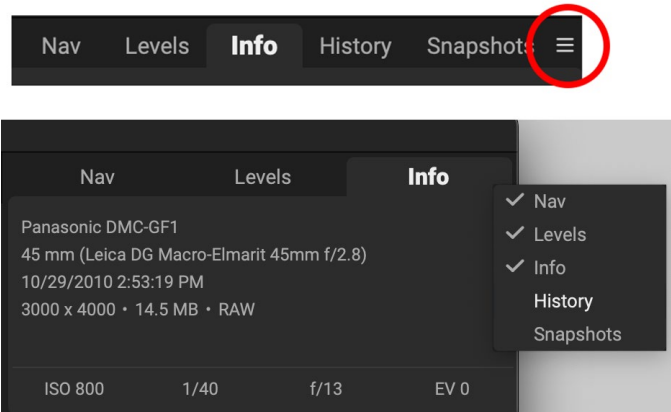
To view the menu, hover over the end of the top pane in the panel, which will display the Tab options icon, represented by three, evenly spaced vertical lines. Clicking on the icon will display a list of the separate panes that make up the group. By default, all five panes (Nav, Levels, Info, History and Snapshots) are displayed. Selecting any of the items in that list will hide that pane. To restore a hidden pane, go to the Tab options menu and select it again.

In addition to showing and hiding certain panes, you can also rearrange the order of the visible tabs in the group. Click and hold the mouse on a tab you wish to move and slide it right or left to reorder the tab.

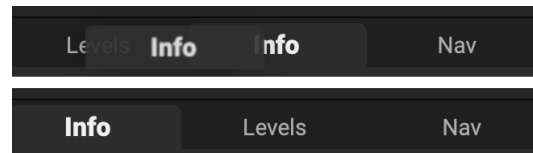
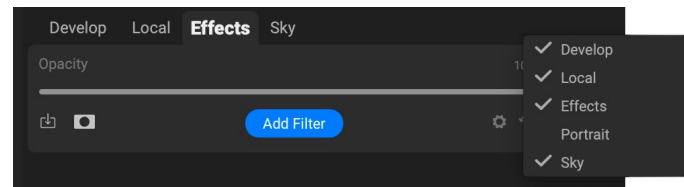
Photo RAW's Properties feature has a similar Tab option icon that lets you hide one of the tabs (Blending, Masking or Text) from view. This icon is visible in either of the Properties display options: window or pane in the right panel.

In addition to displaying or hiding tabs, many of the panes in the Browse module have the capability to hide that pane from view via both the Window menu or the pane options menu.

For example, you could hide the Tethered Shooting or the Metadata pane by clicking on the pane options icon and selecting Hide from the pop-up menu, or by unchecking the pane via the Window menu. Hidden panes can be restored by selecting them from the Window menu.



*The Tab options pop-up menu is displayed when you hover over the end of the top pane in Photo RAW (circled in red, top). Clicking on the icon will display a pop-up of the separate panes; selecting one of the items in the list will remove (or add) that item from the pane. This function is also available in the Edit Module's tabs, letting you rearrange the tab order, or hiding infrequently used tabs (like Portrait, shown below).*



*Reordering the top panes is easy: click and hold the mouse on a tab you wish to move, and drag right or left (top). When you let go of the mouse button, the tabs will be in a new order.*

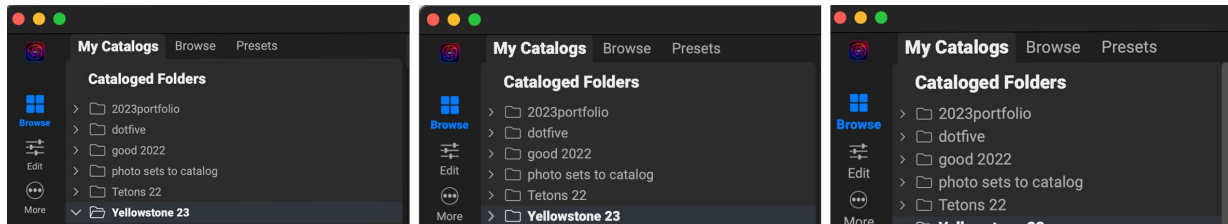


*Many panes inside the Browse module have an option to hide that pane, which can be helpful to minimize the Photo RAW interface. All panes can be shown again from the Window menu.*

**NOTE:** For information on the panes at the top of the Photo panel in Edit, see [“Navigator, Levels, Info, History and Snapshots” on page 84](#). The Properties window is discussed in detail starting on [page 87](#). The Browse panes are discussed starting on [page 17](#) (left side panes) and [page 41](#) (right-side panes).

## CHANGING PHOTO RAW'S FONT SIZE

By default, Photo RAW prioritizes the main workspace to focus on photos, using a small font size to display panel names, labels, file names any other basic text. You can adjust the default font size to one of three settings, Small, Medium or Large, by choosing the General tab of Photo RAW's Preferences window. Select the option from the Font Size pop-up, and restart Photo RAW to have the effect take place.



*Photo RAW has three options for displaying type in the main workspace, Small (left), Medium (middle), and Large (right). To change the size, go to the General tab of the Preferences window, and pick the new option from the Font Size window. The change will take effect the next time you launch the app.*

## USING PHOTO RAW WITH A SCROLL WHEEL

When you are using ON1 Photo RAW 2024 with a mouse that has a scroll wheel, there are number of different options available throughout the app, on both Mac and Windows.

Throughout the app, the scroll wheel has the following general options:

- Using the scroll wheel will pan up and down in the current window. In Browse's Thumbnail view, it will scroll the window. In most other views, using the scroll wheel with the cursor over the preview area will pan the image on screen up and down. Holding the Shift key down and scrolling will pan left or right.
- Hold Option (Mac) or Control (Windows) with the scroll wheel to zoom in or out of an image.

In the Edit module, when working with any tool that has a brush size and feather option, press Command-Option (Mac) or Control-Alt (Windows) and scroll to change the brush size. To change the feather, press Option-Shift (Mac) or Alt-Shift (Windows).

If you would like the scroll wheel solely for adjusting the brush size, click the "Only Adjust Brush Size with Scroll Wheel" option in Photo RAW's General Preferences window (see [page 272](#)).



# PART 2: ORGANIZING WITH BROWSE

ON1 Photo RAW 2024's Browse module is a powerful and incredibly fast photo browser and manager. It gives you one place to find, view and manage your images, no matter where they are located.

Browse is an ideal environment for performing quick sorts and edits after a shoot: You can import, then view, your photos immediately without having to wait for a long cataloging or preview-creation process. You can rate, add keywords and flags, create albums, and even remove photos, all from within Browse. And, with Keyword AI, Photo RAW can automatically analyze your photos in the background, suggesting new keywords on the fly, providing options to search your photo library in entirely new ways.

Browse also has a sophisticated indexing system, designed to let you get access to your favorite folders of images quickly; just add a folder to the My Catalogs pane, and it will index your photos in the background, giving you increased search capabilities and even faster access to your most important photos.

When using the ON1 Cloud Sync service (see [page 72](#)), you can easily share a cataloged folder or album with other computers of yours (a laptop, for example) and any of your mobile devices.

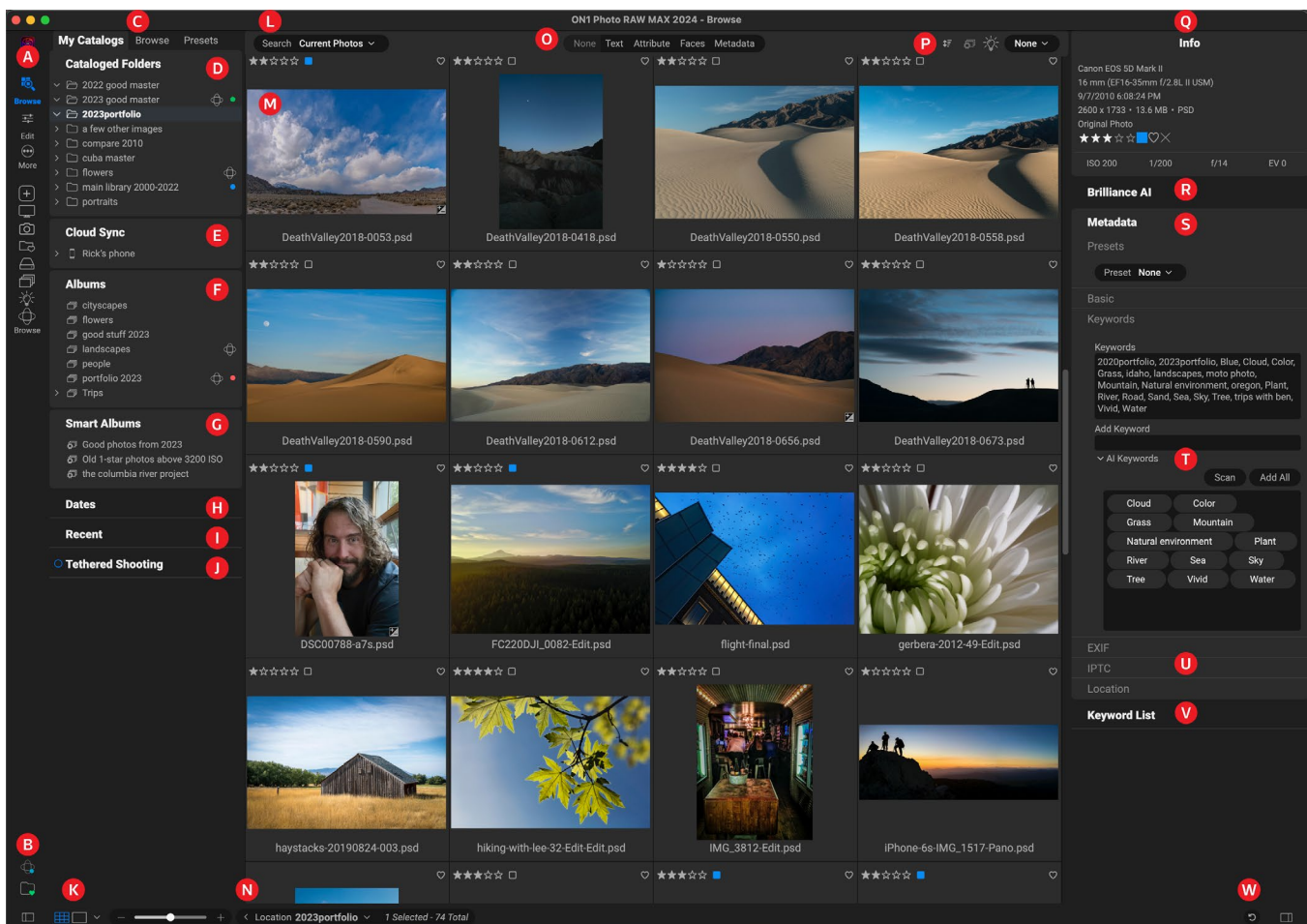
Browse also lets you apply any editing presets from the Edit module directly to an image or group of images. You can copy edits made on one photo and paste them onto another, or even a group of photos.

The following is a list of Browse's key features:

- Find your photos fast, wherever they are—local or network drives and cloud-based services—with the Search Bar, and save frequently used searches as smart albums or filter presets.
- Manage duplicates or similar photos (and more) quickly with the Smart Organize feature.
- Import your photos from your camera, memory card or other device.
- Use Keyword AI to generate keywords automatically based on photo content, letting you bypass the often time-consuming task of manually tagging photos so that you can find them easily later.
- Add any other metadata—from creator to keywords and GPS—quickly to a group of photos, and use metadata templates to apply often-used metadata information during the import process.
- Catalog important folders of photos, to get the fastest access to your most important photos across multiple sources, while still preserving your folder hierarchies and locations.
- View and cull photos from a shoot in four different views: Grid, Filmstrip, Detail and Compare views. Use the Map view to see where you shot your photos, or to add location information.
- Dual-display capability that lets you work more efficiently. See Grid view on one display, and Detail view on another, or use this mode to present photos on a TV or projector.
- Apply Edit module presets to a single image or group, or sync edits across a group. Or apply ON1's Brilliance AI to your photos directly from within Browse.
- Build panoramas and high dynamic range (HDR) images directly from within Browse, and blend multiple photos at different focus distances to increase depth-of-field.
- Create flicker-free time-lapse videos from sequences of raw images.

- Connect your Nikon or Canon camera and capture photos directly, with full manual camera support, using tethered-shooting mode.
- Quickly find photos based on their creation date, or any combination of metadata information, including time of day, camera/lens type, file type and more.
- Create albums from a selection of photos, or use advanced searching methods to create “smart” albums that dynamically update based on metadata.
- Copy, move, delete and rename files.
- Sort, flag, rate or color code your images.

## ON1 Photo RAW Main Screen Overview



The Browse module has three main sections: the Catalogs/Browse/Presets panel on the left side of the screen, the Preview window in the center, and the Photo Info panel on the right side.

The main components of Browse module include:

- Module Selector/More Options/Shortcuts:** The top left panel includes icons for switching between Browse and the Edit module; a More button that lets you perform basic operations in Browse; and shortcuts to the Getting Started, Smart Organize and Albums, as well as to your most common photo storage locations. (See [“Using Shortcuts” on page 21.](#))

- B. **ON1 Cloud Sync/Cataloged Folder Progress/Open and Close Left Panel:** Accesses the ON1 Cloud Sync status window (when available) and the Cataloged Folder Progress windows. The icon at the bottom opens and closes the left panel. (See [“Using ON1 Cloud Sync with Photo RAW” on page 72](#) for more on the syncing service.)
- C. **My Catalogs/Browse/Presets Panels:** Switch between the cataloged folders panel, local drives and cloud sources, and Edit module presets by clicking on the tabs.
- D. **Cataloged Folders/Favorites and Local Drives:** Displays your cataloged folders (shown) or local disks and favorite folders, depending upon which tab has been selected.
- E. **Cloud Sync:** Shows all ON1 Cloud Sync devices.
- F. **Albums Pane:** This pane is for creating albums, also known as collections of images. Albums can be grouped into subfolders for easy organization.
- G. **Smart Albums Pane:** This pane includes collections of dynamically built albums based on criteria set in the Search Bar.
- H. **Dates Pane:** Search for photos based on the capture date.
- I. **Recent Pane:** This keeps track of recently opened files and folders.
- J. **Tethered Shooting Pane:** This lets you connect your Nikon or Canon camera to your computer; you can capture images directly from the camera to ON1 Photo RAW.
- K. **View Selector/Preview Size:** Switch between Grid, Detail, Filmstrip, Compare and Map views. The Preview slider adjusts the thumbnail size (Grid view) or the size of the currently viewed photo (all other views).
- L. **Search Location:** Part of the Search Bar, this lets you choose the location of a search operation.
- M. **Preview:** The window where you view your images in thumbnail or detail view.
- N. **Breadcrumbs Bar:** Shows the path of the selected image or folder in the Preview area; the pop-up lets you go back up the current folder tree, select another folder from recent items or your Favorites. To the right of the bar is the count of both the currently selected items in the preview area and the number of items in the folder or search operation.
- O. **Search Bar criteria:** Select criteria when using the Search Bar to find items in your library.
- P. **Sort/Smart Album/Smart Organize/Saved Searches:** From left, the Sort icon lets you adjust the sort order of the current view; saves the current search operation as a Smart Album; opens the Smart Organize window; and lets you choose from a previously saved search, or the save the current search.
- Q. **Info Pane:** This section will give you detailed metadata about your image when available. (Also displays Navigator and Histogram panes when in Filmstrip, Detail and Compare modes.)
- R. **Brilliance AI:** This pane lets you apply the Edit module’s Brilliance AI feature to photos within Browse.
- S. **Metadata Pane:** This pane will show your metadata for the selected image.
- T. **AI Keywords List:** Displays a list of suggested AI-generated keywords for the current photo.
- U. **EXIF/IPTC/Location Info:** Displays additional detailed information about the selected file.
- V. **Keyword List:** All keywords found in your image catalog.
- W. **Reset All:** Removes all edit adjustments made in Edit from the selected image or group of images.

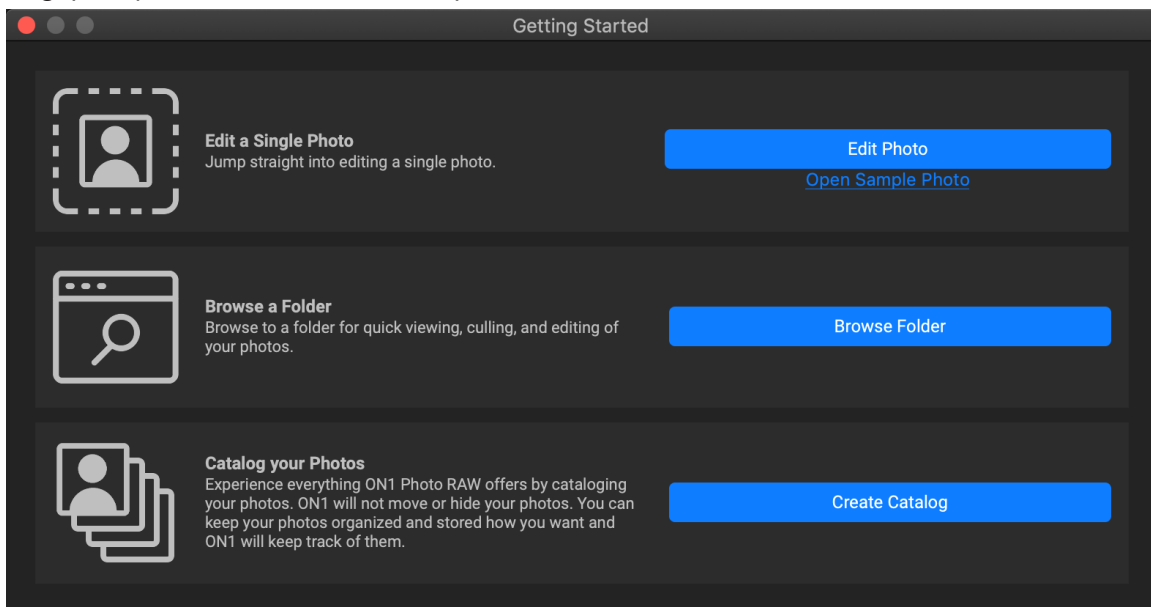
# Workflow Basics in Browse

ON1 Photo RAW 2024 provides a great deal of flexibility in how you wish to work with your photos. You can browse for existing photos in folders that are connected to your computer (including cloud services like Dropbox, Google Drive and Microsoft OneDrive). You can also import photos directly from your camera or other device. And, once you've found a photo (or photos) you wish to work on, moving to the Edit module is a single click away.

If you store your photo library in a specific location on an internal or external hard drive (or multiple drives), you can have Photo RAW index those folders. This process 'catalogs' the photos, reading their metadata and building previews, letting you navigate and access your photo library much more quickly than if you were to simply look at a random folder of images. Cataloging a folder doesn't move or change your photos; it just makes it easier for you to find and work with them inside Photo RAW.

## Getting Started window

The first time you launch Photo RAW, Browse displays a Getting Started window, designed to help you get working quickly. This window has three options:



*The Getting Started window is designed to help you get working quickly with ON1 Photo RAW 2024.*

- **Edit a Single Photo:** clicking this button will give you the MacOS or Windows file-selection dialog, where you can navigate to a specific photo. Once you've chosen an image, Photo RAW will open that photo directly within the Edit module (starting with the Develop tab). You have access to all the editing tools, and when you're done editing, you'll be asked to save a copy of the edited version of your photo. (See ["Working in the Edit Module" on page 79](#) for information on editing photos.)
- **Browse a Folder:** this button will open the file-selection dialog for your computer. There, you can navigate to a specific folder of photos. Clicking the Open button in that dialog will display that folder's photos in the Browse Preview area.
- **Catalog Your Photos:** clicking this button will let you choose a folder to be cataloged by Photo RAW. This folder (and any subfolders of photos within it) will be added to the My Catalogs pane. (See ["Cataloged Folders" on page 34](#) for info on creating cataloged folders.)



The Getting Started window can be accessed at any time by clicking the '+' button in the Shortcuts section on the left side of the Browse window (see [“Using Shortcuts” on page 21](#)), or via the Help menu.

**NOTE:** If you wish to use the full non-destructive editing capabilities of Photo RAW when working on your photos, do not use the Edit a Single Photo option. Instead, inside Browse, find the photo you wish to edit, select it, and click on the Edit module selector on the right side of the main window. (See [“Using Photo RAW as a Raw Editor” on page 81](#) for more about non-destructive editing and why it might be important to your workflow.)

## USING SHORTCUTS

The Shortcuts selector on the left side of the Browse panel is a list of icons designed to give you quick access to a number of commonly used system destinations or Browse functions. It can be displayed or hidden, depending upon your preference, by choosing the Show Browse Shortcuts from the Window menu.

From top to bottom, the icons represent the Getting Started window; your Desktop, your default Browse location, which can be set in the General Preferences tab (see [page 272](#)); cataloged folders; local drives; albums; the Smart Organize window, and ON1 Cloud Sync devices. Clicking on one of the icons will either display the shortcut's contents in the Preview window (Desktop, Pictures, Cataloged Folders, Local Drives, Cloud Services, Albums, Cloud Sync), or will open a specific function window in Photo RAW (Getting Started, Smart Organize).



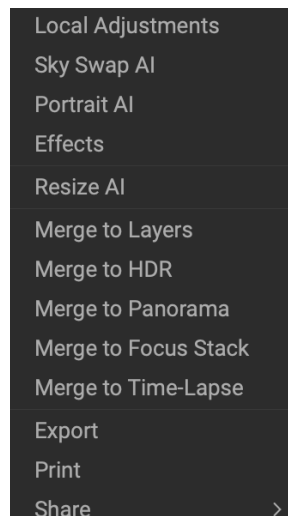
Getting Started window  
Desktop  
Default Browse location  
Cataloged Folders  
Local Drives  
Albums  
Smart Organize window  
ON1 Cloud Sync

By default, the Pictures shortcut uses your My Pictures folder (Windows) or Pictures (Mac). You can change the default location in the General section of the Preferences window (see [page 272](#)).

## THE MORE MENU

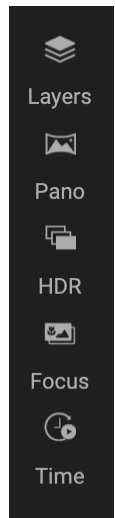
Above the Shortcuts section is the More button, which contains a group of additional options for Photo RAW. Clicking on the button displays a menu that includes the following items:

- **Develop:** Switches to the Develop tab with the currently selected photo (see [page 135](#))
- **Local adjustments:** Switches to the Local tab with the currently selected photo (see [page 150](#)).
- **Sky Swap AI:** Switches to the Sky Swap tab with the currently selected photo (see [page 182](#)).
- **Portrait AI:** Switches to the Portrait tab with the currently selected photo (see [page 187](#)).



*Clicking on the More button gives you additional options for functions inside Photo RAW.*

- **Effects:** Switches to the Effects tab with the currently selected photo (see [page 155](#)).
- **Resize AI:** Switches to the Resize module with the currently selected photo (see [page 214](#)).
- **Merge to Layers (multiple photos only):** Takes the currently selected photos and opens them as a new composite file in the Layers portion of the Edit module (see [page 195](#)).
- **Merge to HDR (multiple photos only):** Takes the currently selected photos and opens them in the HDR Merge window (see [page 206](#)).
- **Merge to Panorama (multiple photos only):** Takes the currently selected photos and opens them in the Panorama Merge window (see [page 203](#)).
- **Merge to Focus Stack (multiple photos only):** Takes the currently selected photos and opens them in the Focus Stack window (see [page 209](#)).
- **Merge to Time Lapse (multiple photos only):** Takes the currently selected photos and opens them in the Build Time Lapse window (see [page 211](#)).
- **Export:** Takes the currently selected photo or photos and opens Photo RAW's Export window (see [page 234](#)).
- **Print:** Takes the currently selected photo or photos and opens Photo RAW's Print window (see [page 245](#)).
- **Share:** Takes the currently selected photo or photos and lets you share them to SmugMug, or, on MacOS, to various locations on your Mac (see [page 213](#)).



The right bumper can be turned on or off via the Window menu.

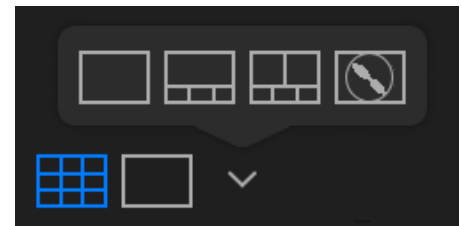
Selecting any of these items will perform the action described above; note that some of these options will take you out of the Browse module.

The More menu is new to Photo RAW 2024. Previous versions of Browse had a series of icons on the right side of the main screen that accessed the same items found in the More menu. If you would like to display that set (shown in the screen shot on the right), select “Show Right Bumper” from the Window menu.

## Working in the Preview Area

The Preview window is the largest part of the Browse workspace. Here, you can view folders of images (including all images synced via ON1 Cloud Sync) in either thumbnail or detail view, based on the folders, albums or filters you have chosen via the Browse panel. There are five main views in the Preview window:

- **Grid**, which displays a grid of thumbnails of your images. This view also displays folders, letting you go up and down a folder hierarchy quickly. You can also change the information displayed in each cell in the grid.  
*Shortcut key: G*
- **Photo (also known as Detail)**, which you get by double-clicking on a thumbnail. You can view this image in either ‘fit to window’ view, or can zoom in to see more detail.  
*Shortcut key: E*



The View pop-up at the bottom left side of the main Browse window displays the four detail-oriented view options.

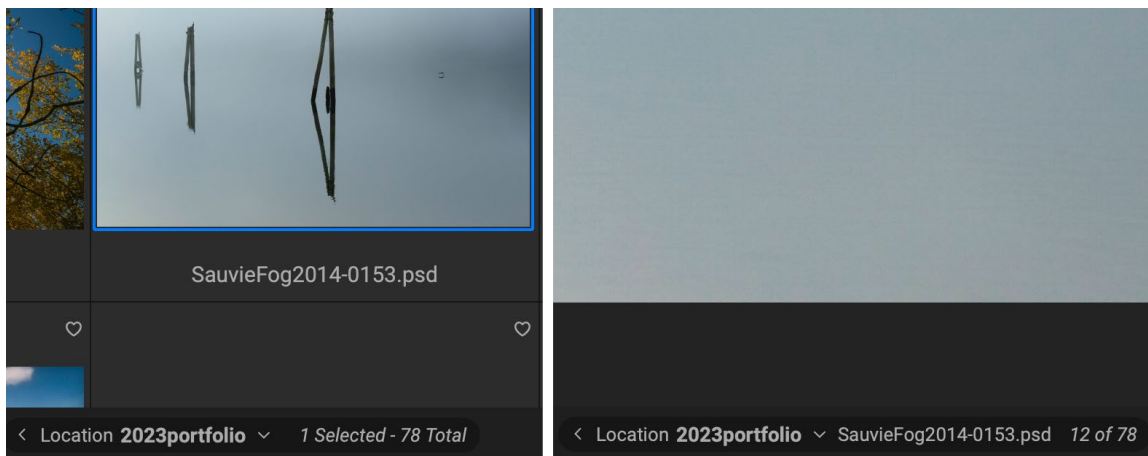


- **Filmstrip**, which displays a strip of images from a folder or album at the bottom of the screen. The currently selected image displays in the preview area above the strip; use the arrow keys to move through the folder, or click on an image in the filmstrip to view it in the preview area. Similar to Detail view, the Filmstrip mode lets you view the current image in ‘fit to window’ and zoom views. *Shortcut key: F*
- **Compare**, which lets you view a group of photos in separate panes inside the preview area. You can zoom in on one or all of the selection, and lock the panning so that, as you move around one photo, the others move with it. Using Compare, you can quickly find the best images in a sequence, whether it be for composition, sharpness, facial expressions or more. *Shortcut key: C*
- **Map**, which can be used to display locations for photos that have GPS-based location data, or to search for locations that can then be applied to a photo or group of photos. *Shortcut key: M*

You can change the viewing mode between the different views by clicking on the view selector at the bottom of the window, or by using the shortcut keys listed above.

**NOTE:** You can use your mouse’s scroll wheel in Browse’s view modes to help navigate and to zoom in and out. See [page 15](#) for more information.

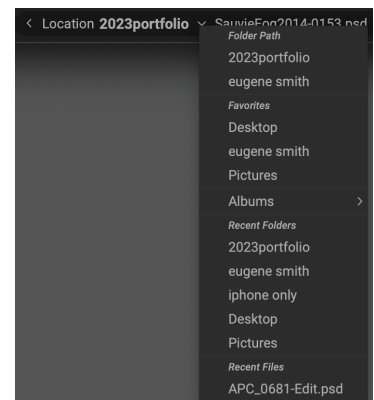
## USING THE BREADCRUMBS BAR



The Breadcrumbs bar displays the name of the current folder location and the number of photos in the folder. In Grid view, the bar shows the number of selected photos and the total number of photos in the folder. In all other viewing modes (including those in the Edit module), the name of the current photo is listed, as well as its order in the folder.

At the bottom of the main window in Browse and Edit is the Breadcrumbs Bar, which displays name of the currently selected photo and the folder in which it resides. If you are in Grid view, the bar will have the number of selected photos and the total number of photos in the folder. In all other views (Photo, Filmstrip, Compare, Map, and in the Edit module), the bar displays the order number of the current photo in the folder (based on the current sort order) and the total number of photos in the folder.

Clicking on the downward-facing triangle presents a pop-up menu with three sections: the path of the current folder (to the root of the drive), the list of your favorite folders (see [“Favorites” on page 35](#)), recent folders,



and recent files. Regardless of the viewing mode you are in, selecting any item from those sections will take you to that folder, displaying the first photo in the folder. If there are no photos in that folder, Photo RAW will display a “No Photos Found” label in the preview area.

## ALTERNATIVE VIEW MODES

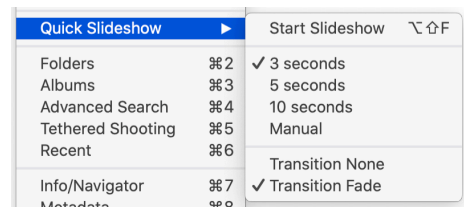
In all of Browse’s preview modes you have three options for viewing the contents of the current window:

- Photo RAW’s default is a resizable, movable window.
- **Full Screen Mode**, which can be found in the Window menu, will expand the main window to fit the contents of the current display. The menu bar is hidden, but it can be viewed by moving the mouse cursor to the top of the screen. This mode can be toggled on and off by pressing Option-Control-F (Windows) or Command-Control-F (MacOS).
- **Full Screen Preview**, also found in the Window menu, will display the currently selected photo full-screen, without any of the other interface elements. You can use the arrow keys on the keyboard to move from photo to photo. This option is helpful when you wish to view a selection of photos as large as possible without any distractions. (This mode can also be turned on by pressing Shift-F (MacOS only).)

### Using Photo RAW to display slideshows

You can create on-the-fly, full-screen slideshows to display groups of photos inside Browse. Select a group of photos in the preview area, and choose Quick Slideshow from the Window menu. The slideshow will loop until you stop, by pressing the Esc key.

The Quick Slideshow submenu has options for the amount of time between slides and whether to display a fade transitions between slides or have no transition at all.



## FAST PREVIEW MODE

Sometimes, when you get back to your computer after a shoot, you want to be able to go through a large number of photos quickly, looking for your best shots. ON1 Photo RAW’s Fast Preview mode lets you do just that. Select Fast from the View menu’s Preview Quality option, and you can jump from photo to photo quickly with minimal lag between shots.

If you are more concerned about color accuracy than speedy previews, select Accurate from the Preview Quality option in the View menu. ON1 Photo RAW will generate a full-resolution preview of your photo, using the photo’s embedded color profile. This will take a few seconds, depending upon the size of the raw file you’re working with, but you will get a better sense of the actual color in the photo.

### Persistent Thumbnail Cache

When you go through a folder of photos, Browse caches thumbnails and preview images as well as extracted metadata. This will make it faster the second time you browse a folder. It also stores user-added or adjusted metadata such as ratings, labels, keywords, captions, rotation and GPS data, among others. You can adjust the size of the cache and the storage location of the cache in the System tab in Photo RAW’s Preferences window (see [page 279](#)).

## FOCUS AND CLIPPING VIEWS

When you're viewing photos with an eye toward selecting the best images in a group for editing, you generally want to look at issues with both exposure and sharpness. To help you with this, Photo RAW offers two viewing aids that are available in both the Browse and Edit modules: Clipping and Focus Mask overlays. In the Browse module, you can display these overlays in Detail, Filmstrip and Compare modes; in the Edit module, the overlays can be displayed in any of the tabs.

### Clipping

Clipping occurs when the shadow and highlight tones in an image are suddenly cut off to completely white or black, rather than fading smoothly. (Large expanses of white pixels in a photo are often referred to as 'blown' highlights, and can be distracting.) One of the benefits of shooting in raw format is that, while many photos will have areas of pure white or black when originally viewed on-screen, there is still recoverable data in the raw image. The Clipping overlay can help determine how big a problem you might have with a photo, and how easy (or difficult) it will be to fix.

To display the Clipping overlay temporarily, press the J key; to turn it on permanently, choose View > Show Clipping, or press Alt (Windows) or Option (Mac) J on your keyboard.

The Clipping view overlay displays areas that have either pure white or pure black in them. Areas with a blue overlay indicate pure black pixels, while the areas with a red overlay indicate pure white pixels.



*Clipping view displays pure white pixels with a red overlay, and pure black pixels with a blue overlay.*

### Focus Mask

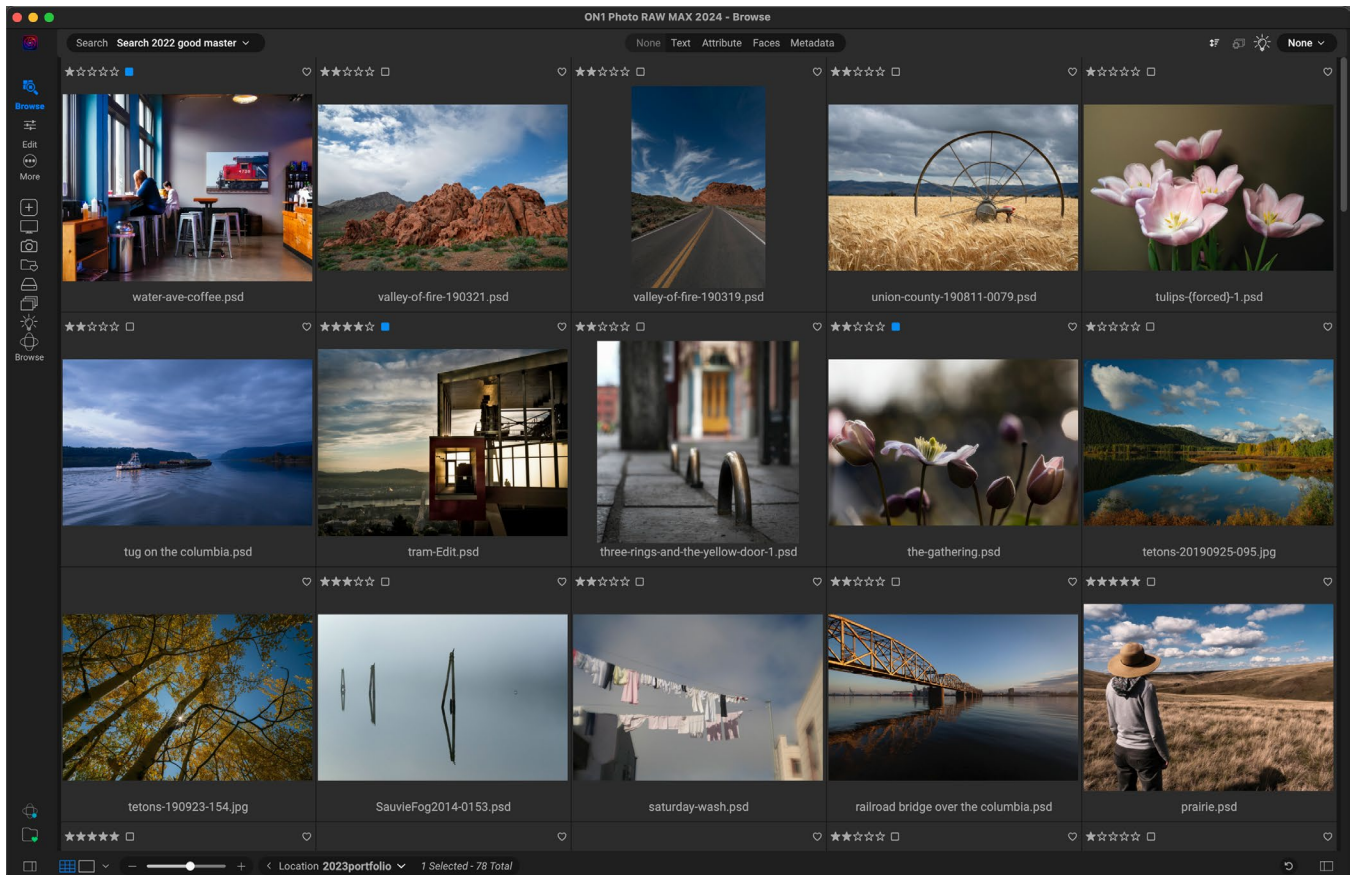
It can often be difficult to view the sharpness in a photo without zooming in to 100% or more, and if you have a lot of photos from a shoot, it can be a bit tedious to check focus at that level. Photo RAW's Focus Mask overlay can help winnow your shots down to the sharpest ones.

To turn on Focus Mask, choose View > Show Focus Mask, or press Shift-Alt/Option J. The sharpest areas in your image will be represented by a bright green overlay. As you move from photo to photo in a folder, you'll be able to tell whether you have an acceptable level of sharpness where you need it by the strength of the overlay. The mask will continue to be displayed even as you zoom in on a photo.



*The Focus Mask option displays areas of sharpness with a bright green overlay.*

## WORKING IN GRID VIEW



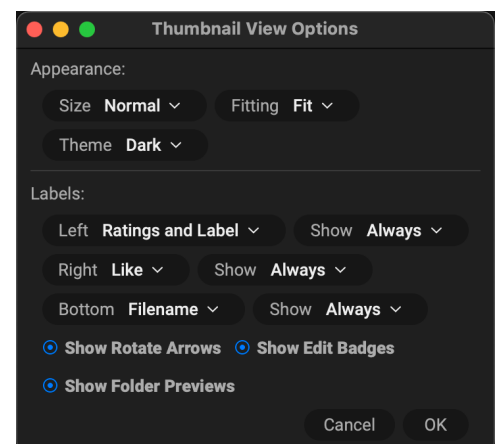
Grid view displays thumbnails of folders and images you have selected using the Folder or Albums panes. There are many operations you can perform from inside Grid view, including:

- Use the breadcrumbs to navigate (the '<' button goes up one folder).
- Select your image while in Grid view and open the photo in one of the editing tabs.
- Adjust thumbnail size using the on-screen slider or use “-/+” keys on your keyboard.
- Choose Show Subfolder Contents from the View menu when you want to view the contents of all subfolders (this only works when you are viewing cataloged folders).

### Changing the thumbnail display options

You can change the display characteristics of each thumbnail cell in Grid view, via the Thumbnail View Options command, which is in Browse’s View menu (and available when you right-click on any thumbnail in the grid). The Thumbnail View Options window has two sections, one for choosing the appearance of each thumbnail, the other for the information labels associated with each thumbnail.

In the Appearance section, the Size option sets the size of the top and bottom label text (Small or Large); the Fitting options let you set the image thumbnail so that all of the image is displayed





(Fit) or that it fills the frame of the thumbnail (Fill); and the Theme option lets you choose a Dark or Light appearance.

The Labels section lets you adjust the displayed data for the top (right and left sides) and the bottom labels in each thumbnail, and how each label is displayed—all the time, or only when you mouse over the thumbnail. You can also choose whether to display the rotation arrows and edit badges (which indicate that the image has been edited inside Photo RAW), as well as preview images for folders viewed inside Browse.

By default, the labels are set up to display the ratings and label information on the top left, the favorites state (like, empty, reject) on the top right, and the bottom displays the filename. You can however, set any of the three label locations to display any of more than 20 pieces of metadata, including filename, camera and lens information, exposure and ISO, capture date, ratings, image dimensions, and much more.

**NOTE:** Most of the available fields in the Thumbnail View Options are also visible in the Metadata panel. See [page 42](#) for more information.

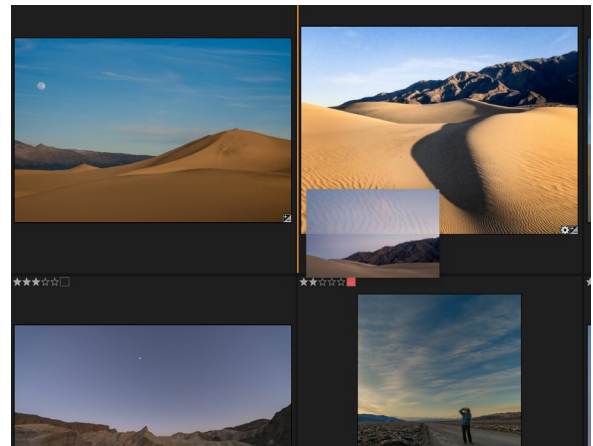
## Sorting photos in Grid view

When working in Grid view, you can sort the thumbnails in a number of different ways by choosing the Sort By pop-up at the top of the window. The sorting options include: date captured or modified; color label; file name, type, or size; and rating.

At the bottom of the Sort pop-up are settings for sorting the view in ascending or descending order. If you have a custom sort order, choosing these options will change the view in the opposite order.

You can also create a custom sort order by dragging thumbnails inside the grid window; click and drag the thumbnail so that the outline sits between two images.

Once you change the order of images this way, the Sort pop-up will change to Custom, and Photo RAW will remember the sort order for that folder until you change it. (Custom sorting also works—and the custom order remembered—when you're viewing albums.)

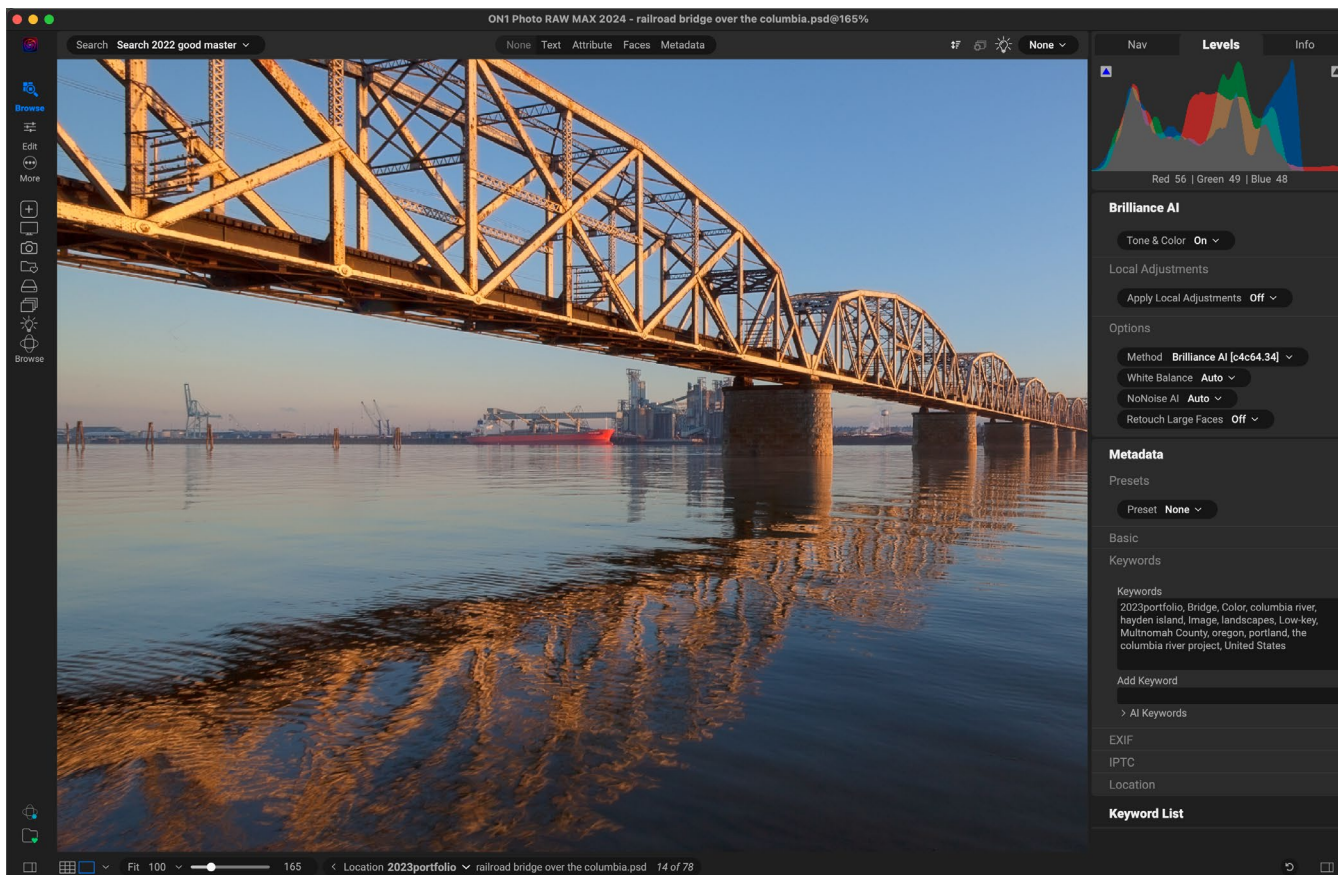


*To reorder a photo in Grid view, drag it between the two photos where you want it to be placed.*

## Metadata viewing in Grid view

When you have the Photo panel open on the right side of the screen in Grid view, Photo RAW will display the Info pane at the top, which includes summary information about the selected photo, and the Metadata and Keyword panes, which let you view, edit and adjust many of the metadata fields for the current photo. When you have multiple items selected, the panes will display the information for the primary item in the selection (represented with a heavier outline in the grid); adding keywords or other editable metadata (author, location data or descriptions, for example) will apply those items to the entire selection. See [page 41](#) for more on the Photo panel and its operation.

## WORKING IN PHOTO (DETAIL) VIEW



*In Detail view, you can zoom to 100% to check small details and sharpness in a photo, view its histogram, and even apply a preset, all without having to leave Browse.*

In Photo view—also known as Detail view—you get a full-screen version of your photo. When you go to this view, your images will be displayed in Fit mode, showing the entire image. You can click on the image to zoom in to 100%. This is useful for judging small details and sharpness. Single-clicking on a image that is magnified will return back to Fit mode. You can click and drag a magnified image to look around. Your zoom mode is maintained as you move from image to image so you can compare the same spot in several frames.

When you view an image in Photo view and have the right-hand Photo panel open (as shown above), the Levels, Navigator (Nav) and Info panes will be visible as tabs at the top of the panel on the right. Clicking on the label will display that tab's data. In the Navigator pane you can reposition the preview and change the magnification amount. The Levels pane displays a composite histogram of the image being displayed. You can also view and adjust the rating and flag labels for the current image, either via the keyboard or via the Info pane. (See [“The Photo Panel”](#) on page 41 for details on the Nav, Levels and Info panes.)

You can also apply Brilliance AI to a photo in Photo view (as well as in Filmstrip and Compare views), and you can add author, keyword, description and other information via the Metadata and Keyword List panes. Moving to the next image in the current folder is achieved by using the arrow keys on your keyboard.

## WORKING IN FILMSTRIP VIEW



Filmstrip view is similar to Detail view, but displays a strip of photos from the current folder (or album). You can easily move to another photo by using the right and left arrow keys, or by scrolling and clicking with your mouse.

Filmstrip view presents a large version of your current image in the preview area, displaying other photos from the current view in a strip of thumbnails at the bottom of the screen. The photos are sorted by the current sort order, which can be changed via the Sort pop-up above the strip.

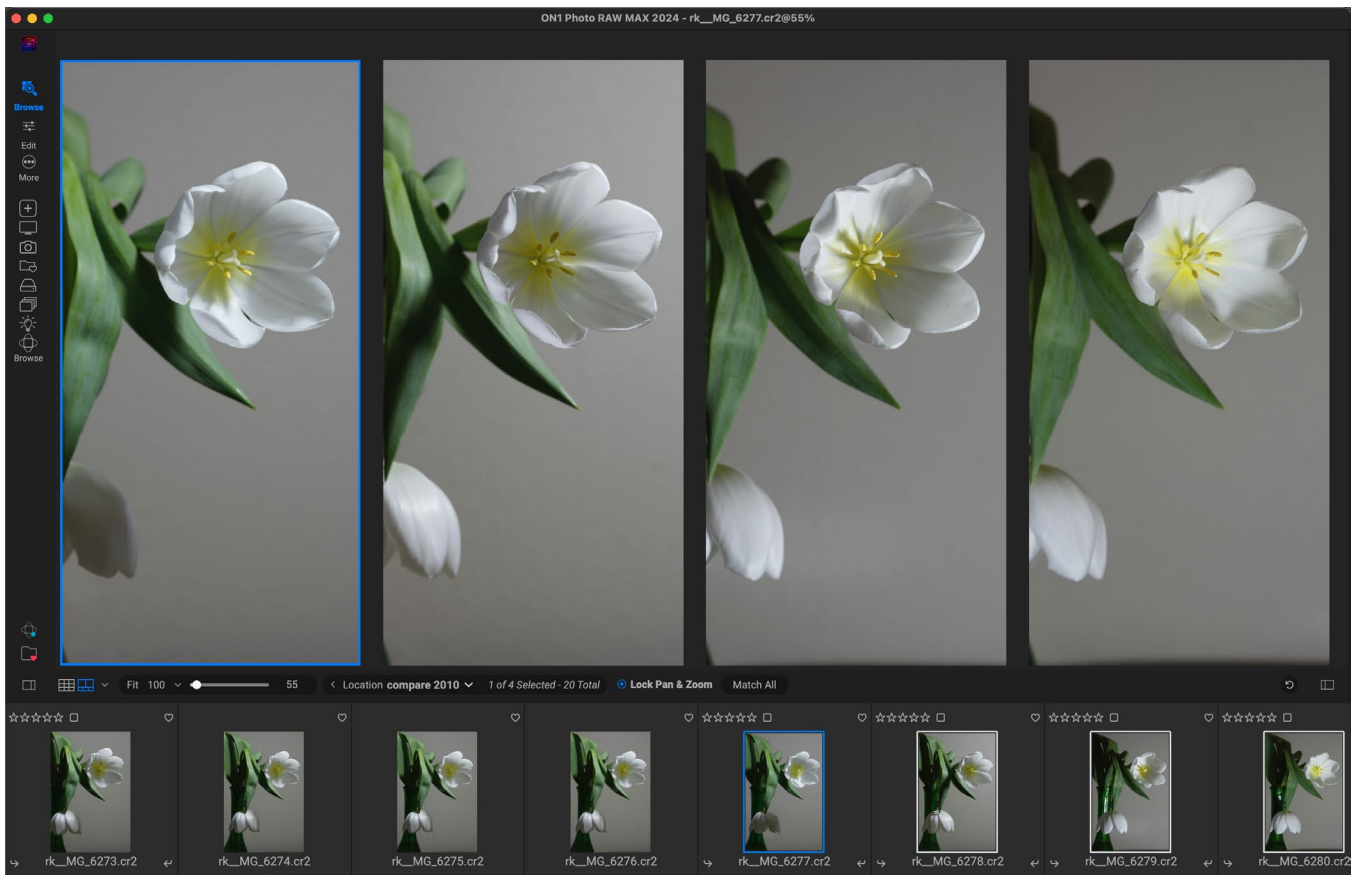
The current image is represented by a blue rectangle in the filmstrip, and you can use the arrow keys to move from photo to photo, or you can scroll with your mouse and click on a photo to display it in the preview. (You can also rate and flag images inside this view.)

When you view an image in Filmstrip view and have the right-hand Photo panel open (as shown above), the Levels, Navigator (Nav) and Info panes will be visible as tabs at the top of the panel on the right. Clicking on the label will display that tab's data. In the Navigator pane you can reposition the preview and change the magnification amount. The Levels pane displays a composite histogram of the image being displayed. You can also view and adjust the rating and flag labels for the current image, either via the keyboard or via the Info pane. (See [“The Photo Panel” on page 41](#) for details on the Nav, Levels and Info panes.)

**NOTE:** Filmstrip view is also available as a view in Photo RAW's Edit and Resize modules. In Edit, you can rate and flag photos, using the same keyboard shortcuts, and move from image to image for editing. In Resize, Filmstrip view lets you batch-process multiple images.



## WORKING IN COMPARE VIEW



Compare mode displays selected photos as panes inside the preview area. The photo highlighted with a blue box is the current selection. Clicking in that pane will zoom the photo; if the Lock pan/zoom box is checked (above the filmstrip), then all of the compared photos will zoom with it.

Compare mode is for those times when you shoot a sequence of photos of the same type of scene—a portrait session, a wedding, a landscape series, for example—and wish to narrow that group down to find your best ones. With Compare, you can select a group of photos, view them side-by-side to check composition, zoom in simultaneously to check focus, and rate your favorites and remove the rejects.

To use Compare mode, you can choose one of two methods:

- Select a group of images you wish to compare in either Grid or Filmstrip view. To select a group of contiguous photos (ones next to each other in order), simply click on the first one you wish to compare, then hold down the Shift key and click on the last photo. If you want to add noncontiguous photos, click on the first photo, then use the Command (Mac) or Control (Windows) key and click on each subsequent photo you wish to compare. When you have your selected photos, press the C key, or click on the Compare icon in the View Selector at the bottom left of the Browse window.
- You can also select photos directly in Compare mode: press the C key or click on the Compare icon in the View Selector at the bottom left of the Browse window. In the strip at the bottom of the window, you can select the photos in the same manner as the first option, by clicking on the first photo in a sequence, and Shift-clicking on the last, or by using the Command (Mac) or Control (Windows) key to select noncontiguous photos from a group.

When you enter Compare, you will see your selected photos in a grid in the Preview area, fit to show the entire photo. The currently selected photo will have a blue box around it, while the other items in the



selection will have a light gray box around them. You can switch the primary selection by using the arrow keys on your keyboard, or by clicking inside the pane you wish to make primary.

If you click once inside the current selection, the photo will zoom in to show greater detail; if you click and hold the mouse button down, you can pan across or down your photo, so you can check for things like detail, sharpness or facial expressions. (Clicking a second time inside the pane will reduce the photo to fit all of it in the pane.)

To see the detail across the group of selected photos, click on the Lock pan/zoom dot above the filmstrip. Now, when you click on an area inside the primary photo, all of the photos will zoom simultaneously to the same location of your click. And, if you click and drag inside the primary photo, all of the selected photos will pan along with the primary. To pan one photo—which can be useful if the field of view was different than the rest—click on that photo to make it the primary selection, then hold down the Shift key and click and drag inside that pane. If you do this and wish to get back to the original zoom position, click on the Sync button next to the Lock pan/zoom setting, and it will reset the zoom view to the same place in each compared photo.

Use the spacebar if at you want to zoom between fit and 100% on the selected photo in the grid. Toggling the spacebar between views does not “lock” and will not sync with other photos even if Lock is turned on.

If you wish to remove a photo from the group, select it (by clicking on it or by pressing the left or right arrow keys) and press the / (slash) key on your keyboard. The photo will be removed from the Compare window, and the remaining photos will resize to best fill the available space in the window. (You can also add additional photos to the Compare window by using the selection techniques mentioned above.)



*Zooming into a photo, and panning to the common areas of concern, you can easily determine which photo is sharp enough for your needs.*

When using Compare, you can rate or flag a photo, apply a preset and add other metadata. These functions will only be applied to the primary selected photo (outlined in blue). There are two exceptions:

- Using the Sync settings button on the far right side of the Browse window, underneath the Info pane. Clicking on that will sync all of the Edit settings between the primary selection and all of the items being compared.
- Using the Create Album or Add to Album commands from the Albums menu: this adds all of the currently selected photos to either the new album (when you check the Add Selected Items button) or to the chosen album. This feature can be helpful when you have a group of images that you would like to keep for a client or to further segment a series.

## WORKING IN MAP VIEW

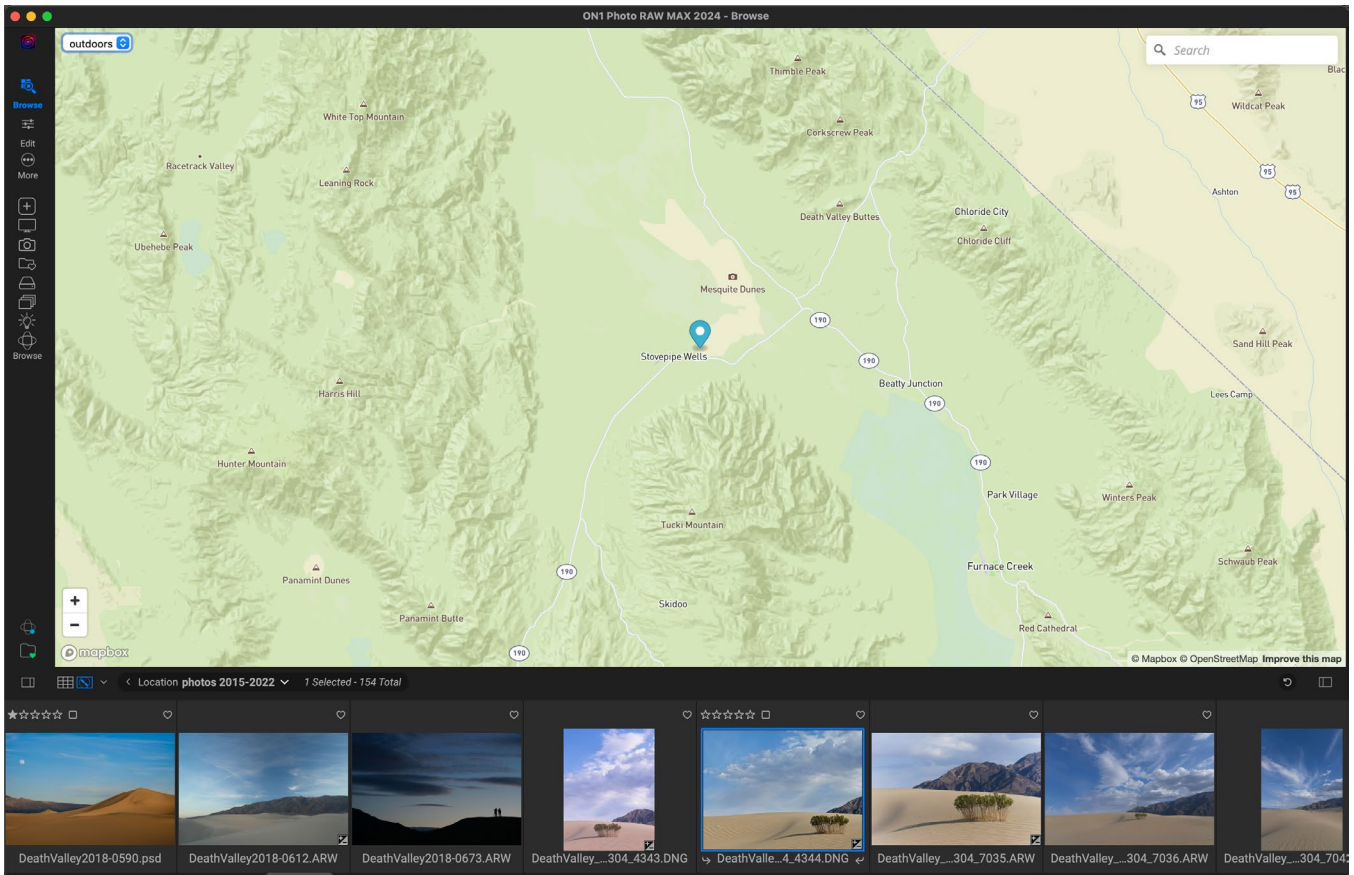
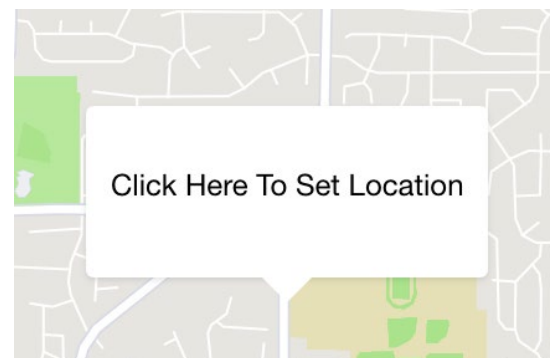


Photo RAW's Map view provides a simple mechanism to add GPS information to a photo, by searching for a place on a web-based map, or to view the location of a photo that already has location information embedded in its metadata. An internet connection is required to add or view map data.

The Map display has three controls: the buttons in the upper left corner of the map, to switch between Street, Satellite and Outdoors (topographic) views; a search area, which lets you look for a place (cities, counties, roads); and the controls on the lower left, which let you zoom in or out of the current map view. To move around the current view, click and drag inside the window. The filmstrip displays other photos in the current folder. To move between photos you can use the arrow keys, or you can use the mouse to select a new photo.

To view the location of any GPS-tagged photo on a map, select the photo and click on the Map view icon at the bottom of the main Browse window.

To add GPS data to a photo, select a photo or group of photos and click on the Map view icon at the bottom of the screen. There you can search for a location via the search bar. Once you have the desired area, right-click on the map to add a location for the photo (or photos) in that spot. If the position is correct, click inside the pop-up box to set the pin.

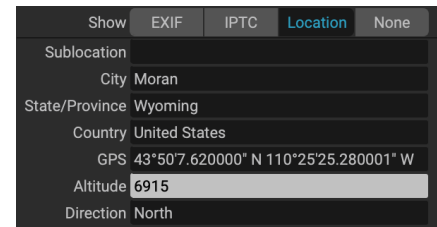


*Right-clicking on a spot on the map will generate this pop-up. To confirm the location, click in the box; otherwise, you can right-click elsewhere to choose a different location.*

If you would like to choose a different point instead, right-click in another location.

Once added, Photo RAW will enter that position in the GPS field of the Metadata panel.

Photo RAW can also look up standard location information — city, state, country — from the GPS coordinates in a photo, and populate that information in the Location tab of the Metadata pane (shown on the right). To do this, click on the photos you wish to update and choose Set Location from GPS Coordinates from the Photo menu. (See [“Metadata Pane” on page 42](#) for more information.)



## My Catalogs, Browse and Presets Panels

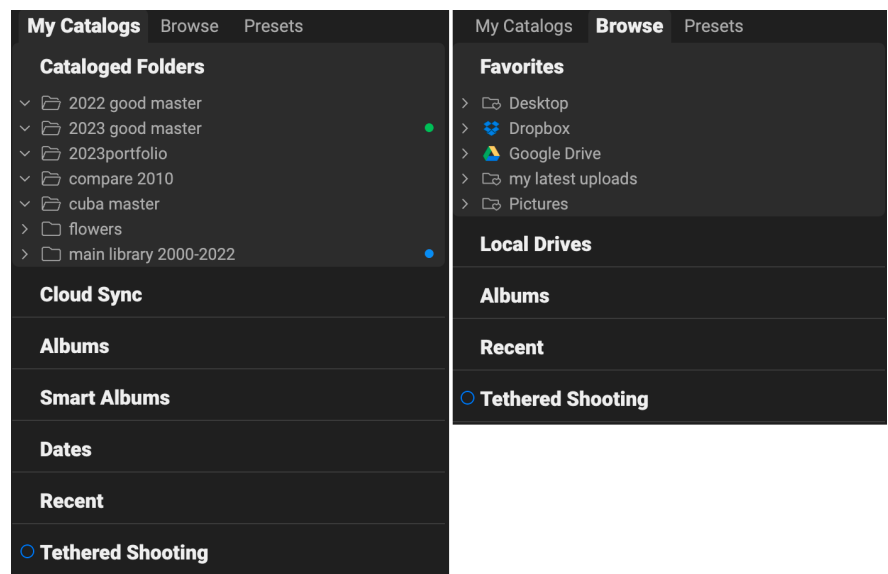
On the left side of the Browse window are three tabs, My Catalogs, Browse and Presets. My Catalogs and Browse are designed to let you organize and find your photos quickly and easily, while the Presets panel lets you apply Edit module presets to your photos directly in the Browse module. (See [“Applying Edit Module Presets in Browse” on page 66](#).) To move between the panels, click on the appropriate tab at the top of the panel. You can hide the left panel by clicking on the Show/Hide Panel icons at the bottom left and right sides of the panel. (Pressing the Tab key will show and hide both panels simultaneously.)

### DIFFERENCES BETWEEN MY CATALOGS AND BROWSE TABS

The top panes in the My Catalogs and Browse panels contain different views of your folders and other sources, most of which are designed to help you with file-related tasks.

The My Catalogs pane lists all of your cataloged folders and your registered ON1 Cloud Sync devices, as well as the Albums, Smart Albums, Dates, Recent, and Tethered Shooting panes.

The Browse panel includes a Favorites pane, which lets you add and access frequently visited folders; it also includes a configurable list of cloud storage services. The remainder of the panel includes Local Drives, Albums, Recent, and Tethered Shooting panes



*The My Catalogs view (above left) displays your cataloged folders and ON1 Cloud Sync devices you have registered, while the Browse view (above right) displays folders designated as Favorites (for quick access), attached local drives and any cloud storage services you have installed on your computer.*

**NOTE:** Earlier versions of ON1 Photo RAW combined the Cataloged Folders and Local Drives tabs into a single Browse panel. If you prefer that arrangement, check the Legacy Browse tab option in the General Preferences screen. (See [“General Settings” on page 272](#).)

## Navigating Sources

To view the contents of any folder in the Cataloged Folders or Local Drives panes, click on the folder name. This will display the photos and subfolders within the selected folder inside the Preview area. To view the contents of a subfolder, either click on the subfolder inside the Folders pane, or double-click on it in the Preview area. (You can use the breadcrumbs bar at the top of the Preview area to navigate back to the top of your folder system.)

**TIP:** Any pane in Photo RAW, in any module, can be collapsed by clicking anywhere in the pane's title bar.

## CATALOGED FOLDERS

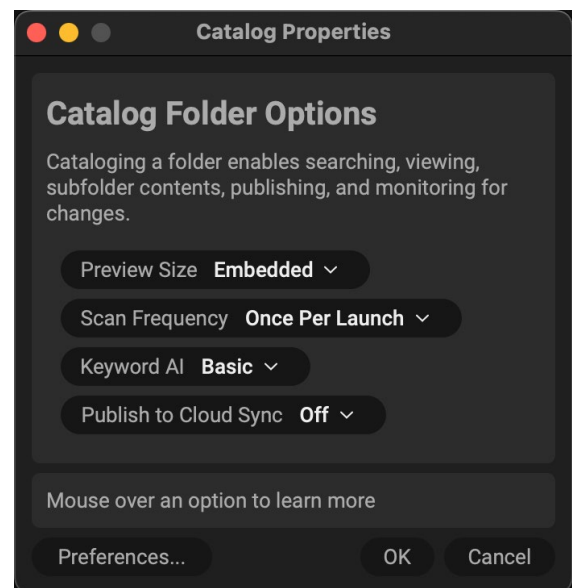
A cataloged folder is a shortcut for your favorite or most-used folders of photos. A folder designated as cataloged is cached in the background to improve the speed of loading those folders (and any subfolders) and their photos. Cataloged folders are ideal for portfolios, your favorite photos, or for your primary library of photos. Cataloged folders are necessary (with one exception) when using the Search Bar to search for photos across multiple folders (see [“Finding and Filtering Images with the Search Bar”](#) on page 56).

You can make any available folder a cataloged folder by clicking on the '+' button at the top of the Cataloged Folders pane; by right-clicking on a folder in the Preview area of the Browse panel and choosing Make Cataloged Folder from the pop-up menu; or by choosing Add Cataloged Folder from the File menu. The cataloging process is designed to work in the background, so it doesn't affect other work you do in any Photo RAW module. (You'll see a small progress indicator to the right of the folder as this process happens.)

When you catalog a folder, the Catalog Properties window will open, giving you will be prompted to choose the size of the previews that are generated during the cataloging process, and whether you wish to publish the folder to ON1 Cloud Sync. The three thumbnail options are:

- **Standard**, which extracts the image metadata and EXIF thumbnail and creates a high-quality thumbnail and a fit-screen-sized preview.
- **Medium**, which extracts metadata, EXIF thumbnail and creates a high-quality thumbnail.
- **Embedded**, which extracts metadata and the EXIF thumbnail only, using that until a high-quality preview is required.

For most purposes, you'll want to choose the default preview size, Standard. If, however, you are working with a system that has disk space restrictions, or have a network connection to your cataloged folder, choose either Medium or Minimal.



*The Catalog Properties window.*



Other options in the Catalog Properties window include:

- **Scan Frequency:** determines how often Photo RAW will scan the folder for new, changed or removed photos and folders within that cataloged folder.
- **Keyword AI:** sets the level of AI-keywording for that folder. (See [“Keyword AI” on page 44.](#))
- **Publish to Cloud Sync:** lets you select whether that folder’s contents get synced to the ON1 Cloud or not, and if published, whether you want the original or an editable proxy to be uploaded to the cloud. (See [“Using ON1 Cloud Sync with Photo RAW” on page 72.](#))

A cataloged folder that has been published to ON1 Cloud Sync will display the Cloud Sync icon next to the folder name.

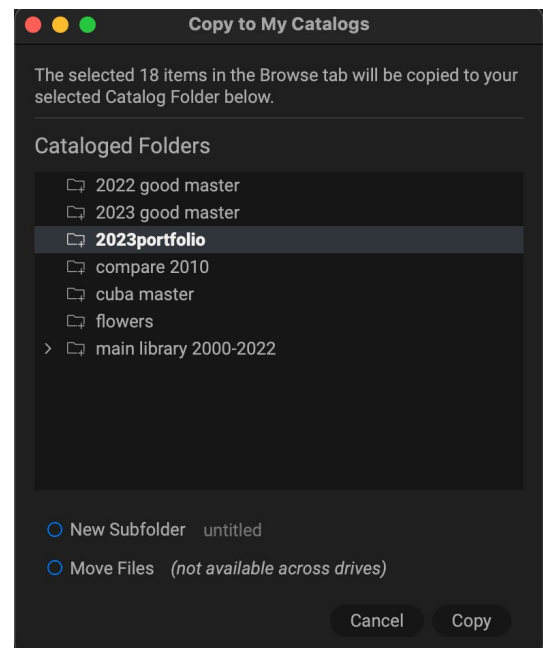
You can change the settings for each catalog folder by right-clicking on it in the Cataloged Folders pane and choosing Catalog Properties from the pop-up menu. To remove a cataloged folder, right-click on the folder in the pane and choose Remove Cataloged Folder. To unpublish it from ON1 Cloud Sync, right-click the folder and choose Unpublish from ON1 Cloud Sync.

## Adding photos to existing cataloged folders

You can add photos from any location inside Browse to an existing cataloged folder via the Copy to My Catalogs option. To use this feature, you must already have at least one cataloged folder. Then, when working in Browse, select the photo or photos you wish to add, and choose Copy to My Catalogs from the File menu, or via the folder icon (with a ‘+’ button) to the right of the search bar at the top of the Browse window. (You can also right-click on a photo and choose Copy to My Catalogs from the pop-up menu.)

Inside the Copy to My Catalogs dialog box, you can choose which cataloged folder you wish to copy the photos, can add them to a new subfolder, and choose whether to move the photos or copy them. If you are copying to a folder that has been published with ON1 Cloud Sync, those photos will automatically be synced to the cloud.

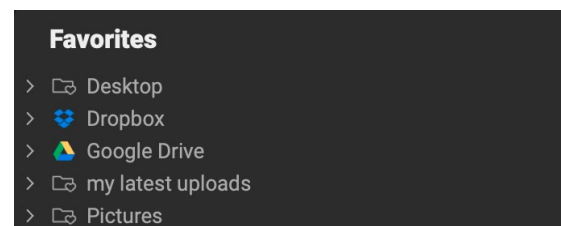
Moving the files is only available when you are moving the photos to a new location on the same drive; otherwise, a copy of the file is made in the new location.



The Copy to My Catalogs dialog box lets you copy or move selected photos into your existing cataloged folders.

## FAVORITES

Photo RAW’s cataloged folder feature is useful for keeping your primary photo library organized, but there might be times when you have a group of folders that you frequently access, but that you do not wish to have cataloged. (One common instance might be a folder where you export temporary images for social media or other uses.) In these cases, the Favorite folders option can be



The Favorites pane lets you add frequently accessed folders that might be used for temporary or other applications.

helpful. Any folder you designate as a favorite will appear in this area, along with cloud-based storage services like Google Drive, Dropbox and OneDrive.

To add a folder to the Favorites pane, you can click the '+' button in the Favorites pane. You'll get your system's file/folder selection window. Navigate to the folder you wish to add, then click Open. Alternatively, you can navigate to your chosen folder in Browse and drag the folder onto the '+' icon in the pane, or right-click on the folder and choose Add to Favorites from the pop-up menu.

## Cloud storage services

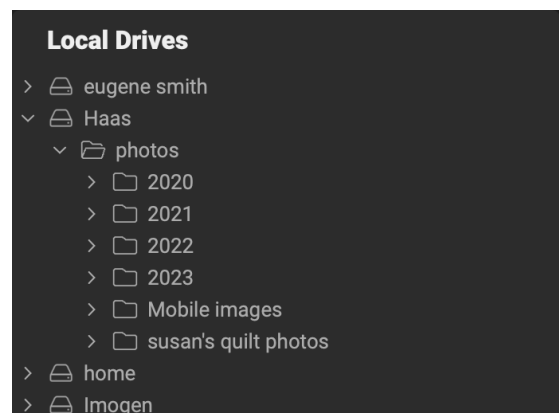
Browse supports cloud storage services from Dropbox, Google Drive, and Microsoft OneDrive. These services—when installed on your computer and other devices—keep local copies of your images on your computer, and Browse can find and monitor these locations automatically.

During the installation process, ON1 Photo RAW 2024 automatically looks for the default installation locations for these services. If you do not have one of these services installed, and wish to remove it, right-click on the service name in the Favorites pane and choose Remove from Favorites from the pop-up menu. If you add one of these services after installing Photo RAW, click the '+' button at the top of the pane, and locate the folder via your computer's file-selection window.

## LOCAL DRIVES

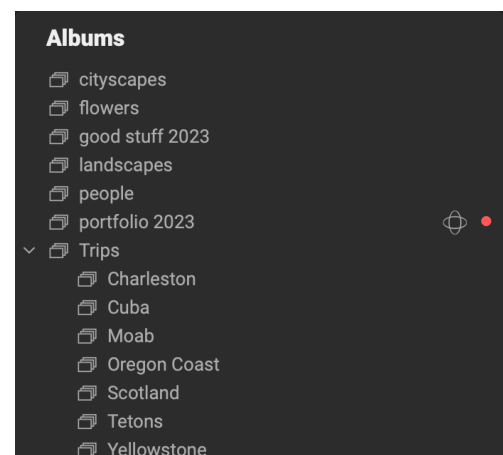
Browse automatically recognizes any disk (volume) inside or attached to your computer. This includes internal and external hard drives, optical drives, thumb drives, digital camera memory cards, digital cameras, any devices that support USB Mass Storage, and network-attached services (including mapped volumes on Windows).

Disks appear in the Local Drives pane below the Favorites section, with a hard drive icon next to them. Keep in mind that some disks, like optical drives, are often read-only. You will be able to view a copy of a photo, but will be prompted to save the image to a new location if you wish to edit it.



## ALBUMS PANE

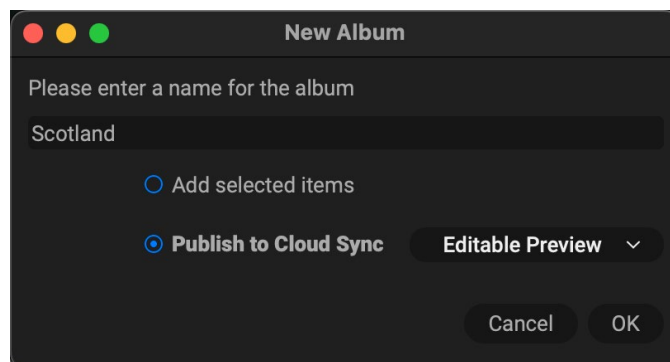
ON1 Photo RAW 2024's Albums feature lets you organize or keep track of photos on a project, event or even a broader category like a portfolio. Albums are created by selecting images manually and adding them to a new (or existing album) by dragging and dropping photos onto the pane. You can nest albums together to help manage your collections, and all albums created can be published to ON1 Cloud Sync, which are indicated by the Cloud Sync icon to the right of the album name. (Any albums created on other ON1 Cloud Sync devices will be displayed in the Albums pane on all of your connected computers.)



## Creating an album

Click the '+' icon in the pane and choose Create Album... from the pop-up menu. You can also create an album by selecting photos and dragging them onto the '+' icon in the Albums pane.

The New Album dialog box gives you options for adding an album name, and whether you wish to add the selected photos to the new album. If you would like to publish the album to the ON1 Cloud, click the box and choose either Editable Preview or Originals from the pop-up menu. Which option you choose will depend upon your intent, and your storage availability. See [page 72](#) for more information about Cloud Sync.



## Adding photos to an existing album

There are multiple ways to add photos:

- Dragging and dropping a photo on the album name.
- Selecting a photo or group of photos, right-clicking on the photo and choosing Add to Album from the pop-up menu.
- Choosing Album > Add to Album and picking the destination album from the menu.
- You can also copy a photo and paste it into an album: click on a photo, choose Edit > Copy, then click on the album in the Albums pane, and choose Edit > Paste.

## Removing photos from an album

To remove a photo (or photos) from an album, select them in the album, then choose Remove from Album from the Album menu, or right-click on the photo and choose Remove from Album from the pop-up menu. (You can also select a photo and press Shift-Delete.)

## Delete an album

To delete an album, right-click on the album name and choose Delete.

## Publishing and unpublishing an album from ON1 Cloud Sync

You can publish any existing album to ON1 Cloud Sync by right-clicking on the album name and choosing Publish to ON1 Cloud Sync. Right-clicking and choosing Unpublish from ON1 Cloud Sync will remove that album from your synced devices, but leave it on the device from which it was originally shared.

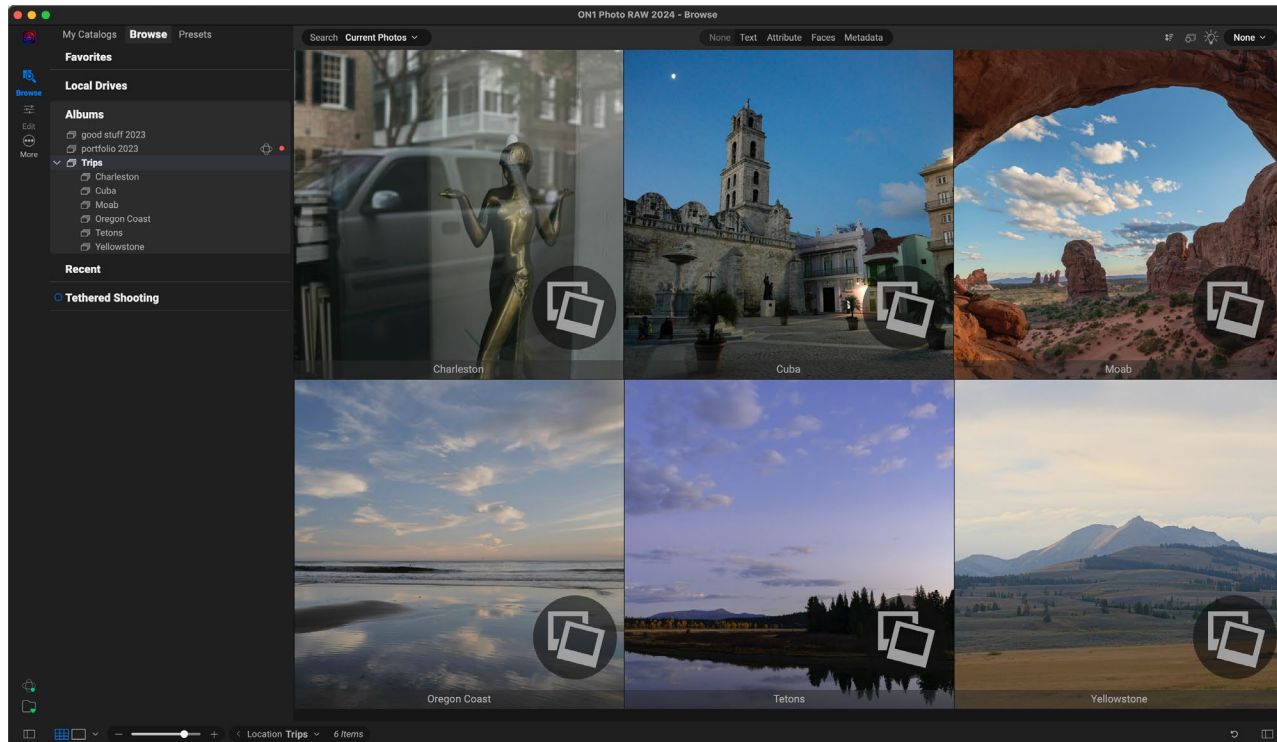
**NOTE:** ON1 Cloud Sync albums can only be unpublished from the device that they were created on, but you can delete any published album from any ON1 Cloud Sync device. Doing this will remove that album from all of your devices. See [“Using ON1 Cloud Sync with Photo RAW” on page 72](#) for more detail.

## Changing the album thumbnail preview

To change the preview thumbnail of an album, double-click on the album name. Select a photo you would like to use for the preview, right-click on it and choose Set Album Preview from the pop-up menu.

## Nesting albums

To create a set of nested albums, create a blank album by clicking on the + icon in the Albums pane. You can easily add sub-albums to that new master album set by dragging and dropping albums onto the new one in the Albums pane. When you click on the master album, Browse will display the albums that are part of that collection in a folder-style view. Double-clicking on an album icon will display the contents of that album. To view all the images in a nested set, choose Show Subfolder Contents from the View menu.



*When you click on a nested album set, Browse displays the sub-albums. Double-clicking on a sub-album will open that album. If you wish to view all of the images in a nested album set, click the Show Subfolder Contents button from the View menu.*

To move a sub-album from a master album to the top Albums level, drag and drop it out of the master, or right-click on the sub-album name and choose Move to Top.

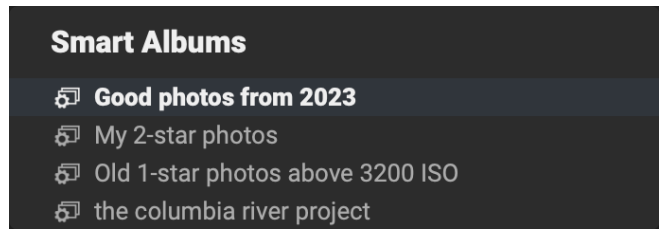
If you drag an album onto an existing album that already contains images, you will see the top-level album's images at the root level, along with any sub-albums.

**NOTE:** Nested albums cannot be used with ON1 Cloud Sync. If you move a synced album into a nested album folder, Photo RAW will remove that album from the ON1 cloud.



## SMART ALBUMS

Smart albums are a dynamic album type that created from the results of a custom search operation built with the Search Bar (see [“Finding and Filtering Images with the Search Bar” on page 56](#)). When you use the Search Bar to create a filtered set of photos in your collection, such as “all photos that have been rated three stars or greater after June 2018,” you can save that search as a smart album, and, when you click on the album, Photo RAW will perform that search in real time.



You can apply a color label, rename or delete smart albums by right-clicking on the album name. If you wish to change the smart album criteria, select it, then use the Search Bar to reset your search options, and choose Update Smart Album with the current settings from the pop-up menu on the far right of the Search bar.

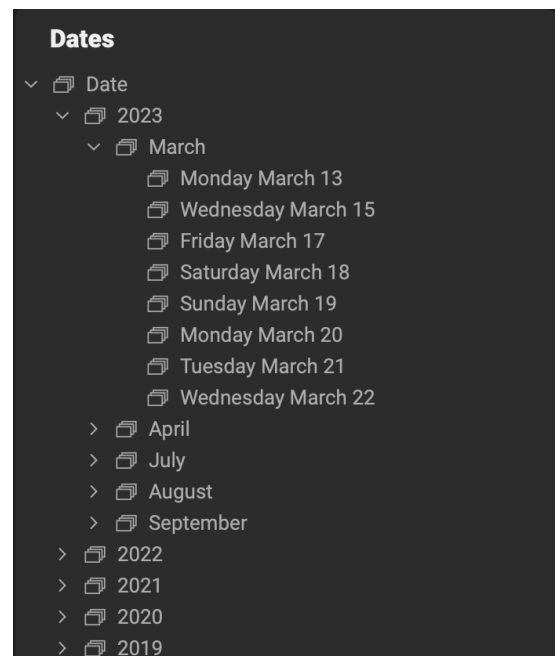
**NOTE:** Nested albums and smart albums cannot be published to Cloud Sync.

## DATES PANE

Photo RAW's Dates pane offers a quick way to look for cataloged images based on when they were taken. Using a simple timeline interface, you can drill down into your photo library by year, month and day. It makes searching for birthday and holiday photos a snap.

Opening the Dates pane, you'll see a list of years, with the current year at the top (only years that have photos taken during them will be present in the list). Clicking on a year will show you all of the photos taken during that year. Clicking on the triangle to the left of the year will display a list of all the months that have photos in them, and you can keep drilling down to the day level. Drilling down to any level in the pane—year, month, day—will show all photos taken during that period.

The Dates pane works only with cataloged folders.



# TETHERED SHOOTING

The Tethered Shooting pane lets you remotely control many Nikon and Canon cameras connected to your computer via USB, and capture images from the camera to your computer. Tethered shooting is used for shooting and saving images in a studio setting, displaying your images immediately on your computer’s display. It is an excellent way to make adjustments to lighting and composition in the studio.

To get started with tethered shooting, connect your camera to your computer with the appropriate USB cable (your camera’s manual should have information on the cable required, if the camera didn’t come with one). Turn the camera on, then, in the Tethered Shooting pane, turn the pane on by clicking the button to the left of the pane’s name.

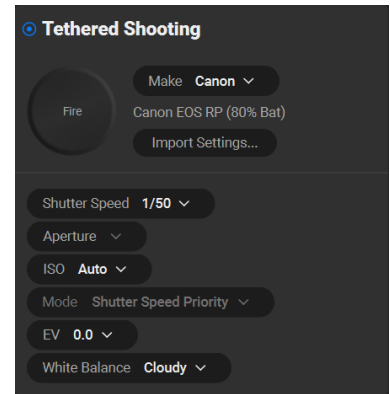
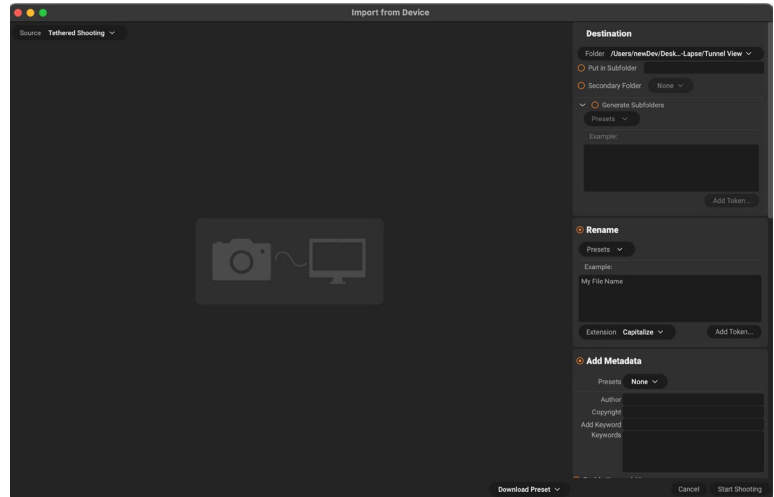


Photo RAW will search for a connected camera and, if found, it will open Photo RAW’s Import window. In the panel on the right side of that window, you can choose a number of options for saving your tethered shots, including file name and location, metadata, any Develop or Effects settings, and time adjustments. (See [“Importing Photos into Browse” on page 51](#) for an explanation of panes in the Import window.)

Once you have chosen your tethered import settings, click the Start Shooting button at the bottom right of the Import window, which will close the window. The Tethered Shooting pane will now have the model of your camera selected, with the current shot settings in the table at the bottom of the pane. The settings are, from left to right and top to bottom, shutter speed, aperture, ISO, camera shooting mode (Manual, Aperture/Shutter Priority), exposure compensation, and white balance. Any setting that has a drop-down will let you change that setting.



Clicking the Fire button in the pane will take a shot with the current camera settings, and will save it to the location you chose in the Import Settings window. If you’re in Grid View, the image will appear at the beginning of the end of the thumbnail grid, depending upon how your sort order is set up. If you’re in Detail or Filmstrip view, the tethered image will appear in the Preview area.

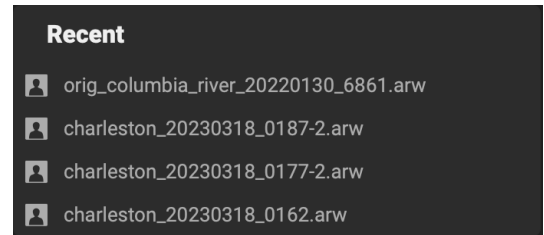
When you are finished with a shoot, turn the Tethered Shooting pane off by clicking the button next to the pane’s title, turn your camera off, and disconnect it from your computer.

**NOTE:** ON1 Photo RAW 2024’s Tethered Shooting feature currently supports most Canon and Nikon digital SLR cameras. Check ON1’s support website ([on1help.zendesk.com](http://on1help.zendesk.com)) for a list of supported cameras.

## RECENT

The Recent pane keeps track of recently opened files browsed folders. Files are listed in order of last opened. You can access your most recent files in this pane by clicking on the one you want and it will appear in the preview window.

You can clear the list by pressing the 'x' icon in the title bar.



**NOTE:** You can show or hide most of the panes in the My Catalogs, Browse and Presets tabs. See for [“Customizing the display and order of Tabs and Panes” on page 15](#) for details.

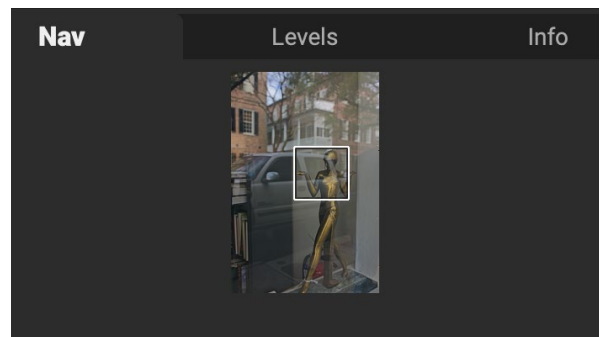
## The Photo Panel

The panel on the right side of the screen contains information relative to the currently selected image in the Preview area, and includes three sections: Nav, Levels, and Info.

### THE NAVIGATOR PANE (DETAIL AND FILMSTRIP VIEWS ONLY)

This pane presents a thumbnail view of the current image. The white square region marks the image area that is visible in the preview pane. You can pan your image by clicking and dragging inside the square.

At the bottom of the Navigator pane are several zoom buttons representing percentage zoom views (100%, 50% and 25%). Click on one of the buttons to change the view. Fit zooms to fit the current canvas size, while 100 zooms to 100%, displaying the actual pixels.

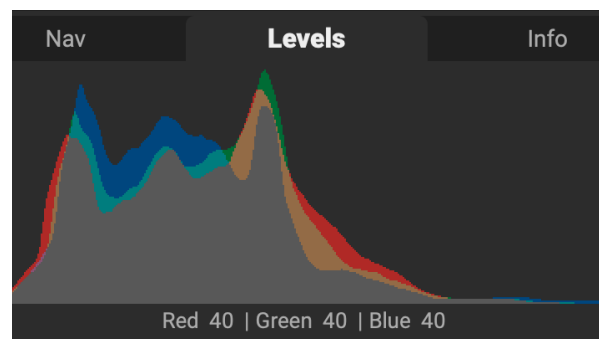


*The Navigator pane*

### THE LEVELS PANE (DETAIL AND FILMSTRIP VIEWS ONLY)

This pane gives you a color chart of the shadow, midtone and highlight areas based on an image's RGB values (commonly known as a histogram). This is useful to show areas within the image that may be clipping. Clipping is when your image contains pure blacks or white and can signify loss of highlight or shadow detail.

The left side of the histogram represents the shadows, while the right represents the highlights. At the top of each end is a triangle. If the triangle is lit, there is clipping on that side of the histogram. If you click on



*The Levels pane*

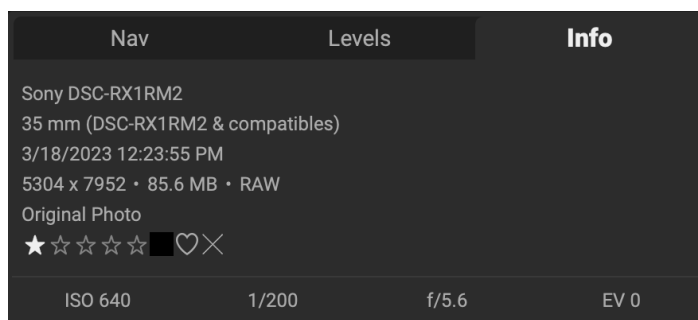
the arrows, you will activate the clipping overlay on your image, which displays the areas that are clipped. Those areas with a blue overlay are pure black, while the areas with the red overlay are pure white. You can turn the clipping view off again by clicking on one of the triangles. You can also temporarily enable clipping view by holding down the J key at any time. (Clipping can be turned on or off permanently by pressing Alt (Windows) or Option (Mac) and the J key.) The clipping view is useful when you are making adjustments to the brightness and contrast of your image.

The Levels pane also displays the RGB values under the cursor at the bottom of the pane.

## INFO PANE (ALL VIEWS)

The Info pane displays common metadata and other information for the currently selected image in a large, easy-to-read format. This metadata includes:

- Camera make and model
- Lens focal length
- Capture date and time
- File type
- ISO
- Shutter speed
- Aperture
- Exposure compensation
- Image dimensions
- File size
- Rating, color label and like status



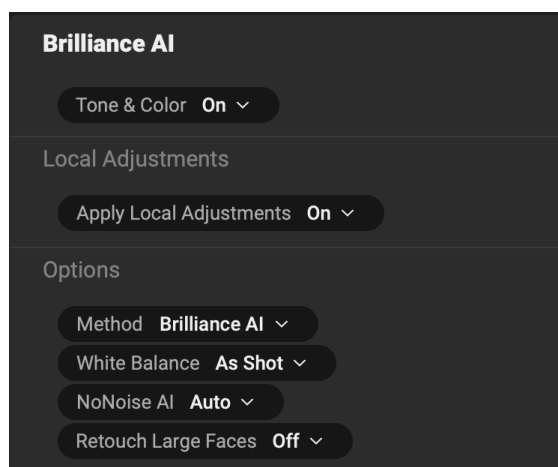
If any of the metadata fields are unavailable they will be left blank. You can also adjust the star rating, color label and flag for the current photo directly from within the Info pane.

**NOTE:** The Settings Applied option found in the Info pane in previous versions of Photo RAW is now displayed in the Layers pane inside Edit (see [page 201](#)).

## BRILLIANCE AI PANE (BROWSE)

The Brilliance AI pane lets you apply the Edit module's Brilliance AI to your photos. Brilliance AI provides intelligent color and tone adjustments, automated application of NoNoise AI and Portrait AI, and automatic local adjustments.

To apply Brilliance AI, select a photo or group of photos and click the control circle to the left of the pane's title and adjust the parameters as desired. You can apply Brilliance AI to individual photos, groups of photos,



or even folders of photos, adjusting the parameters for each type of image you have. Any Brilliance AI operations performed in Browse will be displayed in the Edit module, where you can further fine-tune your edits.

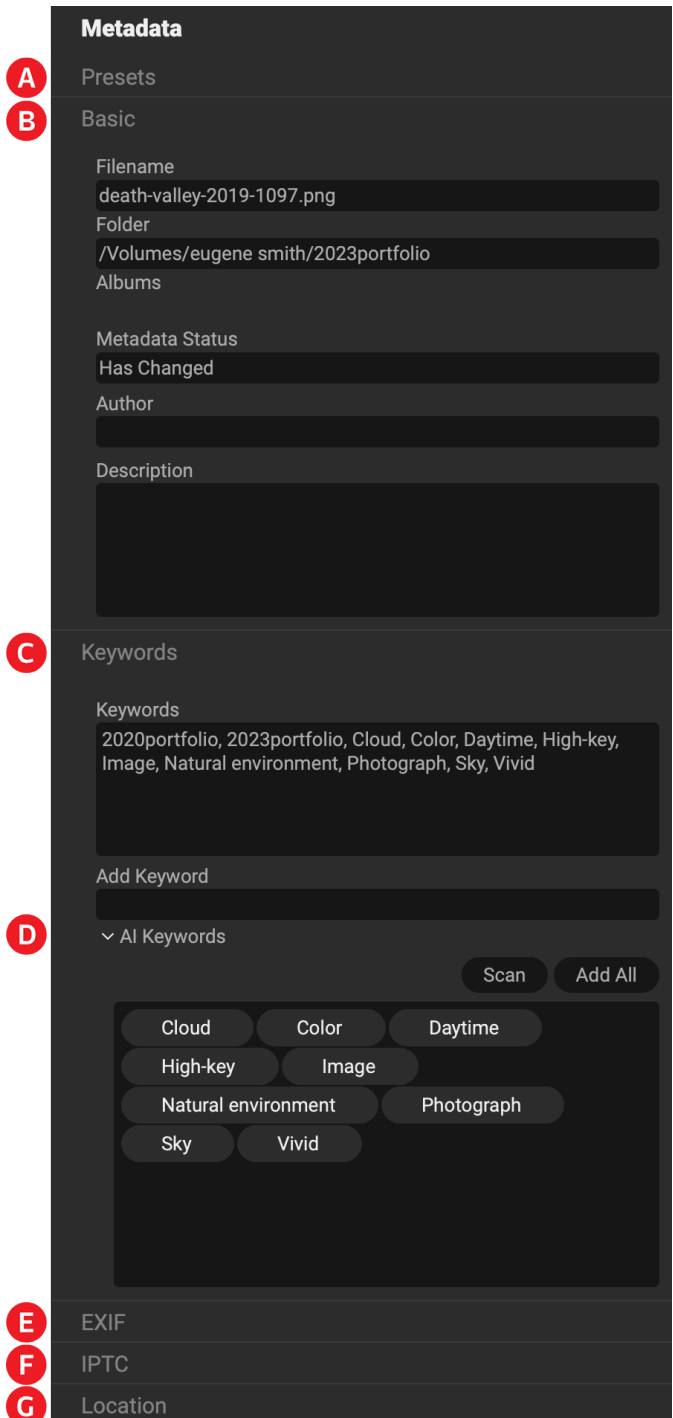
Brilliance AI is discussed in detail starting on [page 136](#).

## METADATA PANE

The Metadata pane displays all of the available metadata information about a photo in one place. Some of this is embedded metadata from your camera, while other elements can be added manually, or, with the Keyword AI feature, you can have Photo RAW 2024 scan your photos and suggest keywords based on their contents, making it easy to find photos based on a wide variety of data types.

The Metadata pane consists of the following sections:

- A. **Preset:** Lets you apply a saved metadata preset (see [page 48](#)) to your image, which can include any changeable metadata found throughout the pane.
- B. **Basic:** Includes location and name of the selected photo, and any albums the photo might reside in. You can enter author information and a description. (The Author field is tied to the IPTC Creator field.)
- C. **Keyword section:** Add keywords manually and modify existing keywords.
- D. **AI Keywords:** Automatically generated keywords based on image data and AI semantics.
- E. **EXIF:** When the label is clicked, the pane displays EXIF information for the current photo (see [page 22](#)).
- F. **IPTC:** When the label is clicked, the pane displays IPTC information for the current photo (see [page 22](#)).
- G. **Location:** When clicked, the pane displays location data for the current photo.



## KEYWORD AI

Photo RAW 2024's Keyword AI feature is designed to take the pain out of creating keywords manually for each of your photos. By scanning your photos and suggesting keywords based on the contents of a photo, location information, and much more, you can find images quickly, even if you have never entered any keywords on your photos. Photo RAW can 'see' hundreds of objects and regions, identify locations, find people, and understand photographic properties, all of which then become searchable terms to help find photos faster.

You have full control over the keywording process inside Photo RAW. You can generate keywords manually on any or all photos, or automatically when using cataloged folders. If you work with other photo apps and want your AI-generated keywords to be embedded into a photo's metadata, Photo RAW gives you both automated and manual options to perform this task.

### Manual keyword generation

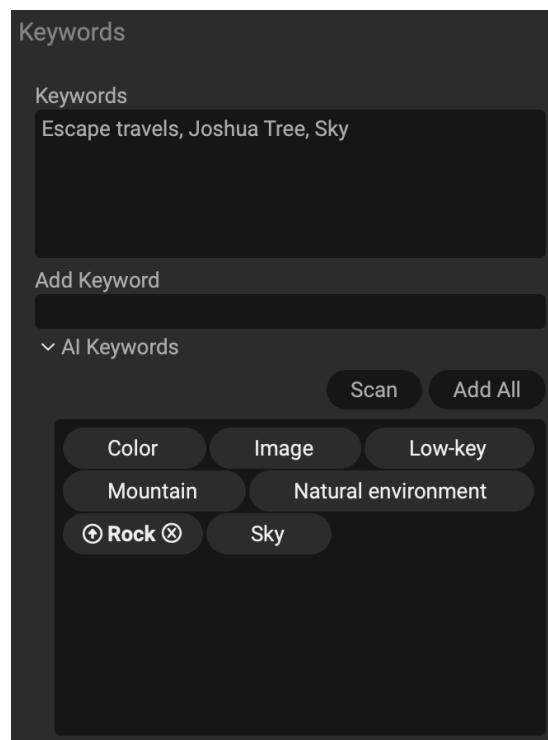
You perform AI keyword generation manually by selecting a photo, a group of photos, or a folder in Browse, and then clicking the Scan button in the AI Keywords section of the Metadata pane. (You can also right-click on a photo, selected group, or a folder and choose Scan from the pop-up menu.)

When you click the Scan button, Photo RAW will generate the keywords and display them in the AI Keywords section. You can keep the generated keywords in the section, or add specific AI keywords to the main Keywords area by hovering over the keyword and clicking the Up arrow to add it. To remove a specific keyword, click on the 'x' button. To add all AI keywords, click the Add All button.

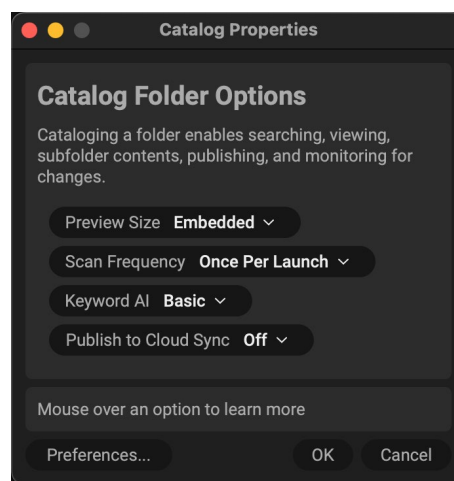
### Automated keyword generation with cataloged folders

Automated keywording of photos is available when working with cataloged folders. When you create a cataloged folder, the Catalog Properties window lets you set whether the photos on that folder will be automatically scanned or not. There are three options in the Keyword AI menu of the Properties window:

- **Off:** Photo RAW will not scan the folder for keywords.
- **Basic:** Photo RAW will perform basic keyword scanning, including the folder name, photographic properties, primary areas in a photo, and some subject-based object detection (people, animals, cars, etc.).
- **Honor Preferences:** When scanning, Photo RAW will use the full settings specified in the Keyword AI preferences tab (see [page 45](#)).



Once a photo has been scanned by Keyword AI, you can manually add the appropriate AI-generated keywords to the main Keywords section of the Metadata pane. You can also have Photo RAW automatically embed the keywords so that they are visible to other photo apps (see [page 45](#)).



When you create a cataloged folder, you can set Photo RAW to run Keyword AI automatically.

By default, the photos in all of your all of your cataloged folders are scanned at a Basic level. And, once you have set a cataloged folder to generate AI keywords, any photos added to that folder will be automatically keyworded, depending upon the setting of the Scan Frequency in Catalog Folder Options window (see [page 34](#) for complete details on working with cataloged folders).

**NOTE:** ON1 Photo RAW 2024 performs nearly all of its Keyword AI scanning entirely on your computer; the exception is when it performs reverse lookup of GPS coordinates for location information. At no point are your photos uploaded to the cloud or shared by Keyword AI.

## Embedding AI keywords

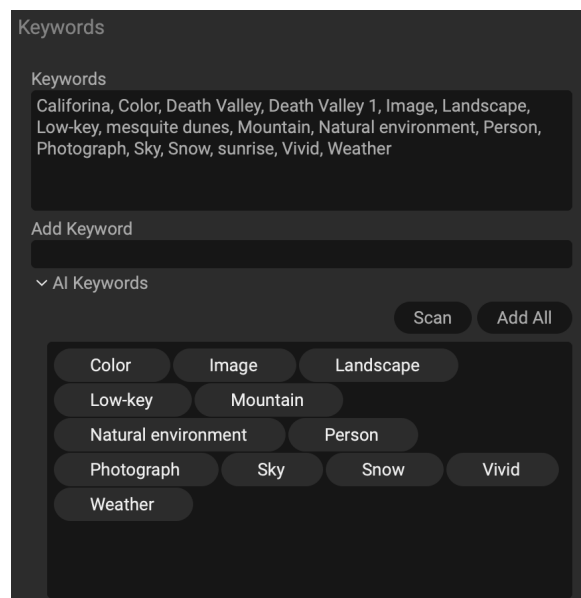
By default, Photo RAW does not automatically embed AI keywords into the metadata associated with a photo. All AI-generated keywords – whether generated automatically or manually – are displayed in the AI Keywords section of the Metadata pane, and they are associated with that image inside Photo RAW. And, when searching for any text in Browse’s Search Bar (see [page 56](#)), Photo RAW will also search the AI Keywords section of the pane.

If you would like to make sure that a photo’s keywords are associated with it outside of Photo RAW, you must ‘embed’ the keywords into the photo’s metadata. You can do this manually by selecting a photo (or group of photos) and choosing Embed Metadata from the Photo menu in Browse. Doing this will keep all keywords of any type embedded in the photo, and they will be visible in any other app that properly reads metadata, such as Lightroom, Capture One, Affinity Photo and more.

To automatically embed the AI keywords into the metadata of your photos, there are two options, depending upon the file type:

- **For Raw files**, turning the “Write Keyword AI Results to XMP” option on in Photo RAW’s Preferences > Keyword AI tab will automatically add all AI-generated keywords to the Keywords section in the Metadata pane, and will write those keywords to an XMP sidecar file in the photo’s directory. That sidecar file can be read by most popular image editors and cataloging apps and preserves keywords, ratings, and other metadata associated with a photo.
- **For non-Raw files**, turning on the “Automatically Embed Metadata” option in Browse’s Photo menu will embed AI keywords in all photos as they are scanned.

Turning off the “Write Keyword AI Results to XMP” or the “Automatically Embed Metadata” settings will only affect AI keyword scanning from that point forward. The metadata for any previously scanned photos or folders – including the addition of AI keywords – will remain intact.

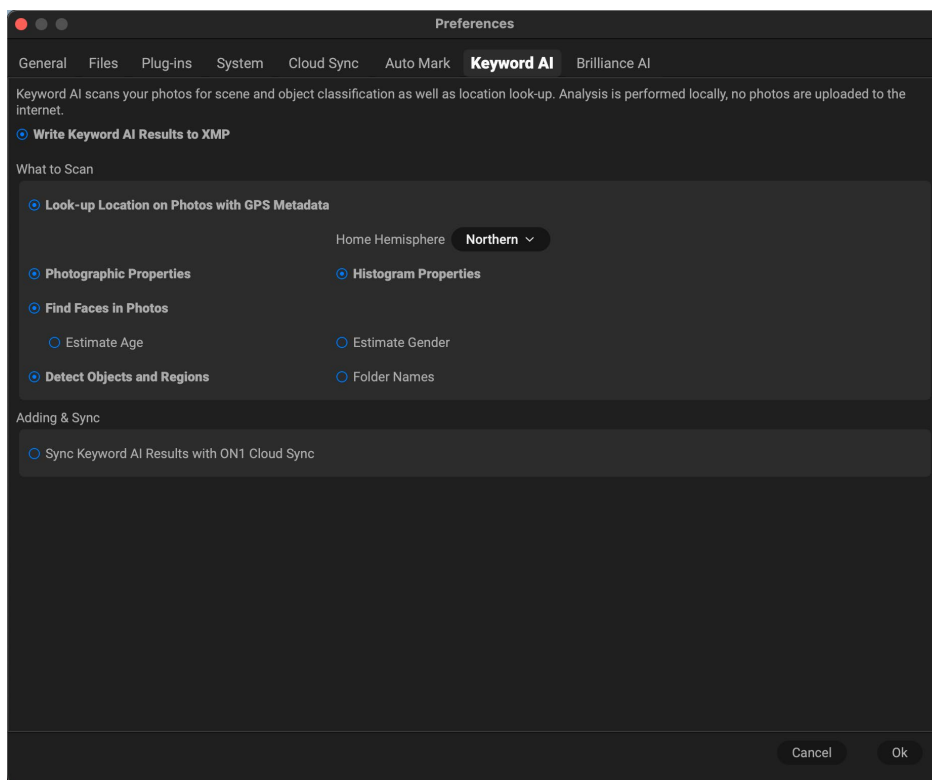


*Turning the Write Keyword AI Results to XMP setting on in Preferences will automatically copy all of the AI-generated keywords to the Metadata pane’s Keywords section, and those keywords will get written to the XMP sidecar file associated with that photo.*



## Fine-tuning Keyword AI search parameters

You have a few options for fine-tuning the specifics of what Photo RAW searches for when creating AI-generated keywords; these options can be set in the Keyword AI tab of the Preferences window. There, you can choose what type of data you want to include when Photo RAW is scanning your cataloged folders. These options include location data, photographic properties, histogram properties, face, age and gender information, and specific objects and regions. When you make changes to the Keyword AI tab, you'll need to restart Photo RAW for them to take effect. Note that changing these options will not change the AI keywords that have already been generated.



*You can adjust the Keyword AI scan parameters via Photo RAW's Preferences window. You can also turn the automatic keyword scan off, if you prefer, although you can always manually scan for AI keywords from the Metadata pane's Scan button.*

## Reading AI keywords into other apps from Photo RAW

Most of the popular photo editing and organizational apps have a mechanism for reading and writing metadata to files. When importing photos tagged with Keyword AI into Lightroom or Capture One, for example, those apps will recognize keywords (and other metadata) you have added in Photo RAW and save them within their catalog structure.

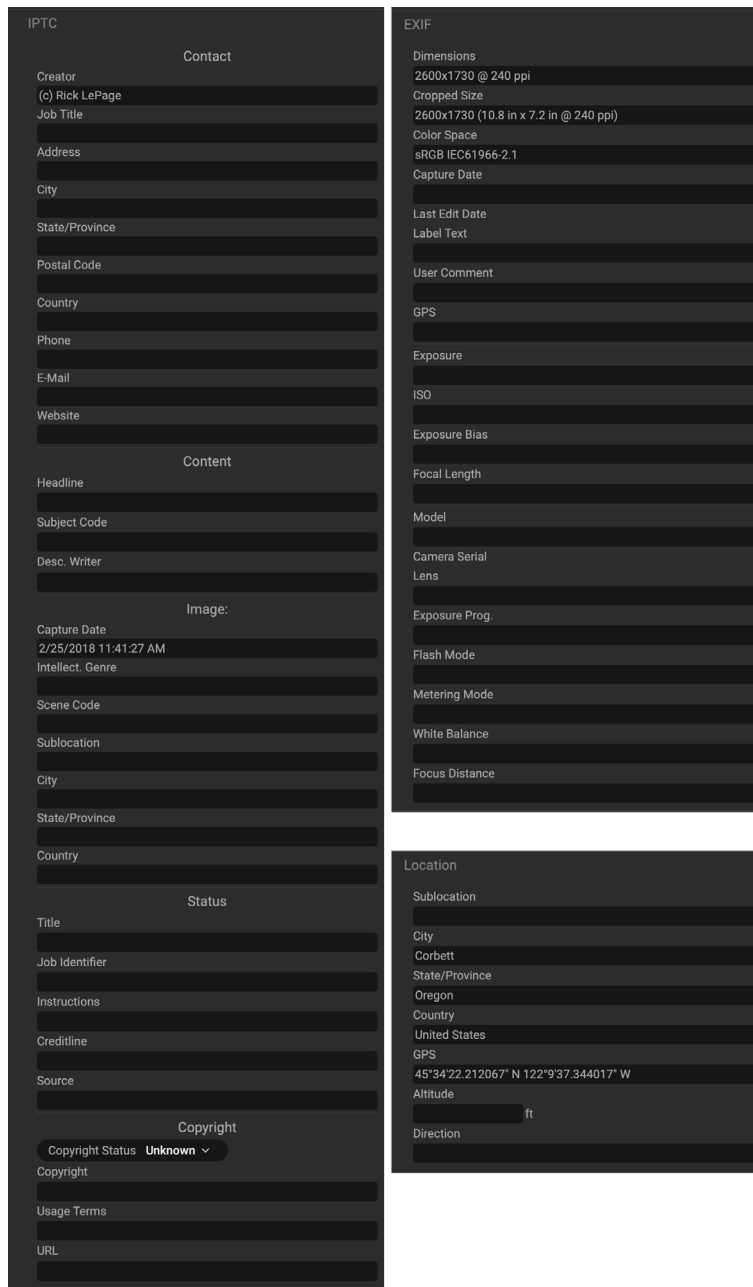
If you want to use Keyword AI on photos that have been cataloged by other apps, open the folder containing those photos in Browse. You should see any existing keywords or other compatible metadata, and you can scan and generate AI keywords and embed them back into the files via the method shown above. When you're done and back in your originating editor, you will have to read the updated metadata back into that app. Lightroom has a flag that will indicate that the metadata for a photo has been changed; you can click on that photo (or all photos with that flag) and choose Read Metadata from File from the Metadata menu. Capture One has a similar command, available from the Image menu, but it doesn't have an easy way to determine if the metadata has changed.



## ADDITIONAL METADATA OPTIONS

The bottom of the Metadata pane has three sections for viewing or adding specific types of information to your photos:

- **EXIF** (Exchangeable Image File Format) displays all of the data embedded by your camera. Depending upon the camera, some of all of this information will be displayed, and many of the fields are editable.
- **IPTC** (International Press Telecommunications Council) is an industry-standard metadata format, and offers much more detailed metadata information than EXIF. It historically has been used by journalists and stock photographers to catalog and tag photos, as well as add copyright information, captions, and other data. (The Creator IPTC field and the Author field in the main Metadata pane share the same text; data written into one is automatically added to the other.)
- **Location** includes GPS information, as well as country, state/province and city information. Photo RAW can automatically look up this information for any photo that has GPS coordinates, via the Set Location from GPS Coordinates item in the Photo menu.



The three additional metadata sections are for IPTC, EXIF and Location data.

To open any (or all) of these sections, click on the label. Clicking again on the label will hide that section from view.

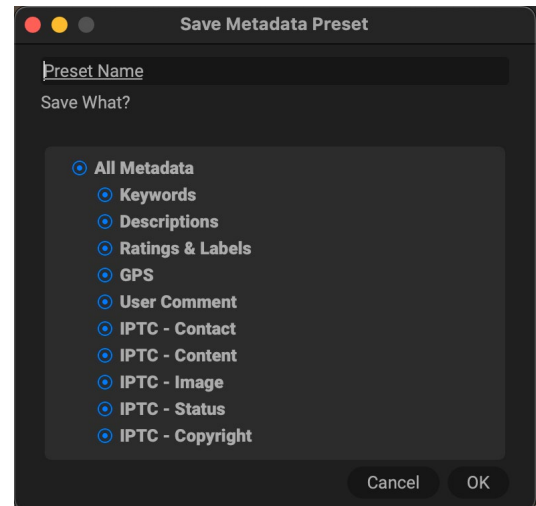
When you enter text into any field in the EXIF, IPTC or Location pane, Photo RAW will add that information to the currently selected image. You can change the metadata in multiple images at the same time by selecting them all, then changing any of the fields in the pane.

## Metadata templates

With Photo RAW, you can create metadata templates that apply common information to your images, such as copyright, author, contact information, your website and more. These preset templates can be applied directly in the Metadata pane, as well as via the Import feature (see [“Importing Photos into Browse” on page 51](#)).

Saving a metadata template is easy: you can either go to an image that has the basic metadata items you wish to use, or you can select an image without metadata and add your common items to the Metadata pane. Once you have the metadata set, click on the Preset drop-down menu at the top of the pane and choose Save New Preset. The Save Preset dialog will appear on-screen, and you can choose which metadata fields you wish to save as part of the template. For example, while you might wish to save the copyright and contact information as part of your preset, you might not want to apply keyword, GPS or description data to a group of images.

You can update a metadata template by selecting the preset in the pane, then changing the appropriate fields as desired, and then choosing Update Preset with Current Settings from the Preset drop-down. To delete a metadata preset, first choose the preset from the drop-down menu, then choose Delete Preset from the menu.



*The Save Metadata Preset dialog lets you choose which metadata fields get saved to a preset from the currently selected image.*

## Embedding metadata

Metadata you add in Browse is stored in industry-standard XMP sidecar files for raw files. This facilitates the transfer of metadata to any application that supports XMP. When you edit an image, create a copy of an image for editing or use the ‘Send to’ command, the metadata is embedded into the file automatically (with the exception of raw files). You can manually embed your metadata into images using the Embed Metadata command from the Photos menu. This will open each image you have selected, update the metadata and re-save it. This is supported for TIF, PSD, PSB and JPG files; raw and PNG files do not support direct embedding of metadata.

## Reading metadata

Sometimes, when you’ve been sharing raw images across machines or with others, the metadata information might get ‘lost,’ or is different than your original metadata. In these instances, choose Read Metadata from the Photo menu, which will grab the metadata from the file or the XMP file (for raw files).

## Changing a photo’s capture date

You can change the capture date of a photo (or a group of photos) by selecting Edit Capture Date from the Photo menu. In that window, you can adjust the date to a specific date and time, adjust for time zone changes, and to the raw file’s embedded capture time.

## KEYWORD LIST PANE

As you add cataloged folders or browse through folders of non-cataloged photos inside ON1 Photo RAW 2024, any keywords you have added—to any photo—are stored in an internal database. That list of keywords is visible in the Keyword List pane, and from there, you can search for established keywords and display those photos from your cataloged folders, manage the keyword list, and apply keywords to new images. And, to help manage your keywords, Photo RAW 2024 will also let you create subcategories of keywords (see [“Using hierarchical keywords with Photo RAW” on page 50](#)).

If you double-click on a keyword in the list, Photo RAW will search your cataloged folders for that keyword, and display the results in the Preview window. In this search, Photo RAW is actually performing a search in the Advanced Search pane, so you can refine your search there, if you wish to add additional filter criteria. (If you would like to search the current folder only, choose the Filter Current Photos option in the Advanced Search pane.)

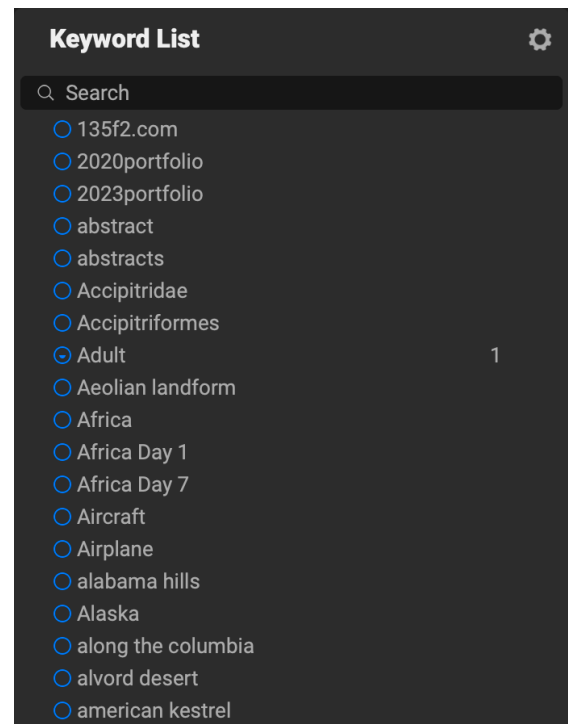
You can assign keywords to an image in any of Browse’s views. Click on the button to the left of a keyword in the Keyword List, and Photo RAW will apply that keyword to the currently selected image or images. (You can also enter keywords into the Add Keywords field in the Metadata pane.)

Right-clicking on a keyword gives you a pop-up menu with a list of options you can perform:

- **Assign Keyword to Selected Photos:** adds that keyword to the current selection.
- **Remove Keyword from Selected Photos:** removes that keyword from the selection
- **Add Keyword:** Lets you create a new keyword, with the option to save that keyword as a subcategory of the currently selected keyword.
- **Edit Keyword:** lets you rename the selected keyword, and applies the new keyword to all of the cataloged and known photos that used it.
- **Delete Keyword:** Removes that keyword from the cataloged and known photos that use it.
- **Find Cataloged Photos with Keyword:** Displays (in grid view) all of the photos in your cataloged folders that use the selected keyword.

### Refining the Keyword List

Because the list of keywords can be extremely long, you can use the pane’s search field to look for keywords: as you start to type in the field, Photo RAW will display a list of keywords that contain the letters you’ve typed. Once you’ve narrowed your search, you can select a keyword from the list (shown, right), and perform any keyword operations detailed in the previous section.



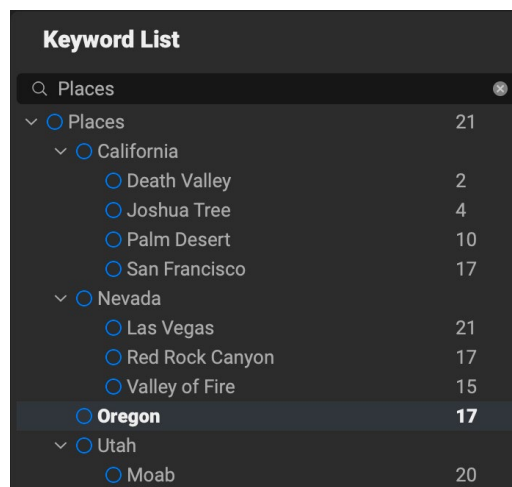
*The Keyword List includes any keywords you’ve ever used, but you can filter the list by typing into the search field at the top of the pane. Double-clicking on an item in the pane will display all of the photos that have that keyword.*

## Using hierarchical keywords with Photo RAW

In addition to standard keywords, ON1 Photo RAW 2024 also supports the creation and use of hierarchical keywords. This option lets you “nest” keywords within a top-level keyword, which can be helpful to manage and categorize keywords.

For example, you might want to use a master keyword for states that you’ve visited—“California,” “Nevada,” “Oregon,” etc.—and use sub-keywords for places within the state, like “Death Valley,” “Joshua Tree,” “Valley of Fire” and others.

Hierarchical keywords are displayed in the Keyword pane with a small right arrow to the left of the top-level keyword. Clicking on the arrow will display the sub-keywords for that master, with the number of images with that keyword on the right side. As is the case with standard (i.e. non-hierarchical) keywords, you can double-click on any of the nested keywords to show all of the photos in your cataloged folders that use that keyword.

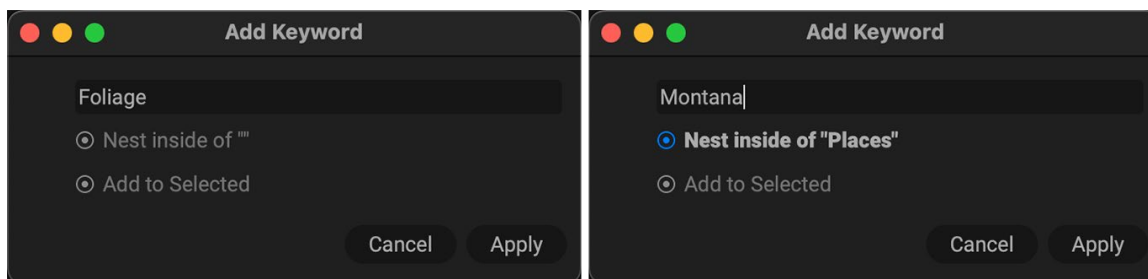


*Hierarchical keywords can help with keyword management, and can be extremely useful when you wish to use primary and secondary categories for such image categories as locations, people, types of shoots, and so on.*

To create a keyword hierarchy, first create your master keyword by clicking on the gear icon at the top of the Keyword List pane and choosing Add Keyword. Enter the name of the top-level keyword and click Apply. (If you have photos selected, and don’t want to add the new keyword to those images, uncheck the “Add to Selected” box before clicking Apply.)

To create a new nested keyword, right-click on the master keyword and choose Add Keyword from the pop-up. The dialog box should now give you a check box to nest the new keyword inside the top-level keyword, as well as to add the new keyword to any selected photos.

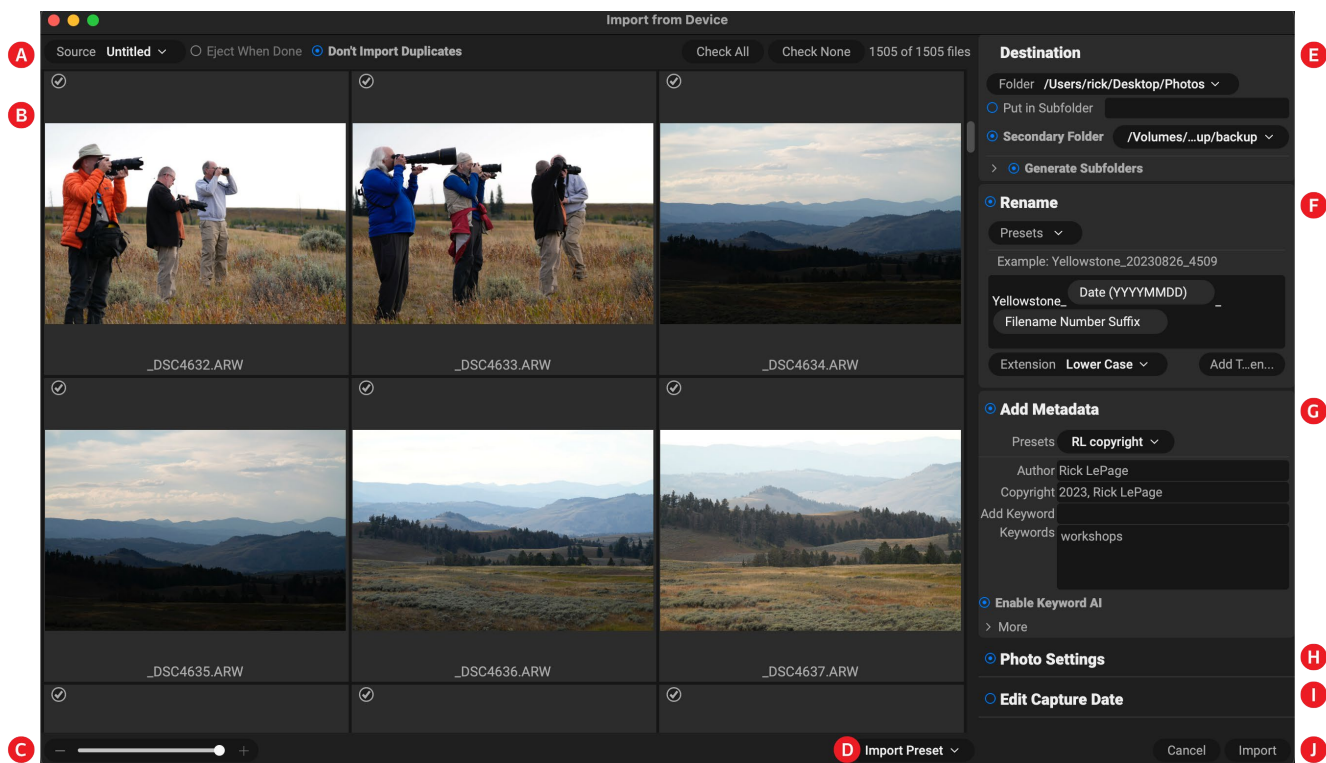
If you wish to create new hierarchies from existing keywords, it is best to first create your master keyword, and then drag any existing keywords onto that master.



*To create a hierarchical keyword set, create the top-level keyword by choosing Add Keyword from the Keyword List pop-up. Then, right-click the top-level keyword and choose Add Keyword. There, you will have the option to nest the new keyword inside the top-level keyword.*

**NOTE:** You can show or hide most of the panes in the Photo panel. See for [“Customizing the display and order of Tabs and Panes” on page 15](#) for details.

# Importing Photos into Browse



ON1 Photo RAW's Import function lets you quickly grab photos directly from your camera, memory card, phone, tablet, or other source location (like a portable hard drive loaded with images from the field).

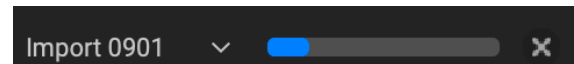
To import photos, connect your camera, card or other device and choose Import from Browse's File menu. The Import window opens, with the following options:

- A. **Import Options Bar:** Lets you choose the source (camera, memory card, or other device), eject the device after importing, and to bypass images that have already been imported. You can also choose options for selecting all photos or none of them.
- B. **Preview window:** Displays the images to be imported. By default, all photos are included; click the check mark in the corner of any image to remove it from the import process.
- C. **Thumbnail size:** Adjusts the size of the thumbnails in the preview area.
- D. **Preset selector:** Applies an import preset—which can include any of the settings from the import panel on the right—to the currently selected images.
- E. **Destination:** This pane sets the location of the imported images, as well as a secondary folder that you can use to store a copy of your photos saved as a backup to another location. (See [page 52](#) for details on using this pane.)
- F. **Rename:** This pane lets you rename the imported files, with options for custom text, serialization, and image metadata. (This pane uses the same token-based renaming function and presets found in the Rename Files dialog; see [page 54](#) for more.)
- G. **Add Metadata:** Lets you add assorted metadata to the imported images, ranging from keywords, copyright information and more. To access the complete IPTC metadata fields, click the More drop-down; you can also add GPS coordinates and a description via this

section of the pane. You can use existing metadata presets (or create your own in this window) to apply consistent metadata across multiple imports; simply enter the data you wish to include and choose Save New Preset from the Preset menu in the pane. (See [“Metadata templates” on page 48](#) for more on metadata presets.)

- H. **Photo Settings:** This pane lets you apply any Edit module presets to the imported images. (These settings are not permanent; you can adjust or reset the adjustments via the Settings menu. See [“Presets” on page 121](#) for more.)
- I. **Edit Capture Date:** Use this pane when you wish to change the capture date of imported images. The Adjust Time Zone setting can be helpful if you forget to change your camera’s clock when you travel across multiple time zones.
- J. **Cancel/Import:** Cancel closes the import window, cancelling your session; Import brings your photos in based on your chosen settings.

Once you have adjusted your import settings and selected the images for import, click on the Import button to perform the operation. While your photos are being imported, you’ll see a progress bar displayed in the lower right side of the Browse window. If your import location is a cataloged folder, the new images will be indexed automatically in the background.

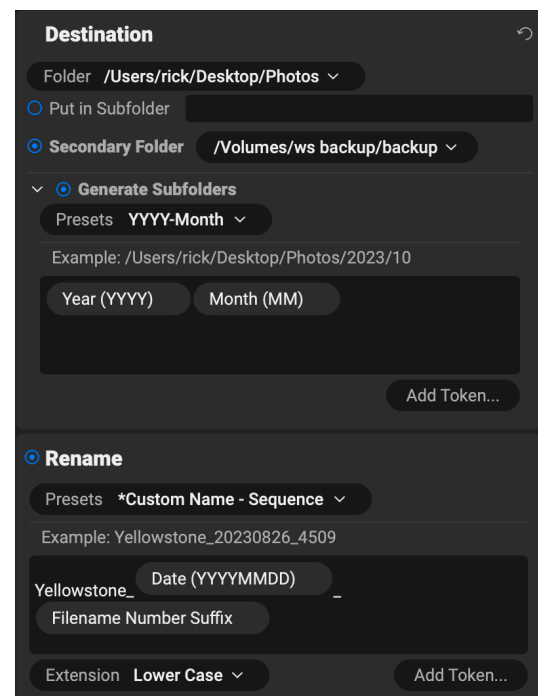


While Photo RAW is importing images from a camera or card, you’ll see a progress indicator at the bottom of the Browse window.

## DESTINATION PANE OPTIONS

Destination is the only pane in the Import window that you have to set up when importing images. It has a number of different options for where you wish to import images:

- Use the **Folder** pop-up to choose the destination for your import. Recently used destinations will be in the list, or you can choose a different folder.
- To put your imported images into a new folder—one that you name—inside the primary import location, enter the name of the new subfolder in the **Put in Subfolder** field. Photo RAW will create that folder and import the images to that location.
- Turning on the **Secondary Folder** option will copy the imported images to another folder connected to your computer (using the parameters in the Put in Subfolder and Generate Subfolders settings, if used). It is intended for people who wish to back up their photos onto another drive or location. Use the pop-up menu to determine the backup location; any previously used folders will be listed in the menu.
- Use the **Generate Subfolders** option if you would like to use image metadata or import count information to create customized subfolders during import. This option uses the same token-based function used in the Rename pane; see [“Renaming Files and Folders in Browse” on](#)





[page 54](#) for specifics on using these tokens. For example, you could have imported photos automatically organized by two levels of folders, one by year, and inside each year, folders for each month. When images are imported, Photo RAW will place each image in the appropriate location based on the settings in this field, creating the folder if it doesn't exist.

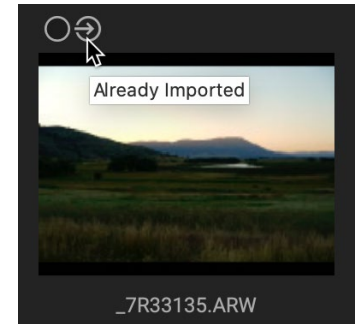
Each time you import images, Photo RAW will display your previous settings.

## BYPASSING DUPLICATE FILES DURING IMPORT

The Don't Import Duplicates option is helpful for those times when you reuse a card in the field, but don't delete the photos from it.

Each time you use the Import function, Photo RAW keeps a record of every imported photo's filename and capture time. When you add a card to import, the app checks its import database, and if it finds a duplicate, it will uncheck it in the Import window, and display an "Already Imported" icon to the right of the checkbox.

Photo RAW saves the original filename and time metadata, so the Don't Import Duplicates option works even if you use the Rename option to rename the photos on import. And, if for some reason you wish to re-import a photo, you can click the selection check mark to re-import it.



*With the Don't Import Duplicates option on, any photo that has already been imported will be deselected.*

## SAVING IMPORT SETTINGS AS A PRESET

Photo RAW makes it easy to save often-used import settings as a preset: things like copyright and other metadata, file-naming conventions, import locations and more. To save an import preset, adjust the information and settings in any of the panes on the right of the Import window, and choose Save New Preset from the pop-up. Thereafter, when you choose the preset, it will apply those saved settings to the current import job. If you wish to change a setting for an existing preset, select the preset, make your changes in the panels and choose Update Existing Preset from the preset selector's pop-up menu.

Photo RAW remembers the last-used import preset when you choose Import from the File menu.

# Managing Files and Folders in Browse

## CREATING A NEW FOLDER

You can create a new folder from the right-click contextual menu in the preview area or selecting Add Subfolder in the Edit menu. This will create a new folder inside the selected folder; if you have files selected in the preview area, you also will get the option to move or copy the selected images into the new folder.

## DELETING A FOLDER

To delete a file or folder, click on it and press the Delete key or right-click and select 'Delete' from the contextual menu. Then, confirm that you wish to move the file to the trash. If you have multiple files and or folders selected it will move them all to the trash. If you make a mistake you can use the Undo command, although some files, like those on a network volume, are deleted immediately and cannot be undone.



## COPYING AND MOVING FILES AND FOLDERS

You can copy and move files and folders in the ways you are accustomed to on your computer. You can select files and folders and use the Edit > Copy command to copy them to the clipboard and then Edit > Paste to paste them to new location, inside or outside of Browse. You can use this to copy a file or folder from one place to another or to attach an image to an email for example.

You can also use the familiar drag-and-drop functions to copy or move files and folders. Dragging and dropping a file or folder will move it if it is on the same drive or copy it to another drive. You can drag and drop in and out of Browse module.

**NOTE:** Due to the non-destructive nature of Photo RAW 2024's workflow, copying a photo and pasting it outside of Photo RAW will paste the original file. If you wish to incorporate any Edit module changes, use the Export or Quick Export commands to get a version of the photo with your edits.

## SHOW IN FINDER/SHOW IN EXPLORER

To view a file or folder in the Finder (MacOS) or Explorer (Windows), right-click on an image or folder in the Preview area and choose Show in Finder or Show in Explorer from the pop-up menu.

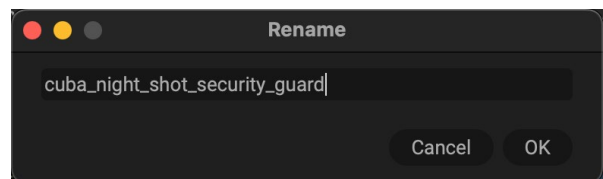
## CHANGING A FOLDER'S THUMBNAIL PREVIEW

By default, Photo RAW chooses an image from a folder to use as the preview thumbnail for that folder. To change this, double-click on the folder icon and select a photo you would like to use as the thumbnail. Right-click on the photo and choose Set Folder Preview from the pop-up menu.

## RENAMING FILES AND FOLDERS IN BROWSE

Browse offers two methods for renaming files or folders inside ON1 Photo RAW 2024: single file and batch.

To quickly rename a single file or folder, click on it in most Browse views and choose Rename File from the Edit menu, or right-click on the item and choose Rename File from the pop-up menu. This will display a window where you can type in a new name for the item. Clicking OK will rename that file or folder.



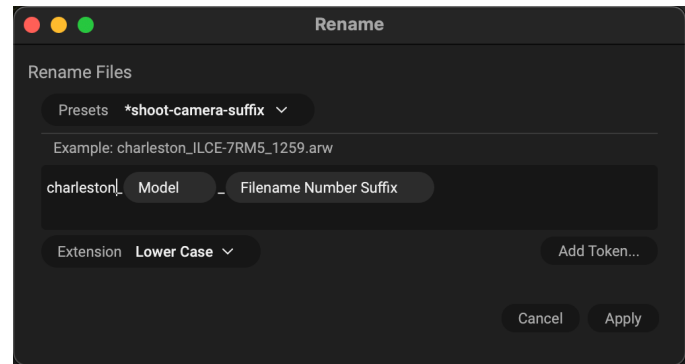
*Renaming a single file or folder.*

### Batch-renaming groups of files or folders

To rename multiple items in Browse as a batch, select them in the current view and choose Rename File from the Edit menu or the right-click contextual menu. Photo RAW will display the Rename window, which offers an array of options for renaming files based on custom text and image metadata.

In batch-rename mode, the Rename window has a central text entry field, where you can add any custom text you wish all of the renamed files to have. You can also insert a set of tokens (via a pop-up menu) that will be added to the renamed files. These tokens are in four main groups:

- **Filename**, which includes options for using the original filename, number suffix (taken from the image as recorded by the camera) and enclosing folder name.
- **Date/Time**, which includes a list of date (year, month, day) and time data that can be combined in various ways.
- **Sequence**, which adds an incremented number to each renamed file in the batch, as well as the total number of files in the batch. Each of these token sets include options for leading zeros in the resultant filename.
- **Metadata**, which lets you add specific EXIF and IPTC metadata to the filename.



*When renaming multiple files or folders, Photo RAW's batch-rename feature lets you use complex combinations of custom text and image metadata. You have the capability to save your custom rename settings as a preset to reuse at other times.*

**NOTE:** A complete list of the tokens used in the Rename window, with explanations, can be found on [“Export” on page 234](#), in the Export section of this guide.

To build a rename sequence using tokens, click on the Add Token button, and choose the appropriate token from the pop-up menu. The token will be added as a shaded item in the text field, and the Example item above the text field will show a sample of a renamed file using the current set of tokens and custom text. To change an existing token, click on the down arrow on the right of the token, which will display the full set of tokens. To delete a token, double-click on it and press the Delete key.

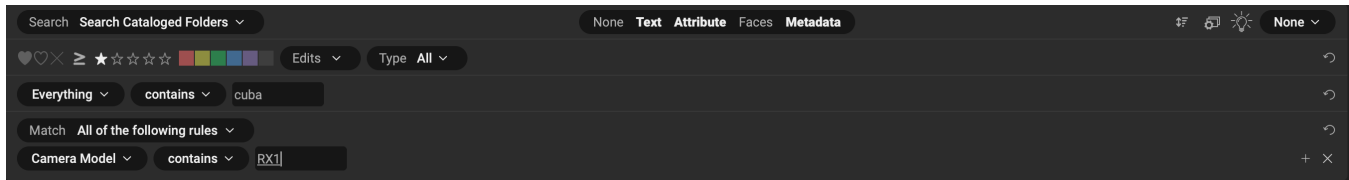
Custom text can be added anywhere in the entry field. You can click the cursor at the beginning or end of a token (or in-between tokens) and add spaces, dashes, underscores and any other text you wish to be included in each renamed file.

Because the Rename process is not undoable, make sure you use the Example field to check that your text and token combinations give you the filenames you expect for your batch process, and adjust as needed. When you're sure, click Apply, and Photo RAW will rename all of the files.

The Presets pop-up menu at the top of the Rename window includes a set of common batch combinations that you can use as a starting point. You can also create your own batch-rename presets: build the rename options you wish, and choose Save New Preset from the bottom of the Presets menu. You can also update an existing preset and delete presets from this menu.

**NOTE:** The Rename window remembers the parameters of your last operation, which can be helpful for creating presets.

# Finding and Filtering Images with the Search Bar

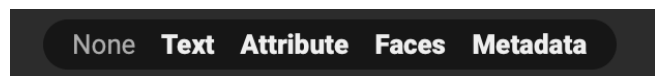


Browse's Search Bar, shown here with a complex search of all cataloged folders.

Browse's search bar is designed to help you find photos in your photo library based on a extensive variety of criteria specific to photos and the metadata embedded in them. You can search based on any text associated with a photo; likes, labels and star ratings; dates, including creation and modification dates, time of day and seasons; keywords (including AI-generated keywords); and nearly any piece of metadata, from camera body and lens information to aperture, ISO settings, and much more.

Search options are flexible: they can be applied to the current folder view or album, or they can search any or all of your cataloged folders. You can also save any search as a preset style, so you can use it again in the future, or you can save your search (of cataloged folders only) as a Smart Album that is available in the My Catalogs panels.

The search bar is always available at the top of the main Browse window. By default, Search is turned off, but you can turn it on by clicking on any of the four buttons in the center of the bar:



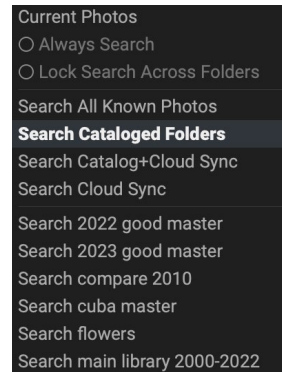
The Search Bar has four tabs that let you search for photos in your library, using a broad array of options.

- **Text:** Searches for text associated with a photo. By default, it will search all text options, but you can use the menu to filter by a photo's description, filename, keywords or title.
- **Attribute:** Searches for files based on likes/dislikes, ratings, color labels, and file type.
- **Faces:** Searches for photos with one, two or a group of faces, as well as age categories (Baby/Toddler, Child, Teenager/Young Adult, Adult, and Elderly) and gender. These options will only find photos that have been scanned by the Keyword AI process, and when the Find Faces option is turned on in the Preferences' Keyword AI tab (see [page 282](#)).
- **Metadata:** Let you create complex searches based on a broad set of metadata criteria and conditions. See [page 58](#) for more information about the search fields available and using the different operators to create complex searches.

To turn on option on, click on the button in the Search bar; to turn it off, click on the button again. You can also use combinations of the various options to create complex searches.

Browse's search bar is dynamic: as you adjust the options in the window, the selection of photos that meet your criteria and other settings will be displayed in Browse's main window, in Grid view. If you add or remove criteria, change the source folders, the thumbnail grid will update.

To stop the current search and return to the previous view, click None in the Search bar.



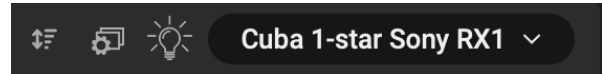
The Search pop-up at the left side of the bar lets you choose where in your photo library you wish to search.

## SEARCH BAR OPTIONS

The pop-up menu on the far left of the search bar instructs Browse where to search. The menu lets you choose between the photos in the current view (the default option); cataloged folders (all, or a specific folder); all photos that Browse knows about (cataloged, favorites, and images in any folders you've viewed). When you have Current Photos selected as a source, the pop-up will have a Lock Search Across Folders option; choosing this will keep using the search criteria as you move from folder to folder.

To the right of the search options are three icons:

- **Sort:** This sorts the photos in the current view. The sorting options include: date captured or modified; color label; file name, type, or size; and rating. You can also create a custom sort order by dragging thumbnails inside the grid window; click and drag the thumbnail so that the outline sits between two images.
- **Create Smart Album:** When searching across cataloged folders, you can save a custom search as a smart album (see [page 39](#)).
- **Smart Organize:** This opens the Smart Organize window, where you can search for duplicate photos, photos of similar appearance, or photos taken at similar times or places (see [page 61](#)).



*The icons on the right side of the search bar let you sort the current results, create a smart album, or refine the current search with the Smart Organize feature. The pop-up on the far right of the search bar lets you save a custom search for later use.*

## SAVING SEARCH CRITERIA

You can save your searches to reuse at other times via the Save Styles menu at the far right of the Search bar. Set your search to the state where you would like to save it, and choose Save New Style from the menu. If you make changes to your chosen style and would like to incorporate those changes into the style, choose Update Style with Current Settings from the same menu. You can also rename and delete styles from this menu.

If your search is specific to cataloged folders, you can also save those searches as a Smart Album, either by clicking on the Smart Album icon in the Search bar, selecting Save as Smart Album from the pop-up menu in the Search bar.

## SETTING THE SEARCH CRITERIA

The Search Criteria section consists of two parts: the matching options, and the criteria the search is using to find photos. The Match options set how you wish the search criteria to be filtered, based on three options: choosing photos that **meet all** of the current criteria, those that **meet any** of the criteria, or those that **match none** of the criteria.

You build the search options by adding criteria from the Add Field pop-up, using as many criteria as you wish to achieve your chosen search results. When you add a field, the default is Everything, which searches every piece of text-based metadata in your photos. You can change it by choosing another field from the pop-up menu. If you wish to remove a criterion you've added, click the 'x' on the right side of the item.

## METADATA SEARCH FIELDS

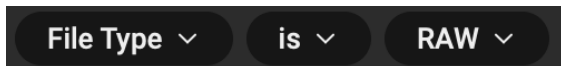
The Metadata option includes 20 primary categories of search criteria, many of which have additional subcategories. The categories, and what they search for, are:

- **Album** – whether a photo is in an album or not (Smart Albums are not supported).
- **Camera** – searches for specific camera and lens metadata used to take a photo, including aperture, shutter speed, ISO, focal length, camera name, and more.
- **Cloud Sync** – whether or not an item has been synced with ON1 Cloud Sync
- **Color Label** – photos with a specific color label (icon and text name); can search for multiple labels as well (i.e. Red and Green).
- **Date** – capture date, edited date or time of day (morning, afternoon, evening, night) of a photo.
- **Description** – searches the contents of the Description field in the Metadata pane
- **Edited** – searches for photos that have had adjustments applied in the Edit module; includes any adjustments in specific modules—Develop, Effects, Local Adjustments, Portrait, Sky Swap—as well as Layers, NoNoise, cropping, retouching, Liquefy tool, and text additions.
- **Everything** – searches for any text-based data (filename, keywords, metadata information) associated with a photo.
- **File Type** – searches for specific image and video file types. Image formats include RAW, TIFF, PNG, JPEG, PSB, PSD, DNG, ONPHOTO, and HEIC. Video formats include M4V, MOV, AVI, WMV, MPEG, and MTS.
- **Filename** – filename or the folder path that the photo resides within.
- **IPTC** – searches IPTC-specific fields—as shown in the Metadata pane—including Copyright Status, Creator/Author, Job Identification, and Title.
- **Keyword AI** – only searches for AI-generated keywords, as well as whether there are keywords attached to an image or not.
- **Keywords** – searches for applied keywords, as well as whether there are keywords attached to an image or not.
- **Likes** – photos set with Like (icon with a filled-in heart), Dislike ('X' icon) or Not Set (empty heart).
- **Location** – draws from Location information section of the Metadata pane, can also search for photos with or without GPS data.
- **Object Type** – whether a file is a Photo, Version (see [page 69](#) for information on versions), or Video.
- **Rating** – photos with a star rating set.
- **Season** – searches date information for photos shot during Spring, Summer, Winter, or Fall; includes Northern and Southern Hemisphere options.
- **Shared** – searches for photos that have been shared to SmugMug.
- **Size** – searches for photos based on size information, including file size on disk, height and width, long and short edge, number of megapixels, and orientation (landscape, portrait, square).

## Search field operators

Each search field has an operator option and a subject field. Fields where the subject field is a list of items—Edited, File Type, Likes, Object Type, and Shared—have a simple, “is/is not” binary set of operators. Search fields that have a text- or numeric-based subject field will have additional operators that let you refine the search in very specific ways:

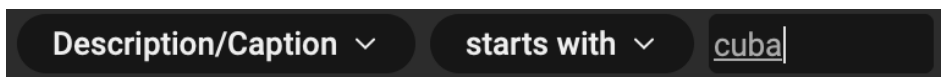
- “**is/is not**” will look for the exact match of the subject in the search field.



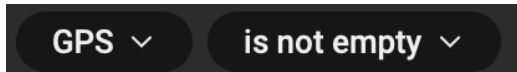
- “**contains/does not contain**” will look for matches that at least include the subject in the search field.



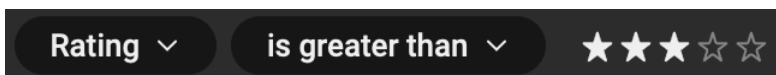
- “**starts with/ends with**” will look for matches where the text of the subject field is at the beginning or the end of the target. This is most often used when searching filenames, but it also is available in any metadata subject that has a text entry.



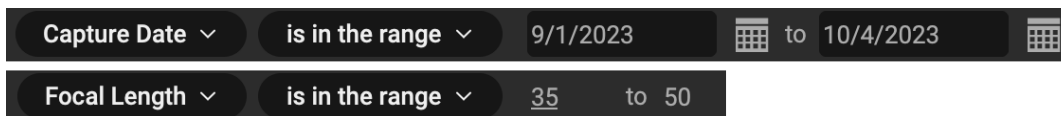
- “**is empty/is not empty**” is used to determine whether the contents of a metadata field contain information or not, and can be helpful when finding which photos in your library don’t have GPS information, or a color rating.



- “**is greater than/is less than**” is used when the subject field being searched for contains numeric data. This operator is commonly used when searching ratings, but can be used in many other search types, especially with camera-specific metadata. Secondary options, “is greater than or equal/is less than or equal,” are also available.



- “**is in the range**” is used to find numeric or date-based metadata that resides within a specified range.



Date-specific fields have a few additional operators, including:

- “**is/is not in the last**” finds photos taken in the last number of specified days.
- “**is today/yesterday**” finds photos taken on the current day or the previous day.
- “**is in the last week/month/year**” finds photos taken in the range specified by the chosen operator.

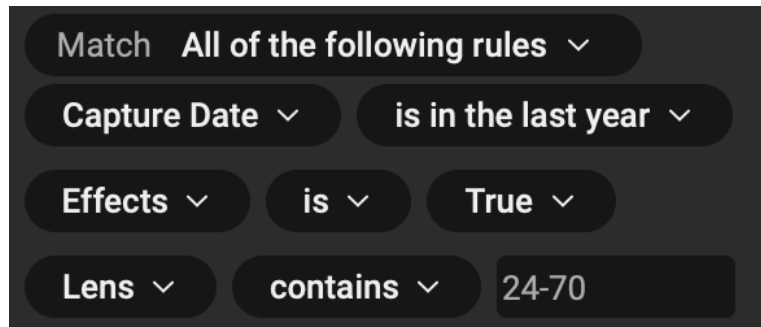


- **“is repeated annually”** will find all photos taken on a specific day, regardless of the year. This can be useful for finding photos taken on holidays, birthdays, and other recurring events.

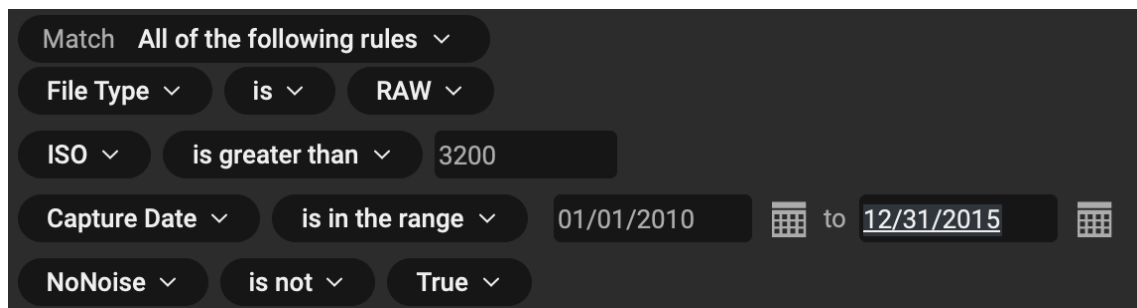
## Creating complex searches

While many of your searches might be simple ones—like finding photos from a certain date range, or ones with a specific keyword or rating—the real power of Advanced Search lies in its capability to perform complex, multilevel searches. You can use a many search criteria in the Search Bar as you wish to achieve the desired results.

For example, to search for photos taken in the past year with a 24-70mm lens and that have been edited in Effects, you’d use the following criteria:



Or, if you wanted to look for raw photos from 2010 to 2015, with an ISO above 3200, that might benefit from Photo RAW’s NoNoise, you could use the following criteria:



With the above search, you might have a lot of photos that could use NoNoise’s noise reduction, and save the search as a style so you can perform it again at later date. Adding the Editing criterion, “NoNoise is not True” will remove any NoNoise-applied photos from the search results, letting you focus on images that could still benefit from NoNoise.

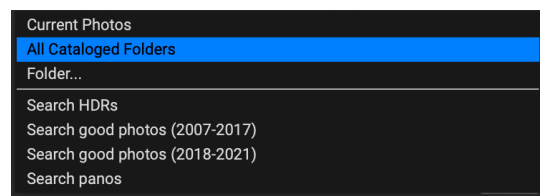
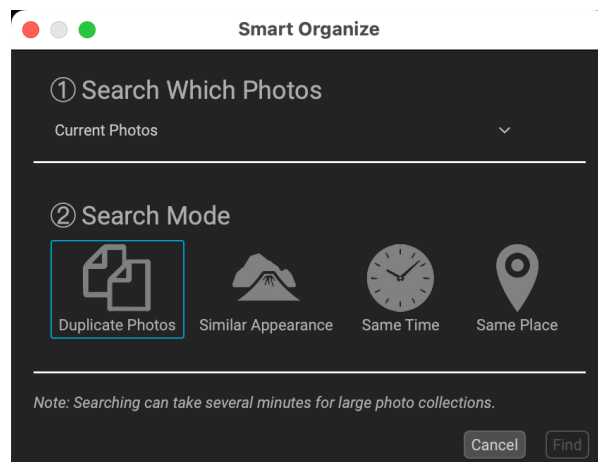
You can even have multiple instances of the same search field with different search options, although in most cases you’ll need to make sure that you have Meet Any of the Search Criteria set in the Match pop-up. For example, if you wished to find all RAW files and all DNG files, you would add two instances of the File Type criterion, one for each type, and change the Match pop-up to “Any of the following rules.”

# Using Smart Organize to Manage Duplicates and More

Photo RAW's Smart Organize feature is designed to help you get an unwieldy photo library under control. When you have a large library that contains thousands of photos, it can be difficult to find duplicates, or to manage images that are similar in appearance or date and time. Or sometimes, you wish to group photos from HDR brackets, slices for building panoramas, or photos to be focus stacked. Not only can Smart Organize find duplicates, but it can find and group photos that have similar appearance, location or time. It can help you cull your library to find just the best photos in a series.

To access Smart Organize, click on the icon in the Shortcuts list or choose Smart Organize from the File menu. This will open the start-up window, which has two sections, Search Options and File Info. The top of the Search Options pane lets you choose which part of your photo library you wish to search:

- The contents of the current view in Browse (Current Photos);
- All of your cataloged folders;
- A specific folder selected via your operating system's file/folder selection dialog box; or
- Any one of your individually cataloged folders.



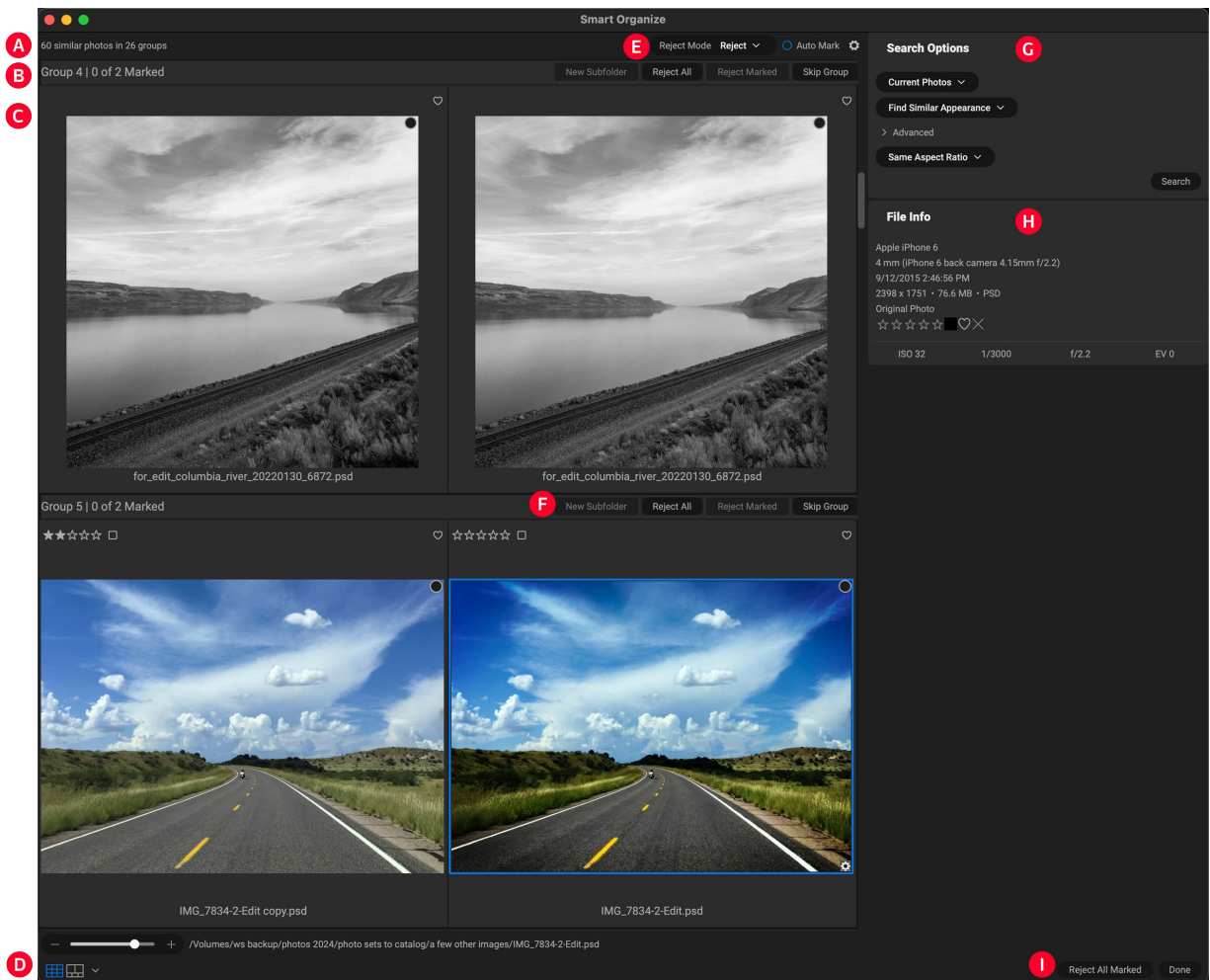
The second portion of the Search Options pane lets you choose which search mode to use. There are four search types:

- **Duplicate Photos.** This option looks for potential duplicate images, based on name, date taken, file size, and dimensions.
- **Similar Appearance.** This option uses machine learning to find photos that are similar to each other, looking at similar tones and colors. This makes it easy to group and sort through series of photos, such as portraits of different people.
- **Same Time.** Selects photos that were shot in the same general time frame. When you wish to group panorama slices or HDR brackets, you can use this option to group sets of images.
- **Same Place.** Uses GPS data to display photos taken in the same general vicinity of each other.

Clicking the Find button will perform the search, and open the Smart Organize Results window, as shown on the following page.

**NOTE:** When working with large collections of photos, Smart Organize can take quite a bit of time to display results.

## THE SMART ORGANIZE RESULTS WINDOW



The Smart Organize results window contains the following elements:

- A. **Results:** the total number of photos found, and the number of sets.
- B. **Group heading:** displays the group number and the number of photos marked in that group.
- C. **Preview area:** displays search results as grid of thumbnails, by group.
- D. **View Selector:** zoom factor (top left); switch between Grid and Compare views (bottom left); file path for the currently selected photo.
- E. **Reject/Delete** and **Auto Mark** settings.
- F. **Group-specific options:** let you create a new subfolder with the selected images: reject/delete marked photos in the group: and Skip the group and remove it from the window.
- G. **Search Options:** includes the original search type, but you can also perform a new search by selecting items from the pop-up menus in the panel.
- H. **Info Panel:** displays EXIF and size information for the currently selected photo. Works identically to the standard Info panel in ON1 Photo RAW 2024 (see [page 42](#))
- I. **Close buttons:** Reject/Delete All Marked closes the window and does either deletes/rejects the marked photos in all groups; Done closes the window without making any changes.

## Working through the search results

When you perform a search with Smart Organize, the results window is organized into groups, based on the search mode you chose. Groups can consist of a pair of photos, or larger numbers, based on your library and the type of search. You can use the view slider of the window to make the thumbnails larger or smaller, and you can view the photos in Grid or Compare modes (see [page 17](#) and [page 30](#), respectively), which work in the same manner as those views in the main Browse window.

The idea behind the results window is that you'll work group by group, evaluating the photos in that group, and making decisions on the group's contents based on the type of search you originally made. Photos that you wish to do something with—remove in one form or place into subfolders—you apply a checkmark to. Then, you'll move on to the next group. The top section of each group has the following items:



- A. **Group Information:** Displays the number of the current group (out of the total number of groups) and the number of photos marked in the group. You can also use the right and left arrows on the left side of the bar to move to another group.
- B. **New Subfolder:** Creates a subfolder with the marked photos in the group.
- C. **Reject/Delete All:** This will apply the reject flag or delete all of the photos in the group, based on the Reject Mode option chosen at the top of the search results window.
- D. **Reject/Delete Marked:** This will apply the reject flag to, or delete all of the *marked* photos in the group, based on the Reject Mode option chosen.
- E. **Skip Group:** Removes the group from the results, without making any changes.

In each group, you mark photos you want to deal with—ones you wish to reject/delete or move to a subfolder—with the checkbox in the upper corner of that photo's thumbnail. You can select multiple photos in a group, and when you choose one of the actions, it will apply to the checked photos. Clicking on the New Subfolder, Reject/Delete All, or the Reject/Delete Marked buttons will apply that action to the group and remove the group from the results list. Clicking on the Skip Group button will remove that group from the results window and not make any changes to those photos.

When you're using Smart Organize to look for and group photos—for HDR, panoramas, focus stacking, or other organizational uses, use the New Subfolder option. Mark the photos that you wish to group, and click on the New Subfolder button. You'll be prompted for a folder name; enter the name and click OK. Photo RAW will move the marked photos to that new folder.

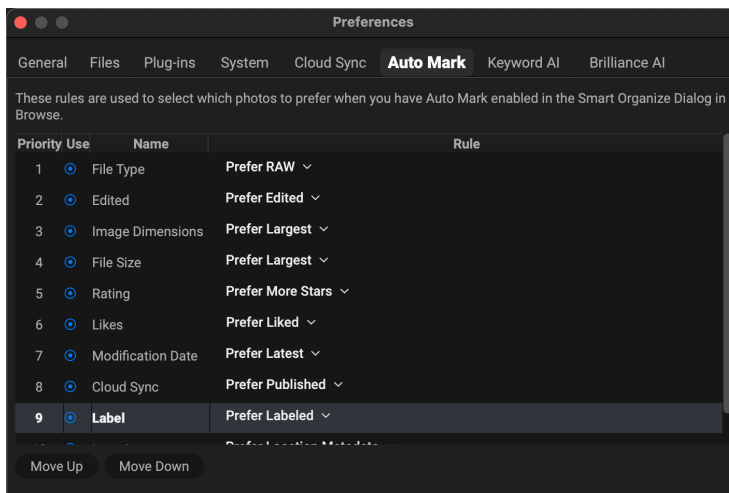
**NOTE:** If the marked photos do not reside in the same folder the New Subfolder button will be grayed out.

## Using Auto Mark

When you have the Auto Mark option checked at the top of the results window, Photo RAW will mark the photos in each group that it believes should be checked, based on criteria found in the Auto Mark tab of the Preferences window. This tab can be opened in the search results window by clicking on the gear icon to the right of the Auto Mark checkbox.

The Auto Mark preferences tab displays a collection of 10 criteria—file type, editing status, various image metadata items, and more—that you can set, and that Photo RAW will utilize when performing a Smart Organize search. For example, you can choose to prefer Raw files over ONPhoto, JPG or PSD files, and, when creating each group, Photo RAW will mark—or not in the case of finding duplicate files—the appropriate images.

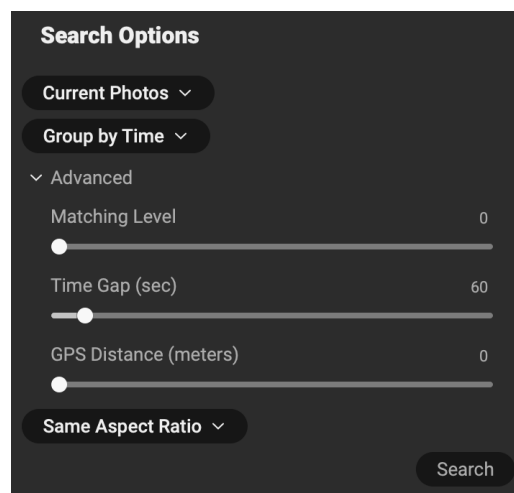
Auto Mark is intended to be an aid in helping you select and mark photos, especially when you're dealing with large groups of photos. It doesn't, however, automatically delete or reject photos; in each found group, you can choose to accept its recommendations, change them, or ignore them completely and skip that group. If you prefer to mark images in groups by yourself, simply turn the Auto Mark option off at the top of the results window.



## Adjusting your search options

If you would like to perform a different search than the one currently displayed in the Smart Organize results window, you can do so via the Search Options pane on the left side of the results screen. The top of that pane has pop-ups for the search locations and the four search types (duplicates, appearance, time and location). However, there are two other options you can change, depending upon the type of search operation you are making.

In all four search types, the bottom of the pane has a menu with three options related to the aspect ratio and size of the photos selected. You can choose to refine the selection to files of the aspect ratio, the same pixel dimensions, or none.



When you are searching for photos based on similarity, time or location, an Advanced section will be visible in the Search Options pane. The three Advanced options (and which search type they work with) are:

- **Matching Level (Find Similar):** This slider adjusts the results of grouped photos. The smaller the number, the less they have to match to be grouped.
- **Time Gap (Group by Time):** This lets you adjust the time in between shots by which you wish images to be grouped.
- **GPS Distance (Group by Location):** Sets the range (in meters) by which location-based photos are grouped.

When you have set the parameters of your new search, click the Search button, and Smart Organize will generate a new results window.

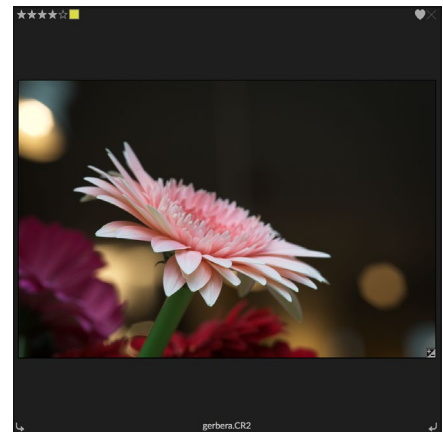
# Editing Photos in Browse

While most of ON1 Photo RAW 2024's image-editing power is found within the Edit module, you can perform many editing tasks on photos inside Browse. This includes changing metadata, labels and ratings, but you can also apply Brilliance AI (shown on [page 42](#)) or Edit module presets to an image or group of images directly from within Browse (see [page 66](#)). You can even copy Edit module settings from one photo and paste them onto other photos directly within Browse. These operations are also available to any photos shared via ON1 Cloud Sync.

## RATINGS, LABELS AND LIKES

Using a standard rating and label system, it is easy to sort and cull your favorites from the throw-away shots. Browse offers three ways, aside from keywords and subfolders, to mark and group similar images. All of these methods may be set several ways: from the Photo menu, the right-click contextual menu, clicking the badges on the image thumbnail or in the footer of Image view. There are also keyboard shortcuts associated with each classification option.

- **Star ratings:** Set from zero to five stars. Photographers often use five stars for their favorite images and one star for images they don't want to keep, but you can use this system in whatever way works best for you. You can adjust the rating using the 1 through 5 keys on the keyboard. You can also clear the stars on any image with the ` (backquote or grave) key.
- **Color labels:** There are five color labels as well. Color labels are a great way to mark sub-sets of images for special handling. You can set the color ratings by pressing the following keys: 6 (red), 7 (yellow), 8 (blue), 9 (green), 0 (purple).
- **Likes:** A common need for photographers is to mark their favorite images and the ones they want to delete. This is best accomplished with the Like classification. There are three options: Like (icon with a filled-in heart), Dislike ('X' icon) and Not Set (empty heart). By default, images are in the Not Set category until you change them. You can set your Liked images with the P keyboard shortcut, Dislikes with the X key, and clear settings with the U key.



An example of a photo in Grid view with a ratings, color and favorite attached.

Both star ratings and color labels are industry standards. When you use these tools, the settings are stored in the metadata and will be available in other photo editors and managers, like Lightroom. (Likes are proprietary and will only appear in ON1 Photo RAW 2024.)

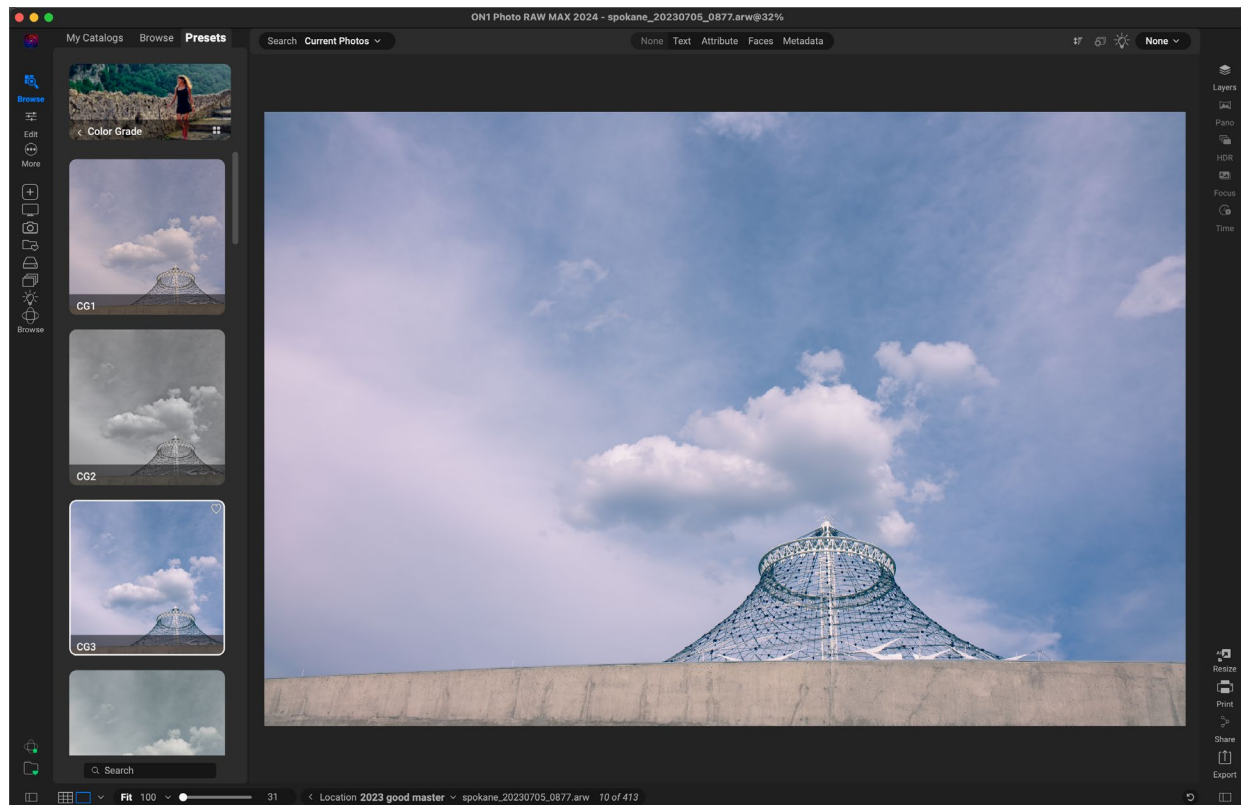
**TIP:** You can change the information displayed in the image thumbnails via the Thumbnail Options function. See [“Changing the thumbnail display options” on page 26](#) for more.



## Use Auto Advance when culling your photos

Photo RAW's Auto Advance feature—which can be turned on or off via the Photo menu—was designed to help you rank a group of images quickly: with Auto Advance turned on, apply a rating, color label or flag to an current image and Photo RAW will make the change and automatically move to the next image.

## APPLYING EDIT MODULE PRESETS IN BROWSE



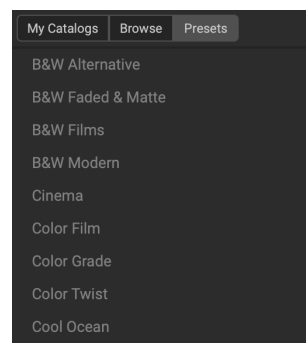
You can easily add a preset to any photo (or group of photos) in Browse, in any Preview mode (Grid, Detail, Filmstrip or Compare). Just click on the Presets tab, navigate to the category you wish to use, and click on the preset thumbnail to apply. If you don't like the look, you can Undo, or choose another preset. You can also use the fade slider to reduce the amount of the effect.

ON1 Photo RAW 2024 has a preset system that lets you save your complete settings from the Edit module. These presets are always available in Browse, so you can apply your favorite presets quickly and easily to a photo or a group of photos.

To apply a preset to an image, click on the Presets panel. There you will see any built-in presets supplied by ON1, as well as any presets you might have created or installed yourself. The panel is divided into categories, like B&W Films and Cinema. Click on a category to open it and show that category's presets.

To see a larger representation of what your selected photo will look like, click the Quick View Browser icon in the preset category's title bar. That will display an overlay window with all of the presets in that category.

To apply a preset to a photo, simply click on the preset in either the Category preset browser or in Quick View Browser mode. Presets applied in Browse are not cumulative; after you've applied one preset, clicking on another preset will remove the previous one and apply the new one. (If you have applied edits in either Develop or Effects, those modules' settings will be erased if the preset has settings in those modules.)



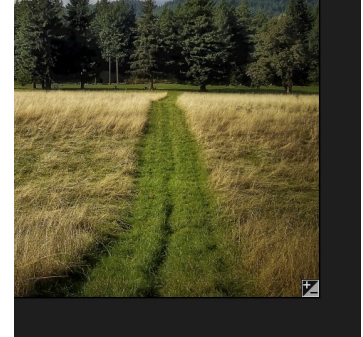
The Presets panel has a broad range of preset types, all of which can be applied in the Browse module.

Because Photo RAW is non-destructive, going to any of the Edit module tabs will display all of the settings applied by the preset. Once in Edit, you can adjust the settings, switch preset, or make any other editing changes.

To remove a preset from a photo, click on the photo and choose Reset All Settings from the Settings menu. You can also remove individual settings made in either the Develop or Effects tabs, if you prefer.

(For more detailed information about how to create and edit presets, see [“Presets” on page 121.](#))

**NOTE:** If a photo has had a preset applied in Browse, or has otherwise been edited in one of Photo RAW’s editing tabs, you will see a small badge with a ‘+/-’ icon in the lower-right corner of the thumbnail. These badges are visible in the Grid, Filmstrip and Compare views. (See the image on the right for detail.)



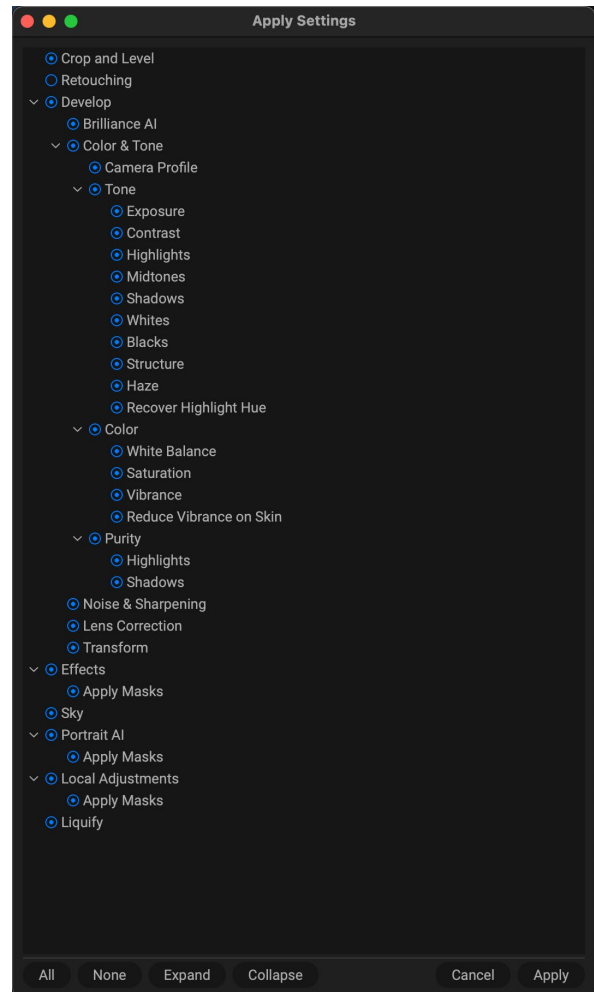
## COPYING SETTINGS AND SYNCHRONIZING EDITS

In addition to applying presets, you can copy all of the existing edits made in one photo and paste them directly onto other images in the Browse module. This includes every editing operation you can perform in the Edit module. There are two primary methods for doing this—Copy/Paste and Sync—but they achieve the same end goal: it’s more a matter of preference in which operation you choose.

To copy the edit settings from an image, click on the source file and choose Settings > Copy Settings. Then, click on the new image and choose Settings > Paste Settings. A window will appear, giving you the option of applying any or all of the edits on the original photo, or you can select which edits—everything from individual settings in Develop’s Tone and Color pane, to masks, cropping, and text if used—you wish to paste into the new photo. (You can also select a group of photos and paste the edit settings onto the group.)

The Copy/Paste Settings commands can be useful when you wish to paste settings across a number of photos in different folders. As long as your Browse session is active, Photo RAW will remember the last copied settings, and you can paste them onto other photos as you wish.

With the Sync Settings command, select the image you want to use as your source. Then, holding down the Shift key (if you are selecting an image or group that



*In the Apply Settings window, you can apply nearly all Edit module operations to another image or group of images. Filled circles to the left of a setting mean that the setting will be applied; click the circle if you don’t wish that setting to be applied.*

is contiguous with the source), or the Command (Mac) or Control (Windows) key, and click on the image(s) that you wish to apply the source file's edits. Your selection should have the source image highlighted in blue, and the target images highlighted in gray. If that is correct, click on the Sync button at the bottom of the Preview area, or choose Sync Settings from the Settings menu. The Apply Settings window will open, and you can follow the same procedure to synchronize your edits.

## Sync All Settings

To sync everything from a source photo to another photo or group of photos Settings > Sync All Settings will bypass the Apply Settings window. Select your source and destination photos and select the command. Everything—including cropping, text and masks—in the source image will get synced.

## RESETTING EDITS IN BROWSE

Any edits you have made with ON1 Photo RAW 2024 can be completely reset from within the Browse module. This includes photos you might have pasted or synchronized settings onto inside Browse, or anything done within the Edit module.

The Settings menu offers eight options for erasing edits made to a photo:

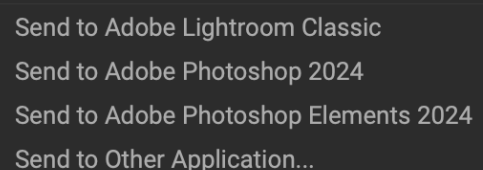
- **Reset All Settings:** This removes all adjustments made to a photo in the Edit module. (This option can also be accessed from the Reset All button at the bottom of the Browse window.)
- **Reset Develop Settings:** Removes only the settings applied in the Develop tab.
- **Reset Effects Settings:** Removes only the settings applied in the Effects tab.
- **Reset Sky Settings:** Removes only the settings applied in the Sky tab.
- **Reset Portrait AI Settings:** Removes only the settings applied in the Portrait tab.
- **Reset All Retouching Tools:** Resets any retouching applied anywhere in the Edit module.
- **Reset Local Adjustments:** Removes all local adjustment layers.
- **Reset Liquify Tool:** Resets any application of the Liquify tool in the Edit module.
- **Reset Crop:** Returns the image to its original, uncropped size.
- **Reset Text:** Removes any text blocks.

You can undo any of these changes immediately after making them.

**NOTE:** The Reset settings options—as well as the Copy/Paste and Sync options—are not available when you are working with layered photos in Browse. You can, however, Copy and Paste settings between layers in the Edit module.

## SEND TO

Browse lets you send images you are viewing to other applications for editing. This is done via the Send to option, which is available from the right-click contextual menu or the Edit menu. Browse detects common photo managers or editors and lists the latest installed version:

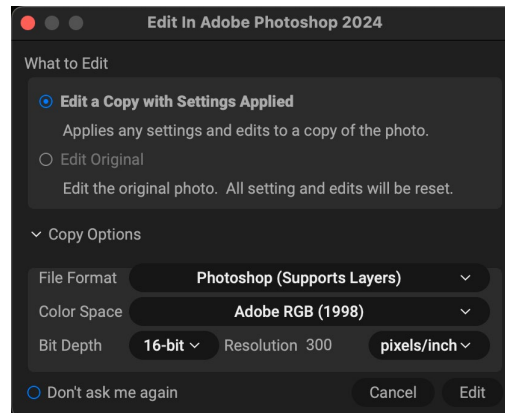


Send to Adobe Lightroom Classic  
Send to Adobe Photoshop 2024  
Send to Adobe Photoshop Elements 2024  
Send to Other Application...

- Adobe Photoshop
- Adobe Lightroom Classic
- Adobe Photoshop Elements

You can set up any application you want to send your photos to. Simply select the Send to Other Application option. Then select the application you want to send your photos to. The application will be remembered and listed with your other Send to options. (For example, if you use an email client you can add it to easily email photos.)

When you send an image to another application, you will be presented with the Edit in dialog box from ON1 Photo RAW 2024. There you'll have the option to send either the edited photo or the original, unedited image. If you choose to send a copy, you'll have options for choosing the file type, color space, bit depth and resolution. If you use the same set of options every time, you can check the "Don't ask me again" box in the window, and you won't be prompted again. (To change this setting, go to the Files tab in Photo RAW's Preferences (see [page 275](#)).



The Edit In dialog, with the Copy Options section expanded.

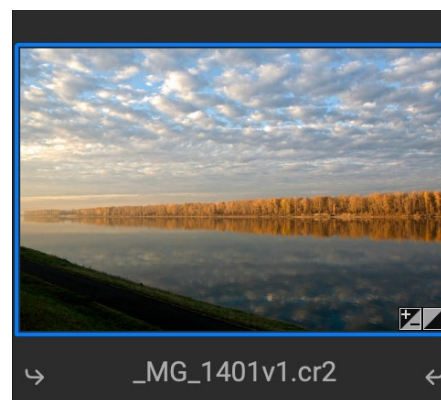
## VERSIONS

ON1 Photo RAW's Versions feature lets you create a 'virtual' copy of an image, which you can edit in a completely different manner than the original file, but without actually duplicating the image. This lets you easily try different preset treatments, crops, and retouching operations on a copy of the same image without having to lose any work—or see your disk space increase.

Creating a version is easy: in any of Browse's view modes, choosing Create Version from the Settings menu (or choosing Command-' or Control-') will create a new version of the currently selected (or viewed) photo. A copy of the image will be created next to the existing one in your library, with a 'v1' added to the filename. (Additional versions will be numbered sequentially.)

A version acts like most images inside Photo RAW. You can open it in any of the Edit module tabs; crop or make any adjustments with all of Photo RAW's tools and filters; and you can edit its metadata independently of the original. You can even export a versioned photo or use it in Resize (Photo RAW creates a rendered file in those instances). You can not create a version of an .onphoto file that has layers in it, however. You must first flatten the image inside the Edit module. (See ["Working with Layers" on page 195](#) for more.)

In Grid view, versioned photos will have a small square badge split into light and dark triangles.



A versioned photo will have a 'v1' (or higher) attached to the end of the filename, and a small badge, split into dark and light triangles, in the lower right corner of the thumbnail.

# Using ON1 Photo RAW 2024 with two displays



*Photo RAW's Dual Mode lets you open a new browser-style window, which can be placed on a second display, or be used to present on a TV or projector.*

You can use Photo RAW's Dual Mode feature to display a second copy of your photos in an added browser-style window. Here, you can view folders of images as thumbnails, and navigate through them, while displaying the full-size images in the primary window. This can help your productivity when you have an additional monitor connected to your computer, reducing the need to switch between Grid and Detail, Filmstrip or Compare view. It can also be useful when you wish to present photos on a projector or TV, and don't want to display the entire Photo RAW application window.

Dual Mode only works with the Browse and Edit modules. In Browse, you can choose how you wish the second window to act, either displaying in Grid view, with the primary window working in the three other primary view modes (Photo, Filmstrip or Compare), or vice versa. As you navigate images in the Grid, the other window will display the currently selected image.

When in the Edit module, the second window works solely in Grid view, displaying thumbnails of the current folder. If you click on another image in the grid, that image will be presented in the main window.

## TURNING DUAL MODE ON

To use this feature, chose Dual Mode > Show from the Window menu. The first time you use Dual Mode, the second window will open on your primary display. Simply drag the window to your secondary display, and from that point on, Photo RAW will remember the location of the second window. (When the window

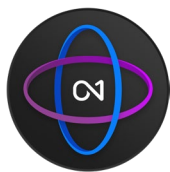


is placed in the second display, you can choose Dual Mode > Full Screen Mode from the window menu to have the window fill the entire screen.)

The icons at the bottom of the secondary window are a subset of the main application window: in Browse, you will see options for Grid, Photo and Compare views; in Edit, only the Grid view icon will be visible. The Size slider can change the size of thumbnails (in Grid view) or the zoom level (in Detail and Compare view).



# Using ON1 Cloud Sync with Photo RAW



ON1 Cloud Sync is an optional cloud storage service and sync technology that lets you capture, edit, and access photos seamlessly between multiple computers and mobile devices. The service is designed to share photos when you're using the subscription versions of ON1 Photo RAW 2024 and ON1 Photo Mobile. Cloud Sync also lets you sync custom presets and extras between two installations of Photo RAW (Mac and Windows).

There are two storage options for ON1 Cloud Sync accounts, 200GB and 1TB, and multiple methods for signing up. If you have purchased an ON1 Photo RAW subscription, it will automatically be available in both Photo RAW or ON1 Photo RAW for Mobile after you have signed in to your ON1 account.

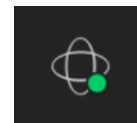
From ON1 Photo RAW 2024, photos are published and synced to the ON1 Cloud via cataloged folders or albums, and you can choose to publish photos either as editable previews or in their original format (including raw). See [“ON1 Cloud Sync File Formats” on page 74](#) for specifics on the different file types and why you would use one over the other.

When you're using the ON1 Photo Mobile app on your smartphone or tablet, all photos on that device are published to the cloud in their original format, and reside in a single folder called Local Photos. (You can also create albums with ON1 Photo Mobile.)

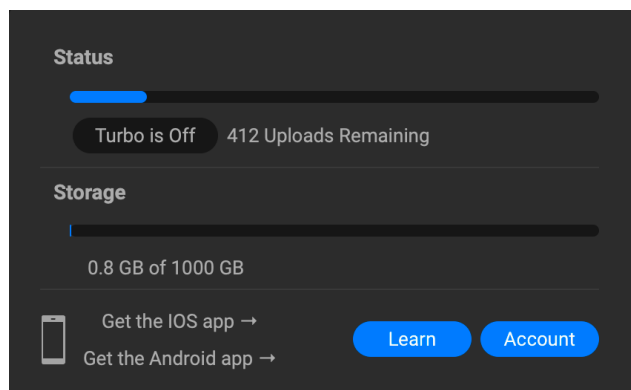
## VIEWING YOUR ON1 CLOUD SYNC STATUS

In the lower right section of the left sidebar is the ON1 Cloud Sync status icon, which has a small colored dot—in one of four colors—that indicates the status of ON1 Cloud Sync on the current computer. The indicator colors are:

- If there are no uploads or downloads in process, and the connection to the ON1 Cloud is on, the dot will be **green**.
- When Photo RAW is in the process of uploading or downloading images or other information from the cloud, the dot will be **blue**.
- If there is a problem with the internet connection, you aren't logged in, or if you are running low on available space, the dot will be **red**.
- It will be **gray** if you do not have an ON1 Cloud Sync account.



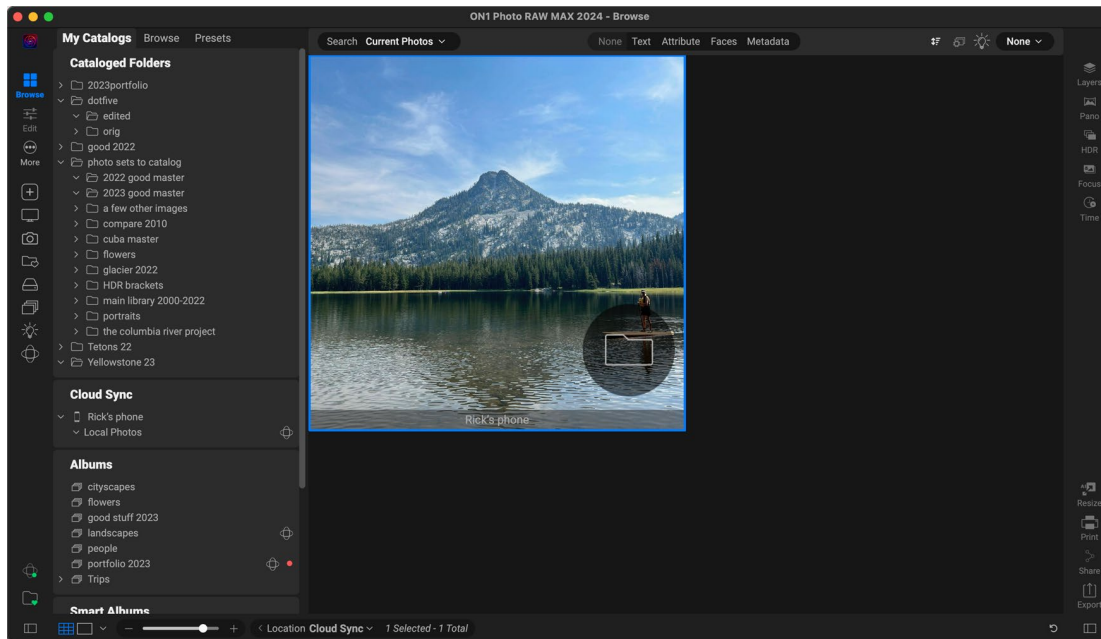
Clicking the status icon will bring up your ON1 Cloud Sync dashboard (shown on the right). This window shows the status of any current uploads, your available cloud storage, and includes links to the iOS and Android versions of the ON1 Photo Mobile app. Clicking on the Account button will take you to your account page on the ON1 website. The Learn button displays a window with information on how to get started with ON1 Cloud Sync.



The Turbo button is used to speed uploads; it will take as much processing power as it can to sync photos, to the limit of your upload bandwidth.

## VIEWING OTHER ON1 CLOUD SYNC DEVICES IN BROWSE

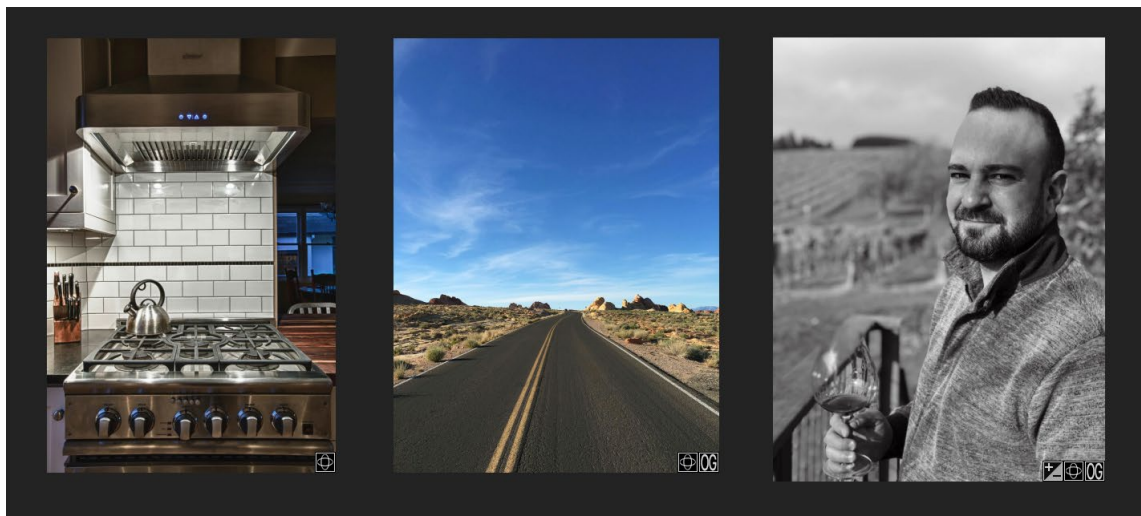
When you have shared ON1 Cloud Sync devices, you can see a list of them by clicking on the ON1 Cloud Sync icon in the Shortcuts bar on the top left side of the Photo RAW window.



Clicking on the ON1 Cloud Sync icon at the bottom of the Shortcuts bar on the left will display a list of your connected devices. Each device will appear as a folder. Mobile devices will display a single folder, called Local Photos, while any Mac or Windows computer will display a list of the cataloged folders synced with the ON1 Cloud Sync service.

ON1 Photo RAW 2024 will display your connected devices in the preview area as folders in Grid view. Clicking on one of those folders will open with a list of that device's synced photos. For mobile devices, you will see a single folder, Local Photos, which contains all of the photos that are on that device. For Windows and Mac computers, you will see a list of all cataloged folders from that device.

You can view and edit any of the photos on a synced device from within ON1 Photo RAW 2024, and you can drill down into the folders in the same manner you would for any other folder in Photo RAW. You can sort the photos, add them to new or existing albums, adjust metadata and add keywords to them.



Photos synced to the ON1 Cloud from other devices will have a badge when you are viewing a folder or album in Browse's Grid view. If the synced photo is an editable preview, it will have the Sync badge in the lower right corner of the thumbnail (image left, above). If it is an original, it will also have a badge with an 'OG' label (center). And, if the photo has been edited, you will also see the '+/-' label (right).

When viewing photos in Grid view, you can tell if a photo is synced from another device by the small Cloud Sync badge in the lower right portion of the thumbnail. If the photo in question is an original — as opposed to an editable preview — there will also be a badge with the initials ‘OG.’ These badges will be displayed on all published folders, devices and albums when you are working in Grid view.

## ON1 CLOUD SYNC FILE FORMATS

With ON1 Photo RAW 2024, you have the option of publishing photos to the ON1 cloud in one of two formats, the original photo, or an editable preview, which uses a proprietary compressed-raw file format developed by ON1. This editable preview can be up to 75% smaller than the original raw file, while preserving the original’s tone and color fidelity. Using this option lets you keep more of your photos in the cloud, and, with either format, you can still edit a photo on one device, and your edits will be synced back to the originating computer, so that your original file is updated with those edits (and any other metadata changes you might have made).

As noted, the savings in storage space can be quite great. Use these basic guidelines for photo storage options:

- With a camera that creates 30MB raw files, you should be able to store more than 5,500 raw originals in the cloud with a 200GB ON1 Cloud Sync service plan, and more than 27,000 photos with the 1TB plan.
- If you are shooting JPGs with that same camera, we estimate that you would be able to store more than 20,000 JPG originals with the 200GB plan, and more than 100,000 photos on the 1TB plan.
- If you chose to upload editable preview files instead of originals, you should be able to store more than 33,000 photos in the cloud with the 200GB plan, and more than 160,000 with the 1TB storage plan.

Remember, while you can store photos in the ON1 Sync cloud using either format, and in any combination, your originals are always stored securely on the device that created or imported them.

**NOTE:** Photos taken or imported with the ON1 Photo RAW for Mobile app are always uploaded in their original format.

### When to choose one sync format over another

In most cases, if you are working on two computers (a desktop and laptop, for example), working with editable previews should be more than sufficient for most workflow requirements. You can edit and update any metadata, including ratings, keywords and more, and work within all of the tabs in the Edit module. The fidelity and tonal range of the preview files is excellent, and all of your edits will be applied to the originals on the other device.

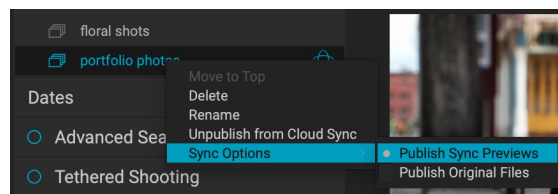
You should sync folders and albums as originals when you want to work with an original photo on another computer. There are four primary reasons for this: you wish to create layered files; build HDR, panorama or focus-stacked composites; resize a photo with the Resize module; or you wish to print a photo at the highest-possible quality.

In these instances, if you have an original photo on another ON1 Cloud Sync device, you can download a copy of that original from the cloud to your current computer by right-clicking on the photo in Browse and choosing Download Original from the pop-up menu. If the original version is in the cloud, you will be prompted to save the copy in a location on your computer.

Depending upon your intent, you can delete this copy later, or save it back to a published folder or album. For more information on these instances, see [“Using Layers with Synced ON1 Cloud Files” on page 202](#), [“Using Resize with ON1 Cloud Sync Files” on page 246](#), and [“Printing photos from ON1 Cloud Sync devices” on page 213](#).

## Managing sync options in Photo RAW

Photos published to ON1 Cloud Sync are managed in ON1 Photo RAW 2024 at the folder or album level. What this means is that you can set up different folders or albums to sync as editable previews or originals, and you can change this option at any time by right-clicking on the folder or album and choosing the Sync Options item from the pop-up menu.



You can publish (or unpublish) an album or cataloged folder at any time by right-clicking on the item name and choosing Publish/Unpublish to ON1 Cloud Sync from the menu.

It is worth noting that you cannot change the sync option for individual photos: it can only be done at the album or folder level. You can however, selectively change the sync option for the subfolders in a cataloged folder.

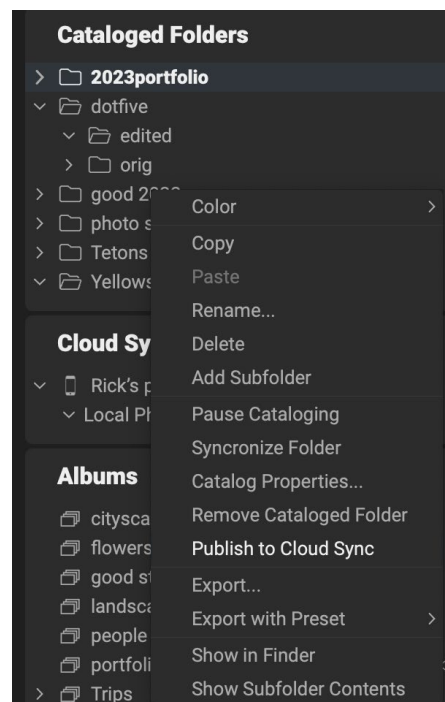
## BASIC CLOUD SYNC WORKFLOW WITHIN PHOTO RAW

As noted in the sections on cataloged folders ([page 34](#)) and albums ([page 36](#)), publishing photos from ON1 Photo RAW 2024 is straightforward. When creating an album or cataloged folder, you have the option to publish and sync those photos as either originals or previews, or you can wait until a later time and publish them by selecting the item and choosing Publish to ON1 Cloud Sync from the pop-up menu. By default, when you publish via the pop-up, Photo RAW will upload editable previews to the cloud, but you can change this via the Sync Options menu item, as described in the previous section.

When you're working with any photos that are based on a remote Cloud Sync device, regardless of whether it was created on a computer with Photo RAW or on a mobile device with ON1 Photo Mobile, you will be able to perform any changes to metadata, or make any edits in the Edit module, and those changes will be synced back to the original file on the original device. This doesn't matter if the file in the cloud is an editable preview or an original.

## Syncing presets and extras with Cloud Sync

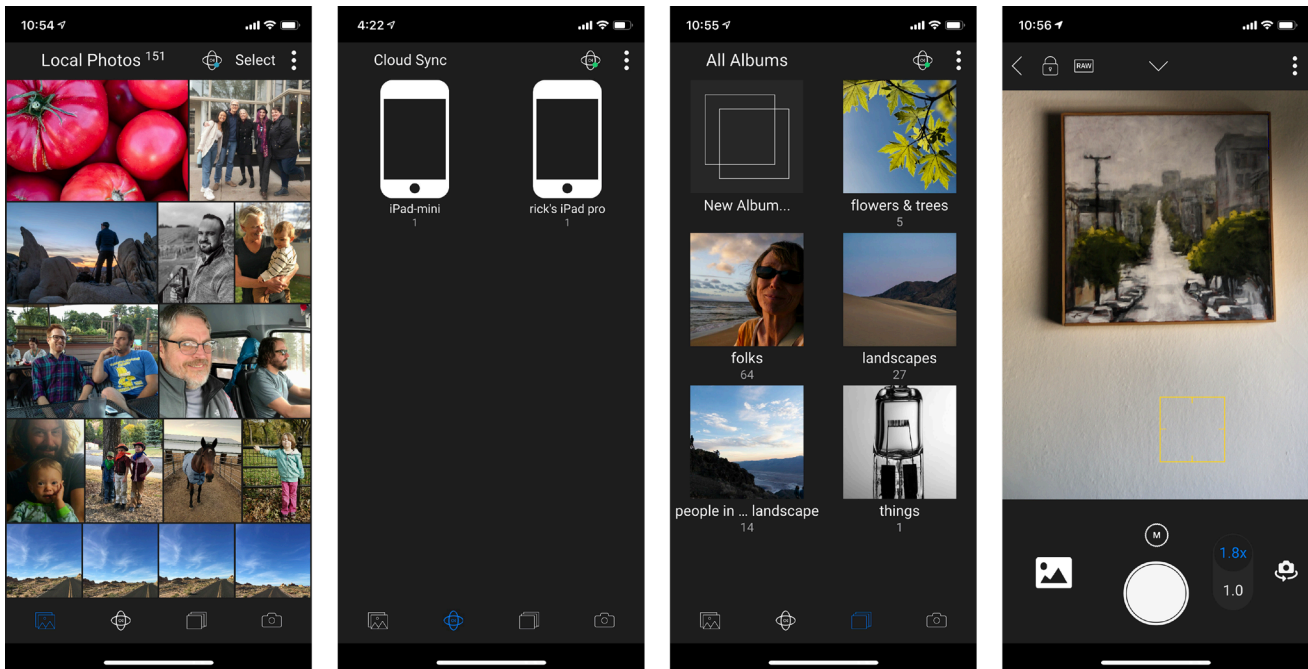
You can also sync your Photo RAW presets and imported extras between your licensed computers with Cloud Sync. This option can be turned on or off via the Sync Presets checkbox in the Cloud Sync Preferences pane (see [page 281](#)).



To change the publishing status of an album or folder, right-click on the item and choose the appropriate format from the Sync Options pop-up menu.

## CLOUD SYNC, PHOTO RAW AND PHOTO RAW FOR MOBILE

On mobile devices, which includes both smartphones and tablets, the ON1 Photo RAW for Mobile app acts as a camera – with full raw-capture support – and an import device, which can add your photos immediately to ON1 Cloud Sync. ON1 Photo Mobile also has a subset of Photo RAW’s Edit module built into it. You can shoot photos with your phone, edit them using ON1 Photo Mobile, add them to existing Cloud Sync albums and they will automatically be shared to the cloud for viewing and editing.



The ON1 Photo Mobile app, available for both iOS and Android phones and tablets, is designed to share and edit your mobile photos, and access and edit photos on your other ON1 Cloud Sync devices. The app has four tabs, a Local Photos container (above left), which is where your photos from that mobile device reside; ON1 Cloud Sync (center left), which lets you access the photos from other shared devices; Albums (center right), which displays existing Cloud Sync albums (and lets you create new albums); and Camera (left), which is a full-featured smartphone camera capable of capturing raw photos.

All of the photos shot and imported onto a mobile device with ON1 Photo RAW for Mobile are captured to a location on the device called Local Photos, which is what you see when you look at a mobile device in the ON1 Cloud Sync pane in ON1 Photo RAW 2024.

There are four tabs in the ON1 Photo Mobile app:

- **Local Photos**, which displays the photos on that device;
- **Cloud Sync**, which displays your synced devices, and lets you drill down into them to view the photos on those devices;
- **Albums**, which displays synced ON1 Cloud Sync albums, and lets you create your own synced albums directly from your mobile device; and
- **Camera**, a full-featured, pro-level camera capable of capturing raw images and syncing them immediately to the ON1 cloud.

ON1 Photo Mobile uses the same RAW processing engine developed for ON1 Photo RAW, and has a non-destructive raw editor built into the app. The basic editing controls are similar to those found in the Develop tab of Photo RAW’s Edit module: there are adjustments for Exposure, Contrast, Shadows,



Midtones, Highlights, Whites, Blacks, White Balance, Noise, and Sharpening. The app also includes five filters from the Edit module's Effects tab.

## Viewing photos in ON1 Photo Mobile

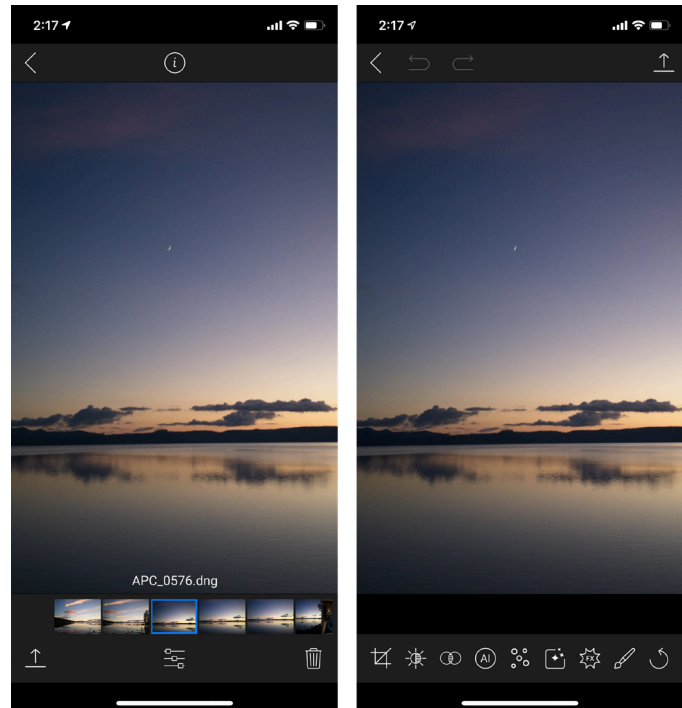
You can view all of your photos — local or synced from the cloud — in ON1 Photo Mobile via standard gestures and taps. Tapping on an album, for example will display a grid of that album, and you can pinch two fingers together and apart to change the grid size. Tap on a photo to view it in Detail view, and pinch to zoom in.

## Photo Management and Editing with ON1 Photo Mobile

When you wish to share or edit a photo with ON1 Photo Mobile, tap on it from any Grid view screen. This will display the photo in Detail view with the photo's name, and three icons at the bottom of the screen: one for sharing the photo, one for editing, and the other to delete the current photo (this only applies to photos that reside in that device's Local Photos folder).

Sharing options include saving a copy of the photo to your camera roll, or to be shared via your device's social media sharing options. The sharing window includes sizing options (medium, large, and full-size) for your exported photo.

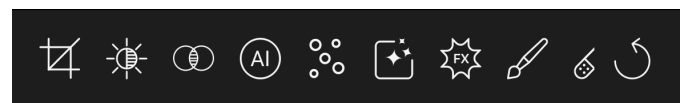
Editing photos with the app is similar to editing photos in Photo RAW, although ON1 Photo Mobile doesn't have all of the tools and filters found in the desktop app. ON1 is committed over time to bring the mobile app as close to parity with the desktop version as possible.



When you're viewing a photo in ON1 Photo Mobile, tapping the center icon at the bottom of the screen will take you into Editing mode.

Tapping the Edit icon at the bottom center of the screen will display ten editing functions underneath the photo:

- **Crop:** resizes and levels your photo.
- **Tone:** for adjusting exposure, contrast, highlights, shadows, midtones, white and black points, and for adding structure or applying dehaze.
- **Color:** lets you adjust the color balance of the photo.
- **AI Auto:** performs an automatic tone adjustment on your photo using a proprietary ON1 algorithm.
- **Details:** for applying sharpening and noise reduction.
- **Presets:** ON1 Photo Mobile includes a variety of presets in multiple categories, letting you achieve a great look with one click.
- **Effects:** lets you apply nine of Photo RAW's Effects filters: Black & White, Color Adjustment, Curves, Dynamic Contrast, Film Grain, HDR Look, Glow, Split Tone, and Vignette.





- **Local Adjustments:** In the same way that Photo RAW lets you apply targeted adjustments to portions of a photo, ON1 Photo Mobile has a Local Adjustments module, where you can fine tune portions of your photos, with the same masking tools found in the desktop app.
- **Retouching Tools:** includes the Perfect Eraser and Clone tools to fix blemishes, dust spots and more.
- **Reset:** The rightmost icon will reset all of your edits, returning your photo to its original state.

For more information about the various editing options available in ON1 Photo Mobile, and how they relate to the ON1 Photo RAW 2024 editing engine, see [“About the Edit Module” on page 80](#).

## Mobile editing limitations with synced photos

While ON1 Cloud Sync and ON1 Photo Mobile have been designed to provide a seamless editing experience between desktop and mobile devices, there are two instances where you might run into an situation where you can view, but not edit a synced file inside ON1 Photo Mobile:

- When you’ve edited a synced ON1 Cloud photo with Photo RAW using any Effects filter that is not present in ON1 Photo Mobile.
- Any .onphoto file cannot be edited with ON1 Photo Mobile. This includes HDR, panorama and focus-stacked composites, as well as layered files.

Any photo synced with ON1 Cloud Sync that has *not had editing adjustments* made to it can be edited with any ON1 Photo RAW 2024 or ON1 Photo Mobile device, whether the photo in question is an original or an editable preview. And all ON1 Cloud Sync photos will be visible on all Cloud Sync devices, regardless of their originating format.

**PART 3:**  
**WORKING IN**  
**THE EDIT MODULE**

# ABOUT THE EDIT MODULE

ON1 Photo RAW 2024's photo-editing power is found in the Edit module, which consists of five distinct editing functions, each separated into tabs:

- **Develop** is where you perform basic, global editing operations, such as adjusting tone and color, removing noise and repairing motion blur and camera shake—with ON1's breakthrough NoNoise AI and TackSharp AI technology—and more. It is the perfect place to begin editing your photos. It's all topped off with the new Brilliance AI feature, which streamlines your editing and instantly makes almost any photo look great, while still providing the non-destructive editing that is the hallmark of Photo RAW. (See [page 135](#).)
- **Effects** is the stylization center of Photo RAW, with 31 filters that can be stacked in any order, all with extensive blending and masking options. And, with Photo RAW's Mask AI technology, you can apply Effects filters solely to specific regions in a photo with a single click. (See [page 155](#).)
- **Sky Swap AI** lets you replace boring skies quickly and easily. Sky Swap AI automatically masks out the sky in your photo, letting you replace it with any of more than 100 included skies. You can even import your own skies directly from within the tab. (See [page 182](#).)
- **Portrait AI** uses machine-learning algorithms to automatically find and retouch all the faces in a photo, apply smoothing, reduce blemishes, and brighten eyes and teeth. (See [page 187](#).)
- **Local Adjustments** are designed to apply basic, targeted edits to parts of your photos, letting you perform traditional photo-editing tasks—like dodging and burning—with ease. You can also add custom brush overlays to an image via the Local Adjustments tab. (See [page 150](#).)

To help you fine tune the edits on your images, Photo RAW has 20 tools that perform everything from cropping (with content-aware fill) and transformation, the creation and refinement of selections and masks, and a suite of tools for applying sophisticated retouching operations. Tools like Super Select AI make the selection and application of Effects filters or local adjustments easier than ever before: you can simply point and click at an area of a photo and apply an adjustment in a single operation.

Switching between the different tabs in the Edit module is as simple as clicking on the appropriate tab. While you work on an image, all of your settings in each tab are saved while you edit. All edits you make to an image are preserved non-destructively, and you can go back to any image at any time and make changes or corrections to it.

Photo RAW 2024's Edit module also includes a Layers pane, which lets you stack multiple images together to achieve sophisticated composites that aren't available in many standalone photo editors. You can add text as a layer to your photos, with full control over font type, size and placement. And, because the Edit module is entirely non-destructive when you use Photo RAW as a standalone app, you can re-edit your compositions without worry. (See ["Working with Layers" on page 195](#) for more.)

ON1 Photo RAW 2024 also includes a robust preset system that lets you save settings made in any of the editing tabs, along with some of the retouching tool operations and masks—including AI-generated masks—for applying to other photos. Editing presets can be applied in the Edit module, or in Browse, and, like all other elements of Photo RAW 2024, are re-editable. (Presets are discussed in detail on [page 121](#).)

In addition to presets, you can copy and paste Edit module settings from one file to another, or synchronize the edits on one photo to a group of photos. These operations can all be performed in any of the editing

modules, as well as in Browse, adding to ON1 Photo RAW 2024's extreme flexibility. (See [“Copying settings and synchronizing edits” on page 128](#) and [“Applying Edit Module Presets in Browse” on page 66.](#))

If you are using the ON1 Cloud Sync service, your synced photos are editable in Photo RAW, regardless of device. All of your edits will be synced back with the photos on their originating device, and will be fully re-editable in Photo RAW. The primary exception to this is when you are using Layers, which must be stored on the device that created the layered file. See [“Using Layers with Synced ON1 Cloud Files” on page 202](#) for a more detailed description of the workflow for Layers and ON1 Cloud Sync.

## Using Photo RAW as a Raw Editor

ON1 Photo RAW 2024 offers true non-destructive raw editing capabilities. This means you can view your images in the Browse module, click to open a raw file in any part of the Edit module and apply edits—including cropping, healing and local adjustments—and Photo RAW will always be working with your original file. At any point, you can go back to Develop, Effects, Sky Swap AI, Local Adjustments or Portrait AI and change any or all settings you have made. What's more, when you're working with layers, Photo RAW will save your work in a non-destructive format as well, using a Photo RAW-specific 'onphoto' file format. This format retains all layer and editing information, and, when you wish to export a composited image for sharing or other uses, you can easily export it in any format supported by Photo RAW.

### THE EDITING PIPELINE IN ON1 PHOTO RAW 2024

There are many editing operations you can make to a raw file (or other supported file format) with ON1 Photo RAW 2024, from broad global adjustments for exposure and color, to the application of effects, to cropping and retouching, the addition of local adjustments to sections of a photo. Because there has to be some structure of how edits are applied to a raw file, it might be helpful to understand the order in which edits are applied to a raw file. Whenever you view an edited image without additional layers, this is the order in which ON1 Photo RAW 2024 applies edits:

1. The original, base image is always at the bottom of the stack.
2. Since retouching—operations like removing dust spots, editing blemishes or skin imperfections—is often the first thing many photographers do to their images, Photo RAW applies these operations first. This way, all subsequent edits will incorporate these changes.
3. Next are most settings applied in the Develop tab. This includes the application of color profiles, global exposure, color correction, sharpening and noise reduction (unless NoNoise AI and/or TackSharp AI is used, in which case those settings are applied to the base image).
4. Local adjustments made to an image are applied next.
5. Any Transform operations are applied after local adjustments.
6. Edits made in the Portrait tab are applied next.
7. Any filters applied in the Effects tab are applied last.
8. Text layers sit above the image stack.
9. Finally, any cropping or rotation information made to an image is applied to the file.

When working with multiple layers, steps 1 through 7 are applied for each layer, with the bottom layer at the bottom of the 'stack', and the topmost layer at the top. After all the layers' edits have been applied, Photo RAW adds any text, followed by cropping and rotation information, to complete the document pipeline.

You do not have to edit your photos in this order; this is just the way in which Photo RAW 2024 applies the edits you make to an image. You might find a dust spot, for example, only after changing exposure settings in Develop or applying a filter in Effects. You can then use the Perfect Eraser to remove the spot and continue with your editing, and Photo RAW 2024 will apply it at the proper place in the stack.

## ON1 Edit Module Main Screen Overview



Edit provides you with an easy-to-use work space for editing your photos. Below is an overview of the main window sections of the Edit module:

- A. **Tool well:** Tools for working within the Edit module.
- B. **ON1 Cloud Sync Status/Left Panel:** Shortcuts to ON1 Cloud Sync status and to open and close the left (Presets/Filters) panel.
- C. **Presets/Filters panel:** List of all installed presets (by category). When working in the Effects tab, a Filters panel is visible as well.
- D. **Preset/Filter Search:** Searches presets (and filters, when working in Effects) by name.
- E. **Window options and Preview size:** Switch between Grid (returns to Browse), Photo and Filmstrip views, and sets the zoom view for the current photo.
- F. **Tool Options bar:** Options and settings for currently selected tool. When working in a tool group (like Mask), the other tools in that group are selectable.
- G. **Preview Window:** Displays the current photo in detail view.

- H. **Breadcrumbs Bar:** Displays the name and path of the current photo and the number of photos in the current folder; the pop-up lets you choose another folder to view.
- I. **Preview option toggles:** First icon displays the original (unedited) version of the current photo; the second icon turns the current mask on and off. The mask pop-up lets you choose the mask overlay mode.
- J. **Photo Information panes:** Navigator, Levels (histogram), Info, History, Snapshots.
- K. **Properties pane:** Contains tabs for setting blending modes, masking options, and text layer specifics. (Can also be configured to display as a pop-up window. See [page 87](#).)
- L. **Layers pane:** Add, edit and manage layers here.
- M. **Edit tabs:** Tabs for accessing the Develop, Local Adjustments, Portrait AI, Sky Swap AI, and Effects. Clicking on each tab brings up the settings for that tab.
- N. **Reset/Revert/Save bar:** Resets all Edit module settings for the current photo; Reverts all edits made during the current session on the current photo; Saves the photo's edits and returns to Browse.
- O. **Output:** Shortcuts for switching to the Resize module, as well as for printing, exporting and sharing the current photo. (*Visible when the 'Show Right Bumper' option is on.*)

The look of the Edit module in ON1 Photo RAW 2024 is similar to that of Browse, with slight variations that are specific to photo-editing tasks. The left side of the window contains a tool well with Edit-specific tools, and a Presets pane (when using the Effects tab, you will also see a Filters tab alongside Presets).

The right side of the screen contains the same panes at the top—Navigator, Levels/Histogram and Info—as well as a History pane, the Layers panel, and tabs for the four editing areas inside Edit: Develop, Effects, Portrait and Local. Clicking on a tab will bring up the options and settings for that area. When viewing images, you can work in either Photo or Filmstrip view, each view works the same as they do in Browse (See [“Working in the Preview Area” on page 22](#) for more).

Photo RAW provides several ways to navigate and view your image in the Edit module's Preview window:

- By default, your image is presented in Fit view, which displays the image within the preview area, and the Zoom tool is selected. Clicking on the image with the Zoom tool will zoom in to 100%, and the cursor will change to the Hand tool. You can move around your image by clicking and dragging in the preview area. Clicking once will take you back to Fit view.
- You can also zoom in and out via the View menu and the Navigator pane. The Navigator pane displays a bounding box around the area currently on-screen, and you can reposition what is displayed in the preview area by clicking and dragging the box around the pane. Clicking on one of the buttons at the bottom of the Navigator pane will automatically zoom to Fit, 100%, 50% or 25% views. (The buttons are visible in the Zoom tool's Options bar.)
- When the preview zoom is larger than the viewable area, holding down the spacebar will display the Hand tool if any editing tool is selected. Clicking and dragging while holding the spacebar will reposition your image at the current view level.



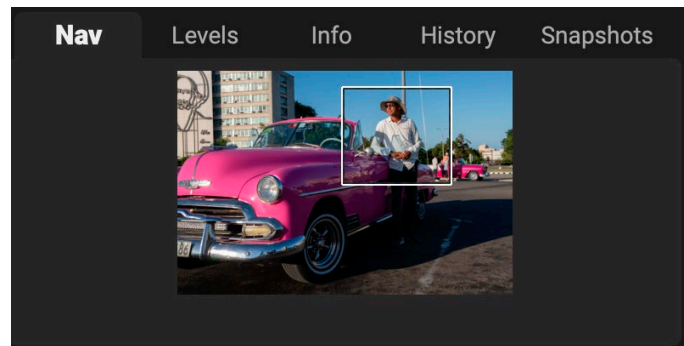
# Navigator, Levels, Info, History and Snapshots

At the top of the control panel on the right of the main window are the Navigator, Histogram, Info, History, and Snapshot panes. These tools are for inspecting and viewing details of your image, for looking at the Edit adjustments made during a session, and for saving a snapshot of an editing session in a specific place.

## THE NAVIGATOR PANE

This gives you a thumbnail view of your image as it is displayed in the current view. The white square region marks the image area that is visible in the preview pane, and you can pan your image by clicking and dragging inside the square. (The pane will also update when using the Hand/Zoom tools.)

At the bottom of the Navigator pane are several zoom buttons representing percentage zoom views (100%, 50% and 25%). Click on one of the buttons to change the view. Fit zooms to fit the current canvas size; 100 zooms displays the actual pixels.

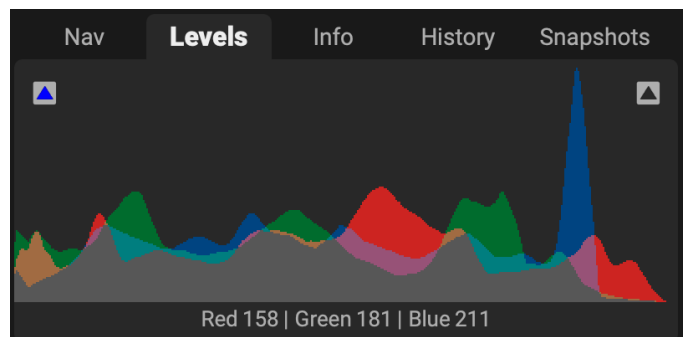


**NOTE:** You can also use your mouse's scroll wheel to pan and zoom inside your photos. See [“Using Photo RAW with a Scroll Wheel” on page 15](#) for specifics.

## THE LEVELS PANE

This gives you a color chart of the shadow, midtone and highlight areas based on the image RGB values (commonly known as a histogram). This is useful to show areas within the image that may be clipping. Clipping is when your image contains pure blacks or white and can signify loss of highlight or shadow detail.

The left side of the histogram represents the shadows, while the right represents the highlights. At the top of each end is a triangle. If the triangle is lit, there is clipping on that side of the histogram. If you click on the arrows, you will activate the clipping overlay on your image, which displays the areas that are clipped. Those areas with a blue overlay are pure black, while the areas with the red overlay are pure white. You can turn the clipping view off again by clicking on one of the triangles. You can also temporarily enable clipping view by holding down the J key at any time. The clipping view is useful when you are making adjusts to the brightness and contrast of your image. (See [“Focus and Clipping Views” on page 25](#), for more information about using the clipping view.)

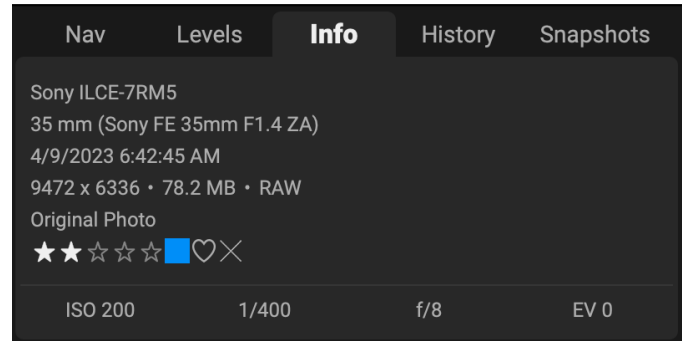


The Histogram pane also displays the RGB values under the cursor at the bottom of the pane.

## THE INFO PANE

The Info pane displays metadata for the current image in an easy-to-read format. This metadata includes camera make and model; lens focal length; capture date and time; file type; ISO setting; shutter speed; aperture; and exposure compensation.

The Info pane also displays file-specific data, including image dimensions and resolution. If any of the metadata fields are unavailable they will be left blank.

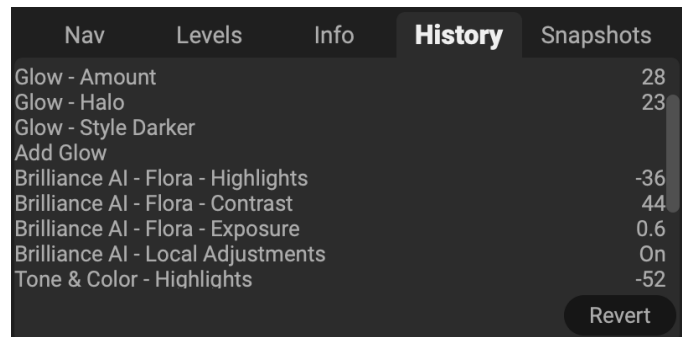


**NOTE:** The Settings Applied section found in earlier versions of Photo RAW now resides in the Layers pane. See [“Viewing Edit module settings for a layer” on page 201.](#)

## THE HISTORY PANE

Photo RAW has a robust Undo capability, which is helpful when you wish to back up a few steps during the editing process. When you want to go back further, it can be tedious to keep pressing Command/Control-Z. That’s where the history pane can be extremely useful. It displays every adjustment made during an editing session.

From the History pane, you can scroll through your edits, all the way back to the state of your photo when you opened it for editing.



As you work, the History pane tracks all of your edits, adding each change you make to the top of the pane. History displays not only the adjustment, but in many cases will display the settings of sliders in the various panes and filters.

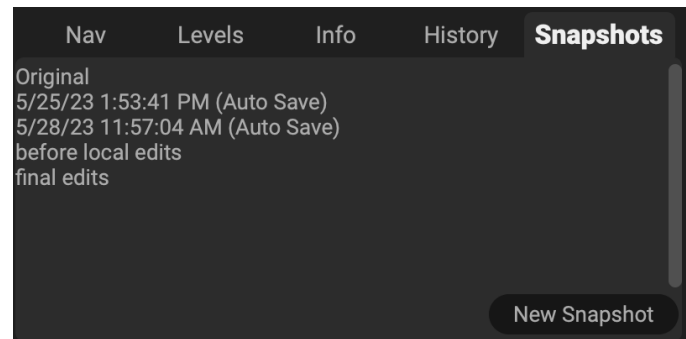
You can scroll through the list, and, if you click on an item, Photo RAW will “roll back” your edits to the spot you clicked. You can click up and down in the list, and, as long as you don’t make any changes, the entire Edit history is preserved. If you roll back to an edit and make a change, the History pane “resets” from that point on, losing any of the edits you made after the point you rolled back.

History is not saved across editing sessions; it is designed to help you refine the edits made during an editing session. If you go back to Browse, open another image for editing from the Filmstrip, or switch to Resize, the History pane resets. If you would like to save your edits based on a specific editing state, use the Snapshots feature, described below.

**TIP:** If you click on an item in the History pane, and you wish to step up or down in the adjustment history from that point, you can use the Undo/Redo commands to quickly go through the list. If you are happy with your edits, click back on the top item in the History pane to preserve the state of the photo.

## THE SNAPSHOTS PANE

Photo RAW's Snapshots function lets you save a photo's editing "state" at any point in the editing process, so that it can be returned to at a later time. When you create a snapshot, it saves all of the current photo's edits as they are in that moment. Once saved, you can get back to that state in the editing process at any time by clicking on the snapshot's name in the pane. You can also create multiple snapshots and move from state to state by clicking on the appropriate snapshot in the list.



*When you create a snapshot, you are saving the state of a photo's edits as it was at that point in the editing process. Clicking on a snapshot in the pane will return you to that state at any time.*

Snapshots can be useful when you wish to save and compare different applications of effects, such as comparing color vs. black-and-white treatments. They're also helpful when you're not quite sure about where to take an edit, and you want to ensure that you can get back to a specific point in the editing process.

### Snapshot basics

The top of the Snapshot pane for each photo will always have an item called "Original," which is the original state of the photo as it was first opened in the Edit module. In addition, at the conclusion of every Edit module session for that photo, Photo RAW will automatically save the final editing state as a snapshot, with the date and time you closed the photo, and an "(Auto Save)" label at the end of the snapshot name.

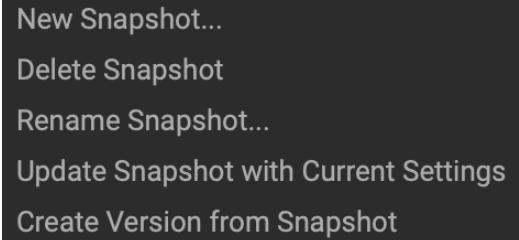
To create your own snapshot, go to the Snapshots tab and click the New Snapshot button. A window will open asking you to name the snapshot; by default, it will be the current date and time, but you can enter any descriptive text you would like. There is no limit to the number of snapshots you can create.

When you wish to return to the editing state defined by a specific snapshot, click that item in the Snapshots pane. You can also move from snapshot to snapshot, which can be helpful for comparing edits. To then get back to where you were at before you clicked a snapshot, choose Undo, or, if you've applied a number of edits from that snapshot state forward, you can use the History pane to roll back to the pre-snapshot state. (Alternatively, you could create a new placeholder snapshot, which would preserve that state, and return to it later.)

### Managing snapshots

There are a few snapshot-management options available, which can be called up by right-clicking on any item in the Snapshots pane. These options include:

- **New Snapshot:** creates a new snapshot with the current editing state.
- **Delete Snapshot:** removes the snapshot permanently from the pane.
- **Rename Snapshot:** renames the snapshot; this includes autosaved snapshots, although Photo RAW preserves the (Auto Save) label.
- **Update Snapshot with Current Settings:** saves the current editing state to the selected snapshot, overwriting the previously saved state.
- **Create Version from Snapshot:** creates a new, virtual copy of the photo, using the snapshot's editing state (see [“Versions” on page 69](#) for more on this feature).

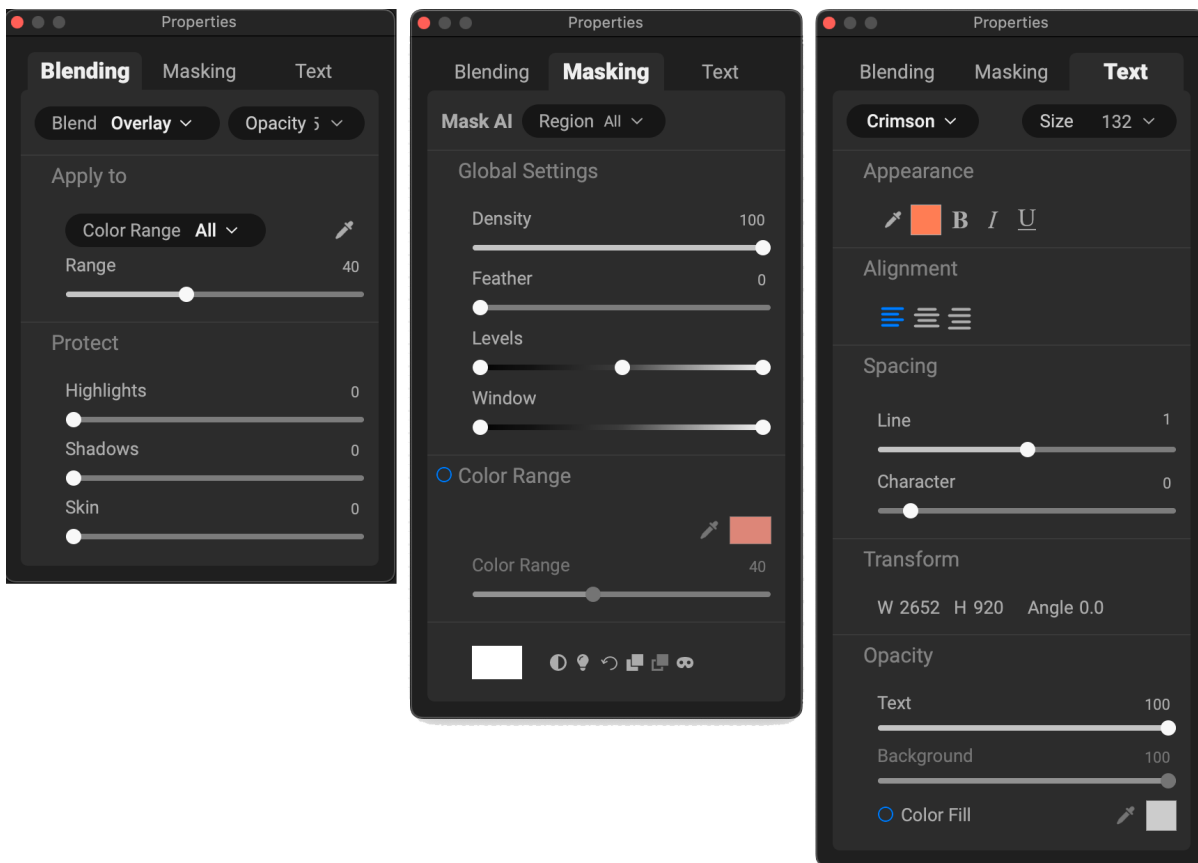


*Right-clicking on an item in the Snapshot pane gives you a list of management options for that snapshot.*

**NOTE:** You can show or hide most of the panes in the Edit module's right-side control panel. See for [page 15](#) for details.

## The Properties Window

The Properties window is used for setting blending modes and masking options throughout the Edit module; and for manipulating Text layers in the Layers pane. By default, it works as a window, but it can also be configured to act as a pane in the Edit module's control panel.



The Properties window is closed by default, but opens when you click on the blend mode icon, when you create or click on a mask, or when you click on or create a text layer.

**NOTE:** For information on using the blending modes, see [page 161](#); the Properties window's masking options are detailed on [page 117](#); text layers are discussed on [page 197](#).

## Configuring the Properties Window

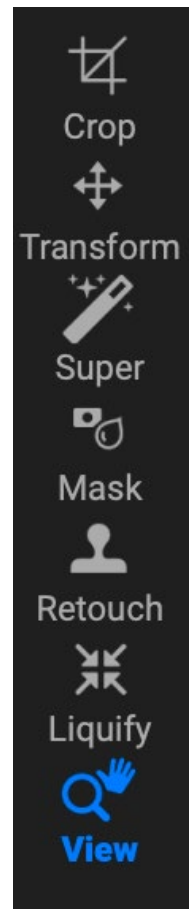
You can configure the Properties window's visibility in a number of ways, via the Windows > Properties submenu in the Edit module:

- The **Show** submenu option turns the pop-up window (or nested pane) on or off. When set to off, the pane will be hidden, but will reappear once a masking tool has been selected.
- The **Nest** submenu option relocates the Properties window to a pane in the left side of the Edit module, above the Layers pane.
- The **Auto Collapse** option collapses either the window or pane to just the tab headings (Blending, Mask, Text). Positioning your mouse over any of the tabs displays the entire pane.

## The Tool Well

The Edit module has 19 tools that are accessible via the Tool Well on the left side of the screen. Some tools—Crop, Transform, Super Select AI, and View—are self-contained within the tool icons. Others—Mask, Retouch, and Liquify—are nested within a tool group and are accessible via the Tool Options bar at the top of the screen when you click on one of those tool icons.

- **Crop Tool:** Trims an image to your desired size or ratio. *Shortcut key: C*
- **Transform (Move) Tool:** Moves and changes the size and rotation of your layer. *Shortcut key: V*
- **Super Select AI Tool:** Lets you select regions in an image by clicking on them and then applies Effects filters or local adjustments automatically to those regions. *Shortcut key: K*
- **Masking Brush (Mask group):** Mask large similar areas quickly. (Includes Perfect Brush option.) *Shortcut key: B*
- **Gradient Mask (Mask group):** Applies a selective gradient as a mask in any filter (or to the entire stack). *Shortcut key: M*
- **Quick Mask AI Brush (Mask group):** Similar in operation to the Super Select AI tool, this tool generates masks by clicking on regions in a photo. *Shortcut key: W*
- **Quick Mask Brush (Mask group):** Create high-quality masks with only a few strokes as guidance. *Shortcut key: Command-Option-Shift W (Mac); Control-alt-Shift W (Windows)*
- **Line Mask Tool (Mask group):** Create masks using straight lines, with the capability to add curves and adjust mask points on the fly. *Shortcut key: Shift-P*



- **Refine Brush (Mask group):** Lets you refine an existing mask's edges, to help mask difficult areas, such as hair. *Shortcut key: N*
- **Chisel Brush (Mask group):** Removes fringes from the edge of a mask. *Shortcut key: Shift-H*
- **Blur Brush (Mask group):** Blurs the edges of a masked area to help it blend more naturally. *Shortcut key: L*
- **Healing Brush (Retouch group):** Non-destructively removes distractions from a photo using content-aware fill technology. *Shortcut key: Q*
- **Perfect Eraser (Retouch group):** Removes distractions like signs and power lines. *Shortcut key: Shift-Q*
- **Retouch Brush (Retouch group):** Removes blemishes like dust spots and acne. (Includes Perfect Brush option.) *Shortcut key: R*
- **Clone Stamp (Retouch group):** Paints over an area from another area. *Shortcut key: Shift-S*
- **Push Tool (Liquify group):** Lets you push or warp areas of your photo with a brush in a manner similar to finger-painting. *Shortcut key: Shift-L*
- **Bloat Tool (Liquify group):** Warps the brushed area and slightly enlarges that region. *Shortcut key: Option-L*
- **Pinch Tool (Liquify group):** Warps the brushed area and slightly shrinks that region. *Shortcut key: Shift-Option-L*
- **View Tool:** Adjusts the magnification of the image in the Preview area, and lets you move around the Preview window. *Shortcut key: Z*

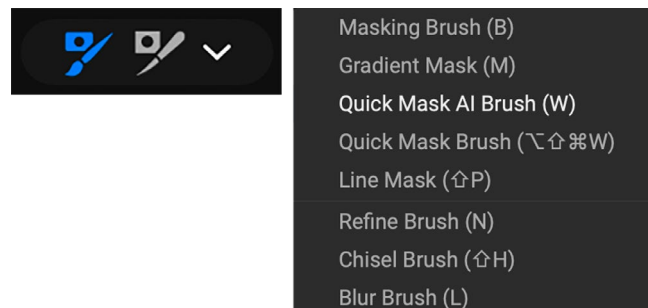
**NOTE:** The Text tool found in earlier versions of Photo RAW has been removed from the 2024 version. Text operations are now created via the Layers panel, as a new Text layer type. See [page 197](#) for complete information on how to work with text in Photo RAW.

## ACCESSING AND USING TOOLS

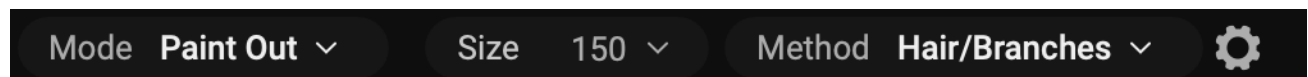
To access a tool, click on the tool or use the shortcut key for that tool. When selected, the cursor will change, and you will see the tool icon and a set of options for the tool in the Tool Options bar above the Preview window. (The tool will be highlighted in your system's accent color.)

If the selected tool is part of a tool group, the first tool in the pair is the primary tool for that group:

Masking Brush for the Mask group, Healing Brush for the Retouch group, and the Push tool for the Liquify group. Other tools in that group will be visible in the drop-down menu next to the primary tool.



*The options bar for the tool groups—like the Masking Tool group shown here—will display the primary tool (Masking Brush in this instance) for the group. To select a different tool in the group, click the drop-down menu and select that tool.*



*Each tool in Photo RAW—with the exception of the View tool—has an Options Bar, where you can adjust the settings for that tool. Shown here are the options for the Retouch Brush.*



## ADJUSTING TOOL SIZING PARAMETERS

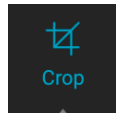
When using tools that have Size and Feather options, you have multiple ways to adjust those parameters:

- In the Options Bar for each of those tools, you can use the slider in the Size and Feather fields to increase or decrease the amount.
- You can use the left and right bracket keys on your keyboard – ‘ [ ’ and ‘ ] ’ – to adjust the size; additionally, hold down the Shift key to adjust the feather.
- You can also use your mouse’s scroll wheel (see [page 15](#)). Press Command-Option (Mac) or Control-Alt (Windows) and scroll to change the brush size. To change the feather, press Option-Shift (Mac) or Alt-Shift (Windows).
- You can also use your pressure-sensitive tablet, if you have one. Settings to turn that option on will be found in the Tool Options bar’s Gear menu for the tool.

# Standalone Tools

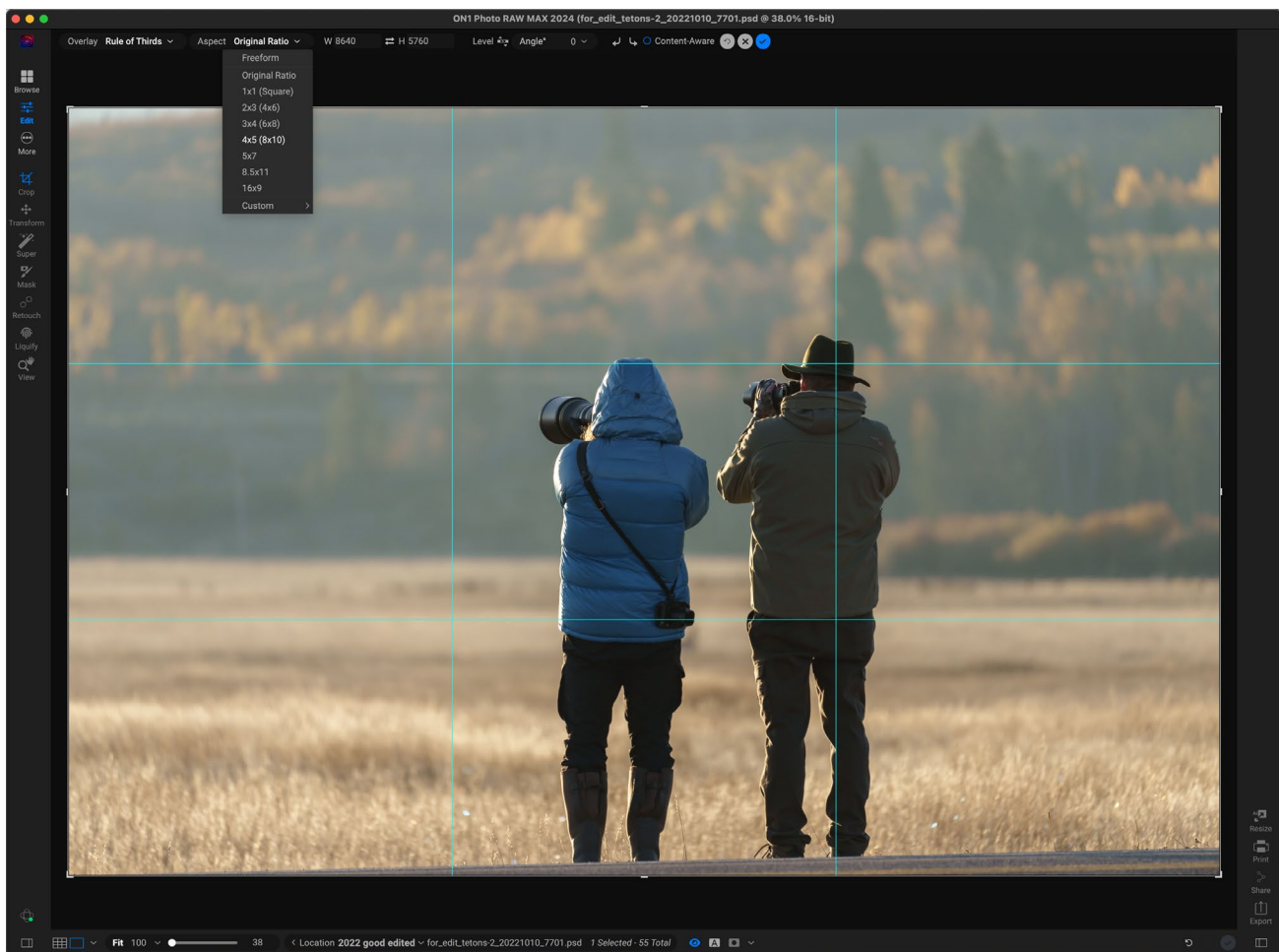
The standalone tools, Crop, Transform, Super Select AI, and View, perform a single task inside Photo RAW.

## CROP TOOL



This tool lets you crop your image, and is fully non-destructive in the Edit module. The tool also has a content-aware option that lets you expand the photo canvas, filling the edges of a photo's frame with realistic detail.

To crop an image without content-aware fill, select the Crop tool from the Tool Well, which will display the crop overlay. Select any preset crop ratio you would like to use from the Options bar — the default is Freeform, which lets you crop in whatever size or ratio you would like. Choosing a preset size (like 4x6) will display the crop overlay at that chosen aspect ratio.



The Crop interface, with a Rule of Thirds overlay and the Crop Preset pop-up open.

Adjust the corner handles of the crop overlay to get the area you wish. (The area outside the crop box appears darkened for guidance.) You can resize and move the image inside the crop box. When you are satisfied with your settings, press the Apply button in the Options bar or press Enter.

To move the image inside the crop box, simply click and drag inside the box. You can also nudge the image using the arrow keys on your keyboard. To resize the crop box, click and drag on any of the handles. Clicking on a corner handle allows you to adjust two sides at the same time; clicking on a side handle allows

you to adjust that side. If you hold the Shift key down while adjusting the size, the box's proportions are maintained. To rotate the crop box, move outside a corner until the tool changes to rotate.

To straighten an image, you can use the Leveling Tool, which is found in the Tool Options bar when the Crop Tool is active. Click on it, and drag the tool across an element in your image that should be level.

## Content-aware cropping

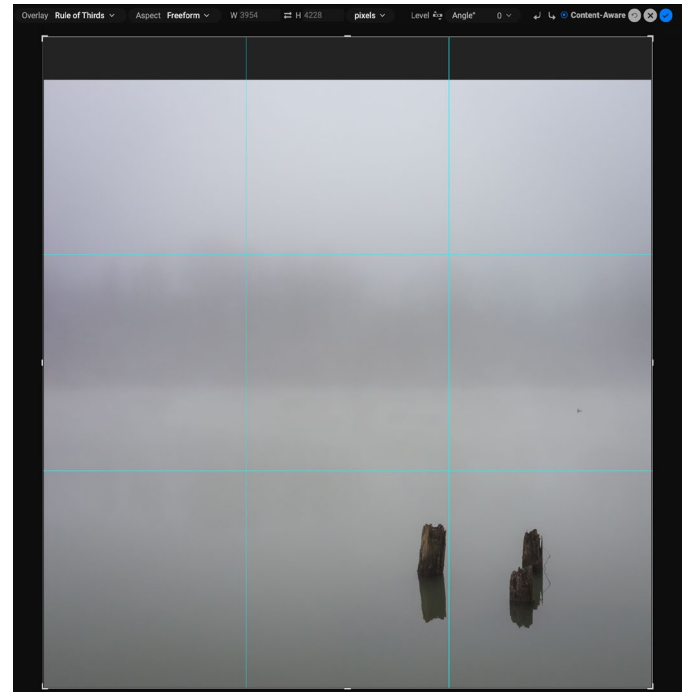
The content-aware feature lets you extend the crop beyond the edges of the frame. To use this, click the Content-Aware option in the Tool Options bar, and move the crop handle past the desired edge. When you click Apply, Photo RAW will fill the expanded area with detail based on the content along the existing edge.

## Crop overlays

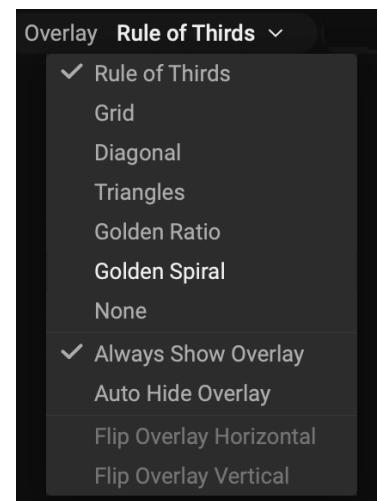
When you select the Crop tool, Photo RAW has the option to display guidelines as an overlay on top of your photo. These overlays can be used as compositional aids for cropping. Photo RAW includes a number of overlays that you can display during a crop session, and they can be accessed from the overlay pop-up menu in the Tool Options bar when the Crop tool is active. There are seven options – Rule of Thirds, Grid, Diagonal, Triangles, Golden Ratio, Golden Spiral, and None – and you can easily go back and forth between them as desired while cropping.

In addition to overlay type, there are two other sets of options in the pop-up menu:

- You can choose to have the overlay displayed all the time during a crop session, or to have Photo RAW only display the overlay when your cursor is in the preview area of the workspace.
- When working with the Triangles or the Golden Spiral overlays, the Flip Overlay options will be visible, letting you flip the orientation of the overlays horizontally (Golden Spiral only) or vertically (Golden Spiral and Triangles).

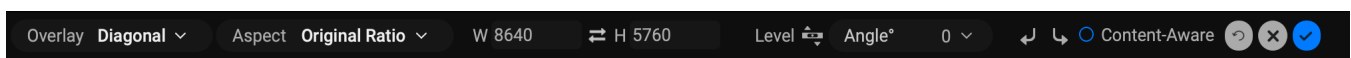


When you select the Content-Aware option in the Tool Options bar, you can extend the canvas beyond the boundaries of the existing photo. Clicking Apply will fill the area based on the characteristics of the edges in the photo.



The Crop Overlay pop-up includes seven options for setting and displaying overlays.

## Crop Tool Options Bar:

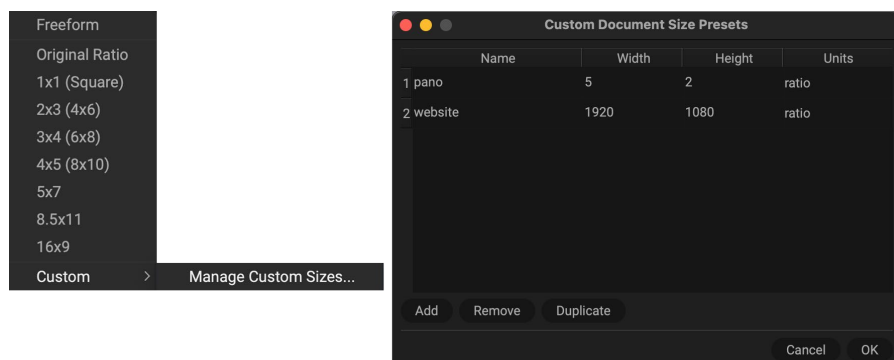


- **Overlay pop-up:** Selects a crop overlay, sets overlay visibility, and flips the overlay.

- **Preset pop-up:** Lets you choose from Freeform, constrained or custom preset ratios.
- **Width:** Sets the width of the crop box.
- **Swap Dimensions:** Swaps the width and height. Handy for rotating the crop box.
- **Height:** Sets the height of the crop box.
- **Leveling Tool:** Click and drag this tool across an element in your image that should be level.
- **Angle:** See and adjust the angle of rotation.
- **Rotation tools:** Rotates the photo 90° clockwise or counterclockwise.
- **Reset:** Resets the crop area to the size of your original photo.
- **Cancel:** Cancels the crop application.
- **Apply:** Applies the crop.
- **Content-Aware:** When clicked, will expand the canvas size, filling the edges of the photo with new detail, based on the area next to the expanded space.

## Creating custom crop sizes

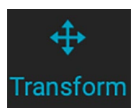
In addition to the preset crop ratios provided, you can create your own custom crop sizes. The bottom of the crop preset pop-up menu has a Custom submenu, which lists all of your custom ratios. To add a size, choose Manage Custom Sizes from the submenu. To add a new ratio, click the Add button, then enter a name, and the width and height ratio you wish to create (the units will always be “ratio” when you create a custom preset for the Crop tool). You can add as many as you’d like and click OK. The new crop ratios will appear in the Custom submenu.



*The bottom of the preset pop-up (above left) has a list of custom crop ratios that you can use in addition to the preset ratios. You can create your own presets via the Manage Custom Sizes submenu option, which opens the Custom Document Size Presets window (above right).*

**NOTE:** The Crop tool in the Edit module is non-destructive, while the one in Resize works destructively. Both modules can create custom crop presets, but the tool in Edit works solely as a crop ratio and has the label “ratio” in the Units column. If you change one of those preset sizes from “ratio” to a specific unit of measurement in Resize (such as “inches”) it will no longer be visible in the Edit module’s Crop tool Custom pop-up.

## TRANSFORM (MOVE) TOOL



The Transform tool is a layer-specific tool, used to manipulate the contents of a layer. It works even if the only layer you have is the base photo layer. A layer may be repositioned, sized or rotated using the Transform Tool. When the tool is selected, handles will appear on the edges

of the selected layer. You use these handles to manipulate the image. When you are done, click the Apply button in the Tool Options bar.

The Transform tool is layer-dependent, and each document layer can have its own transform operations. It is useful when compositing photos, or applying backgrounds and textures in a multi-layered file. The Transform tool is disabled when using Photo RAW as a plug-in.

## Repositioning a layer

To reposition a layer, simply click and drag inside the transform box. You can also use the keyboard arrow keys to nudge a layer one pixel in any direction.

## Resizing a layer

To resize a layer, click and drag on any of the transform handles. Clicking on a corner handle allows you to adjust two sides simultaneously. Clicking on a side handle allows you to adjust that side. If you hold the shift key down while adjusting the size, the proportions of the layer are maintained. If you hold down the Option (MacOS) or Alt (Windows) key while resizing, your image will resize from the center instead of from the edge. You can hold down Shift-Option (or Shift-Alt) to resize proportionally from the center.

You can type in the size you desire in the Tool Options bar (see below) in the width and height fields. You can also size a layer to fill the canvas automatically by pressing the Fill button in the Options Bar.

## Rotating a layer

To rotate a layer, move the Transform Tool just outside a corner transform handle. Notice that the tool cursor changes to a rotate cursor. Now click and drag to rotate the layer. You can also use the opt (alt) left and right arrow keys to rotate a layer when the transform tool is selected. To rotate the layer quickly in 90 degree increments, you can use the rotate left and rotate right buttons in the Tool Options bar.

## Flipping a layer

You can flip a layer either horizontally or vertically by pressing the flip buttons in the Tool Options bar.

When you have completed your transforms you need to commit the changes. You can do this by pressing the Apply button that appears in the Tool Options bar or by pressing the Enter key. You can cancel a transform by pressing the Cancel button in the Tool Options bar or by pressing the Escape key.

## Restoring a layer after a move

The Reset All command inside the Edit module will not reset transforms made with the Move tool. To reset your layer to its original, non-transformed state, click the Move tool and adjust any rotation you might have made, as well as any flip operations. Then choose the Fit to Canvas button.

## Transform Tool Options Bar



- **Width:** Changes the width of the layer, in pixels.
- **Height:** Changes the height of the layer, in pixels.
- **Scale:** Proportionally scales the layer, in percentage.

- **Rotation:** Rotates the layer, by degrees.
- **Rotate Left/Right buttons:** Rotates the layer 90° clockwise or counterclockwise.
- **Flip Horizontal/Vertical buttons:** Flips the horizontal or vertical axis.
- **Fill Canvas button:** Scales the layer contents to fit the document size.

## SUPER SELECT AI TOOL



The Super Select AI tool is a specialized selection tool that lets you make a selection (or multiple selections) and automatically apply a local adjustment or any Effects filter to the selected area.

To use this tool, select it from the Tool Well and move your cursor over the photo. As you move around the photo, Photo RAW will display the various regions in your photo as red overlays; clicking on a region will create a selection and change the overlay for that area from red to blue. If there are additional regions you wish to select, hover over the new area and click. To remove a selection, click on it a second time.

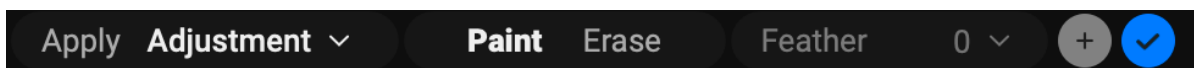
When you have completed your selection, choose an option from the Apply pop-up menu in the Tool Options bar. The menu includes a Local Adjustment option, as well as all of the filters found in the Effects tab. Each option in the Apply menu includes all of the styles for that local adjustment or filter. You can see the effects of each option in real time on your photo as you scroll over each of the items. When you've selected your editing option, click Add, and Photo RAW will create that local adjustment or filter — in either the Local or Effects tabs — and apply the adjustment to the chosen selection.

If you would like to add another filter or local adjustment to the photo, you can make a new selection and choose the effect you wish to apply. Clicking Add will add that enhancement to the photo. When you are finished adding adjustments, click the Done button; the Super Select AI tool will be deselected, and Photo RAW will choose the Zoom tool.

The Mode menu in the Super Select AI Tool Options bar has two options: Paint In or Paint Out. Paint In will apply the final adjustment to the selection you created with the tool, while Paint Out will apply the adjustment to the areas to the inverse of the selection (i.e. the areas that *have not* been selected).

While the masks created by the Super Select AI are generated automatically, they operate like any other mask created in Photo RAW. This means you can use any of the other masking and mask-refinement tools to adjust and refine the finished masks. (See [“Masking Basics” on page 115](#) for more.)

### Super Select AI Tool Options bar

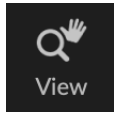


- **Apply:** For choosing the local adjustment style (Local tab) or the Effects filter and style to be applied.
- **Mode:** Sets the masking mode for selections when using the Super Select AI tool. Paint In means that the local adjustment or filter will be applied to the selection; Paint Out means that the adjustment or filter will be applied to all areas in a photo except for the selection.
- **Feather:** After you have added an adjustment or filter (by clicking on the Add button), this option will apply a feather to the edges of the selection.



- **Add:** Creates the adjustment layer or the Effects filter based on the current selection.
- **Done:** Quits the tool and selects the Zoom tool.

## VIEW (ZOOM) TOOL



This is the default tool selected when opening an image in the Edit module. It adjusts the magnification of the image in the Preview window. With the Zoom tool selected, click in the Preview window to zoom in and center the image at the location clicked. Hold down the Option/Alt key to display the Hand tool, which lets you pan around the magnified image. You can also double-click the Zoom tool in the Tool well to set the image to 1:1 (or 100%) magnification view, which shows every pixel. This is best when examining small details.

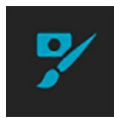
The View tool has no tool options bar; you can adjust the zoom level via keyboard shortcuts (Command/Control + or Command/Control -) or the Preview Size selector at the bottom of the main window.

# Masking Tools

The Mask tool group has a total of eight tools, designed to help create and refine selections. Depending upon the complexity of the masks you are trying to create and manipulate, you will often use multiple tools to get achieve the perfect mask.

We go into much more detail later in the guide, but, at its simplest level, a mask shows or hides the effect of the filter or adjustment. Masks have no color: they are grayscale, and the tones range from pure white to pure black. A mask that is completely white displays the entirety of the effect being used, a mask that is completely black hides that effect. Shades of gray are in effect the opacity of the mask. Darker shades reduce the effect, lighter shades let more of it through. For more complete information on masking and mask refinement, see [“Masking Basics” on page 115](#).

## MASKING BRUSH



The Masking Brush is one of two tools used for masking filters in Effects and creating masks in Layers. Selected, the Masking Brush cursor looks like two concentric circles, one representing the inner hard edge of the brush, the other, the soft outer, feathered edge of the brush. At the center of the brush is either a plus or minus. The plus means that you are painting “in” a filter’s effect, while minus means the brush mode is set to paint out.

### Masking Brush Tool Options Bar



The first icon is for the Masking Brush Options. Clicking on that displays a pop-up menu that contains all of the options available for the tool (see [page 98](#) for more). The five remaining items in the options bar are the most common tasks used with the Masking Brush, and include:

- **Brush Size:** You can control the size of the brush using the Size pop-up. Use a small brush at high magnification for precise work, and a large brush at fit to screen for general work.
- **Feather:** You control the amount of feathering—or hardness—of the brush by using the Feather pop-up in the Tool Options bar. The feather has a range from 1 to 100 percent. Use a small feather at high magnification for precise, hard-edged work and a large, soft-edged brush in Fit to screen mode for general work. You can visually see your feather by watching the outer concentric circle of the brush tool.
- **Opacity:** This controls the transparency of the brush, and ranges from 1 to 100 percent. You use a high opacity to paint quickly and hide large areas. You use a lower opacity for blending areas together or for subtle work. You can also control the opacity with a pressure-sensitive tablet, or by pressing Option (Mac) or Alt (Windows) and one of the number keys on your keyboard. Each number represents an opacity percentage from 10% (1) to 100% (0).

**TIP:** Think of the opacity as the shade of gray you are painting onto your mask. White in a mask represents 100% of an effect and black (0%) represents no effect, and opacity settings in between will show a percentage of the effect.

- **Paint Mode:** There are two modes, Paint and Erase, and they control whether you are painting in (restoring the effect) or painting out (hiding the effect), respectively. You can tell your current mode by looking at the plus or minus icon in the center of the brush. If the icon is minus, you are painting out (Erase), and if the icon is a plus, you are painting in (Paint). You can change the mode in the Tool Options bar, by pressing the X key, or by holding down the Option (Mac) or Alt (Windows) key temporarily.

To invert the mask (turn it from black to white), in order to paint a filter's effect into your image choose Invert Mask from the Mask Properties window.

- **Perfect Brush:** The Perfect Brush incorporates an automatic edge-detection technology to help create precise selections and masks. When you turn the option on—by clicking on the Perfect Brush icon in the Options bar—the Masking Brush collects the colors under the center of the brush and applies the effect only to those colors. This protects the adjustment from being applied across edges, such as tree branches.



Perfect Brush icon.

## MASKING BRUSH OPTIONS MENU

The Masking Brush Options pop-up menu has six sections, Styles, Properties, Shape, Perfect Brush, Manual Spacing and Pressure:

### Styles

The Style pop-up lets you save the current brush state for use at another time. Selecting a saved item from the menu will open that saved brush's characteristics.

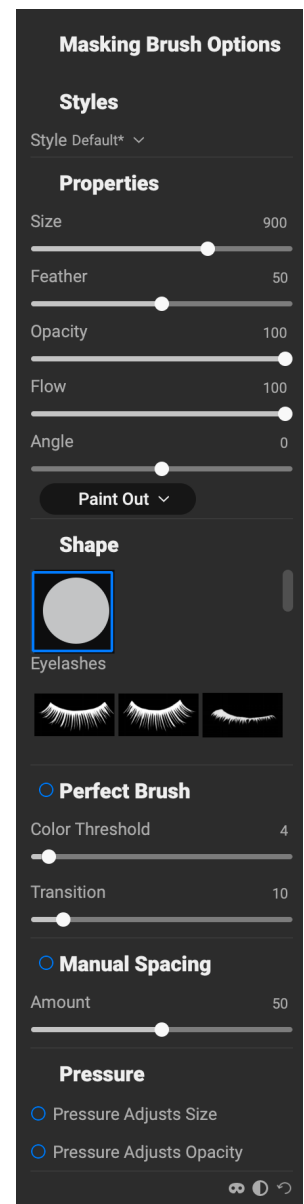
### Properties

The properties section mirrors the Size, Feather, and Opacity options in the main tool options bar, as well as the current Paint Mode setting. Two additional options are also available, Flow and Angle:

- **Flow:** The rate at which the brush is applied, up to the Opacity setting. With a low flow number, as you brush back and forth, the brush color will build up to the Opacity setting. At 100, the brush stroke is applied at the Opacity setting.
- **Angle:** This sets the angle of the current brush shape. For the default, round brush shape, this setting has no effect; it is more useful when working with custom brush shapes (see below). You can also rotate the brush shape by pressing Shift-Option (Mac) or Shift-Control (Windows) and the left or right bracket keys ('[' or ']').

### Shape

The Shape menu displays a list of all custom brush shapes in your library. The top item in the list is the default, round brush, which is the standard brush for working with masks in the Edit module. Custom brush shapes can be useful when you want to create specialized creations or enhanced photos: you can paint in stamps, watermarks, and other shapes in the Edit module's Local Adjustments tab.



For example, you could use a custom cloud brush to add interest to a lackluster sky, or you could create your own watermark and apply it precisely.

For more on using custom brushes in Photo RAW, see [“Using Custom Brushes to Add Overlays To Photos” on page 153](#).

## Perfect Brush

You can tune Photo RAW’s Perfect Brush settings via the Threshold and Transition options:

- **Color Threshold:** This option lets you control the balance between keep and drop colors, based on the area you are working on. For example, you may want the Perfect Brush to be very precise and only paint away very similar colors, while at other times you want it to paint away a broad range of colors in the same neighborhood.
- **Transition:** This slider controls the feather of the Perfect Brush based on color. To create a soft edge, increase the transition. To create a harder edge, decrease the transition amount.

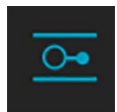
## Manual Spacing

When checked, this sets the spacing of the brush tip as you apply a stroke. This is primarily used when painting with custom brushes. See [“Using Custom Brushes to Add Overlays” on page 153](#) for information on how to use this setting.

## Pressure options

Photo RAW supports pressure-sensitive tablets with the Masking Brush. You can enable pressure sensitive controls for the brush size, brush opacity, or both simultaneously. To turn this support on, click on the gear icon in the Tool Options bar. You can activate pressure sensitivity for both size and opacity by clicking the appropriate buttons in the drop-down menu.

## GRADIENT MASK

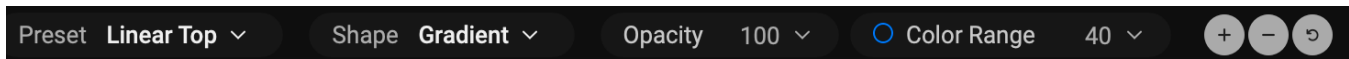


The Gradient Mask is used for blending masks and layers by creating radial, gradient and reflected gradient mask shapes. It works in a similar manner to the Adjustable Gradient tool in the Local Adjustments pane. The mask goes from dark to light in tone, applying more of the adjustment where the gradient is lighter, and less of the adjustment where the gradient’s tone is dark. The most common use of gradient masks is to darken the sky in an image, while preserving the brightness of the foreground, similar to using a gradient filter on your camera lens, or to adjust the effect of a filter mask in Effects.

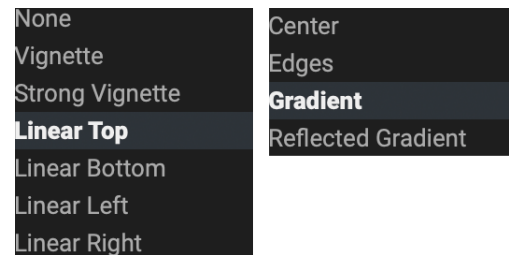
To apply a standard gradient to a filter in Effects, a local adjustment, or a layer, click on the Gradient Mask in the Tool well, then click in the image roughly where you wish the gradient to go. You’ll see the outline of the gradient, which is called a bug. You can use the handles on the bug to move your gradient around, increase or decrease the length of the gradient, or rotate it. You can also create (and delete) multiple masking bugs.

You can change the gradient shape via the Tool Options bar: in addition to the standard dark-to-light horizontal gradient, you can also create a circular gradient and a reflected gradient, which is like the horizontal gradient, but goes from black (no effect) at the outer edges to white (full effect) in the center.

## Gradient Mask Tool Options



- **Preset:** The preset pop-up includes six settings for the bug's mask (vignette, strong vignette, top down, bottom up, and linear left and right), and changes the current bug (if there is one) to match the preset.
- **Shape:** The shape pop-up controls the shape of the bug. In addition to the standard Gradient and the Reflected Gradient, there are two radial shapes: Center, which puts the light tones at the center and the dark tones on the outside of the mask, and Edges, which sets the gradient in the opposite direction.
- **Opacity:** Sets the maximum density of the mask.
- **Color Range:** When enabled, this detects the color under the gradient and applies the mask to only that color range. The higher the number, the wider the range of color that is selected.
- **Add:** Adds a new gradient using the current settings.
- **Delete:** Deletes the current gradient.
- **Reset:** Resets the mask on the layer completely. This removes all gradients and clears any brushing that has been done.

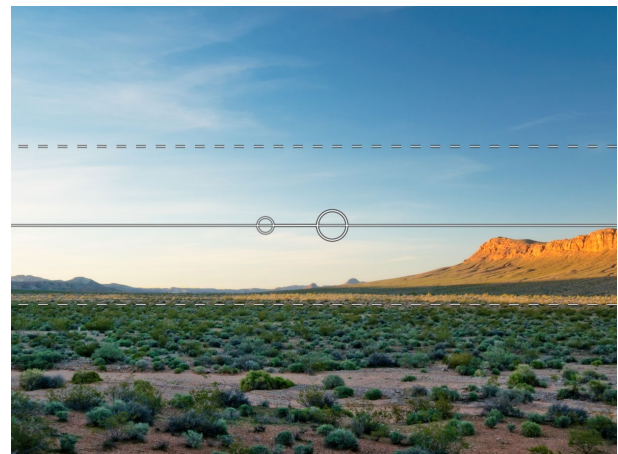


The Preset (left) and the Shape (right) options for the Gradient Mask tool.

## Manipulating a gradient mask

Once you've added a gradient to an image, you can modify it easily by accessing the following parts of the gradient overlay:

- To move a gradient, click on the large circle at the center of the gradient and drag.
- To resize a radial gradient, click and drag on the solid line.
- To adjust the feather (or hardness) of the mask, click and drag along the dashed line.
- To rotate the mask, click on the smaller circle near the center of the gradient and drag it up or down.



## Working with multiple masking bugs

You can have up to six masking bugs per layer. Each bug is re-editable. To add another masking bug, press the Add button or click outside of the current bug while the Gradient Mask tool is selected.

Only one masking bug may be adjusted at a time. You will see the overlay controls for the active bug while your mouse is over the preview area. Inactive bugs are marked with a small circle; to select an inactive bug clicking on this small circle marker.

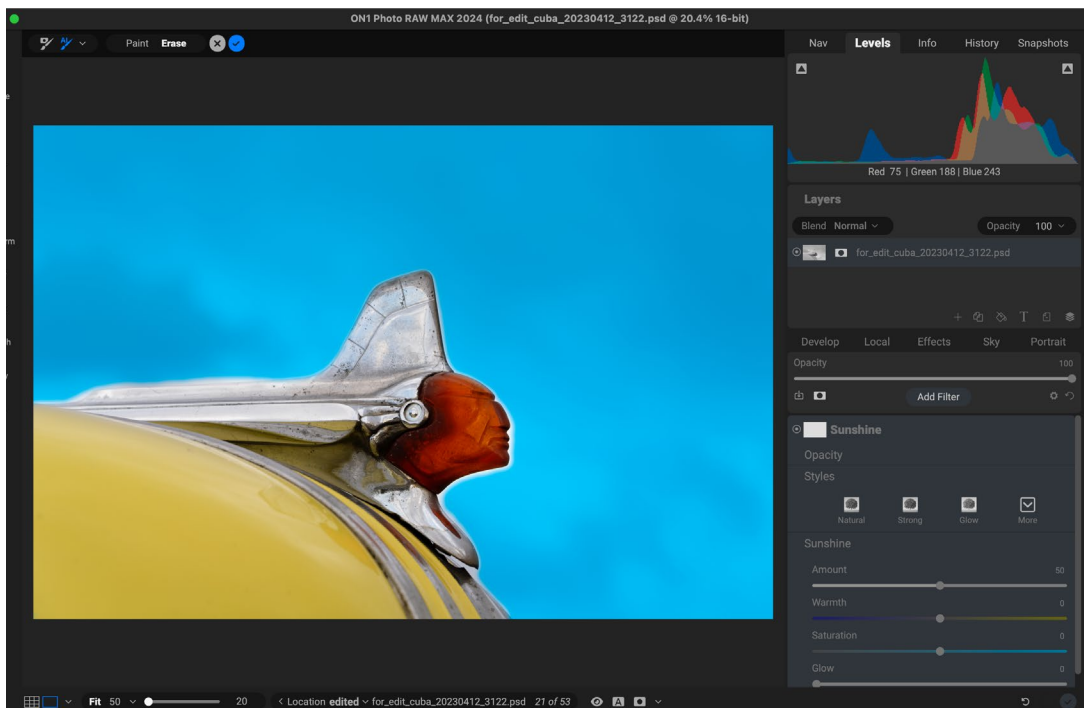
Masking bugs are subtractive. Each bug hides more and more of the current layer. When masking bugs overlay each other they may hide more of the layer too. You can always use the Masking Brush to override and paint back in areas hidden by the masking bugs.

## QUICK MASK AI BRUSH



The Quick Mask AI brush is functionally similar to the Super Select AI tool, but it is intended to create selections for the current filter, local adjustment, or layer – all it does it create a mask for that item. It does not create a new filter pane or local adjustment layer.

To use the Quick Mask brush, first create a filter in Effects, a local adjustment layer in the Local Tab, or the master layer mask, select the tool, and move your cursor over the photo. As you move around the photo, Photo RAW will display the various regions in your photo as red overlays; clicking on a region will create a selection and change the overlay for that area from red to blue. If there are additional regions you wish to select, hover over the new area and click. To remove a selection, click on it a second time.



*The Quick Mask AI brush is designed to be used when you have created a filter pane in Effects, a local adjustment in the Local tab, or a separate layer in Photo RAW. Here, a Sunshine filter has been applied to this image. To keep the sky from being affected by the filter, we have used the Quick Mask AI brush to select the sky and chosen Erase from the options bar to mask out the sky. Clicking Done will create a mask with the sky removed.*

The Quick Mask AI Options bar has two options: Paint or Erase. Paint will apply the final adjustment to the selection you created with the tool, while Erase will apply the adjustment to the areas to the inverse of the selection (i.e. the areas that *have not* been selected). Clicking the checkmark button will create the mask and select the Refine Brush so you can fine-tune the mask.

While the masks created by the Quick Mask tool are generated automatically, they function like any other mask created in Photo RAW. This means you can use the other masking tools to adjust and refine the finished masks. This also includes the Mask Control options found in the Masking tab of the Properties window (see [“Masking Basics” on page 115](#) and [“Masking control options” on page 117](#)).

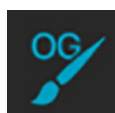


## Quick Mask AI Brush Options bar



- **Mode Selector:** Paint means that the mask will be applied to the selection; Erase means that the adjustment or filter will be applied to all areas in a photo except for the selection.
- **Cancel:** Cancels the operation, deselecting the tool and selecting the Zoom tool.
- **Done:** Creates the mask and selects the Refine brush.

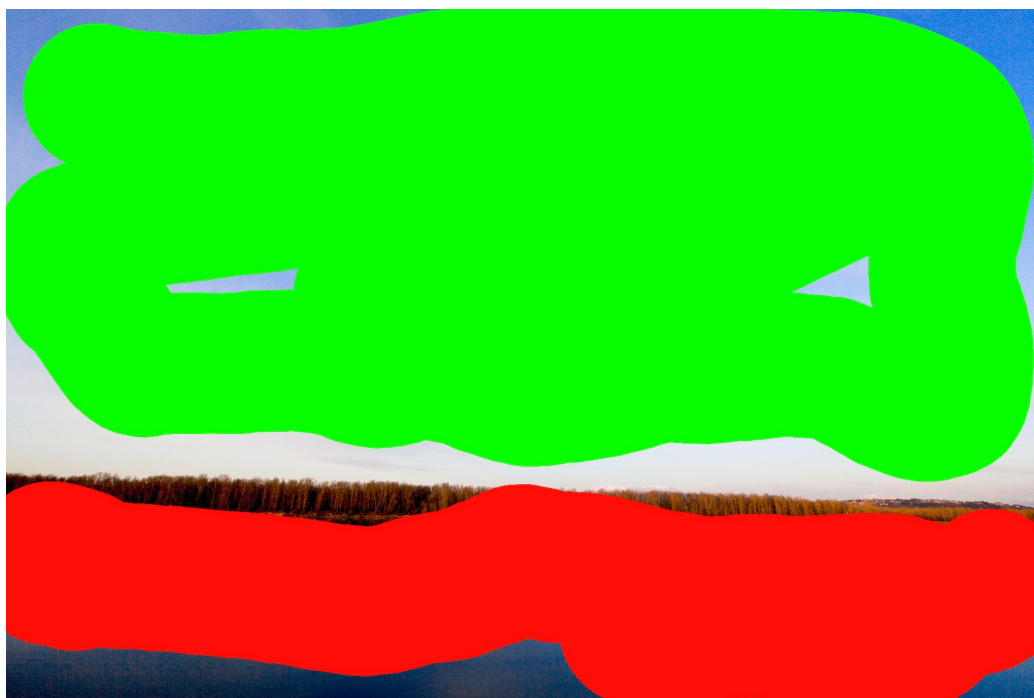
## QUICK MASK BRUSH



Powered by machine learning, the Quick Mask brush creates high-quality masks with just a few strokes. To use it, you paint areas you want to keep in green and areas you want to drop in red. Photo RAW analyses the color, tone and texture of the marked regions to learn what you want to make out and then automatically finds the edges and creates the mask for you. Use it with layers to replace skies or with filters to selectively apply them.

You can use this tool on a filter in Effects, a local adjustment, or on a layer. If you wish to use it on a filter, to mask some of the filter's effects out of your photo, add the filter in Effects, and select the Quick Mask Brush. To use it on a layer, select the layer. In both cases, you'll follow these steps:

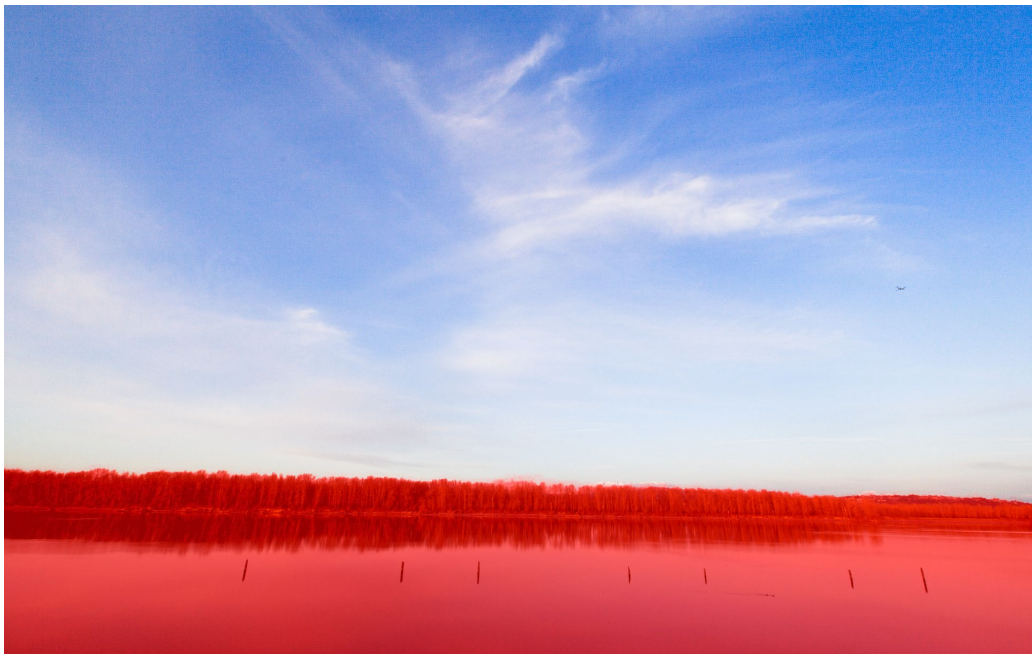
1. First, you need to give the tool guidance as to what you want to keep and drop. This is done by loosely painting over the regions in your photo. There is no need to precisely paint the entire photo: just a few representative strokes of red and green are all that are needed. Paint with Drop mode—which is the default brushing mode—over the portions of your image that you want to remove. These brushstrokes will appear in red. Then change the tool's mode to Keep (via the Tool Options bar, or by holding the Option/Alt key) and paint over the areas you want to keep. These strokes will show up as green.



2. Now press the Apply button in either the Tool Options bar or the Original Quick Mask HUD. This will generate a temporary mask to preview the results. Areas that are filled with red will be masked out, areas in green will remain. Keep in mind the edges will appear rough at this point and will be smoothed out when you generate the final mask.

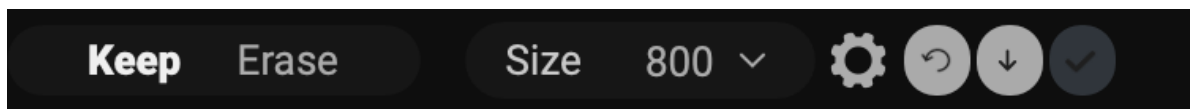


3. If the preview results look good, press the Done button in the Tool Options bar or the Original Quick Mask HUD. If there are areas that are incorrect, you can continue to improve the results by adding more Keep and Drop strokes. Press Apply each time to preview the improved results. When you press Done, the edges are refined with high precision and ON1 Photo RAW switches to the Refine Mask tool.



*Once you click on the Done button, Photo RAW will create the finished mask (shown here as a red overlay), applied to the current filter. You can manipulate the mask further with any of the refine mask tools.*

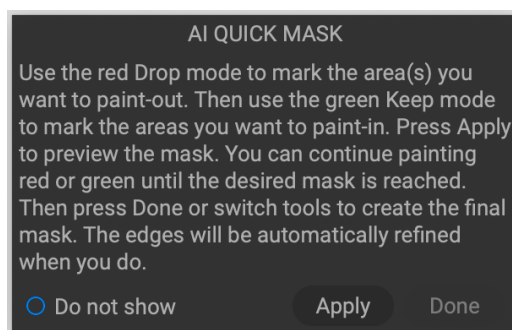
## Quick Mask Brush Options Bar



- **Mode Selector:** Paint means that the mask will be applied to the selection; Erase means that the adjustment or filter will be applied to all areas in a photo except for the selection.
- **Brush Size:** Controls the size of the brush. Use a small brush at high magnification for precise work, and a large brush at fit to screen for general work.

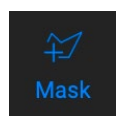
Further settings for the Quick Mask brush can be found by clicking on the gear icon in the Tool Options bar. There, you can set the following options (shown right):

- **Pressure Adjusts Size:** This option lets you control the size of the brush using a pressure sensitive tablet. The harder you press, the larger the brush becomes up to the current setting of the size slider.
- **Refine Edge:** Applies the Refine Mask brush automatically to the edge of the resulting mask, creating a more natural transition. This the default and is recommended for most photos.
- **Show HUD:** This displays the Quick Mask Brush's HUD dialog, which provides guidance on how to use the tool.
- **Overlay:** Sets the transparency of the red and green mask overlays on top of your image. A setting of 100 displays only the mask; the default is 50.



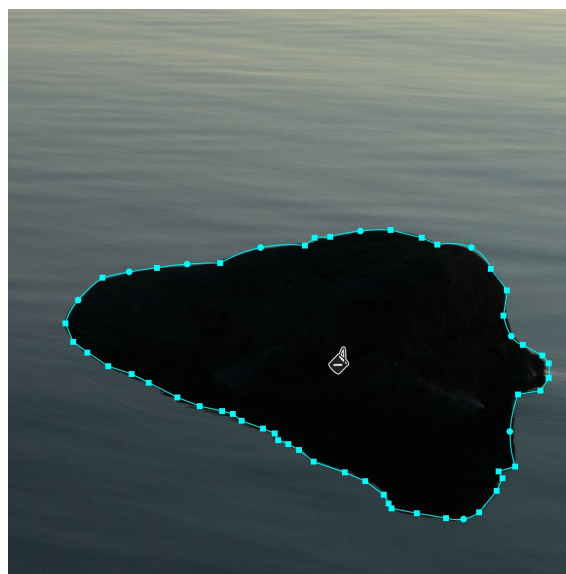
*The Quick Mask Brush HUD gives displays instructions for using the tool. You can turn the HUD off via the Gear menu in the tool options bar.*

## LINE MASK TOOL



The Line Mask tool lets you create masks by drawing straight lines in your image, with the added flexibility of letting you adjust each individual line segment into curves to better fit the object you want to mask. Masks created with this tool are re-editable, can be copied and pasted like any other mask inside Photo RAW, and you can have multiple Line Mask selections for each mask.

To start, you click and drag along the outline of the area you wish to mask. Clicking your mouse button (or with a pen and tablet) adds a point to the line; you can continue to click along the edges of your desired selection, and the tool will add points along the way. These points will be represented by a small square. When you're finished, hover your cursor over the first point and click on it to close the path created by the tool. This will close the selection and change the cursor to a paint bucket icon; click inside the area and Photo RAW will create and the display the mask.



*When you complete the mask area by clicking on the original point, the cursor will change to a paint bucket icon. Clicking in the area will generate the mask..*

Once you've closed the mask, you can adjust the feather and opacity of the mask, and you can further adjust the points on the line in the following ways:

- You can click on any point in the selection and move it by dragging it.
- If you hover (or click) on a point, you'll see a circle appear between that point and the previous point on the line. This circle can be dragged in all directions to curve the line to better fit the object you are masking.
- Add a point by holding down the Shift key and clicking on the line.
- You can delete any point by right-clicking on it and choosing Delete Point from the pop-up.
- You can delete the entire mask by choosing Delete Line Mask from the pop-up menu.

While you're creating the mask, the curve option is always available for the current point; move the cursor back over the line before the point and the circle will appear. You can then drag the curve in or out, and when you're done, move the cursor and click on the next place you wish to add a point.

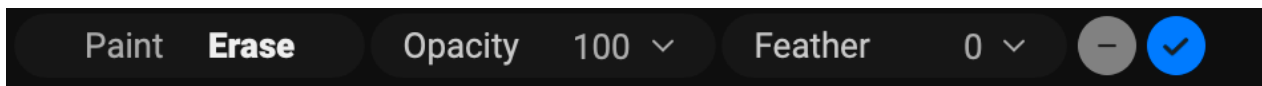
When you've made your adjustments to the selection, you can click the Done button in the Tool Options bar to quit the tool, or you can create another mask.

To re-edit the mask at a later time, select the filter, layer, or adjustment layer that has the mask attached to it and choose the Line Mask tool. When you move your cursor over the area that contains the mask, the mask's outline will appear in light blue. Click anywhere on the outline, and the mask's points – both square and circle – will appear, and you can adjust it as you see fit, even the Opacity and Feather settings.



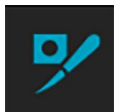
*The curve option—visible when you hover over a point in the selection—lets you fine tune the line to make it better fit the object you're masking. (Shown here exaggerated for effect.)*

## Line Mask Tool Options Bar



- **Mode Selector:** Paint means that the mask will be applied to the selection; Erase means that the adjustment or filter will be applied to all areas in a photo except for the selection.
- **Opacity:** Controls the opacity, or transparency of the finished mask, from 1 to 100 percent. At 100 percent, all of the effect will be displayed in the mask area; as the opacity level drops, more of the layer underneath the mask will be visible.
- **Feather:** Controls the hardness of the mask edge. The feather has a range from 1 to 100; 1 being a hard edge across the boundaries of the mask, 100 being a soft, wide edge that 'feathers' the transition between the masked and unmasked boundaries.
- **Delete:** Removes the currently selected line mask.
- **Done:** Saves the current line masks and closes the tool, returning Photo RAW to the View Tool.

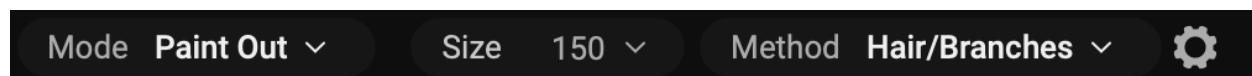
## REFINE BRUSH



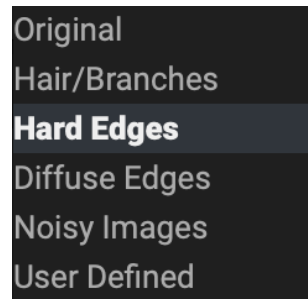
This tool, one of the most versatile in Photo RAW, can be used to clean up intricate areas and the borders along a mask. It is helpful for cleaning up a mask created with the Masking Brush, the Super Select AI tool, or other masking tools, or for creating a new mask entirely.

When you paint with the Refine Brush, the brush strokes are displayed as a red overlay, and when you let up off the mouse button, Photo RAW will work to make the mask edge better defined.

### Refine Brush Tool Options



- **Mode:** Controls the refinement mode, either Paint Out, which refines to remove from the mask, Paint In, which refines to add to the mask, or Auto, which determines the best way to refine the mask edge. Paint Out is recommended in most cases.
- **Size:** This adjusts the size of the brush. Select a brush size that is just larger than the intersection of the subject and background. Avoid using oversized brushes it will take longer to process and may yield lower quality results. You can use your mouse's scroll wheel to adjust the size of the brush as well (see [page 15](#)). The Refine Brush's maximum size is 500 pixels.
- **Method:** Lets you choose the refinement algorithm and settings based on the subject of the masked area. There are five method types, plus a user-defined setting that is created when you adjust any of the individual parameters found in the Gear menu:
  - **Original:** Uses the refinement algorithm found in earlier versions of Photo RAW (referred to as Mode 1 in the gear menu).
  - **Hair/Branches:** Optimized for fine detail, like hair, branches and other subjects.
  - **Hard Edges:** Best method for refining masks with distinct edges between masked and unmasked areas.
  - **Diffuse Edges:** Works best on areas where edge detail is not as well-defined.
  - **Noisy Images:** Works well on photos that have higher degrees of noise in them.



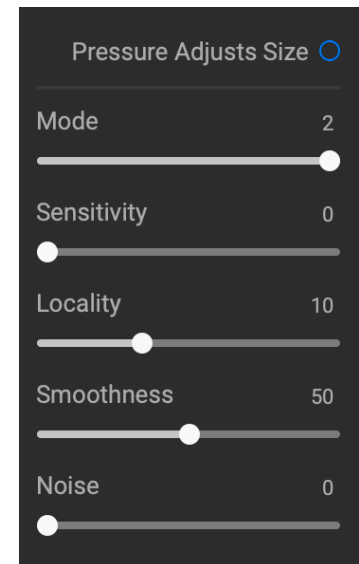
*The Method pop-up.*

The Gear menu includes a setting for controlling the size of the Refine Brush with pressure. It also can be used to adjust any of the refine methods in the Method menu. The parameters include:

- **Mode (1 or 2):** As noted above, Mode 1 is the Refine Brush algorithm used in previous Photo RAW versions; it remains useful in many masking situations. Mode 2 uses the new (2023) version of the Refine algorithm.
- **Sensitivity (0-100):** Refers to the edge sensitivity; low for diffuse edges, high for hard edges. *(Works only with Mode 2)*



- **Locality (0-30):** This parameter varies the search for similar scene materials; higher values expand the search zone along the brush edges. *(Mode 2 only)*
- **Smoothness (0-100):** Represents post-processing smoothing of the refine results. Higher numbers mean smoother edges. *(Mode 2 only)*
- **Noise (0-100):** This is a post-processing-based noise filter; use higher values with noisier images. *(Works with both Mode 1 and 2)*



When you change any of the parameters in the Gear menu, those results will be applied to the User Defined settings, and will be saved until you change them again. In general, however, most of your masking refinement work with the Refine Brush should be found in one of the five primary Method options.

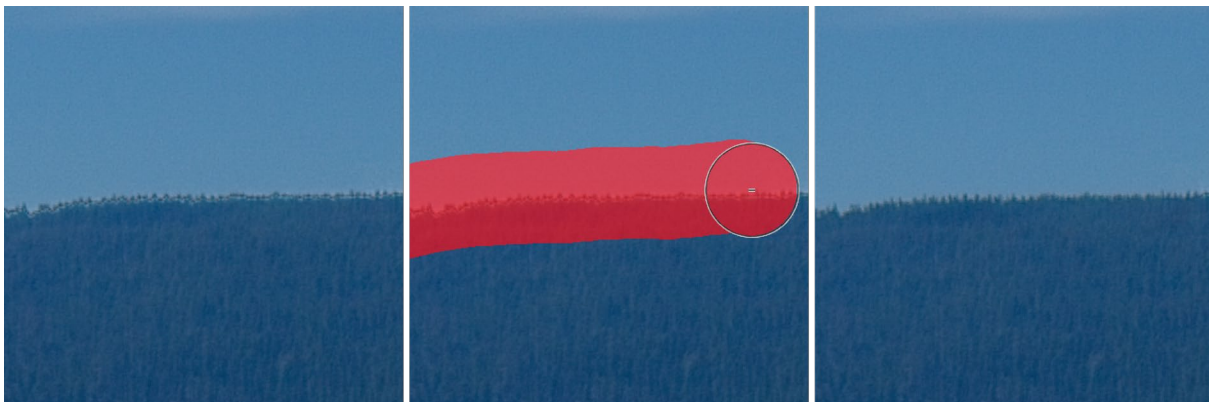
## Working with the Refine Brush

One of the biggest issues with masks is the transitions between edges, or in areas where one of the primary masking tools will miss some fine detail. You'll notice these transitions when you apply an effect or adjustment to a masked area, and there will be halos on the mask edges, or areas where the effect should be applied, but isn't. The Refine Brush, and, on occasion, the Chisel and Blur tools, can be used to help you fine-tune your masks and better transitions, ultimately creating more realistic masks.

The Refine Brush is often the first place you'll want to go when working with masks that could use some tuning. Some of the most common operations include:

- You can paint along the edges of a mask that might have areas where the mask isn't complete, or where the transitions between masked and unmasked areas could be smoother.
- You can paint over large areas of a masked area where there might be fine edges that could use further refinement, like trees or hair.
- You can also "encircle" an area in a photo where you wish to add to or subtract from a mask, or even create a new mask altogether.

For simple areas where you wish to refine an edge that has some halos or is otherwise a bit less than ideal, set the brush size a bit larger than the area you wish to tune set the appropriate method, and brush over the edge. This is shown in the enlarged area below.



*In the photo above, a local adjustment on the sky, masked with Mask AI, left some ugly halos along a treeline. Using the Refine Brush, set to the Diffuse Edges method, smoothed the transition properly, making for a better mask. (Effect exaggerated for demonstration purposes.)*



With tree branches, hair and other areas of fine detail, you can paint over the entire area that you wish the mask to refine, as shown in the following graphic.



*The Refine Brush is a great choice for adjusting masks with fine details that are often obscured when building masks with some of Photo RAW's primary masking tools. In the screen shots above, you can see the mask of a tree generated automatically with the Mask AI pop-up in a local adjustment layer (left). The tree's interior branches are completely masked. Selecting the Refine Brush, with the Method set to Hair/Branches, we've painted broad strokes in and around the area where the branches are (center). Photo RAW then refines the mask so that the branches are properly masked against the sky, making for a much more realistic mask.*

The Refine Brush's "encircling method" lets you add to or subtract from an existing mask, or you can use it to create your own mask. To do this, use the brush to draw an outline around the object you wish to select and mask. What happens next depends upon what your intent is, and whether there is already a mask in the local adjustment or Effects filter you are currently working with:

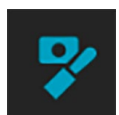
- If there is a mask already created, and you wish to remove the stroked area, choose Paint Out before applying the brush. If you wish to add to the existing mask, choose Paint In.
- If there is no mask already present in the adjustment or filter, using the Refine Brush and drawing around an object or area will create a mask of the encircled space.



*The encircling method.*

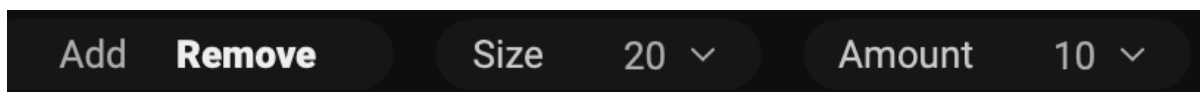
For more information about masking inside Photo RAW, see ["Masking Basics" on page 115](#).

## CHISEL BRUSH



The Chisel brush works to remove fringes or halos along the hard edges of a mask; just click and drag along the edges of a mask you wish to refine. Fringes are common when the background to be removed is brighter than the foreground. The chisel works like a chisel or plane in a wood shop: It removes just a sliver along the edges, and, because it only works on the edges, you don't have to be too careful when using it.

### Chisel Brush Options



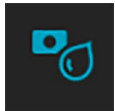
- **Mode:** Select remove or add from the mask edge
- **Size:** Adjusts the size of the chisel tool. Feel free to use a large chisel to make brushing fast.

The size of the chisel does not affect how much is chiseled off.

- **Amount:** Controls the amount of pixels that will be removed or added during each stroke.

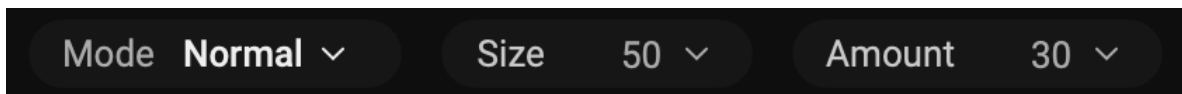
**TIP:** Double-clicking on the Chisel icon applies the chisel to the entire mask.

## BLUR BRUSH



The Blur brush softens edges of the mask where you paint; all you need to do is run the tool over the edges you wish to blur. Softening the edges on blurred or semi-transparent subjects like hair can make them blend with a new background in a more realistic manner.

### Blur Brush Options



- **Mode:** Remove/Add/Normal lets you adjust what part of the mask edge to blur. Remove blurs and lightens the mask, Add blurs and darkens the mask, Normal blurs both light and darks.
- **Size:** Adjusts the size of the blur tool. Feel free to use a large size to make brushing fast. The size of the brush does not affect the blur amount.
- **Amount:** Controls the amount of blur. Use a low amount to maintain detail.

**TIP:** Double-clicking on the Blur icon applies the blur to the entire mask.

# Retouching Tools

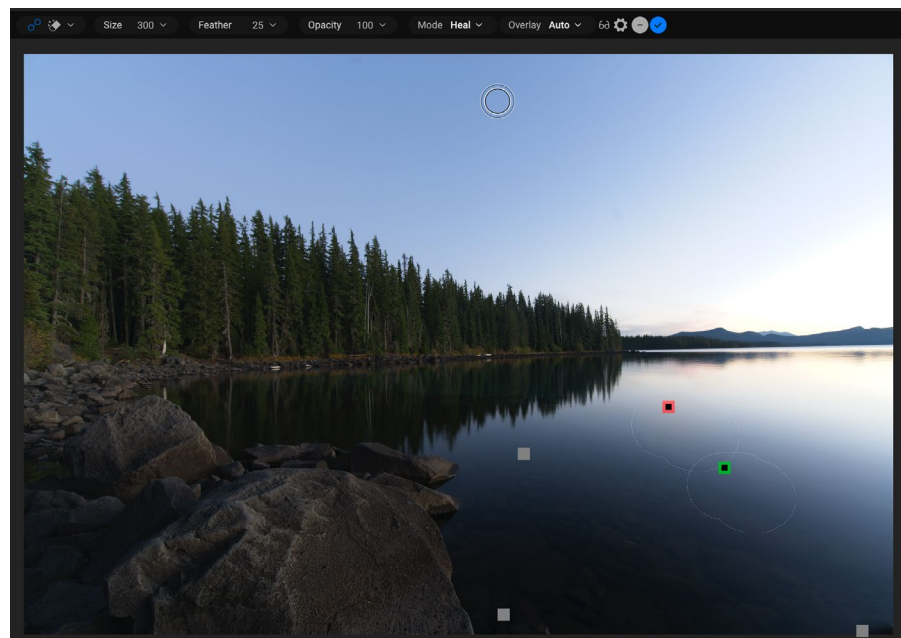
The Retouch tool group has a four tools, the Healing Brush, Perfect Eraser, Retouch Brush, and Clone Stamp, each of which have different options for removing distractions from your photos. The Healing Brush is a non-destructive tool, which means that you can adjust each individual application of the tool at any time. The remaining tools are destructive, in that you cannot remove individual operations, although you are able to reset all retouching operations from the Settings menu at any time (see [“Resetting edits” on page 129](#)).

## HEALING BRUSH (RETOUCH GROUP)



The Healing Brush is a tool for removing distractions like dust spots, power lines and unwanted people from your photos, using sophisticated content-aware fill technology. Like the other retouching tools, you can apply the brush to multiple portions of an image. Unlike the other tools, however, the Healing Brush is fully non-destructive: each area you apply the brush to is individually editable (and removable).

To use the brush, paint over a distraction and a matching area of your photo will be blended on top to replace it, using content-aware technology. You'll see two circular markers: red, which is the area that has been removed, and green, which is the area that was used to fill the source. Each marker is movable by clicking and dragging; sometimes, you'll want to try a different area to match to your source. Non-active markers will be displayed as gray squares until you click on them. (Press the Delete key to remove the current area.)



*Areas that use the Healing Brush will be displayed as a gray marker. Clicking on a specific marker will display the source and area used to fill the source. You can then readjust its placement, or delete the area.*

The Healing Brush has four modes, Heal, Stamp, Copy and Move. Each mode has a different approach:

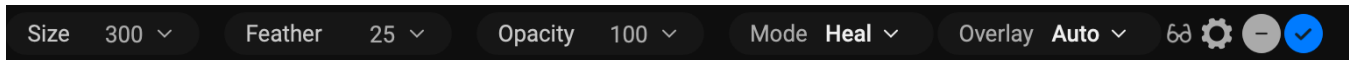
- **Heal** mode applies content-aware matching from a nearby area to mask the object or area being painted out.
- **Stamp** mode acts like the Clone Stamp tool (see [page 113](#)), applying the actual pixels from the area used to mask the object out; unlike that tool, however, this option is non-destructive.
- **Copy** mode is similar to the Heal mode, except that it makes a copy of the brushed area or

object instead of masking it out.

- **Move** mode is similar to Copy mode, except that it masks the brushed area and moves the original area to a new location.

Healing Brush modes cannot be changed once they have been applied; if you wish to change the application in an area, you must select the old marker, choose Delete from the Tool Options bar, set the new mode, and re-brush the chosen area.

## Healing Brush Options

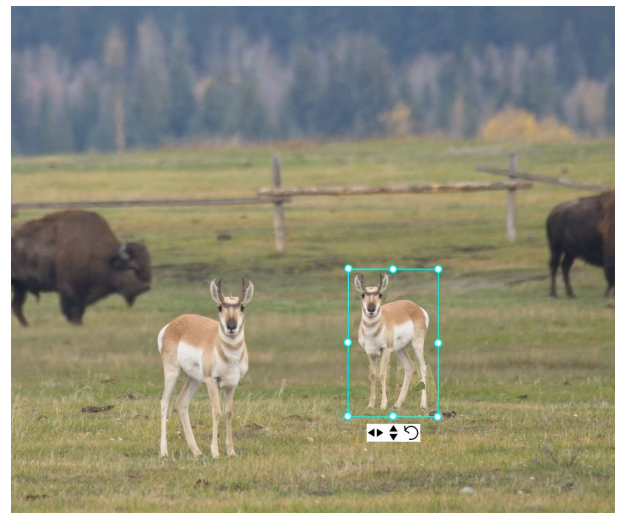


- **Brush Size:** Adjusts the overall size of the brush.
- **Brush Feather:** Adjusts the hardness of the brush.
- **Brush Opacity:** This adjusts how strong the retouching is. Use 100% to completely remove an imperfection. Use a lower opacity to soften it.
- **Mode:** sets the type of healing that will be applied when brushing – Heal (content-aware), Stamp (pixel-exact), Copy (content-aware) or Move (content-aware).
- **Overlay:** Sets the display of the markers designating retouched areas. Auto displays all the markers in the photo, with the current marker highlighted in red and green, and the others as gray. Selected will only display the current marker (in red and green); the other markers will only be visible as you move over the photo with your mouse.
- **Visualize Dust:** Changes the view to a high-contrast overlay, to help view sensor dust spots more easily.
- **Pressure Adjusts Size (gear icon):** If you have a pressure-sensitive tablet, you can adjust the size of the brush according to the pressure. Click the button to activate.

## Transforming retouched areas

As noted, all applications of the Healing Brush are non-destructive, meaning that you can adjust the source and destination areas for each marker, and you can delete markers by clicking on the appropriate marker and choosing Delete from the Tool Options bar (or by pressing the Delete key).

You can also transform individual destination markers in a photo by holding down the Option/Alt key (Mac/Windows) and hovering over the area. When you do this, a box will appear over the currently selected destination marker. You can resize the selection by adjusting the handles on the box; to resize proportionally, hold down the Shift key. You can also rotate the selection by clicking outside the box and pressing the mouse key, or you can flip the selected area vertically or horizontally by clicking the icons underneath the box.



*When you hold down the Option or Alt key and hover over the currently selected Healing Brush marker, a box appears, which lets you adjust the size, rotation and orientation of the marker. When used in conjunction with the Healing Brush's Copy or Move modes, you can easily duplicate and transform individual subjects within your frame, as shown by the copy of the pronghorn above..*

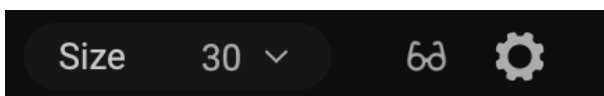
## PERFECT ERASER



The Perfect Eraser can be used to remove distracting elements and blemishes from your image. It uses a content-aware algorithm that replaces the pixels with a natural-looking result within the boundaries that are painted.

Use the tool to paint over an area you wish to remove, covering the entire area. A red overlay appears where you paint. If the first attempt does not give you a perfect result, paint over it again and it will improve with each pass. You can also fine tune the area after by using the Retouch Brush (see below).

### Perfect Eraser Options



The Perfect Eraser's Tool Options bar consists of three options; brush size, a dust-spot overlay, and pressure-sensitive tablet support.

The default brush size for the Perfect Eraser is 125 pixels; you can make this bigger or smaller by clicking on the Brush Size in the Tool Options bar, or by pressing the right or left bracket keys on your keyboard. The maximum brush size is 500 pixels.

The Visualize Dust item displays a high-contrast overlay to help find and eliminate sensor dust spots.

If you have a pressure-sensitive tablet, select the Pressure Adjusts Size item, which is in the gear icon. The gear icon also includes a Legacy option, which is solely used to preserve compatibility with previous versions of Photo RAW.

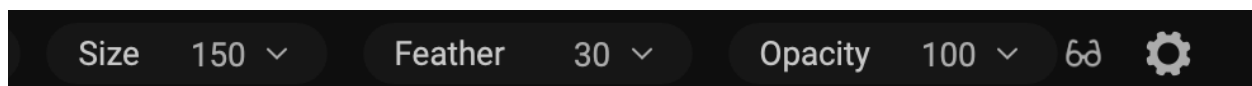
## RETOUCH BRUSH



Use the Retouch Brush to remove small imperfections like dust or blemishes. Just dab the brush on areas that contain spots or other imperfections, such as acne, sensor dust, power lines and more. The tool looks at the neighboring areas in your image and fills in the brushed area with an area of similar color and texture.

It is best to use the smallest brush size possible and to work by dabbing rather than making large brush strokes. If you dab with the Retouch Brush and don't like the results, use the Undo command and try using a smaller brush or vary your brush stroke and try again. The Retouch Brush is also great for retouching skin.

### Retouch Brush Options



- **Brush Size:** This adjusts the overall size of the brush.
- **Brush Feather:** This adjusts the hardness of the brush. It works best to use a feather larger than 50 to blend and look natural.
- **Brush Opacity:** This adjusts how strong the retouching is. Use 100% to completely remove an imperfection. Use a lower opacity to soften them.



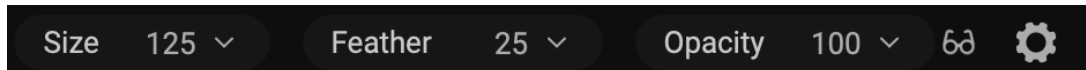
- **Visualize Dust:** Changes the view to a high-contrast overlay, to help view sensor dust spots.
- **Pressure Adjusts Size (gear icon):** Click on the button to activate the sensitivity controls for your pressure-sensitive tablet.

## CLONE STAMP



Use the Clone Stamp tool to replace an area of a photo with an area from a different part. Hold down Option (Mac) or Alt (Windows) and click the area you want to clone from. Then click and drag on the area you want to clone over and it will clone from the point you selected.

### Clone Stamp Tool Options

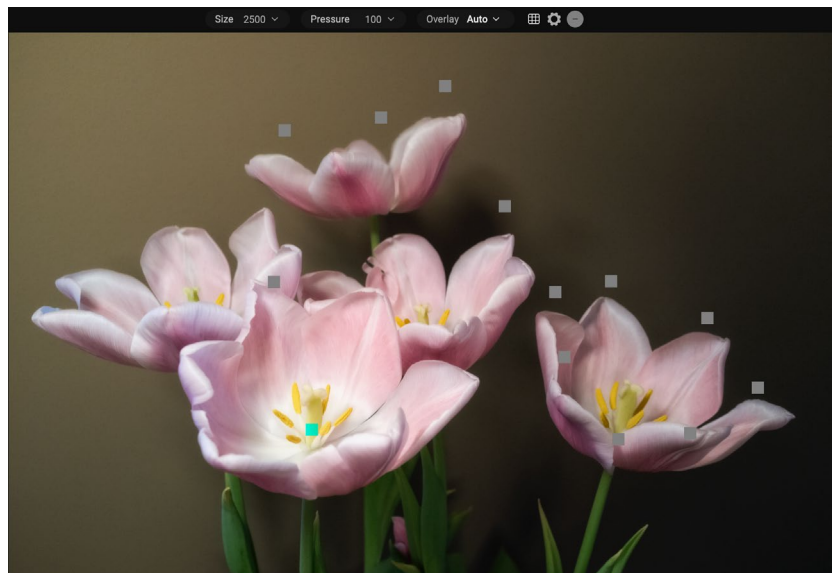


- **Brush Size:** This adjusts the overall size of the brush.
- **Brush Feather:** This adjusts the hardness of the brush. It works best to use a feather larger than 50 to blend and look natural.
- **Brush Opacity:** This adjusts how strong the retouching is. Use 100% to completely remove an imperfection. Use a lower opacity to soften them.
- **Visualize Dust:** Changes the view to a high-contrast overlay, to help view sensor dust spots.
- **Pressure Adjusts Size (gear icon):** If you have a pressure sensitive tablet, you can adjust the size of the brush according to the pressure. Click the button to activate.

## Liquify Tools

The three tools of the Liquify group — Push, Bloat, Pinch — have different warping characteristics, but they share the same options, and all adjustments made with the tools are non-destructive, in a manner similar to the Healing Brush. The “active” marker (the one currently selected) will be displayed as a blue square. Non-active markers will be displayed as gray squares until you click on them to make them active. (Press the Delete key to remove the current area.)

You can easily adjust the individual regions made by any Liquify tool after the fact, by moving the stroke, or by adjusting the Size and Pressure settings for each stroke.



*The Liquify tools can be used to push, enlarge, and shrink areas of a photo to reduce flaws or reshape regions for emphasis. Here, we've used a combination of the Bloat and Pinch tools to reduce the size of some of the background tulips, while enlarging the prominence of the foreground one. All of the regions created by the tools are represented as gray squares; clicking on any of them will let you reshape that region or delete it.*



You can't apply multiple strokes over the same region, however.

You can use the Liquify tools to move items in a scene slightly, and enlarge or contract elements that need greater or lesser prominence. Like any other adjustment, it can be easy to overdo any of these tools, and you might find that it takes a bit of time to find the best use for each tool, but they can be quite useful for many retouching and editing needs.

## Liquify Tool Descriptions



The Push tool lets you reshape areas of a photo by “pushing” and warping the pixels in the region being brushed. The result is akin to finger painting. Of the three Liquify tools, Push is the one that is closest in operation to a brush, where you apply strokes to warp the area being reshaped.

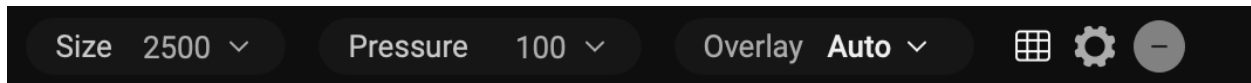


The Bloat tool works to “enlarge” the area under the cursor; you can click and hold the mouse button (or click it multiple times) to increase the effect until it reaches the maximum limit of pressure. While you can apply a brush stroke with the Bloat tool, you might find that playing with the brush size can be more helpful when enlarging an area than creating a larger stroke.



The Pinch tool works to “shrink” the area under the cursor; like the Bloat tool, you click and hold the mouse button to increase the effect until it reaches the maximum limit of pressure. While you can apply a brush stroke with the Pinch tool, you might find that playing with the brush size and using multiple regions can be more helpful when trying to reduce a region with a longer stroke.

## Liquify Tool Options



- **Size:** This adjusts the overall size of the brush.
- **Pressure:** Sets the strength of the warped area.
- **Overlay:** When set to Selected, displays only the currently selected push stroke. When set to Auto, it displays all of the Liquify tools' strokes; the selected one will be highlighted in blue; the others will be represented as gray.
- **Show Mesh:** Displays a grid overlay of the warped area made by the tool.
- **Tablet Adjusts Size (gear icon):** If you have a pressure-sensitive tablet you can control the size of the brush with pressure when this setting is turned on.
- **Tablet Adjusts Pressure (gear icon):** If you have a pressure-sensitive tablet you can control the pressure amount when this setting is turned on.
- **Delete:** removes the currently selected region.

The Show Mesh grid overlay can be useful as a live map of the Liquify adjustments made to an image. Areas of the grid that have had one of the three tools applied will be distorted, and can help determine whether a region needs additional refinements in either Size or Pressure.

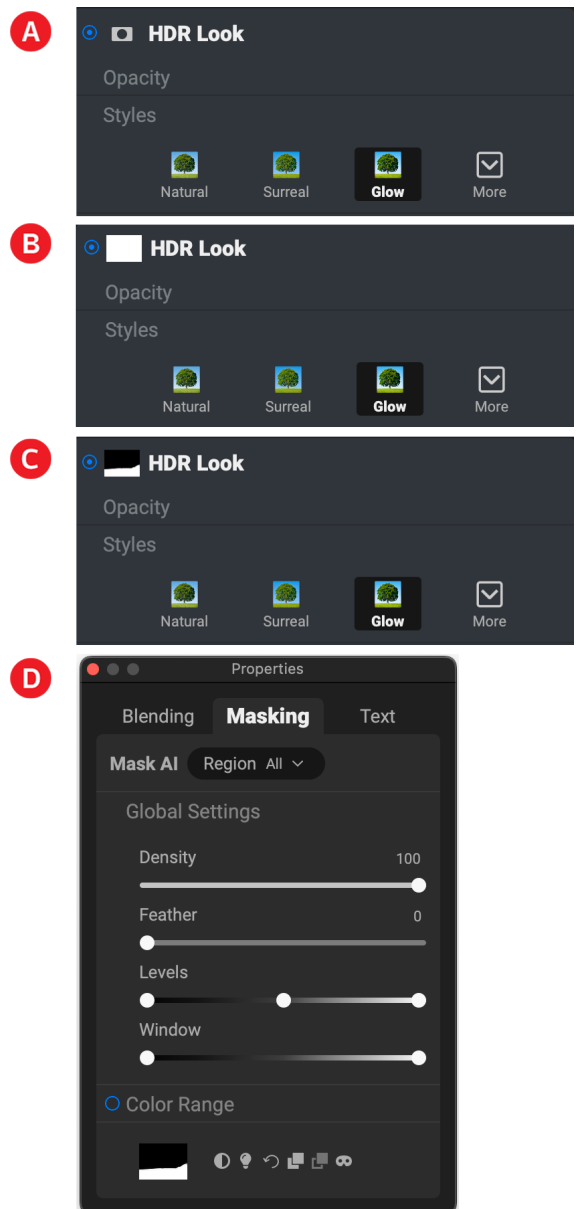
# Masking Basics

One of Photo RAW's most powerful features is its masking capabilities. Every filter in Effects, every adjustment panel in the Local tab, and every layer can have a mask associated with it. And, when you're retouching a face in Portrait AI, that face has had a mask automatically generated for it.

At its simplest level, a mask shows or hides the effect of the filter or adjustment. Masks have no color: they are grayscale, and the tones range from pure white to pure black. A mask that is completely white displays the entirety of the effect being used, a mask that is completely black hides that effect. (A common way to remember it is via the phrase “**black conceals, white reveals.**”) Shades of gray are in effect the opacity of the mask. Darker shades reduce the effect, lighter shades let more of it through.

The beauty of the masks is that you can paint with black, white or any shade in between, so you can “mask” portions of your photo so that they will not have that effect—or will have a reduced effect. You can also copy masks from one filter and paste them into other filters. Using this feature, you can mask out the sky in one filter, copy the mask, paste it into another filter and invert it, applying a different effect to everything but the sky. Photo RAW even lets you create luminosity masks, which are masks that are solely based on the brightness of the pixels in the image. And, while working on your images, you can press the ‘O’ key and view your masks, either as a red overlay or as the grayscale version of the actual mask, which can be helpful when you wish to check the edges of mask, or want to make sure an area is completely masked.

Creating masks can be as simple as choosing the Super Select AI tool and clicking on a region in a photo; using the Mask Sky option from the Mask menu; or dropping a gradient on a photo. You can also create complex masks by using multiple tools and masking functions. For instance, you can drop a gradient on a photo, and use the Masking Brush to paint out areas where you don't want the gradient applied, or you can use the Color Range function (in the Masking tab of the Properties window) to select portions of an image based on specific colors and tones.



Three views of a mask (A-C), along with the Masking Options section of the Properties window, here shown attached to an HDR Look filter in Effects. When you first add a filter (or a layer), the mask is empty (A). If you click on the empty mask, Effects will automatically generate the mask, here shown filled with white (B), which means all of the effect will come through. When you use any of the masking tools, the areas masked out, will be shown in the filter's mask view (C). And, when you click on the mask icon in the pane, it will open Photo RAW's Properties window (D), which includes options for displaying, copying and pasting, and fine tuning that mask

# THE MASKING TOOLS AND VIEWING OPTIONS

Inside ON1 Photo RAW 2024, there are six tools that can be used to create masks: the Super Select AI tool, the Masking Brush, the Gradient Mask, the Quick Mask AI Brush, the Quick Mask Brush, and the Line Mask tools. The Super Select AI and Quick Mask AI tools — along with the Mask AI tool in Effects' filter browser (see [page 157](#)) — generate masks automatically, based on known regions in your photos.

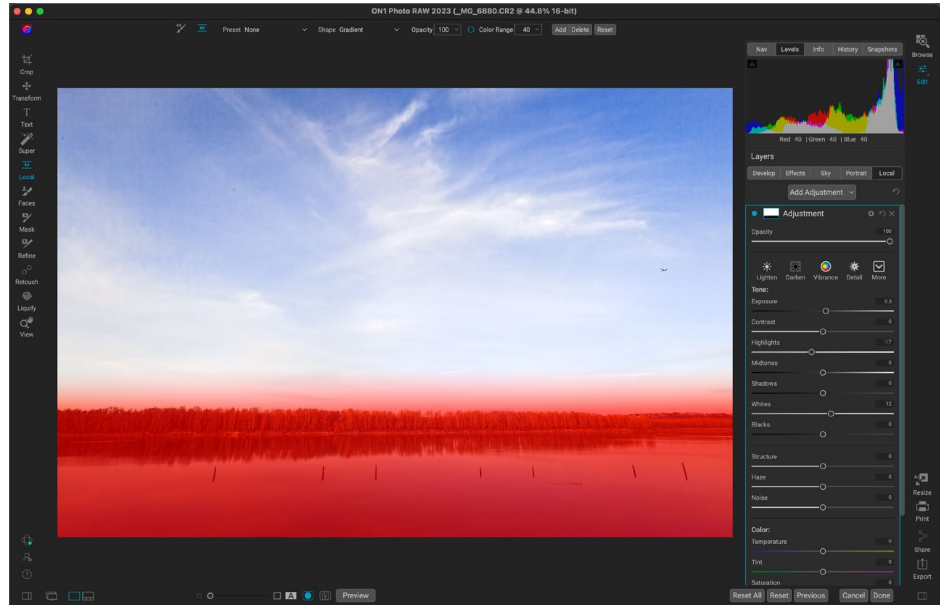
You can use the gradient and masking brush tools cumulatively, meaning that you can add to or subtract from the current mask. However, if you select the Quick Mask AI tool, it will replace any existing masks on that pane or layer. However, once you've created a mask with the Quick Mask AI tool, you can add and refine that mask with the other tools.

The refine brushes—Blur, Chisel and Refine—are designed to help work with edges and halos that can crop up when you have areas of strong contrast between a masked area and an unmasked one.

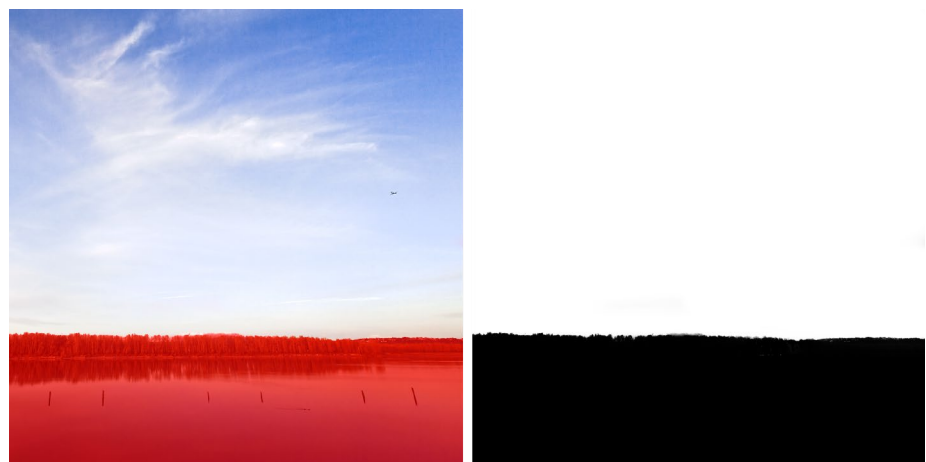
In addition to the masking tools, each mask has a set of controls you can use to manipulate the mask to refine it further (see [“Masking control options” on page 117](#) for more).

When you add a filter or a layer, the mask is technically hidden. You can create a mask by either using one of the masking tools, or by clicking the Show/Hide Mask icon in the title bar of the pane, to the right of the filter name. The contents of the Show Mask icon will represent the mask on that layer. (Local Adjustment panes automatically create a black layer mask, so you can 'paint in' the adjustment to the image.)

Photo RAW has two primary options for viewing the contents of a mask: either as a red overlay on top of your image (the default) or a view only of the mask itself, represented as grayscale.



Here is a local adjustment—using the Adjustable Gradient tool—that has been applied to a photo to darken the sky. The Show Mask option has been turned on, so you can see where the effect has been masked out (shown in red). The gradient mask is softer at the top of the gradient, and entirely opaque at the bottom of the gradient. These smooth transitions can create a better look for your photos.



The two Mask View options help in different ways. The Red Overlay option (above left) can give you an idea of what portions of your photo are successfully masked in or out. The Grayscale option (above right) lets you view the mask solely as luminance values, where pure black indicates portions that have been masked out completely, pure white is where the effect is applied completely, and the levels of gray indicate partial application of the effect. The Grayscale option is especially useful when you wish to check the edges along a mask border.

You can turn the mask overlay on or off by pressing the 'O' key on your keyboard.

The grayscale view can be helpful when checking edges, or when refining some of the advanced masking controls. These mask view options are available from the Mask menu; select Show Mask to see the mask, while the View Mode option lets you switch between the two modes. You can also set the app to display the red overlay only when you are brushing with the Masking Brush and its cousins.

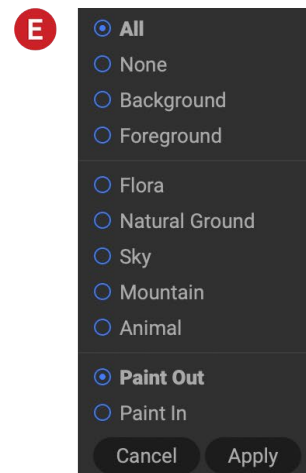
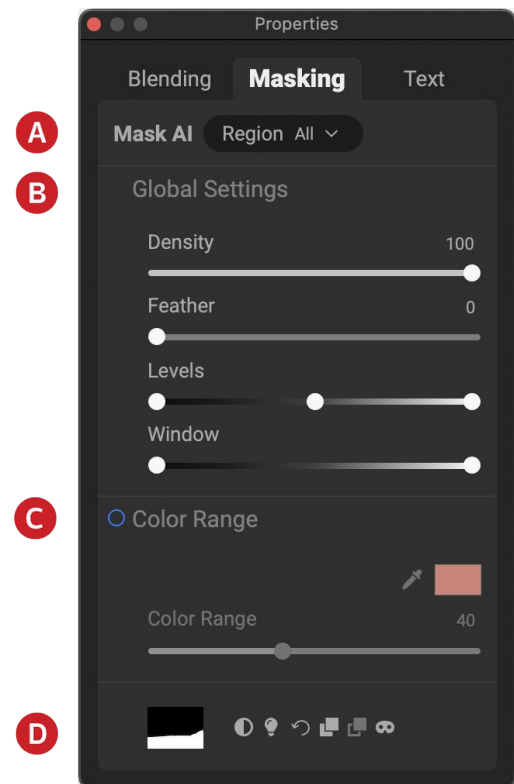
When you're viewing a mask in either overlay or grayscale modes – or even when you aren't actually viewing it – you have access to all of the tools in the Edit module. You can zoom in, to view the mask in greater detail, can use the Refine masking tools to adjust the fine edges of your mask. You can also use any of the other masking control options found in the Mask control options, as described below.

## MASKING CONTROL OPTIONS (PROPERTIES WINDOW)

When you click on the Mask icon at the top of a pane or in a layer, Photo RAW will open the Masking tab of the Properties window (see [page 87](#)), which displays a set of options for that specific mask.

This section has the following contents:

- A. Mask AI pop-up (Effects and Local tabs only) for selecting an area based on region.
- B. The Global Settings section includes the following mask options: Density adjusts the overall density from black (100) to white (0); Feather blurs the mask; Levels and Window let you adjust the black and white points of the mask, fine tuning them in different ways.
- C. The Color Range option lets you choose a color and make or tune the mask based on the range of the color selected.
- D. View of the current mask, with options (from left to right) to invert the mask, create a luminosity mask, reset the mask, copy and paste the mask, and view or hide the mask overlay.
- E. The Mask AI pop-up, which displays the regions in the current photo. You can select multiple regions, and choose whether to have the mask painted in or out when applied. Once you have selected regions, click Apply to create the mask.



The buttons at the bottom portion of the Masking tab can be quite helpful, especially when you're working with complex masks, or when you wish to reuse masks in other parts of Photo RAW:

- **Invert** reverses the contents of the mask, swapping the tones.
- The **Lumen** button creates a luminosity mask of the image (see [page 119](#)).
- The **Reset** button erases the current mask, leaving it filled with white.
- The **Copy** and **Paste** buttons let you copy the current mask, to paste it into another filter, local adjustment or layer.
- The **View** button toggles the Mask View on and off.



*The mask options include (from left to right) Invert, Luminosity, Reset, Copy, Paste, and Show/Hide overlay.*

## Color Range selections

The Color Range option lets you create a mask using a specific color, either one inside your image, or one via your system's color picker. To use this option, click the On button next to the Color Range section, and click the eyedropper tool to select a color inside your image that you wish to sample. You can then use the slider to expand or contract your mask based on that color: lower numbers means that fewer colors (related to the chosen color) will be selected, higher numbers mean a wider range of colors will be selected.

The Color Range option found in the Gradient masking tools can be controlled from the Masking Properties. When you add a gradient mask and click on the Color Range option in the Tool Options bar, the color chosen is sampled from the center of the gradient control, but you can open the Masking section of Properties and sample a different color using the eyedropper. Note that if you do this, and move the masking bug, it will resample using the color from the center of the bug.



*Here, we've created a mask using the Color Range option in the Mask Options section for this Color Enhancer filter in Effects. We clicked on a blue color in the sky to use as the base for the selection range. Adjusting the Color Range slider while viewing the mask lets us fine tune the selection.*



## Luminosity masks

A luminosity mask is a specialized mask type you can create anywhere you can create a mask inside Photo RAW. This mask uses the brightness (or luminance) values in your image to let you target specific tonal ranges with an effect (or to hide the effect from those tones). It is ideal for subtle enhancements to very specific areas of an image. They can be used for targeted sharpening and contrast operations, highlights control, and much more.

To add one of these masks, click on the Lumen button in the Masking tab or choose Create Luminosity Mask from the Mask menu. Because luminosity masks take the brightness levels of a photo, when you view the mask, it will look like a grayscale version of the image. With a luminosity mask, your effect will be applied in an increasing amount depending upon the brightness value of the pixel underneath: if the pixel is black, none of the effect will be applied; if it is white, it will be entirely applied; for all other tones, the effect will get applied as a percentage of the pixel's brightness, from 0 (white) to 100 (black).

You can use the Levels or Window controls to further target tones with your luminosity mask. The Levels setting lets you set the black (left triangle) and white (right) points of the mask, with the midpoint, or gamma, setting being adjusted by the middle triangle. This lets you refine the mask to focus on narrow bands of luminance values in an image; for example, if you wanted to focus an effect on the midtones, bringing the white and black points into the middle of the Levels slider, and adjusting the midpoint, will achieve this much quicker than you could with the Masking Brush.



*Viewing a luminosity mask is similar to a black-and-white version of your photo; the lighter the tones, the more the intended effect will be, and the darker the tones, the lesser the effect.*

The Window slider is similar to the Levels slider, in that it works like a black point slider from both sides. When you move the right and left triangles, all of the tonal ranges outside the points will be black, leaving those areas affected that are within the 'window' of the mask. For example, if you wanted only the shadows in your image to have an effect, you would move the right slider over towards the left by about two-thirds.



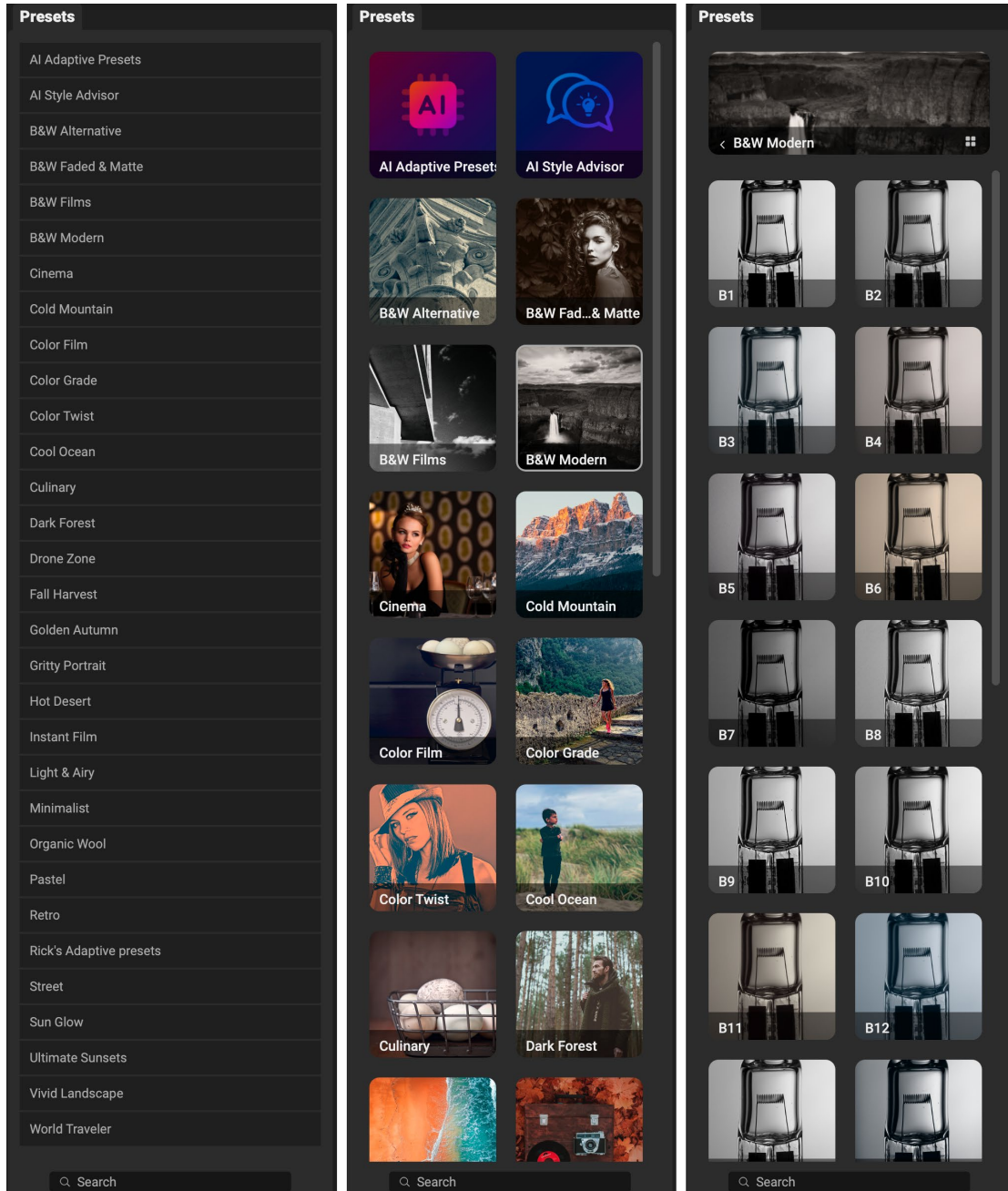
## MASKING TIPS

Here are a few tips for working with the various masking options:

- You can use multiple masking tools to create, modify and refine masks. For example, you can start with a luminosity mask, adjust the tonal range of the mask with the Levels or Window sliders, and then further refine your mask by painting in or out with the Masking Brush or Gradient Mask. Adding a luminosity mask always overrides the current mask (as is the case with the Quick Mask AI brush), however, so you should start there.
- While the AI-based masking tools can be quite good when building selections, they aren't perfect. You should inspect your AI masks after applying them, and use the other masking tools, or the Refine, Chisel or Blur masks, or the masking options to fine-tune your selections.
- Use the Feather slider to smooth transitions between masked and unmasked sections.
- Lowering the Density slider helps intensify an effect after you've created a mask. Think of it like a 'reverse fade': at 100, all of your mask is viewable, at 0, the mask is entirely white.
- Don't forget that masks aren't just for Effects filters and Local Adjustments; you can create a master layer mask that will apply your selection to the cumulative adjustments made in the Edit module. To do this, click on the Mask icon to the right of the layer.
- It can sometimes be helpful to use the same mask on different filters, so use the Copy button to grab the contents of a mask from one filter and the Paste button to paste that onto the mask of another filter. The Invert command can be invaluable when you wish to apply a filter to the opposite portion of a photo, such as a sky and your foreground.
- Because masks are tied to the actual pixels of the current photo (or layer), they cannot be copied from one photo to another, or between layers in a multi-layered document.

# Presets

Presets are stored “recipes” that include sets of Edit module adjustments, and can be applied to one or 100 images with ease, in Browse or Edit. Presets are a fast way to get consistent results when editing a group of images, helping you hone your own look. You can easily create your own presets, even presets that incorporate Photo RAW’s Mask AI and Sky Swap AI technology to apply masks automatically to regions in a photo (See [“Creating and Using AI Adaptive Presets”](#) on page 124).



Three different views of the Preset panel. On the left is the List view, in the center is Thumbnail view; these views display the categories of presets. (The view options can be set in the View > Preset Browser submenu.) On the far right is an expanded category, displaying the various presets, with a thumbnail of the current image with the preset applied. From there, you can apply a preset to the current image.

As you hover over a category, the Quick View Browser icon appears on the left side of the category's name. (B&W Films is shown above in the preset category list.) Clicking on that icon will open a full-screen window showing your photo with that category's presets applied to it. (See the following page for a screen shot of the Quick View Browser.)

Photo RAW lets you create your own custom presets and categories, and you can also create subcategories of presets. (See [“Managing Presets and categories”](#) on page 125 for more.)

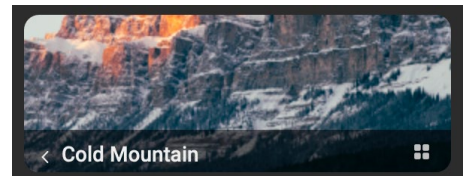
ON1 Photo RAW 2024 comes with more than 200 built-in presets, in more than a dozen categories, ranging from landscapes to portraits, color grading, film looks and much more. You can create your own presets, or import presets from other ON1 users and photographers.

You can create presets that apply any Edit module operation: Develop adjustments, Effects settings, sky swaps, Portrait operations and local adjustments, and any combination of these.

Presets can also store the camera profile used, Brilliance AI settings, crop settings and retouching information, as well as masks created with any of the masking tools. If you apply a preset that contains these options, check to make sure that it returns the desired result; if not, you can reset the various individual operations via the Settings menu.

## APPLYING PRESETS

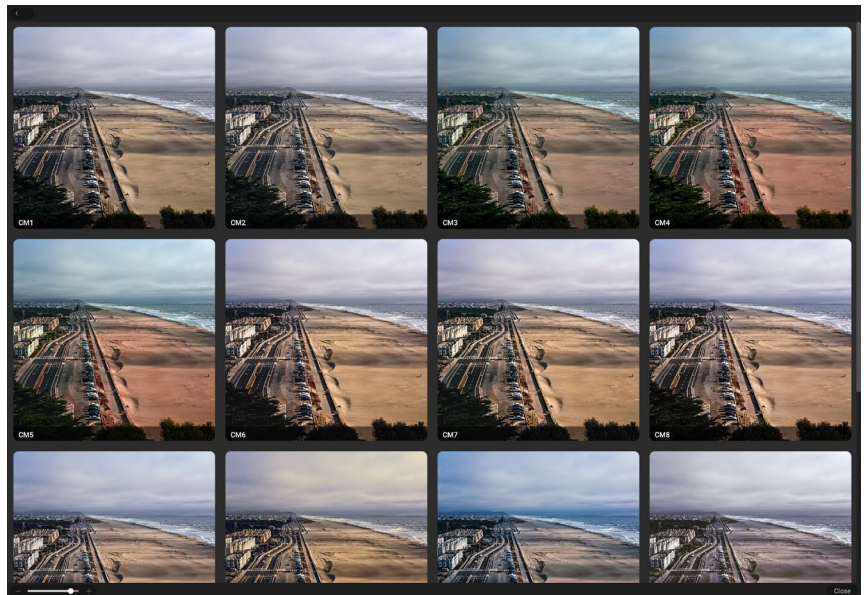
To apply a preset to an image, click on the Presets panel. There you will see any built-in presets supplied by ON1—ordered by category—as well as any presets you might have created or installed yourself. Clicking on a category name will open it and display any presets within that category, with a tiny thumbnail showing your selected image with that preset applied to it. To change the size of the thumbnails in the Presets panel, select the Browser Mode option from the View menu and choose One, Two or Three Column View.



*A preset category with the Quick View Browser icon shown.*

To help you view the effects of a specific preset, Photo RAW will display a real-time representation of that preset over your current photo when you hover your cursor over a preset in the subcategory view. To see a larger representation of what your selected photo will look like with all of a category's presets, click on the Quick View Browser icon in the category's title bar. That will display a window with all of the presets in that category. (Press the Escape key to close the Quick View Browser.)

To apply a preset to a photo, click on the preset in the mini-browser or in the Quick View Browser. It is worth noting that, by default, presets are not cumulative; clicking on another preset will remove the previous one and apply the new one to your photo. See [page 123](#) for information on how to insert a preset into a photo that already has a preset applied to it.



*Clicking on the Quick View Browser icon in the Panels pane (or choosing Open Quick View Browser from the Window menu) will open a full-screen representation of that category's presets, giving you a larger representation of how that preset will look on your image.*

**NOTE:** Real-time preview of presets is only available when working in the Edit module. To preview presets in Browse, use the Quick View Browser.

Once you've applied a preset, you can reduce its overall effect by hovering over the chosen preset. There, you will see a Fade slider, where you can lower the opacity of any Effects filters applied with the preset. (Develop, Portrait, and local adjustments are not reduced.)

After you have applied a preset, you can still make changes to any of the settings—in Develop, Effects, and Local Adjustments—add or remove adjustments, switch to another preset, perform any retouching or more.

If you don't like a preset, clicking on another one will replace the settings of the previous preset with the settings of the new preset. To remove a preset entirely, choose one of the reset options from the Settings menu, or remove the individual settings from the appropriate panes in Develop and Effects. (The latter approach is recommended if you have created masks or local adjustments that you wish to preserve.)

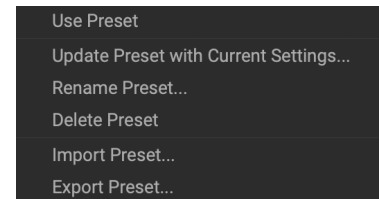
You can save a preset as a favorite by hovering over its thumbnail in the browser, and clicking on the heart icon. This will add that preset to a Favorites category that resides at the top of the Presets panel. To remove a favorite, click again on the heart icon.



The Fade slider reduces the opacity of Effects filters applied with a preset. To find it, just hover over the applied preset in the Presets pane.

## Inserting presets (Effects tab only)

When you click on a preset, Photo RAW's default behavior is to remove any existing adjustments and apply the newly chosen preset to your photo. Sometimes, however, you would like to add a preset on top of your adjustments. To do this, open the Presets pane, right-click (Option-click on MacOS) on the preset you wish to add, and choose Insert Preset from the pop-up. This will add the preset's filters above the currently selected filter pane and preserves edits you made in the Develop or Local tabs.



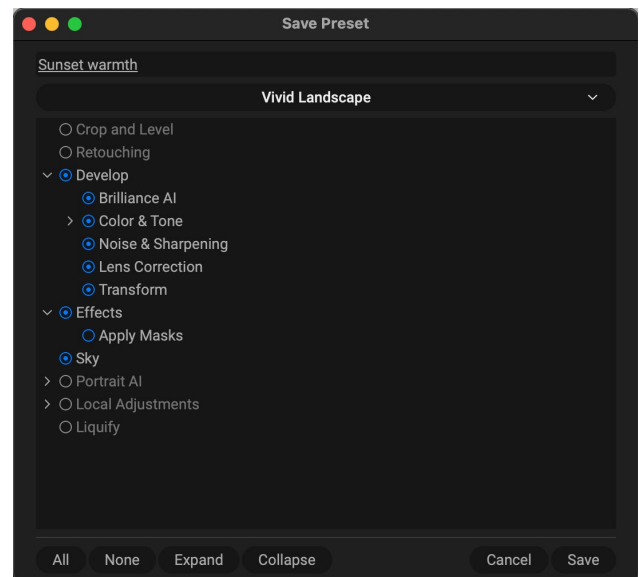
The Insert Preset option is only available when working in the Effects tab.

Inserting a preset will only add that preset's Effects filters to your currently edited photo. Develop adjustments and local adjustment layers will not be added.

## CREATING YOUR OWN PRESETS

Once you have a group of edited settings that you wish to save, go to the Settings menu and select Save Preset. The Save Preset dialog will appear, with options for which module's settings you wish to save, naming the preset, and adding it to an existing or new category. Nearly all of the Edit module settings can be saved as a preset, including cropping, retouching, text blocks and masks. To save your masks — AI adaptive or otherwise — check the Apply Masks option for each tab in the Edit module.

If you have applied a preset to an image, and subsequently updated any of the edit settings (or add or remove adjustments), you can update the preset with the new settings by choosing Update Preset with Current Settings from the Settings menu. This will only change the preset moving

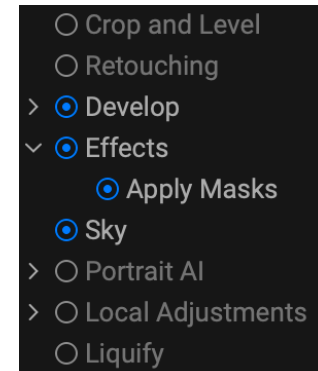


forward; any images that used the previous version of the preset will keep those settings unless you reapply the preset. (You can also update a preset by right-clicking on the preset in the Preset Browser.)

If you would like to create a new preset category—which will be added to the Presets panel throughout Photo RAW—choose Add New Category from the category pop-up.

## CREATING AND USING AI ADAPTIVE PRESETS

When you use the Super Select AI tool, the Sky Swap AI tab, or when you use the Mask AI options in the Effects, Local Adjustments or in the Layers panel, you can save those region selections when you create a new preset, by clicking on the Apply Masks item in the appropriate tab. Then, when you apply the preset to a new photo, anything (Effects filter, sky swap or local adjustment) that had an AI-generated mask region – such as a sky – will be applied to those regions with the same name in the new photo. These preset types are called “adaptive,” meaning that they are applied to a photo based on Photo RAW’s AI models.



Here are a few tips to think about when working with adaptive presets:

- It's best to create an adaptive preset that only uses AI-generated masks. If you save a preset where any filters or local adjustments have masks that have been created by the standard masking tools (like the Masking Brush or Gradient Mask), those masks will be regenerated based on the precise location of the mask in the image that was used to create the preset.
- Any changes to the mask made via the Masking options tab in the Properties window (see [page 117](#)) are saved with the preset.
- After you apply an adaptive preset to a photo, check the masks that the preset created. Quite often, you'll find that you might need to use some of the mask refinement tools – or even the Masking Brush – to fine-tune your mask.
- ON1 includes a set of adaptive presets with Photo RAW 2024. Feel free to add your own adaptive presets to that category, or create your own category (see below for how to do that). It's best, however, to name or categorize them (or both) such that you know which presets contain AI-generated selections.

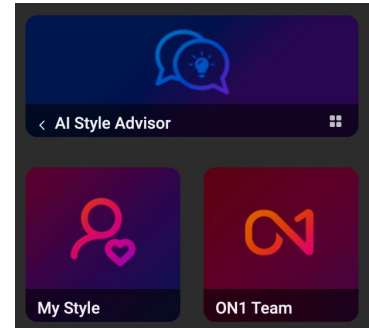
**NOTE:** When you apply an adaptive preset to a photo, the named AI masks will be visible in the Mask AI area in the Masking Control Options section (see [page 117](#)) of the appropriate filter or local adjustment.



## USING THE AI STYLE ADVISOR

Photo RAW's AI Style Advisor is a special preset category of AI-generated presets. As you work in the Edit module, Photo RAW pays attention to the type of editing you perform in all portions of the app, and, over time, it will add and refine adaptive presets to your My Style category.

These presets will appear based upon the type of photo and the regions within them: for example, a portrait photo will have AI styles that use the Portrait AI settings you've used in the past. You can view the suggested presets either by running your mouse over the thumbnails in the preset browser, or by using the Quick View Browser.



Initially, the My Styles category will be blank. After you have edited approximately 200 photos, My Styles will populate with suggested styles, and as you continue to work within Photo RAW, the My Styles category will expand and give you even better results.

To get you started, the AI Style Advisor has a collection called ON1 Team, which is a collection of AI Styles from the photographers at ON1.

**NOTE:** The AI Style presets can't be imported or exported from within Photo RAW and won't show up in the Extras Manager. If you like one of the AI Style presets, apply it, then save the current editing state as a standard preset. See [“Creating Your Own Presets” on page 123](#) for more.

## MANAGING PRESETS AND CATEGORIES

You can perform a variety of operations on presets and preset categories, including importing and exporting presets (individually or by category), deleting individual presets, and hiding categories.

### Importing & Exporting Presets

You can import presets you have downloaded from the ON1 website or other source. Some files will be individual presets, while others might be preset “packs,” which will include more than one preset.

A preset will have an '.ONP' extension, while a preset pack has an 'ONPreset' extension; all you need to do is double-click on the file—or choose Import Preset from the Settings menu—and Photo RAW will ask you to pick a category where you wish to place the preset or pack, and it will copy the presets into the app. You can delete the downloaded files, if desired.

To export an individual preset, click on it and choose Export preset from the Settings menu. You can also export an entire category of presets, via the category preset menu (shown below).

### Deleting presets

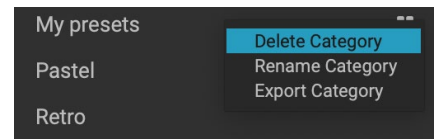
To remove a preset if you no longer want to have access to it, select the preset you wish to remove in the Preset panel, and choose Delete Preset from the Settings menu. You can also right-click on an individual preset and click Delete Preset from the pop-up menu.



You can delete any preset, including the presets that came pre-installed with ON1 Photo. If you think you might wish to save a preset, export it first, then delete it.

## Managing categories

In addition to creating your own preset categories, which get displayed in the Presets pane, you can also perform other operations on categories, including deleting, renaming or exporting. These options are all available via the Preset Category pop-up menu, which is available when you hold right-click on a category name:



*Right-click on a preset category to get the category pop-up menu.*

- To remove a category—and its presets—from the Presets panel, choose Delete Category.
- Choose Rename Category if you wish to change the name of the category.
- To export a category and all of the presets within it as an ONPreset pack, choose Export Category from the pop-up menu.

**TIP:** Many preset options can also be performed by right-clicking on a preset's name in the Preset panel. This is helpful if you want to update, export or rename a preset without applying it to the current image in the Edit module.

## Creating nested presets

To help manage large groups of presets, Photo RAW's Extras Manager lets you nest preset categories. See [“Organizing Presets” on page 10](#) for details on how to create and manage preset category subfolders.

## CAMERA-BASED PRESETS

In addition to using presets in the Browse and Edit modules, you can also have Photo RAW automatically apply a preset to any new photos from a specific camera, even down to the serial number.

This can come in handy if you have created a custom camera profile or if you have converted a camera to infrared. Camera-based presets are automatically applied to photos in cataloged folders, imported photos, and any time you open a folder in Browse. It's important to note that any photo that has already had any adjustments made in the Edit module will not have the preset applied to it.

So, if you always find yourself making the same basic adjustments to most photos from a specific camera, just make a preset and it will apply to all photos from that camera. You can also choose to have the preset applied to Raw or JPG photos from that camera, or both if you shoot Raw+JPG.

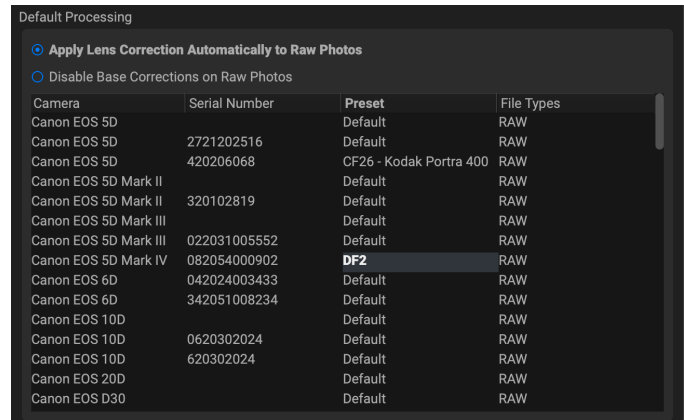
## Setting up camera-based presets

To use this feature, first define the preset you wish to use. Because presets are applied globally to all of that camera's images—except for those that have been edited previously—you probably want to keep the adjustments within a narrow range of categories, like a specific camera profile, Develop's Tone and Color and Details settings, and minimal Effects filters, if any at all.

To connect the preset to the camera, open the Files tab of the Preferences screen ([page 275](#)). At the bottom of the window is the Default Processing section, which contains a list of all the cameras that Photo

RAW knows you have shot with. The list includes the camera name, serial number (if your camera records that in the image metadata), preset and file types. Scroll down to the camera you wish to use and click on the Preset pop-up, which contains a hierarchical list of your presets, and select the one you wish to use. The default file type is Raw; if you wish to apply the preset to JPG files, or both Raw and JPG files, choose the appropriate setting from the File Types menu.

When you close the window, Photo RAW will update your database and apply that preset to all of the photos created by that camera. And from that point on, when you add photos taken with that camera, Photo RAW will apply the preset automatically to all those photos.



## Editing photos with camera-based presets

Because Photo RAW is non-destructive, any photo with a camera-based preset applied to it can be edited and changed in the Edit module, or have a new preset applied via Browse. However, you must either apply a new preset, or change the individual settings in the Edit module. You can't choose the Reset All Settings option from the Settings menu, because the default settings for that camera's images are now those applied by the preset.

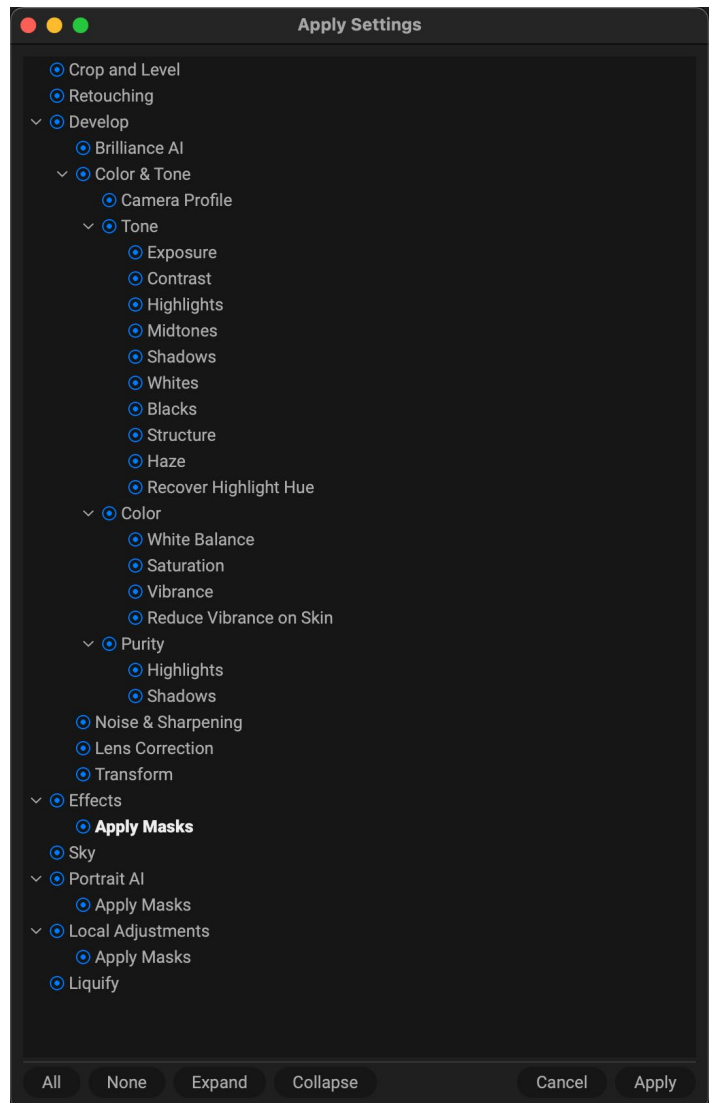
# Copying settings and synchronizing edits

In addition to applying presets, you can copy all of the existing edits—of any operation you can perform in the Edit module—made in one photo and paste them directly onto other images. There are two primary methods for doing this—Copy/Paste and Sync—but they achieve the same end goal: it's more a matter of preference in which operation you choose.

To copy the edit settings from an image, click on the source file and choose Settings > Copy Settings. Click on the new image and choose Settings > Paste Settings. A window will appear, giving you the option of applying any or all of the edits on the original photo, or you can select which edits—everything from individual settings in Develop's Tone and Color pane, to masks, cropping—you wish to paste into the new photo or group of photos.

The Copy/Paste Settings commands can be useful when you wish to paste settings across a number of photos in different folders. As long as your Edit session is active, Photo RAW will remember the last copied settings.

With the Sync Settings command, select the image you want to use as your source. Then, holding down the Shift key (if you are selecting an image or group that is contiguous with the source), or the Command (Mac) or Control (Windows) key, and click on the image(s) that you wish to apply the source file's edits. Your selection should have the source image highlighted in blue, and the target images highlighted in gray. If that is correct, click on the Sync button at the bottom of the Preview area, or choose Sync Settings from the Settings menu. The Apply Settings window will open, and you can follow the same procedure to synchronize your edits.



*In the Apply Settings window—accessible from either Paste Settings or Sync Settings—you can apply nearly all Edit module operations to another image or group of images. Filled circles to the left of a setting mean that the setting will be applied.*

**NOTE:** When you copy and paste settings or sync settings from one photo to another (or a group), with the Apply Mask option turned on, and you include AI-generated masks from the appropriate Edit tab, Photo RAW will apply the masks based on the regions you masked. This is similar to the way that AI adaptive presets are applied (see [“Creating and Using AI Adaptive Presets” on page 124](#) for details).

If you're sure that you want to sync everything from a source photo to another photo or group of photos, the Settings > Sync All Settings command will let you bypass the Apply Settings window. Select your source and destination photos and select the command. Note that all settings—including cropping, text and masks—in the source image will get synced.

## RESETTING EDITS

Any edits you have made with ON1 Photo RAW 2024 can be completely reset from within the Edit module. This includes photos you might have pasted or synchronized settings onto inside Browse, or anything done within the Edit module.

The Settings menu offers eight options for erasing edits made to a photo:

- **Reset All Settings:** This removes all adjustments made to a photo in the Edit module. (This option can also be accessed from the Reset All button at the bottom right of the Browse and Edit windows.)
- **Reset Develop Settings:** Removes only the settings applied in the Develop tab.
- **Reset Effects Settings:** Removes only the settings applied in the Effects tab.
- **Reset Sky Settings:** Removes only the settings applied in the Sky Swap AI tab.
- **Reset Portrait AI Settings:** Removes only the settings applied in the Portrait tab.
- **Reset All Retouching Tools:** Resets any retouching applied anywhere in the Edit module.
- **Reset Local Adjustments:** Removes all local adjustment layers.
- **Reset Liquify Tool:** Removes all applications of any of the Liquify tools.
- **Reset Crop:** Returns the image to its original, uncropped size.
- **Reset Text:** Removes any text blocks.

You can undo any of these changes immediately after making them; otherwise resetting with the appropriate option will permanently reset the image.

**NOTE:** The Copy, Sync and Reset settings are only applicable on a layer-by-layer basis. As such, these options are not available when you have selected a layered photo in Browse. When working in the Edit module, the Reset, Copy/Paste and Sync settings work only on the currently selected layer.



# Soft Proofing

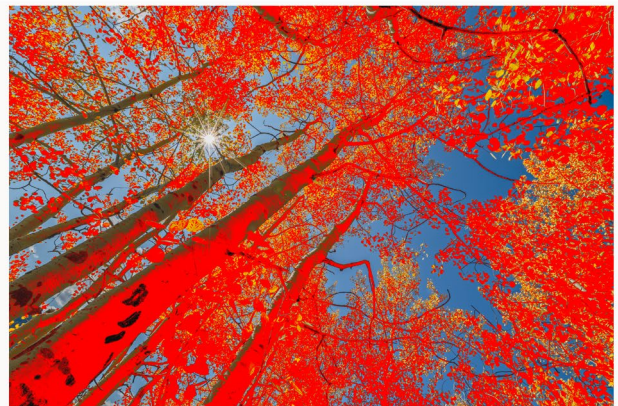
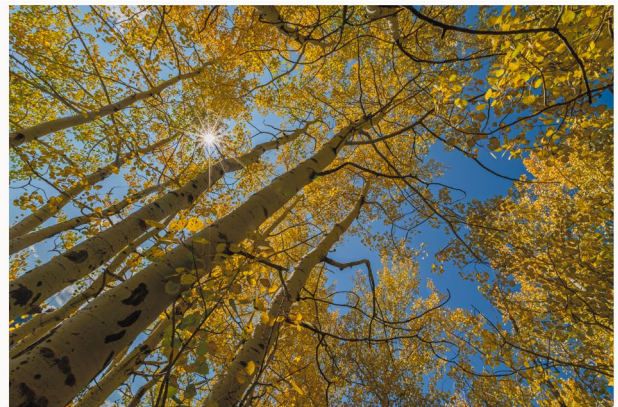
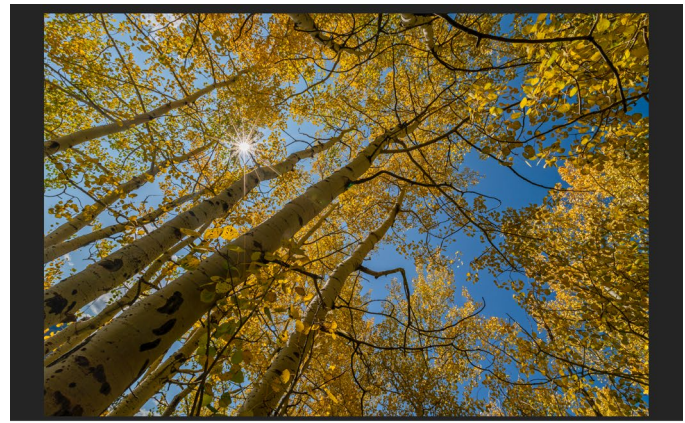
ON1 Photo RAW's soft proofing feature lets you see how a photo will look when printed, using the color profiles that get installed with your printer. Soft proofing helps you determine where there might be issues when you print, so that you can adjust your tone, color and effects to give you a print that is closer to your editing vision.

Normally, when you're viewing an image in Photo RAW, you are viewing it through the lens of your monitor's display profile. The color gamut of your computer's display is wider than that of most photo printers, which means that some colors you are able to view on-screen are not reproducible when you print. When this happens, the color profile conversion that happens in the print engine will cause substitutions of colors that the printer cannot print to the closest color that it can. This means that your image could have subtle (or broad) shifts in color, especially in certain color ranges.

Soft proofing is turned on by selecting Enable Soft Proofing from the View menu. You can then soft-proof various paper types by choosing an installed printer profile from the Profiles submenu. The image will change to approximate the color of the paper you're profiling. You can also turn on an overlay that will display out-of-gamut colors.

The primary soft-proofing options are available underneath the Enable Soft Proofing item in the View menu. The options are as follows:

- **Gamut warning:** When checked, this displays colors in the image (via a red overlay) that don't correspond to the current printer profile being soft proofed.
- **Profiles:** The Profiles submenu lists the currently available printer profiles. Choosing one will change the on-screen display to use that profile. You can also import profiles via this submenu.
- **Intent:** Photo RAW offers two different rendering "intents" when soft proofing, which are used to convert the color from display to print. Perceptual shrinks the color gamut during the



*These three screen shots show the results of soft proofing options, as viewed in the Edit module. The top image is with soft proofing off (and is using the display color profile). The middle image is with soft proofing turned on, and using a printer profile for Epson's Exhibition Matte Paper. The bottom image has the Gamut warning turned on; out of gamut colors are highlighted by the bright red overlay.*

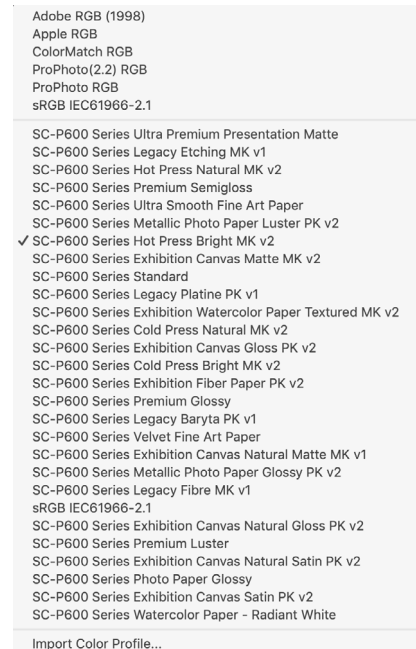
conversion, which works to preserve the relationship between colors in the image. The other intent type, Relative, only converts colors that are outside the current color gamut, but this can sometimes cause two colors, one in gamut, and one outside, to be identical after conversion.

Neither rendering intent is perfect or desired; it often is a matter of the makeup of the image, your editing intent, the paper being printed on, and so forth. Often, you'll want to switch back and forth between Relative and Perceptual, seeing which gives you a better print.

- **Simulate Paper and Ink:** Turning this setting on will cause Photo RAW to use the white point for the chosen paper type (instead of the white point of your monitor), and the paper's actual black density (instead of the display's black point). If you're trying to match a print, you will usually want this setting turned on.

Adjusting images with soft proofing is often a bit of trial and error. It's easy to get caught up in eliminating out-of-gamut colors, but most modern photo printers—both home printers and online print services—do a pretty good job of properly approximating colors.

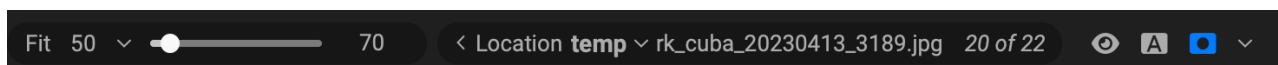
The biggest thing you want to be looking for when viewing a soft proof is tone, contrast and color accuracy between screen and print. When using a home printer, use test prints to hone in on the right mix of Edit module adjustments. Photo RAW's Versions feature can be extremely helpful when you're tweaking settings to get a print just right (see [page 69](#) for more on working with Versions).



*The Profiles submenu displays the installed printer profiles for any installed photo printer. You can also import your own color profiles.*

## Other Edit Module Preview Options

In addition to soft proofing, ON1 Photo RAW 2024 offers a few other previewing options in the Edit module, which can be found in the previewing section at the bottom of the Photo RAW window. With these options, you can compare the before and after views of a photo—in either split-screen or full-screen views—and see the current mask overlay.



*The Preview area at the bottom of the main Photo RAW window includes options for adjusting the preview magnification (left side); for viewing the original photo, with all edits removed; for turning compare (before/after) view on or off; and for viewing the current mask overlay.*

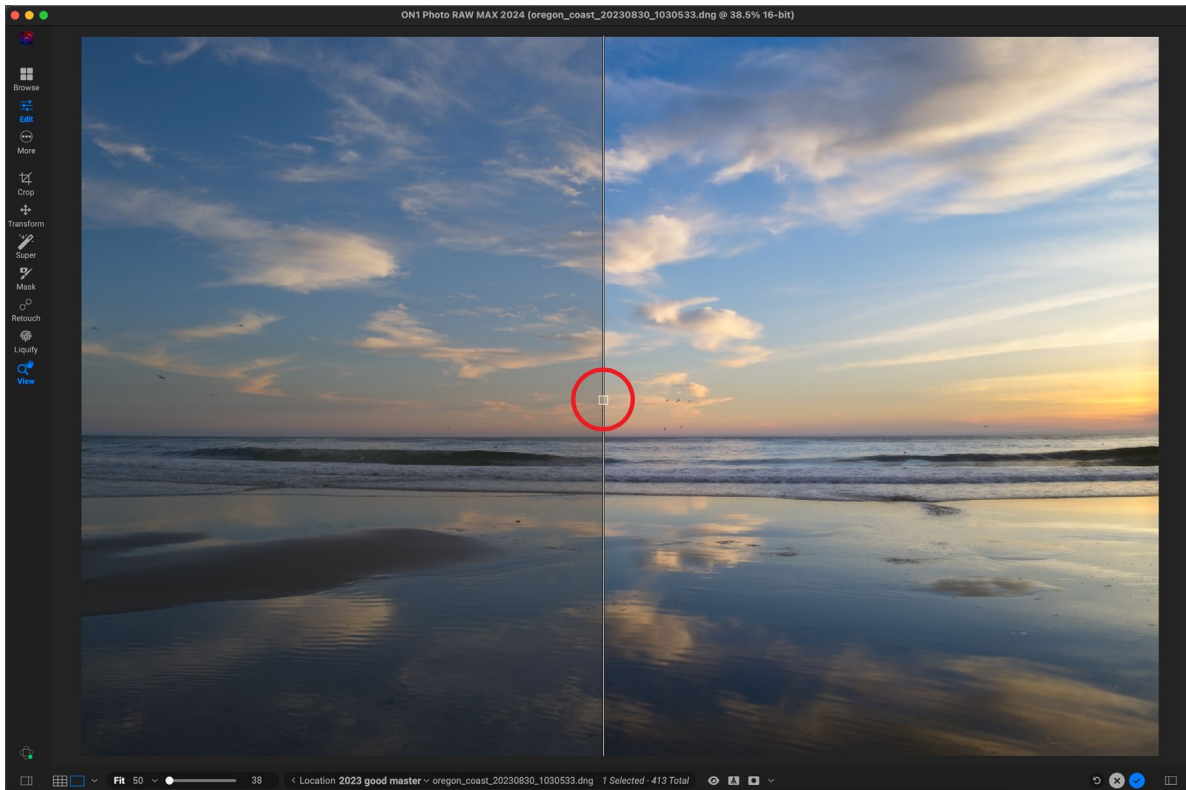
## CHANGING THE MAGNIFICATION VIEW

Photo RAW includes various options for zooming in or out of a photo while you're working on it. In addition to the Zoom tool and the Navigation pane (see [page 96](#) and [page 84](#), respectively), you can change the zoom view by moving the magnification slider. You can either click on the control and slide it to the right to zoom in and to the left to zoom out, or you can click on the boxes at the ends of the slider.



## BEFORE/AFTER PREVIEWS

As you work in the Edit module, it can be helpful to see how individual edits—via items in the different edit tabs—affect your photo, as well as to see the cumulative changes made to the original image. The Edit module’s Compare mode displays a side-by-side view of your photo, with the original version on the left, the edited version on the right. There is a movable slider in the middle of the screen, which lets you view more or less of each view; click on the box at the center of the slider and drag it to the left (to view more of the edited image) or to the right (to view more of the original). While working in Compare view, you can use the magnification slider to zoom in or out of the image.



*Edit's Compare view displays a before/after view of your current photo, with a movable slider (circled, above) for expanding and contracting the different views.*

You can also view your original image full-screen by clicking the Preview button at the far right of the previewing toolbar. When you click this button, the original photo is displayed with a “Preview Off” overlay. To return to your edited version, click the Preview button again. (You can also use the backslash key—‘\’—to show and hide the full-screen preview.)

## SHOW/HIDE MASK

You have two options for displaying the contents of the current mask (in Effects, Local and Layers):

- As a transparent red overlay, where the masked sections of your photo are shown in red.
- As a grayscale mask, where you do not see the photo, but see only the mask. Masked areas are shown in shades of gray, with pure black meaning that those pixels are completely masked. Gray values (from 1% to 99%) represent the opacity of those pixels relative to the mask, and areas of pure white are not masked.

The overlays can be set in the Mask menu's View Mode submenu while you are working in the Edit module. You can also, via this option, show the mask as a red overlay only when you are brushing a mask.

You can toggle the current mask view by clicking on the Show Mask icon in the previewing toolbar, or by pressing the O key.



The two options for viewing a mask are with a red overlay (left), which shows the masked areas in red, and a grayscale mask (right), which shows only the mask, in a range of tones from white (not masked) to black (completely masked). Tones in gray represent varying percentages of the mask's opacity.

For more information on the varying aspects of masking in ON1 Photo RAW 2024, see the details on the respective masking tools, starting on [page 97](#), and [“Masking Basics” on page 115](#).

## FOCUS AND CLIPPING VIEWS

Two additional previewing tools that can be quite powerful aids when you are editing photos are the Clipping and Focus Mask overlays. These options can be displayed in any of the Edit module tabs.

### Clipping

Clipping occurs when the shadow and highlight tones in an image are suddenly cut off to completely white or black, rather than fading smoothly. (Large expanses of white pixels in a photo are often referred to as 'blown' highlights, and can be quite distracting to a viewer.) One of the benefits of shooting in raw format is that, while many photos will have areas of pure white or black when originally viewed on-screen, there is still recoverable data in the raw image. The Clipping overlay can help determine how big a problem you might have with a photo, and how easy (or difficult) it will be to fix.

To display the Clipping overlay temporarily, press the J key; to turn it on permanently as you move from photo to photo, choose View > Show Clipping, or press Alt (Windows) or Option (Mac) J on your keyboard.



Clipping view displays pure white pixels with a bright red overlay, and pure black pixels with a bright blue overlay.

The Clipping view overlay displays the areas that have either pure white or pure black in them. Those areas with a bright blue overlay indicate pure black pixels, while the areas with the bright red overlay indicate pure white pixels.

## Focus Mask

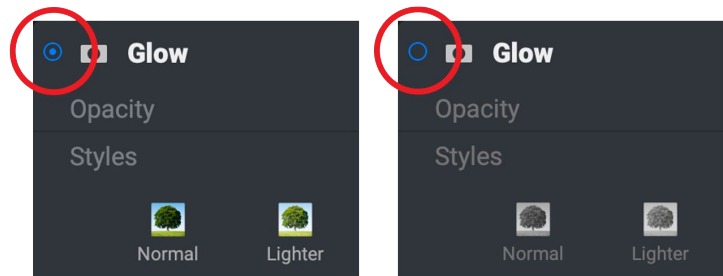
It can often be difficult to view the sharpness in a photo without zooming in to 100% or more, and if you have a lot of photos from a shoot, it can be a bit tedious to check focus at that level. Luckily, Photo RAW's Focus Mask overlay can help winnow your shots down to the sharpest ones.

To turn on Focus Mask, choose View > Show Focus Mask, or press Shift-Alt-J (Windows) or Shift-Option-J (Mac). The sharpest areas in your image will be represented by a bright green overlay. As you move from photo to photo in a folder, you'll be able to tell whether you have an acceptable level of sharpness where you need it by the strength of the overlay. The mask will be displayed even as you zoom in on a photo.



## Showing or Hiding Edit Module Adjustments

You can also show or hide many individual adjustments made throughout the Edit module. Most of the panels in the Develop, Effects, Portrait and Local tabs have a Show/Hide control in the upper left-hand corner of the panel. You can make your adjustments, and can click the control to turn the effect on or off.



That this option is not solely for previewing an effect; if the adjustment is turned off, it will not be present in the edited image.

*To turn an effect or other adjustment off, click on the Show/Hide control in the upper left of an adjustment's panel. If the control's circle is empty, that effect is not implemented. Clicking the control will turn it back on.*

This can be helpful if you're trying different filters in Effects, for example, and you want to see if one looks better than another, or if you wish to see if it truly helps the photo or not. To turn the adjustment back on, click on the Show/Hide control so that the circle is filled.

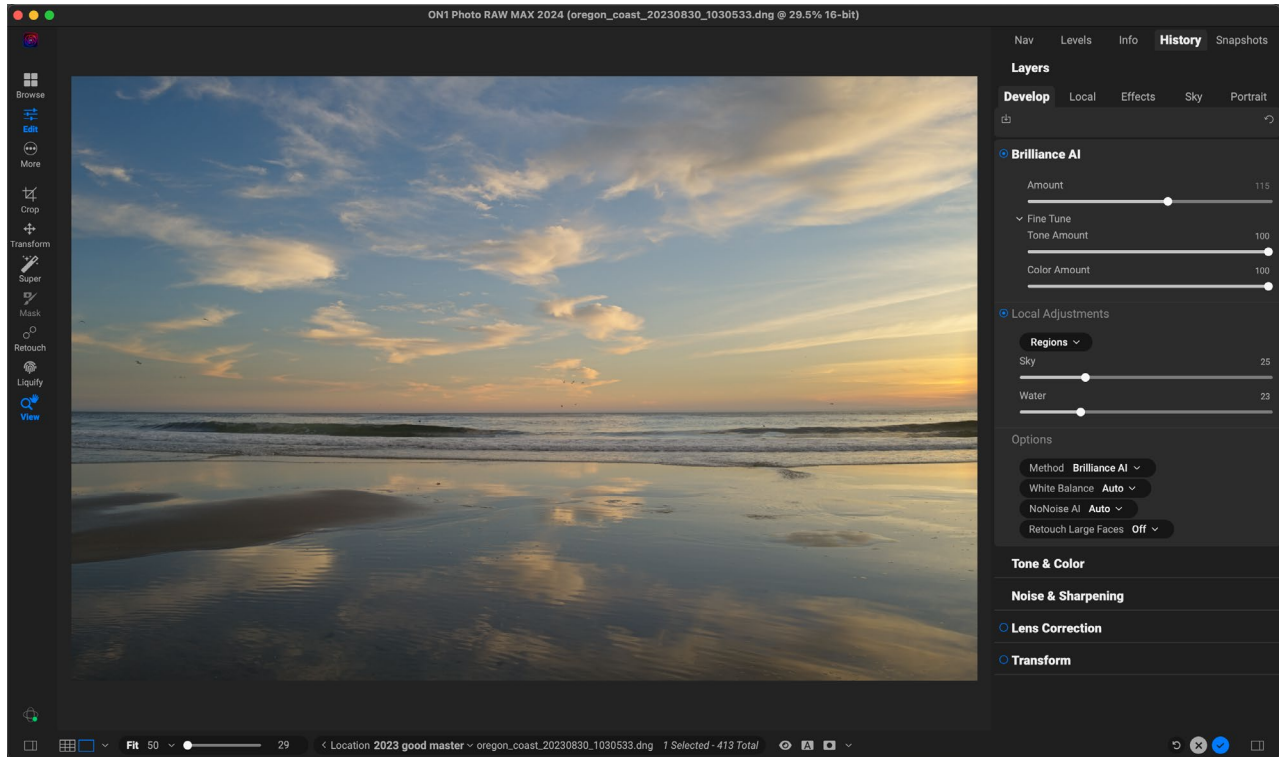
The only adjustment inside the Edit module that cannot be turned off in this way is the Tone & Color panel in the Develop module. If you wish to view your photo without those adjustments, you need to press the Reset icon, which is represented by '⌫' at the top right side of the panel.

For a complete description of the controls in most Edit module panels, see ["Filter Overview" on page 156](#).

## Saving Your Work

Photo RAW saves your non-destructive settings for the photo you are editing when you return to Browse. If you would like to periodically save your settings without returning to Browse, you can use the Save Settings command. This saves your work in the off chance the application encounters an error. To save the current state of your actions, choose Save Settings from the Settings menu, or press Command-S (MacOS) or Control-S.

# BASIC GLOBAL EDITING WITH DEVELOP



Develop is the module for performing basic global editing operations—adjusting tone and color, removing noise, sharpening and applying transforms to a photo. It is the perfect place to begin editing your photos. And, with Brilliance AI, you can get started quickly with AI-based automatic adjustments that jump-start your editing, letting you get right to the stylization part of your workflow.

## Develop Adjustment Panes

To edit your images, the Develop tab has four adjustment panes found in the Overall Settings panel. Unlike the Effects tab, which lets you stack filters in any order, the Develop tab's adjustments are applied in the following order:

1. Brilliance AI
2. Tone & Color
3. Noise & Sharpening
4. Lens Correction
5. Transform

## WORKING WITH PANES

The Tone & Color pane is at the top of the stack, followed by the Noise & Sharpening, Lens Correction and Transform panes. These panes are not removable from the stack, although you do not have to apply any of these operations to a photo. The remaining panes can be applied based upon what you wish to do with



your photo. Clicking on the button to the left of the pane's name will turn that pane on or off, which can be helpful if you want to see the effect in the context of other edits you have made. The Reset button—designated by the circular arrow icon at the top right of each pane—will reset that pane's settings to their default state.

**TIP:** Each pane can be collapsed, by clicking in the pane's title bar. If you don't want to have to scroll up and down the Settings panel when you have a lot of open panes, choose Solo Mode from the Window menu. This will leave only the current pane open, and will hide all the other panes. Clicking on another pane will open that one and collapse the previous one.

## BRILLIANCE AI

Photo RAW's Brilliance AI is designed to help reduce some of the drudgery of the basic raw processing operations that we all have to do at the beginning of our editing workflow. It analyzes your photo and automatically fixes tonal and color issues in your photos. It can also apply noise reduction, targeted local adjustments on specific regions, and portrait retouching on any faces found in your photos.

Unlike older 'auto' buttons that did basic white and black point adjustments and some color and saturation enhancements, Brilliance AI uses artificial intelligence to get most of the heavy lifting done at the beginning of the editing process, enhancing your photos and making them look great, so you can work on stylization and other localized editing or composite work in Layers.

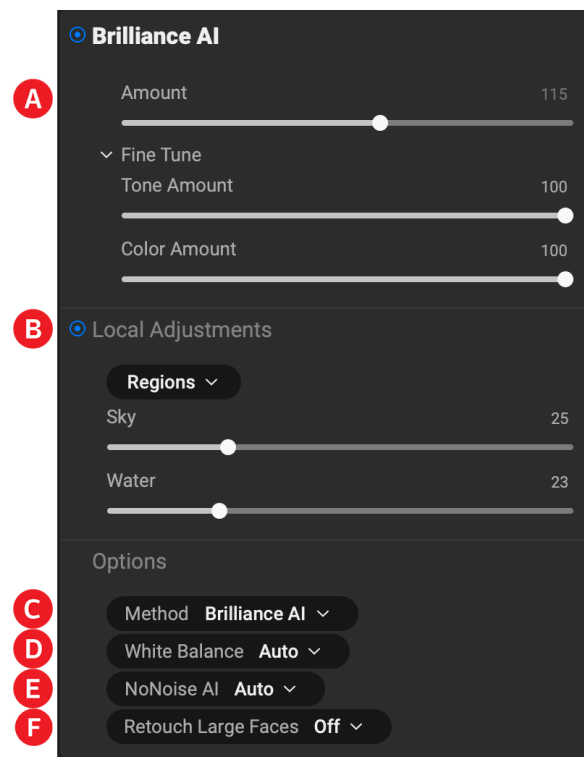
Brilliance AI's operations are fully non-destructive: you can go in and remove or further edit any of the adjustments made, and you can also set the defaults for each of the possible operations in the Brilliance AI tab of Photo RAW's Preferences window (see ["Setting Brilliance AI defaults" on page 137](#)).

To use Brilliance AI on a photo, click the control circle to the left of the pane's title. Once on, the Brilliance AI pane has three sections, Amount, Local Adjustments, and Options:

- A. **Amount/Fine Tuning:** The Amount slider controls the strength of the overall effect. The Fine Tune section lets you adjust separately the Tone and Color portions of the effect.
- B. **Local Adjustments:** When turned on, Photo RAW will search for regions in the photo and create local adjustments for each area. These regions will be added as separate panes in the Local tab of the Edit module.

The Options section of the pane has four settings:

- C. **Method:** By default, the method is Brilliance AI. The other two options, AI Auto and AI Match, are included for photos that were edited with previous versions of Photo RAW.

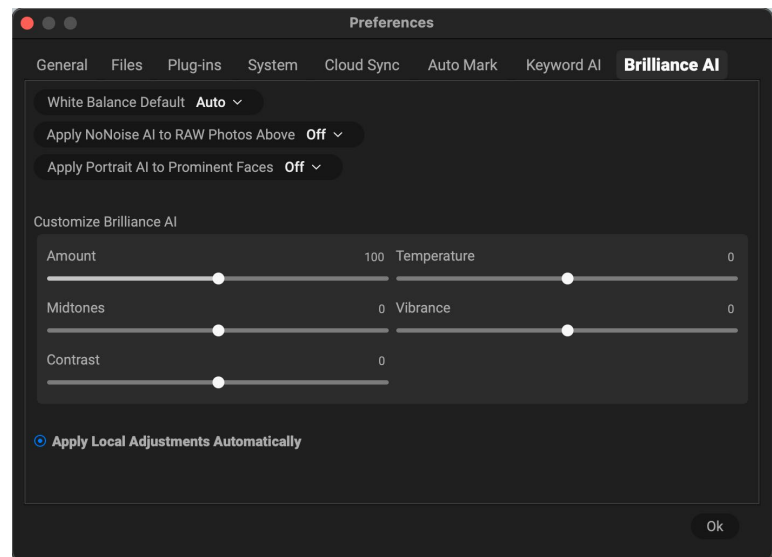


- D. **White Balance:** The default is to perform automatic white balancing, but you can set it to As Shot, or to any one of the standard color temperatures found in the Tone & Color pane. (If you don't want Brilliance AI to adjust the white balance, leave the setting to As Shot.)
- E. **NoNoise AI:** This setting determines whether Photo RAW's NoNoise AI is applied to the photo. Setting it to On will run NoNoise regardless of the photo's ISO; Auto will only run NoNoise if the photo's ISO is above the amount set in the Brilliance AI tab of Photo RAW's Preferences window (see [page 283](#)); Off will not run NoNoise on the photo.
- F. **Retouch Large Faces:** If Brilliance AI finds prominent faces in a photo, it can automatically apply retouching in Portrait AI. This option can be set to on or off.

## Setting Brilliance AI defaults

You can customize Brilliance AI's default operations in the Brilliance AI tab of Photo RAW's Preferences window. The tab has three main sections:

- The top portion lets you set how Brilliance AI adjusts the white balance, at what minimum ISO setting NoNoise is applied (or not at all), and whether to apply Portrait AI retouching to prominent faces.
- The middle section is for customizing the main Brilliance AI Amount setting. If you feel that Brilliance AI regularly adds too little or too much to your photos, you can tune the settings here. You can also change the default adjustments for Temperature, Midtones, Vibrance and Contrast.
- Apply Local Adjustments Automatically lets you set the region-based localized editing.



**NOTE:** Regardless of the defaults set in the Preferences window, you can use the Brilliance AI pane in the Develop tab to turn on or off any of the basic Brilliance AI adjustment categories for each photo or group of photos.

## Editing photos that have Brilliance AI applied

Once you have used Brilliance AI on a photo, you can go into the individual Tone & Color, NoNoise AI, Portrait AI and Local adjustments and make further refinements. For example, you could go into each of the local adjustment panes and use the mask refinement tools to fine tune your masks. You could decide to turn one of the local adjustment panes off. You can also add filters in Effects, swap skies, and more without affecting the core Brilliance AI adjustments.



If you turn the Brilliance AI pane off, Photo RAW will reset the Tone & Color pane to its initial state, and turn off NoNoise AI settings, any local adjustments and any faces retouched. Turning it back on will return your tone, color, noise, local adjustments, and portrait retouching settings to their previous state, with any additional adjustments you might have made while Brilliance AI was turned on.

## TONE & COLOR

This pane adjusts the tonal and color characteristics of an image, letting you correct and enhance exposure, contrast, detail and color. It is split into two sections, Tone and Color, with a Color Profile option at the top of the pane.

### Camera Profile

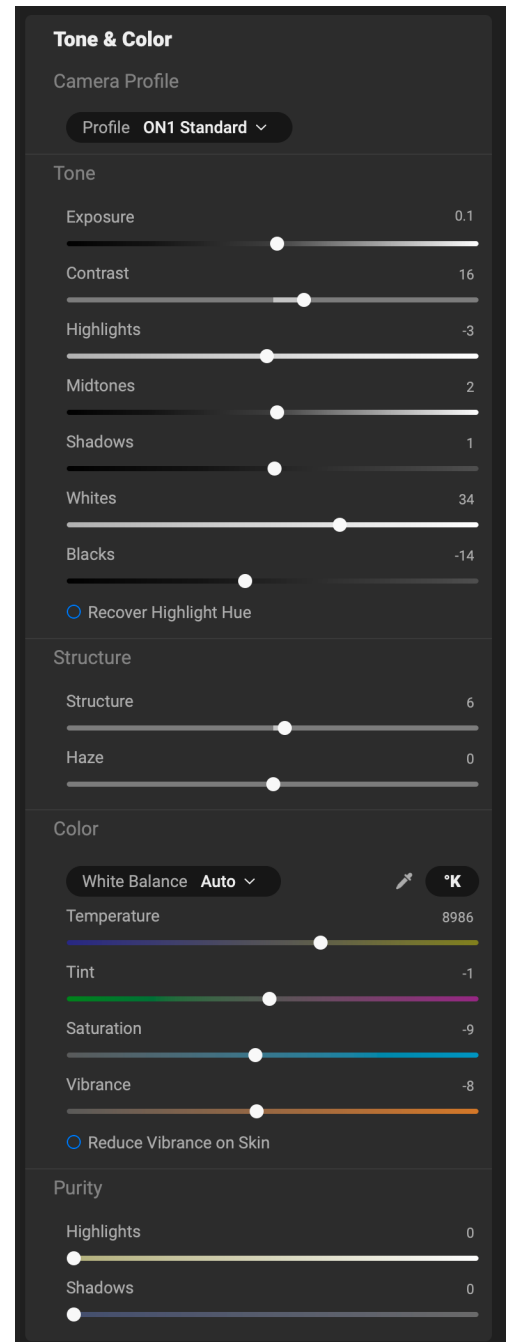
Camera profiles apply alternative interpretations of the raw data in an image based upon different genre types or intents. The pop-up menu displays Photo RAW's built-in profiles: ON1 Standard, Landscape, Portrait, Vivid and Neutral. If your camera has its own embedded profiles, you will see those profiles in the list as well, and you can also import your own custom camera profiles using Photo RAW, and X-Rite's ColorChecker and ColorChecker Camera Calibration software. (See [page 148](#) for more information on how to create and import custom camera profiles into Photo RAW.)

Photo RAW's camera profiles are non-destructive, and work independently of any changes you make to tone or color.

### Tone

The Tone sliders control the global tonality, or brightness and contrast of the image. You can adjust each of the following:

- **Exposure:** Adjusting this slider to the right will lighten your image. Adjusting to the left will darken your image.
- **Contrast:** Increase or decrease the contrast in your image.
- **Highlights:** Darkens the highlights, recovering detail.
- **Midtones:** Adjusts the middle tones in your photo.
- **Shadows:** Lightens the shadows, revealing details.
- **Whites:** Adjusts the white point, adding or removing contrast in the highlights.
- **Blacks:** Adjusts the black point, adding or removing contrast in the shadows.
- **Recover Highlight Hue:** When checked, Photo RAW will attempt to recover highlights while maintaining subtle hues in areas like the sky.
- **Structure:** Adjusts the detail in your image by changing the local contrast.



- **Haze:** When moved to the left, this will remove haze or fog from your photos; moving it right will enhance fog or haze.

## Color

The Color sliders control the Temperature, Tint and Vibrance. They are used to remove a color cast and enhance the color of the image. By default, when working with raw (or DNG) files, the color temperature is measured in degrees Kelvin (°K), which gives you a larger and more accurate range to make adjustments.

The settings in this section of the Tone & Color pane include:

- **Auto Button:** The auto button attempts to detect and remove a color cast. It makes adjustments to the Temperature and Tint sliders.
- **Gray Dropper:** Used to remove a color cast of an image. Click the icon to activate, then click on an area in the image that should be gray.
- **White Balance presets:** This pop-up lets you change the white balance according to common color temperatures (As Shot, Auto, Daylight, Cloudy, Shade, Tungsten, Florescent, Flash, Custom). The default is As Shot, which is the color temperature that the camera recorded when you took the photo.
- **Temperature:** This slider shifts the color either cooler (blue) or warmer (yellow). When editing a raw file, the °K button will be blue, which means that the temperature is measured in degrees Kelvin. Clicking the button will change the slider to a relative color ramp. (The Kelvin ramp is only available when working with raw photos; other formats use the relative slider.)
- **Tint:** Shifts the color either green or magenta.
- **Saturation:** Increases or decreases the saturation of your image.
- **Vibrance:** Increases/decreases the color of muted tones, leaving more saturated colors alone.
- **Reduce Vibrance on Skin:** When turned on, adjustments made with Vibrance slider are reduced on skin colored areas. This allows you to increase the vibrance of clothing and the background without adversely affecting the skin color.
- **Purity – Highlights:** Reduces the saturation in the highlights.
- **Purity – Shadows:** Reduces the saturation in the shadows.

## Adjusting Tone & Color settings via hotkeys

When you're working in any tab inside the Edit module, you have the capability to adjust the basic tone and color settings for your current image directly from the keyboard, based on the hotkeys found in the Keyboard Shortcuts window. These include the following sliders: Exposure, Contrast, Highlights, Midtones, Shadows, Whites, Blacks, Temperature, Tint, Saturation and Vibrance.

To use this feature, first invoke the setting you wish to change with the appropriate keyboard shortcut. An on-screen overlay label will appear, indicating that you are changing that setting. Use the Up/Down arrow keys to increment or decrement the chosen slider. When you're done, press the Escape key, or click in the window.

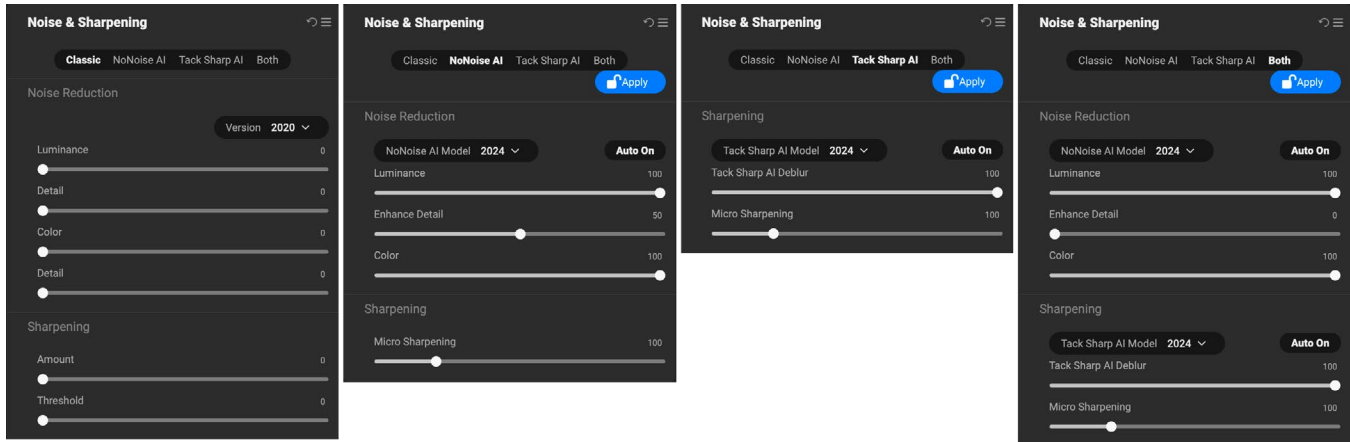
Command	Shortcut
> Modules	
v Develop	
Exposure	\Q
Contrast	\W
Highlights	\E
Midtones	\R
Shadows	\T
Whites	\Y
Blacks	\U
Temperature	\A
Tint	\S
Saturation	\D
Vibrance	\F

*You can view (and change) the hotkeys for the primary Tone & Color adjustments from the Keyboard Shortcuts window, which is found in the Edit menu.*

This feature can be helpful when, for example, you apply a set of filters in Effects and feel that they caused the shadows to darken in your image. Using the keyboard shortcut for the Shadows adjustment, you can make changes dynamically without having to go back to the Develop tab.

Photo RAW has a set of pre-assigned keys for these adjustments in the Develop section of the Keyboard Shortcuts window, but you can change them easily. See [page 96](#) for more.

## NOISE & SHARPENING



Develop's Noise & Sharpening pane offers traditional noise reduction and sharpening options in the Classic tab (above left); while the NoNoise AI (second from left) and the TackSharp AI (second from right) tabs incorporate ON1's AI-based noise reduction and focus-enhancement and sharpening technologies. The Both tab (above left) lets you apply both NoNoise and TackSharp to an image at the same time.

The Noise & Sharpening pane incorporates the two adjustments that often compete with each other when working on a photo, and that generally need to be balanced in order to achieve satisfactory results in your edits. There are four options for noise reduction and sharpening in the pane, split into tabs:

- **Classic**, which offer Photo RAW's traditional noise reduction and sharpening settings.
- **NoNoise AI**, which uses AI-based machine learning to remove luminance and color noise from photos shot at higher ISOs.
- **TackSharp AI**, another AI-based tool that can be used to deblur or sharpen soft photos. It can detect and remove motion blur and will even save out-of-focus shots.
- **Both**, which includes the NoNoise AI and TackSharp AI tabs, letting you apply AI-based noise reduction and focus-sharpening applications at the same time.

The Classic sliders are applied in real time on your image, while NoNoise AI and TackSharp AI are applied at the base image level, demosaicing each image from its raw data and applying its noise reduction and sharpening to the base image. Because it is applied at the raw level, you must process the image and then apply it, which 'locks' the settings to the base image, although you can adjust the settings at any point in time. It also takes a bit longer to process a photo with NoNoise or TackSharp than the Classic method. (See [page 81](#) for details about the order in which editing operations are applied to a photo.)

For most images, you'll want to use the Classic option first, unless you know that the images were shot at high enough ISOs that noise will be a problem in your final edit, or that your photo contains soft or out-of-focus details that you wish to correct.

## Using the Classic tab

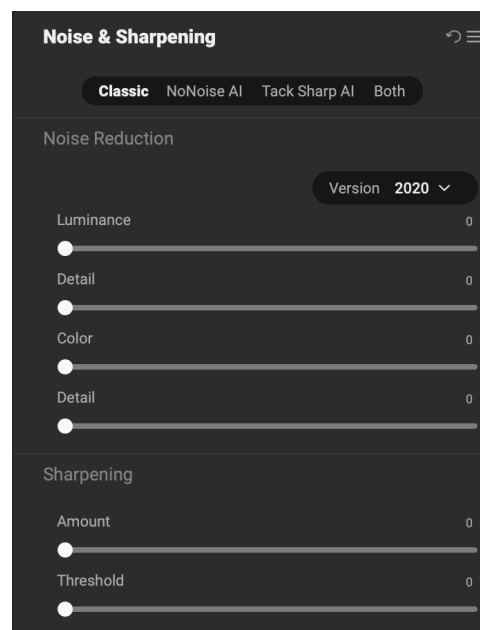
For most images, you'll want to use the Classic tab in the Noise & Sharpening pane; which is the default tab in the pane when you open it.

**NOTE:** When you are adjusting the sharpening or the noise in a photo, it is best to be working at 100% view. To do this, you can click on the 100 button in the Navigator pane, choose View Actual Pixels from the View menu, or press Command-Option-0 (Mac) or Control-Alt-0 (Windows) on your keyboard.

### Noise Reduction

The Noise Reduction section reduces luminance and color noise, while maintaining image detail. By default, Photo RAW applies a small amount of noise reduction on your photo, based on the camera type used. You can then further refine both luminance and color noise, as defined below:

- **Luminance:** Adjusts the strength of the noise reduction applied to the image's luminance. Hold the Alt/Option key to see the luminance while adjusting this slider.
- **Color:** Controls the amount of noise reduction applied just to the color noise or chroma, of the image.
- **Detail:** Controls how much edge detail is protected for each type of noise reduction (Luminance and Color). Hold down the Alt/Option key to see the edge mask while adjusting this slider.
- **Remove Hot Pixels:** If you have any individual, blown-out pixels in your image, turning this setting on will remove them, changing that pixel's color to one that blends in with the surrounding pixels. This setting can also be helpful in reducing noise in long exposures.
- **Version:** This is set by default to 2020, when ON1 last revised its Classic noise reduction algorithms. Photos edited in earlier versions use the 2017 model, while newer photos will default to the new model. You can change any image to the other model via the pop-up.



### Sharpening

The sharpening section of the Details pane is designed to visually sharpen an image based on its initial state from your camera—for example, to bring back some sharpness that might have been lost. It has two basic controls: Amount and Threshold. Amount controls the strength of the sharpening applied, while Threshold reduces sharpening in areas of low detail via a threshold mask. Hold down the Option (Mac) or Alt (Windows) key as you adjust the Amount slider to display your photo in grayscale, which can make it easier to view the degree of sharpening you're applying.

With the Threshold slider, a setting of 0 means that the sharpening amount gets applied to every pixel. As you increase the amount, it focuses the sharpening only where there is a difference between

neighboring pixels. To help you determine which edges are sharpened, you can use the same Option/Alt key trick mentioned above. In this view, as you adjust the Threshold slider, everything that is white will get sharpening applied to it; everything displayed as black will not have sharpening applied.

If you wish to apply further sharpening for printing or other output uses, you can add more targeted sharpening and noise reduction in the Effects tab, or the Resize module, if you wish to sharpen for output.

## Using NoNoise AI

To get started, click on the NoNoise AI tab in the Noise & Sharpening pane. When you click on the NoNoise AI tab, Photo RAW analyzes your image and applies ON1's AI-driven noise-reduction technology, based on the contents of the image. NoNoise initially presents your image at 100% view, with a split screen displaying your original file on the left side, and the denoised version on the right (shown below).



*When you open a raw image for processing inside NoNoise AI, the app will apply initial noise reduction based on the contents of the image and your noise-reduction preferences (High, Medium or Low). The image will be displayed at 100%, with a preview slider that can be dragged left or right (shown circled in red); the original image is on the left side of the slider, while the right side displays the denoised image with the current settings in the NoNoise AI tab.*

The advanced AI neural networks behind NoNoise AI work at the deep raw level. They are trained to detect and reduce the noise before the raw data is even converted to a photo, preventing noise from propagating further up in the image processing pipeline. As a result, NoNoise can clearly differentiate between what is noise and what are small details, helping to maintain sharper details and reduce false color.

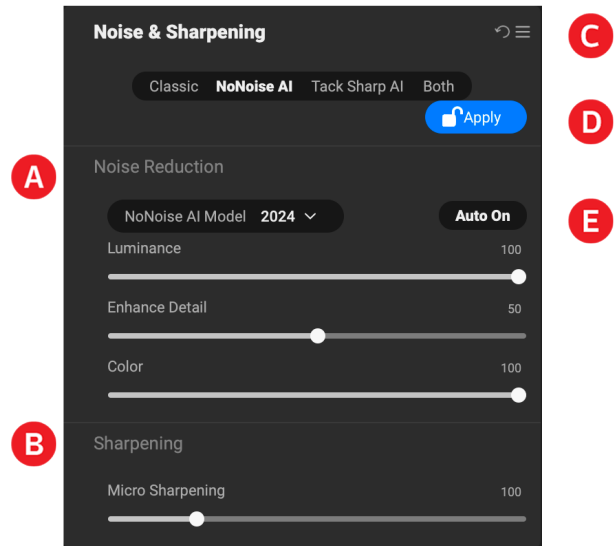
NoNoise AI automatically applies noise reduction based on the contents of your image and your preferred level of reduction, but you can adjust the amount of noise reduction and detail preservation—as well as add sharpening—to your taste, by adjusting the sliders in the Noise & Sharpening pane. The controls consist of two primary sections in the main section of the pane, and an action area on the top right side of the pane:

- A. **Noise Reduction:** This section adjusts the amount of Luminance (brightness) and Color noise reduction on the current image. Enhance Detail works to preserve details that would have



been lost in traditional noise-reduction processes. Color is always set to 100, but the amount of Luminance reduction is set based on the image contents and your Auto settings level (see below). The Method pop-up offers three options: 2024, which is the preferred option for raw files, 2023, the original NoNoise method, and High Detail, which is optimized for non-raw files.

- B. **Sharpening:** This adjusts the amount of sharpening applied to the processed image. The sole slider, Micro Sharpening, enhances small details in your image.
- C. **Reset:** The top button resets the tab to its default state. Click this if you would like to reset any changes you've made here.
- D. **Apply/Adjust:** This button has two states: Apply (blue) and Adjust (red). Apply is the default state when you open the image: NoNoise has applied noise reduction, and you can fine tune the settings as you'd like. When you're done, clicking the Apply will 'lock' your settings in, changing the state to Adjust. To re-edit your settings, click Adjust, and the button will revert to Apply, with the current settings available.
- E. **Auto On/Off:** When you have applied NoNoise to an image with the default reductions settings, this button will read Auto On. If you adjust the Luminance slider, the button will change to Auto Off, meaning that the slider has been adjusted from the auto value. Clicking the button in this state will return the Luminance setting to its original value.



### NoNoise's Default Noise-Reduction Settings

We know that noise reduction is as much about personal taste as it is about technology. Some people prefer a light touch, while others like a much more processed result. In Photo RAW's Preferences, you can configure NoNoise AI to use one of three automatic noise-reduction settings—Low, Medium or High—when you click on the NoNoise AI tab (or Both). This setting only affects the Luminance slider; the Color slider's default is always set to 100, the Enhance Detail's default setting is 50, and the Sharpening Amount is 20.

The default Auto setting is High, but you can change it to Medium or Low in the General tab of Photo RAW's Preferences window; choose the desired setting in the NoNoise AI Default pop-up at the bottom of the window.

Our recommendation would be to play around with a group of representative images from your library, looking at the types of noise reduction that work best for you, and then change your setting to the range that you like best.

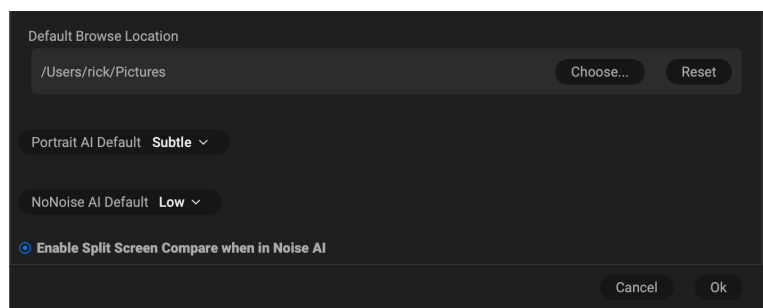


Photo RAW's General Preferences pane has an option to configure NoNoise AI's automatic noise-reduction settings—to Low, Medium or High—based on your taste. The default is High.



## Fine Tuning the Image

Work the Noise Reduction section of the NoNoise AI pane first, if you need to. When thinking about adjusting the noise reduction amounts, detail enhancement and sharpening, use the Preview window at a zoom level that lets you see the important details, and use the Hand tool to move you around the image. Then, work with the Luminance and Enhance Detail sliders to zero in on the best look.

A good methodology, especially as you are getting to know the app and its settings, is to set the Luminance, Detail Enhancement, and Sharpening all to zero. Then start by adjusting the Luminance slider up, examining an area that has both detail and smooth areas. Adjust the Luminance until you see the desired amount of noise reduction in the smooth areas. Depending on your tastes, this will usually be in the 80 to 100 range.

Next, increase the Enhance Detail slider until you have the desired amount of enhancement. Values between 20 and 50 are common. High amounts on this slider may bring back some noise in the smooth regions, so you may need to balance how much you use by comparing high-detail and low-detail areas.

Last, adjust the Sharpening Amount in the same fashion as the Enhance Detail slider. Values between 20 and 50 generally give the best results.

If you want to apply sharpening to the image, make sure you're working at 100% or higher, so you can see the results of the three sharpening controls. Watch out for halos generated from oversharpening, and use the Threshold slider to keep large, smooth areas from getting sharpened; the higher the Threshold amount, the more your sharpening is focused on edge detail. Typically, a Threshold setting of 2-4 will give the best results.

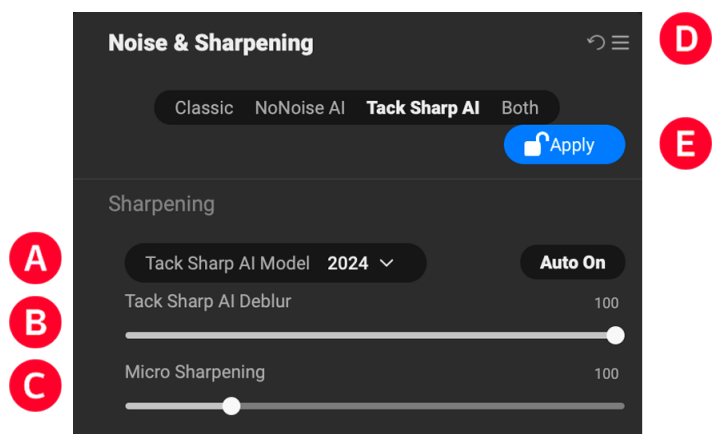
When you're done with NoNoise AI, click the Apply button to lock the settings.

**NOTE:** Because NoNoise AI works best at the raw image level, we recommend that you process your images in NoNoise before you apply basic editing (exposure, color balance, etc.) or finish editing. Ideally, you want to work with the raw data as much as possible. Use the High Detail option (in the Method pop-up) when processing non-raw files, even high-resolution, 16-bit formats like PSD files or TIFFs.

## Using TackSharp AI

The TackSharp AI tab is much simpler than the NoNoise tab, consisting of two sliders and a method option:

- A. The **TackSharp AI Model** has two options: 2024, which is the (default) preferred setting, and Original, which was NoNoise's first sharpening algorithm.
- B. The **Tack Sharp AI Deblur** slider is designed to enhance focus and reduce motion blur. The default setting is 100; in most cases, you shouldn't have to touch the slider, but feel free to do so if you feel that the sharpening is too aggressive.



- C. The **Micro Sharpening** slider is identical to the one found in the NoNoise AI pane. It is designed to enhance the small details in your image. This slider defaults to 100; as you adjust the slider, zoom in to an area with small details, like hair or feathers, and pay attention to the effect. A little bit can go a long way.
- D. **Reset:** The top button resets the tab to its default state.
- E. **Apply/Adjust:** This button has two states: Apply (blue) and Adjust (red). Apply is the default state when you open the tab. When you're done, clicking the Apply will 'lock' your settings in, changing the state to Adjust. To re-edit your settings, click Adjust, and the button will revert to Apply, with the current settings available.



*When you open a raw image for processing inside TackSharp AI, the image will be displayed at 100%, with a preview slider that can be dragged left or right; the original image is on the left side of the slider, while the right side displays the sharpened image with the current settings in the TackSharp AI tab.*

## Using both NoNoise AI and TackSharp AI together

The Both tab in the Noise & Sharpening pane is designed for those times when the lack of sharpness and increased noise are an issue in a photo. By applying both NoNoise and TackSharp technologies to your image simultaneously, you can work to achieve the right balance between the two.

When working in the Both tab, the only difference you'll find is that the Micro Sharpening slider is listed in the TackSharp section of the tab and is not available in the NoNoise section. Otherwise, it functions identically to the individual tabs.

## LENS CORRECTION

The Lens Correction pane uses the lens metadata embedded in a photo and searches Photo RAW's internal lens database for an appropriate profile. If found, the profile will be applied automatically, reducing distortion, color fringing (chromatic aberration) and peripheral fall-off. You can also make your own manual lens-correction adjustments, if you prefer.

Photo RAW detects embedded lens profiles in modern lenses from Panasonic, Fujifilm, Canon, Nikon and Sony. The lens database also has hundreds of profiles for many third-party lenses from companies like Tamron, Sigma, Tokina, Zeiss, Voigtländer and others. It will automatically apply a profile when the camera and lens models are from the same manufacturer.

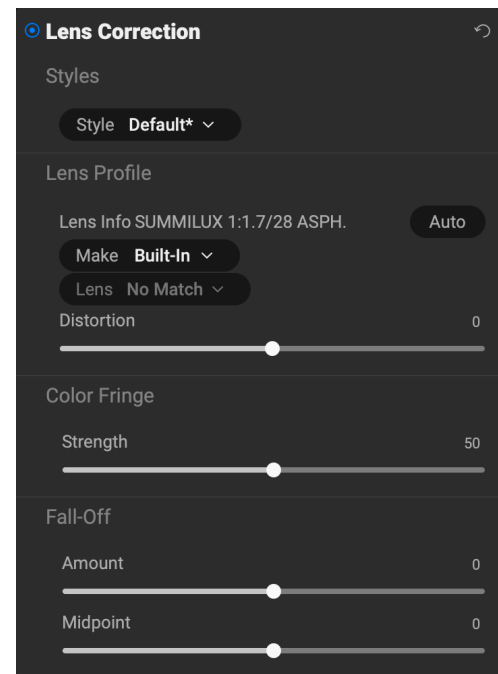
When working with third-party lenses and your specific camera, you can use the Lens Profile section of the Lens Correction pane to find the appropriate lens profile from the database and apply it to your image. When you do this, you will be asked if you wish to apply this lens profile to any other images for that lens. If you say yes, the profile will be saved as a custom style in the Lens Correction pane, and will be applied automatically every time Photo RAW sees this combination.

If Photo RAW doesn't have a built-in profile for your lens, it will automatically attempt to correct the image in real time, based on a comparison between the embedded JPG of the raw image and the raw data itself. In this case, there is no need to save the correction as a style—if you feel that this representation is accurate. If it needs tweaking, you can further adjust the correction in the Manual section of the pane (see below), and then save the correction as a style and apply it to other images taken with that lens and camera combination. (They will not be applied automatically, however.)

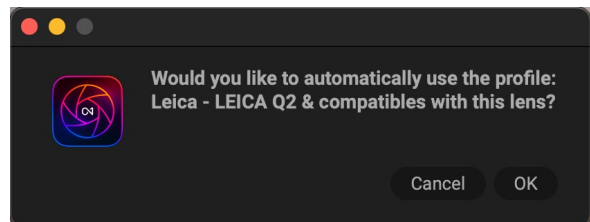
### Applying Manual Lens Correction

To apply your own lens correction to a photo, click on the Manual triangle at the bottom of the pane and choose the manufacturer of the lens (or the camera make, if you don't have that). The Manual section lets you adjust the following parameters:

- Pincushion (where lines in a photo curve inward) or barrel (lines curve outward) distortion;
- Purple or green color fringing that might occur along edges in an image shot with that lens/camera combination; and
- The light fall-off (vignetting) that can occur at the outer edges of a lens at certain focal lengths or aperture. Once you've adjusted the sliders as needed, choose Save New Style from the Style pop-up to use this profile on other lenses.



The Lens Correction pane, with the Manual section expanded. Most of the time, when you're working with standard lenses, Photo RAW will automatically apply the correct lens profile. The Manual section of the pane lets you further adjust distortion, color fringing strength and light fall-off, if you so desire..



When you pair a camera with an existing lens profile from a third-party lens manufacturer, Photo RAW will ask if you would like to use that profile on all images than have this camera-lens combination.

**NOTE:** Lens corrections are applied automatically inside Photo RAW, but you can turn this setting off via Default Processing section of the Preferences' File tab (see [page 275](#)). If you have this setting turned off and wish to apply corrections to an image, you must enable the Lens Correction pane in the Develop module.

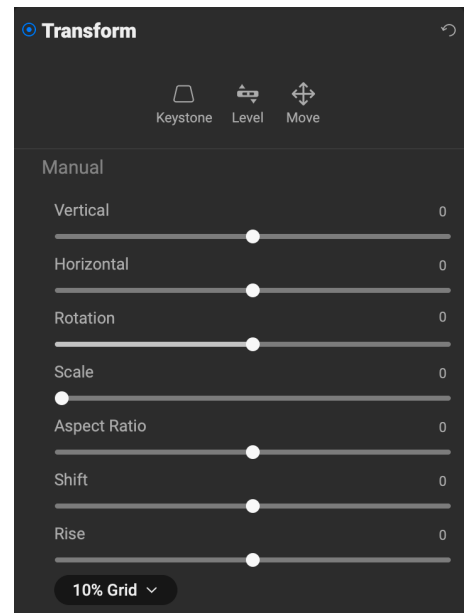
A list of the currently supported lens profiles can be found on the ON1 support website, via [this link](#).

## TRANSFORM

Transform applies distortion and perspective correction to your image, and offers rotation and scaling options as well. You can use these settings to make small adjustments to perspective or distortion.

The three icons at the top of the pane let you apply specific transforms to the current photo:

- **Keystone** lets you project your image as if it were on an angled surface. This type of effect is often used to help adjust the perspective in architectural photos. Selecting the Keystone option will give you a box with four handles at the corners. You can extend the handles in any direction. Once you're done, click on the Apply button at the center of the keystone box.
- **Level** works in a similar fashion to the one found in the Crop tool (found on [page 91](#)). Select the tool and click and drag across an element in your image that should be level.
- **Move** lets you adjust the image's position on the canvas. Click and drag to reposition.



Keystoning can be helpful when you want to adjust the perspective in a photo; just adjust the four corners to align with an object that should have parallel lines, like a window or door, then click the Apply button. The Transform pane doesn't apply a crop when you apply a transformation; use the Crop tool to do that.

In addition to the above tools, the following options will apply specific transform operations:

- **Vertical:** Adjusts the vertical perspective.
- **Horizontal:** Adjusts the horizontal perspective.
- **Rotation:** Rotates the canvas up to 45° clockwise or counterclockwise.
- **Scale:** Scales your image up from the center, to 100%.
- **Aspect Ratio:** Stretches your image horizontally (slider moves to the left) or vertically (right).
- **Shift:** Translates the image left or right.
- **Rise:** Translates the image up or down.



The Grid pop-up menu at the bottom of the Transform pane lets you display a grid overlay while you are adjusting the pane's sliders. The default for the pane is No Grid, but you can also choose between 10% (large), 5% (medium) or 1% (fine) grid settings.

The Transform tool works best most of the time in small amounts. It's not necessarily going to fix a photo with an extreme perspective, but it can often help with slight adjustments, especially if you fine-tune them with some of the Transform panel's other controls or the Manual section of the Lens Correction panel. In addition, the tool does not apply a crop after an operation; if you are happy with the transform results, use the Crop tool to finish your work.



*The Transform pane's Keystone option can help with perspective issues in a photo. Clicking the Keystone icon gives you a box that you can use to align the four corners of an object that should have parallel lines (above left). Once you have the edges of the object aligned, click the Apply button in the center to create the transform, and apply a crop as necessary. (Sometimes, you'll find that using the manual section of the Lens Correction pane can help reduce some of the distortion that the Keystone operation can create.)*

## CREATING AND ADDING CUSTOM CAMERA PROFILES

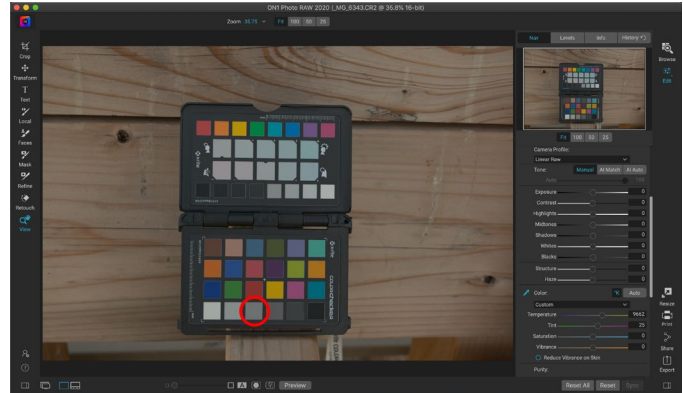
As noted in the section on the Tone & Color panel ([page 138](#)), you can create your own custom camera profiles and import them into Photo RAW. Custom camera profiles can help improve the fidelity of color reproduction in your photos, and for some photographers, this can be a useful tool.

To build a new profile, you'll require a color profiling target and special software that creates the profile. ON1 worked with X-Rite Inc. during the development process to create a workflow that helps ease this process and ensure consistent results when building camera profiles. In addition to ON1 Photo RAW 2024, you'll need a reference target, such as one of the ColorChecker series, and X-Rite's ColorChecker Camera Calibration app, which is a free download for owners of the X-Rite color targets.

**NOTE:** You can find the different ColorChecker options on the X-Rite website at [xritephoto.com/camerasolutions](http://xritephoto.com/camerasolutions).

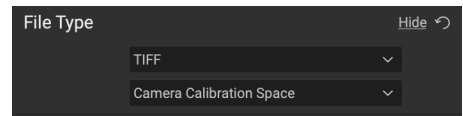
The process for creating a custom profile is as follows:

- Turn off automatic white balance on your camera; set it to the lighting conditions—daylight, tungsten, flash, fluorescent—in which you are shooting the target.
- Place the color reference target in the center of your scene, with even light. Take the photo.
- Open the photo in Develop.
- In the Camera Profile section of the Tone & Color panel, choose the Linear Raw profile from the pop-up.



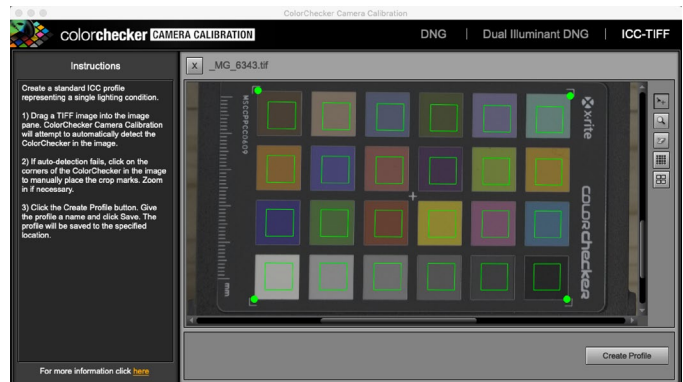
When you open the photo with the color target, set the camera profile to Linear Raw, and use the gray dropper to neutralize the photo, by clicking on one of the light gray targets (circled, above).

- Click on the dropper icon in the Color section of the Tone & Color panel (see [page 139](#)), and click on one of the light gray patches in the target. This will neutralize the image.
- Using the Export feature, export your photo as a TIFF, selecting the Camera Calibration color space from the pop-up under the file type option. (See [page 234](#) if you need help with exporting photos from Photo RAW.)
- Using X-Rite's ColorChecker Camera Calibration software, open the exported TIFF. The app should find and align the target; if so, click the Create Profile button, and save the exported profile. If it doesn't find the target, follow the guidelines in the software to help improve your chances with a new photo.



When exporting your neutralized target, set the file type to TIFF, and the color space to Camera Calibration Space.

- In Photo RAW, go to the Develop module with a photo created with the camera you profiled. In the Tone & Color panel, click on the Import Profile item in the Camera Profile pop-up menu. Find the exported profile and choose Open. Your profile is now installed.



Using X-Rite's ColorChecker Camera Calibration app, you can open the exported TIFF file, and create your own custom camera profile. Then, import the profile via the Camera Profile pop-up in Develop to use it with any photos taken with that camera.



# LOCAL ADJUSTMENTS

You can easily make localized editing adjustments to portions of an image in ON1 Photo RAW 2024. You can create these adjustments with any of the primary masking tools, or with the Super Select AI tool. You can also use the Mask AI selection feature in the Masking Options area of each adjustment pane (see [page 117](#) for a discussion of the Masking Options section and the use of Mask AI to create automatic selections).

In addition to manually creating local adjustment layers, Brilliance AI lets you create region-based local adjustments that are fully re-editable in the Local tab (see [“Brilliance AI” on page 136](#) for more).

You can create as many local adjustments as you need on an image by clicking on the Add Adjustment button at the top of the Local Adjustments section.

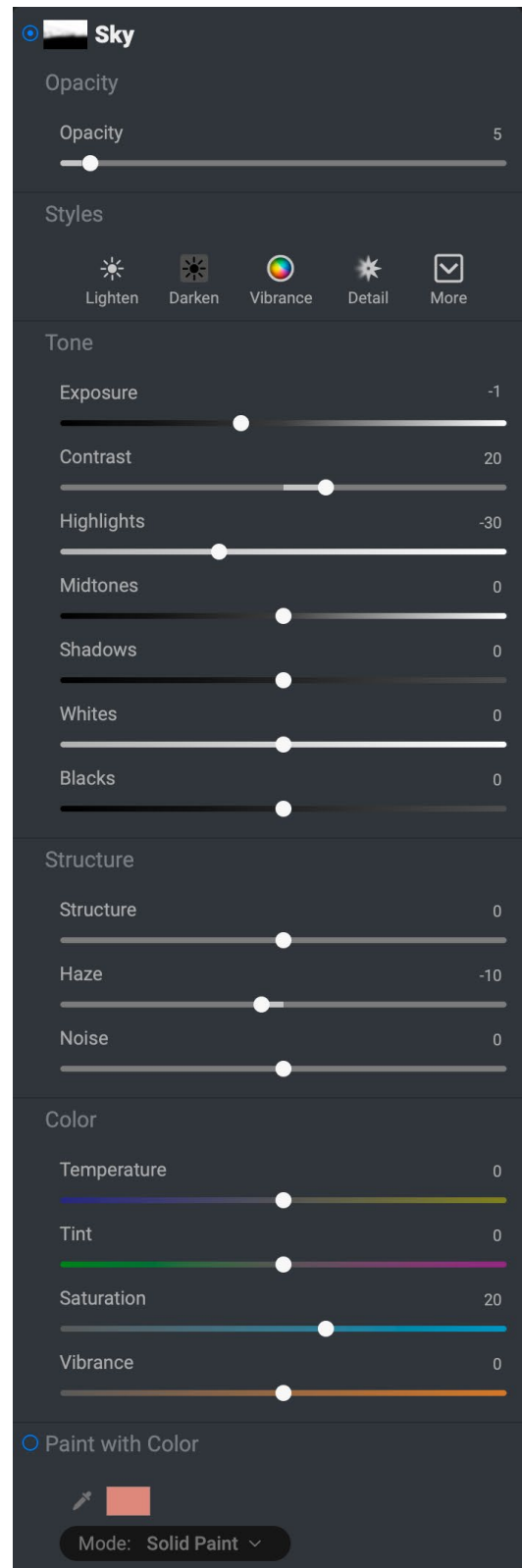
Local adjustments can be used to apply a gradient filter to darken a sky, for example, or to add a more complicated vignette to an image. Local adjustments are in essence a mask that is applied to a portion of your image, and you can manipulate those masks in powerful ways with both the blending modes and the luminosity options in the Local tabs.

Operations you can perform with local adjustments include tone (exposure, contrast, highlights and shadows, detail), color (white balance, saturation and vibrance) and detail (structure and noise). Each local adjustment layer can have completely different settings and work on different parts of your image. You can also use local adjustments to paint with color over part of a photo, to perform specialized tasks such as skin retouching or to replace the color of an object.

Like the rest of the Edit module, local adjustments are independent from the Develop, Effects, Sky Swap and Portrait tabs; you can create a local adjustment while working in Develop, switch to Effects, and when you click on the Local tab, your local adjustments remain intact.

## LOCAL TAB

To create a local adjustment, click on the Local tab and click on the Add Adjustment button at the top of the Local tab. Photo RAW will create a new adjustment pane with a fully black mask (showing no effect), change to the Masking Brush and open the Properties window to the Masking tab. You can switch to any of the masking tools to create the mask for your adjustment. If you wish

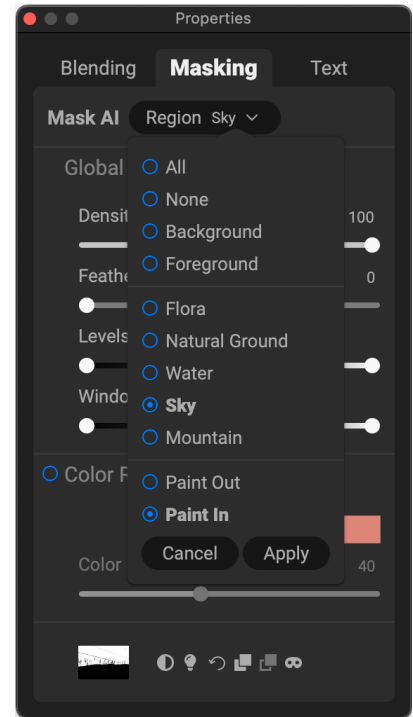


to use Mask AI to create an adjustment for a specific region (or regions in a photo), click Region pop-up in the Masking tab, and choose the region you wish to mask. (See [“Using Photo RAW’s AI-based tools to mask regions automatically” on page 157](#) for detailed information on using Mask AI.)

At the top of each adjustment pane is an Opacity slider, which sets the opacity of the adjustment. The Styles section has a number of canned styles for you to start with, including ones for lightening or darkening (dodging and burning), adding vibrance, fixing teeth or red eye, and many more. (You can also save your own styles via the More menu.)

The main section of the Local tab has all of the same options found in the Tone & Color pane in the Develop tab: Exposure, Contrast, Highlights, Shadows, Detail, and Color Temperature, Tint, Saturation and Vibrance. In addition to those settings, the local adjustment pane includes a Noise slider, designed to help reduce noise on a targeted level (most often seen in the shadows), as well as Structure and Haze sliders.

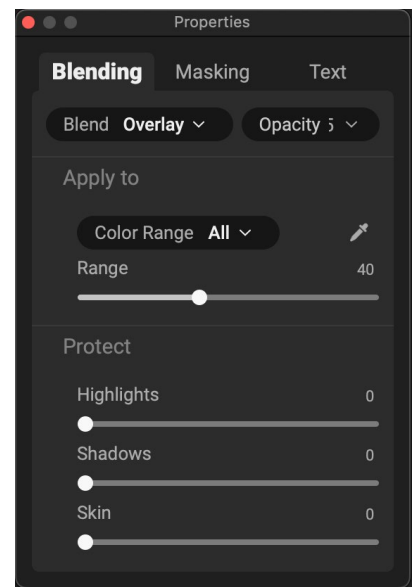
These controls work the same way inside the Local pane. One difference is that, since a local adjustment is actually a layer that sits on top of your global adjustments, Photo RAW provides you with a number of blending options for each adjustment. Blending modes determine how the selected adjustment blend with the items below it.



**TIP:** You can name each adjustment layer by double-clicking on the word 'Adjustment' in the pane. This can be helpful when you have a lot of adjustment layers and wish to remember which adjustment did what.

Click on the Blending tab in the Properties window to change the blending options for the current adjustment:

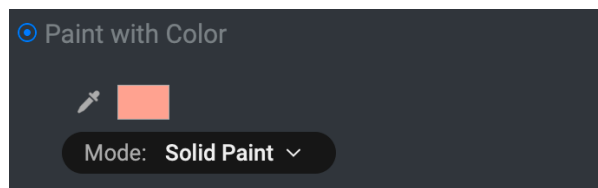
- **Blending Options:** A pop-up list of blending modes. There are 24 common blending modes available in the list, including Normal, Screen, Multiply, Soft and Hard Light, and Overlay.
- **Apply To:** This lets you apply the blending mode to a specific color or tonal range. The options are; All (the default), Highlights, Midtones, Shadows, Reds, Greens, Blues, Magentas, Cyans, Yellows, Flesh Colors, Vivid Colors and Neutrals. (You can manually choose a color range by selecting the Dropper Tool and clicking on a color in your image.)  
When you choose one of these options, the adjustment is only applied to the parts of the image with those lightness, hue, or saturation ranges specified. The Range slider expands or contracts the selected option, and the Highlights, Shadows, and Skin sliders protect those settings from your adjustments.



For detailed information on how the various blending modes work, see [page 161](#).

## Painting with Color

The Paint with Color option at the bottom of the local adjustment panel lets you use the Local Adjustment brush to select a color and paint it into your image. It is designed for two situations: when you wish to apply softening (or evening out) to portions of an image by blending existing color, and to replace the color of an existing object.



The Paint with Color section has three options, Solid Paint, Replace Color, and Classic, and a color swatch for the chosen color. You can choose a color from your image by clicking on the eyedropper icon, or you can click on the swatch and choose a color from the system color picker.

Solid Paint will paint over anything you brush with the chosen color; think of it as painting with a Normal blending mode. Replace Color will replace the hue, but not the luminosity, of the color you are brushing over; it is essentially painting with a Color blend mode, in which whites are preserved.

The Solid Paint option is an ideal skin softening tool; use the eyedropper to select a midtone section of skin, and, using a low opacity setting, paint over parts of the skin with the brush. This option is also useful when you are using custom brushes to add overlays to a photo. See [page 153](#) for more on this.

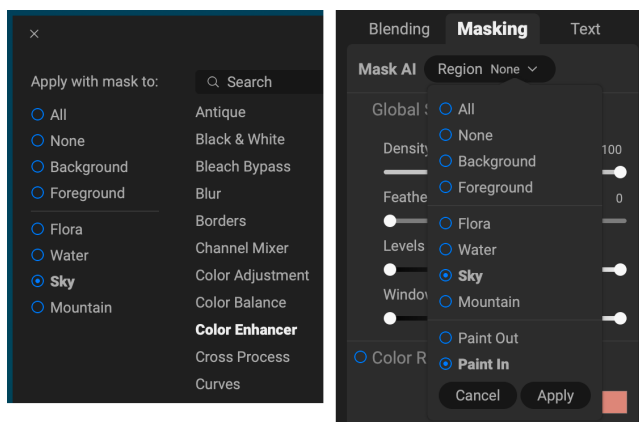
## CREATING LOCAL ADJUSTMENTS WITH THE SUPER SELECT AI TOOL

Photo RAW's Super Select AI tool can also be used – from any tab in the Edit module – to select a region in a photo, apply a preset local adjustment style, and open it in the Local tab. For detailed information on the Super Select AI tool and how it works, see [page 95](#).

## WORKING WITH LOCAL ADJUSTMENTS

When adding a local adjustment layer, Photo RAW will select the Masking Brush by default, but you can use any of the masking tools to create and refine the areas you wish to modify with a specific adjustment. In addition, you have access to all of the mask-refinement brushes (Refine, Chisel, Blur) to fine tune your mask as desired.

For specific details on how to work with these masking options, see [“Masking Basics” on page 115](#), and [“Masking control options” on page 117](#).



*In addition to using the Super Select AI tool to add filters selectively to a photo, Photo RAW's Mask AI technology can be found in the Add Filters window (above left), and in the Masking tab of the Properties window.*

## USING CUSTOM BRUSHES TO ADD OVERLAYS TO PHOTOS

One specialized use for local adjustment layers and the Paint With Color's Solid Paint option is to add overlays with custom brush shapes. You can paint in stamps, watermarks, and other shapes to create specialized creations or enhanced photos. For example, you could use a custom cloud brush to add interest to a lackluster sky, or you could create your own watermark and apply it precisely. Photo RAW comes with a collection of custom brushes of all kinds, and you can import any black-and-white TIF file or Photoshop-compatible brush file (.abr) for use in the app, via the Extras Manager (see ["Extras" on page 9](#)).



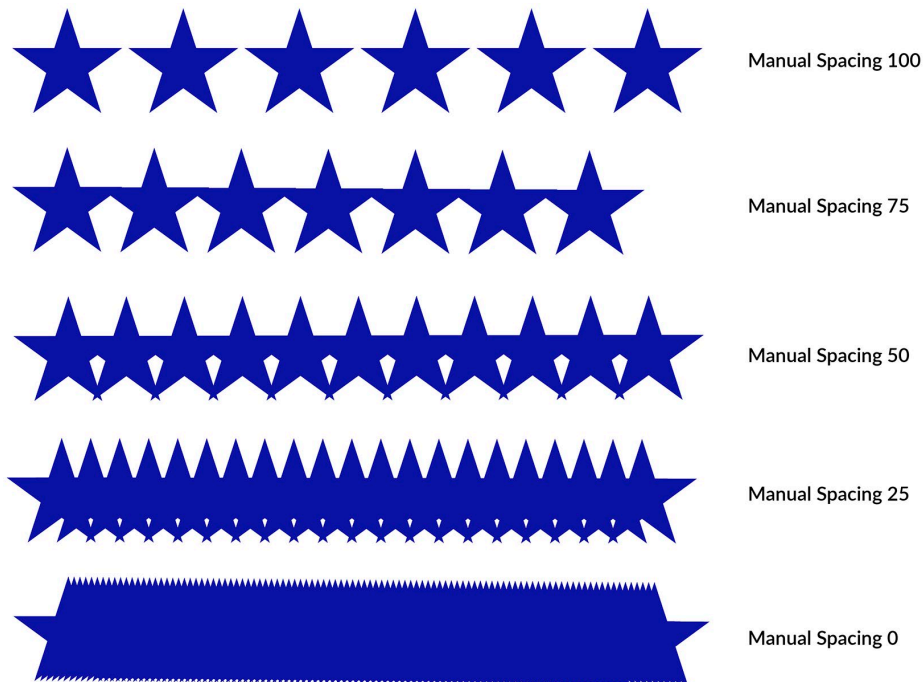
Using custom brushes, available via the Brush Shape pop-up in the Adjustment Brush's Tool Options bar, you can easily add realistic shapes as overlays to your photos.

Creating basic overlays with a custom brush is easy:

1. Create a new local adjustments layer by clicking on the Local tab.
2. If the Adjustment Brush isn't selected in the Tool Options bar, select it, and choose a new brush from the Shape menu in the options bar.
3. Set the brush size and angle. In general, you'll want to keep the Opacity and Flow high, and the Feather low (or 0), but that will depend upon the brush and the application.
4. From the gear menu, turn the Manual Spacing option on. Depending upon the brush type and the application, you'll have to play with the Amount slider, but the general rule of thumb is, for stamped brushes, where you wish the shape to be applied singly, set the spacing low. If you wish to apply the brush multiple times with a stroke—and have clear definition between the brush shapes—set the spacing higher (see the spacing chart below for an illustration of the different settings).
5. Turn the Paint With Color option on and set to Solid Paint. Choose a color for brush, and paint as desired on the image.

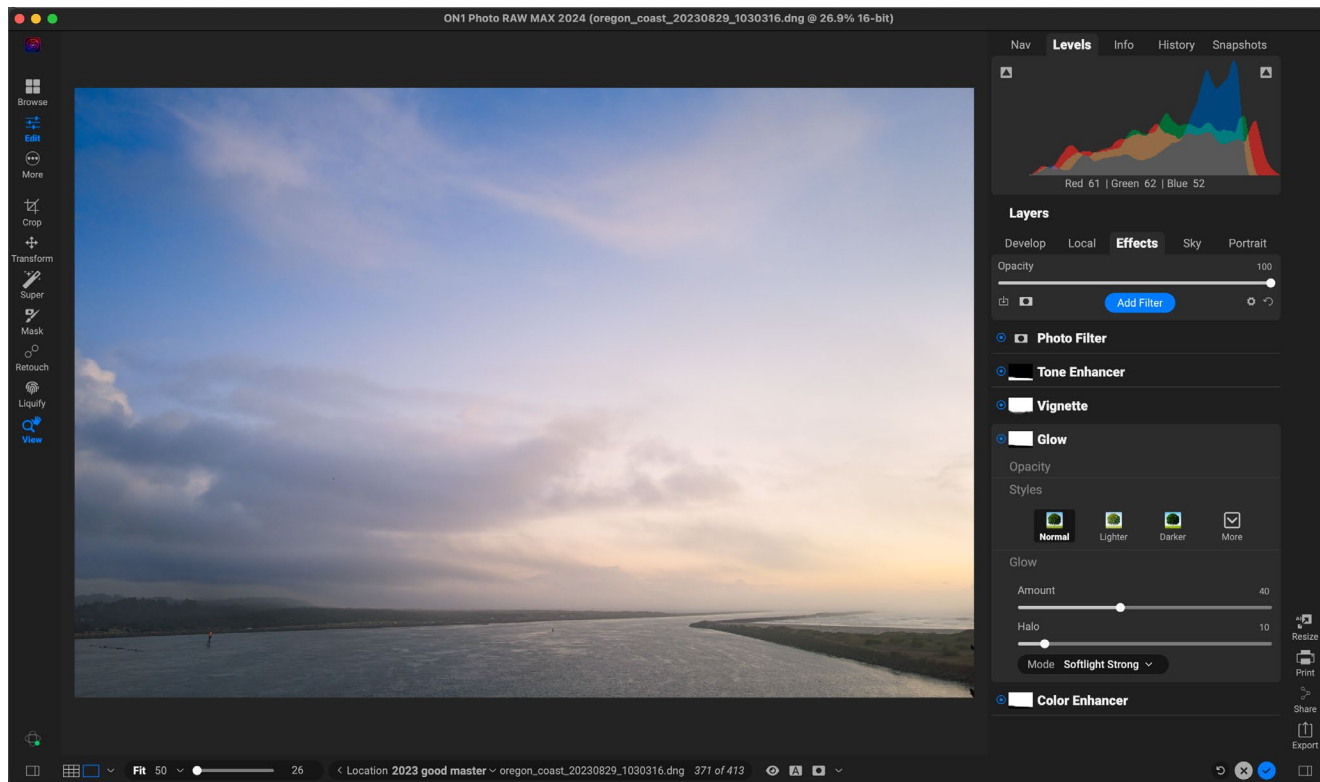
## Tips for using custom brushes

- The best way to begin working with brush overlays is to practice. Use some of the default brushes, and play with them by adding them to a photo or blank canvas.
- Use the Brush Styles option (in the Tool Options bar) to save your favorite brushes and their optimal settings.
- The maximum brush size in Photo RAW is 2500 pixels.
- If you're applying a brush as a single stamp here and there on a photo, start with a feather of 0, and Opacity and Flow set to 100. Once you've set your brush size and angle, click once on the image.
- The Paint With Color option applies to all brush strokes made on that adjustment layer. You can easily change the color via the color patch in the panel. If you want to apply the same stamp with different colors, create a new adjustment layer for each color.



*This chart shows the effect of the Manual Spacing on a brush stroke for a star custom brush. With a spacing of 100, as you stroke, the stroke will be applied with plenty of space between the brush shape. With a spacing of 0, the shape will meld together as you apply the stroke. Depending upon the brush type, this might be acceptable for your purposes.*

# STYLIZING WITH ON1 EFFECTS



If Develop is the base from which you start editing your photos, Effects is the finishing school. With 31 filters that can be stacked in any order, and with extensive blending and masking options, Effects lets you create stunning, pro-level photos with ease. And, since it is built upon ON1 Photo RAW 2024's non-destructive editing engine, you can go from Browse to Develop to Effects and back again, preserving your edits, masks and more without having to worry about saving multiple versions of your files.

While Develop and Effects share the same tools, Effects is much more customizable in how adjustments—called filters in Effects—are applied. The editing stack inside Develop is fixed, while the stack in Effects is extremely flexible. Here are just a few of the things you can do with an image in Effects:

- You can add filters in any order (even multiple instances of the same filter).
- Move filters up and down in the stack.
- Use blending options with all or some of the filters and set the opacity of each filter individually.
- Selectively apply a filter to specific portions of an image by creating complex masks using any of Photo RAW's masking tools, including the AI-based tools like the Super Select AI or Quick Mask AI tools. Or, you can use ON1's innovative Mask AI technology to create masks directly from within the Add Filter window.

In addition to creating and using presets, you can copy and paste Edit module settings from one file to another, or alternatively, synchronize the edits on one photo to a group of photos. These operations can all be performed in any of the editing modules, as well as in Browse, adding to ON1 Photo RAW 2024's extreme flexibility. (See [“Copying settings and synchronizing edits” on page 128](#) for details on how to copy edits between photos.)



# Filters

Filters are the building blocks of Effects' editing power. Each filter is an adjustment type, much like the basic adjustment panes inside Develop, but Effects filters have much more functionality than the Develop panes. The Effects tab has 31 filter types, added either by the Add Filter button found at the top of the Effects tab, or via the Filters pane on the left side of the window. You can apply filters in any order, and you can have more than one instance of a filter in the stack. This can be helpful when you are creating complicated masks on an image and wish to apply the same filter differently in parts of the photo. And, like everything else in Photo RAW, filters can be added, adjusted and removed easily, and they never affect the base image that you start with.

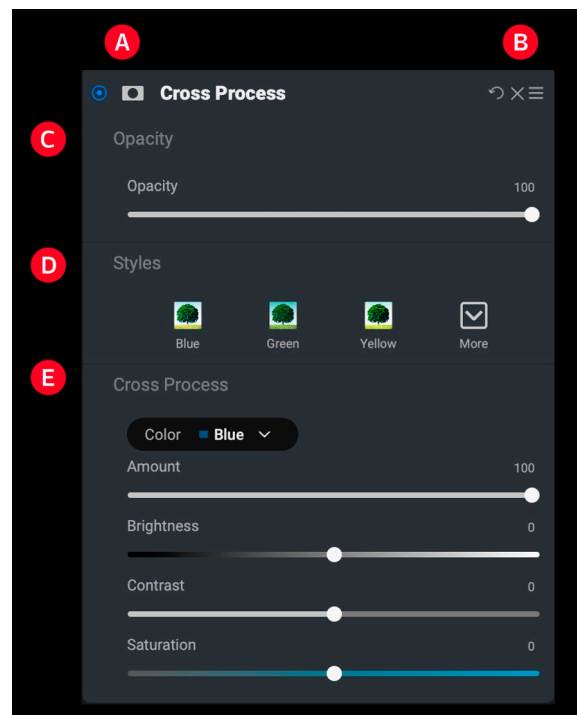
Each filter is like a movable, editable layer over the base image you are working on. You can use Effects' masking tools to apply a filter to only part of an image and can change the blending mode (and opacity of the filter) to alter the way the filter interacts with those above and below it in the stack. And, when you add a filter via the Filters window, you can use Photo RAW's Mask AI technology to select a region in your photo and apply the filter to that area automatically – without using any of the built-in masking tools.

## FILTER OVERVIEW

Each filter pane has a different set of adjustment options and controls, but every filter has the same five sections:

- A. Filter on/off button (left); Show/Hide Mask (right); Filter Name.
- B. Displays blending mode options (left); Resets filter (middle); Deletes filter from the stack (right). *[Note: This section is only visible when your cursor hovers over the filter.]*
- C. Filter opacity setting.
- D. Styles sections for filter-based presets.
- E. Control area with that filter's specific settings (dependent upon the filter chosen).

The section titles for Opacity, Styles and the filter control area are collapsible and expandable. Click the gray label to hide that section from the pane.

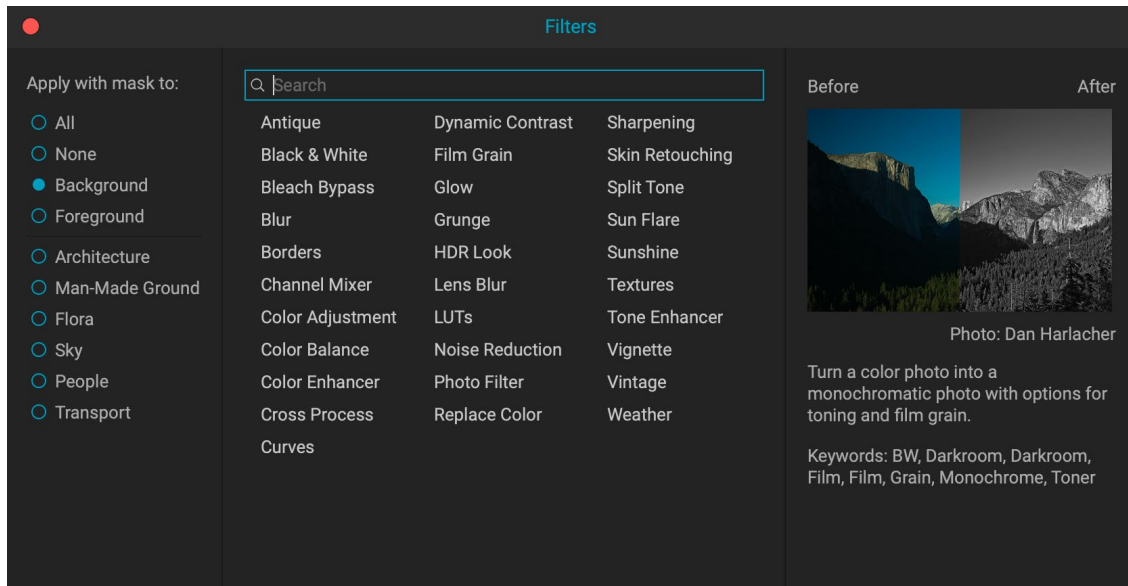


Overview of a filter—in this case, the Cross Process effect.

## APPLYING FILTERS WITH THE ADD FILTER BUTTON

If you click the Add Filter button at the top of the Effects tab, the Filters window opens up, with a list of all 30 filters on the right side of the window, and the Mask AI pane on the left. If you run your cursor over a filter name, the right side of the window will have a small before/after thumbnail, a short description, and a list of keywords that relate to that filter. To add a filter, click once on the filter name, and it will add it to the stack, above the current filter. If there aren't any filters in the stack, the new filter will be at the top of the stack. You can click and drag the title bar in any filter to move it up or down in the stack.

If you're not sure what you might be looking for, you can search for filters using keywords, like "monochrome," "contrast," "sharpening," and so forth. Photo RAW will then narrow down the search to those filters that match your search terms.



When you click on the Add Filter button in the Effects tab, Photo RAW displays the Filters window, which consists of the Mask AI controls (left), the list of filters (center), and a description (right) of the filter your cursor is currently hovering over, with a sample preview (including a before and after split view).

## Using Photo RAW's AI-based tools to mask regions automatically

Normally, when you add a filter, Effects puts the filter in the Effects stack, and applies it to the entire image. To selectively apply a filter automatically to specific areas in a photo, you have three options:

- You can use a tool like the Super Select AI tool to select a region and create a filter in Effects (see [page 95](#) for information on using this tool).
- To add a filter from within the Effects tab, choose the Add Filter button, and select the region in the Mask AI section on the right side of the Filters window.
- If you have an existing filter, you can also select a region from the Masking control tab of the Properties window. (Clicking on the Show/Hide Mask icon in the filter's title bar will open the Properties window automatically.)

In addition to these options, you can also use an AI adaptive preset when you wish to create selections based on regions in a photo. (See [page 124](#) for more on presets and their application.)

## APPLYING FILTERS WITH THE FILTER BROWSER

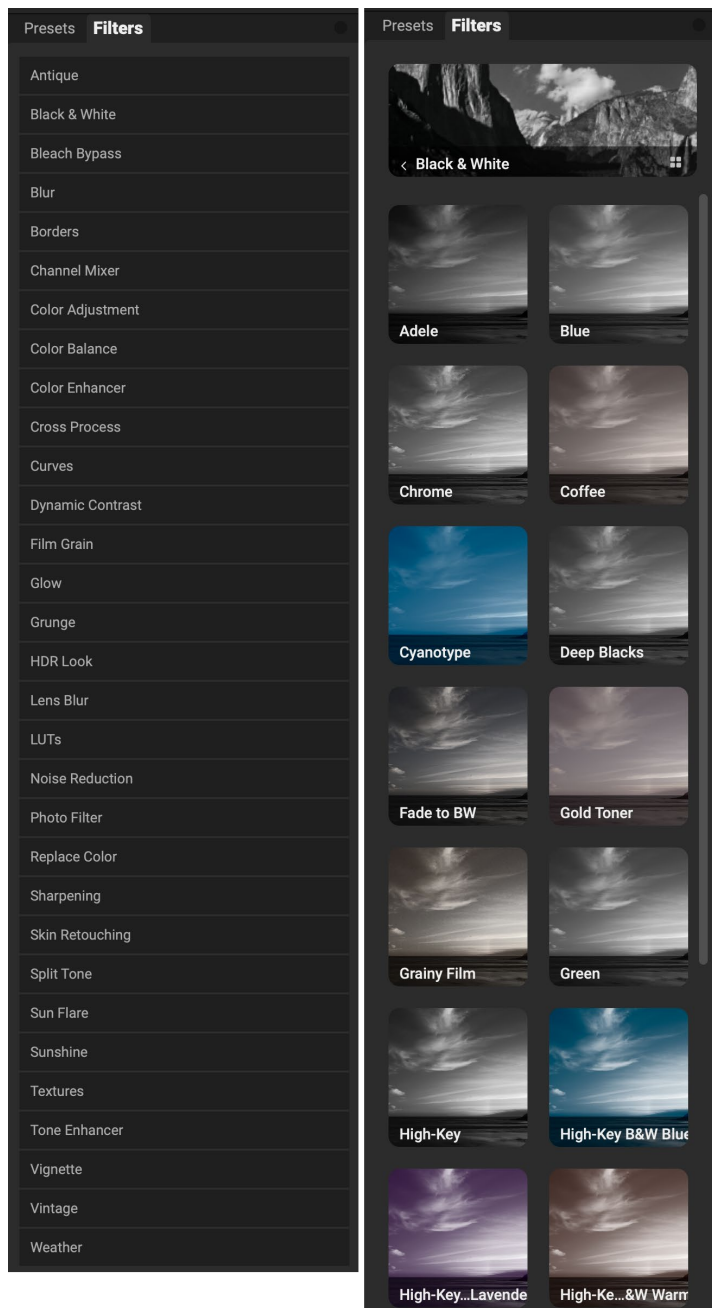
In addition to the Presets panel found throughout the Browse and Edit modules, Effects has an additional Filter panel on the left side of the screen. This panel lets you browse all of the filters inside Effects, and display previews of the available styles for that filter, and, if you hover your cursor over a filter style in this view, Photo RAW will display a preview of the filter style's application in the main window.

To choose the Filters panel, click on the Filters tab. A list of the filters will appear, and clicking on a filter will display thumbnails of your image with that filter's available styles. To choose one, click on the style, and Effects will add that filter to the Overall Settings pane. Note that this will replace the currently selected filter in the stack; to add a new one on top of the stack, click the Add Filter button at the top of the Effects tab on the right, then choose a filter from the list. (You can also click and drag the title bar of any filter and move it up or down in the stack.)

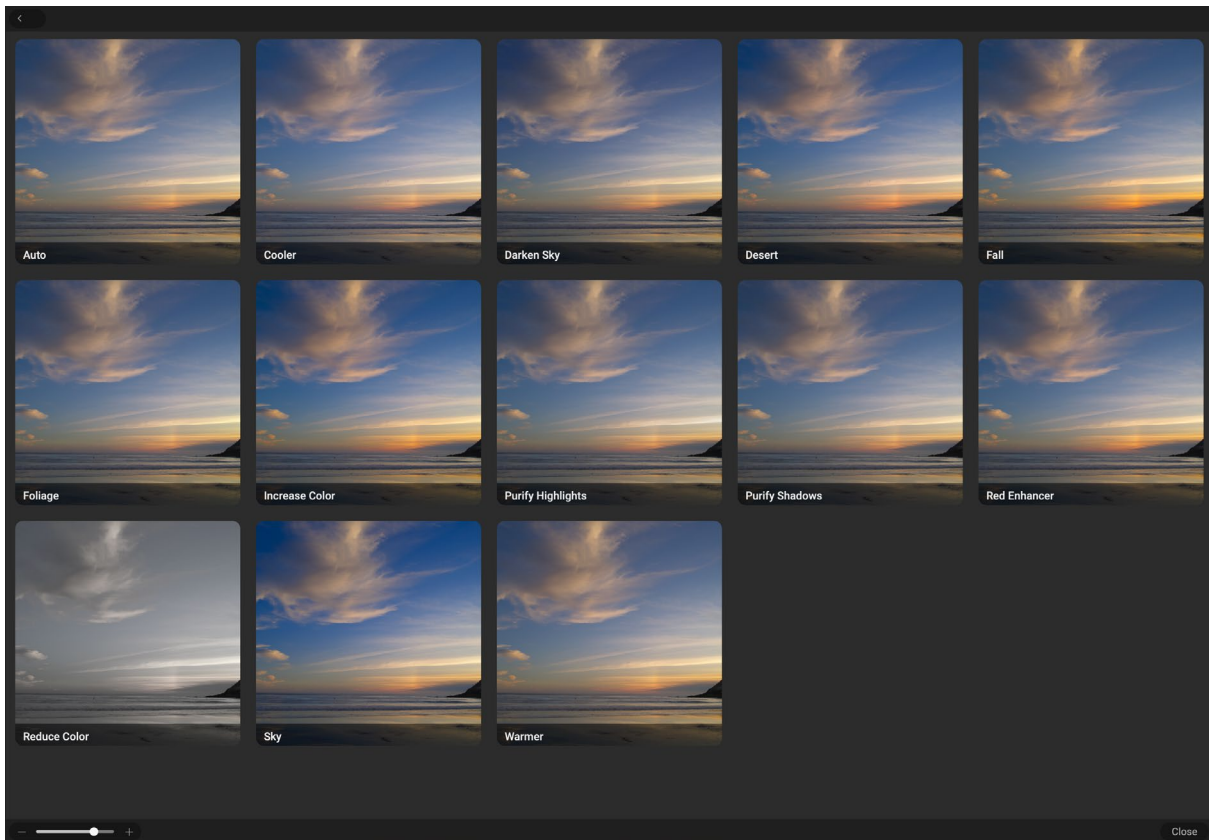
If you'd like to see a larger representation of what your selected photo will look like with a filter's styles, click on the Quick View Browser icon in the category's title bar (see the following page for a representation of the Quick View Browser). That will display a window over the entire Photo RAW interface with all of the presets in that category. (Press the Escape key to close the Quick View Browser.)

To change the size of the thumbnails in the filter styles panel, select the Browser Mode option from the View menu and choose One, Two or Three Column Thumbnail View. (If you choose Thumbnail from the Browser Mode submenu, the Filters and Presets panels will display as thumbnails.)

If you'd like help with what the different filter operations do, click on the Info button at the top right of the panel. With that button checked, when you hover over a filter, Photo RAW will display a small pop-up window containing the same description (with before/after thumbnail) found in the Add Filter window. Click the Info button again to turn off this display.



*The Filter Browser has a list of all the filters available in Effects (left). Clicking on a filter will display thumbnails of the filter's styles using your photo (right). And, when you move your cursor over a filter style, in the main preview window, Photo RAW will display a live preview of the filter applied to your current image.*



The Filter panel's Quick View Browser option works identically to the one for the Presets panel: click on the icon to the right of the filter name, and Photo RAW will display the current photo with that filter's styles applied.

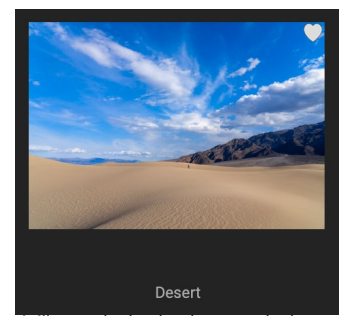
## Searching for filter styles inside the Filter Browser

To search for styles inside the Filter Browser, type in the name you're looking for in the search field at the bottom of the panel. The search results will appear in a new sub-folder called search results, which will be selected automatically.

## Saving filter styles as favorites

If you hover over a filter style's thumbnail in either the Filter Browser or the Quick View Browser, you'll see a heart icon. Clicking the icon will fill the heart in and add that style to your Favorites category. This category resides at the top of the filter list, and contains all filter styles you have selected as a favorite. To remove a favorite, open the Favorites category, and click again in the heart icon.

To apply a filter style to a photo, simply click on the style in either the Filter Browser or in the Quick View Browser.



A filter style that has been marked as a favorite will be displayed in the Favorites category.

## WORKING WITH FILTER PANES

By default, the filter stack is empty, although, if you have applied a preset that uses filters from Effects, you will see those filters in the stack. Clicking on the button in the top left corner of the filter pane will turn that effect on or off, which can be helpful if you want to see the effect in the context of other edits you have made. If you don't like the effect, click on the 'X' icon in the pane's title bar to get rid of it. The Reset button, which is next to the Delete button, represented by '↺', will reset that pane's settings to their default.

To move a filter up or down in the stack, click on the pane's title bar and drag it up or down. A heavy white line will appear between panes as you drag; let go of the mouse at the location you wish the filter to go.

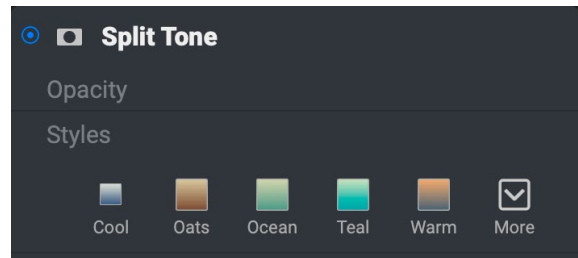
**TIP:** Each pane can be collapsed, by clicking in the pane's title bar. If you don't want to have to scroll up and down the filter stack when you have a lot of open panes, go to the Window menu and choose Solo Mode. This will leave the current pane open, and will hide all the other panes. Clicking on another pane will open that one and collapse the previous one.

## STYLES

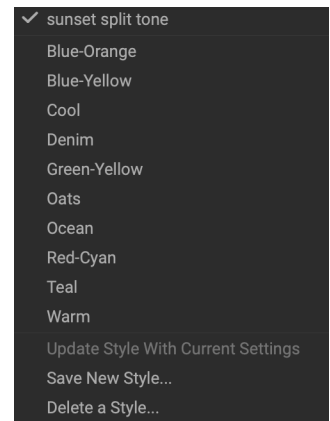
All of the Effects filters have a set of built-in styles in the top part of the pane. Styles are like preset adjustments for a pane: they provide a group of settings to help you get started in the pane, or to apply a specific effect.

You use a style by clicking on the style's icon in the pane, and then can adjust the sliders as desired to get the right effect for your photo.

You can also save your own settings as a style. Simply click on the More icon on the far right side of the styles list for that pane, then choose Save New Style from the pop-up. Name your style, and it will then be added to the top of the More menu (see right). To apply a saved style, choose the style from the More pop-up menu. To adjust the settings for a saved style, apply it, make any changes you would like to the sliders or other options, then right-click on the More pop-up and choose Update Style with Current Settings from the menu.



Styles for the Split Tone filter.



Saved styles appear at the top of the More menu.

## FILTER MASKS

Every filter has a mask associated with it, which lets you apply that filter's effect to specific areas of an image, using the Masking Brush and Gradient Mask tools. By default, the mask is white, which means that the effect is visible in every part of the image. Using the Masking Brush, for example, you can 'paint out' the effect in areas that you wish not to be affected by the filter. Alternatively, you can invert a filter's mask and choose to 'paint in' the filter where you would like it to be.

When you add a filter, the mask is technically hidden until you use one of the masking tools to create one, or when you use the Mask AI section of the Masking tab in the Properties window or in the Filter Browser (see ["Using Photo RAW's AI-based tools to mask regions automatically" on page 157](#) for more).

Photo RAW has two options for viewing the contents of a mask: either as a red overlay on top of your image (the default) or a view only of the mask itself, represented as grayscale. These options are available from the Mask menu; select Show Mask to see the mask, while the View Mode option lets you switch between the two modes. To display the current filter's mask, press the 'O' key; to turn it off, press the key a second time.



For a full description of the masking options in the Masking Properties window, see [“Masking control options” on page 117](#). For more details about creating and manipulating masks in Photo RAW, see [“Masking Basics” on page 115](#); information on the masking tools starts on [page 95](#).

## DELETING A FILTER

You remove a filter by selecting it and pressing the ‘X’ icon in the top right area of the filter’s pane.

## FILTER OPACITY

Every filter has an opacity setting, which effectively adjusts the strength of the filter. The Opacity slider, which is found at the top of each filter’s pane, ranges from 0 (no effect) to 100 (full effect). What this means is that at 100, all of the filter is applied to the image in the stack. At 50, the filter strength is half, and the effect is much less strong. Playing with a filter’s opacity can often help soften an effect in a way that you wouldn’t be able to get otherwise.

For example, if you add a Black & White filter to an image, but would like a faded, muted color effect, simply reduce the opacity of that filter. The more you reduce the opacity, the less effect the Black & White will have.

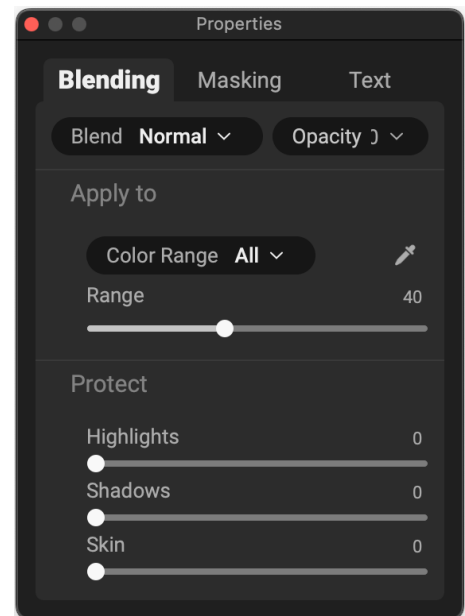
By default, when you add a filter, the opacity will be set to 100. You can create presets, however, with whatever opacity you wish for a given filter.

## BLENDING MODES

In addition to opacity, you have one other very powerful option for adjusting the strength and effect of a filter: blending modes. Blend modes determine how a filter interacts with the filters below it in the image stack. Blend modes can darken or lighten an image, depending upon the mode chosen, while others adjust contrast or color. ON1 Photo RAW 2024’s blend modes also let you apply a blend mode to specific colors or tones in your image, making them a very useful tool for precision editing of your images. You can apply sharpening, for example, only to the midtones in an image, which can be very helpful in a landscape image.

To see the blending modes, click on the gear icon at the top right of the filter’s pane (this is hidden by default, but displays when you hover over the pane). This will open the Blending tab in the Properties window. The blending option controls are:

- **Blending Options:** A pop-up list of blending modes. There are 24 common blending modes available in the list, including Normal, Lighten, Darken, Screen, Multiply, Soft Light, Hard Light, Overlay and Color.
- **Apply To:** This lets you apply the blending mode to a specific color or tonal range. The options are; All (the default), Highlights, Midtones, Shadows, Reds, Greens, Blues, Magentas, Cyans, Yellows, Flesh Colors, Vivid Colors and Neutrals. (You



The Blending tab of the Properties window lets you set the blending mode, opacity, and what tones or colors the blending will apply to. You can also protect highlights, shadows and skin tones from the blending actions.



can also manually choose a color range by selecting the Dropper Tool in the pane and clicking on a color in your image.)

- The Protect sliders help protect highlight, and shadow areas and skin tones from the application of the blending mode.

When you choose one of the options in this menu, the adjustment is only applied to that part of the image that is based on the lightness, hue, or saturation range specified. The Range slider expands or contracts the selected option, and the Highlights, Shadows, and Skin sliders protect those settings from your adjustments.

## How blending modes work

At their basic level, blend modes determine how the pixels on one layer interact with the layers below it. With 24 blend modes in ON1 Photo RAW 2024, it might be difficult to know which ones to use in any given situation, but they can easily be grouped into Normal (the default mode) and five categories: Darken, Lighten, Contrast, Comparison, and Color/Luminosity.

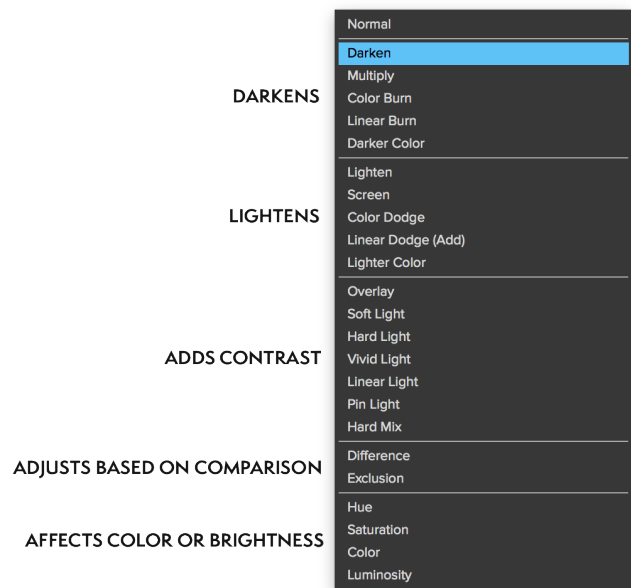
Normal is the most widely used: it simply applies the effect to all of the pixels in the adjustment (or effect), assuming the layer opacity is 100%.

The other modes apply different levels of that category's effect using various mathematical formulas, and sometimes it can be hard to know which mode will work best with what photo.

Most often, when you know how you want to apply an effect —by darkening, for example— you'll need to perform a bit of experimentation

with the different modes in that category to determine which mode works best.

### ON1 PHOTO RAW BLEND MODES

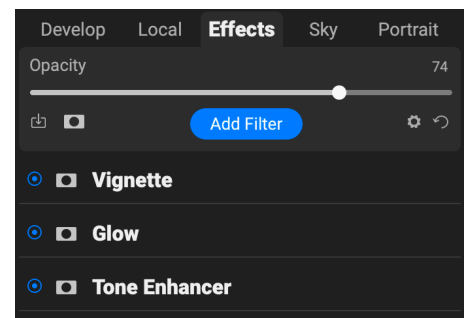


## MASTER OPACITY, BLENDING AND MASK OPTIONS

Effects also has master opacity and blend mode options for the entire filter stack, and includes a Master mask option. The Master Opacity slider, found below the Effects tab, controls the strength of the composite filter stack against the original image—if you haven't performed any other editing operations on it—or against the image as it has been adjusted inside the Edit module.

The Master Blend Mode options can be accessed via the gear icon at the top of the Edit tab. Clicking on it opens the Properties window. It has the same blending options found in the individual filter panes.

To create a Master mask, click on the mask icon next to the Save Preset icon in the Edit tab. This mask works on the entire effects stack. Note that this master mask does not have Mask AI options pop-up found in the individual filters.



*In addition to masking, opacity and blend mode options for each filter in the Effects stack, you can set the opacity and blending modes for the entire stack. You can also create a master mask for the entire stack.*

# Filter Types

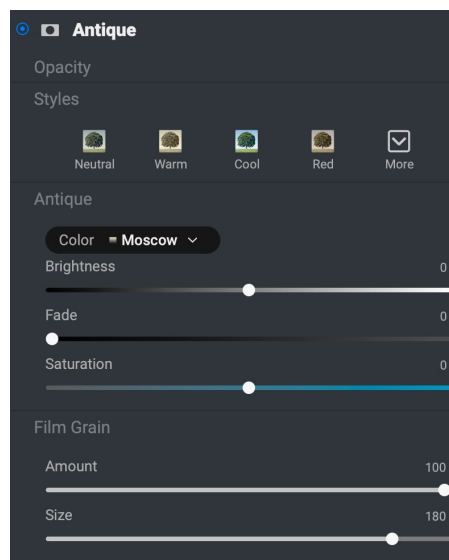
Effects has 31 filter types available for you to use inside ON1 Photo RAW 2024. Each filter has a set of styles in the top row, providing a range of popular or useful options for using that filter. You can also save your own preset styles by clicking the More pop-up at the end of the Styles row.

**TIP:** The blending mode options (gear icon), reset and delete filter icons are hidden by default. Hovering your cursor over the filter in the Effects stack will display those options. Also, you can collapse or expand the various sections in a pane by clicking on the section label. See [page 156](#) for an explanation of the various filter sections.

## ANTIQUÉ

The Antique filter gives your image an aged look; unlike the Vintage filter, this filter focuses more on a monochromatic or hand colored look.

- **Color:** Displays a list of color options that are similar in tone to the Split Tone filter, providing a duotone-style effect.
- **Brightness:** Adjusts the overall brightness of the image.
- **Fade:** Adds a white fill to the image, giving the illusion of a faded photograph.
- **Saturation:** Adjusts the color saturation. Moving the slider to the left decreases the saturation; moving it to the right increases it.
- **Film Grain:** Amount controls the strength and size dictates how large the grain appears.



## BLACK & WHITE

This pane is used to turn a color image into a monochromatic image, and, includes additional toning features. The styles at the top of the pane represent different filter types often applied to an image, while the Auto button selects the black and white points of your image automatically. To manipulate the tones manually, move the color range sliders to the right (increasing brightness) or the left (decreasing). Alternatively, you can choose the Channel Mixer option from the Conversion pop-up, and use the slider to choose a look that accentuates the color tones you are most interested in.

To change the tones directly inside a photo, choose the Color Response tool in the pane: click on it to select the tool, then click and drag in the image to increase or decrease the brightness of the selected color range.

### Tone

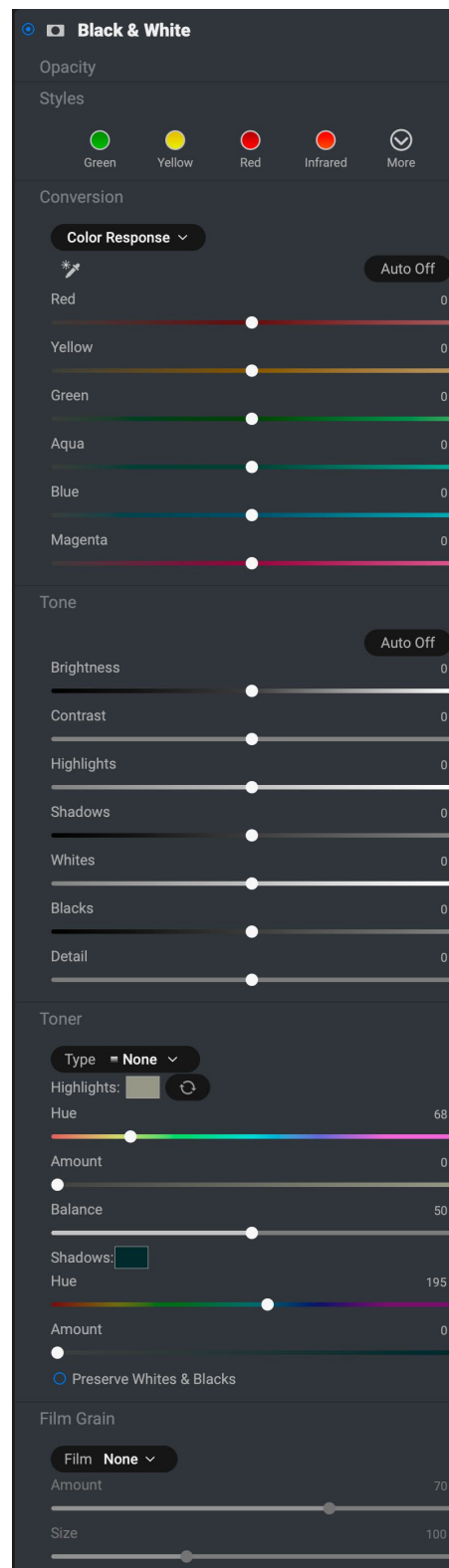
The Tone section of the Black & White pane lets you adjust brightness, contrast, highlights and shadows, whites and blacks, and detail directly within the filter pane.

### Toner

The Toner section of the filter is designed to approximate many traditional and popular darkroom-based paper toners, from sepia tones to platinum, selenium, coffee and more. You can choose from more than 20 toning options via the Type pop – up menu, and adjust the combination of paper (which is represented by the Highlights section of the pane) and silver (represented by the Shadows). To tune your options, you can adjust the Hue or Amount of each setting, and use the Swap tones icon (next to the Highlights color well) to swap the highlights and shadows colors. The Preserve Whites and Blacks button keeps the pure whites and pure blacks neutral, instead of taking on the color of the toner.

### Film Grain

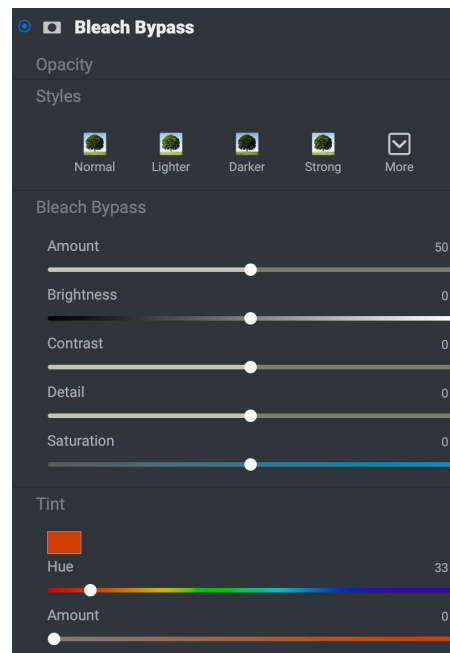
The last section of the Black & White pane is Film Grain, which, like the Toner section, is designed to add a classic film grain look to your photos. To add film grain, choose from the drop-down list of popular black and white films. The Amount slider controls the strength of the effect, while the Size slider adjusts the scale of the grain.



## BLEACH BYPASS

This filter is based upon an old color film processing technique where the bleaching step was skipped. It reduces the saturation and increases the contrast.

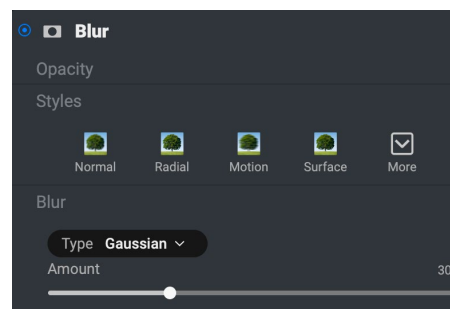
- **Amount:** Controls the strength or amount of the bleach bypass appearance.
- **Brightness:** Adjusts the overall brightness of the image.
- **Contrast:** Increases or decreases the global contrast.
- **Detail:** Enhances the details by increasing the micro contrast.
- **Saturation:** Adjusts the underlying saturation.
- **Tint:** Choose a new color by clicking in the color icon or by using the Hue slider.
- **Amount:** Adjusts the strength of the tint.



## BLUR

This filter has five options for adding blur to your images: Gaussian, Motion, Radial, Surface and Box. Each blur has its own look:

- **Gaussian:** This is a simple Gaussian blur applied to your image. It has one slider, Amount, which controls the strength of the blur by adjusting the radius.
- **Motion:** This adds the appearance of movement.
  - Amount controls the strength of the blur, Distance controls the blur relative to the subject and camera. Angle sets the blur angle, Smoothing softens lines created by the motion.
- **Radial:** These blurs are circular, zooming out from a central point.
  - Amount controls the strength of the blur. Quality controls how noisy the blur is, with 1 being grainy and 100 smooth. Smoothing softens the lines created by the motion.
  - The Radial blur type includes a center spot selector at the bottom of the pane. Click on the icon, then click on the part of the image you want to make the center of the blur.
- **Surface:** These blurs preserve edges while blurring the rest of the image. This blur type can give you a “simplified” effect. The Amount slider controls the strength of the blur, while Threshold sets how similar colors are grouped.
- **Box:** A Box blur is similar in concept to a Gaussian blur, but it bases the blur on contrasting edges. Box blurs tend to retain edges a bit more clearly than Gaussian blurs.



**NOTE:** Do not use the Opacity slider when trying to reduce the strength of a blur; use the Amount slider instead.

# BORDERS

ON1 Photo RAW 2024 has a large collection of pre-made borders and edges that you can add to your photos. These borders range from classic film borders to viewfinders to artistic effects to emulsion transfers and many more.

The Borders filter also has an extensive set of controls for manipulating the size, color, and blending mode of the borders you choose.

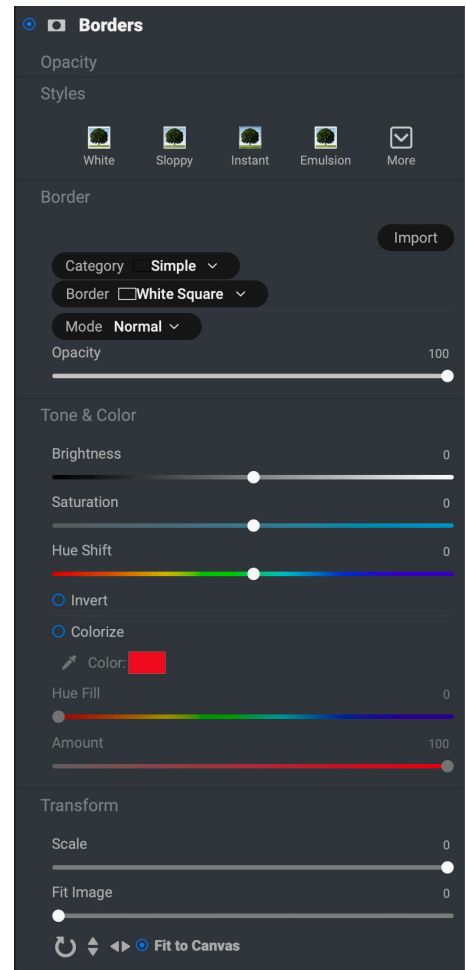
You can also import your own borders, either directly into the Borders filter pane, or via the Extras Manager (available in Browse). Border files need to be a standard PNG file type with a large central transparent area

The Category and Border pop-ups at the top of the pane are used to select the border category and the specific borders within each category. There are 8 built-in categories, sorted by type. Any user-imported borders will also appear in this list.

Once you have chosen a border to add, you can adjust its blending mode and opacity, and, if the border has color, you can adjust its hue, saturation and brightness. Alternatively, if the border is black or white, you can colorize it.

The Transform section at the bottom of the Borders pane lets you scale the border up or down in size, to help you get the look you're after, and the Fit Image slider adjusts the size of the image under the border.

You can rotate or flip the currently selected border by clicking the buttons at the bottom of the screen.



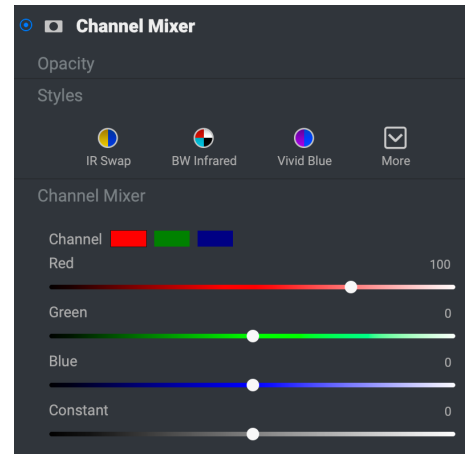
**NOTE:** See [“Extras” on page 9](#) for information on how to use the Extras Manager to import borders, textures and other extras, along with additional information for preparing files for the Borders and Textures filters.

## CHANNEL MIXER

The Channel Mixer filter adjusts the intensity and color of the individual red, green and blue channels in a photo. You can use it for black and white conversions, channel swapping for infrared shots, or to shift entire color ranges.

Click on the channel icons to select a specific channel, and use the Red, Green and Blue sliders to increase or decrease the pixel values for that channel.

The Constant slider affects the luminosity of the currently selected channel.

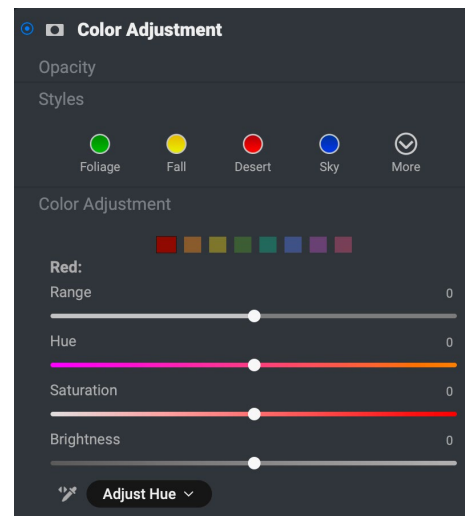


## COLOR ADJUSTMENT

This pane lets you adjust specific ranges of color in your photos. The styles at the top of the pane are designed to help enhance specific scene types (Foliage, Fall, Desert, Sky).

In the pane underneath are color swatches for eight colors: red, orange, yellow, green, aqua, blue, purple and magenta. Clicking on one of the colors will let you adjust the hue, saturation and brightness of the selected color range. Other settings include:

- **Range:** This slider lets you narrow or widen the range of the selected color.
- **Hue:** Changes the hue for the selected color range.
- **Saturation:** Adjusts the saturation of the selected color range.
- **Brightness:** Adjusts the brightness of the selected color range.



You can also use the pane's Targeted Dropper tool to adjust the hue, saturation or brightness dynamically. To do this, click on the tool and choose which parameter you would like to adjust. Then click in your image on a color you would like to adjust and drag the cursor to the left or right to decrease or increase the effect.



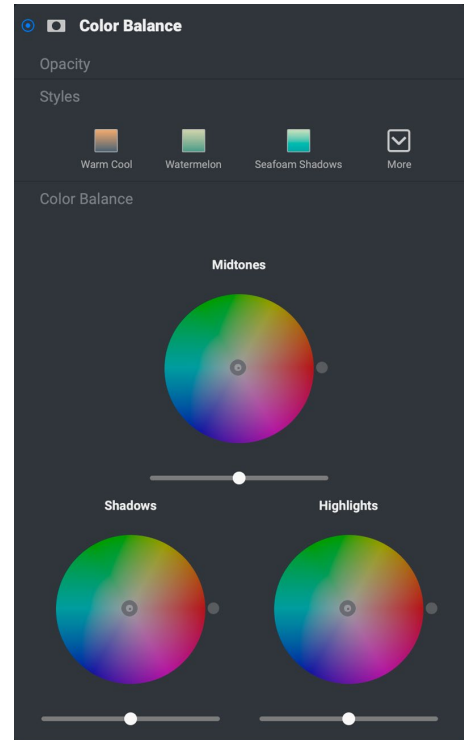
## COLOR BALANCE

This filter lets you adjust the colors in a photo's highlights, midtones and shadows tones. This can be useful when you wish to color grade a photo, remove color casts from shadows or highlights, or to create duotone- or tritone-style images.

The tonal ranges are represented by color wheels. To adjust colors, click on the circle at the center of the specific tonal range you wish to adjust (Highlights, Midtones, Shadows) and drag the circle inside the wheel. The angle from the center represents the hue of the adjusted color, while the distance from the center of the wheel represents saturation.

The slider underneath each wheel corresponds to the brightness of the tonal region.

On the outside of each wheel is a readout of the hue, saturation and brightness; it updates as you move the circle inside the wheel.



## COLOR ENHANCER

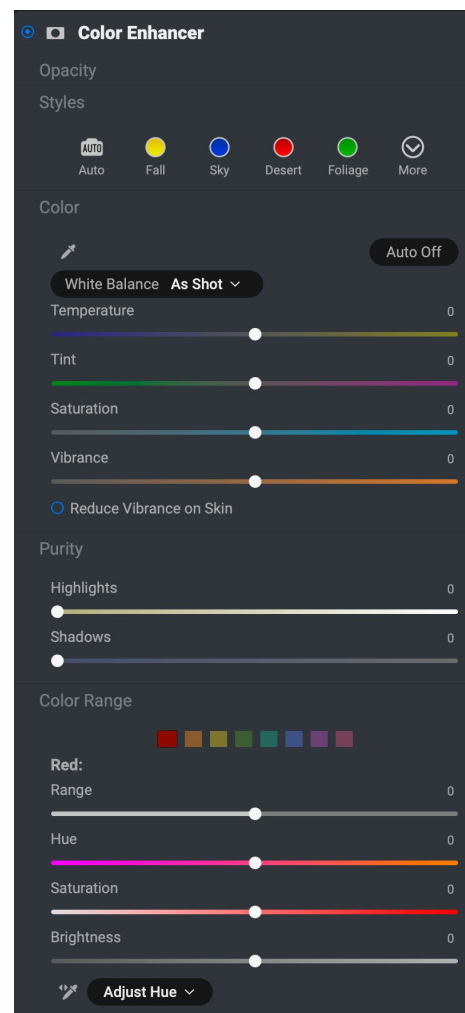
The Color Enhancer is designed to give you complete control over color manipulation in your image, whether it is on a globally across your entire image, or by adjusting different color ranges.

The styles at the top of the pane are designed to help enhance specific scene types (Foliage, Fall, Desert, Sky). To adjust global color in an image, work in the Color section of the top half of the filter pane; to work with individual color ranges, use the Color Range section at the bottom of the pane.

### Color

The Color sliders in the top half of the pane control Temperature, Tint and Vibrance. They are used to remove a color cast and enhance the color of the image. The settings in this section of the Color Enhancer pane include:

- **Auto Button:** The auto button attempts to detect and remove a color cast. It makes adjustments to the Temperature and Tint sliders.
- **Gray Dropper:** Used to remove a color cast of an image. Click the icon to activate, then click on an area in the image that should be gray. The sliders will automatically adjust according to the sample you have selected.
- **White Balance:** This pop-up lets you change the white balance according to common color temperatures (As



Shot, Auto, Daylight, Cloudy, Shade, Tungsten, Florescent, Flash, Custom). The default is As Shot, the color temperature that the camera recorded when you took the photo.

- **Temperature:** This slider shifts the color either cooler (blue) or warmer (yellow).
- **Tint:** Shifts the color either green or magenta.
- **Saturation:** Increases or decreases the saturation of your image.
- **Vibrance:** Increases or decreases the color of muted tones, leaving more saturated colors alone.
- **Reduce Vibrance on Skin:** When turned on, adjustments made with Vibrance slider are reduced on skin colored areas. This allows you to increase the vibrance of clothing and the background without adversely affecting the skin color.
- **Purity – Highlights:** Reduces the saturation in the highlights.
- **Purity – Shadows:** Reduces the saturation in the shadows.

## Color Range

In the Color Range section of the pane are swatches for eight colors: red, orange, yellow, green, aqua, blue, purple and magenta. Clicking on one of the colors will let you adjust the hue, saturation and brightness of the selected color range. Other settings in the pane include:

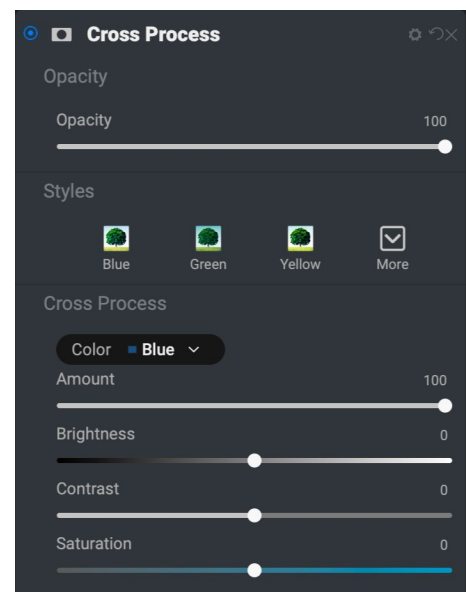
- **Range:** This slider lets you narrow or widen the range of the selected color.
- **Hue:** Changes the hue for the selected color range.
- **Saturation:** Adjusts the saturation of the selected color range.
- **Brightness:** Adjusts the brightness of the selected color range.

You can also use the pane's Targeted Dropper tool to click on a section of your photo and adjust the hue, saturation or brightness dynamically. To do this, click on the tool and choose which parameter you would like to adjust. Then click in your image on a color you would like to adjust and drag the cursor to the left or right to decrease or increase the effect.

## CROSS PROCESS

This filter simulates the effect of processing film deliberately with the incorrect chemistry. It creates unnatural colors and high contrast.

- **Color:** A drop-down list of cross-processing types (Blue, Green, Yellow, with Strong options).
- **Amount:** Controls the overall strength of the filter.
- **Brightness:** Adjusts the overall brightness.
- **Contrast:** Adjusts the overall contrast.
- **Saturation:** Adjusts the underlining saturation.

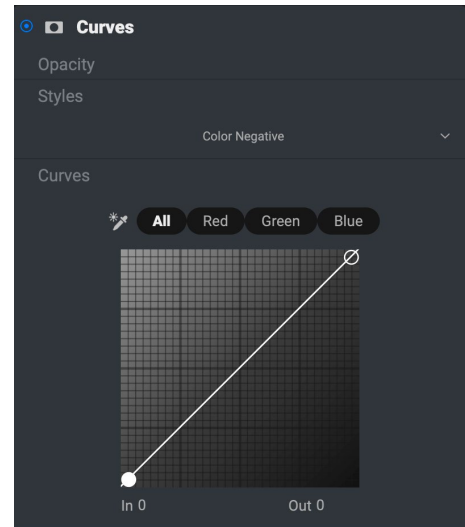


# CURVES

The Curves pane is a powerful—and advanced—tool for adjusting contrast, tone and color in your image.

The main section of the pane displays the histogram of the current image in the background; the gradient behind the histogram is designed to give you a sense of how the tones will change as you adjust the curve.

The center line is a linear representation of the image's tonality, ranging from 0 to 255; the point at the bottom left represents the darkest tones in a photo (minimum of 0), while the point at the upper right represents the lightest tones in the photo (maximum of 255). By clicking along the line at the center of the pane and dragging it up or down you adjust specific tones by making them lighter (up) or darker (down).

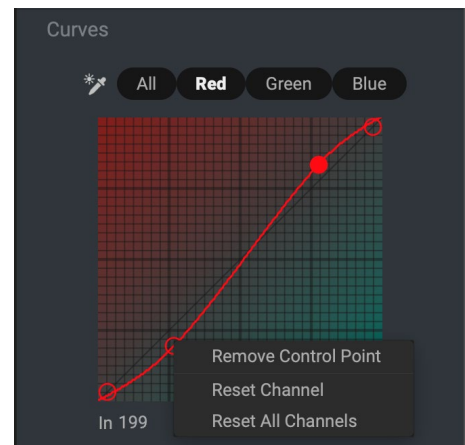


By default, the pane shows the composite RGB channel, but you can view and adjust each channel separately by clicking on the appropriate tab (Red, Green, or Blue). When looking at the individual channels, the background gradient will indicate what color shifts will occur when you adjust the curve. For example, raising the points on the curve in the Red channel will move the data more towards red, while lowering the points on the curve will move the data more towards green.

Moving the line adjusts the tonality by adding control points along the line (turning the line into a 'curve,' hence the name):

- Inside the pane, clicking anywhere along the center line will add a point, and you can drag that point up or down to change the tones.
- You can also click on the Dropper tool to the left of the channel tabs, then click and drag inside the photo at a location where you would like to adjust the tonality. This adds a point at the precise tonal location on which you clicked.

You can add multiple control points to the curve, and readjust them at any time by clicking on the point in the pane. You can “slide” a point along the curve, or you can click and drag up or down. If you are familiar with numeric-based color values, you also click on a point and use the In or Out boxes to adjust the input or output values of the tones at that point.



Right-clicking on a control point gives you the option of removing that point. You can also reset curve adjustments made to one or all of the channels.

To remove a point, right-click on it and choose Remove Control Point. Note that there is always at least one control point selected.

Working in the individual RGB channels alters the tonality of each specific channel, but the adjustments are similar. To reset any curve adjustments made in a channel (or in all channels), right-click in the grid, and choose Reset Channel (or Reset All) from the menu.

The Style pop-up for the Curves filter has preset options, including settings for color negatives, matte-style looks, and more. If, for example, you regularly apply a classic S-curve to your photos, you could set the curve the way you like it, and then choose Save New Style from the pop-up. If you apply a style and make adjustments to it that you would like to save, select Update Style with Current Settings from the menu.

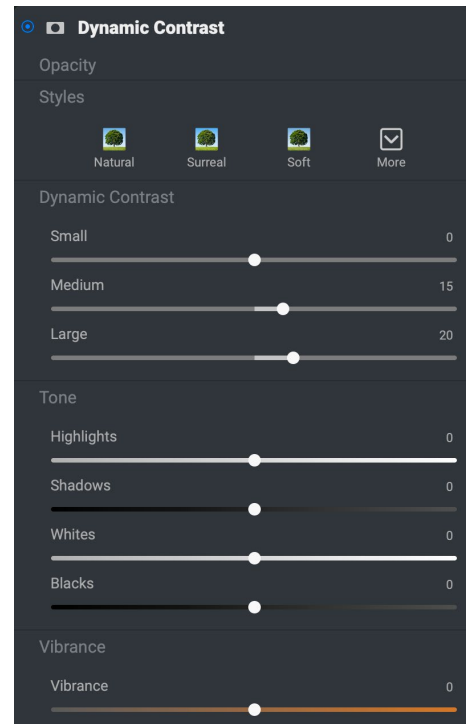
**NOTE:** The Curves section of the Tone Enhancer filter ([page 179](#)) operates in the same way as the Curves filter, with the sole exception being that there are no curve-specific style options available.

## DYNAMIC CONTRAST

Dynamic contrast adds clarity—also known as tonal contrast—to your image, making it pop. It can be a strong effect, so it is often combined with masks to help lessen the effect in certain areas of an image (clouds in a sky, for example, often look surreal with too much Dynamic Contrast applied to them).

The top portion of the pane adjusts the contrast in areas of small, medium and large detail; moving the slider to the left decreases the contrast, while moving the sliders to the right increases them.

Because adjusting the contrast in extreme ways can affect an image's tonal qualities, the bottom section of the pane lets you make adjustments to the highlights and shadows to recover detail, in the white and black areas, and increase vibrance.

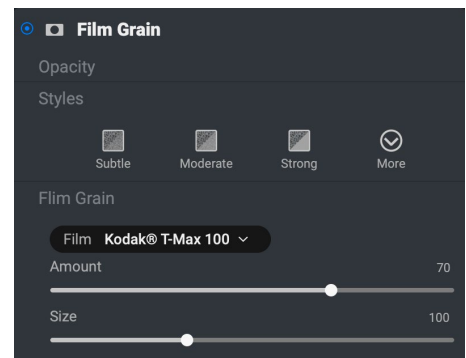


## FILM GRAIN

The Film Grain filter is designed to add a classic film grain look to your photos. It operates identically to the section found in the Black & White filter, but lets you add grain without having to convert your photos to black and white.

ON1 Photo RAW 2024 has a wide range of grain types from classic black-and-white negative films from Kodak, Ilford and Fujifilm. To add grain, choose from the Film drop-down menu.

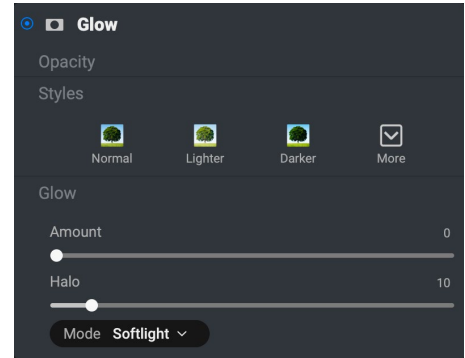
The Amount slider controls the strength of the effect, while the Size slider adjusts the scale of the grain.



## GLOW

This pane adds a soft-focus glow to the image, which can be accentuated by using different blending modes. The Styles section and the More pop-up include a number of different glow types. Adjustable settings for the Glow pane include:

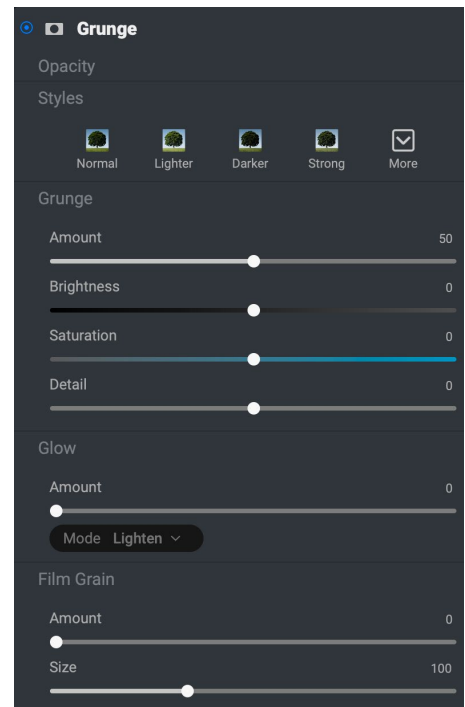
- **Amount:** Controls the overall strength of the glow.
- **Halo:** Sets the radius of the glow effect; higher numbers create more 'fuzziness' to your image's edges.
- **Mode:** Lets you set the blending mode for the glow effect.



## GRUNGE

This filter is used to add a dirty or grungy look to your image. Settings in this pane include:

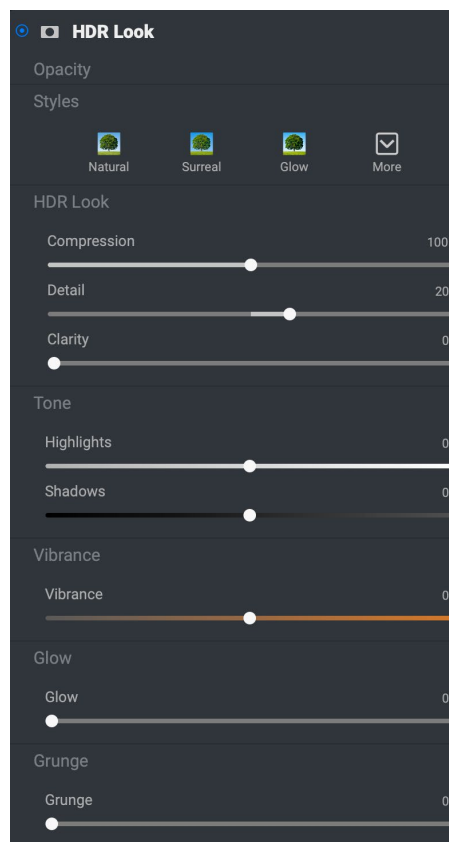
- **Amount:** Adjusts the overall strength of the grunge.
- **Brightness:** Adjusts the overall brightness of the image.
- **Saturation:** Adjusts the underlying saturation.
- **Detail:** Adjusts the amount of detail.
- **Glow Amount:** Adds a glow to the grunge.
- **Mode:** Selects the glow blending mode.
- **Film Grain Amount:** Adds film grain to the image.
- **Film Grain Size:** Controls the grain size.



## HDR LOOK

This filter recreates the HDR style of tone mapping, with accentuated edges and sharpening. Like the Dynamic Contrast filter, HDR Look will often benefit from masking or via blend modes. Settings include:

- **Compression:** Compresses the tone to reveal highlight and shadow detail.
- **Detail:** Increases the local contrast of details and edges.
- **Clarity:** Increases the global contrast.
- **Highlights:** Recovers detail in the highlights.
- **Shadows:** Recovers detail in the shadows.
- **Vibrance:** Adjusts the vibrance of muted colors.
- **Glow:** Adds a bright glow.
- **Grunge:** Adds a dark gritty look.

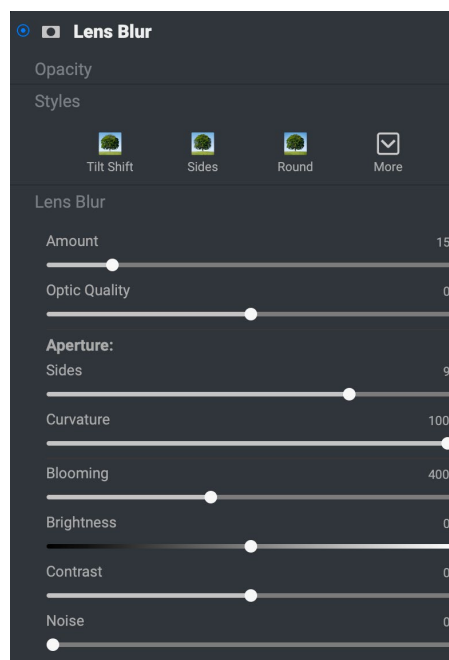


## LENS BLUR

This filter creates a blur, based on a camera lens such as a tilt-shift or a shallow depth of field look. You can use the Gradient Mask to adjust the amount of blur through your image, or brush in or out the effect where you want it. The filters settings include:

- **Amount:** Adjusts the overall strength of the blur.
- **Optic Quality:** Controls the aperture shape in the inner and outer feather.
- **Sides:** Sets the number of blades in the lens aperture, which changes the shape of the bokeh.
- **Curvature:** Sets the curvature of the aperture blades.
- **Blooming:** Adjusts the highlight bokeh.
- **Brightness:** Controls the overall brightness of the blur.
- **Contrast:** Controls the contrast of the blurred areas.
- **Noise:** Adds simulated film grain to the blurred areas.

Do not use the Opacity slider when trying to reduce the strength of a blur; use the Amount sliders instead.





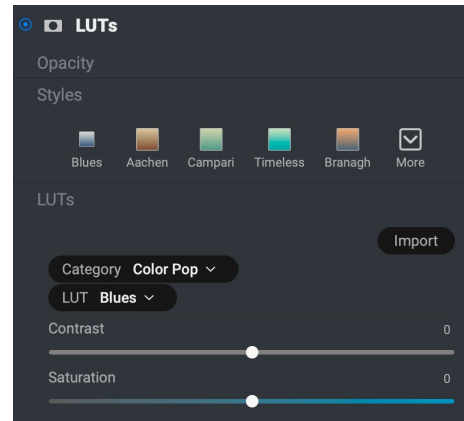
## LUTS

The LUTs filter applies a color look-up table (LUT) to transform the underlying color of an image. LUTs were first used with video applications to provide color-grading (and other) effects to film, and they are increasingly popular in still photography. The Styles section has a few default effects you can apply, and you can also import your own LUTs, by clicking the Import button inside the filter.

Photo RAW can import common LUT file formats, including .3DL and .CUBE file types.

- **Category:** This pop-up menu lets you choose from one of the pre-installed LUT categories, or any categories you have imported into Photo RAW.
- **LUT:** Displays the available LUTs within the chosen category.
- **Contrast:** Lets you adjust the underlying contrast.
- **Saturation:** Adds or reduces saturation.

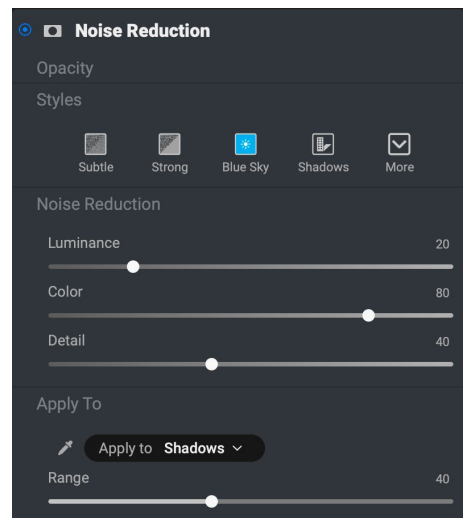
**NOTE:** See [“Extras” on page 9](#) for information on how to use the Extras Manager to import LUTs into Photo RAW.



## NOISE REDUCTION

Use this pane to reduce luminance and color noise, while maintaining image detail. The styles section includes a number of different noise reduction options, based on the type of image you're working on.

- **Luminance:** Adjusts the overall strength of the noise reduction applied to the luminance or detail of the image. Hold down the Alt/Option key to see just the luminance while adjusting this slider.
- **Color:** Controls the amount of noise reduction applied just to the color or chroma of the image.
- **Detail:** Controls how much edge detail is protected. Hold down the Alt/Option key to see the edge mask while adjusting this slider.
- **Apply to:** Allows you to limit the noise reduction to just a portion of the image based on color or brightness values. Options include highlights, shadows and midtones, as well as color ranges. To set a custom color range, click the Dropper icon and click on a color area that has the noise you wish to remove. Use the Range slider to adjust the range (or 'fuzziness') of the color range where you wish to apply the noise reduction.



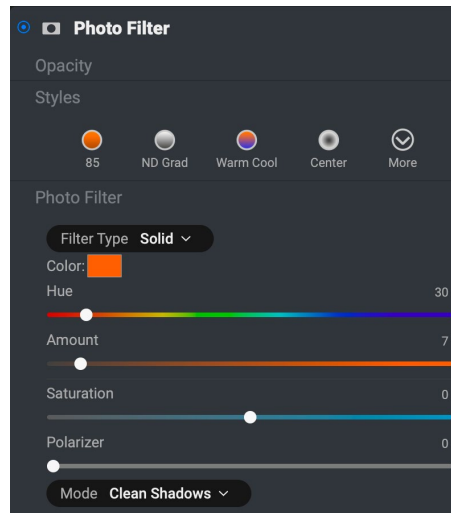
## PHOTO FILTER

This filter recreates traditional color lens filters used for warming, cooling, gradients and more. You choose the filter type from the pop-up menu at the top of the pane, then adjust the settings to your liking. Each type offers different options for selecting a filter color (or colors, in the case of the Bi-Color type), adding saturation or polarization, and more.

There are four Filter Types: Solid, Graduated, Bi-Color, and Center. The Solid option includes a section for choosing the single color you wish the filter to be, and an Amount slider for how strong you want the effect, as well as a Saturation slider for boosting or reducing overall color. The Polarizer slider adds a polarization effect, which can sometimes help clear haze or enhance the blues and greens in an image.

The Bi-Color and Graduated filter types let you choose filter color (or colors), feather for the filter transition, and a direction for the effect.

The Center type works much like the Graduated option, with the difference being that the filter radiates from the center of your image, and you can choose the center to be either clear or colored.



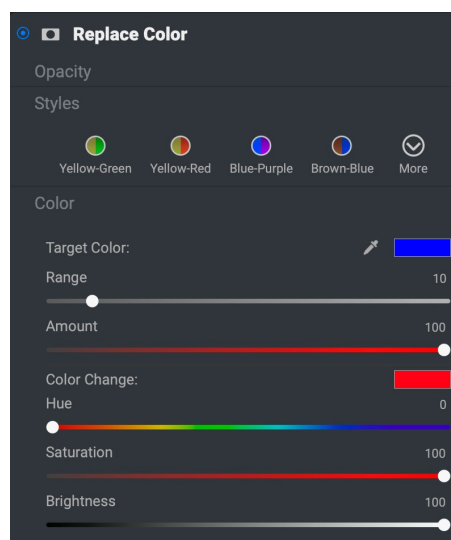
## REPLACE COLOR

This filter lets you select a color range and replace that range with one of a completely different color. When used with filter masks, you can achieve targeted color changes in a photo with ease, while retaining the other colors in the image.

The top section of the filter is used to select a target color, and the bottom section is where you pick a replacement color.

First, use the eyedropper tool to select a color from your photo, or click on the color swatch to pick one from the color wheel. Adjust the Range slider to add or remove colors similar to your target. The Amount slider is similar to an opacity setting: anything less than 100 (the default) will blend the new color with the original color. You'll see the results in real-time, so you can get a good idea of the selection.

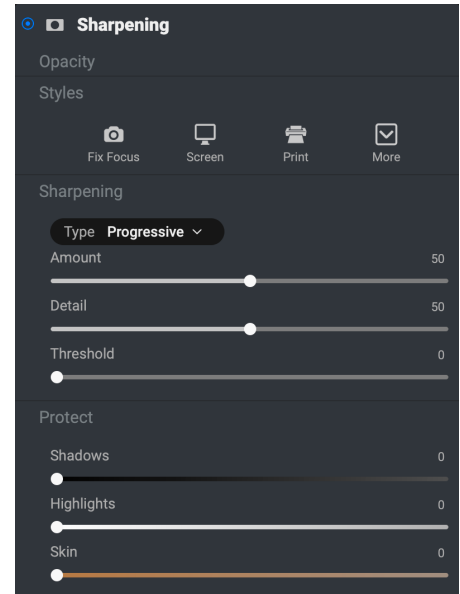
In the Color Change section, click on the swatch to set a new color, or use the Hue, Saturation and Brightness sliders to get the color you're after. If you have areas where you don't want the source colors changed, use the masking tools to paint the effect out.



## SHARPENING

This pane helps add sharpness to your photos, to compensate for a moving subject or a slightly out-of-focus camera, or for an illustrative effect. ON1 Photo RAW 2024 offers three algorithms for sharpening, High-Pass, Progressive and Unsharp Mask. Which one you use depends upon the image or your personal preferences. The styles section and the More pop-up have a wide range of sharpening styles to help you get started.

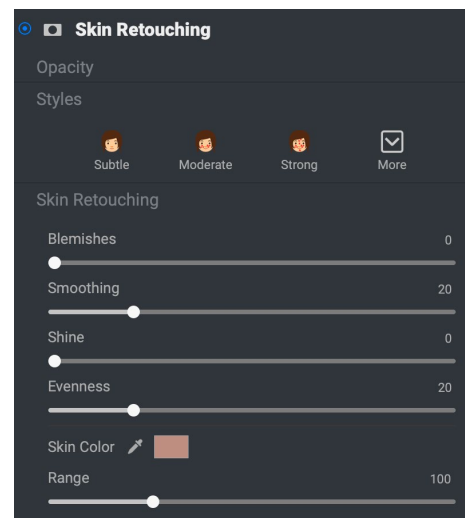
- **Type:** Chooses the sharpening method. Each sharpening method has its own set of sliders.
- **Amount (all types):** Controls the overall strength of the sharpening for each sharpening type.
- **Halo (Unsharp Mask, High Pass):** Sets the radius of the sharpening effect. Smaller amounts keep fine detail, while larger amounts can exaggerate edge detail.
- **Threshold (Unsharp Mask, Progressive):** Controls the sharpening effect based on contrast in your photo. Larger settings means that smoother areas do not get sharpened.
- **Detail (Progressive only):** Controls sharpening in small details.
- **Protect:** protects highlight, and shadow areas and skin tones from having sharpening applied.



## SKIN RETOUCHING

The Skin Retouching pane is used to reduce blemishes, smooth skin and reduce shine on skin. The styles at the top of the pane represent a range of adjustments, from subtle to strong, and the More pop-up menu has a number of additional styles for you to choose from, depending upon your image. Other settings include:

- **Blemishes:** Adjusts the strength of acne, pores and fine lines.
- **Smoothing:** Adjusts the strength of smoothing similar to makeup foundation.
- **Shine:** Adjusts the strength of the skin shine.
- **Evenness:** Adjusts skin color consistency across the entire face. It is great for correcting overly yellow highlights, shadows that may be green or reducing redness in noses and ears.
- **Skin Color:** Use the Color Dropper icon to select the skin color. Click the icon to activate it and single click again on the color of the skin in the image.
- **Color Well:** This will display the color you have chosen with the Color Dropper. Clicking on the well will let you choose a different color to represent the skin.
- **Range:** Adjusts the precision of the color selected.

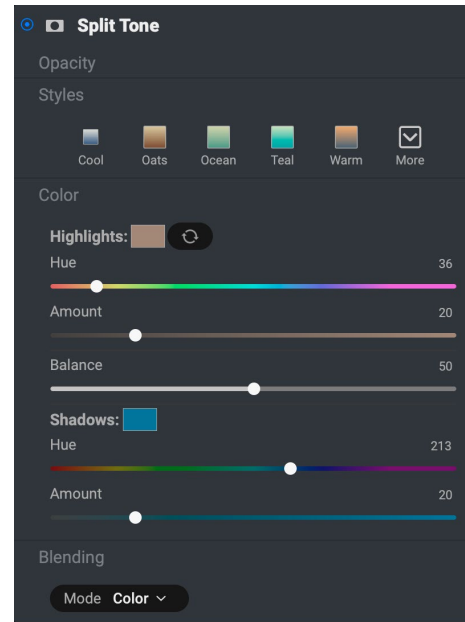


## SPLIT TONE

This filter applies a duotone-style effect by using a gradient map that tints the dark and light portions of the image in different hues. This can be used to age an image and give it an antique or vintage look. The styles section has a selection of popular split-tone effects, and you can create your own by manipulating the sliders to choose a map for the highlight and shadow colors.

To use the pane, you can use the Hue slider in each of the sections to choose the colors you want for highlights and shadows. The Amount slider controls the strength of the color, and Balance sets the balance between the shadow and highlight colors, letting you make one of the colors more dominant. You can swap the Highlight and Shadow Colors by clicking the button to the right of the Highlight color.

The Mode pop-up sets the blending mode for the split tone. The options you can choose from are Normal (no blending), Color, Lighten, Darken, Multiply or Screen.



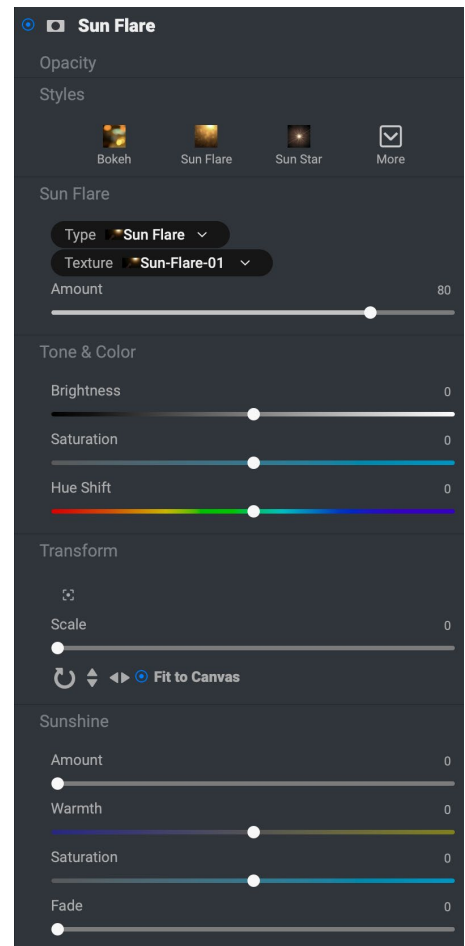
## SUN FLARE

This filter adds realistic-looking sun flares, sun stars and bokeh overlays to a photo. You can resize, move and adjust the tone and color of the effect, and can also add toning similar to the standalone Sunshine filter. The Type pop-up lets you choose between the three options (bokeh, flare or star), and the Texture menu displays a range of options for the chosen type.

The Tone & Color section of the filter lets you adjust the brightness, saturation and hue of the current texture.

To move the position of the texture, click the icon next to the Transform label, then click and drag on the overlay to the desired spot. You can use the Scale slider to enlarge the overlay, and you can rotate or flip it by clicking on the icons to the left of the Fit to Canvas button.

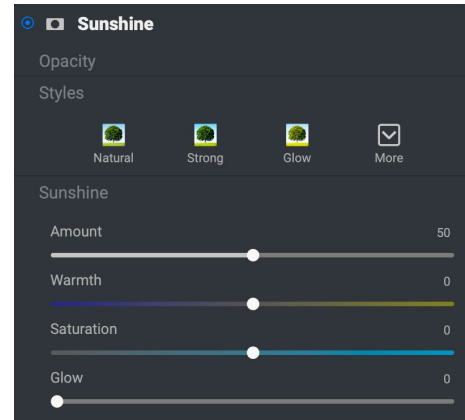
The bottom of the Sun Flare pane includes a version of the Sunshine filter, letting you adjust the warmth and saturation of the overall effect. The Fade slider gives a matte look to the final effect.



**NOTE:** See [“Extras” on page 9](#) for information on how to use the Extras Manager to import Sun Flare files into Photo RAW.

## SUNSHINE

This filter increases the appearance of sunshine in a photo, and can help to make a flat, cloudy day more vivid. The controls are fairly straightforward, including adjustments for the strength (Amount), warmth and saturation. You can use the Glow slider to add a bright glow to your image.



## TEXTURES

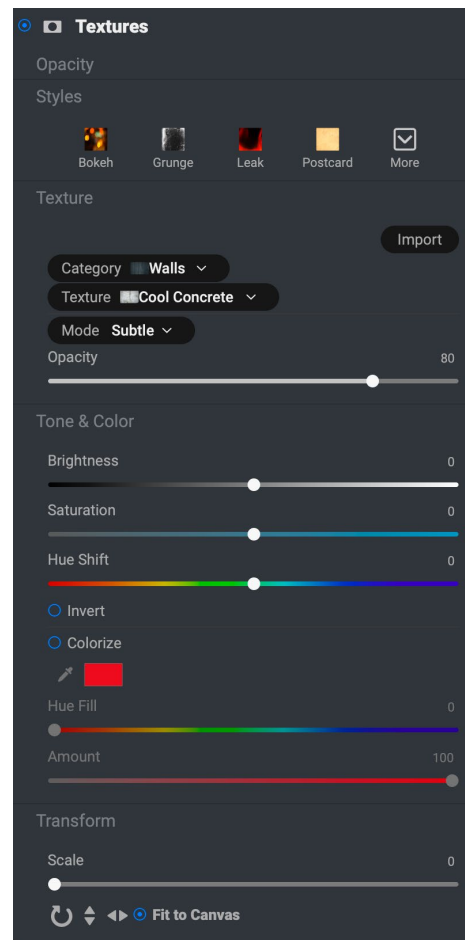
The Textures filter places a texture over the image to add a stylized look and is similar to the Borders filter in scope and functionality. ON1 Photo RAW 2024 comes with an extensive set of textures that you can add to your photos, ranging from fabric, metal, stone, text and more. You can also import your own textures directly into the Borders filter pane, or via the Extras Manager. Texture files can be almost any image format (JPEG, TIFF, Raw or Photoshop).

When loading a texture file, it will be rotated automatically to match the orientation of your image. You can override this with the rotate and flip tools, and use the Transform option to scale the texture's size over your image.

The Textures pane has Category and Texture pop-ups at the top of the pane, used to help you narrow your texture search. There are nine texture categories, sorted by type, and any user-imported textures will also appear in this list.

Once you have chosen a texture, you can adjust its blending mode and opacity, and, if the texture has color, you can adjust its hue, saturation and brightness. Alternatively, if the texture is black or white, you can colorize it by clicking on the Colorize button.

The Transform section at the bottom of the pane lets you scale the texture up or down in size. You can also rotate or flip the texture by clicking the buttons at the bottom of the screen, which can be helpful to achieve the look you desire.

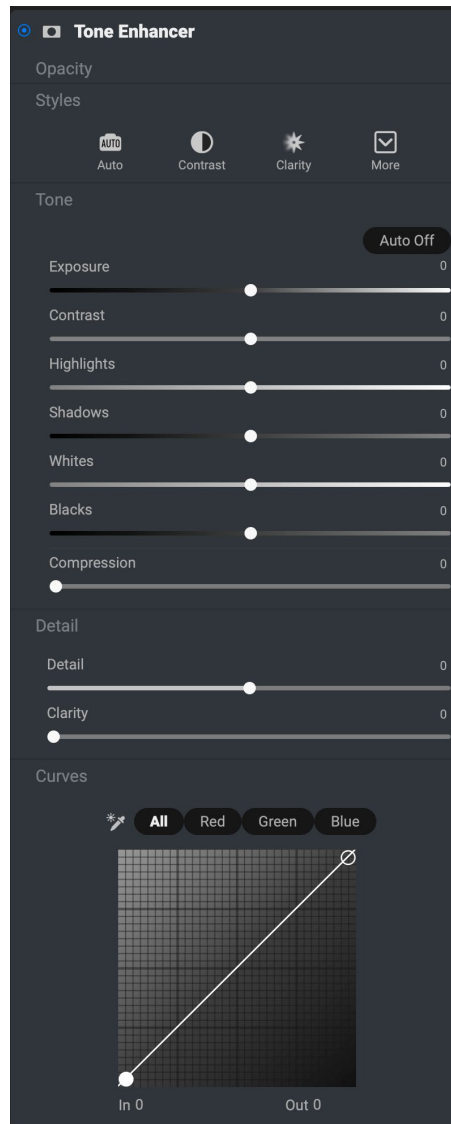


**NOTE:** See [“Extras” on page 9](#) for information on how to use the Extras Manager to import textures (and other extras), along with additional information for preparing files for Borders and Textures.

## TONE ENHANCER

The Tone Enhancer controls the brightness and contrast, or tone, of the image and lets you recover detail in the highlights and shadows, and adjust the white or black point. It offers similar controls to the Tone section of the Tone & Color pane, and also includes a curves dialog.

- **Auto Button:** The auto button sets the white and black points automatically, adjusting all of the primary tone settings to balance the histogram.
- **Exposure:** Adjusting this slider to the right will lighten your image. Adjusting to the left will darken your image.
- **Contrast:** Increase or decrease the contrast.
- **Highlights:** Darkens or lightens the highlights.
- **Shadows:** Darkens or lightens the shadows.
- **Whites:** Adjusts the white point, adding or removing contrast in the highlights.
- **Blacks:** Adjusts the black point, adding or removing contrast in the shadows.
- **Compression:** Compresses the tone to reveal highlight and shadow detail.
- **Detail:** Increases the local contrast in the image.
- **Clarity:** Enhances large edges to add clarity.
- **Curves:** The curves section is a powerful, advanced tool for adjusting contrast and color in your photos. For specifics on how to work with this feature, see [“Curves” on page 170](#).

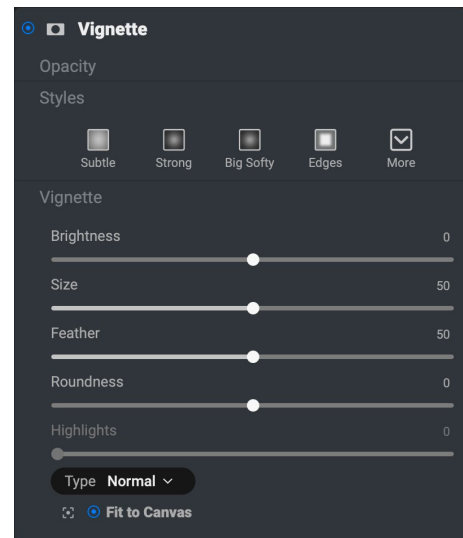




## VIGNETTE

The Vignette pane creates flexible vignettes which focus a viewer's eye toward the center of the image by darkening the edges of the frame. The buttons at the top of the pane let you quickly apply a vignette and then customize the look with the advanced controls. Styles apply common vignette types.

- **Brightness:** Controls how light or dark the vignette is.
- **Size:** Controls the size of the vignette.
- **Feather:** Controls the hardness of the edge of the vignette.
- **Roundness:** Controls the shape of the vignette from square to round.
- **Type:** This menu lets you select a Normal, Subtle, or Soft vignette effect. The Priority option will let you preserve highlights when applying the vignette.

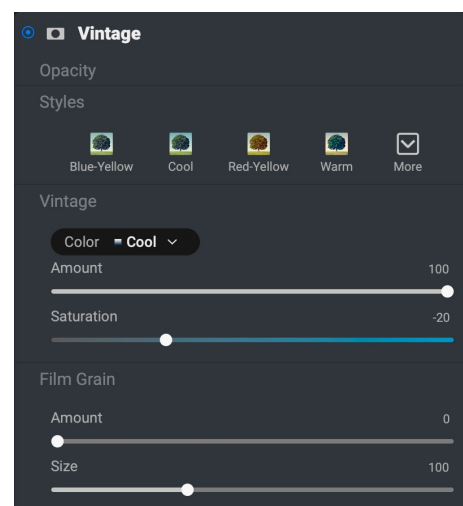


The Center Tool at the bottom left of the pane lets you to select the center point of the vignette. Click on the tool icon to activate and then click on the area in the image you wish to make the center of your vignette.

## VINTAGE

The Vintage filter is for adding an aged, vintage look reminiscent of films and photographic papers from the mid-to-late 20th Century.

- **Color:** A drop-down menu of various color styles to apply to your image.
- **Amount:** Controls the overall strength of the filter.
- **Saturation:** Adjusts the saturation of the original image.
- **Film Grain Amount:** Adds film grain to the image.
- **Film Grain Size:** Controls the grain size.

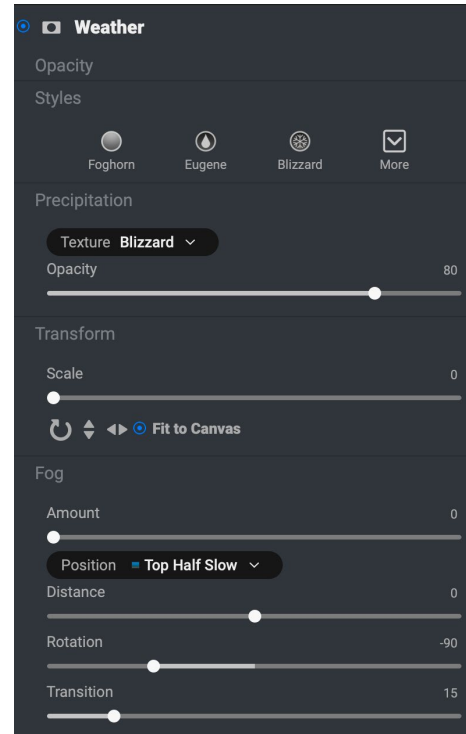


## WEATHER

This filter adds weather-inspired overlays to a photo. The Precipitation section at the top lets you add rain or snow overlays, by choosing a type from the Texture pop-up menu. You can adjust the opacity of the effect, and can scale, flip or rotate the overlay via the Transform section of the panel.

You can also add fog effects to a photo. To turn this effect on, raise the Amount slider in the Fog section at the bottom of the pane. The Position pop-up menu includes a number of gradients for applying the effect (choose All to apply the effect to the entire image). Choose the one that is the best starting place for your photo.

The Distance and Transition sliders act upon the gradient, letting you choose the intensity and length of the Position gradient, while the Rotation slider lets you adjust the angle.



# REPLACING SKIES WITH SKY SWAP AI



Replace a lackluster sky (above left) with a beautiful replacement (right) in the Sky tab of the Edit module.

The Sky tab makes replacing or enhancing a dull sky a breeze, by automatically detecting the sky in your photo and masking it out. Once the mask has been built, you can select a replacement from one of the over 100 skies included with Photo RAW, or you can import your own directly from within the Sky tab.

Photo RAW gives you full control over the mask used to blend the sky and you can use any of the other the masking tools to adjust it as needed. You can adjust the sky to blend better with your foreground, even blur the sky to simulate a long exposure. Not only does it replace the sky, but it can adjust the foreground lighting and color as well as add a reflection of the sky to water found in the foreground.

It's easy to get started with swapping out a sky: in Browse, select an image you would like to put a different sky into and choose Edit in Sky from the File menu, or, if you're in the Edit module, click on the Sky tab. Photo RAW will automatically generate a mask of the sky and open the Sky Swap AI panel. There, you can choose from multiple categories of sky images, ranging from sunsets, storms, night skies and much more. If you have your own sky that you'd like to use, you can click the Import button to add it.

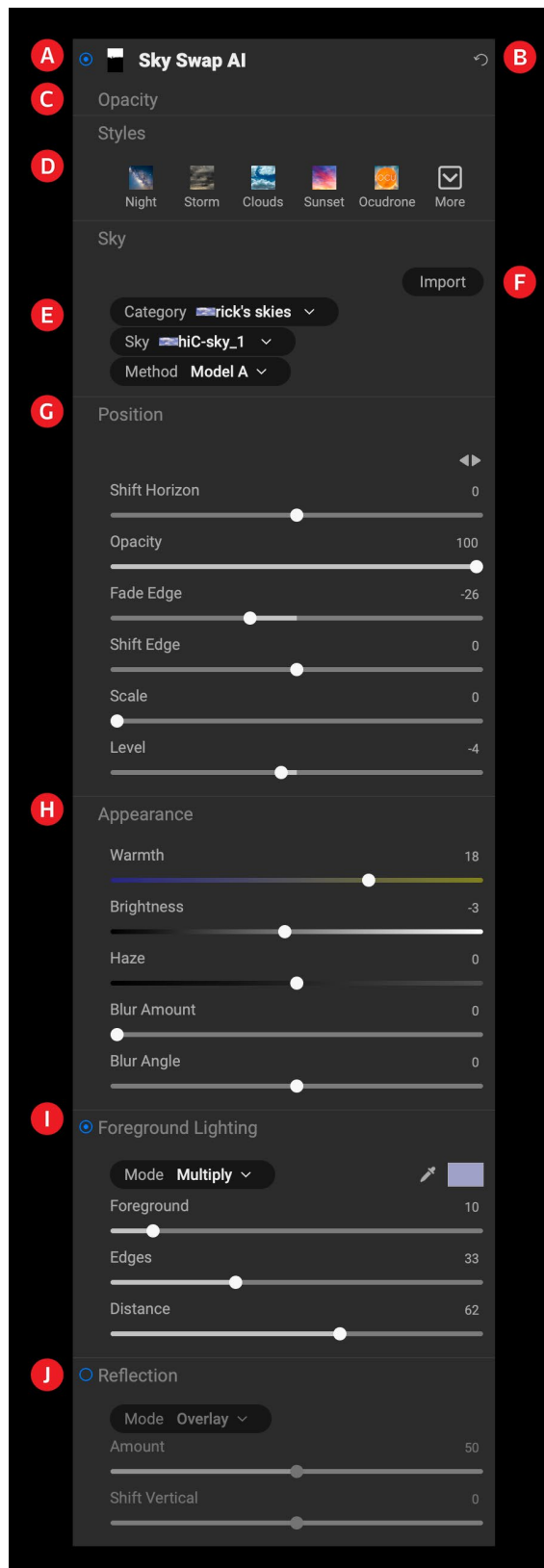
Once your original sky has been masked, and you've added a replacement that you like, you use the controls in the Sky Swap pane to fine tune the placement, intensity foreground, lighting (and reflection, if desired). If there are portions of the mask that you'd like to work on, all of Photo RAW's masking tools—with the exception of the Quick Mask AI, which overwrites any mask—are at your disposal.

Lastly, if you would like to continue to work on the sky and foreground separately, just copy the Sky Swap AI mask and paste it into an Effects filter mask, new layer, or local adjustment.

# Inside the Sky Swap AI Pane

When you click on the Sky tab, Photo RAW automatically generates a mask of the sky in your current photo and opens the Sky Swap AI pane, which consists of the following sections:

- A. **Pane controls:** on/off button (left) turns the replacement on or off; Mask view (right) opens the Mask options section for fine-tuning the mask. (See [“Masking control options” on page 117](#) for more.)
- B. **Reset button:** returns the Sky pane to its original state. (*Hover over the pane to display.*)
- C. **Opacity:** Sets the overall opacity of the sky replacement.
- D. **Styles section:** for choosing a specific preset sky from within one of the categories, or create and apply your own style via the More menu.
- E. **Sky selection area:** includes pop-up menus for the different sky categories, and the skies that are part of the currently selected category.
- F. **Import button:** launches the Extras Manager (see [page 9](#)) for importing skies directly into Photo RAW.
- G. **Position:** lets you choose one of two sky swap methods (A or B), shift the horizon line of the new sky; set the opacity of the sky; fade and shift the edge of the mask; scale the size of the new sky to better fit the final image; and apply a leveling adjustment to the new sky.
- H. **Appearance:** sets the warmth and brightness of the replacement sky, applies dehaze, and lets simulate motion by blurring the clouds and setting the blur angle.
- I. **Foreground Lighting:** lets you adjust the intensity and color of the light on the foreground.
- J. **Reflection:** when working with images that have bodies of water in the foreground, you can add a reflection, adjusting both the blending mode, the amount (strength) of the reflected sky, and apply a vertical shift.



## THE POSITION SLIDERS

After you've chosen your sky from the Category and Sky pop-up menus, use the Position section to adjust the placement and the blending of the new sky. You can flip the sky horizontally—which can be helpful when you wish to change the direction of the light in the sky to match the foreground—by clicking on the triangles to the right of the Position label. The Shift Horizon slider will move the imported sky up or down inside the masked area, while the Fade Edge and Shift Edge sliders can be used to blend the new sky more realistically with the foreground. The Opacity slider will default to 100, which means that none of the original sky will show through, but you can lower the opacity to blend the new sky into the image as well.

The Scale slider will enlarge the new sky's size inside the mask, which you might do because you want to add some drama with larger clouds, or want to emphasize a specific group of clouds, or because the size of the size of imported sky doesn't quite meet the boundaries of your original image.

### Method setting

Photo RAW has two types of algorithms that it uses to select skies, Method A and B. For most photos, the default option, Method A, will offer the best results, but you might find that there are some instances where that option gives you less than optimal results. In those situations, try Method B; Photo RAW will re-analyze the scene and will create a new mask.

## THE APPEARANCE SLIDERS

The sliders in the Appearance section adjust the look of the replacement sky to help better match the sky with the existing foreground, and their purpose is straightforward. The Warmth slider lets you apply a warmer or cooler look to the new sky, while Brightness adjusts the luminance of the sky, making it brighter or darker. Moving the Haze slider to the left removes haze or fog from the sky (by adding contrast), while moving it right will enhance it.

The Blur Amount and Blur Angle sliders let you apply a motion-blur-style effect to the clouds in the replacement sky, to simulate a long exposure.

## THE FOREGROUND SLIDERS

As the name of the section implies, the Foreground Lighting and Reflection sliders apply their settings to the foreground and help further blend the new sky realistically into the scene. To turn on one of the groups, click the on/off button to the left of the Lighting and Reflection labels.

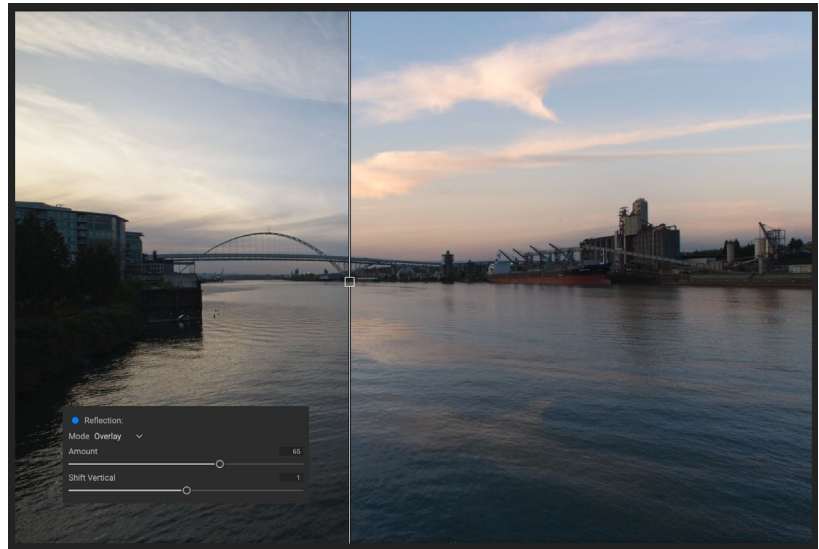
The Lighting sliders attempt to apply some of the color of the light in the replacement sky to the foreground. By default, when you turn the Lighting section on, Photo RAW will automatically sample a color from the sky and apply a slight color fill effect to the foreground. If you'd like to change the color, click on the eyedropper icon next to the color patch, and choose another. The Amount slider sets the intensity of the light, while the Distance slider adjusts the effect to fill more or less of the entire foreground, almost like a gradient.

There are two blend mode options you can use when adjusting the lighting: Multiply and Screen. Multiply will darken the lighting effect, while Screen will lighten it.

The Reflection group is designed for those times when you have a body of water in the foreground, and wish to blend in a slight reflection of the sky into the foreground.

This option includes a few more of Photo RAW's blending modes, and you'll find that different modes work better than others, depending upon the scene. (See [“Blending Modes” on page 161](#) for more information on the various blending modes used in Photo RAW and their usage.

The Amount slider adjusts the intensity of the reflection, while the Shift Vertical slider works in a manner similar to the Shift Horizon slider does in the Position section of the Sky Swap pane: it moves the reflection of the replacement sky up or down across the foreground area.



*The Reflection option in the Foreground section of the Sky Swap AI pane is designed to add a reflection of your replacement sky to water in the foreground (shown on the right above in split-screen preview mode), even if it's not completely calm.*

## Generating Realistic Sky Replacements

Adding a new sky to an image is easy, but getting a sky that looks like it belongs in the image is another thing. Here are a few tips for creating realistic-looking sky replacements:

- Quite often, the biggest issue in replacing a sky is matching light, whether it be the direction of the light cast by the sun, or the time of day. As you work through the list of skies looking for a replacement, ask yourself if the movement of light makes sense in the blended pair. Sometimes, you can use the Flip Horizontal toggle in the Position section of the Sky Swap pane to fix a directional issue; other times, the potential replacement sky, as much as you wish it to work, will just look out of place.
- It will be rare that you pop a sky into an image and that it works perfectly. If the light does seem to fit, play with the controls in the Position, Appearance, and Foreground sections to get a better sense of how the sky works in the scene.
- As you play with different skies and are trying to get a sense of how one works better than another, make use of Photo RAW's Undo capability; better yet, work with the History pane (see [page 85](#)) to jump back and forth between different places during your editing session.
- Don't forget to pay attention to the mask. While the Sky Swap AI technology is excellent, it won't be perfect in every instance. Use Photo RAW's masking tools to refine and adjust the mask in places where your sky might intrude into the foreground or vice versa.
- Use the mask! Copy the mask and use it in your finish editing elsewhere in Photo RAW. For example, you might want to apply a Dynamic Contrast filter to your foreground, but know that the filter will not look great on the sky. Copy the mask from the Sky Swap AI pane by choosing Copy Mask from the Mask menu, then open the Dynamic Contrast filter in the Effects tab and choose Paste Mask from the Mask menu. Because the mask's contents are set to the sky, you'll want to also choose Invert Mask from the menu. Once you do that, the



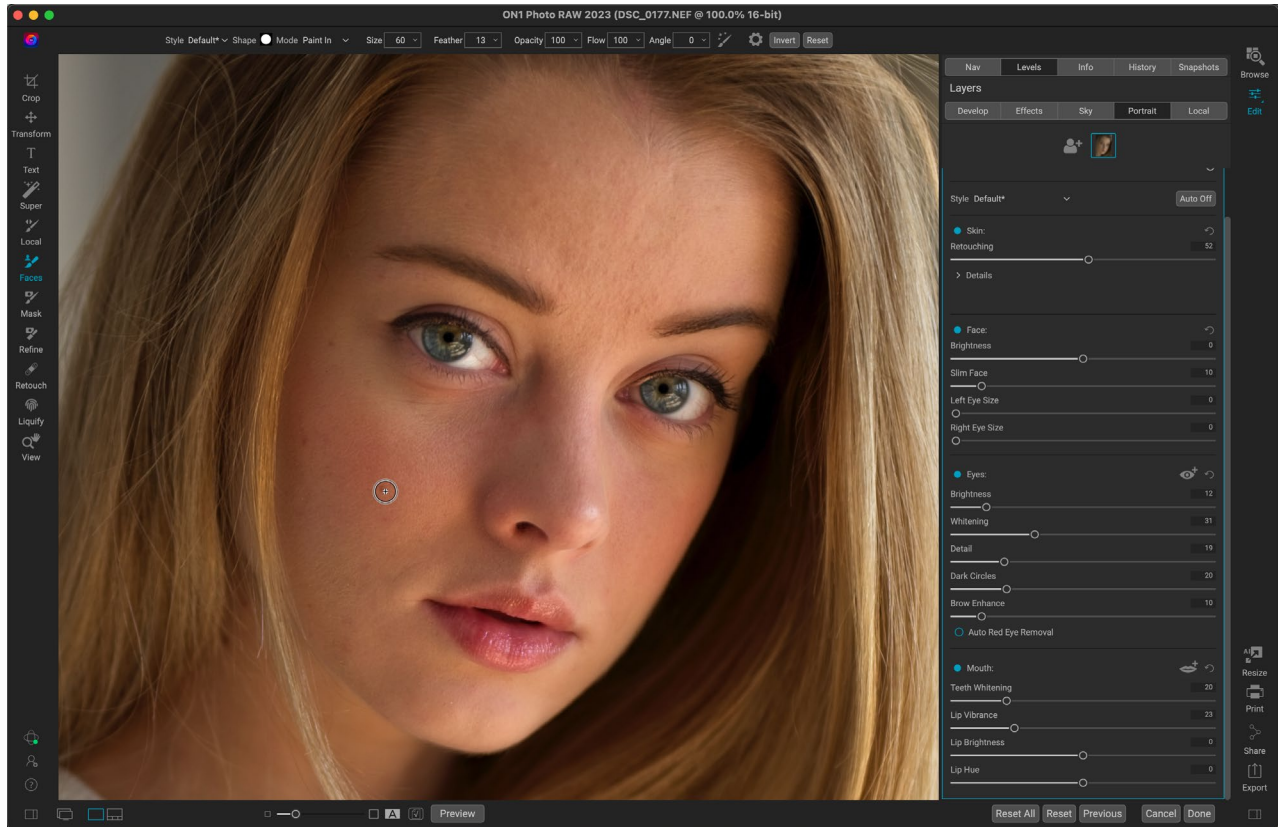
filter's settings will only be applied to the foreground. You can copy, paste and invert the mask as many times as you'd like.



*Paying attention to light, and its direction, is one of the keys to getting realistic-looking sky replacements. As pretty as the as the sunset sky is (top left), the direction of the light in the foreground (from behind and to the left) is all wrong for the sunset. The sky on the top right is a bit better fit, but the light is coming from the right, clashing with the foreground. Flipping that sky (bottom left) feels more integrated, but it still feels dark for the scene, even when adjusting the Brightness slider. Choosing a sky taken at roughly the same time of day (bottom right) feels more harmonious with the foreground, and, with a little bit of adjustment, ends up looking fairly realistic.*

- Shoot your own skies and import them via the Extras Manager. When you're out and see a gorgeous sky, photograph it with as much of the sky as you can catch. Because you'll have shot the sky, you'll have a better idea of the lighting direction and time of day, which will be quite helpful when you are trying to match a sky.
- Finally, remember that, like all other aspects of Photo RAW, everything done in the Sky tab is non-destructive and re-editable. If you don't like your replacement, or need to tweak its settings as you apply other edits, click on the Sky tab and your work will still be there. (And you can always get back to your original image's sky by resetting the Sky Swap AI pane.)

# RETOUCHING WITH PORTRAIT AI



Portrait AI was designed to help you retouch faces quickly and naturally, and with as little user intervention as possible. When you open a photo in the Portrait tab, Photo RAW automatically finds each face in your photo, analyses it individually, and adds just the right amount of retouching, based on your preferences.

Despite all the automation, you have full control over all aspects of retouching and finishing. Each face in your photo has independent settings and adjustments. You can manually adjust eye and mouth positions in each face, paint to refine the skin mask and use brushes to remove blemishes.

Portrait AI's skin retouching uses frequency-separation techniques, which help to maintain natural skin texture while reducing color and tonal changes across the skin. It creates flawless, natural-looking skin.

In addition to skin smoothing and blemish removal, you can use Portrait AI to correct common errors in lens choice and lighting by adding fill-light to brighten the face or resculpt the face to thin the jawline. You can even adjust the eye size on each individual face.

The whites of eyes can be brightened and the iris can be sharpened, and there are automatic red eye removal options as well. You can easily brighten the smile and adjust the color and saturation of the lips.

Portrait AI is easy to use: The Masking Brush can be used to paint skin in or out—and the Portrait pane that contains settings for adjusting the skin, eyes and mouth in a face. Each face in your photo has its own pane, so you can adjust each face on an individual basis.

# Inside the Portrait Pane

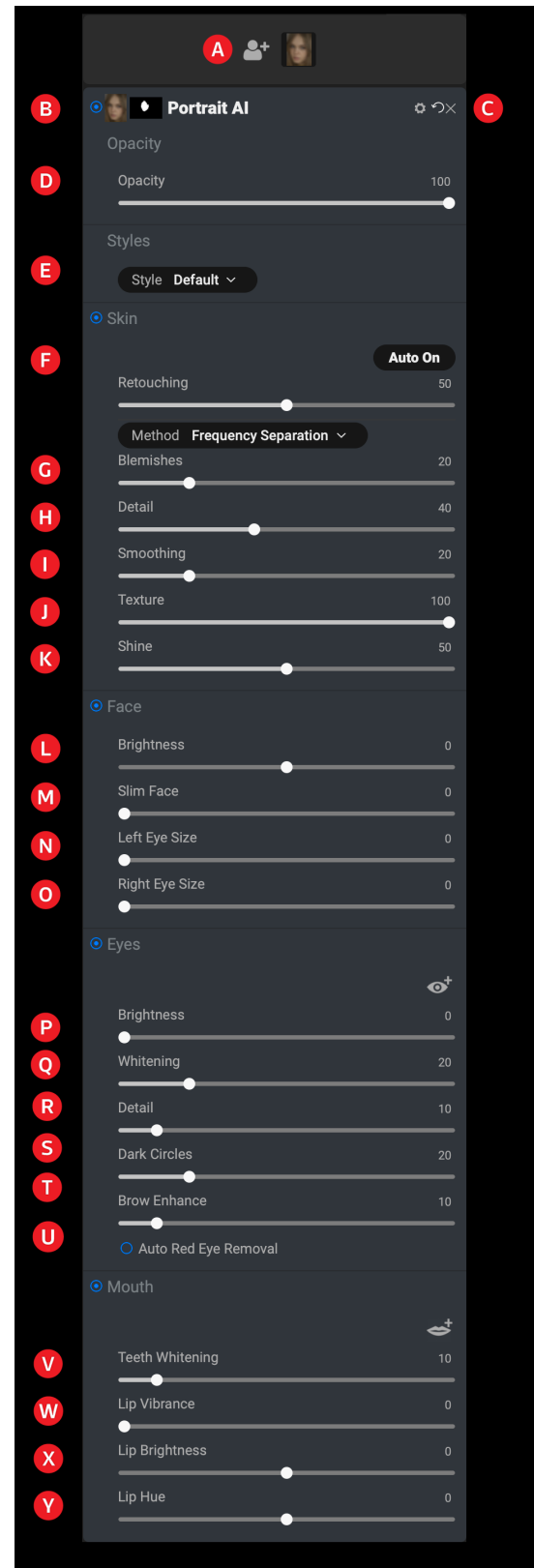
Each face in a photo will have its own Portrait pane, which contains the mask for the face, and settings for smoothing the skin, and adjusting aspects of the face, eyes and mouth.

You can view a face's pane by clicking on the appropriate photo at the top of pane. (You can change the name of each pane by double-clicking on the 'Portrait AI' label at the top.) The top of the pane has the following items:

- A. **Face selection:** This includes the Add Face button and any faces found (or added) in your photo. Clicking on the face will select that face's portrait pane.
- B. **Face and mask icons:** The first icon is a small representation of that pane's face, to help with identification in photos that have many faces in them. The mask is for that person's face. To turn off all of the settings for that pane (to preview that face before and after, for example), click the control circle to the left of the face. If the circle is empty, it means that the adjustments are not currently applied.
- C. **Blending options, Reset and Delete:** These icons are for changing the blend mode, to reset the pane to its original state, or to delete that portrait layer altogether. (*Hidden by default; place your cursor over the pane to display.*)
- D. **Opacity:** Sets the overall opacity of the pane's settings.
- E. **Style:** Pop-up list of preset settings for that pane. The Default style uses Portrait's Auto AI technology applying either Subtle or Strong retouching. (Subtle is the default AI approach, but this can be changed to Strong in the General Section of the Preferences window.) You can also save your own styles, based on individual preferences.

The bottom part of the Portrait pane includes four sections: Skin, Face, Eyes and Mouth. Each section has an on-off control circle immediately to the left of the label, which can be helpful if you don't need to retouch the skin or the eyes, for example. The Skin section settings include:

- F. **Retouching:** The amount of skin retouching, based on Portrait's AI analysis of the face.



- G. **Blemishes** smooths facial elements, like fine lines and wrinkles.
- H. **Detail** brings back some detail that might have been lost in the smoothing process.
- I. **Smoothing** applies additional skin smoothing.
- J. **Texture** controls the amount of artificial texture applied as an overlay to the face.
- K. **Shine** lessens hot spots, evening out the skin's tones.

**NOTE:** The Method pop-up contains two options, Frequency Separation and Surface Blur. The Surface Blur option is based on previous versions of ON1 Photo RAW, and is solely included to provide backward-compatibility with presets created for those versions.

The Face section has four adjustments:

- L. **Brightness:** Adds to or removes brightness from the current face.
- M. **Slim Face:** Resculpts the face, slimming it along the jawlines.
- N. **Left Eye Size:** Increases overall the size of the left eye.
- O. **Right Eye Size:** Increases overall the size of the right eye.

The Eyes section has five adjustment options:

- P. **Brightness:** Brightens the entire eye area; can be helpful when your subject is wearing a hat.
- Q. **Whitening:** Whitens the eyes.
- R. **Detail:** Adds sharpness to the pupils.
- S. **Dark Circles:** Brightens circles and/or bags under the eyes.
- T. **Brow Enhance:** Darkens the eyebrows.
- U. **Auto Red-Eye Removal:** Clicking this button will apply red-eye removal to the eyes.

Clicking the icon to the right of the Eyes label will display an overlay with the eye control points when you move your cursor over the face. (See [page 192](#) for information on adjusting the eye overlays.)

The Mouth section has four settings:

- V. **Teeth Whitening:** Whitens the teeth.
- W. **Lip Vibrance:** Increases the color in the lips.
- X. **Lip Brightness:** Adjusts the brightness of the lips.
- Y. **Lip Hue:** Adjusts the hue of the lips.

Clicking the icon to the right of the Mouth label will display an overlay with the mouth control points when you move your cursor over the face. (See [page 192](#) for information on adjusting the mouth overlay.)



# Portrait AI Workflow

Portrait AI was designed to automatically give you perfect retouching every time you open an image. As such, the basic workflow, for most images you will work with, is relatively simple:

1. Perform basic global edits in Develop. This includes tone and color adjustments, as well as any noise reduction and lens correction. Leave sharpening to the final stages of editing.
2. Go to the Edit module and click on the Portrait tab, or, when using as a plug-in, choose Portrait AI from the appropriate menu in your editing app.
3. Go through each individual's portrait pane and adjust individual settings as desired.
4. Use the retouching tools to remove or repair blemishes.
5. Apply manual adjustments to the skin mask and reshape the eye/mouth overlays, if needed.

## SUBTLE VS. STRONG PROCESSING OPTIONS

When Portrait AI applies its automatic retouching to a face in a photo, it uses one of two AI-based processing options, Subtle and Strong. As its name implies, the Subtle setting—which is the default option—opts for a lighter touch when retouching. Strong applies a bit more processing than Subtle, but it still shouldn't be over the top. Some situations might call for the Strong setting, or you might find that you prefer that setting. To change the default option, go to the General tab of the Preferences window, and choose the option you wish to use in the Portrait AI Default pop-up (see [page 272](#)).

## WORKING THE INDIVIDUAL PORTRAIT PANES

Once Portrait has found the faces in your photo, select each face in turn by clicking on it in the face section at the top of the Portrait AI panel, or click on the pane itself. Work your way down the pane from the Skin section at the top, down to the Face section, and on to the Eyes and Mouth at the bottom. Making broad movements of the different sliders can give you an idea of how a setting gets applied, but be careful in making adjustments too strong, which can give your models a plastic look. Work in 100% view, so you can see the effects of your changes up close.

Portrait AI generally will do a good enough job in the basic skin smoothing and retouching that you shouldn't have to dig into the Details section; adjusting the Retouching slider left or right should often be all you need to do to fine tune the skin.

**NOTE:** When working with multiple faces, you can name each Portrait layer individually by double-clicking on the word 'Portrait' in the title bar.

## USING THE RETOUCHING TOOLS

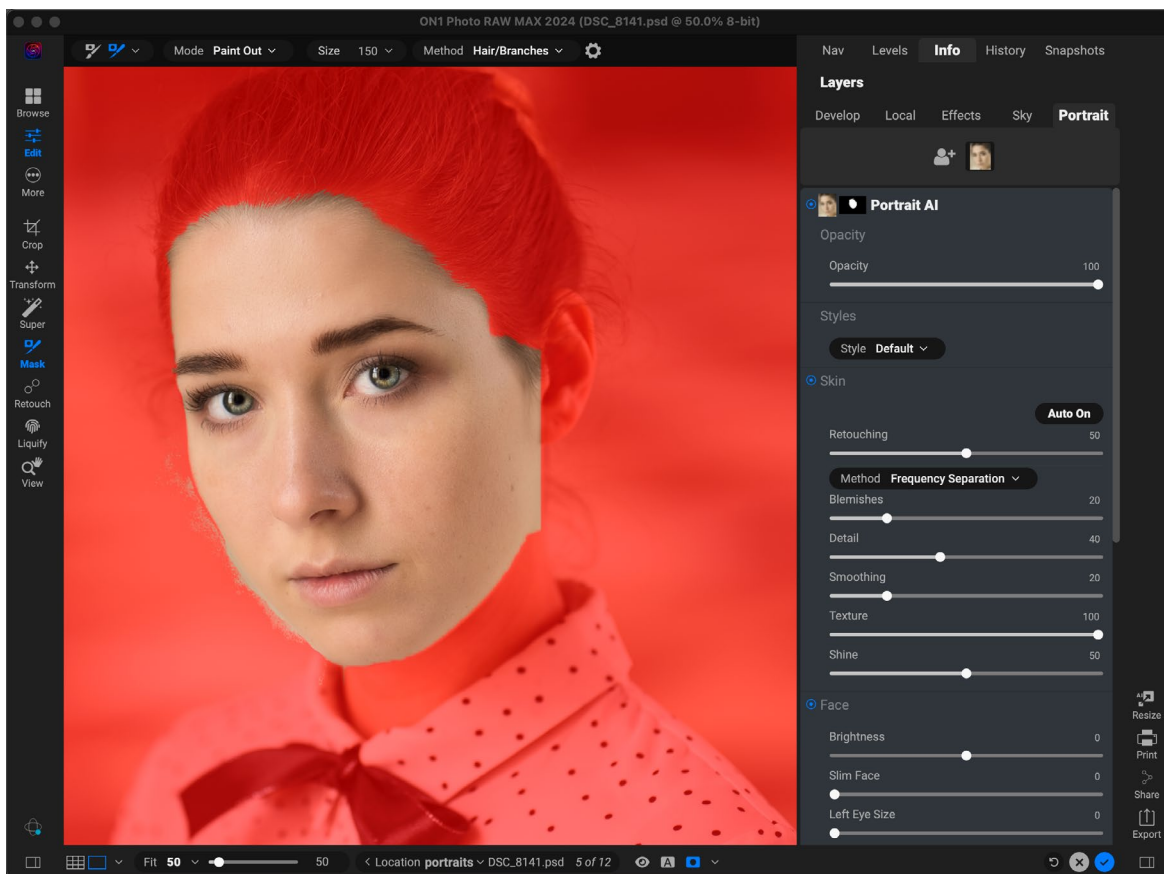
If you have portions of a face that have specific retouching needs (blemishes and other marks), use the Perfect Eraser, Retouch Brush, Clone Stamp or Healing Brush to make those changes. (See the Retouching Tools section, starting on [page 110](#), for detailed information using on working with these tools.)

## MAKING MANUAL ADJUSTMENTS IN PORTRAIT AI

Portrait uses sophisticated technology to find faces, but it's not always perfect. Luckily, you have some tools to use to make further enhancements or adjustments beyond the controls in the Portrait pane. These include adjusting a face's mask, to add or reduce the area that the retouching applies to, or making small adjustments to the areas around the eyes and mouth. In some very rare instances, you might find a 'face' that really isn't a face, or that Portrait was unable to find a face.

### Fine-tuning a face's mask

To keep Portrait's retouching localized to each face, the app builds a mask for the face. Only inside the contents of the mask are the parameters of that face's portrait pane applied. The rest of the image is 'masked out,' meaning that the adjustments don't apply to those pixels. The mask is represented by the mask icon at the top of each pane.



You can fine-tune a face's mask retouching by painting skin in or out on your model as necessary with the Masking brush or any of the refinement masking tools. To view the mask, click the View Mask icon at the bottom of the window, or press the 'O' key.

When building a face mask, Portrait AI looks closely for the general contours of the face, but doesn't include other skin. You might want to smooth some skin under the chin or on the neck, or you might want to paint out some areas—hair over the forehead—from the mask, so that they won't be softened.

You can view the mask for each face by selecting the appropriate pane and clicking the Show Mask icon at the bottom of the main Portrait AI window (to the right of the Before/After button). This will display the mask for the face, with a red overlay representing the area untouched by that pane's settings. It will also select the Portrait AI brush, which you can use to 'paint in' more skin (enlarge the area), or 'paint out' areas that you might not want to have retouching applied.



Next, you set the painting mode (Paint In/Paint Out), brush size, feathering, and opacity to make the changes to your mask. Performing your brushing with the mask view turned on helps show your progress. Use the Option key (Mac) or Alt (Windows) to change the brush mode in real time, to paint in and out with ease.

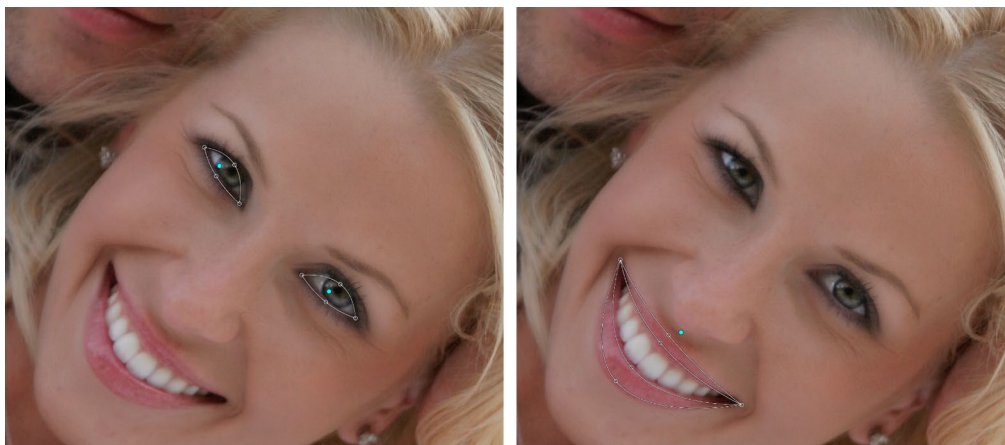
Adjusting the skin mask works best with the view mode on, and at 100% view (or larger, in some instances). When you're done refining the mask, choose another tool and click the View Mask icon at the bottom of the screen to turn the mask off.

## Working with eye and mouth overlays

Portrait AI does an excellent job finding the eyes and mouth for each face in a photo, even three-quarter and side shots. For each feature, Portrait creates an overlay that functions similarly to the face mask. The eyes (or eye, if only one is in the photo) and mouth overlays define the boundaries of those features, and only the controls in the respective sections of each face's pane are applied to those areas.

To view the different overlays on a face, click on either the Eye or Mouth icon to the right of that section's label. When you move your cursor over the face, you'll see the overlay for that feature.

Each overlay consists of a nodal point (in blue) and control points that define the boundaries of each feature. You can rearrange or modify the overlays: clicking and dragging the point lets you adjust the center of the overlay; clicking and dragging on any control point lets you readjust the boundaries of that area.



*Clicking the icon to the right of the Eye or Mouth label in a portrait pane will display the overlay for that feature. You can adjust the control points for each overlay by clicking and dragging them to reshape the area.*

The mouth overlays are a bit more complex than the eye ones; they include control points for the top and bottom of each lip, which lets you adjust for the teeth. In most cases, you won't need to adjust the overlays, but if you feel that you could get a better mask for either the eyes or the mouth, it's best to zoom in fairly close, so you can adjust the overlay precisely.

## Dealing with missing or 'ghost' faces

In the rare instance when Portrait doesn't find one of the faces in your photo, click the Add Face button at the top of the Portrait tab. Then, position and size the box around the face you wish to add, press the Return key, and the portrait pane will be created (and selected). When adding a face in this manner, you'll need to manually add the eyes and mouth, and enable the different sections of that face's pane.

To add the eyes, click on the Eye icon to the right of the label. Then click the cursor in the center of each eye. When you're done, Portrait will create the overlay for each eye, and you can readjust them as necessary.

Adding the mouth is similar; click on the icon to the right of the Mouth label, and click on the corners of the mouth. Portrait will create the overlay, and you can adjust the control points to fit the contours of the mouth as needed.

Once you've added the eyes and mouth, you can work through the pane in the same manner you would with an automatically generated face.

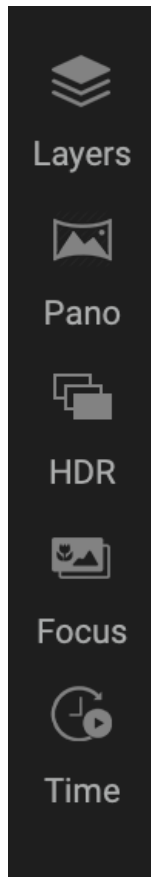
Sometimes, you'll find a pane that's been generated for something that clearly is not a face. If you find one of these 'ghost' faces, right-click the ghost icon at the top of the Portrait AI panel and choose Delete Face.

# PART 4: COMBINING PHOTOS WITH ON1 PHOTO RAW 2024

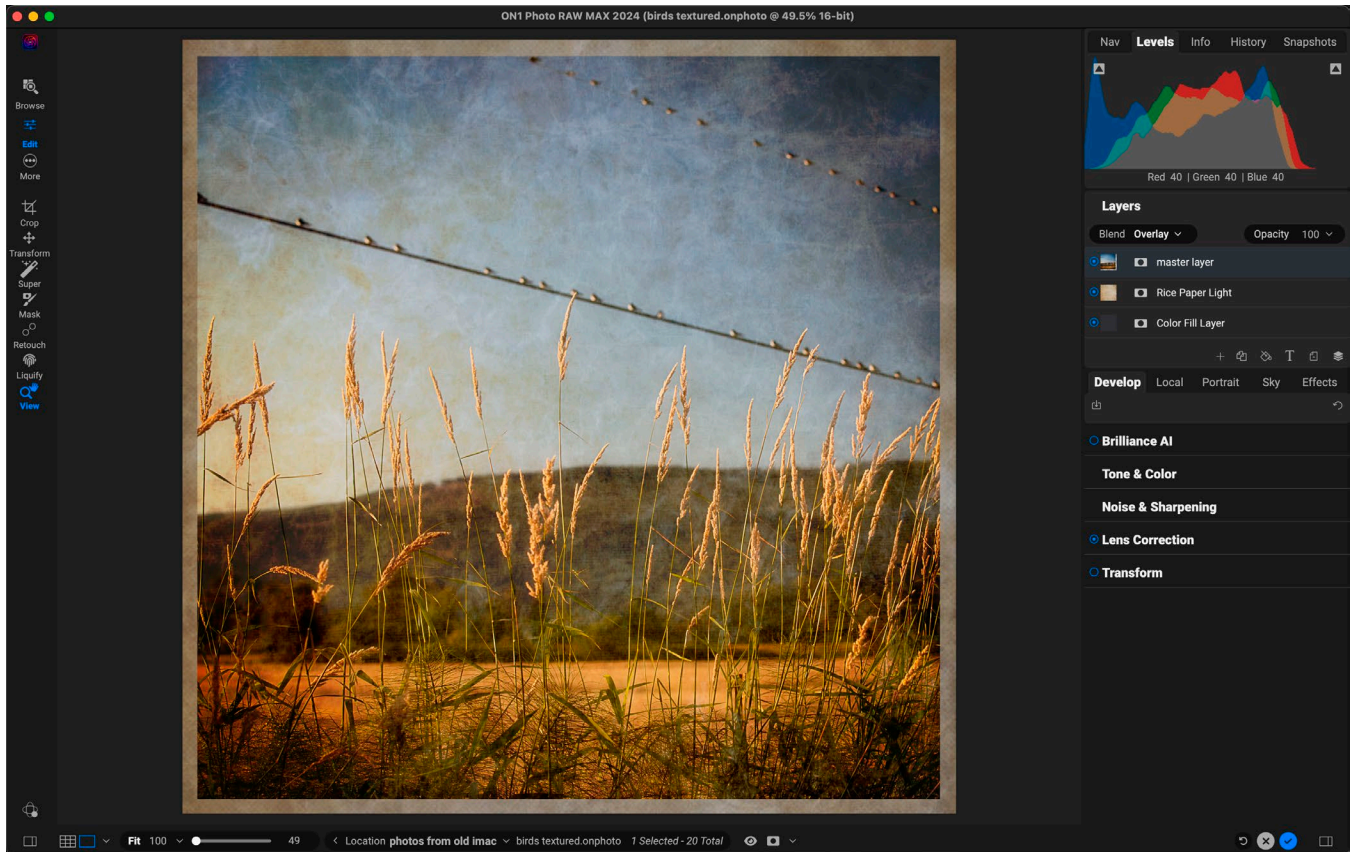
For many photographers, editing in post-production doesn't just mean working on a single image at a time. When shooting out in the field they might capture multiple shots of a scene, to blend them later to achieve a greater dynamic range, to create expansive panoramas, or to build a perfectly focused scene from front to back. Or, they might be interested in creating sophisticated composites that can only be created within a layered workflow. For those photographers, ON1 Photo RAW 2024 includes a full set of combination tools to help them achieve their photographic vision with ease:

- **Layers:** Photo RAW's Edit module offers a full layered workflow, letting you create collages, perfectly blended composites from multiple images, and much more. (See [page 195](#).)
- **Panorama:** The Panorama feature can create amazing, expansive views of a scene from two to 25 photos blending them together into a seamless whole. It can even create great panos from a handheld set of shots. You can even batch process a group of panorama shots. (See [page 203](#).)
- **HDR:** This feature takes a group of photos shot at different exposure values and blends them to create photos that include a wider range of tones—from deep shadows to bright highlights—than can be achieved with a single shot. Like panoramas, Photo RAW's HDR feature supports batch processing. (See [page 206](#).)
- **Focus Stacking:** Like the HDR feature, Focus Stacking takes multiple shots of the same scene, each shot with a different focus point, and blends them together into a perfectly focused final result. (See [page 209](#).)
- **Time-Lapse:** Create beautiful, flicker-free time-lapse videos from sequences of still photos. (See [page 211](#).)

As is the case with all of the editing functionality in ON1 Photo RAW 2024, these features work non-destructively. Your original photos are not changed, and the resultant, blended photos have all the re-editability found throughout Photo RAW.



# WORKING WITH LAYERS

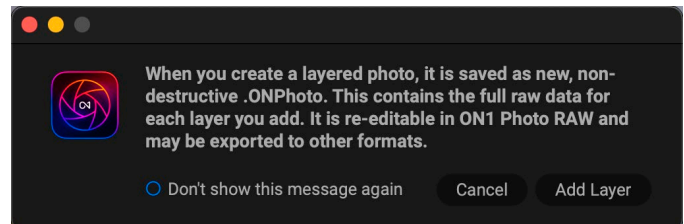


*The Layers feature inside ON1 Photo RAW 2024 is fully non-destructive. This means you can use all of the Edit module's tools, tabs and filters, along with layer-independent masking capabilities, and still preserve your original photos—and can come back at any time to further enhance your creations.*

The Layers functionality inside ON1 Photo RAW 2024's Edit module lets you create quick composites, blend multiple images together, paint in new skies or backgrounds, add text, align layers based on their content, and much more. And, because Layers is tightly integrated within the Edit module, all of your work remains re-editable at all times: you can go back and add, change or update any setting made inside the Edit module, on any layer.

You can combine multiple photos or copies of the same photo as layers. Each layer can be moved, sized and masked on its own, and each layer has its own non-destructive settings—just like any photo in Photo RAW, all the way back to the original raw data. That means you can use all of Photo RAW's editing features—basic exposure changes, camera profiles, portrait retouching, Effects filters and more—as part of a layered photo.

When you add a layer to a photo, Photo RAW automatically creates a new document with an .onphoto extension, leaving your original photo intact. This document type, which is visible inside Browse, contains all the layer information and non-destructive editing operations made inside Photo RAW. (For information about the implications of using layered files with ON1 Cloud Sync, see [page 202](#).)



Layers can be as simple as copies of the current photo, to apply more complex adjustments to portions of an image than you could with local adjustments. You can also add other documents as a layer inside the

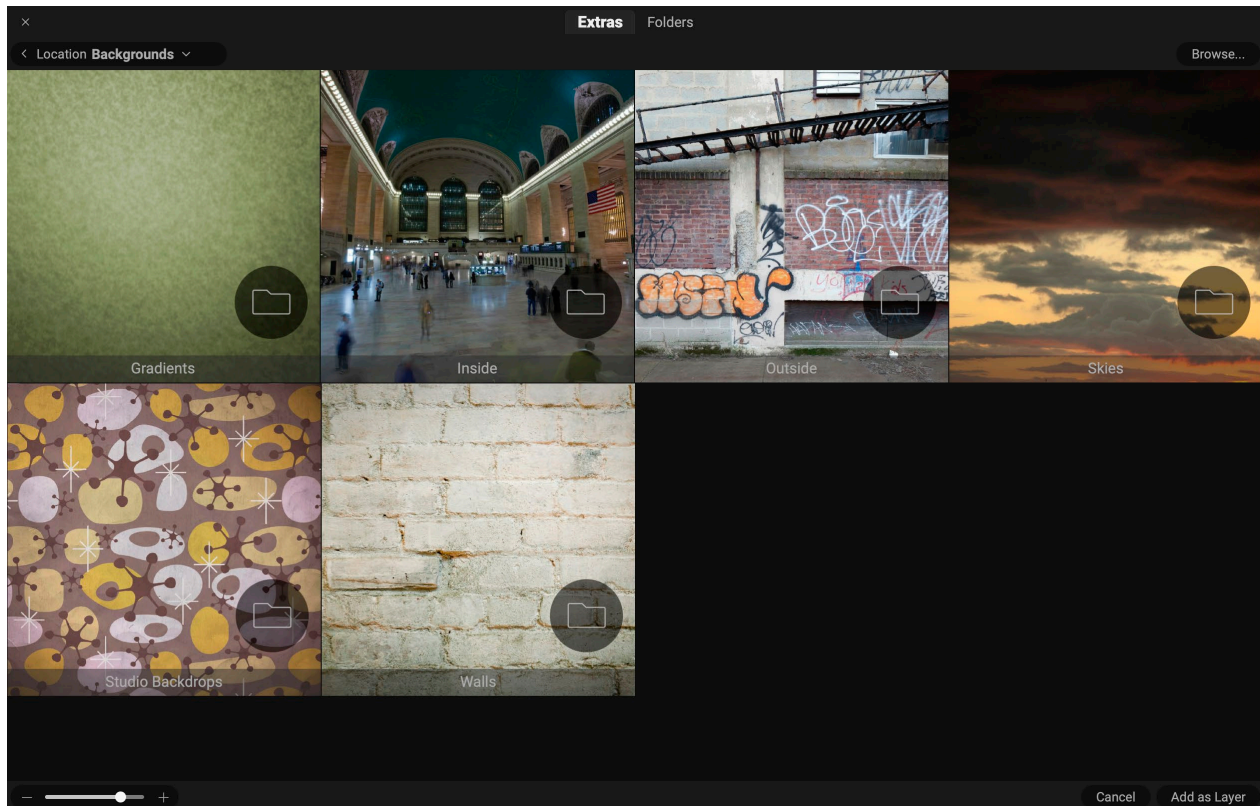


current document, for replacing skies or other backgrounds, for adding textures, or for when you wish to create complex collages. Photo RAW supports up to 14 layers in a document.

Once you have added a layer, the entire Edit module is available for that layer. When you click on a layer, you can add any adjustment from the four edit tabs, create masks, and more. You can use the Transform tool to move, rotate, and scale the contents of a layer independently from the complete document. (Because the Crop tool works at the document level, you can't crop individual layers.)

## ADDING A NEW LAYER

The easiest way to add a new layer to an existing image is to choose 'Add Layer from File' in the Layer menu. This will open the Add Layer window, which has two tabs: Extras and Folders. The Extras tab will display ON1 Extras and My Extras. The ON1 folder will include all of the Extras installed with your copy of Photo RAW, including backgrounds, textures, borders, skies, and more. The My Extras folder will include any similar files you have added to Photo RAW via the Extras Manager (as described on [page 9](#)).



*When you choose Add Layer from File, a window appears with Extras and Folders tabs. The Extras tab contains backgrounds, textures (shown above) and borders supplied by ON1 with Photo RAW, as well as any extras you might have added via the Extras Manager. Clicking on the Folders tab (or the Browse button at the top right of the window) will let you browse your computer for photos and other supported files.*

If you wish to open a different file, click on the Browse button at the top of the Add Layer window, which will open your computer's file selection dialog box, where you can navigate to the specific file. Any file compatible with ON1 Photo RAW 2020 can be opened and added as a layer.

**NOTE:** You can also copy and paste pixel-based image data from other apps into Photo RAW while working in the Edit module. Choosing Paste will create a new layer with the copied pixels.

## Opening a layered Photoshop file

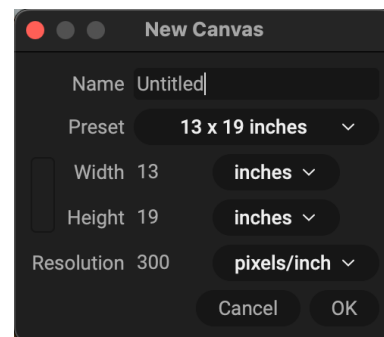
ON1 Photo RAW 2024 can open most layered Photoshop files in the Edit module. What happens depends upon the composition and type of layers in the document:

- If the layered document has basic Photoshop layers and masks, Photo RAW will open the document inside Edit, with each layer and mask visible in the Layers pane.
- If the Photoshop file has specialty layers—smart objects, text layers, layer styles—Photo RAW will flatten the visible layers and will open the file as a composite image, with a single layer.

In either case, Photo RAW will convert the file to an .onphoto file, preserving your previous document.

## Creating an empty layered file

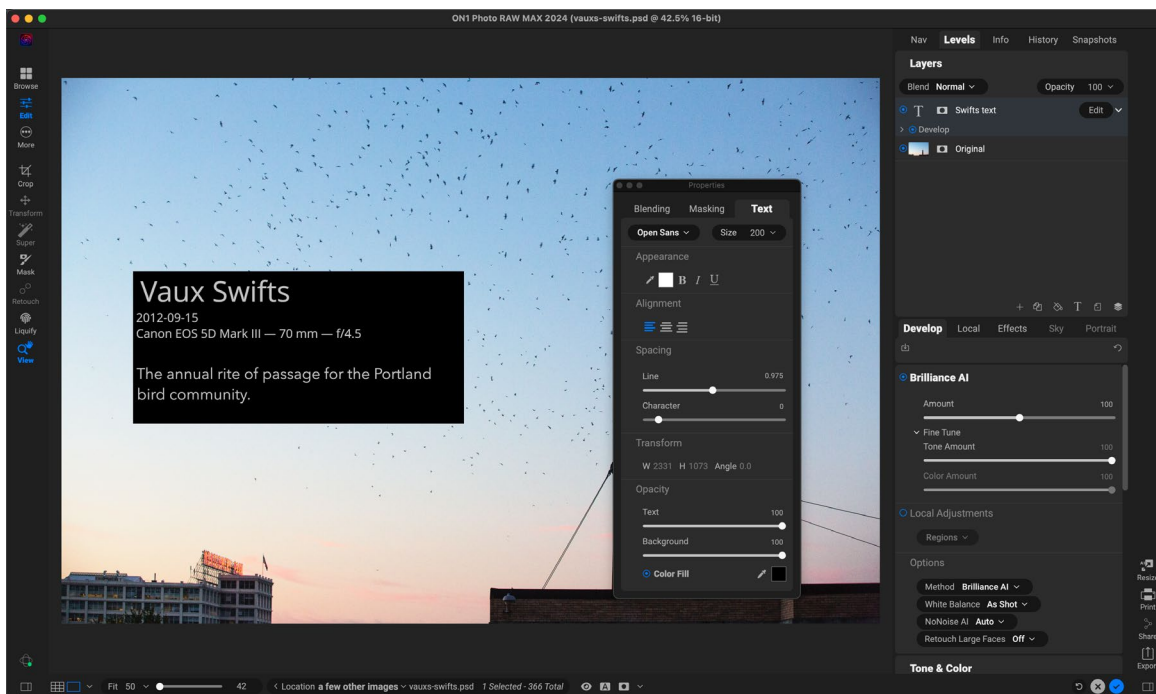
You can also start with a blank canvas, in either the Browse or Edit modules. Choosing New Canvas from the File menu opens a dialog box for creating a new file at whichever custom size you choose. When you click OK, Photo RAW creates a new .onphoto file with a single, transparent layer in it. You can then use any of the options detailed below to add photos and other extras to the file. (You can change the size of an existing canvas by choosing Canvas Size from the File menu inside the Edit module.)



The New Canvas menu item is available in Browse and Edit.

## Creating Text layers

The Text layer type lets you add blocks of text to your photo or composite, for everything from simple watermarks to more complicated text-based layouts. Within each text block you have complete control over the size of the block, the font, type size, line spacing, letter spacing, color and alignment of the text. You can also add a background fill color and can set the opacity of each text block and background.



When you add a Text layer to a document, Photo RAW will create a block with sample text, and open the Text tab of the Properties window, which lets you adjust the parameters (color, font, size, and so on). To have multiple text blocks, add a new text layer.



To add a text block, choose Add Text Layer from the Layer menu, or click the text icon in the Layer pane's toolbar (see [page 199](#)). A new text block layer will be added, with placeholder text selected, and the Text tab of the Properties window will open. You can start typing, or you can adjust the font, sizing and other options you wish to use in the Properties window. To add another text block, create a new text layer from the Layer menu.

You can move and resize the text blocks around by clicking outside the block. Clicking the corners of the block to resize it, or click and drag inside the block to move it around. Double-clicking inside the block will let you re-edit the text.

To edit an existing text block, choose the Text layer, and double-click in the block, then make your changes. If you would like to remove an existing layer, click on the layer in the layers pane and choose Delete from the Layer menu.

Photo RAW will remember the last settings you used, which can be helpful if you like to use a specific font and size—in text for a watermark, for example.

**TIP:** The Text tool also lets you add some embedded metadata information from for the current photo into a text block. To do this, type metadata field name, contained within left and right curly braces —'{' and '}' — into the block, like this: {Aperture}. When you click outside the block to see the final text. The metadata fields available are: Name, FileName, Date, Time, Shutter, Aperture, ISO, Camera, Lens, Focal, Description, Author, Copyright, Path.

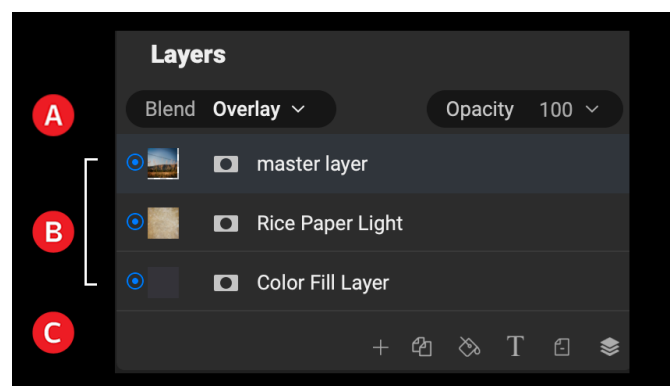
## Creating a Color Fill Layer

In addition to opening other document types, Photo RAW can create a new layer filled with a solid color, which can be quite useful when working with sophisticated composites or blend modes. Choosing Add Color Fill Layer from the Layer menu (or clicking on the Color Fill icon in the Layers tool bar) will open the system color picker, where you can choose a color for your new layer. You can change the color of any color fill layer by selecting it in the Layers pane and choosing Edit Color Fill from the Layers menu.

## WORKING WITH THE LAYERS PANE

The Layers pane has three sections:

- A. **Layer Blending and Opacity:** Lets you set the blending mode and the opacity of the currently selected layer.
- B. **Layers:** All of the layers in the current document, with a thumbnail of the layer contents and the layer mask (if there is one); the currently selected layer has a slightly different background tone than the other layers. Layers can be renamed by double-clicking on the title.
- C. **Layer Tools:** The toolbar at the bottom of the Layers pane includes buttons for performing basic layer operations (described in more detail below).



The Layers pane in Photo RAW. This photo has three active layers.

## Layer Visibility

A layer's visibility can be turned on or off by clicking the button to the left of the layer thumbnail. When turned off, the layer has no effect on the composite image.

## Changing Opacity

The opacity slider controls how opaque or how strong the selected layer is. The default is 100%. At lower settings, the layer will blend with the layer(s) under it. Altering the blending mode and opacity of a layer can create a wide range of color and tone effects.

## Changing the Layer Order

You may change the order of layers by dragging and dropping layers into the order you prefer.

## Renaming Layers

You can rename a layer by double-clicking on it. The name turns into an editable field. Type in your preferred name and press Enter.

## Layer pane toolbar

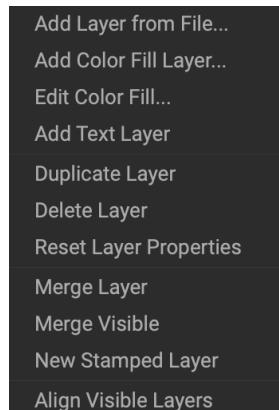
All of the layer commands in Photo RAW can be accessed via the Layers menu and a pop-up menu that you get when you right-click on any layer. The toolbar at the bottom of the Layers pane contains the basic commands you need when working with layers. From left, the icons represent:



- **New Layer:** Adds a new layer, opening the Add Layer from File window.
- **Duplicate Layer:** Makes a duplicate layer, including any Edit module adjustments made in the original photo.
- **New Color Fill Layer:** Creates a new color fill layer.
- **New Text Layer:** Creates a new text layer.
- **Delete Layer:** Deletes the currently selected layer.
- **Merge Layer:** Merges the currently selected layer with the one directly beneath it in the Layers stack.

Other layer commands, available via the Layer menu or pop-up, include:

- **Reset Layer Properties:** Deletes any layer masks or transform operations you have made to the current layer. To reset Develop, Effects, or Portrait settings or local adjustments made to a layer, click the Reset Layer button at the bottom right of the main Edit module window.
- **Merge Visible:** Unlike the Merge Layer command, this will merge all of the visible layers—ones with the layer visibility status set to on—in a file into a single composite layer, with all of the merged layers' effect applied.



*Right-clicking on a layer brings up a list of available Layers operations.*

- **New Stamped Layer:** When you have the top layer in the stack selected, this option will create a new composite layer at the top of the stack, with all of the layers' effect applied.
- **Align Visible Layers:** This will align the visible layers, based on the content of the layers. See [page 202](#) for more information.

## Changing Blending Modes

Blending modes determine how the selected layer blend with the layer(s) below it. The default blending mode is Normal. This maintains the full opacity of the upper layer. Layers also supports many other blending modes which can be used to alter the brightness, contrast and color of the image. Blend modes are changed via the Blending tab of the Properties window. See [“Blending Modes” on page 161](#) for detailed information on adjusting the blend modes.

## Layer Masks

If you use any of the masking tools – including the AI-based Super Select AI and AI Quick Mask tools – a layer mask will be created automatically. Clicking on the layer's mask icon will display the standard Photo RAW mask options, and you can use all of the Edit module's masking tools to create or modify layer masks, including the Mask AI feature used in the Effects and Local Adjustments tabs. You can also copy and paste layer masks—including masks from Effects filters—via the Mask options section or via the Mask menu. See [“Filter Masks” on page 160](#), [“Using Photo RAW's AI-based tools to mask regions automatically” on page 157](#) and “Masking Tools,” starting on [page 95](#) for more on using Photo RAW's masking tools.

## Adding layers via Filmstrip view

In addition to the Add Layer options detailed above, if you are in Filmstrip view inside the Edit module, you can also drag photos from the strip at the bottom of the screen into the main window. This will create a new layer with that photo on it. (See [“Working in Filmstrip View” on page 29](#) for more.)

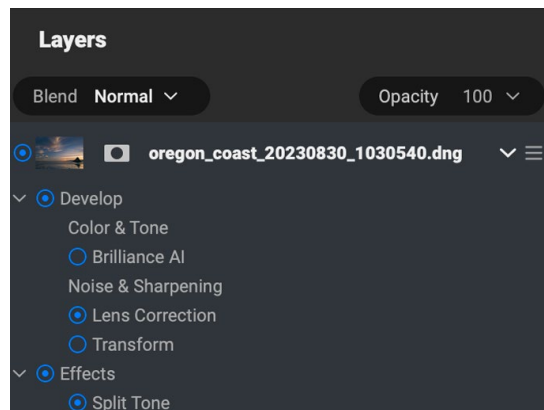
**NOTE:** If the file you add is larger or smaller than the pixel dimensions of the document, use the Transform tool to resize it as desired. If you wish to preserve the original aspect ratio of the placed file, use the Shift key to resize it proportionally.

## VIEWING EDIT MODULE SETTINGS FOR A LAYER

Each layer in the Layers pane has a hidden list that shows all of the operations from the Edit module that have been applied to the current image. To view the list, click once on the layer's title. This will drop down the settings view for that layer.

The list will show every tab in the Edit module that has had adjustments made to it, and you can drill down further into the Develop, Effects, Portrait, Sky Swap and Local Adjustment tabs to see which adjustments were made to an image.

Double-clicking on any of the available items inside the Settings Applied area will jump to that setting inside the Edit module, where you can adjust it easily.



*Clicking on a layer's title will display the Edit module settings that have been applied to that layer. Double-clicking on one of the items will open that specific pane in the Edit module tab. Click on the layer name once more to close the settings.*

**NOTE:** This feature replaces the Settings Applied option found in the Info pane in previous versions of Photo RAW.

## USING THE TRANSFORM TOOL WITH LAYERS

Use the Transform tool (see [page 93](#)) at the top of the Toolbar to manipulate layers. A layer may be repositioned, sized or rotated using the tool. When selected, transform handles will appear on the edges of the selected layer. You use these transform handles to manipulate the image. You can only transform one layer at a time.

### Repositioning a Layer

To reposition a layer, simply click and drag inside the transform box. You can also use the keyboard arrow keys to nudge a layer one pixel in any direction.

### Resizing a Layer

To resize a layer, click and drag on any of the transform handles. Clicking on a corner handle allows you to adjust two sides simultaneously. Clicking on a side handle allows you to adjust that side. If you hold the shift key down while adjusting the size, the proportions of the layer are maintained. If you hold down the Option (MacOS) or Alt (Windows) key while resizing, your image will resize from the center instead of from the edge. You can hold down Shift-Option (or Shift-Alt) to resize proportionally from the center.

You can type in the size you desire in the Tool Options bar in the width and height fields. You can also size a layer to fill the canvas automatically by pressing the Fill button in the Inspector.

### Rotating a Layer

To rotate a layer, move the Transform tool just outside a corner transform handle. Notice that the tool cursor changes to a rotate cursor. Now click and drag to rotate the layer. You can also use Option/

Alt with the left or right arrow keys to rotate a layer when the Transform tool is selected. To rotate the layer quickly in 90 degree increments, you can use the rotate left and right buttons in the Tool Options bar.

## Flipping a Layer

You can flip a layer either horizontally or vertically by pressing the flip buttons in the Tool Options Bar.

When you have completed your transforms you need to commit the changes. You can do this by pressing the Apply button that appears in the Tool Options Bar or by pressing the Enter key. You can cancel a transform by pressing the Cancel button in the Tool Options Bar or by pressing the Escape key.

## ALIGNING LAYERS

One of Photo RAW's most advanced features is the ability to align multiple layers based on content. This can be a great aid when you've hand-held a group of shots, and want to blend portions of one image onto another, to use a better sky, for example.

To align layers, open them in the Layers pane, and choose Align Layers from the Layer menu or pop-up menu. Photo RAW will then analyze the contents of the layers, and aligns them to the one with the most commonality. When you look at the individual layers after aligning them, you'll see that some layers have been moved or rotated slightly to match the content. You can then use Photo RAW's masking tools to hide or show various aspects of the aligned layers.

## USING LAYERS WITH SYNCED ON1 CLOUD FILES

If you wish to create a layered file with ON1 Photo RAW 2024 using a synced photo that resides on device other than the current device, you should be aware of two restrictions.

First, because Layers requires the creation of a new file in ON1's proprietary .onphoto format, this new file must be saved to the device it is being edited with. If you save this new file to a published folder or album, it will be synced. You will be able to edit the layered file on another computer running ON1 Photo RAW (see the section on working with existing layered files below for more).

Second, if the synced photo you wish to use is synced as an editable preview, Photo RAW will warn you that you will be working with a photo that has less fidelity than the original (see the dialog box on the right). For some uses, working with the preview might be good enough, but if you want to be sure that you are using the highest-quality base layer, either copy the file to your current computer, or change the sync option for the photo's folder or album to Originals, and download that from ON1 Cloud Sync.

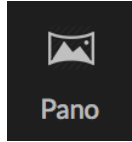
For more information on these settings, see ["Managing Sync Options in Photo RAW" on page 75](#).

### Using Existing Layered Files with ON1 Cloud Sync

If you create a layered file inside ON1 Photo RAW 2024 and sync it to the ON1 Cloud in any manner (folder or album, preview or original), that layered .onphoto file is fully editable on another synced device running Photo RAW. Any Edit module changes you make to that layered file on that device (on any existing layer), *with the exception of adding or removing layers*, will be synced back to the original file. If you add or remove layers, you will be prompted to save the newly edited file to the current computer.

Layered photos that have been synced to the ON1 Cloud are not editable on mobile devices using ON1 Photo Mobile; they are viewable, however.

# STITCHING PANORAMAS



ON1 Photo RAW 2024 lets you stitch multiple images together to create a panorama, directly from within Browse. You can even batch process a group of panoramas.

Panoramas are composite photos created from multiple individual frames of a scene (also known as ‘slices’). While they’re often thought of as wide, narrow images, panoramas can be horizontal or vertical, wide or compact. They give you a much higher quality final image, with added detail and a greater point of view. Photo RAW can create a panorama with as few as two images or more than 25.

To create a panorama with Photo RAW, go to Grid view in Browse and select the images you wish to use—or select a folder that contains the frames you wish to build into a panorama—and choose Merge to Panorama from the More menu in the left bumper (or choose Create Panorama from the File menu).

Photo RAW will then display the Create Panorama window, which has two components: the Preview area, which displays the merged panorama, and the Options panel, which lets you adjust the type (spherical or collage) and the edges of your panorama; choose an output size (either 100% or 50% of the stitched file dimensions); choose a module to open the panorama after merging, and add panoramic metadata.



ON1 Photo RAW's Create Panorama window displays the projected panorama, and includes options for the type of merger, cropping options, file size and adding panorama-specific metadata. You can also specify which Photo RAW module in which you wish to open the finished panorama.

With most landscape-oriented panoramas, you will want to use Auto or Spherical projection type, which merges the photos as if they were mapped on the inside of a sphere. The Collage projection type lays merged photos flat (as opposed to mapping them on a curved surface), and is often called “scrapbook style.”

There are three cropping options available in the Edges pop-up menu: None, Crop and Warp to Fill:

- **None** will merge the panorama without cropping the finished image.
- **Crop** trims the edges of your panorama to fit the best rectangular crop.



- **Warp to Fill** uses ON1's content-aware fill technology to stretch the edges of your scene to fill as much of the entire frame as it can, giving you bigger cropped area.

Remember that no content-aware technology is perfect: If you use Warp to Fill option, make sure to check the edges of the frame after the panorama is built, making sure that there aren't any smudged areas or bad fills. (It often works best on scenes with skies and large vistas, and less so on scenes with lots of detail at the edges.)

The Open In section of the Options Bar lets you choose what to do when your panorama has been built. You can stay in Browse, or open your finished panorama in either the Develop or Effects tabs.

The Add Panoramic Metadata option, when checked, will take advantage of the exploration features found in panorama-aware websites—like Facebook and Google—and apps, letting users click and spin around your panorama in real time.

When you click Save, Photo RAW will build your panorama, blending the exposures as necessary, saving the resultant file as an .onphoto file; it will then open it in the module of your choice (as determined by the Open In menu in the Panorama window.)

## BATCH PROCESSING PANORAMAS

Processing a group of panoramas inside Photo RAW is easy: create a separate folder for each panorama you wish to build, putting the slices for that panorama in the folder. Then, in Browse, select the folders you wish to build, and Photo RAW will automatically go through each folder, building the panoramas using the default options: Auto, with edges cropped and built at 100% size.

Each completed panorama will be placed in the same folder as the component slices.

## TIPS FOR CREATING GREAT PANORAMAS

Creating panoramas can be a lot of fun, and can capture the grand vistas in a way that a single capture cannot. There are certain best practices that will help ensure you can create a great panorama:

- Use a tripod, and ensure that it—and your camera—are level throughout the entire arc of your scene.
- Lock your metering and your focus before you shoot: use the same aperture, shutter speed and ISO for all of the shots in your panorama.
- Overlap each shot by 50 percent, to give you plenty of data for which to build your final panorama.
- If your panorama isn't quite what you had hoped for—especially in terms of exposure—and you have enough overlapping frames, try removing a few frames and rebuilding the panorama.
- Once you've got your images in Photo RAW, perform basic edits on them in Develop and turn Lens Correction on. (Save styling for after your panorama has been merged.)

## PHOTO RAW PANORAMA EDGE OPTIONS

These panoramas demonstrate the three different edge options available via the Create Panorama feature. The top panorama was set to None, the middle to Crop, and the bottom the Warp to Fill. Because the scene included skies and grasslands at the edges, the Warp to Fill was able to add enough pixels to fill out the top of the panoramic frame.



**None**

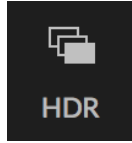


**Crop**

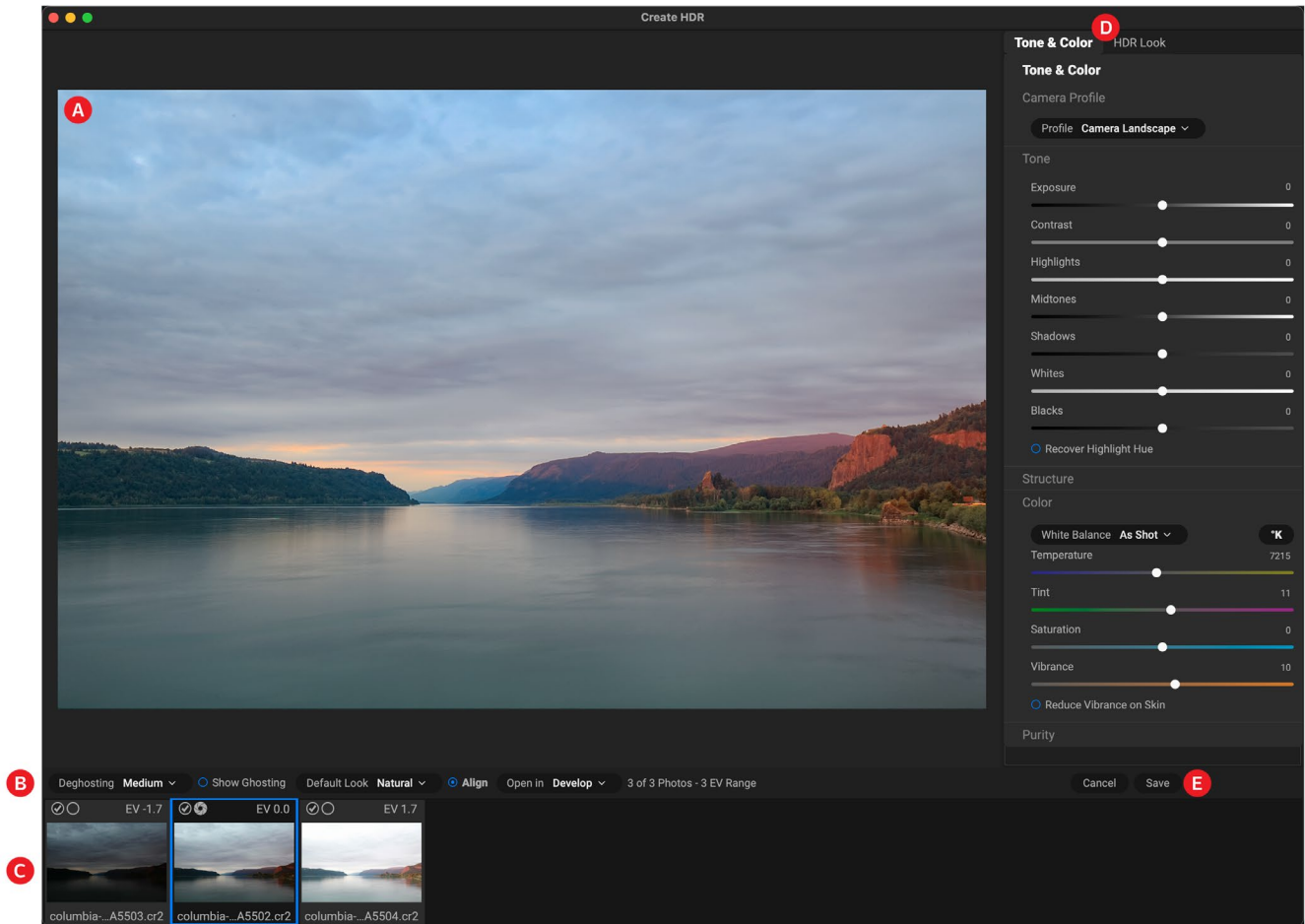


**Warp to Fill**

# BLENDING HDR IMAGES



In addition to panoramas, ON1 Photo RAW 2024 has a second photo-merge feature: high dynamic range (HDR) photo creation. This feature lets you take multiple shots of a scene, at varying exposure levels—accurately capturing shadows, midtones and highlights in different frames across the series—and then blend them together to create a final image that has a much wider tonal range than a single shot could do. And, as is the case with the panorama feature, you can create multiple HDR composites via Photo RAW’s batch processing option.



To create an HDR image, go to the Grid or Filmstrip view in Browse and select the set of images that you wish to blend. Then choose Merge to HDR from the More menu in the left bumper (or choose Create HDR from the File menu). You will then see the Create HDR window, which has the following options:

- A. The **Preview** window displays a rendition of your merged HDR image (and is resizable).
- B. The **Options bar** has settings for adjusting ghosting, choosing a default look, and which module you wish the resultant image to open in.
- C. The **Reference panel** includes the images used to build the HDR, with their exposure values relative to the base image. The image with the outline is the base version used for deghosting; the base image for exposure is represented by the lens aperture icon next to the checkmark.

D. The **Tone & Color pane** from Develop (see [page 138](#)) and the **HDR Look** pane from Effects ([page 172](#)) are present to help you tune your image.

E. **Save/Cancel buttons.**

Once the Create HDR window is open, you can use the various options to tune your image. You can adjust the base image: clicking on the different frames in the Reference panel will choose a different base image for deghosting; to select a different base exposure image, click on the small lens aperture icon in a different image of the series. (By default, Photo RAW chooses the image it felt was closest to the middle of the series for both exposure and deghosting.)

The Default Look options are also designed to help get you started, corresponding to style options in the HDR Look panes. Natural and Surreal use those styles from the HDR Look pane. They are only designed to be a starting point: You can override any of the options by adjusting the settings in the two editing panes.

The deghosting section of the Options bar has options to blend portions of the frame that might have shifted during the image series (things such as clouds, flowing water or moving branches). Depending upon the amount of ghosting, you can choose from four levels of deghosting (or none). If you wish to see those areas in your image that will need deghosting applied to them, click the Show Ghosting button. Those areas that have ghosting issues will be shown with a red overlay. Depending upon how much movement there was in your scene, you can then choose the appropriate level of deghosting, or, in some instances, cancel and choose a different set of images to blend into an HDR.

The Align button in the Options bar is on by default, which means that, during the HDR generation process, Photo RAW will attempt to automatically align the images, based on their contents. Turn the Align button off when the alignment process results in a bad composite, or when you don't want Photo RAW to align the images (when working with star photography, for example). With the Align feature off, Photo RAW will use the selected base image for the HDR process.

The Open In section of the Options Bar lets you choose what to do when your merged HDR file has been built. You can stay in Browse, or open your finished panorama in either the Develop or Effects tabs.

Once you have your settings adjusted to the way you'd like them, you can click Save and Photo RAW will build your HDR, saving it in the .onphoto file format and opening it in the module of your choice. The beauty of Photo RAW's HDR engine is that any of the edits you make to your image in the Create HDR window are reflected in the Tone & Color pane in Develop and the HDR Look pane in Effects.

Because ON1 Photo RAW is non-destructive, you can re-edit your HDR to fit your wishes. If you decide that you wish to use a different HDR Look style, or want to add additional effects to your photo, you simply open the image in the appropriate module and edit.



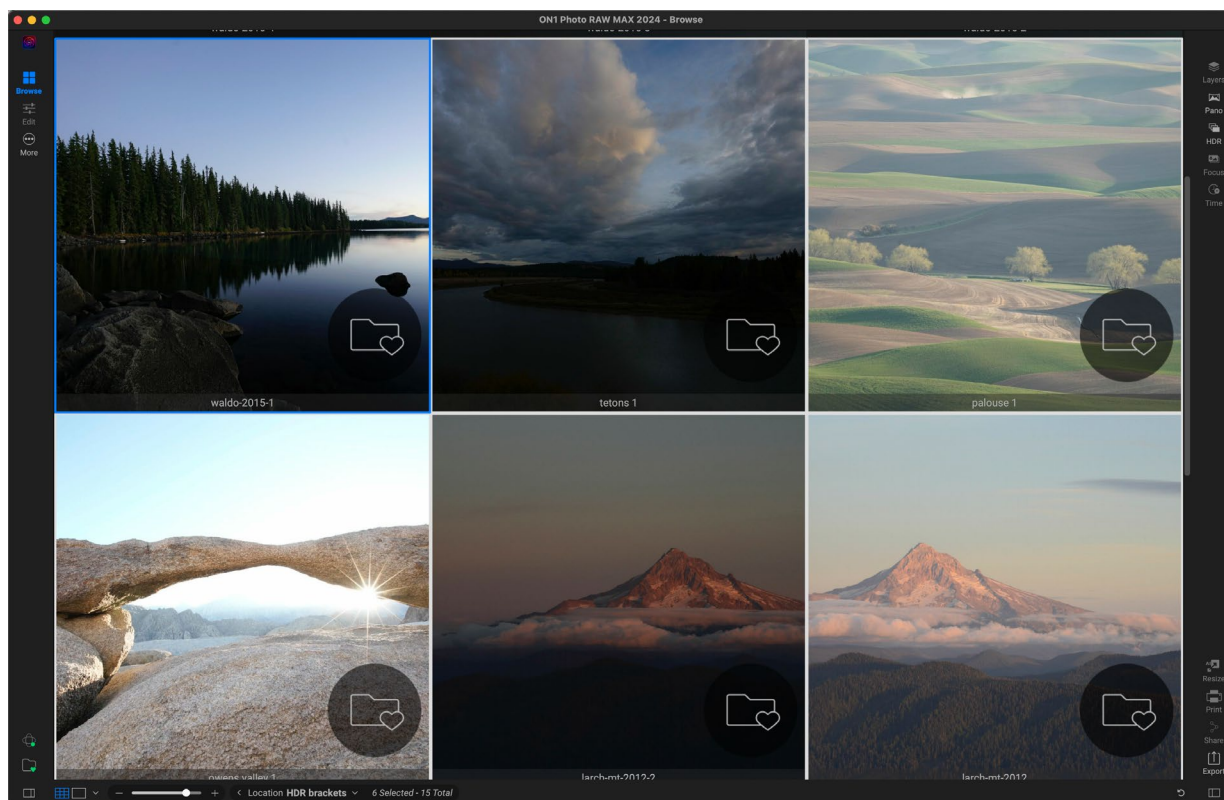
*The Create HDR preview window, with the Show Ghosting option turned on. Areas that have ghosting issues will be shown with a red overlay.*



## BATCH PROCESSING HDR IMAGES

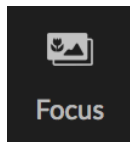
The HDR batch processing option lets you take a folder containing multiple sets of bracketed shots from a shoot, and automatically turns them into HDR photos ready for editing. The process creates separate .onphoto files that can be opened directly in the Edit module.

To do this, create a separate folder for each HDR composite you wish to build, putting the different exposures into that folder. Then, in Browse, select the folders, click the HDR button and Photo RAW will automatically go through each folder, building the HDR composite using the default options. Each completed HDR image will be placed in the same folder as the component photos.

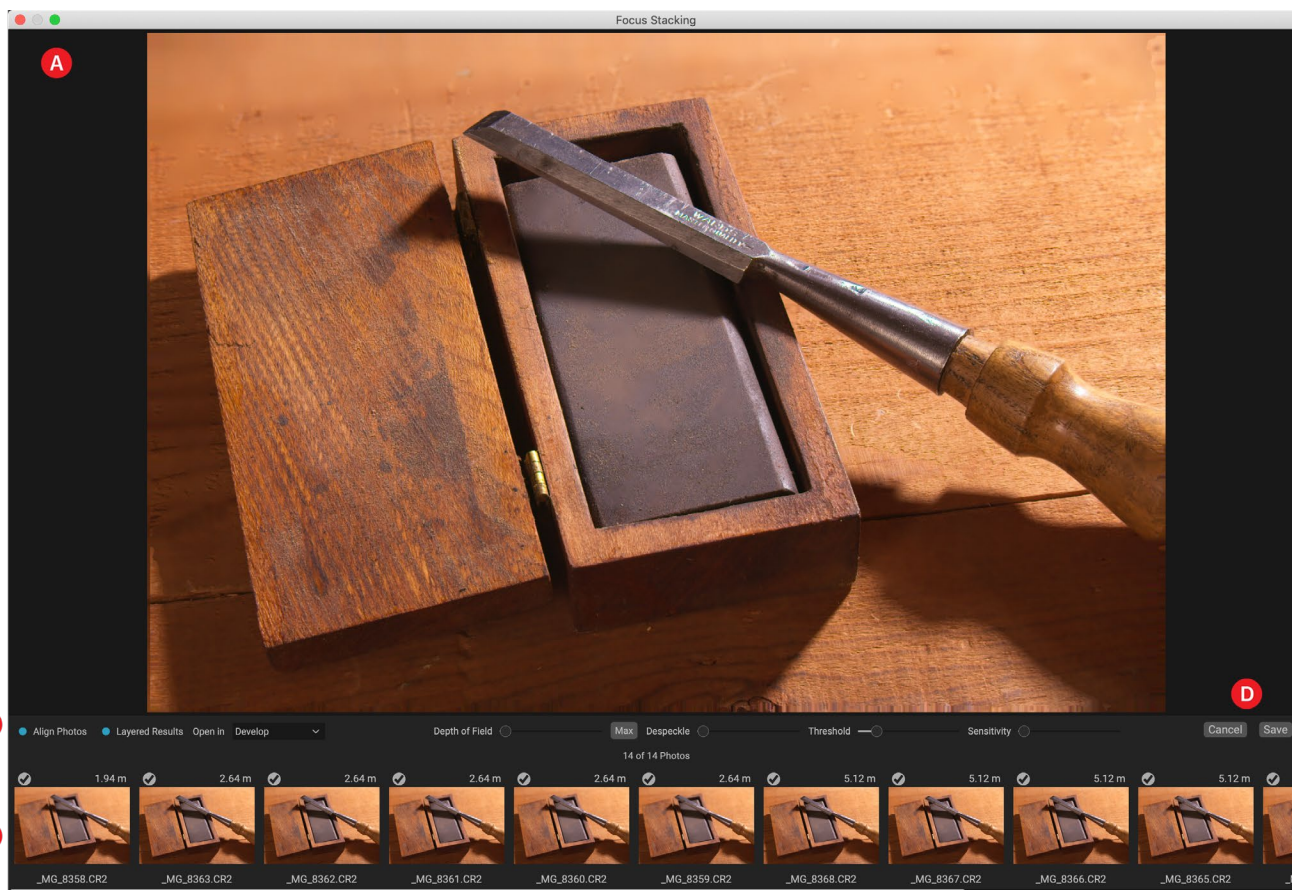


*To batch process a group of different bracketed shoots for HDR creation, put the bracketed images into separate folders, and in Browse, select the group and click on the HDR button.*

# FOCUS STACKING



When working in the field, achieving perfect focus in a photo from the foreground to the background can be difficult, if not impossible to achieve. With ON1 Photo RAW 2024's Focus Stacking feature, you can blend a series of photos taken at different focus distances, giving you more depth of field than any single photo. And, you can adjust the focus in real-time, just like changing the focus on your lenses. Think of it like HDR, but for focus instead of exposure.



Like the Panorama and HDR features, you generate a focus-stacked photo in the Browse module. Simply select the photos that you wish to blend and choose Merge to Focus Stack from the More menu. This will launch the Focus Stacking dialog, which has the following components:

- A. The resizable **Preview** window displays a rendition of your blended focus-stacked photo.
- B. The **Options bar** has settings for aligning photos; an option to create a final layered file (with masks); which module you wish the resultant image to open in; adjusting the depth of field; and for fixing problem areas between the base photos in similar areas.
- C. The **Reference panel** includes the images used to build the focus-stacked image, with their focus values (taken from the photo's metadata, if available). Clicking the check box on an image removes it from the focus operation.
- D. **Save/Cancel buttons.**



If there is focusing metadata in the source images, Photo RAW will display the sources from closest to furthest, with the focus distance listed, and the Preview window will show the suggested final photo. Photo RAW will automatically try to create the greatest amount of depth of field possible, but you can use the Depth of Field slider to constrict the depth of field in the blended result. For example, if you wanted less sharpness in the areas that are closer, move the left slider; for less sharpness in the distance, move the right slider in. To get back to the maximum focus, click on the Max button.

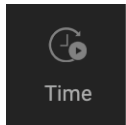
The Despeckle slider can be used when you have some movement in parts of a scene between your base images, such as movement of leaves in a stand of trees. Increasing the Despeckle amount can sometimes help in removing ghosted elements or distractions.

The Threshold slider reduces noise in smooth areas of the image set, although it may knock out subtle detail if driven too hard. Sensitivity biases the decision of final “winner” (which image is declared sharpest) for each pixel. Low values rely more on low-frequency portions of the image, where high values leverage high-frequency aspects of the image and may help reduce noise. Adjusting these are similar to adjusting noise reduction, you are looking for the best compromise of the the two.

When you have the result you desire, click the Save button, and Photo RAW will blend your source photos together and create a new photo saved in the .onphoto format. Depending upon your choice in the Open In portion of the Focus Stacking window, the photo will open in Browse or the Develop or Effects tab. If you chose the Layered Results option, all of the separate images will be displayed in their own layer, with the layer masks attached.

Like all other image types inside Photo RAW, you can edit focus-stacked photos non-destructively in any of the Edit module tabs.

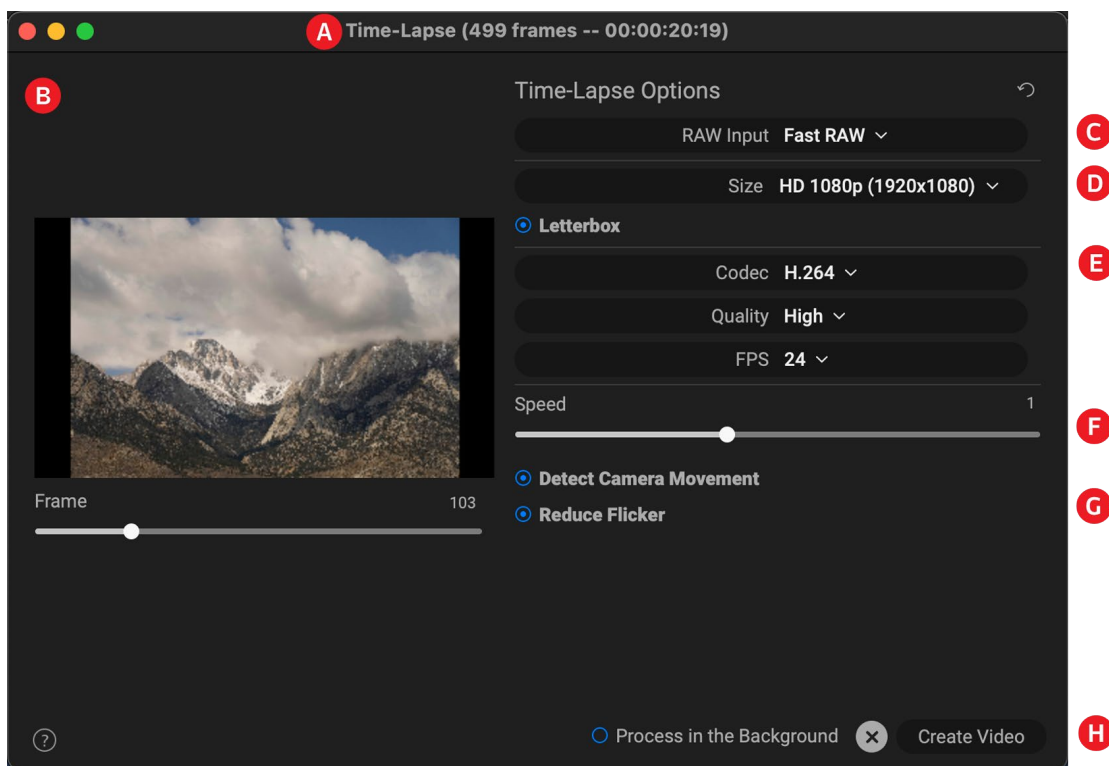
# TIME-LAPSE



ON1 Photo RAW 2024's Time-Lapse feature lets you take a series of still images and turn them into stunning, flicker-free HD or 4K movies with the click of a few buttons, from directly in Browse. You can preview your results right in the dialog and create quick proof versions or high-quality final results.

When processing a time-lapse sequence, Photo RAW can detect when the camera is bumped and will filter out misaligned frames. It can also detect changes in exposure and even them out automatically during processing, letting you create you “holy grail” style day-to-night videos. You can even increase or decrease the speed of the final videos to stretch out short sequences into longer, smooth videos.

To use the Time-Lapse feature, go to Grid view in Browse and select the photos to be used in the time-lapse sequence, then choose Merge to Time-Lapse from the More menu. This will bring up the Time-Lapse window, shown below:



- A. **Title bar:** Includes the number of frames in the sequence, and the estimated length of the generated time-lapse movie at the current Speed setting.
- B. **Preview area:** Displays a small preview of the movie to be generated from the sequence. Use the Frame slider to scrub through the sequence.
- C. **RAW Input:** Lets you set the type of proxy file used to generate the time-lapse movie. Options are Embedded JPEG (Fastest), Fast RAW (uses Detail view from the Browse cache), and Full RAW (uses the full raw file).
- D. **Size:** Settings for the final movie size—HD 720p (1280x720), HD 1080p (1920x1080), 4K (3840x2160), and 4K (4096x2304).

- E. **Movie generation settings:** Adjust the codec used to process the final movie (H.264 or ProRes), quality (High, Medium or Low), and the frame rate (FPS).
- F. **Speed:** Slider to compress or expand the movie length.
- G. **Options:** Detect Camera Movement will look for misaligned frames, removing them from processing; Reduce Flicker will adjust exposure settings on the fly during processing.
- H. **Create Video/Cancel/Process in the Background** buttons.

When you click Create Video, Photo RAW will build your time-lapse video from the sequence using the settings in the Time-Lapse window. When the movie file has been created, the video file will be saved in the same folder that the sequence resides, and will be visible in Browse. Double-clicking on the file in Browse will launch your computer's default video-playback app.

## BUILDING EFFECTIVE TIME-LAPSE MOVIES

Unlike Photo RAW's other image-combination tools, you'll want to perform your finish editing on the sequence before you click on the Time icon. For some sequences, you can finish edit the first image in the sequence—or a representative image in the sequence—in the Edit module, and use the Sync Settings command to synchronize all of the edits across the sequence (see [“Copying settings and synchronizing edits” on page 67](#)). Then, turn the Reduce Flicker option on to let Photo RAW to adjust the frames' exposure settings during the time-lapse generation process.

With more complex sequences, you might want to think of the sequence as different subgroups of exposure settings, edit a select frame from each group and sync that group's settings throughout the sequence. You'd still want to use the Reduce Flicker setting, but in some instances, doing a little bit more subtle processing across a long sequence can help you create a better final product.

The settings in the Time-Lapse window have been designed to give you great flexibility when building time-lapse movies. When you go to create your initial movie from a sequence, think about creating 'proof' versions to check your movie's settings and results. For example, use the Embedded JPEG or Fast RAW setting in the RAW Input pop-up, along with a smaller 720p or 1080p output size, for those first time-lapse movies. They'll generate much more quickly, and you can get a good idea about your sequence and your final edits before producing that 4K masterpiece from the full set of raw files.

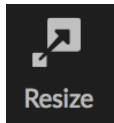
# PART 5: OUTPUT AND SHARING

While editing and organizing your photos are probably the most important tasks you'll do on a regular basis inside ON1 Photo RAW 2024, there will be times when you want to “do something else” with your photos. Whether it's enlarging photos for high-quality prints, sharing your photos with others or on social media, or printing to your desktop printer, Photo RAW has all the functionality you'll need to get your photos where you want them to be.

In this section, you'll find detailed information on the following topics:

- **Resize:** The industry standard for image enlargement and printing. (See [page 214](#))
- **Export:** The power of Resize in a quick and easy-to-use panel, letting you export your photos with flexibility, ease and control. (See [page 234](#))
- **Print:** Print your photos in any size, as individual photos, or in contact sheet form. (See [page 245](#))
- **Share:** A quick way to share your photos, including via SmugMug. (See [page 251](#))
- **Send To:** Edit photos in other photo apps. (See [page 252](#))
- **Other Sharing Options** (MacOS only). (See [page 253](#))

# RESIZE AI



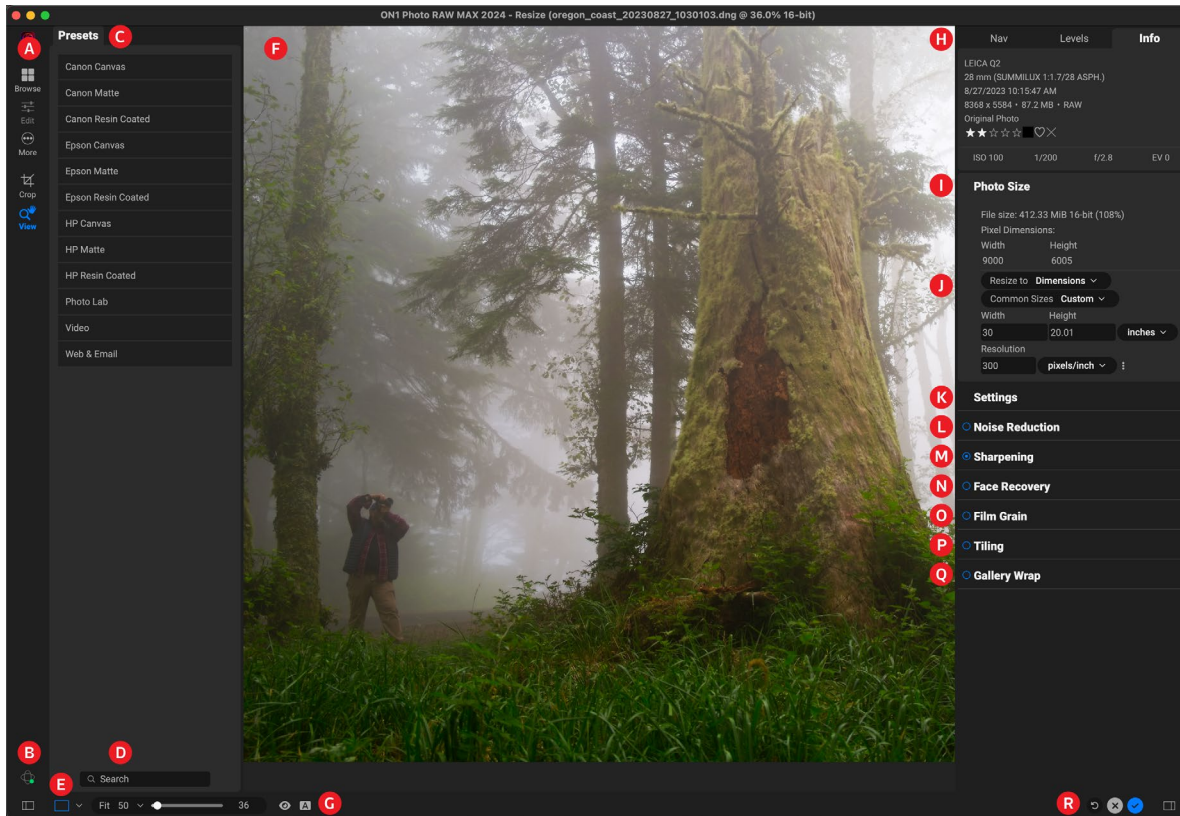
Resize AI is ON1's professional-quality resizing tool. Rebuilt from the ground up with an entirely new resizing engine, Resize uses state-of-the-art AI neural networks to create the highest-quality photo enlargements of any resizing tool on the market.

Existing enlargement methods create new pixels or resolution by copying those around them, leading to photos with less detail, soft edges, and more noise. Resize's super-resolution technology enlarges photos while maintaining and recovering detail and sharpness. Its primary features include:

- **Create large prints.** Resize excels at making stunning poster-sized prints. Easily crop to a specific paper size, resize the photo with the ultimate detail, and then print it directly or save the file to send to a photo lab.
- **Crisp details.** Resize upscales your photo to any size and sharpens the final details incredibly well. You can even crop a portion of your photo and still have amazing quality and detail. It can equate to having a longer lens without the expense or weight.
- **Breathe new life into old photos.** The size and quality of old digital photos don't compare to that available today. Now, remaster old images, making them bigger, sharper, and cleaner.
- **Face recovery.** Resize uses an advanced machine-learning model that detects small faces and enhances them with realistic detail. It can virtually reconstruct a face from modest details, adding realistic features and textures.
- **AI-based noise reduction.** For original photos with high levels of noise – or photos with JPG artifacts – you can use Resize's built-in noise reduction, powered by ON1's NoNoise AI, to reduce noise and artifacts during the resizing process, which leads to higher quality enlargements.
- **Gallery Wraps.** Resize's gallery wrap feature can add reflected or stretched wings to the edge of your photo so you can make a canvas gallery wrap without losing image area.
- **Tiling.** Divide the photo into tiles or strips to make it easier to print a mural. You control the size of the tiles and how much they overlap for trimming.
- **Batch processing and export.** The powerful batch-processing engine in Resize lets you enlarge a group of photos all at once and save them using Photo RAW's Export function. You have full control over how files are named, where they are saved, their file type, and much more. You can even add custom graphic- or text-based watermarks in the process.
- **Print presets for easy automation.** When it comes to preparing photos for print, knowing the proper resolution for your printer and the correct amount of sharpening for your paper choice can be daunting. Resize's built-in presets make this a breeze. Just pick the kind of printer, the type of paper, and the size.
- **Complete printing support.** You can print directly from the Resize module, and can even use Photo RAW's soft proofing feature to see how your photo will look when printed using specific printer and paper profiles.

**NOTE:** A fuller discussion of resolution and print size can be found in "How Big Can I Print?" and "How Much Resolution Do I Need?", starting on [page 232](#).

# Resize Main Screen Overview



Below is an overview of the main sections of the ON1 Resize window:

- A. **Tool Well:** Icons for the Crop and View tools, and for returning to Browse and Edit.
- B. **ON1 Cloud Sync Status/Close Left Panel:** Top button opens ON1 Cloud status; the button at the bottom shows/hides the Presets pane.
- C. **Presets:** Contains a library of presets for different printers, paper types and print sizes.
- D. **Search:** Lets you search for presets by name.
- E. **View Selector Pop-up:** Switches between Detail and Filmstrip views (used to batch-process groups of photos or work on images within the same folder).
- F. **Preview Window:** This is the main section where you preview and work on images.
- G. **Preview option toggles:** Magnification slider for current image, and buttons for comparing before/after views side by side and for previewing the original and edited versions on-screen.
- H. **Navigator/Levels/Info Pane:** Navigator, levels (histogram) and general photo information.
- I. **Photo Size:** Displays the pixel dimensions of your photo.
- J. **Resize to:** Lets you adjust the dimensions for the resized image.
- K. **Settings:** For selecting the resizing method and adjusting smoothness in the final image.
- L. **Noise Reduction:** Applies noise reduction during the resizing process.
- M. **Sharpening:** Sets sharpening options for the resized photo.
- N. **Face Recovery:** Enhances the details in small faces in a photo.



- O. **Film grain:** Adds realistic film grain to the final image.
- P. **Tiling:** Lets you tile the finished image into a series of individual files for assembling into a mural or other oversized print piece.
- Q. **Gallery wrap:** Sets a custom border on the finished image for use when printing on canvas.
- R. **Reset bar:** Reset all settings (returns to original state); Sync copies the current image's Resize settings with selected images (when in Filmstrip view); Cancel closes the current image and returns to Browse without saving your changes; Done saves the current image (when working in Detail, or single-image, mode) or opens the Export window (when working in Filmstrip mode).

## Basic ON1 Resize AI Workflow

The power of Resize is in the concept of resolution on demand; Resize should be used as one of the last steps in your workflow before printing. You can work with a modest size file, which makes your editing faster and takes less hard drive space and memory. Then when you are ready to output your file, enlarge it with Resize to the desired size and sharpen it for output. This means you don't have to keep multiple versions of a file at different print sizes; you just create what you need on the fly.

You can access Resize from anywhere within Photo RAW by clicking on the Resize icon in the module selector: you can select an image—or group of them—from within Browse, or move directly to Resize while you're working on an image in the Edit module.

Once you're in the Resize module, you have multiple options for resizing:

- You can use the **Crop tool** to crop to a specific paper size (see [page 219](#) for details);
- You can adjust the output size (with or without cropping) by using the **Photo Size pane** at the top of the Resize panel (see [page 221](#)); or
- You can use Resize's built-in **presets** to crop and resize images to a specific printer, paper type and print size. Presets can include everything from specific crop and paper sizes, output sharpening parameters, film grain settings and more (see [page 228](#)).

All of these methods can be edited and changed as you work. Once you've set your output dimensions, use the Sharpening, Film Grain, Tiling or Gallery Wrap panes as needed. The Preview window updates as you adjust your settings, and you can go back and forth between the original and edited versions of your image as you work, either in a direct before/after view (by clicking the Preview button at the bottom of the screen), or in an adjustable split-screen view (via the Compare button in the same section).

When you've finished making your adjustments on your photo, pressing the Done key will prompt you to save your image (with a name and file format) and return you to Browse. You can also use the Export window to fine-tune the file format or to export different versions of the current photo.

If you're working with a group of photos, either to batch-process them identically, or to work on them separately, the workflow is slightly different. Clicking Done will automatically open the Export window for saving the currently selected photos and will then return you to Browse. (See [page 229](#) for information on working with multiple images.)

## USING RESIZE WITH ON1 CLOUD SYNC FILES

To use Resize with a file that resides on device other than the current device, you should be aware of two restrictions. First, Resize requires the creation of a new file, and this new file must be saved to the device it is being edited with.

Second, if the synced photo you wish to use is an editable preview, Photo RAW will warn you that you will be working with a photo that has less fidelity than the original. If you want to be sure that you are using the highest-quality base layer, either copy the file to your current computer, or change the sync option for the photo's folder or album to Originals, and download that from ON1 Cloud Sync.

For more information on these settings, see [“Using ON1 Cloud Sync with Photo RAW” on page 72.](#)

## Navigating the Preview Area

The Preview area is the main section where you preview and work on images. You can use the View tool for navigating this window. This tool adjusts the magnification of the image in the Preview window. With the Zoom tool selected, click in the Preview window to zoom in and center the image at the location clicked.



Hold down the Option/Alt key to pan around the magnified image. You can also double-click the View tool in the Tool well to set the image to 1:1 (or 100%) magnification view, which shows every pixel. This is best when examining small details, and when previewing Resize's sharpening and resampling on your photo.

As you adjust settings in the Resize panel on the right side of the screen, the preview will be updated in real time. If you're performing a significantly large resize operation, it can take a few seconds for the preview to be updated completely.

You can use the Split Screen control at the bottom of the main window (shown above) to split the screen into two panes: the one on the left will display the original image; the one on the right will display the image with Resize settings applied. You can use the square in the center of the screen to make one of the panes larger, and can use the Zoom and Hand tools to view more detail or scroll around the image. (Click the Split Screen button at the bottom of the window to turn it off.)

## NAVIGATOR, LEVELS AND INFO

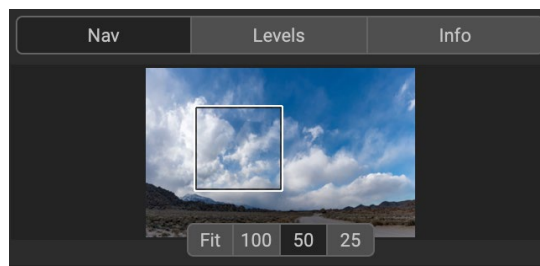
At the top of the control panel on the right of the main window are the Navigator, Levels, and Info panes. These panes can be useful for inspecting and viewing details in your image.

### The Navigator Pane

This gives you a birds-eye view of your image. The white square region marks the image area that is visible in the preview pane. You can pan view by clicking and dragging inside the white region.

At the bottom of the Navigator pane are several Zoom presets. Click on a Zoom preset to activate.

- **FIT:** Zooms to fit the current canvas size.
- **100:** Zooms to 100% or actual pixels.
- **50:** Zooms to 50%
- **25:** Zooms to 25%

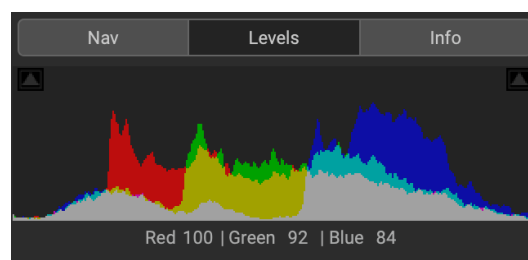


### The Levels Pane

This gives you a color chart of the shadow, midtone and highlight areas based on the image RGB values (often called a histogram). This is useful to show areas within the image that may be clipping. Clipping is when your image contains pure blacks or white and can signify loss of highlight or shadow detail.

The left side of the histogram represents the shadows, while the right represents the highlights. At the top of each end is a triangle. If the triangle is lit, there is clipping on that side of the histogram. If you click on the arrows, you will activate the clipping overlay on your image. The areas of your image with a blue overlay are pure black, while the areas with the red overlay are pure white. You can turn the clipping view off again by clicking on one of the triangles. You can also temporarily enable clipping view by holding down the J key at any time. The clipping view is useful when you are making adjusts to the brightness and contrast of your image.

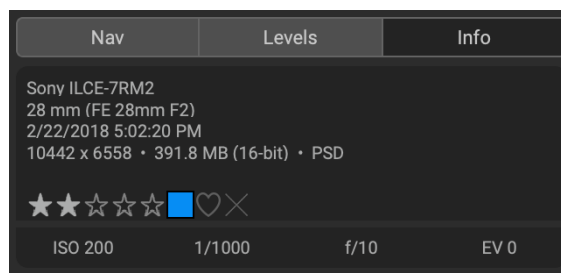
The Levels pane also displays the RGB values under the cursor at the bottom of the pane.



### The Info Pane

The info pane displays photo metadata, including:

- Camera type
- File type
- Focal length and lens information
- Date and time captured
- Exposure information
- ISO
- Shutter Speed

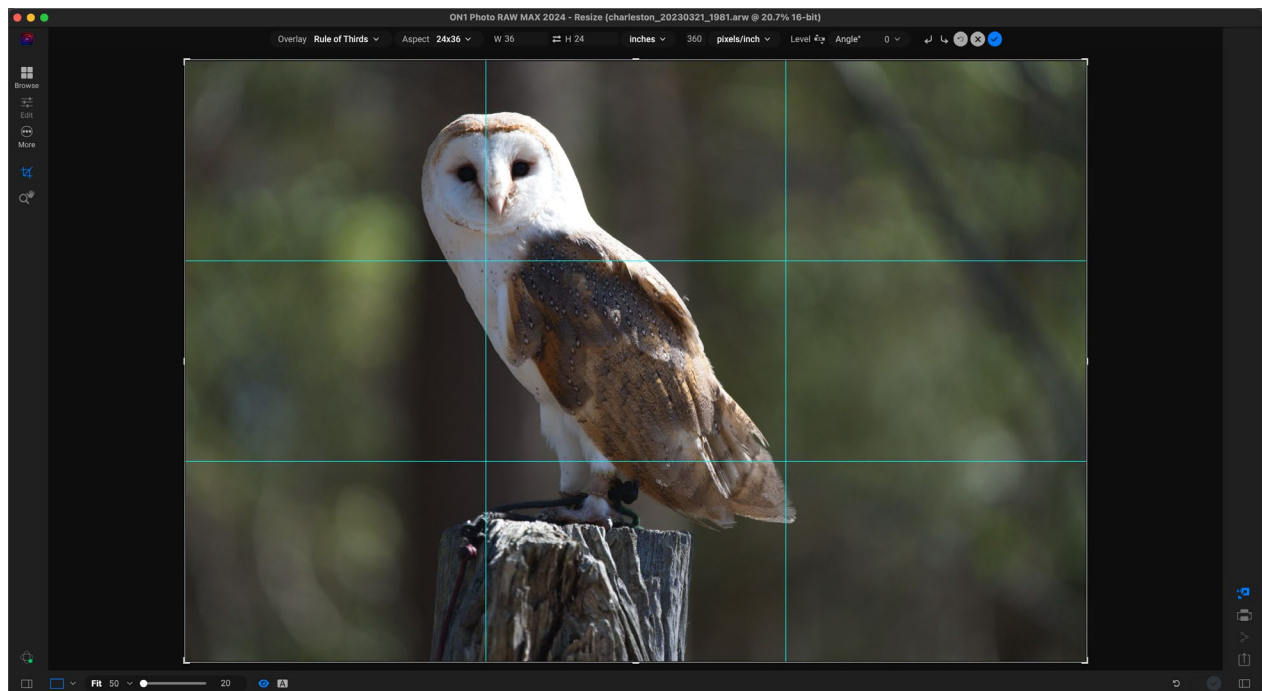


- Aperture
- Exposure Value
- Filename
- Color Space
- Dimensions
- File Size

## CROP TOOL

The Crop tool is used to crop and resize the entire image for output. Unlike the non-destructive Crop tool in the Edit module, Resize's Crop tool does not support content-aware fill. It also removes pixels outside the crop box and changes the canvas size at the same time.

To crop the image, select the Crop tool. Then adjust the corner handles of the crop tool overlay. The area outside the crop box appears darkened for guidance. You can resize and move the image inside the crop box. When you are satisfied, press the Apply button in the Tool Options bar or press Enter.



*The Crop Overlay in Resize.*

### Working with the Crop Tool Overlay

- **Moving the Image:** To move the image inside the crop box, click and drag inside the box. You can also nudge the image using the arrow keys on your keyboard.
- **Resizing:** To resize the crop box, chose a preset from the pop-up, and click and drag on any of the resize handles. The box will resize based upon the print size you have selected in the Tool Options bar. To rotate the crop box, move outside a corner until the tool changes to rotate.

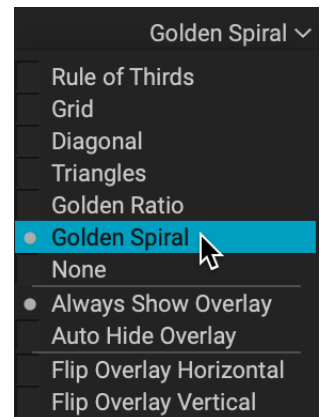
### Crop overlays

When you select the Crop tool, Resize has the option to display guidelines as an overlay on top of your photo. These overlays can be used as compositional aids for cropping. There are a number of overlays that

you can display during a crop session, and they can be accessed from the overlay pop-up menu in the Tool Options bar when the Crop tool is active. There are seven options — Rule of Thirds, Grid, Diagonal, Triangles, Golden Ratio, Golden Spiral, and None — and you can easily go back and forth between them as desired while cropping.

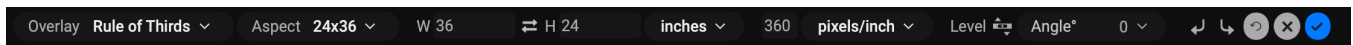
In addition to overlay type, there are two other sets of options in the pop-up menu:

- You can choose to have the overlay displayed all the time during a crop session, or to only display the overlay when your cursor is in the preview area of the workspace.
- When working with the Triangles or the Golden Spiral overlays, the Flip Overlay options will be visible, letting you flip the orientation of the overlays horizontally (Golden Spiral only) or vertically (Golden Spiral and Triangles).



*The Crop Overlay pop-up includes seven options for setting and displaying overlays.*

## Crop Tool Options Bar



- **Overlay pop-up:** Selects a crop overlay, sets overlay visibility, and flips the overlay.
- **Preset pop-up:** Pop-up controls the crop tool mode as well as aspect ratio and document size presets. The Custom option lets you create your own preset crops.
- **Width:** Sets the width of the crop box.
- **Swap Dimensions:** Swaps the width and height. Handy for rotating the crop box.
- **Height:** Sets the height of the crop box.
- **Units:** Determines the unit of measure: Pixels, inches, centimeters, etc.
- **Leveling tool:** Click and drag this tool across an element in your image that should be level.
- **Angle:** See and adjust the angle of rotation.
- **Rotate:** Rotates the image 90 degrees.
- **Cancel:** Resets the crop tool.
- **Apply:** Applies the crop and resizes your photo.

## Crop Tool Modes

The Crop tool works in three modes, which are all accessible via the Preset pop-up in the Tool Options bar:

- **Freeform:** In this mode you can adjust the crop box any way you like. The image will not be resized. Any area outside the crop box will be trimmed off. Use this mode if you just want to change the shape or recompose your image for general use.
- **Aspect Ratio:** You can lock the crop box to an aspect ratio. This makes sure the crop box shape doesn't change, just the size. Use this option to trim existing pixels while maintaining a ratio without resizing the image.
- **Document Size Presets:** These let you crop and resize your image at the same time. If you

know your intent is to print the image at a certain size you can crop and resize the image at the same time. Many common sizes are included plus you can create your own.

## Leveling the Image

The Crop tool has a Leveling tool for applying rotation to your image to make it level. To access it, first select the Crop tool, then perform the following:

- Select the Leveling tool from the Crop Tool Options bar. Your cursor will change to the Leveling tool.
- Click and drag a line across your image that should be level, either horizontally or vertically. When you release the mouse the image will be rotated automatically to the correct angle.

## Creating custom document sizes

You can create document sizes by choosing the Custom option at the bottom of the preset pop-up. Resize comes with many commonly used print, paper and video document size presets but you can also create your own:

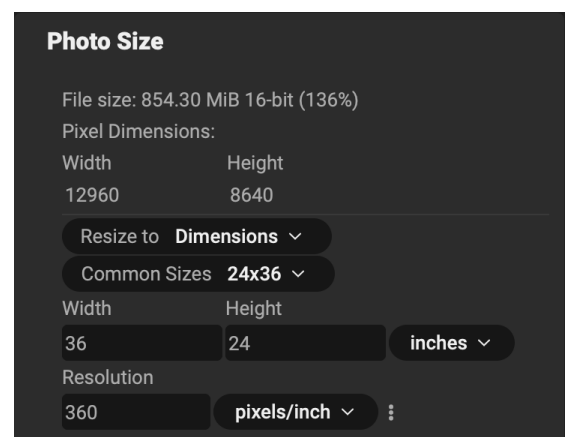
- From the Preset pull-down, select Custom > Manage Custom Sizes. This opens the Custom Document Size Presets window.
- Click on the Add button.
- Double-click on the highlighted untitled name and name your preset.
- Double-click on the width and height and fill in the proper values.
- Click on the units and select the proper unit.
- Click on the OK button.

## PHOTO SIZE PANE

The Photo Size pane is the core of the Resize engine. It has two sections. The top portion displays the file size and pixel dimensions of the photo as you edit it. The bottom section provides multiple options for resizing your photo.

When you first open an image, the information in the top section of the Photo Size pane will be that of the original file; as you adjust the resizing options – via a preset, the Crop tool or the ‘Resize to’ portion of the Photo Size pane – that information will change, reflecting the size and dimensions of the resized image. (The original pixel dimensions and file size for the current image can be viewed in the Info pane.)

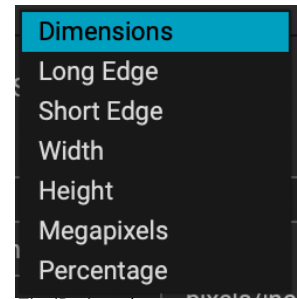
The ‘Resize to’ section of the Photo Size pane has seven options for resizing your images: Dimensions, Long Edge, Short Edge, Width, Height, Megapixels and Percentage. Most of the ‘Resize to’ options will scale your image proportionally; the Dimensions option is the only one that will open the Crop tool, because you are choosing a specific output/paper size for the resized file.





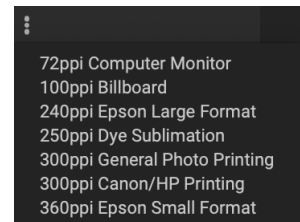
Here are the specifics for the different scaling options in the 'Resize to' pop-up:

- **Dimensions.** Similar to the document size preset pop-up in the Crop tool's Options Bar (see [page 220](#)), Dimensions lets you size your image to common paper and photographic print sizes, as well as any custom sizes you have created via the Custom Document Size Presets window. When you chose an option from the Common Sizes pop-up, Resize will open the Crop tool, so you can crop your image to the appropriate paper size.
- **Long Edge and Short Edge.** These options are useful when you want to lock one edge to a specific length or width and don't care about the sizing of the other edge. Simply choose which option is the important one for your photos, and enter the desired amount in pixels, inches, centimeters or millimeters. These options can be helpful when batch-processing a group of photos that have different orientations, and you want them all to have the same dimension on the long or short edge.
- **Width and Height.** Using this option will scale the current image based on your choice of either the width or the height metric.
- **Megapixels.** Scales the current image to a specific megapixel count.
- **Percentage.** This option enlarges or reduces the size of the exported images based on specific percentages. Numbers below 100 will reduce the image, while those above 100 will enlarge the image.



The 'Resize to' pop-up menu.

All of the options in the 'Resize to' menu include a Resolution section, represented either as pixels/inch or pixels/cm. To the right of the field is a pop-up menu with common settings for various printers and other output formats. (See [“How Much Resolution Do I Need?” on page 233](#) for more information on choosing the proper resolution and sizing for your photos.)



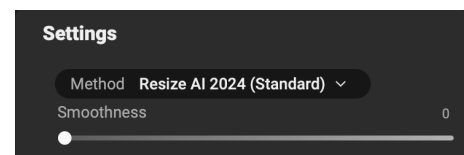
The Resolution pop-up has common print resolutions.

You can readjust any of the options in the resizing section at the bottom of the Photo Size pane. You can move between options, use the Crop tool, or even choose a preset, and Resize will recalculate based on your new choices.

## SETTINGS PANE

The Settings pane contains the controls for selecting the resizing method (or algorithm) and its settings. There are four options in the Method pop-up:

- **Resize 2024 (Standard).** This is the default (and preferred) option when resizing images. It provides the ideal combination of noise reduction and micro-contrast, giving you the best results for most photos.
- **Resize 2024 (Faithful).** This option provides slightly less noise reduction and micro-contrast than Standard, although the differences will be subtle.
- **Genuine Fractals.** This is the classic, fractal-based algorithm used in previous versions of Resize. It is included solely for backward compatibility.
- **Bicubic.** This option is for downsizing images. It has no settings.



The two Resize scaling methods have a Smoothness slider, which is designed to reduce artifacts that might appear in overly sharp areas of a resampled image. By default, this slider is set to 0.

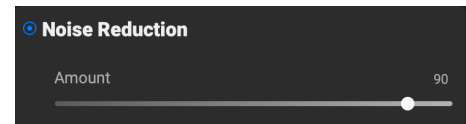
## Genuine Fractals settings

As noted, the Genuine Fractals resizing method is included solely for backward compatibility with previous versions of ON1 Resize. If you wish to use it, there are three sliders for adjusting the resizing parameters:

- **Texture.** This controls the amount of detail in flat, non-edge areas of an image. Smaller numbers (1-2) are good for images with large areas of continuous tone, while larger numbers (3-5) are good for images with lots of small detail. Settings beyond 5 will often introduce a bumpy noise pattern; it works best when your original image was from scanned film.
- **Threshold:** This controls the amount of hard edge detail that is enhanced. The default setting is 25. Decreasing the threshold will focus the Genuine Fractals algorithm on edge information. This may be useful for portraiture or for reducing noise in your image. Settings higher than 25 will increase the amount of small detail in flatter areas of the image. Settings as high as 100 are useful for highly detailed images (hair or feathers).
- **Smoothness:** The smoothness slider is used to reduce artifacts along hard curved edges. Use the lowest setting needed.

## NOISE REDUCTION PANE

The Noise Reduction pane incorporates some of the AI-based technology behind ON1's NoNoise AI product (without the TackSharp sharpening component). You can use it to reduce an original photo's noise or JPG artifacts as part of the resizing workflow, which in turn can lead to higher quality enlargements.



The Amount slider adjusts the overall strength of the noise reduction applied. When adjusting the effect, you should view the photo at 100% view.

**NOTE:** You should not use the Noise Reduction pane on photos that have had noise reduction applied previously to them.

## SHARPENING PANE

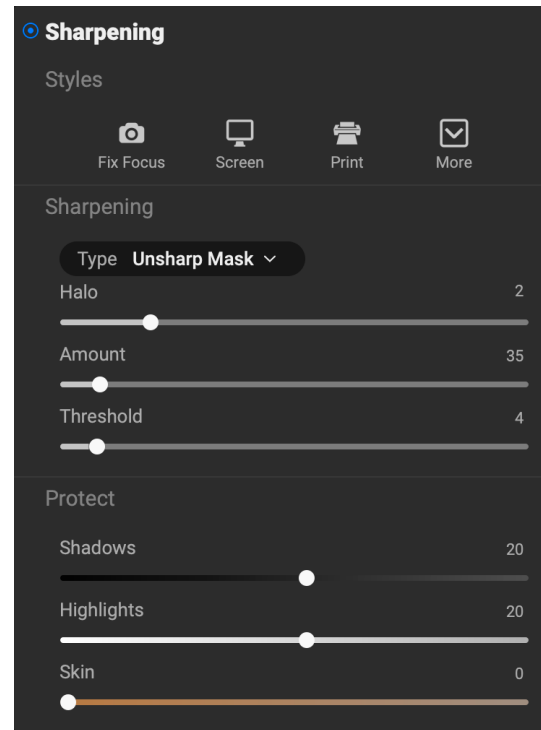
The Sharpening pane contains the controls to add additional sharpness to your image. ON1 Resize features three sharpening methods:

- **Unsharp Mask:** Good for general sharpening. Similar to Photoshop's Unsharp Mask function. Resize's sharpening is different in that it is only applied to the luminance of the image, to prevent color artifacts.
- **High Pass:** High Pass sharpening is helpful when the original image is not sharp.
- **Progressive:** Similar to Unsharp Mask, except it sharpens different amounts depending on the size of the details in the image. Small details are enhanced more than large ones.

Using the Sharpening controls can save you the workflow step of adding additional Sharpening before printing and can help compensate for loss of sharpness due to dot gain from your printer. Sharpening should only be applied at the end of your workflow just before printing. If you plan to do additional retouching or compositing work after resizing your image, you should disable the Sharpening controls.

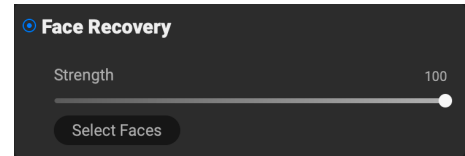
To sharpen your image for output, use these steps after you have adjusted the Document Size pane controls:

1. Zoom in on your image to 1:1. You can do this easily by using the 1:1 Zoom preset located in the Navigator pane.
2. Enable the Sharpening controls by toggling the on/off control in the pane's title bar.
3. Select the sharpening method that will provide the best results for your image. You may need to experiment to determine this.
4. Adjust the amount slider to determine the amount of sharpening desired.
5. Use the Highlight and Shadow sliders to limit the sharpening from being applied to the darkest and lightest areas of the image which can prevent sharpening of noise.
6. Similarly, adjusting the Skin slider can help protect skin tones from being oversharpened in the resizing process.



## FACE RECOVERY PANE

ON1 Resize's Face Recovery feature is designed for times when you have a photo with a group of people, and some of the smaller faces in the photo have less detail in them. Previously, if you used any resampling technology to upscale such a photo, those less-defined faces could appear even softer than the original photo. With ON1's face-recovery technology, you can resize these types of photos and have those faces appear with more realistic features and textures.



To use Face Recovery, click the button to the left of the pane's label to turn on the setting. Resize will analyze the photo, recognize the faces in it, and apply the resampling algorithm to the smaller-sized faces (ones less than 512 pixels square in the original) in the photo, using the Strength slider's setting.

To view the faces in the image, click on the Select Faces button at the bottom of the Face Recovery pane. This will display a box around each found face in the photo. If the face is standard-sized, the box will be white, and that face will not have the recovery algorithm applied to it. All smaller-sized faces in the photo will have a green box around them, and those faces will have recovery applied, at the level determined by the Strength slider. (The Strength setting is applied globally to all of the selected faces; you cannot apply different settings to each face.)

Here are a few tips for working with Face Recovery:

- With most photos, you should verify that the recovery algorithm is being applied to the selected faces, and at the correct strength for the photo. Click the Select Faces button to display the faces, and view them at 100% to make sure you are satisfied with the results.
- You can turn each face on (green) or off (white) by clicking inside that face's box.
- When judging the recovery results, you should look at each face at 100% view. Adjust the Strength slider as desired.
- Sometimes, you might find that Face Recovery helps with larger faces in a photo (for example, when dealing with faces that are slightly out of focus). Toggle that face's box on and off at 100% to see if it improves the results.
- When you're done with the pane, click the Done button. To work in the pane again, click the Select Faces button. Photo RAW remembers all of the faces selected, as well as their on/off state.



*When you click the Select Faces button, Resize will analyze the photo and put a box around every face it finds. Boxes in green indicate smaller faces that will be processed with the recovery technology; Boxes in white will not. You can fine-tune which faces you wish to have the recovery effect applied by clicking in the boxes.*

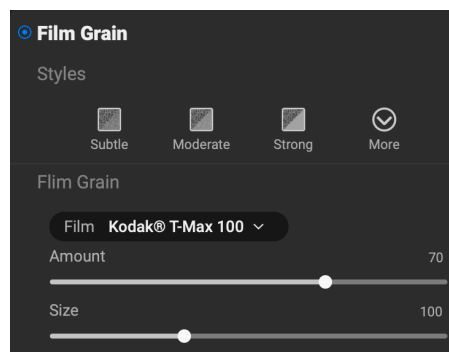
## FILM GRAIN PANE

The Film Grain setting controls the amount of simulated Film Grain (noise) to your image. Adding a modest amount of grain can make your image appear sharper visually and can help hide imperfections (such as JPG artifacts).

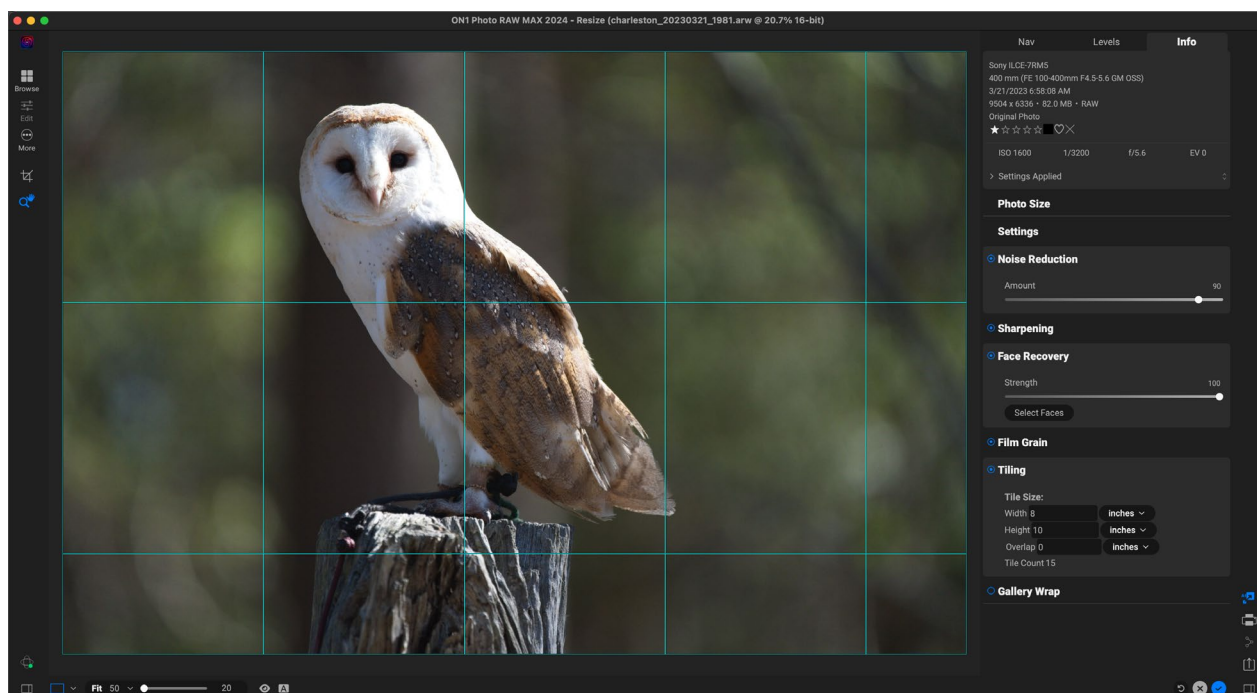
Adding film grain can be especially useful for monochrome images, and should be added just before printing. If you need to do other retouching or compositing work in Layers after resizing your image, you should disable the Film Grain controls in Resize.

To add Film Grain to your image, first zoom in on your image to 1:1. You can do this easily by using the 1:1 Zoom preset located in the Navigator pane. Then, enable the Film Grain controls by toggling the on/off control in the pane's title bar. Adjust the slider up or down until the desired amount of Film Grain is added.

You can preview just the effect of the Film Grain by toggling the on/off control in the pane's title bar.



## TILING PANE



*When you want to print big, but lack the big printer, Resize's Tiling feature lets you create flexible, tiled prints on smaller paper sizes.*

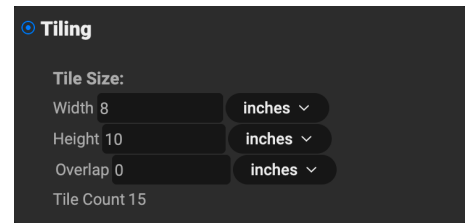
The tiling feature in Resize divides an enlargement into smaller pieces so that the image can be printed on a smaller printer. For example, you might want to create a mural that is 8 feet tall by 12 feet wide, but your printer can only print 24-inch wide strips. With the tiling feature you could automatically create four separate files that are 24 inches wide and 8 feet tall, to create your mural in sections.

With the tiling feature all you do is specify the size of paper you have to print on and if you would like the pages to overlap. Then ON1 Resize will resize your image and section it down into the individual tiles.



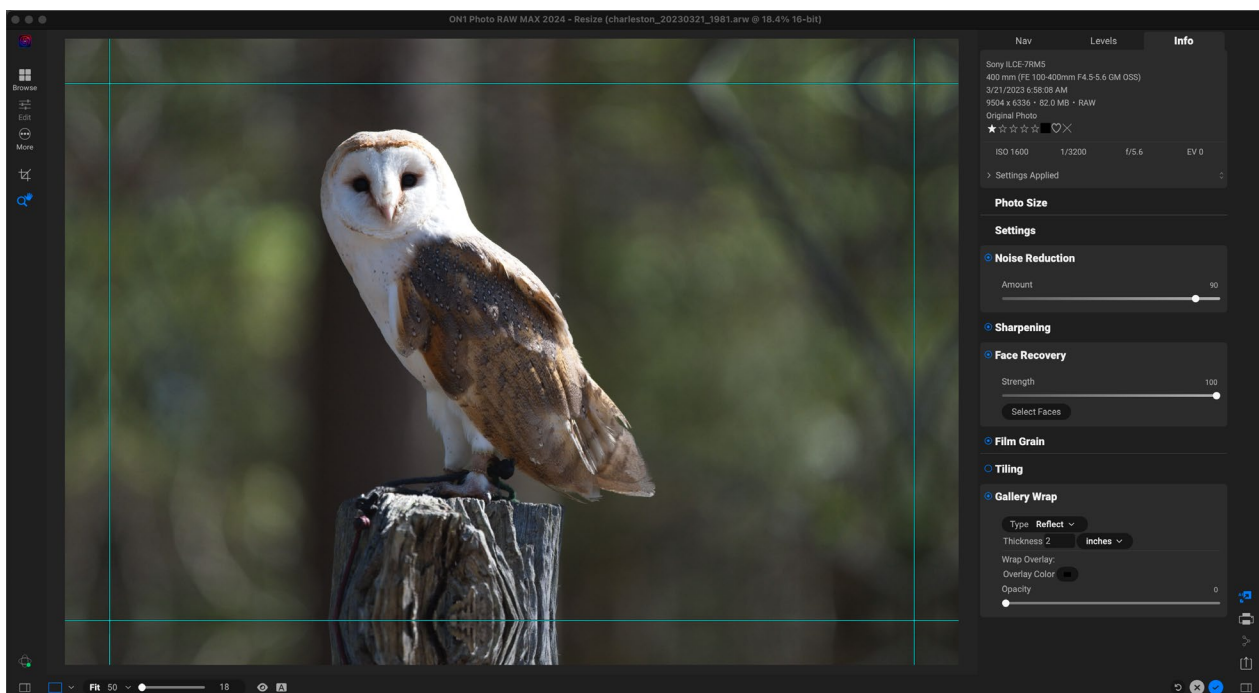
To use the Tiling pane:

1. Turn Tiling on by toggling the on/off switch in the pane's title bar.
2. Set the Width and Height fields to the size and orientation of paper that you wish to print on, or you can select the number of rows and columns instead.
3. Set the Overlap size. The overlap makes each tile overlap so you can tape multiple panels together and corrects for printer margins if you are not printing borderless.



The preview will show cyan guide lines for each tile that will be created. The bottom of the Tiling pane will tell you how many tiles will be created.

## GALLERY WRAP PANE



The Gallery Wrap feature lets you choose from four different wrap types, with adjustable thickness and opacity settings for the wrapped edges.

The Gallery Wrap feature is designed to help you print on canvas. When making enlargements for canvas it is common to wrap a portion of the image around wooden stretcher bars, commonly called gallery wraps. However, if you had important detail near the edges of the image, it might be lost in the wrapping process. The Gallery Wrap feature automatically creates extended margins by reflecting or stretching the areas near the edge of the image without having to sacrifice any of the original image. You can select the thickness of the mounting bars and use different options for creating additional margins.

To use the Gallery Wrap feature:

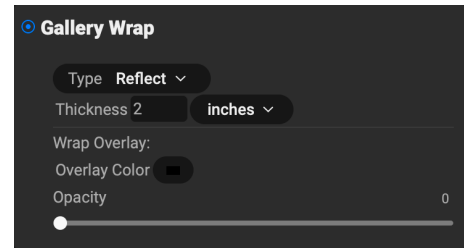
1. Turn on the Gallery Wrap feature by toggling the on/off switch in the pane's title bar.
2. Set the Thickness control to the amount of margins you would like to add. A good rule of thumb is to use the thickness of the stretcher bars, plus half an inch.
3. Select the Type you would like to use (see the list below).



4. If you wish to add a color overlay to the gallery wrap wings set the color and opacity.

The Gallery Wrap feature has several settings for adding margins and adjusting the look of the wrap:

- **Reflect:** Copies an area equal to the thickness setting around your image, then flips each side and adds it as the margins. This is a good general-purpose technique.
- **Reflect Soft:** Does the same as the Reflect method but softens the added margins.
- **Stretch:** The Stretch method takes an area around the edge of the image and stretches it to add the margins.
- **Stretch Soft:** Does the same as stretch, but softens the added margins.



The Thickness slider controls how thick your canvas stretcher bars are. Two inches generally works well for most gallery wraps.

You can darken the wrap or add a solid color to the wrap area with the Overlay Color and Opacity sliders. (The Opacity's default is 0, which means that there is no color overlay added.)

## PRESETS

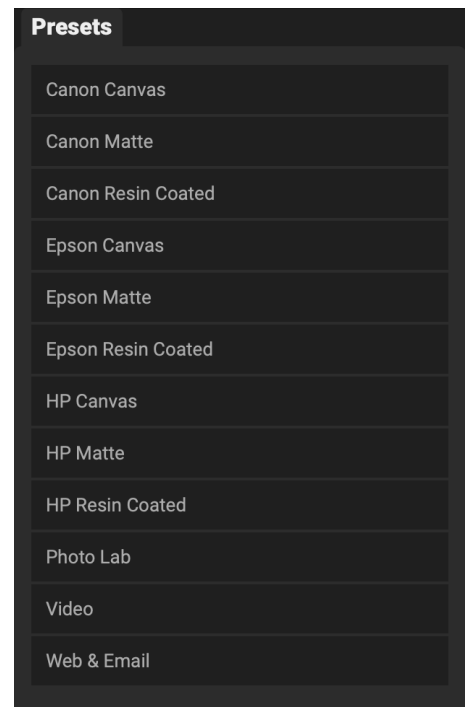
Resize has a preset system built into it, much like the one used by Develop and Effects, but which is designed to help you get very specific crops for a wide range of paper and printer types. These include settings for photo lab print sizes, and many Epson, Canon and HP large-format printers, with multiple media types.

In addition to being able to set document size and settings, and settings in any of the other panes, Resize presets always contain a Crop adjustment: any time you apply a preset, Resize selects the Crop tool and places the crop overlay on-screen. You can resize the crop, or move the overlay to a appropriate crop area.

To apply a preset, choose the category you would like to use from the Presets panel. The category will expand to a list of the available presets for that group. Click on the preset you wish to apply.

### Saving a Preset

Once you have your settings that you wish to save, go to the Preset menu and select Save Preset, and choose a category you would like to save it in. If you have applied a preset to an image and make adjustments to any of the settings in the left panel, you can update that preset with the new setting by choosing Update Preset with Current Settings from the Preset menu. To delete a preset, right-click on the preset in the Presets Browser and choose Delete Preset.

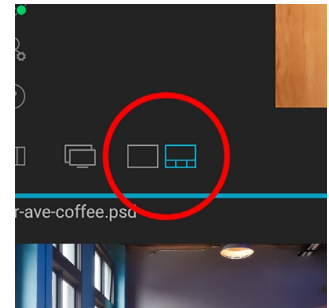


**NOTE:** You can also import and delete Resize presets from within the Extras Manager. See [“Extras” on page 9](#) for more.

# Working with Multiple Images in Resize

You can resize multiple images in a folder from within Resize by using Filmstrip view. Clicking the Filmstrip icon in the View Selector at the bottom of the screen (to the right of the Detail view icon) will display a strip of the photos contained in the current image's folder. Once the folder is open, you can resize each image individually, or you can adjust the settings for one image and sync those settings to all (or some) of the images in the selection. When you're finished with your session and click the Done button, Resize AI will save your resized photos via the Export window (see [page 234](#) for more on Export).

When you are working on a group of images in Filmstrip view, each image is displayed with its original pixel dimensions and its resized dimensions (once you have applied Resize settings). You can move between images by clicking on them in the filmstrip or by using the arrow keys.



Turn the Filmstrip view on by clicking the icon to the right of the Detail view. This will let you resize multiple image in Resize.



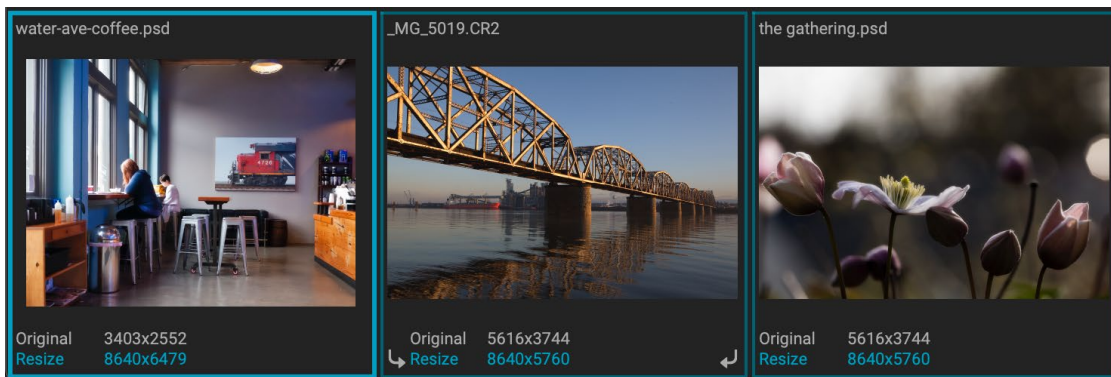
When you use the Filmstrip view inside Resize AI, all of the photos in the current folder on disk will be displayed at the bottom of the main window. You can select all of the photos by choosing Command-A (Mac) or Control-A (Windows). The current image being worked on will have a bolder highlight around it.

With the open images, you can adjust the resize parameters for each image individually, by moving from image to image, or you can edit one image, select any images in the filmstrip that you would like to copy those settings to, and click the Sync option at the bottom of the Resize window.

When you use the Sync Settings option, *all of the properties of the current image* — including crop and crop position — will be applied to the selected images in the filmstrip. The crop is re-editable on any image during the session. Just click on the image you wish to change, and make your changes.

Some additional notes about batch-processing images and working with the filmstrip:

- If you are using Browse's Filmstrip view to select multiple images and then click on the Resize icon in the module selector, that selection will be maintained inside Resize AI, and the Filmstrip mode will open automatically inside the module. If you select a group of images in Browse's Grid view and open them in Resize AI, the selection will remain, but you'll be in Detail (single-image) view. Click the Filmstrip view icon in order to work on other images in that folder.
- To select multiple images in the filmstrip, Control-click (Windows) or Command-click (Mac) on each image you wish to select. To select a sequence of images, click on the first image, then Shift-click on the last image in the sequence. To select all of the images in the folder, use the Select All command (Control-A for Windows, Command-A for Mac).
- To deselect an image from a group, use the same Control-click (Windows)/Command-click (Mac) mechanism. This can be helpful if you wish to sync only some images in a group, or remove any images from the export group (see below).
- When you click Done, *only the selected images in the filmstrip will be exported*. If you have made changes to the selection during your session, and want to export the entire group, use Select All.
- The Reset All command only works with the currently selected image. If you need to reset all of your work, either choose Cancel, which will take you back to Browse, and reopen the batch. Alternatively, you can click on each image, choose Reset All, and move to the next image.



After you have resized your photos, either individually, or via the Sync command, the new pixel dimensions for each image will be displayed at the bottom of each thumbnail in the filmstrip.

## SOFT PROOFING IN RESIZE

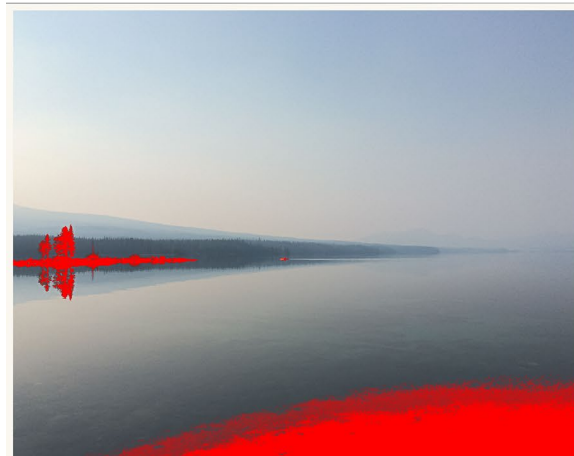
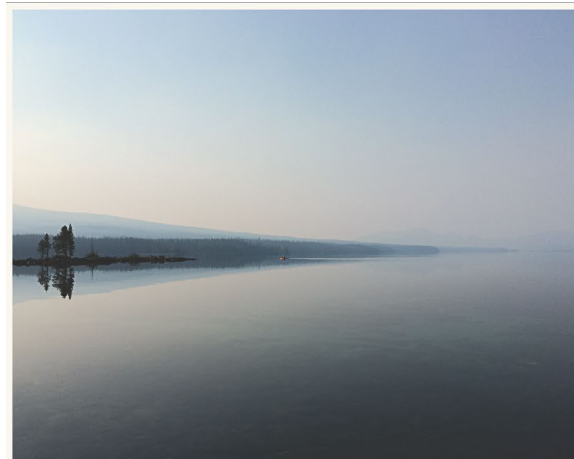
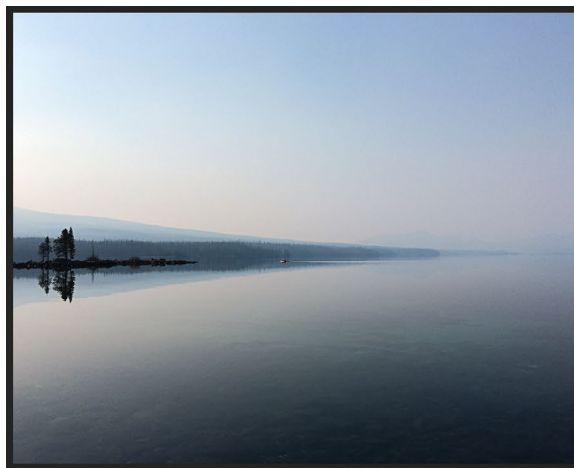
ON1 Photo RAW's soft proofing feature lets you see how a photo will look when printed, using the color profiles that get installed with your printer. Soft proofing helps you determine where there might be issues when you print, so that you can adjust your tone, color and effects to give you a print that is closer to your editing vision.

Normally, when you're viewing an image in Photo RAW, you are viewing it through the lens of your monitor's display profile. The color gamut of your computer's display is wider than that of most photo printers, which means that some colors you are able to view on-screen are not reproducible when you print. When this happens, the color profile conversion that happens in the print engine will cause substitutions of colors that the printer cannot print to the closest color that it can. This means that your image could have subtle (or broad) shifts in color, especially in certain color ranges.

Soft proofing is turned on via the View menu, or by clicking on the soft proofing icon to the left of the Preview button at the bottom center of the main Resize window. The background of the main preview window will change to approximate the color of the paper you're profiling.

Additional soft proofing options are available underneath the Enable Soft Proofing command in the View menu. The options are as follows:

- **Gamut warning:** When checked, this displays colors in the image (via a red overlay) that don't correspond to the current printer profile being soft proofed.
- **Profiles:** The Profiles submenu lists the currently available printer profiles. Choosing one will change the on-screen display to use that profile.
- **Intent:** Photo RAW offers two different rendering "intents" when soft proofing, which are used to convert the color from display to print. Perceptual shrinks the color gamut during the conversion, which works to preserve the relationship between colors in the image. The other intent type, Relative, only converts colors that are outside the current color gamut, but this can sometimes cause two colors, one in gamut, and one outside, to be identical after conversion.



*These three screen shots show the results of soft proofing options, as viewed in Resize. The top image is with soft proofing off (and is using the display color profile). The middle image is with soft proofing turned on, and using a printer profile for Epson's Exhibition Fiber Paper. The bottom image has the Gamut warning turned on; out of gamut colors are highlighted by the bright red overlay.*

Neither rendering intent is perfect or desired; it often is a matter of the makeup of the image, your editing intent, the paper being printed on, and so forth. Often, you'll want to switch back and forth between Relative and Perceptual, seeing which gives you a better print.

- **Simulate Paper and Ink:** Turning this setting on will cause Photo RAW to use the white point for the chosen paper type (instead of the white point of your monitor), and the paper's actual black density (instead of the display's black point). If you're trying to match a print, you will usually want this setting turned on.

Adjusting images with soft proofing is often a bit of trial and error. It's easy to get caught up in eliminating out-of-gamut colors, but most modern photo printers—both home printers and online print services—do a pretty good job of approximating colors properly.

**NOTE:** Since you can't edit the tones in your photo from within Resize, it's a good idea to perform a soft-proof check in the Edit module before taking an important image into Resize.

The biggest thing you want to be looking for when viewing a soft proof is tone, contrast and color accuracy between screen and print. When using a home printer, use test prints to hone in on the right mix of Edit module adjustments. Photo RAW's Versions feature can be extremely helpful when you're tweaking settings to get a print just right (see [page 69](#) for more on working with Versions).

## Understanding Resize AI: How Big Can I Print?

People often ask how big you can print with ON1 Resize AI. The simple answer is this: if your original photo is sharp, with good details and little noise, you can print almost as big as you desire. The limitations are the size of your printer or the capacity of your computer to work with large file sizes. In practice, however, even the largest prints are rarely more than 400 percent larger than the original photo.

Historically, the standard viewing distance for photographic prints is generally considered to be twice the diagonal measurement of a print. For example, the ideal viewing distance for an 8x10-inch print would be slightly more than two feet away, while the viewing distance for an 80x100-inch print would be over 21 feet. That last distance might seem like a lot, but that's the kind of mural — almost 9 feet tall — you would see at an airport or shopping mall. (Keep in mind too that many photographers scrutinize their images closer than standard viewing distances; most people don't get that close.)

Photos are perceived in color, tonality, textures, and sharpness. Other interpolation techniques maintain color and tonality but sacrifice textures sharpness by "inflating" the image uniformly. The image still looks similar, but will not be crisp. Depending on the amount of interpolation, this can be severe and noticeable even at standard viewing distances. ON1 Resize AI maintains the color, tonality, textures, and sharpness of a photo at all sizes. It can actually create new detail at the proper scale.



# How Much Resolution Do I Need?

To answer this, you need to know two things:

1. The size of the print you wish to make.
2. The resolution that your printer needs for best results.

The size of the print can be as large as you would like, although, obviously, you will be limited by the maximum print size of your printer (although tiling can help).

Resolution is the density of the pixels for a given measurement, usually in pixels or dots per inch (or cm). Most modern inkjet printers print anywhere from 1200 to 4800 dots per inch, but what the printer manufacturers really mean is 1200-4800 droplets of ink per inch. A common mistake is to set the resolution of the file to the resolution of the printer. In all but a few specialty printer types (like dye-sublimation) this will lead to huge files that will not print well, if at all.

The secret is that the human eye cannot see more than 250-300 pixels per inch, and the ideal resolution for your files should be close to this. Once you know the print size and resolution, it is easy to use Resize AI to scale your file to the desired output size. Simply enter the resolution and the output specifics in the 'Resize to' section of the Photo Size pane. You'll see that the corresponding dimension is automatically computed by Resize AI based on the proportions of your image.

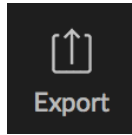
Keep the proportions in mind because the proportions of film, digital camera sensors, and paper can all be different. For example, most digital camera sensors are proportioned so that the height is two-thirds the width or 1:1.5; While the most common paper size, in the US, is the letter which is 8.5×11 inches or about 1:1.25. These kinds of proportion mis-matches are common and require that the original image be cropped to fit the proportions of the paper size. If your image cannot be cropped without ruining the composition, then you will need to adjust your print size to a longer dimension.

Resizing an image larger than the original size requires new pixels to be created. This process is called interpolation or resampling. There are many mathematical ways, called algorithms, to do this. The most common method used by many pixel-editing apps is called bicubic interpolation. Bicubic along with its newer variants bicubic smoother and bicubic sharper work by averaging a small group of neighboring pixels to determine the color value of the new pixels to be added. While this technique is fast, it does not distinguish edges so there is a uniform loss of sharpness and detail across the image.

Resize AI uses a neural network trained on millions of examples of photos. It is fundamentally different from bicubic or other interpolation methods. It can analyze the photo and faithfully recreate textures in nature, at the proper scale, all while maintaining the sharp details and reducing noise and artifacts. All this number crunching may take a bit longer than the single pass interpolation methods like bicubic, but good things come to those who wait and the reward is far superior results.



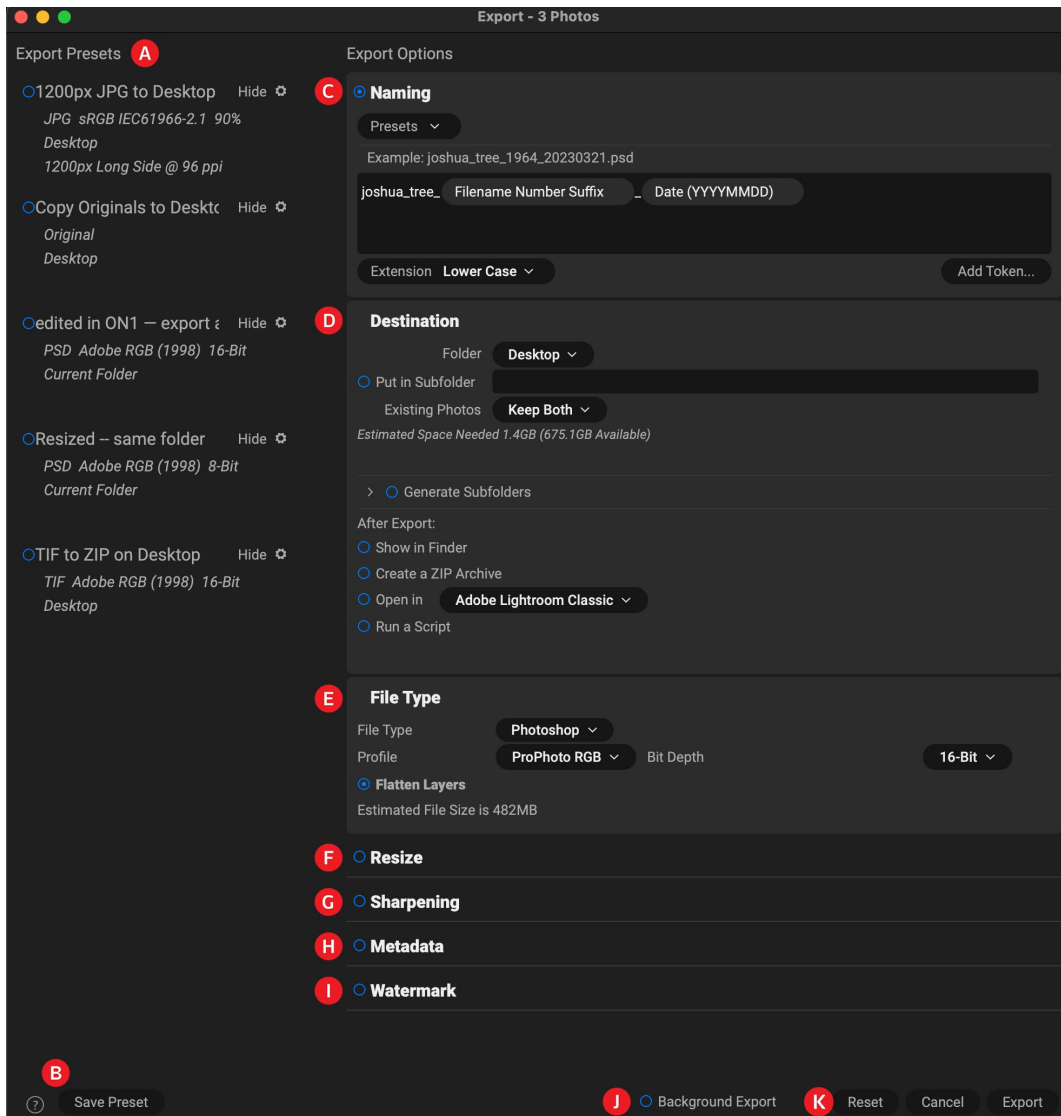
# EXPORT



Export is a special function that is available throughout ON1 Photo RAW 2024, whether you're working from within Browse, Edit or Resize AI. The Export window gives you much of the power of Resize in an easy to use panel, letting you export your photos with incredible flexibility, ease and control.

The Export window is separated into two panels: Export Presets and Export Options. The Options panel contains specific types of options—file renaming, destination folders, file type and more—that you can use when you are exporting images from Photo RAW. If you find that you are using a specific set of options all the time for your workflow, you can create a preset and apply that whenever you use Export.

The contents of the Export window include:



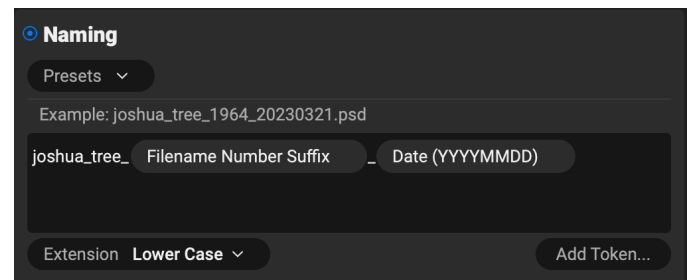
- A. **Export Presets:** The current preset (if used), will be represented with a selection box around it, and the filled circle to the left of the preset name means that it will be used when the Export button is pressed. To use the Export Options panel without any preset applied, turn off all of the presets in the list, and click in the current preset once.

- B. **Save Preset:** Lets you save the current set of export options as a preset.
- C. **Naming:** Renames the exported file based on criteria added to the rename box in the panel.
- D. **Destination:** Lets you set the destination of the exported files. *(required)*
- E. **File Type:** Sets the file type for each exported file. *(required)*
- F. **Resize:** Adjusts the size for each image. *(not available when exporting from the Resize AI module)*
- G. **Sharpening:** Applies sharpening to the exported images.
- H. **Metadata:** Adds/removes metadata from the export.
- I. **Watermark:** Lets you add a text or graphic watermark to an exported image.
- J. **Background Export:** turns on background exporting when you click the Export button.
- K. **Export/Cancel:** Starts the exporting, or cancels it and returns you to Photo RAW.

## Export Options

### NAMING

The Naming pane gives you extensive controls for creating customized filenames using tokens in the entry box inside the pane, as well as with any custom text entered directly into the entry box. You can use any combination of tokens and text in the entry box, and the Example label directly above the box will display what your new filename will look like, using the first item in the export group.



To use this feature, click the control circle to the left of the label in the panel. Add any custom text, or click the Add Token pop-up menu to add tokens based on information associated with the image, including filename data, date and time information, and associated metadata. There are four submenus in the Add Token menu:

- **Filename**, which includes options for using the original filename, number suffix (taken from the image as recorded by the camera) and enclosing folder name.
- **Date/Time**, which includes a list of date (year, month, day) and time data that can be combined in various ways.
- **Sequence**, which adds an incremented number to each renamed file in the batch, as well as the total number of files in the batch, with options for leading zeros in the resultant filename.
- **Metadata**, which lets you add specific EXIF and IPTC metadata to the filename.

To build a rename sequence using tokens, click on the Add Token button, and choose the appropriate token from the pop-up menu. The token will be added as a shaded item in the text field, and the Example item above the text field will show a sample of a renamed file using the current set of tokens and custom text. To change an existing token, click on the down arrow on the right of the token, which will display the full set of tokens. To delete a token, double-click on it and press the Delete key.

Custom text can be added anywhere in the entry field. You can click the cursor at the beginning or end of a token (or in between tokens) and add spaces, dashes, underscores and any other text you wish to be included in each renamed file. Each change you make will be updated automatically in the Example label.

The Presets pop-up menu at the top of the Rename window includes a set of common batch combinations that you can use as a starting point. You can also create your own batch-rename presets: build the rename options you wish, and choose Save New Preset from the bottom of the Presets menu. You can also update an existing preset and delete presets from this menu.

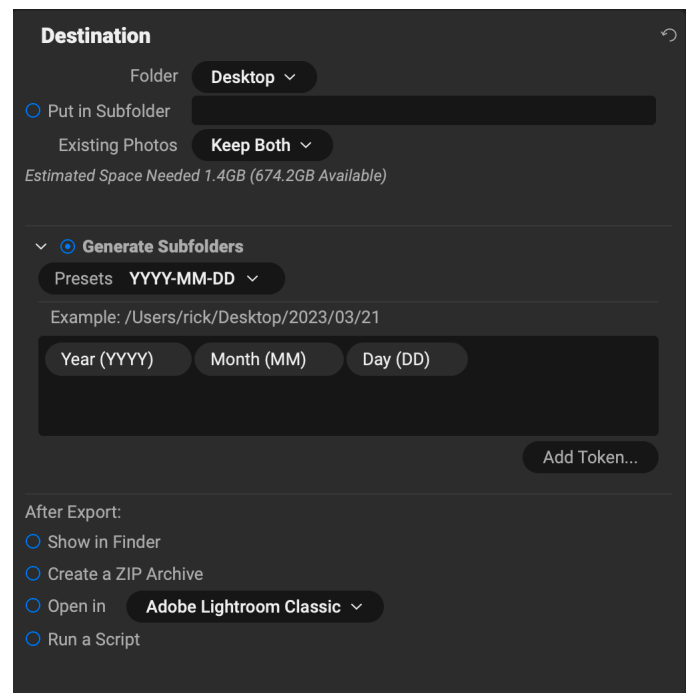
Because the Rename process is not undoable, make sure you use the Example field to check that your text and token combinations give you the filenames you expect for your batch process, and adjust as needed. When you're sure, click Apply, and Photo RAW will rename all of the files.

**NOTE:** A complete list of the tokens used in the Rename window, with explanations, can be found on [page 242](#).

## DESTINATION

The Destination pane is where you set the desired location for the exported images. At minimum, you must specify a destination folder for your export, but the pane has a number of options for adjusting the export location:

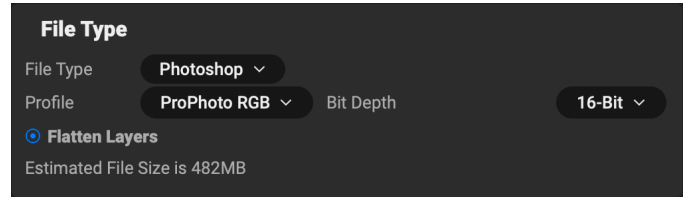
- The **Folder** pop-up menu lets you choose the same folder as the original images, another folder, or, can be set to ask for a destination every time, which can be helpful when you're using an export preset.
- Checking the **Put in Subfolder** option will export the images to the folder—or, create a new folder, if it doesn't exist—specified by option's text field.
- The **Existing Photos** pop-up is for those times when there might be a naming conflict within the destination folder. Replace will overwrite the file with the new one being exported, Skip will leave the destination file alone and not export the new file, and Keep Both will add a number '1' to the end of the filename of the exported file, preserving both files.
- **Generate Subfolders** will subdivide the export based on the exported file's metadata, creating subfolders as necessary—or, if the folders exist, placing the exported file into the appropriate subfolder. This option uses the same token-driven scheme (and presets) used in the Naming pane.



- **After Export** lets you determine what to do when Photo RAW completes the exporting process. Options include displaying the image location in the MacOS Finder or Windows Explorer, to create a ZIP archive of the exported group, to open in another editing application, or to run a script.

## FILE TYPE

Like Destination, File Type is the other required element for using Export. Photo RAW can export in DNG, PSD, TIFF, JPG and PNG formats. With the exception of DNG and PNG, each file format has specific options in the pane:

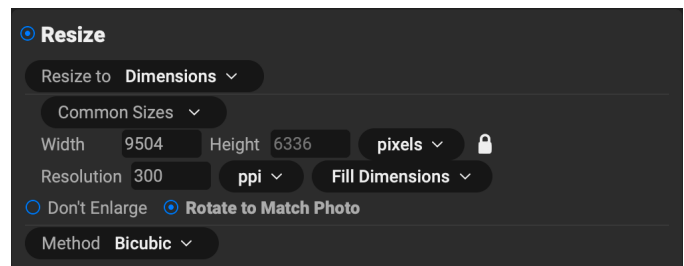


- **Original** includes options for embedding metadata and saving an ON1 sidecar file with the exported images.
- **JPEG** includes options for JPEG quality and for attaching a color profile.
- **Photoshop** includes options for attaching a color profile, bit depth, and whether to flatten any layers in the original image.
- **TIFF** includes options for image compression (none, LZW or ZIP), attaching a color profile, bit depth, and to preserve transparency.
- **DNG** and **PNG** have no additional options.

The File Type pane also includes an estimated file size for the first item in the group.

## RESIZE

The Resize pane lets you adjust the finished dimensions of the exported photos, using the ON1's Resize AI technology found in Photo RAW's Resize module. It has seven options for export: Dimensions, Long and Short Edge, Width and Height, Megapixels and Percentage. Each option has a different range of settings, and all have a setting for resolution (in pixels per inch, or ppi), as well as a Don't Enlarge option, which, when set, will not upscale a file past its native image dimensions (but will still export the file).



*The Resize pane, with the Dimensions option open.*

**NOTE:** The Resize pane is not available when using Export from within the Resize AI module, as the resizing parameters are driven by the module itself.

The **Dimensions** option is the most complex of the six Resize options, letting you set the exact pixel dimensions of the exported files, in terms of width and height. This option is best for when you are exporting single images, when all of your exported files have the same aspect ratio and orientation, or when you wish to fit the exported images to an exact size.

The Common Sizes pop-up menu at the top of the pane options lets you set the final dimensions to any of a broad array of common paper, photographic ratio, square and video formats. You can also create your own specific sizes for re-use via this menu.

Click the lock to resize the images proportionally as you enter either the width or the height, or, if you wish to fit the images to an exact width and height, click the lock icon to turn it off. If an exported image doesn't exactly fit the dimensions you set for Width and Height, Export will do one of two things, depending upon whether you have Fit in Dimensions or Fill Dimensions set in the pop-up to the right of the Resolution box.

- **Fit in Dimensions** will fit the file inside the boundaries of the width and height settings.
- **Fill in Dimensions** will zoom the exported image to completely fill the boundaries of the width and height settings, essentially cropping the exported image. If the image's aspect ratio is different from the width and height settings, the image will be filled from the center.

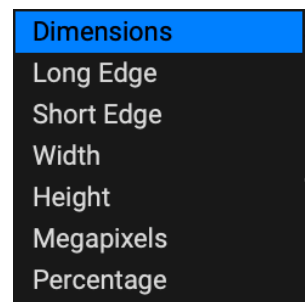
The Dimensions options include one more setting, Rotate to Match Photo, which, when checked, will rotate an exported photo to maximize its orientation. For example, if you exported a group of images to fit a landscape orientation (longer width than height), any image that was in portrait orientation (longer height than width) would be rotated during export.

The remaining options in the Resize pane include:

**Long Edge** and **Short Edge** are useful when you want to lock one edge to a specific length or width and don't care about the sizing of the other edge. Simply choose which option is the important one for your photos, enter the dimension, and Export will resize your images proportionally based on the chosen setting. When you're exporting a group of images with different orientations (landscape or portrait), these options will ensure that all images have the same long or short edge dimension.

**Width** and **Height** will resize all of the images proportionally to the width or height defined, regardless of orientation. Exporting photos with different orientation will result in the width or height of every image being the same, depending upon the setting chosen.

**Megapixels** will export images to a specific megapixel count, while **Percentage** will enlarge or reduce the size of the exported images. Percentages below 100 reduce the image, those above 100 enlarge the image.

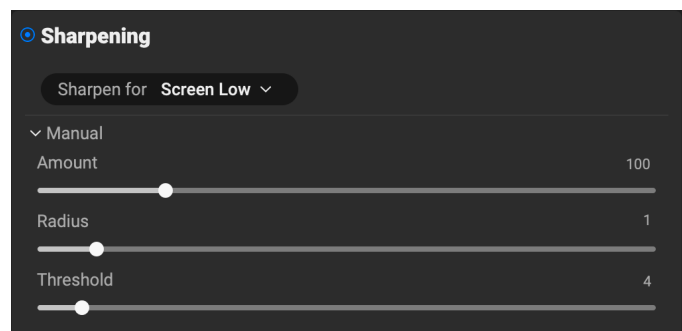


*Resize has seven options for exporting images.*

## SHARPENING

The Sharpening pane has two modes, Sharpen For and Manual. The Sharpen For pop-up menu lets you choose from six options, based upon your final intent. There are four options designed for print output, Glossy Paper High and Low, and Matte High and Low, and two option for display output (for social media or online sharing), Screen High and Low.

The Manual setting provides a bit more control over the output sharpening, letting you adjust the Amount (overall strength), Radius (detail) and Threshold (masks out areas that shouldn't be sharpened based on contrast).



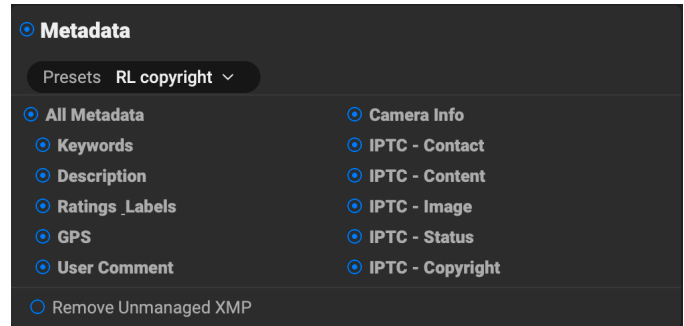
For more specifics about the Manual sharpening options, see the Sharpening filter on [page 80](#).

## METADATA

The Metadata pane lets you set which pieces of metadata are exported—or not exported—with the images in the export set. You can choose to export all Metadata or by clicking the control circle to the right of the All Metadata label. If you click that label off, you can then select which metadata items you wish to save by clicking the appropriate label.

The metadata information exported is the same data found in the Metadata pane in Browse, and any metadata presets you have saved will be available from the Presets pop-up menu. For specifics on the different types of data represented in the Metadata pane, see [page 42](#).

When checked, the Remove Unmanaged XMP button only exports metadata that is represented in Photo RAW's Metadata pane; any other unmanaged image metadata from other apps will not be included.



## WATERMARK

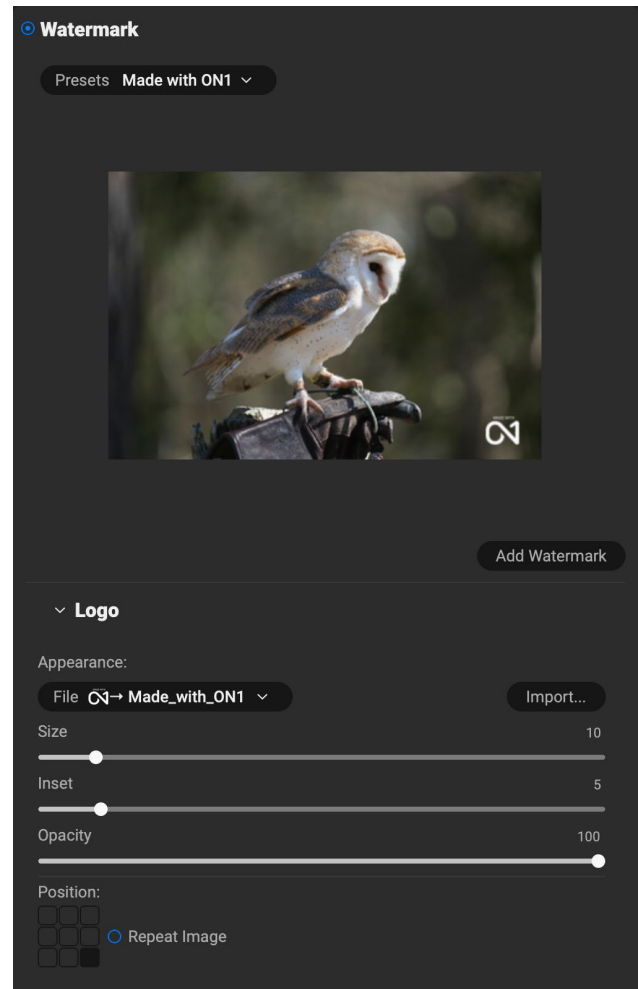
The Watermark pane adds either text- or graphics-based watermarks to an image, with options for size and positioning, opacity, font type, and more. You can import your own logos and save either watermark type as a preset for frequent use.

The Watermark pane also gives you a representation of your chosen watermark (on the first image in your export group), so you can adjust the parameters of the watermark precisely.

To create a new watermark, turn on the pane by clicking on the control circle to the right of the label. Choose either a preset from the Presets menu or click on the Add Watermark button in the lower right of the pane and choose either Text or Logo from the pop-up menu. Once you've selected a type, the bottom of the pane will open with settings for the chosen option. If you change your mind, click the Cancel button to the right of the Logo or Text labels.

### Using graphics-based watermarks

The Logo section of the Watermark pane lets you use either watermark files imported via the Extras Manager (see [page 9](#)), which will be displayed in the File pop-up at the top of the Logo section, or by





clicking on the Import button to the right of the menu (which will add them to the menu).

Use the Position grid at the bottom of the pane to place your watermark, and use the Size and Inset sliders to move it within the area chosen. The Opacity slider adjusts the transparency of the watermark on the final image.

The Repeat Image button will repeat the logo graphic rightward across the image from the location chosen in the Position grid. If you wish to repeat the watermark across the entire image, choose one of the sections on the left side of the Position grid.

When working with graphics-based watermarks, make sure your watermark file is sufficiently large for your usage. For example, if you want it to appear 2 inches wide on a 300-ppi image, your watermark needs to be at least 600 pixels wide. Or if you want it to appear across an entire photo—such as when posting to social media—it needs to be the same size as what you are exporting for the web, typically over 1000 pixels. Using a watermark file that is too small will create a pixelated watermark appearance. And, because most watermarks are overlays on top of an image, these files are usually PNGs with areas of transparency, although JPGs can also be used, depending on the logo.

## Using text-based watermarks

When creating text-based watermarks, the Text section of the pane has an entry box for your watermark text, a font selection area, and the same Appearance and Position options found in the Logo section.

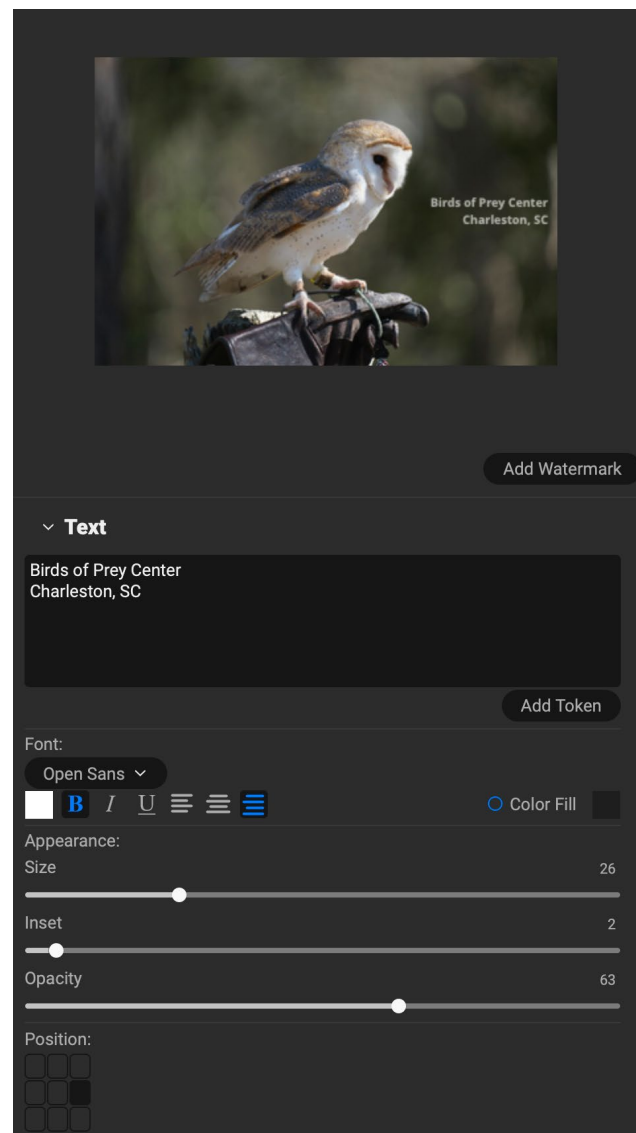
The text entry box can contain multiple lines of custom text, and has the same token-based naming options found in the Naming pane (discussed on [page 235](#)), which can be helpful when exporting informational slides or for other data-driven uses.

You can set the font from the pop-up menu, and the font color by clicking the swatch on the left side underneath the font name. The text style can be set to bold, italic or underline, and the alignment to left, center or right. If you'd like to add a background color to the text box, turn on the Color Fill button on the right side of the pane.

Use the Position grid at the bottom of the pane to place your watermark, and use the Size and Inset sliders to move it within the area chosen. The Opacity slider adjusts the transparency of the watermark on the final image.

## Saving watermark presets

Both watermark types can be saved as a preset for re-use later. To save a preset, adjust your Logo or Text settings as desired, and choose Save New Preset from the Presets menu. If you wish to adjust



*With text-based watermarks, you can not only create simple, single-line watermarks showcasing your business, but you can also create data-driven watermarks (using tokens) for presentations and the like.*

an existing preset at a later time—with a new logo file, for example—choose the appropriate preset from the Presets menu, make your changes, and choose Update Preset with Current Settings from the Presets menu. You can also rename and delete watermark presets from this menu.

## Exporting and Export Presets

The Export window has been designed to offer as much or as little complexity as you would like. At its simplest, you can set the Destination and the File Type to your desired settings, leave all of the other panes alone, and click Export. Photo RAW will remember your last Export setting—including anything you did in the Naming pane—the next time you export, so you don't have to worry about which settings need to be set, and which ones don't. You can use the Show/Hide buttons in the title bar of each pane of the Export Options panel to display only those settings you want to see.

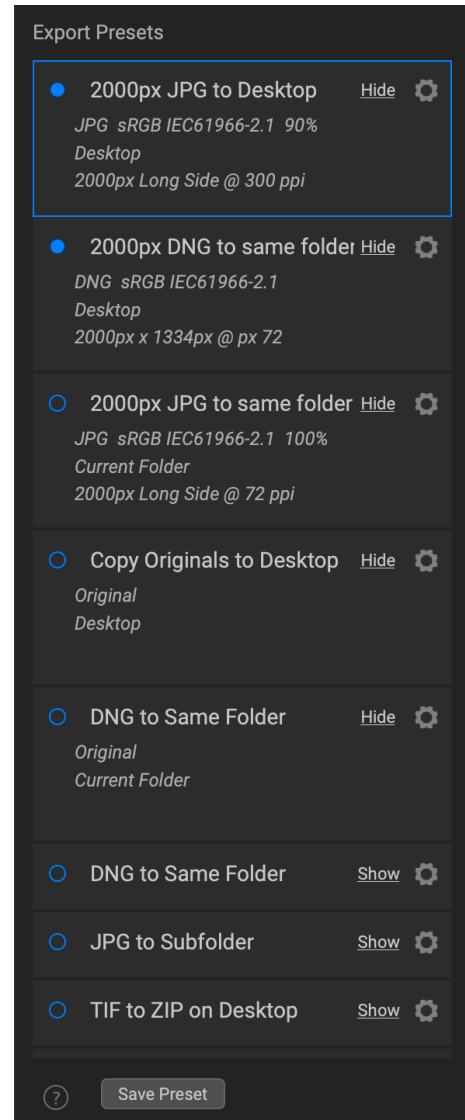
Once you have your settings the way you'd like, you can save them as a preset by clicking the Save Preset option in the Preset panel on the left. Then, when you click that item in the Preset panel, the Export Options will be set to the specifications of that preset.

The Export Presets panel will display a list of the currently available presets. If you have selected a preset, it will have a selection box (in the app's accent color) around it, and if the control circle is filled, the preset is on, meaning that clicking the Export button will export using that preset. If you don't wish to use a preset, click the control circles off on all of the presets in the list.

By default, each preset will have up to three lines of explanatory text underneath the preset name, displaying the file type—DNG, PSD, TIFF—and the Destination information. This can be helpful when you're scanning presets for a specific destination, but you can also collapse the preset to its title by clicking the Hide button in the title bar.

When you change the settings for a selected preset, Photo RAW will ask you if you wish to update the preset with the new settings either when you click the Export button to start the process, or when you switch to another preset with the Export window.

It is possible to export more than one preset at a time. Every preset in the Presets panel that has the control circle set to On (filled) will be included in the export operation. This might be helpful to create backups on another disk, for example, or to build proxy versions for use while the original is being edited.



*All presets include an informational view that lists the export file type, the destination folder, and resize information. If you don't wish to see that, click the Hide button to collapse the view to just the preset title.*

# About Photo RAW's File-Naming Tokens

When using the Naming option in the Export window—or with Browse's Rename File ([page 54](#)) and Import Photos ([page 51](#)) functions—Photo RAW includes a broad set of tokens that you can use as part of the strings to build complex file names, in conjunction with any custom text you wish to enter. These tokens draw on image metadata, including filenames, dates taken, and EXIF and IPTC metadata fields, and can be used in any number of combinations.

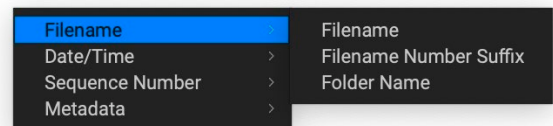
To build a rename sequence using tokens, click on the Add Token button, and choose the appropriate token from the pop-up menu. The token will be added as a shaded item in the text field, and the Example item above the text field will show a sample of a renamed file using the current set of tokens and custom text. To change an existing token, click on the down arrow on the right of the token, which will display the full set of tokens. To delete a token, double-click on it and press the Delete key.

Custom text can be added anywhere in the entry field. You can click the cursor at the beginning or end of a token (or in-between tokens) and add spaces, dashes, underscores and any other text you wish to be included in each renamed file.

There are four categories of tokens, each with their own set of options: Filename, Date/Time, Sequence, and Metadata. A description of each is listed below.

## FILENAME

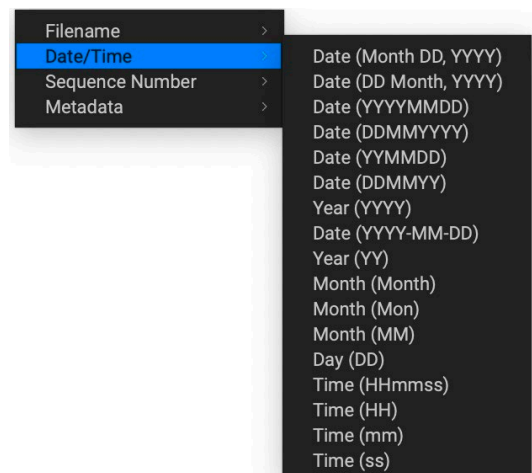
The Filename tokens use information from the filename or the enclosing folder that the file resides in. There are three options, Filename, which adds the current filename of the file being worked on; Filename Number Suffix, which takes the index (shot) number from the original raw file, if available; and Folder Name, which grabs the name of the folder in which the renamed (or imported) file resides.



## DATE/TIME

This submenu consists of 17 combinations of date and time data, as taken from the image's metadata. There are prebuilt date and time combinations (20220104, for example, for a year-month-date token) in the list, or you can build your own combinations out of the subtokens listed in this menu.

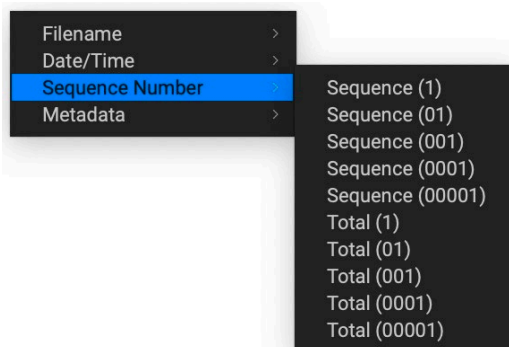
Year data can be presented in either 4- or 2-digit numbers, and Month data can be presented in month number, full name, or 3-letter abbreviations.



## SEQUENCE NUMBER

The Sequence Number tokens come into play when exporting, importing or renaming a group of image files. There are essentially two tokens here, Sequence and Total, with options for padding zeros into each item. Sequence will take the group of images being worked on and, starting with the first item in the selection, will start at 1 and increment by one as each image is processed. The Total token will always be a single number—the number of items in the group being processed.

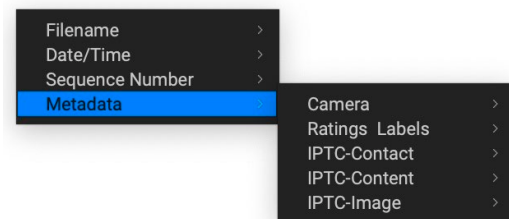
The combination of Sequence and Total tokens lets you create strings like *'filename\_07 of 22'* as part of the new filename.



## METADATA

This submenu has five items, each with its own submenu. All of the items create the chosen token based on the embedded metadata for each image being renamed, imported or exported. The specific text pulled from the Camera and IPTC tokens will be visible in the Metadata pane's EXIF (for camera-specific data) and IPTC (for IPTC data) tabs. The Ratings and Labels tokens are taken from any you have applied in Photo RAW.

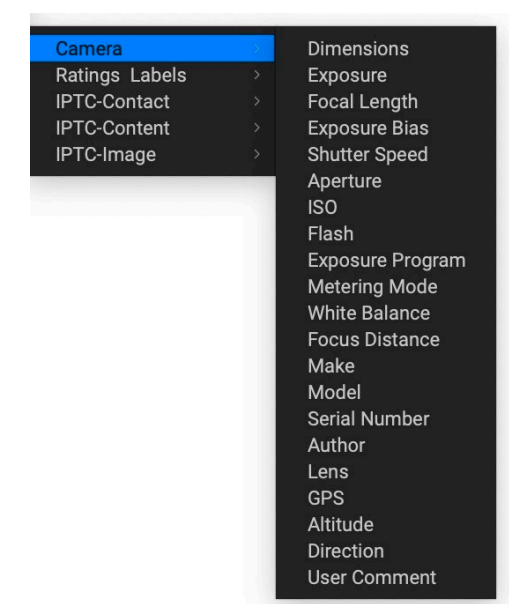
If there is no information in the specified Metadata token, it will be ignored during processing.



### Camera

The Camera submenu includes 21 items, all of which are directly taken from an image's EXIF data. Not all cameras capture all of the items listed, but most of them save essential items like exposure information, focal length and more.

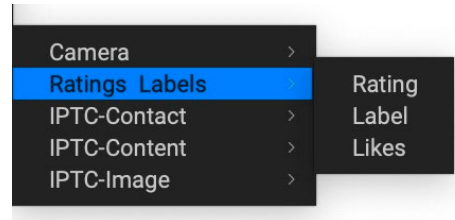
To look at the available camera information of any image, click the EXIF tab in Browse's Metadata pane ([page 42](#)).



## Ratings and Labels

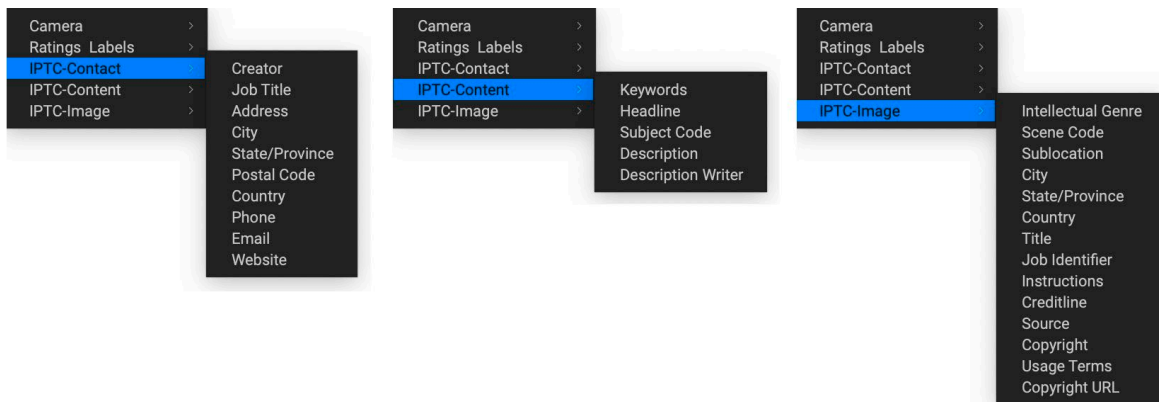
The three tokens in the Ratings and Labels submenu pull information from any rating, label and like information you've made to images in Photo RAW.

The Rating token will add the number of stars an image is rated, while the Label token will add any color label information (red, yellow, green, blue, purple), and the Likes token will add Liked, Not Set, or Disliked to the image name.



## IPTC Metadata Tokens

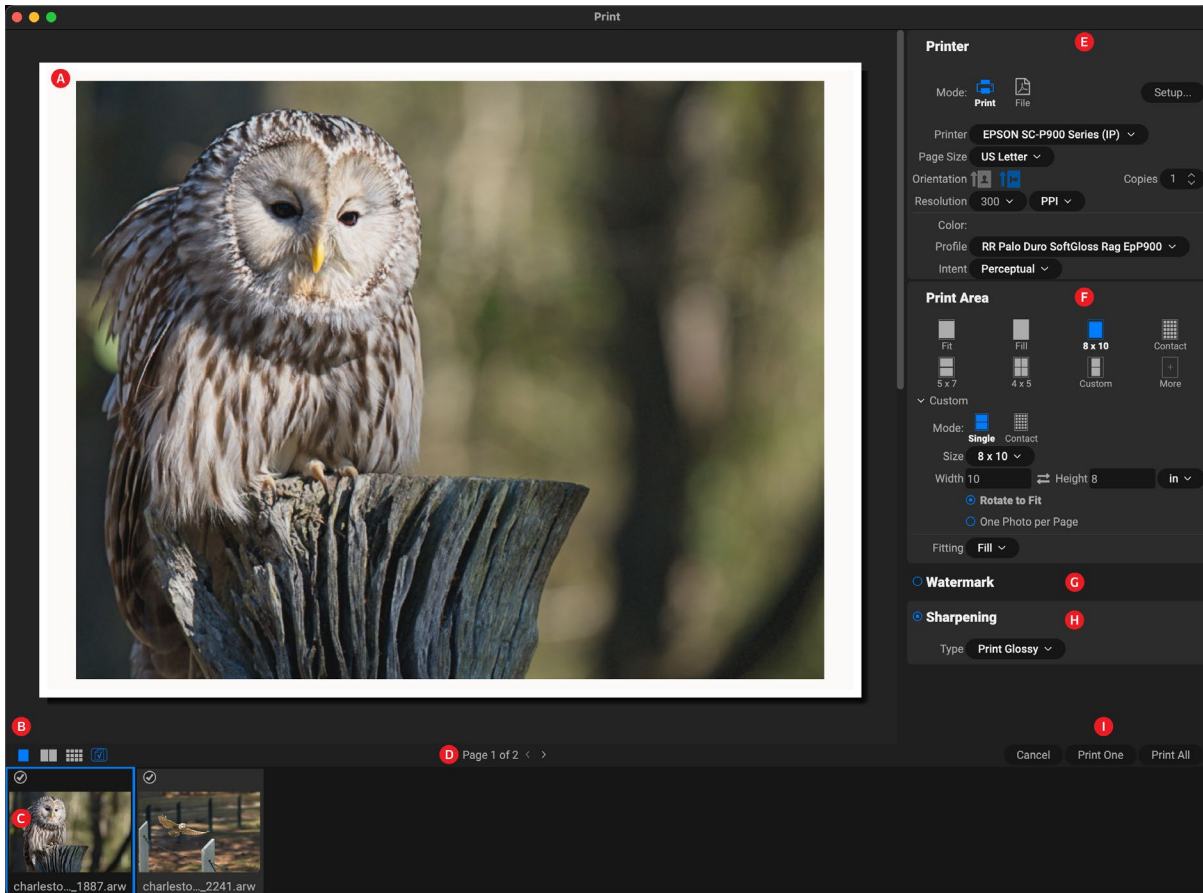
IPTC (International Press Telecommunications Council) is an industry-standard metadata format, and offers much more detailed metadata information than EXIF. It historically has been used by journalists and stock photographers to catalog and tag photos, as well as add copyright information, captions, and other data. There are nearly 30 different tokens in the IPTC metadata submenus, which are divided into Contact, Content, and Image. All of these fields are visible in the IPTC tab of the Metadata pane in Browse ([page 42](#)), and can be added during the import process as well.



Using IPTC information makes the most sense when you have a strict method for importing and categorizing image data during import (or shortly thereafter).

# PRINTING

ON1 Photo RAW 2024 has a flexible print engine that can print photos at any size. You can print photos individually; multiple photos package style, on a single piece of paper; and contact sheets for evaluating images. You can print from any module at any time.



The print window can be opened by clicking on the Print icon in the module selector, or by selecting the Print command from the File menu. It has the following components:

- A. **Preview:** Displays the photo or photos being printed.
- B. **View Selector:** Lets you view the photos being printed individually, in facing-page view, or in grid view. The icon on the far right turns soft proofing on and off.
- C. **Filmstrip:** Shows all of the photos that have been selected for printing, with check marks to turn printing on or off. (The Filmstrip is not visible when a single image has been selected for printing.)
- D. **Page view:** Displays the number of pages being printed, and lets you move from page to page.
- E. **Printer pane:** Contains options for output—printer or PDF—as well as printer, page setup, page size, number of copies, resolution, and printer profile and rendering intent.
- F. **Print Area pane:** Contains options for fitting and selecting the print image size.
- G. **Watermark pane:** For adding a watermark to printed photos.
- H. **Sharpening:** Options for sharpening during the print process.
- I. **Print/Cancel:** Print One (current image), Print All, or Cancel.



# Printing Options

The four panes in the Print window—Printer, Print Area, Watermark, and Sharpening—each deal with a specific printing-related task.

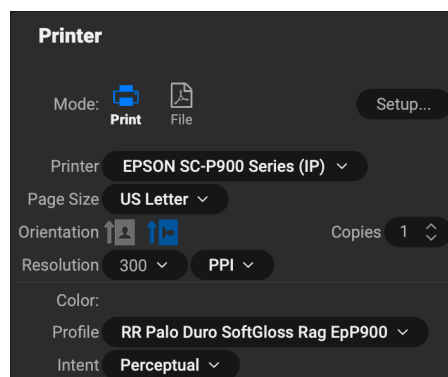
## PRINTER PANE

The Printer pane is where you set the printer-specific features for your output. It has two modes, which are chosen by clicking on the icon at the top of the pane: Print, which lets you print to a connected printer, and File, which will print the selection to a PDF.

When choosing to output to a printer, you'll set the specifics of your printer, the paper size you wish to print to, the resolution, orientation, and the number of copies. When choosing resolution, make sure that you are printing at the printer's optimal resolution. Most photo printers, for example, work best with a file that has between 240 and 360 ppi. (Photo RAW will use its internal resampling engine to ensure that your photo is at the print resolution you choose.)

At the bottom of the pane is a section for choosing a printer-specific color profile; choose the media profile for the paper type you are printing to.

The rendering intent is related to the conversion of an image's colors to fit within the color range (or gamut) of the printer. The default intent, Perceptual, will change all of the colors in a photo proportionally to fit within the printer's range of colors. The other option, Relative Colorimetric will only change the colors out of the printer's gamut, to the closest in-gamut color. Depending upon the image, you might need to play with the intent settings, but Perceptual is usually the best place to start. (You can use Photo RAW's Soft Proofing feature to look at out-of-gamut colors in your photos. See [“Soft Proofing” on page 80](#) for more.)



The Printer pane sets printer-specific options for the current print job. You can also choose to render the print job to a PDF file.

**NOTE:** Photo RAW's Print feature will work with borderless printing options as well. Be sure to choose your printer's borderless options in the page setup pop-up. Different printers will have specific borderless settings, so check the manual to see how to turn borderless printing on.

## Printing to a file

In addition to sending images to a printer, you can also choose to export the current print job to a file. This can be helpful if you are submitting prints to an online service or to print remotely. To use this option, click on the File icon at the top of the pane. Photo RAW will ask you for a filename and a location to save the file. Choose a page size for the file from the Page Size pop-up, and adjust your print area settings. When you choose Print, Photo RAW will create a PDF of the photo (or photos) and save it with the name and destination you specified earlier.

## PRINT AREA PANE

The Print Area pane is where you set the options for the size of the print, and how you wish your photos to be printed. You can also choose whether to print photos individually, package-style, or to create a contact sheet for evaluative purposes.

The top of the pane includes preset styles for either fitting the current photo inside the print size, or filling the entire print size; options for printing at common print sizes, including 8x10, 5x7, 4x6; and options for printing to a contact sheet. You can also create custom print sizes via the Custom section at the bottom of the pane; just set the width and height of the print size, and whether you wish to fit the image to the print size, or to fill the frame with it. If you would like to save this print size as a style, click on the More pop-up at the top of the pane, and choose Save as New Style from the menu. You'll then be able to recall that style from the More pop-up whenever you print.

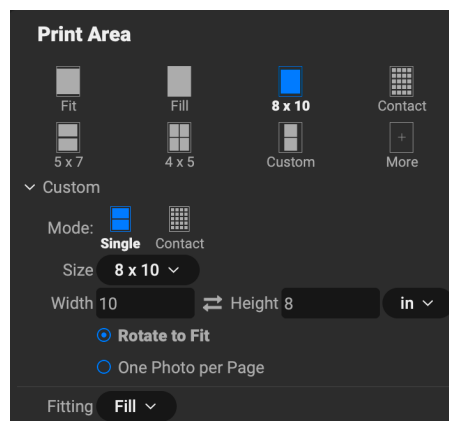
If you are printing multiple photos, Photo RAW will attempt to put as many photos at your chosen print size on the paper size as defined in the Printer pane. To print only one photo per page, click that option at the bottom of the Print Area pane.

### Page size vs. print size

It's worth understanding the distinction between the page size and the print size. In some cases, the two will be identical. For example, if you wish to print on 4x6-inch photo paper, you would choose that option in the Printer pane's Page Size pop-up, and then 4x6 in the Print Area's Custom pop-up. Depending upon the aspect ratio of your photo, you then might need to choose Fit or Fill to get the proper crop. Fit does exactly what it sounds like: it will fit the entire photo within the bounds of the photo's dimensions, which means that there could be some extra white space around the final print. Fill will resize the photo to fill the dimensions of the chosen print size, centering the image.

In our example, a 4x6-inch print has an aspect ratio of 2:3. If the photo you are printing has that aspect ratio, then Fit and Fill do the exact same thing: the photo will fill the print area without any cropping.

For package printing, where you wish to generate multiple prints on a larger sheet of paper, you'll set the specific size paper you are printing to in the Printer pane, and then set the appropriate print size for each photo in the Print Area pane.



*The Print Area pane is for setting the actual print size of the photo or photos you are printing.*

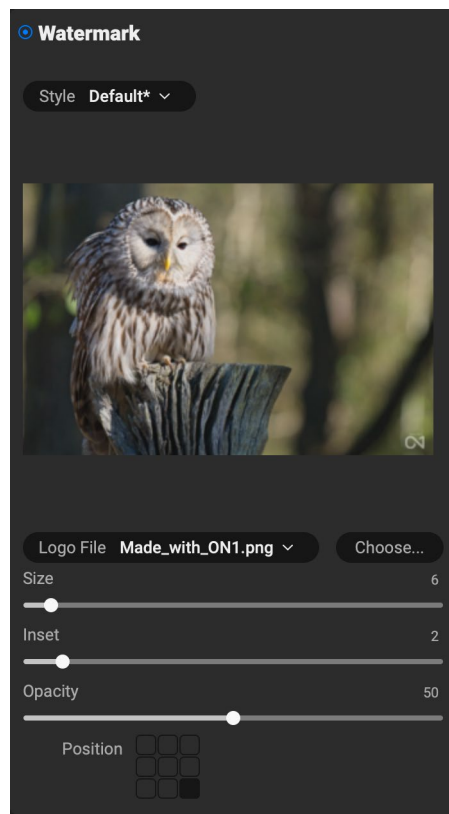
## WATERMARK PANE

The Watermark pane adds an overlay to the printed image, and is most often used for your logo, signature or copyright. Watermarks generally need a transparent background, so make sure your watermark file is a PNG or PSD.

The module has the following options:

- **Choose:** Click the Choose button to select the file you wish to use as your watermark. Once you've added a watermark file, it will be saved to the Logo File pop-up.
- **Size:** This slider controls the size of the watermark file.
- **Inset:** This will determine the percentage in which the file is inset from the edge, based on the Position (see below).
- **Opacity:** This sets the opacity of the watermark.
- **Position:** This grid sets the location of the watermark. Click on the square of the location you desire.

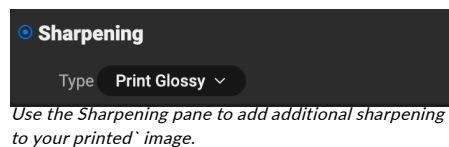
When working with watermarks, make sure your watermark file is sufficiently large for your usage. For example, if you want it to appear 2 inches wide on a 300-ppi image, your watermark needs to be at least 600 pixels wide. Otherwise, it could appear pixelated on the print.



## SHARPENING PANE

In most cases, and depending upon the media type you print to—glossy papers often benefit from additional sharpening, for example—you'll need to add an additional sharpening step when printing. This is an additional level of sharpening beyond anything you might have applied in the Edit module.

The Sharpening pane lets you select a type of sharpening that will be applied to your photos during the printing process. The pop-up menu has a set of options for general sharpening, including ones for a standard print, glossy papers, details, high-pass sharpening, and many more. Depending upon the image, you might need to play with the settings here; performing test prints on small sections of a photo can often be quite helpful in determining the proper level of sharpening in a print.



## Basic printing with Photo RAW

Printing is available throughout the ON1 Photo RAW 2024 interface. If you are viewing a photo in either the Edit or Resize modules, or if you have an image selected in Browse's Grid or Detail views, clicking the Print icon will open the Print window with that image. There, you can set any of the options in the four panes on the right, and click the Print button to output your photo.

If you wish to get an on-screen proof of the final image before you print, using the chosen color profile for the media type you are using, click the soft proofing icon underneath the preview area.

## PRINTING PHOTOS FROM ON1 CLOUD SYNC DEVICES

Any photo that can be displayed on your computer can be printed, even proxies of photos that reside on one of your ON1 Cloud Sync devices. In most cases – especially at smaller print sizes (8x10 and under), the proxy photo will have more than enough resolution to print at high quality. If you are printing at larger sizes, or wish to use all the available image data for your photo, either copy the file from your synced device to your computer, or change the sync setting for the photo's enclosing folder on the synced device, so that the original is in the ON1 Cloud.

## PRINTING MULTIPLE PHOTOS

To print multiple photos—as a package or contact sheet—select the images you wish to print from the Grid or Filmstrip views (in Browse or Edit), and click the Print icon. The photos you've selected will be displayed in the filmstrip at the bottom of the window, and the preview area will display the current page (at the printer's page size) and print size settings. If you are printing a lot of photos at one time, you can flip from page to page via the Page View buttons under the preview. To see more pages, click on the Facing Pages or Show All Pages icons at the bottom left of the window.

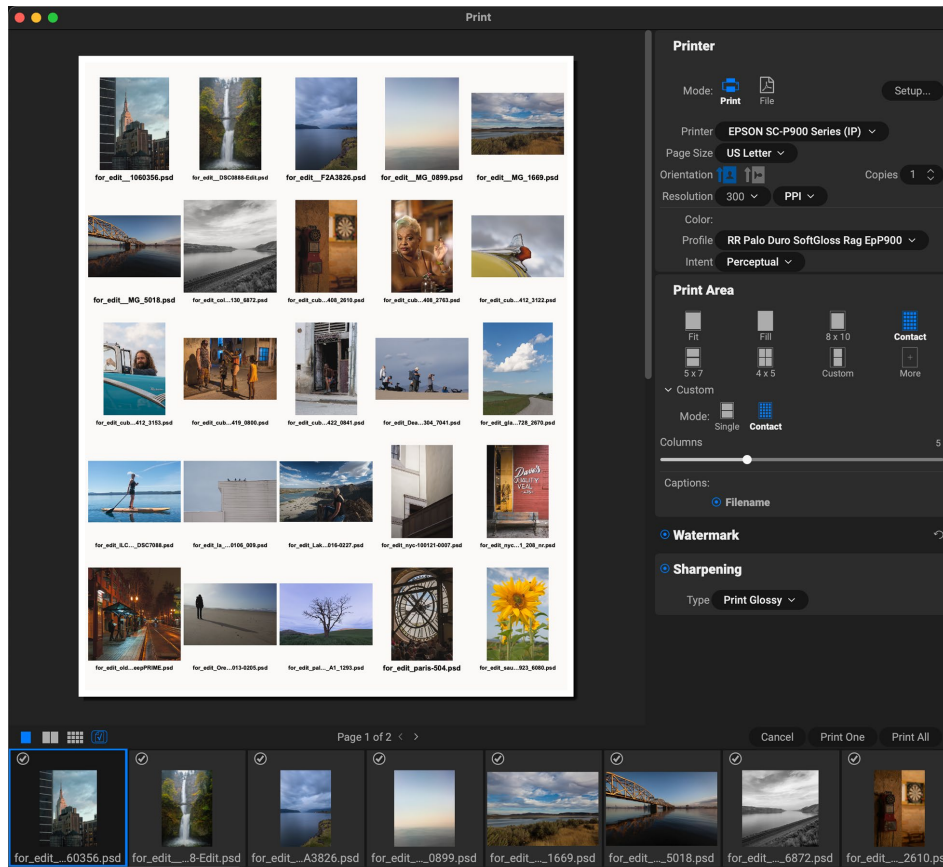


The Print feature gives you extensive options for printing multiple pages package style. Here, we have selected 32 photos to print at 5x7 inches on a letter-size sheet, on an Epson P600 printer. Clicking on the View All Pages button underneath the preview window, you can see all of the photos to be printed. Clicking Print One will print the currently selected page; clicking Print All will print the collection.

If you decide that you don't want to print a photo, click the checkmark for that photo in the filmstrip. To print all of the photos currently selected, click Print. If you would like to try a test print, with a single page, click on the Print One button, which will print the currently selected page, as found in the Page View listing.

## Printing contact sheets

When you wish to evaluate a group of images but don't want to waste larger sheets of photo paper, use the Contact Sheet feature in the Print window. Select the photos you wish to print, set the paper size in the Printer pane, and click on the Contact icon in the Print Area pane.



The Contact Sheet option lets you evaluate a large group of photos in a high quality print, with captions.

When you switch from Package to Contact mode, you have two options, as found in the Custom section of the Print Area pane:

- **Columns:** lets you set the number of columns across the page width. The smaller the number of columns, the larger the individual cells.
- **Captions:** Currently, Photo RAW lets you add the filename as a caption underneath the printed photo. Click the button to the left of the label to turn this on or off. (We will be adding additional caption options in future releases.)

You can use the Page View controls underneath the preview area to move between pages, and, when you're ready to print, click the Print All button to print the contact sheets.

# SHARING TO SMUGMUG



If you are a member of the SmugMug photo sharing and hosting service, ON1 Photo RAW 2024 offers an easy to use mechanism for posting one or multiple photos to the service. This is accessed via the Share menu, which is found throughout Photo RAW in the lower right section of the Module selector. On Windows, the Sharing button's pop-up contains only the SmugMug option; on MacOS, there are additional sharing options beyond SmugMug (see [page 252](#) for more information on these options).

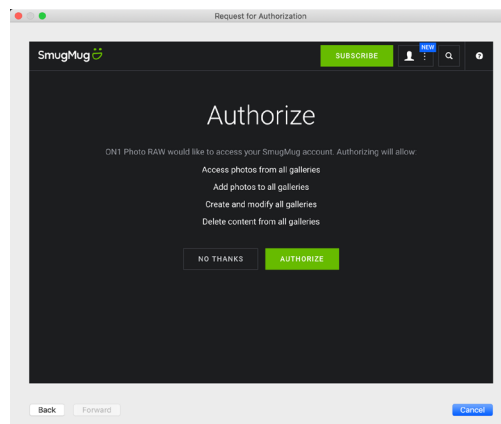
You can share a the currently selected photo or a group of photos by choosing SmugMug from the Sharing pop-up menu. The first time you access the service, you'll receive an authorization window inside Photo RAW; fill out your account information and password, and then click on the Authorize button.

Once authorized, you'll be presented with a window that lets you upload your photo or photos. The window contains a handful of options:

- Click the “Use photo metadata” control to include the photos' metadata for use in the title, caption and keyword.
- The Gallery pop-up lets you add the photos to an existing gallery, or lets you create a new gallery.
- The Open Gallery link to the left of the pop-up will open the currently selected gallery in your default web browser.
- The Size pop-up has three options, full-size, and either 4000 or 2000 pixels (on the long side).

Once you have selected the appropriate options, click the Share button. Photo RAW will create high-quality JPEGs of the chosen photos and publish them to SmugMug.

More information about SmugMug can be found at [smugmug.com](https://smugmug.com).



*The first time you share to SmugMug, you'll be asked to log in to your account, and verify that you want to let Photo RAW post to your galleries on the site.*



*When you post to SmugMug from Photo RAW, you can include metadata, choose the gallery to you want the photos to go into, and the size of the uploaded photos.*



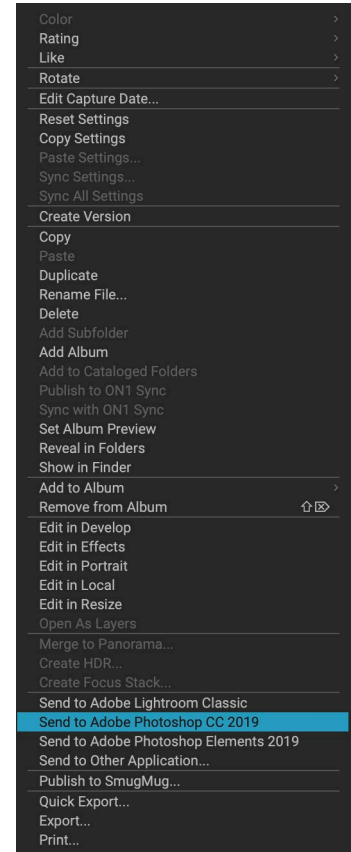
# SEND TO OTHER APPLICATIONS

The Browse module inside ON1 Photo RAW 2024 can send images you are viewing to other applications for editing. This is done via the Send to option, which is available from the right-click contextual menu or the Edit menu. ON1 Browse automatically detects the following common photo managers or editors and lists the latest installed version:

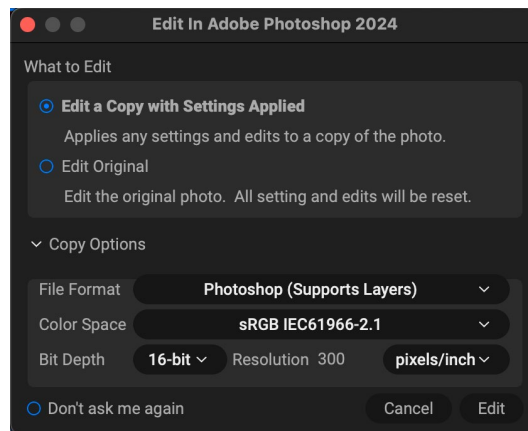
- Adobe Photoshop
- Adobe Photoshop Lightroom
- Adobe Photoshop Elements

You can set up any application you want to send your photos to. Simply select the Send to Other Application option. Then select the application you want to send your photos to. The application will be remembered and listed with your other Send to options. (For example, if you use an email client you can add it to easily email photos.)

When you send an image to another application, you will be presented with the Edit in dialog box from ON1 Photo RAW 2024. There you'll have the option to send either the edited photo or the original, unedited image. If you choose to send a copy, you'll have options for choosing the file type, color space, bit depth and resolution. If you use the same set of options every time, you can check the "Don't ask me again" box in the window, and you won't be prompted again. (To change this setting, go to the File pane in Photo RAW's Preferences.)



The Send To... section is available when you right-click on a photo inside Browse pop-up menu.

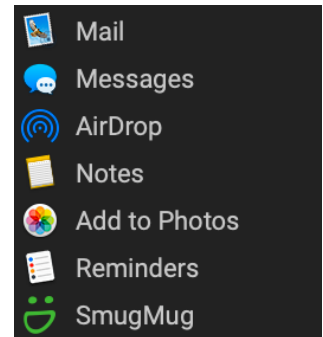


The Edit In dialog, with the Copy Options section expanded.

# OTHER SHARING OPTIONS (MAC ONLY)

In addition to SmugMug publishing, the MacOS version of ON1 Photo RAW 2024 includes other photo-sharing options, including:

- **Mail:** Creates a new email message in Apple Mail with the shared photo.
- **Messages:** Shares photo to Apple's Messages app.
- **AirDrop:** Uses Apple's AirDrop networking feature to share with local MacOS or iOS devices.
- **Notes:** Adds the shared photo to Apple's Notes app. You can choose to create a new note, or add the photo to an existing note.
- **Add to Photos:** Adds the photo to Apple's Photos app.
- **Reminders:** Adds to the Reminders app.
- **SmugMug:** Post photos to the SmugMug service (see [page 251](#) for details).



All of the sharing options perform the same operation: Photo RAW exports a full-size JPEG of the selected photo and shares it with the selected target from the list.

# **PART 6:**

# **ON1 PHOTO RAW 2024**

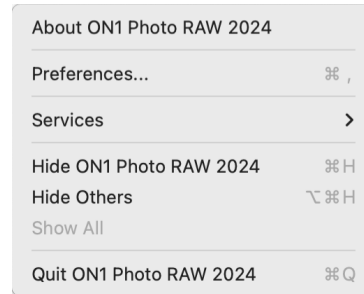
# **REFERENCE**

- **Menus** ([page 255](#))
- **Preferences** ([page 272](#))
- **Using Photo RAW MAX as a plug-in** ([page 285](#))
- **Moving Your Lightroom Classic Catalog to Photo RAW** ([page 298](#))
- **Backing Up and Restoring Photo RAW** ([page 285](#))
- **Keyboard Shortcuts** ([page 304](#))

# BROWSE MENUS

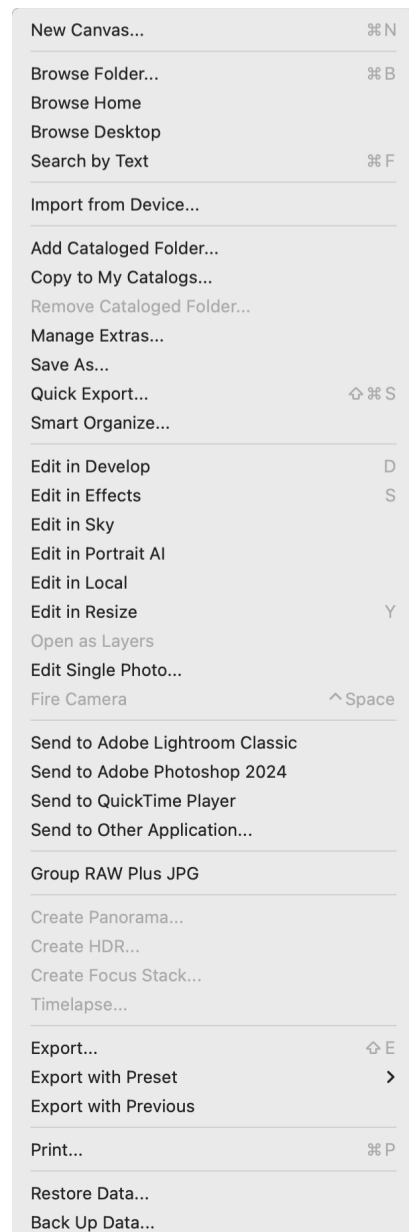
## ON1 PHOTO RAW (MACOS ONLY)

- **About ON1 Photo RAW 2024:** Opens the About box, displays your version number. (In the Help menu on Windows)
- **Preferences:** Opens the preferences dialog. (This is in the Edit menu on Windows)
- **Quit ON1 Photo RAW:** Quits ON1 Photo RAW 2024.



## FILE

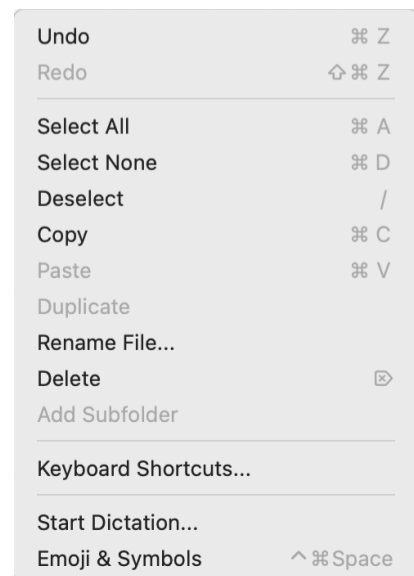
- **New Canvas:** Creates a new .onphoto file at the dimensions you choose and opens it in Layers.
- **Browse Folder:** Opens the browse dialog where you can select which folder you would like to browse.
- **Browse Home:** Navigates to your home Pictures folder.
- **Browse Desktop:** Navigates to your desktop.
- **Search by Text:** Opens the Search Bar's Find Text field.
- **Import from device:** Opens the Import window.
- **Add Cataloged Folder:** Lets you choose a folder to add to the Cataloged Folders section of the Folders pane.
- **Copy to My Catalogs:** Copy or move a group of selected photos to a specific cataloged folder.
- **Remove Cataloged Folder:** Removes the selected folder from the Cataloged Folders pane.
- **Manage Extras:** Opens the Extras Manager for importing and exporting backgrounds, presets, textures and more.
- **Save As:** Saves the currently edited image in a variety of files formats.
- **Quick Export:** Saves the current image in Photoshop, TIFF, JPEG or PNG format.
- **Smart Organize:** Opens the Smart Organize window, which lets you search for duplicates, and images similar in appearance, date, or time.
- **Edit in (module):** Opens the currently selected photo in the specified module.
- **Open as Layers:** Opens the selected files as layers.



- **Edit Single Photo:** Opens the selected files in Edit's Single Image mode.
- **Fire Camera:** Triggers the shutter of a connected camera when Tethered Shooting mode is active.
- **Send to (list):** Sends your image to the selected application in the list.
- **Group RAW Plus JPG:** Stacks RAW and JPG pairs together, reducing clutter.
- **Merge to Panorama:** Takes the selected images and opens the Create Panorama window.
- **Create HDR:** Takes the selected images and opens the Create HDR window.
- **Create Focus Stack:** Takes the selected photos and opens the Focus Stack window.
- **Timelapse:** Takes a sequence of photos and converts them into a time-lapse movie.
- **Export:** Opens the Export window.
- **Export with Preset:** Exports the current selection using a preset from the hierarchical menu, bypassing the Export window.
- **Export with Previous:** Exports the current selection with the last-used Export setting, bypassing the Export window.
- **Print:** Opens up the print window.
- **Restore Data:** Restores your ON1 Photo RAW 2024 system settings and environment to a previous backup.
- **Back up Data:** Backs up your current Photo RAW system settings and environment.

## EDIT

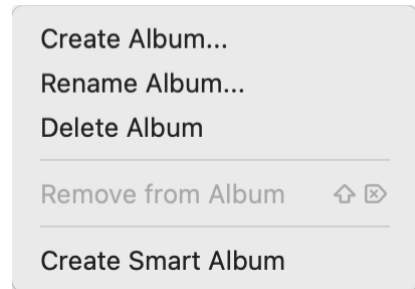
- **Undo:** Removes the last file operation.
- **Redo:** Redoes the undo operation. This is only available if the last thing you did was an undo.
- **Select All:** Selects all the images in the current folder.
- **Select None:** Deselects all the images in the current folder.
- **Deselect:** Deselects the current item.
- **Copy:** Copies the currently selected items.
- **Paste:** Pastes the items in the clipboard.
- **Duplicate:** Makes a physical copy of the selected file, in the same location as the original.



- **Rename Files:** Renames the selected file or folder.
- **Delete:** Moves the selected files and/or folders to the trash.
- **Add Subfolder:** Adds a new empty subfolder inside the current selected folder.
- **Keyboard Shortcuts:** Lets you add or modify the hotkeys for many of Photo RAW's commands.

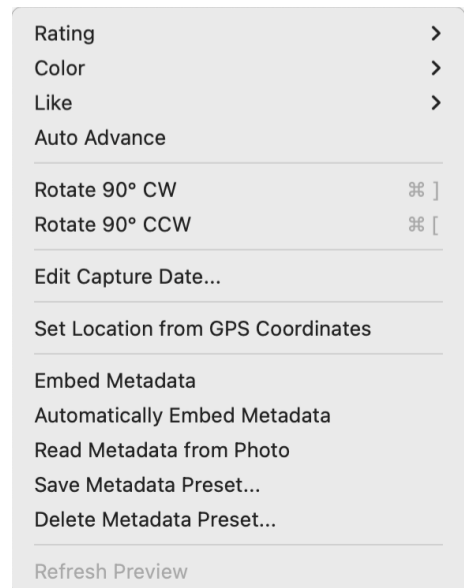
## ALBUM

- **Create Album:** Creates a new album.
- **Rename Album:** Renames the current album.
- **Delete Album:** Deletes the current album.
- **Remove from Album:** Removes selected photo(s) from the current album.
- **Create Smart Album:** Creates a new smart album, based on the current Search Bar criteria.



## PHOTO

- **Rating:** Sets star rating (0 to 5 stars)
- **Color:** Sets the color rating of a photo (None, Red, Yellow, Green, Red, Purple)
- **Like:** Sets a photo to Like, Reject or Not Set
- **Auto Advance:** When checked, any color, rating or like setting applied to a photo will save it for that photo, then move on to the following photo.
- **Rotate 90 Degrees CW:** Rotates an image clockwise by 90°
- **Rotate 90 Degrees CCW:** Rotates an image counterclockwise by 90°
- **Edit Capture Date:** Let's you adjust the date captured metadata, including a setting to take account for time zone changes.
- **Set Location from GPS Coordinates:** Looks up the place name information from the stored GPS coordinates and embeds it in the appropriate IPTC metadata fields.
- **Embed Metadata:** Stores adjusted metadata to the selected photo. (Only applicable to certain file formats.)
- **Automatically Embed Metadata:** When checked, Photo RAW will automatically add adjusted metadata to the current photo.

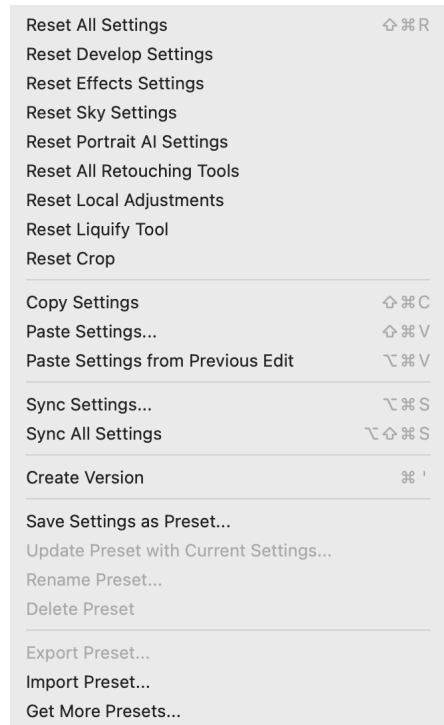




- **Read Metadata from Photo:** Reads the embedded metadata from a raw file, overwriting any data that might be in the XMP sidecar files. (Useful for times when the metadata appears out of sync with different apps.)
- **Save Metadata Preset:** Lets you save some or all of the current image's metadata fields as a preset.
- **Delete Metadata Preset:** Lets you delete a saved metadata preset.
- **Refresh Preview:** Rebuilds the preview of the selected images. (Helpful if there are issues that are causing an image to display incorrectly.)

## SETTINGS

- **Reset All Settings:** Resets all the applied settings on a photo.
- **Reset Develop Settings:** Resets only the settings applied in the Develop tab.
- **Reset Effects Settings:** Resets only the settings applied in the Effects tab.
- **Reset Sky Settings:** Resets the Sky Swap AI tab.
- **Reset Portrait Settings:** Resets Portrait settings.
- **Reset All Retouching Tools:** Resets any retouching applied in the Edit module.
- **Reset Local Adjustments:** Removes all local adjustments made to a photo.
- **Reset Liquify Tool:** Resets any application of the Liquify tools made to a photo.
- **Reset Crop:** Resets the current image's crop to its original state.
- **Reset Text:** Removes all text blocks.
- **Copy Settings:** Copies all of the Edit module settings applied to a photo.
- **Paste Settings:** Pastes the copied settings (with options)
- **Paste Settings from Previous Edit:** Applies the Develop, Effects and Local settings from the last-edited file.
- **Sync Settings:** Selectively applies Edit settings from the primarily selected image (represented by the superselection) to the rest of the images in a selection (with options).
- **Sync All Settings:** Syncs all Edit settings from the primarily photo to the rest of the images in a selection.



- **Create Version:** Makes a virtual copy of a photo, without duplicating the file on your hard drive.
- **Save Settings as Preset:** Saves the editing settings of the selected photo as a preset.
- **Update Preset with Current Settings:** If an image with a preset has had some settings changed, this lets you update the preset with the new settings.
- **Rename Preset:** Renames a preset.
- **Delete Preset:** Deletes a preset.
- **Export Preset:** Exports a preset as an ON1 preset file.
- **Import Preset:** Imports ON1 preset files.
- **Get More Presets:** Goes to ON1.com's Photo Presets page.

## CLOUD SYNC

- **Configure Cloud Sync:** Opens the Cloud Sync Preferences window.

Configure Cloud Sync...

## VIEW

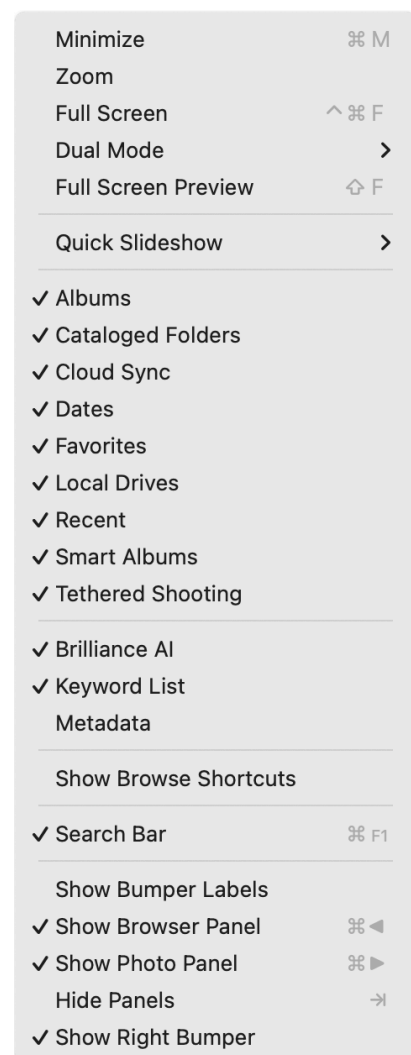
- **Bigger Thumbnails:** Increases the size of the thumbnails in Grid view.
- **Smaller Thumbnails:** Decreases the size of thumbnails.
- **Zoom In:** Zooms into your image in Detail, Filmstrip or Compare view, displaying more detail.
- **Zoom Out:** Zooms out, fitting more of your image in the window.
- **Fit to Screen:** Resizes your image on-screen, to fit it entirely in the preview window.
- **Actual Pixels:** Zooms in to the 100% view.
- **Preset Browser Mode:** Sets the Preset panel browser view to 1, 2 or 3 columns.
- **Thumbnail View Options:** Lets you change the display of thumbnails in Grid view..
- **Search by Rating:** Filters images by star rating.
- **Search by Label:** Filters images by color.
- **Search by Likes:** Filters images by likes/dislikes.
- **Sort:** Sort by filename, date, rating, label and more.
- **Sort Subfolders at the Top:** When sorting, puts subfolders at the top of the grid.

Bigger Thumbnails	+
Smaller Thumbnails	-
<hr/>	
Zoom In	⌘ =
Zoom Out	⌘ -
Fit To Screen	⌘ 0
Actual Pixels	⌘ ⌘ 0
<hr/>	
Preset Browser	>
<hr/>	
Thumbnail View Options...	
<hr/>	
Search by Rating	>
Search by Label	>
Search by Likes	>
<hr/>	
Sort	>
Sort Subfolder at the Top	
Show Subfolder Contents	
<hr/>	
Show Clipping	⌘ J
Show Focus Mask	⌘ ⬆ J
<hr/>	
View Mode	>
Preview Quality	>
<hr/>	
Preview Background Color	>

- **Show Subfolder Contents:** Will display/hide the contents of subfolders when viewing cataloged folders.
- **Show Clipping:** Shows the clipping overlay view, displaying the pure white or black pixels. (Photo, Filmstrip and Compare views only.)
- **Show Focus Mask:** Displays a green overlay on those portions of the current image that are in focus. (Photo, Filmstrip and Compare views only.)
- **View Mode:** Select from Thumbnail (grid), Photo (detail), Filmstrip or Compare views.
- **Preview Quality:** Select from Fast (uses embedded JPG) or Accurate (builds preview from the raw photo).
- **Preview Background Color:** Change the preview background color.

## WINDOW

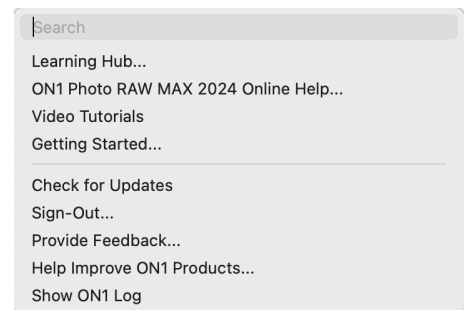
- **Minimize:** Minimizes ON1 Photo RAW 2024.
- **Zoom:** Zooms your window.
- **Full Screen Mode:** Enters or exits full-screen mode.
- **Dual Mode:** Adds new browser window for use in a second display.
- **Full Screen Preview:** Displays the current photo full-screen, without any additional interface elements.
- **Quick Slideshow:** Displays the current group of photos in a slideshow, with customizable time and transition effects.
- **Albums:** Opens/hides the pane.
- **Cataloged Folders:** Opens/hides the pane.
- **Cloud Sync:** Opens/hides the pane.
- **Dates:** Opens/hides the pane.
- **Albums:** Opens/hides the pane.
- **Favorites:** Opens/hides the pane.
- **Local Drives:** Opens/hides the pane.
- **Recent:** Opens/hides the pane.
- **Smart Albums:** Opens/hides the pane.
- **Tethered Shooting:** Opens/hides the pane.
- **Brilliant AI:** Opens/hides the pane.
- **Keyword List:** Opens/hides the pane.
- **Metadata:** Opens/hides the pane.



- **Show Browse Shortcuts:** Displays Browse shortcut icons in the left panel.
- **Search Bar:** Opens and hides the Search Bar.
- **Show Bumper Labels:** Hides/reveals the text labels in the module selector.
- **Show Browser Panel:** Hides/reveals the Browse Panel.
- **Show Photo Panel:** Hides/reveals the Photo Panel.
- **vHide Panels:** Hides/reveals both left and right panels.
- **Show Right Bumper:** Hides/reveals the legacy right-side bumper from previous versions of Photo RAW.

## HELP

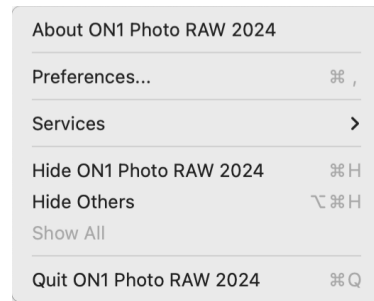
- **Search:** Searches the menu options (MacOS only).
- **Learning Hub:** Opens the Learning Hub inside Photo RAW.
- **ON1 Photo RAW 2024 Online Help:** Opens ON1.com support page in your default web browser.
- **Video Tutorials:** Opens ON1.com product training page in your default web browser.
- **Getting Started:** Opens the initial Photo RAW startup screens.
- **Check for Updates:** Checks the ON1 update server to see if you are running the current version; it notifies you about updates and will walk you through the update process.
- **Sign-In/Sign-Out:** Uses your ON1 account login information to authenticate your copy of Photo RAW.
- **Provide Feedback:** Opens the default web browser and goes to the feedback page of the ON1 website.
- **About ON1 Photo RAW 2024 (Windows Only):** Opens the about box with the version number displayed.
- **Help Improve ON1 Products:** Opens the Improve ON1 Products dialog.
- **Show ON1 Log:** Diagnostic tool that can help ON1 support when you're having issues with Photo RAW 2024.



# EDIT MENUS

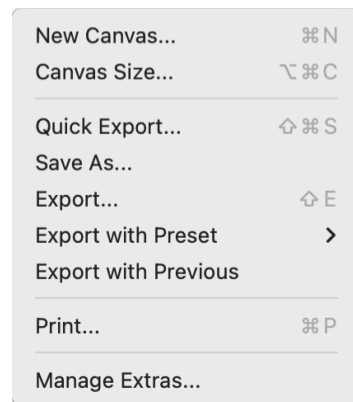
## ON1 PHOTO RAW (MACOS ONLY)

- **About ON1 Photo RAW:** Opens the About box and displays your version number. (This is in the Help menu on Windows)
- **Preferences:** Opens the preferences dialog. (In the Edit menu on Windows)
- **Quit ON1 Photo RAW:** Quits ON1 Photo RAW 2024.



## FILE

- **New Canvas:** Creates a new layered .onphoto file at the specified dimensions.
- **Canvas Size:** Lets you change the size of the current layered file.
- **Quick Export:** Saves the current image in Photoshop, TIFF, JPEG or PNG format.
- **Save As:** Saves the currently edited image in a variety of files formats.
- **Export:** Opens the Export window.
- **Export with Preset:** Exports the current selection using a preset from the hierarchical menu, bypassing the Export window.
- **Export with Previous:** Exports the current image with the last-used Export setting.
- **Print:** Opens up the print dialog box.
- **Manage Extras:** Opens the Extras Manager window.



## EDIT

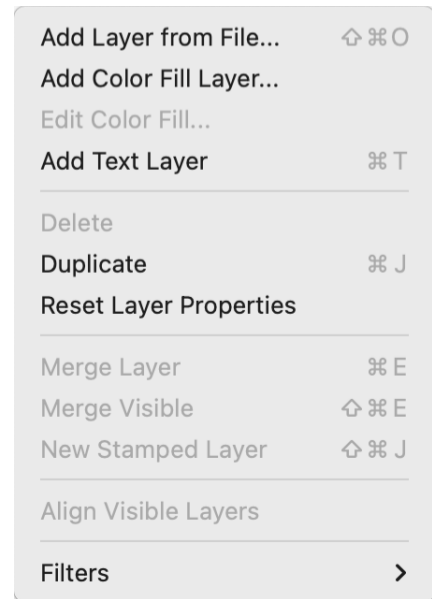
- **Undo:** Removes the last file operation.
- **Redo:** Redoes the undo operation. This is only available if the last thing you did was an undo.
- **Cut:** Cuts the currently selected item.
- **Copy:** Copies the currently selected item.
- **Paste:** Pastes (copies) the items in the clipboard to the current location.
- **Delete:** Deletes the current image (Filmstrip mode only).
- **Revert:** Reverts to the photo's original state.



- **Preferences (Windows):** Opens the Preferences dialog.
- **Keyboard Shortcuts:** Lets you add or modify the hotkeys for many of Photo RAW's commands.

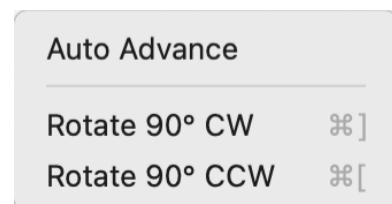
## LAYER

- **Add Layer from File:** Lets you add a new file to the current document as a layer.
- **Add Color Fill Layer:** Adds a new layer consisting of a solid color.
- **Edit Color Fill:** Lets you change the color of a selected color fill layer.
- **Delete:** Deletes the currently selected layer.
- **Duplicate:** Duplicates the currently selected layer.
- **Reset Layer Properties:** Removes any applied layer masks or transforms to the current layer.
- **Merge Layer:** Merges the current layer with the one beneath it.
- **Merge Visible:** Merges all of the visible layers into a new, merged layer.
- **New Stamped Layer:** Merges the visible layers into a new, composite layer, leaving the visible layers intact.
- **Align Visible Layers:** Aligns visible layers based on their content.
- **Filters:** Contains a list of installed Photoshop plugins. Selecting an item sends the current layer to the plugin and returns it in a new layer.



## PHOTO

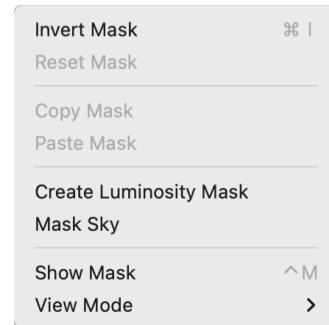
- **Auto Advance:** When checked, any color, rating or like setting applied to a photo will save it for that photo, then move on to the following photo.
- **Rotate 90 Degrees CW:** Rotates an image clockwise 90°
- **Rotate 90 Degrees CCW:** Rotates an image counterclockwise 90°





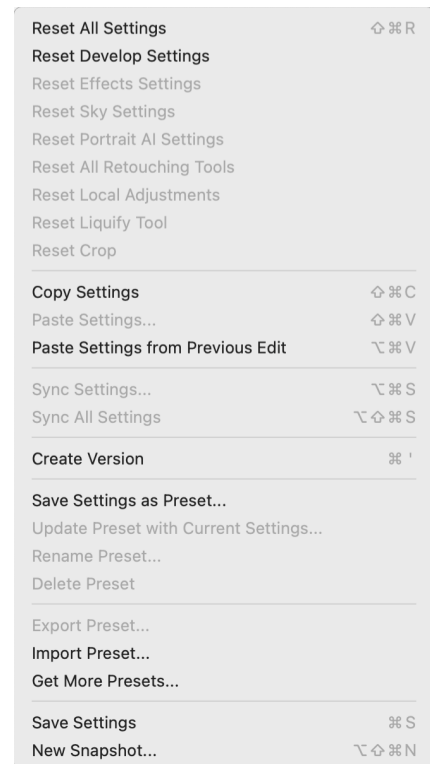
## MASK

- **Invert Mask:** Inverts the mask, what was hidden is revealed and vice versa.
- **Reset Mask:** Resets the mask to plain white.
- **Copy Mask:** Copies the mask.
- **Paste Mask:** Pastes the mask.
- **Create Luminosity Mask:** Creates a luminosity layer mask based off of a photo's black or white tonal values.
- **Mask Sky:** Automatically creates a mask of the sky in the current image.
- **Show Mask:** Displays the current mask either as a red overlay or as grayscale.
- **View Mode:** Sets the Show Mask mode to either red overlay or grayscale.



## SETTINGS MENU

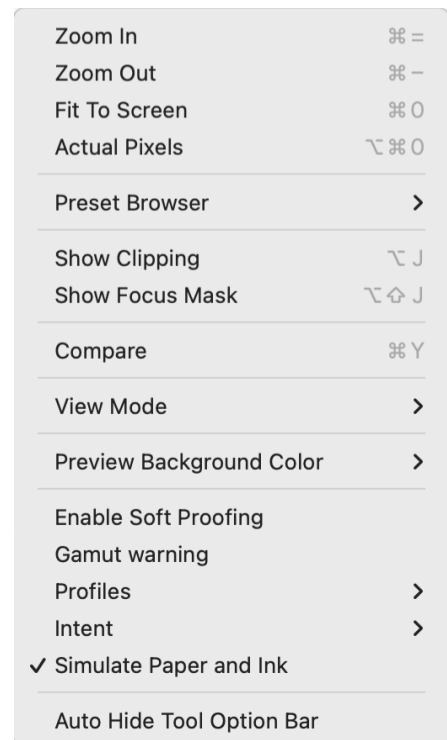
- **Reset All Settings:** Resets all Edit module settings.
- **Reset Develop Settings:** Resets all Develop settings.
- **Reset Effects Settings:** Resets all Effects settings.
- **Reset Sky Settings:** Resets any sky replacement.
- **Reset Portrait AI Settings:** Resets Portrait AI settings.
- **Reset All Retouching Tools:** Resets any retouching applied in the Edit module.
- **Reset Local Adjustments:** Resets all local adjustments.
- **Reset Liquify Tool:** Resets any application of the Liquify tools made to a photo.
- **Reset Crop:** Resets cropping made to a photo.
- **Copy Settings:** Copies all of the settings (Develop, Effects, retouching) applied to a photo.
- **Paste Settings:** Pastes the copied settings (with options)
- **Paste Settings from Previous Edit:** Applies (to the current photo) any Edit module adjustments made to the previous photo.
- **Sync Settings:** Selectively applies the Edit module settings from the primarily selected image to the rest of the images in a selection.
- **Sync All Settings:** Applies all of the Edit module settings from the primarily selected image to the rest of the images in a selection.



- **Create Version:** Makes a virtual copy of a photo, without duplicating the file on your hard drive.
- **Save Settings as Preset:** Saves the editing settings of the selected photo as a preset.
- **Update Preset with Current Settings:** If an image with a preset has had some settings changed, this lets you update the preset with the new settings.
- **Rename Preset:** Renames a preset.
- **Delete Preset:** Deletes a preset.
- **Export Preset:** Exports a preset as an ON1 preset file.
- **Import Preset:** Imports ON1 preset files.
- **Get More Presets:** Goes to ON1's Photo Presets web page.
- **Save Settings:** Saves the current state of your edits in the Edit module, in case of crash.
- **New Snapshot:** Creates a new snapshot of the current editing state.

## VIEW MENU

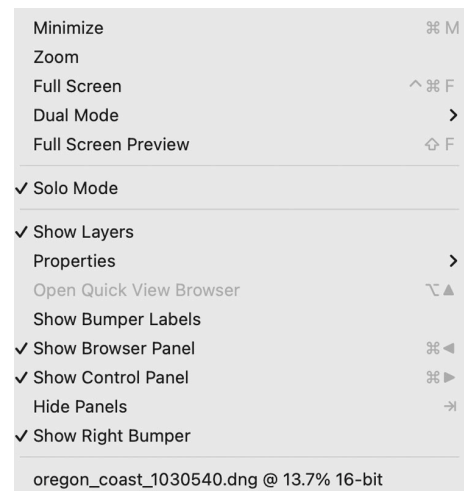
- **Zoom In:** Zooms the preview window in one increment. This will make the preview image larger.
- **Zoom Out:** Zooms the preview window out one increment. This will make the preview images smaller.
- **Fit to Screen:** This sets the preview image so that the entire image is on screen at once. Think of this as an overview of the entire image. This is the setting you will use most of the time.
- **Actual Pixels:** This sets the preview image so that it zooms to actual pixels or 1:1 also called 100%. This setting allows you to see every pixel in the image. This is useful when making precision adjustments.
- **Preset Browser:** Sets the Preset panel browser view to 1, 2 or 3 columns.
- **Show Clipping:** Shows the clipping overlay view, displaying the pure white or black pixels.
- **Show Focus Mask:** Displays a green overlay on those portions of the current image that are in focus.
- **Show Preview:** Toggle to enable or disable the preview.
- **Compare:** Displays an adjustable split-screen view of the current image, with the Before view on the left side of the preview area.
- **View Mode:** Toggles between Filmstrip and Detail view.



- **Preview Background Color:** Lets you set the background color options.
- **Enable Soft Proofing:** Turns on soft proofing for the current image.
- **Gamut warning:** Displays colors that the printer can't reproduce with a red overlay.
- **Profiles:** Displays a list of installed printer and display profiles; choosing a profile will apply soft proofing for that profile's paper type.
- **Intent:** Lets you switch between perceptual or relative rendering intent for the current image.
- **Simulate Paper and Ink:** When turned on, Photo RAW will set the white point and black point of the display to account for that of the chosen profile.
- **Auto Hide Tool Options bar:** When checked, the Tool Options bar for each tool will be hidden on-screen, and becomes visible when you hover over the top of the main window.

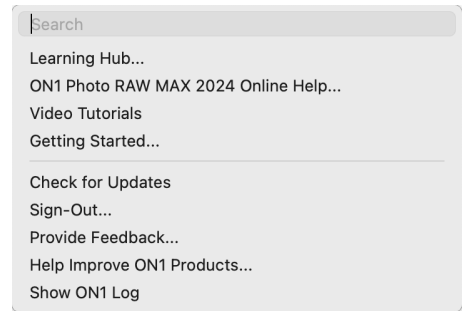
## WINDOW

- **Minimize:** Minimizes your screen.
- **Zoom:** Zooms your window to full-size.
- **Full Screen:** Toggles full-screen mode (hides menus).
- **Dual Mode:** Turns on dual-display mode
- **Navigator:** Hides or shows the Navigator, Loupe, Histogram and Info pane.
- **Layers:** Collapses the Layers pane.
- **Solo Mode:** Keeps only one pane open at a time.
- **Show Layers:** Completely hides/shows the Layers pane.
- **Properties:** Sets display and nesting options for the Properties window.
- **Open Quick View Browser:** Opens the Quick View Browser overlay for the selected preset category.
- **Show Bumper Labels:** Hides/reveals the text labels in the module selector.
- **Show Browser Panel:** Hides/shows the Browser Panel.
- **Show Control Panel:** Hides/shows the Control Panel.
- **Hide Panels:** Hides or shows all Panels.
- **Show Right Bumper:** Hides/reveals the legacy right-side bumper from previous versions of Photo RAW.
- **Document Name:** Shows the name, zoom level and bit depth of the open image.



## HELP

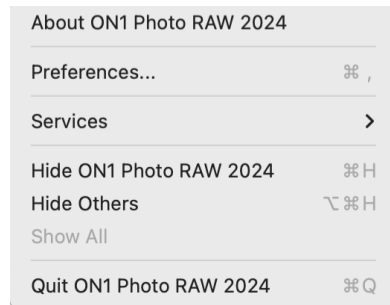
- **Search:** Searches the menu options (MacOS only).
- **Learning Hub:** Opens the Learning Hub.
- **ON1 Photo RAW 2024 Online Help:** Opens ON1.com support page in your default web browser.
- **Video Tutorials:** Opens ON1.com product training page in your default web browser.
- **Getting Started:** Opens the initial Photo RAW startup screens.
- **Check for Updates:** Checks with the ON1 update server an updated version. If there is a newer version, you will be notified and be walked through the update process.
- **Sign-In/Sign-Out:** Uses your ON1 account login information to authenticate your copy of Photo RAW.
- **Provide Feedback:** Opens the default web browser and goes to the feedback page of the ON1 website.
- **About ON1 Photo RAW (Windows Only):** Opens the about box with the version number displayed.
- **Help Improve ON1 Products:** Opens the Improve ON1 Products dialog.
- **Show ON1 Log:** Diagnostic tool that can help ON1 support when you're having issues with Photo RAW.



# RESIZE MENUS

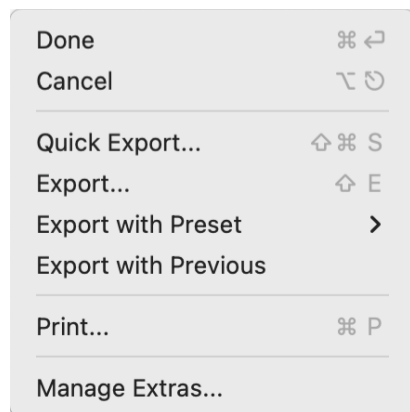
## ON1 PHOTO RAW (MACOS ONLY)

- **About ON1 Photo RAW:** Opens the About box and displays your version number. (This is in the Help menu on Windows)
- **Preferences:** Opens the preferences dialog. (In the Edit menu on Windows)
- **Quit ON1 Photo RAW:** Quits ON1 Photo RAW 2024.



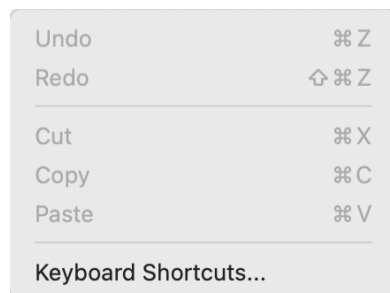
## FILE

- **Done:** Saves the current image and returns to Browse (or external source).
- **Cancel:** Cancels any Resize operations and returns to Browse (or external source).
- **Quick Export:** Saves the current image in Photoshop, TIFF, JPEG or PNG format
- **Export:** Opens the Export window.
- **Export with Preset:** Exports the current selection using a preset from the hierarchical menu, bypassing the Export window.
- **Export with Previous:** Exports the current image with the last-used Export setting.
- **Print:** Opens up the print dialog box.
- **Manage Extras:** Opens the Extras Manager window.



## EDIT

- **Undo:** Removes the last file operation.
- **Redo:** Redoes the undo operation.
- **Cut:** Cuts the currently selected item.
- **Copy:** Copies the currently selected item.
- **Paste:** Pastes the items in the clipboard.
- **Preferences (Windows):** Opens the Preferences dialog.
- **Keyboard Shortcuts:** Lets you add or modify the hotkeys for many of Photo RAW's commands.



## PHOTO

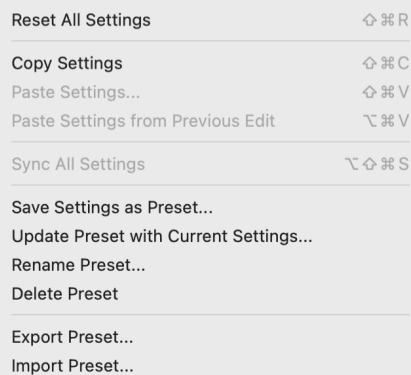
- **Rotate 90 Degrees CW:** Rotates an image clockwise 90°
- **Rotate 90 Degrees CCW:** Rotates an image counterclockwise 90°

Rotate 90° CW ⌘]

Rotate 90° CCW ⌘[

## SETTINGS

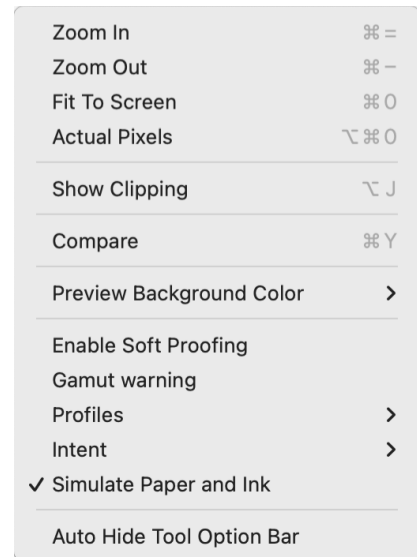
- **Reset all Settings:** Resets any settings made in Resize (current image only).
- **Copy Settings:** Copies all of the Resize AI settings applied to a photo. *(Copy is kept as long as Resize remains open.)*
- **Paste Settings:** Pastes the copied settings to the current photo. *(Kept as long as Resize remains open.)*
- **Paste Settings from Previous Edit:** Applies any Resize AI adjustments made to the previous photo to the currently selected photo. *(Only applicable when using Resize AI in batch-processing mode.)*
- **Sync All Settings:** Applies all of the Resize settings from the primarily selected image to the rest of the images in a selection. *(Only applicable when using Resize AI in batch-processing mode.)*
- **Save Settings as Preset:** Saves a new preset.
- **Update Preset with Current Settings:** If an image with a preset applied has had some settings changed, this lets you update the preset to reflect those new settings.
- **Rename Preset:** Renames the current preset.
- **Delete Preset:** Deletes the currently selected preset.
- **Export Preset:** Exports the current preset as an .onr file.
- **Import Preset:** Imports ON1 Resize preset files.





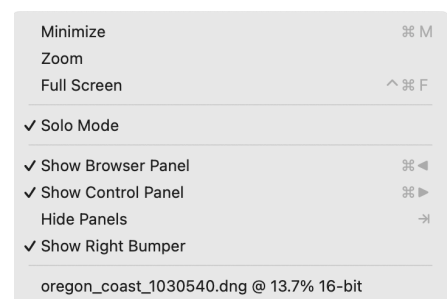
## VIEW

- **Zoom In:** Zooms the preview window in one increment. This will make the preview image larger.
- **Zoom Out:** Zooms the preview window out one increment. This will make the preview images smaller.
- **Fit to Screen:** This sets the preview image so that the entire image is on screen at once. Think of this as an overview of the entire image.
- **Actual Pixels:** This sets the preview image so that it zooms to actual pixels or 1:1 also called 100%. This setting allows you to see every pixel in the image. This is useful when making precision adjustments.
- **Show Clipping:** The clipping overlay view displays the pure white or black pixels in the current image.
- **Preview Background Color:** Lets you set the background color options.
- **Enable Soft Proofing:** Turns on soft proofing.
- **Gamut warning:** Displays colors that the printer can't reproduce with a red overlay.
- **Profiles:** Displays a list of printer and display profiles; selecting a profile applies soft proofing for that profile.
- **Intent:** Lets you switch between perceptual or relative rendering intent for the current image.
- **Simulate Paper and Ink:** Sets the white point and black point of the display for that of the chosen profile.
- **Auto Hide Tool Options bar:** When checked, the Tool Options bar for each tool will be hidden on-screen, and becomes visible when you hover over the top of the main window.



## WINDOW

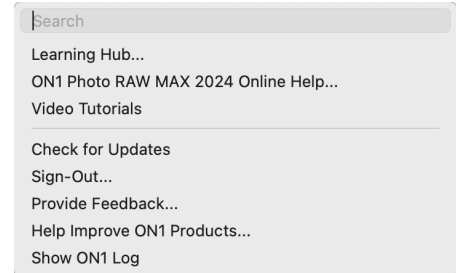
- **Minimize:** Minimizes your screen.
- **Zoom:** Zooms window to full-size.
- **Full Screen:** Toggles full-screen mode (hides menu bar).
- **Solo Mode:** Keeps only one control pane open at a time.
- **Show Browser Panel:** Hides/shows the left Browser Panel.
- **Show Control Panel:** Hides/shows the right Control Panel.
- **Hide Panels:** Hides or shows all Panels.



- **Show Right Bumper:** Hides/reveals the legacy right-side bumper from previous versions of Photo RAW.
- **Document Name:** Shows the name, zoom level and bit depth of the open image.

## HELP

- **Search:** Searches the menu options (MacOS only).
- **Learning Hub:** Opens the ON1 Learning Hub.
- **ON1 Photo RAW 2024 Online Help:** Opens ON1.com support page in your default web browser.
- **Video Tutorials:** Opens ON1.com product training page.
- **Getting Started:** Opens the Photo RAW startup screen.
- **Check for Updates:** Checks with the ON1 update server for an updated version.
- **Sign-In/Sign-Out:** Uses your ON1 account login information to authenticate your copy of Photo RAW.
- **Provide Feedback:** Opens the default web browser and goes to the feedback page of the ON1 website.
- **About ON1 Photo RAW (Windows Only):** Opens the about box with the version number displayed.
- **Help Improve ON1 Products:** Opens the Improve ON1 Products dialog.
- **Show ON1 Log:** Diagnostic tool that can help ON1 support when you're having issues with ON1 Photo RAW 2024.



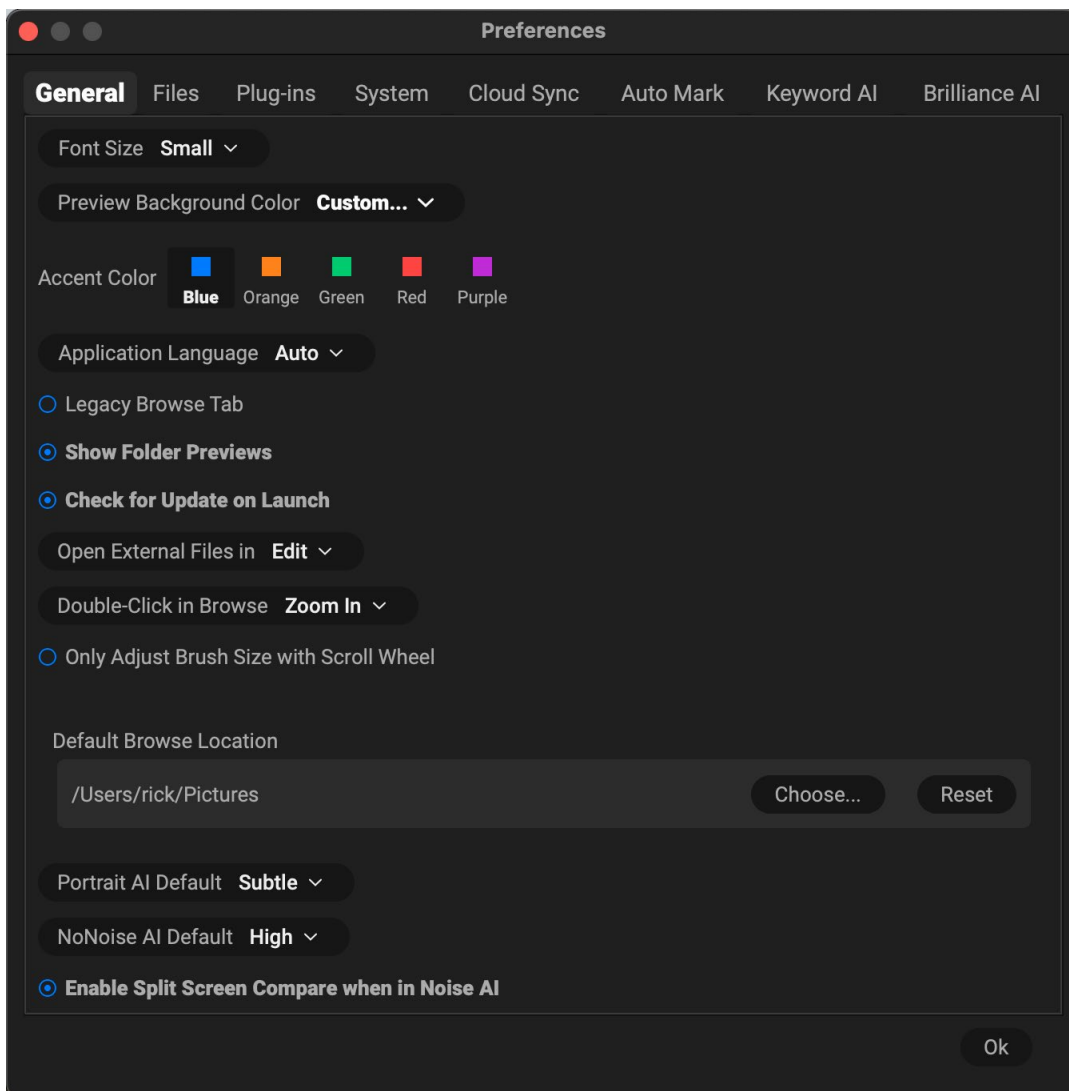
# PREFERENCES

Photo RAW has a number of system-wide settings that you can set via the Preferences window. To access Preferences, either click on the gear icon at the lower left side of the screen, or choose Preferences from the ON1 Photo RAW 2024 menu (Mac) or the Edit menu in Windows.

The Preferences window has seven tabs: General, Files, Plug-Ins, System, Services, ON1 360 and Auto Mark. The settings in each tab are described below.

## GENERAL SETTINGS

The General settings tab adjusts basic settings for the Photo RAW workspace, including background color, scrolling controls and more.



### Font Size

Sets the size of the text in the basic Photo RAW workspace (labels, panes and pop-up menus) to one of three general sizes: Small, Medium, Large.

When changing the font size, you must quit and restart Photo RAW for the new setting to take effect.

## Preview Background Color

You may select the color of the background behind the preview image. The default color is black. There is options for black, white, light gray, dark gray and custom. The custom option has a color picker where you can select your own background color.

## Accent Color

Lets you choose the display color for highlighted items in the Photo RAW interface.

## Application Language

Lets you change the display language for Photo RAW. Auto will use your system's default language.

## Legacy Browse Tab

Checking this will change the separate My Catalogs and Browse panels to the single Browse panel found in earlier versions of ON1 Photo RAW. (See [“My Catalogs, Browse and Presets Panels” on page 17.](#))

## Show Folder Previews

When checked, will display a thumbnail of an image from the enclosing folder in Browse.

## Check for Update on Launch

Enabled by default, the product will communicate with ON1's software update server when you start ON1 Photo; if an update is available it will prompt you to download or skip.

## Open External Files

When double-clicking a photo to edit in Photo RAW from either MacOS Finder or Windows Explorer, specifies whether to open the file in the Browse module (default) or the Edit module, the latter by using Edit a Single Photo mode (see [“Edit a Single Photo” on page 20.](#))

## Double-Click in Browse

Sets the behavior when double-clicking on a photo in Browse's Grid view. The default is to zoom in to the photo; the alternative is to open the photo in the Edit module.

## Only Adjust Brush Size with Scroll Wheel

Turning on this option overrides Photo RAW's default behavior, setting the app so that your mouse's scroll wheel will only change the size of a brush (when an appropriate tool is selected).

When not checked, Photo RAW uses the scroll wheel to scroll, zoom, pan and adjust brush size and feathering, depending upon the modifier keys being pressed. See [page 15](#) for specifics on the default settings for scroll wheel options in Photo RAW.

## Default Browse Location

By default, the Pictures short cut in Browse is either Pictures (Mac) or My Pictures (Windows). You can change that location via this setting.

## Portrait AI Default

Sets the strength of Portrait AI's retouching algorithms when you open a photo in the Portrait tab. There are two options, Subtle and Strong. The default is Subtle. (See [page 190](#) for information on the options.)

## NoNoise AI Default

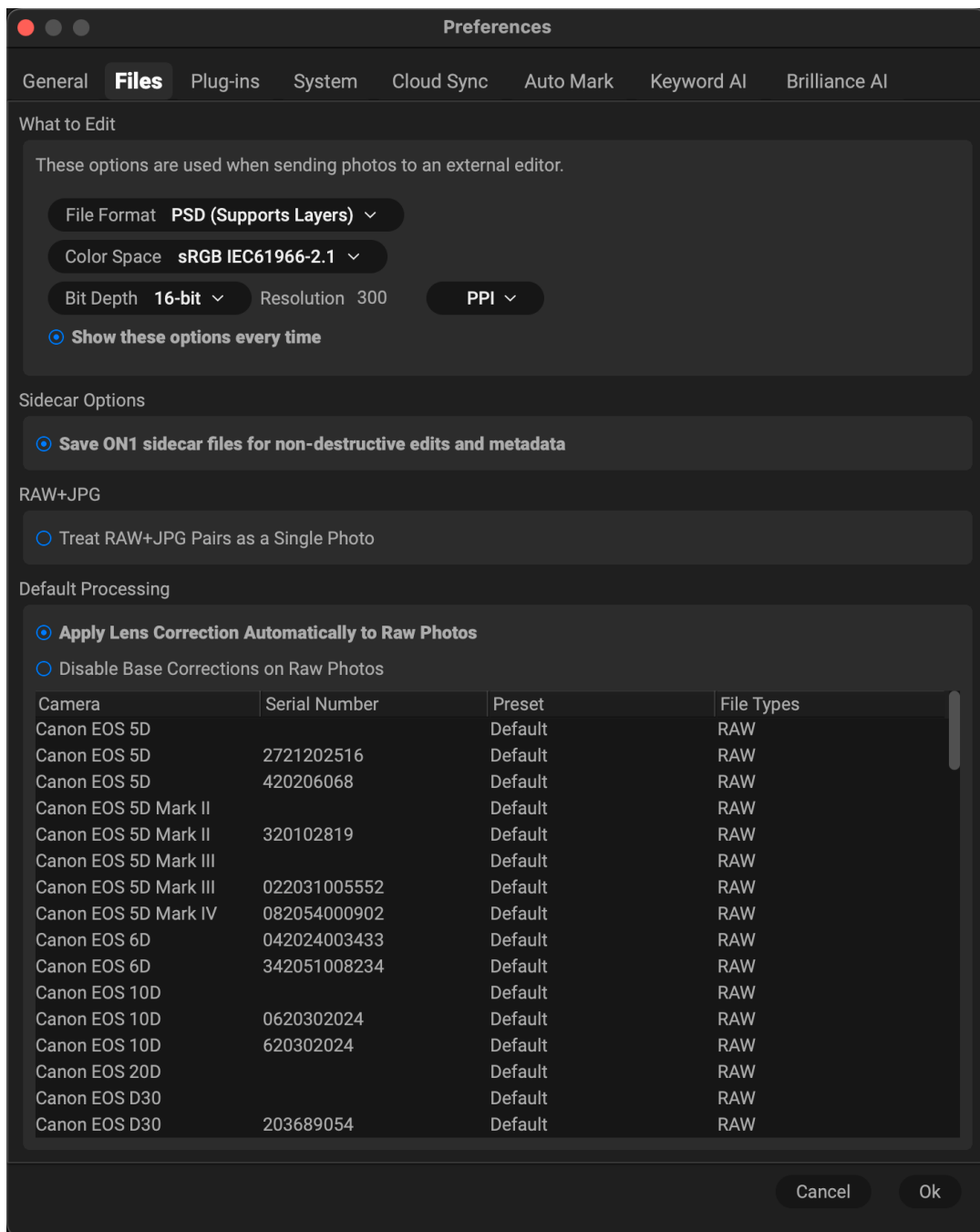
Sets the strength of NoNoise AI's noise reduction when you open a photo in the Portrait tab. There are three options, Low, Medium and High. The default is High. (See [page 142](#) for information on the options.)

## Enable Split Screen Compare when in NoNoise AI

Lets you set the default option for working in the NoNoise panel in Develop. When checked, Photo RAW will automatically switch to before/after Compare mode when you click on the NoNoise tab. When unchecked, you must click on the Compare button at the bottom of the screen to turn on the before/after view.

# FILES

The Files tab is used to determine what file type ON1 Photo RAW will create when opening a file in Resize, or when creating copies to send to an external editor from within Browse. It also lets you apply camera-based presets.



## What to Edit

There are five options in this tab:

1. **File Format:** Sets the file type you wish to create: PSD, TIFF, or JPEG. If you wish to use a layered workflow, you must choose PSD.



2. **Color Space:** Sets the default color space when opening a copy of a file; the list includes Adobe RGB 1998, Apple RGB (MacOS), sRGB, ProPhoto RGB, or ColorMatch RGB. (If you imported a profile, it will also be available here.)
3. **Bit Depth:** Sets the bit depth for the file when opening a copy of a file.
4. **Resolution:** Sets the resolution when opening a copy of a file.
5. **Show these options every time:** If you do not wish to use a predefined set of file characteristics for opening photos from Lightroom or Photoshop, click this box.

## Sidecar Options

Click this box if you wish ON1 Photo RAW 2024 to create ON1-specific 'sidecar' files when you are editing images. This is helpful if you are using the same image library with multiple computers (on an external hard drive, for example), and want your edits to be visible on each machine.

## Treat RAW+JPG Pairs as a Single Photo

If you shoot RAW+JPG, you can use this option to 'stack' both photos inside Browse. (RAW+JPG pairs are shown with a small icon in the lower left corner of the thumbnail.)

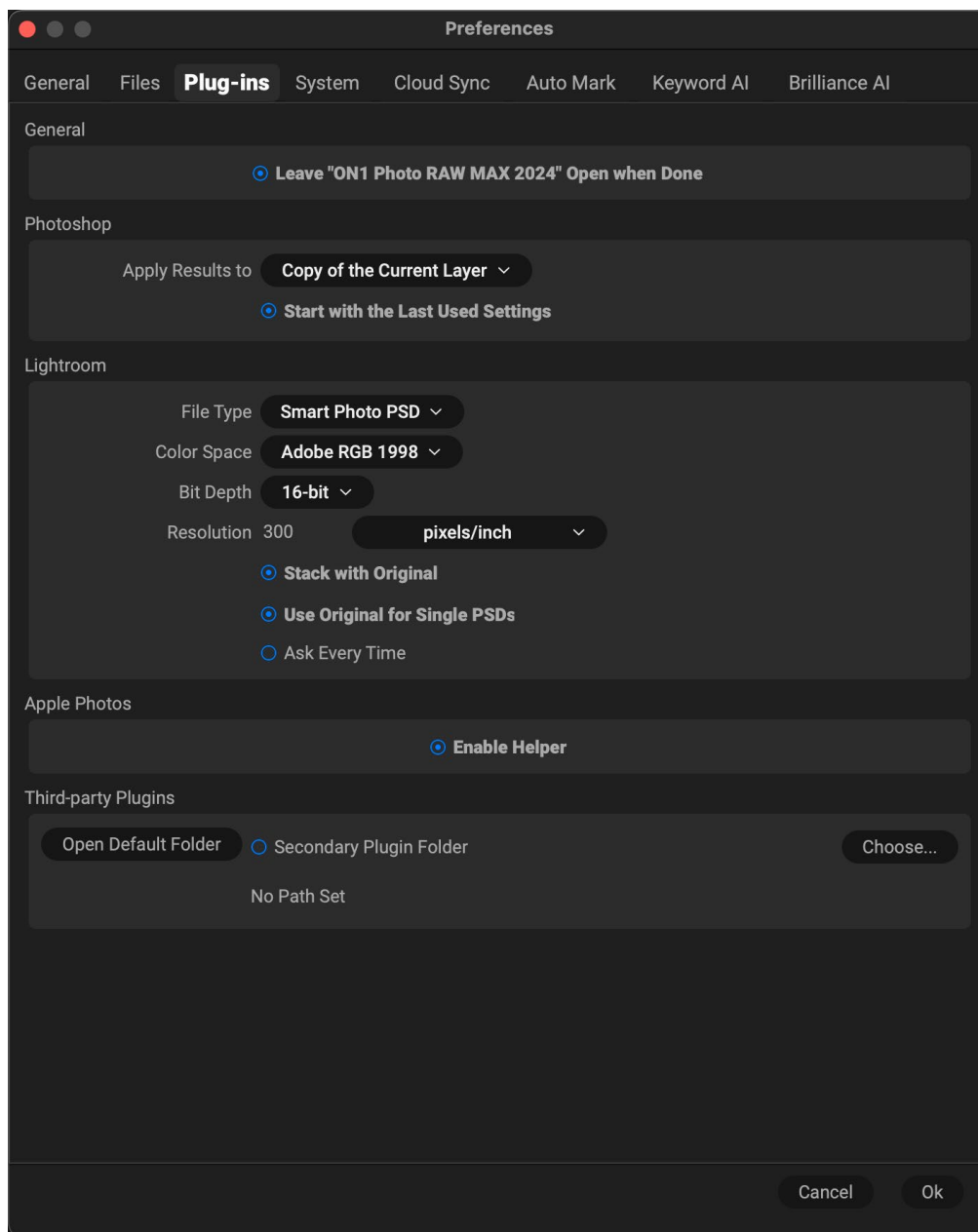
## Default Processing

The Default processing section contains three options, for lens correction, base level raw-file corrections, and applying camera-based presets. The first, Apply Lens Correction Automatically, will use the lens correction automatically on any raw photo when you view it in Detail, Filmstrip or Compare modes. The Disable Base Corrections option turns Photo RAW's basic raw-file correction settings off. This can be helpful for scientific/technical photography, time-lapse, and other specialized applications.

The Camera-Based Presets section at the bottom of the Files pane will contain a list of known cameras you have shot with. You can have Photo RAW automatically apply any preset to a specific camera by choosing the preset from the appropriate pop-up. (See [page 126](#) for more about using camera-based presets.)

## PLUG-INS

The Plug-Ins tab is used to load third-party Photoshop plugins for use within Photo RAW, and, when running ON1 Photo RAW MAX, includes options for using that app as a plugin to other applications.



### General (Photo RAW MAX only)

Checking the “Leave ‘ON1 Photo RAW MAX 2024’ open when done will keep the app open after you’ve edited an image via a plugin.

### Photoshop (Photo RAW MAX only)

- **Apply Results to:** When editing in Photoshop you can choose to have your edits added to a copy of your current layer or to the current layer. You can also choose to start with the last used settings when launching Photo RAW.

## Lightroom (Photo RAW MAX only)

This preference sets specific options for files opened via the Plug-In Extras menu in Lightroom:

- **File Type:** The file type drop-down menu determines what type of file will be created. The default is PSD, which maintains layers. You can also select ON1's Smart Photo format to preserve re-editability from within Lightroom, and JPG or TIFF if you prefer those formats. The last option, 'Same as Source,' maintains the file type of the original file, except for Lightroom raw files, which are saved as PSDs.
- **Color Space:** Sets the working color space; Adobe RGB, sRGB or ProPhoto RGB.
- **Bit Depth:** Sets the file bit depth, either 8-bit or 16-bit per pixel.
- **Resolution:** The resolution drop-down menu determines the resolution of the file.
- **Stack with Original:** When enabled, the new image is stacked with the original image.
- **Use Original for Single PSDs:** When enabled, if you select a single PSD file, it will be edited directly, rather than having a copy made.
- **Ask Every Time:** Presents these export options whenever you chose an item from the Plug-In Extras submenu. Turning this option off will bypass the file-export window, using the options in the Plug-In Preferences window every time.

**NOTE:** For detailed information about the Smart Photo format and re-editability options from within Lightroom, see [page 292](#).

## Apple Photos (Photo RAW MAX and MacOS only)

- The Enable Helper option works to ensure a smooth connection between Apple Photos and Photo RAW. It should remain on by default.

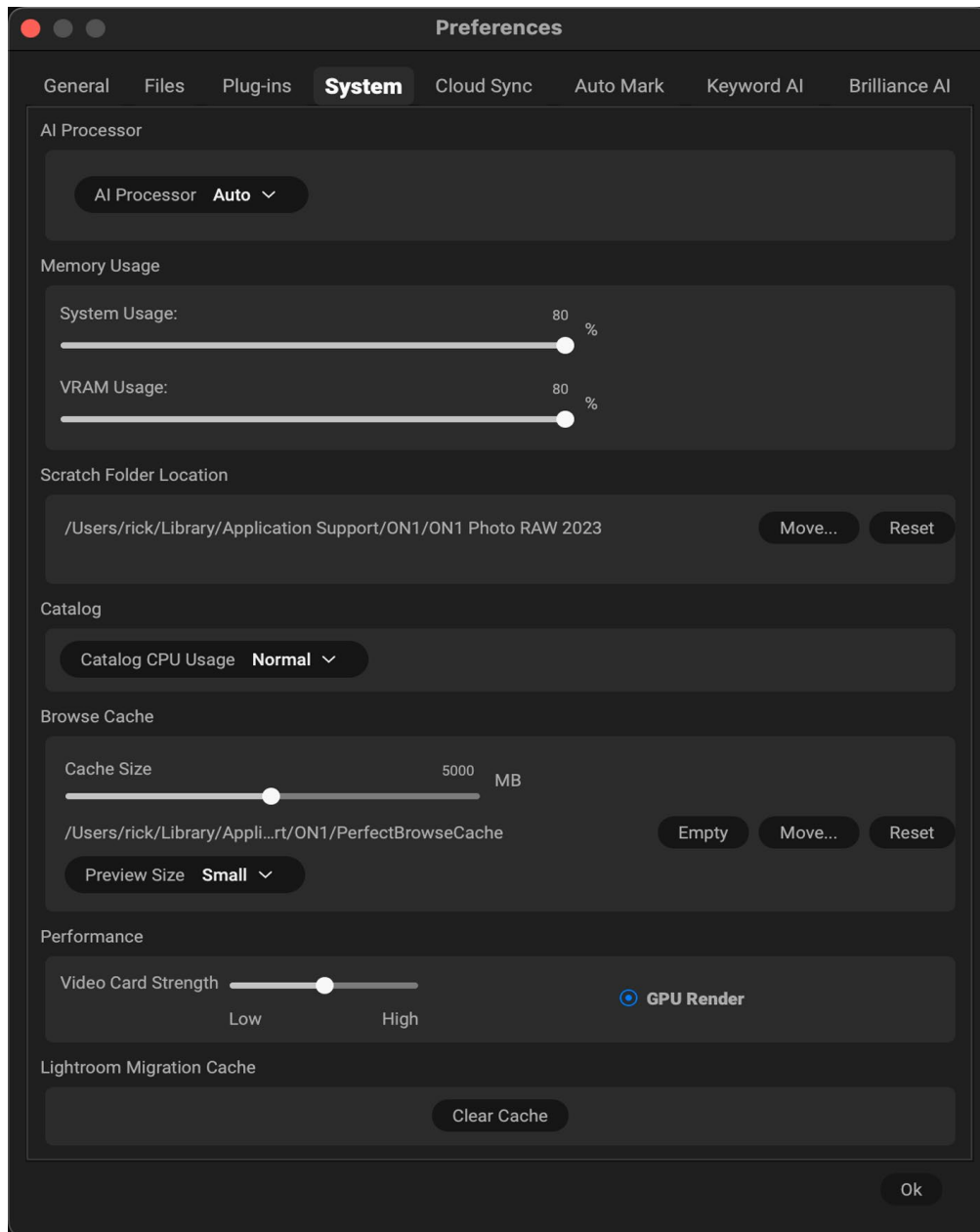
## Third-party Plugins (all versions of Photo RAW)

To install Photoshop plugins in Photo RAW's default location, click the Open Default Folder button and copy the plugin files there. You can also have a secondary plugin folder; to use this, click the checkbox, and then choose the folder by clicking on the Choose button.

See ["Using Photoshop Plugins with Photo RAW" on page 8](#) for information.

# SYSTEM

The System tab adjusts performance-related characteristics of Photo RAW 2024.



## AI processor

Sets the processing option for Photo RAW's AI-based operations. By default, the option is set to Auto, which uses the best combination of system resources to process tasks. If you are noticing some performance issues with NoNoise, Sky Swap, or other AI-based tasks, you can try setting the options to either your CPU or your graphics card.

## Memory Usage

- **System Usage:** Specifies the amount of RAM that is used by the application. The maximum (default value) is 80%.

- **VRAM Usage:** Specifies the amount of video memory (VRAM) used. The maximum (default) is 80%.

## Scratch Folder Location

Lets you move or reset your memory cache, to speed editing operations while you're running Photo RAW. This is helpful if your system drive has limited space and wish to use a faster external drive as a cache. This cache information is purged each time you quit the application.

## Catalog

The Catalog CPU Usage menu sets the default level of Browse's catalog folders processing. The options are Low, Normal (the default), High and Turbo. The higher the setting, the more Photo RAW uses your computer's CPU as it is processing cataloged folders.

## Browse Cache

ON1 Photo RAW 2024 stores thumbnails previews on disk so that the next time you browse a folder it loads much faster. This setting lets you adjust the memory cache size as well as empty the cache, move it to another location, or reset it if you are having issues with Browse.

The Preview size sets the default preview size of cached photos. The default is Small, but it can also be set to Large (HQ) if you prefer larger thumbnails.

**TIP:** If you use cataloged folders and have a small SSD boot volume, move the Browse cache to another drive for performance and space considerations.

## Performance

The Performance section is designed to help you optimize Photo RAW for your specific setup:

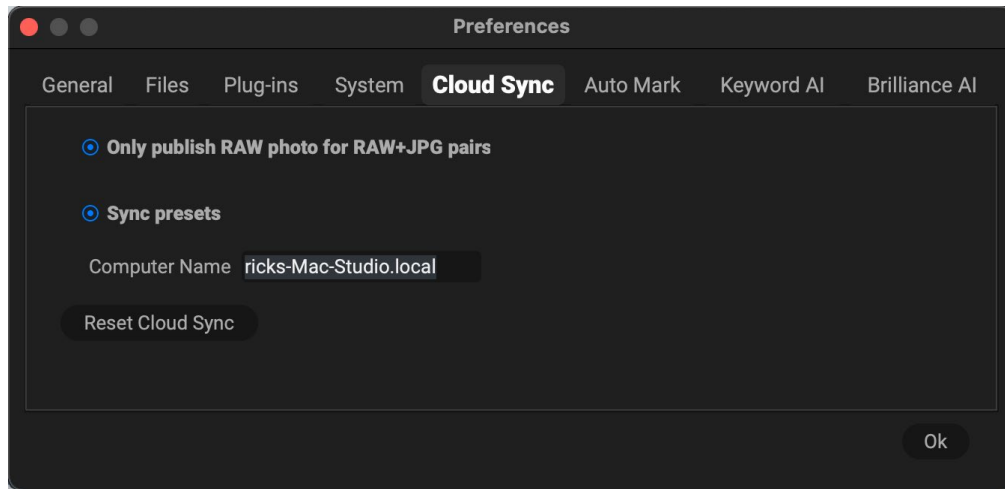
- **Video Card Strength** balances updating the preview of the image and the movement of brushes and gradient tool overlays. If your brush is sticking try turning it down. If you have a high-end video card try turning it up for faster preview updating.
- **GPU Render** uses the GPU (video card) to render preset thumbnails, exporting, printing, sharing and caching. This can greatly improve performance. It is on by default for systems that support it. It may be disabled on lower-end GPUs.

## Lightroom Migration Cache

If you run into problems with the Lightroom Migration Assistant, you can clear the cache here. (See [“Moving Your Lightroom Catalog to Photo RAW” on page 298.](#))

## CLOUD SYNC

If you have subscribed to the ON1 Cloud Sync service, this tab lets you set the name for your device (which will be displayed on your other synced devices), as well as whether or not you wish to publish RAW+JPG pairs and your presets and imported extras.

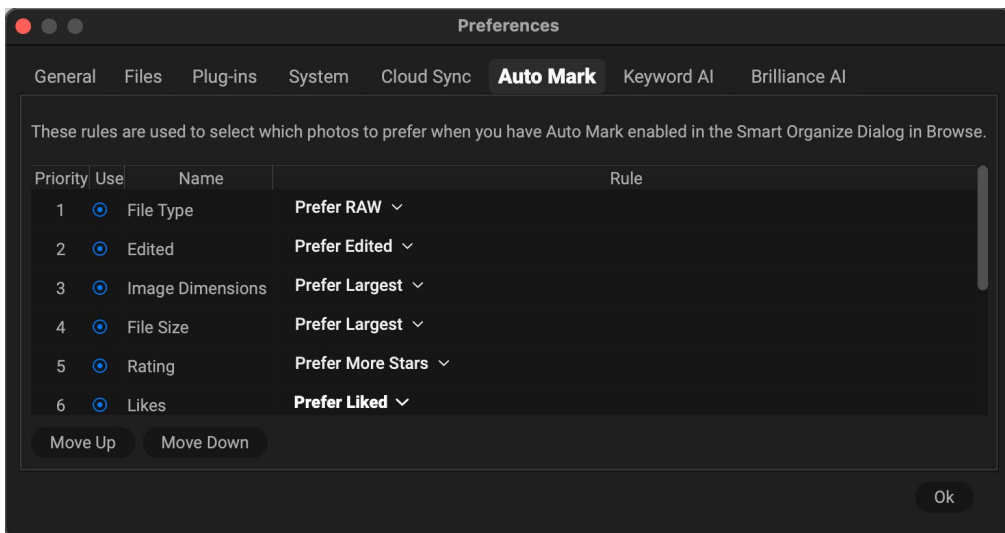


The Reset Cloud Sync button will return your sync setup to its original state, removing all photos and devices.

Detailed information about Cloud Sync can be found starting on [page 72](#).

## AUTO MARK

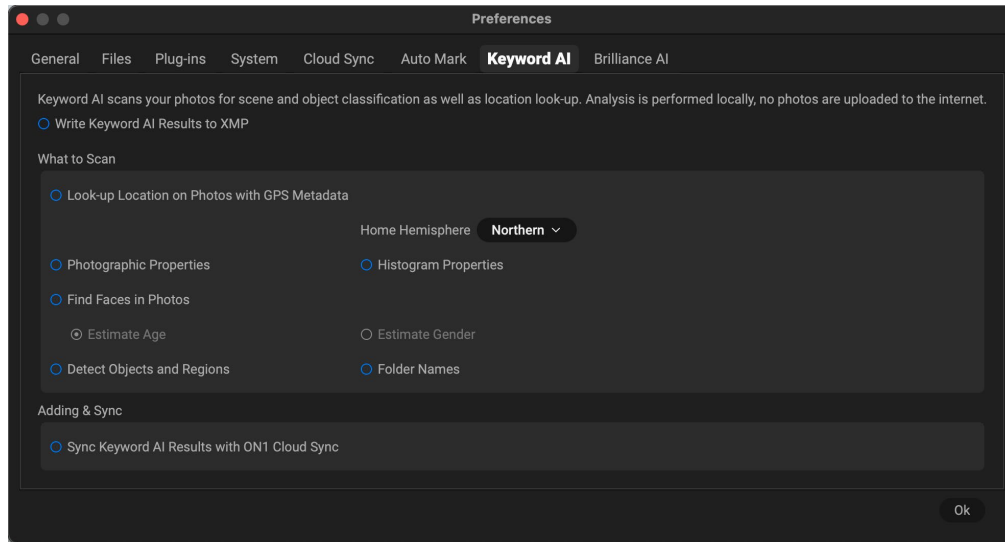
This tab lets you set the various criteria Photo RAW uses when using the Smart Organize feature in Browse. See [page 61](#) for details on Smart Organize, and how to adjust the Auto Mark settings to fit your needs.





# KEYWORD AI

This tab is for adjusting the settings of the Keyword AI feature in Browse. By default, Photo RAW scans all of the photos in all of your cataloged folders, and builds keywords based on the subjects in the photos.



If you don't wish Photo RAW to use the Keyword AI feature, uncheck the Scan Cataloged Folders with Keyword AI option. If you do, you can tweak what parameters are used to apply keywords during the scanning process. These options include:

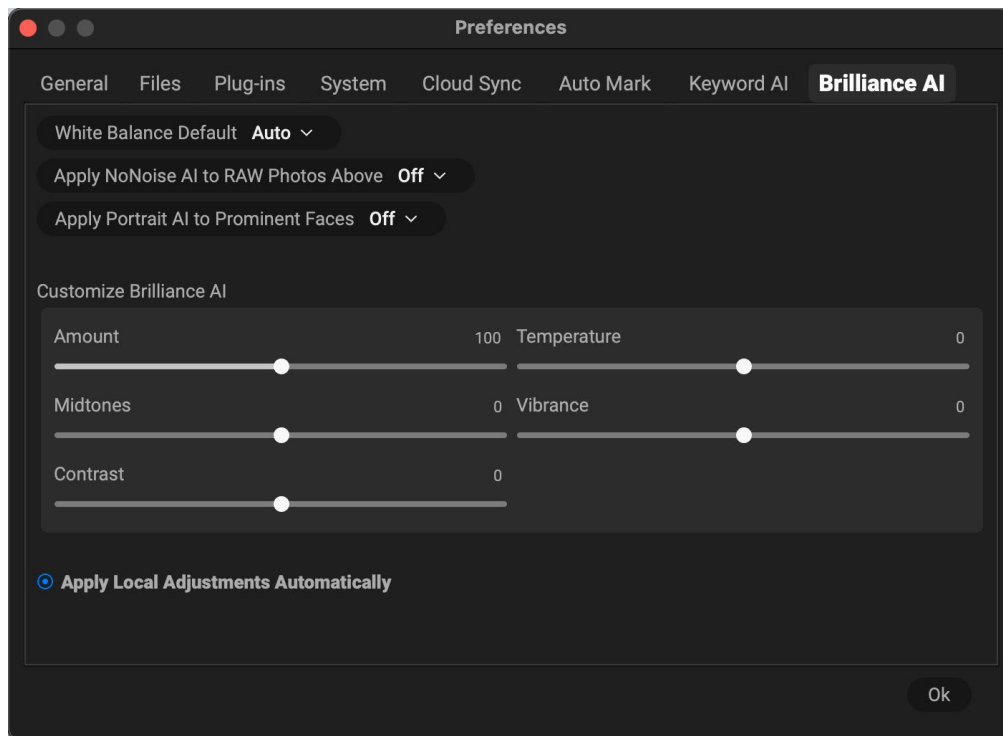
- Location lookup for GPS metadata.
- Photographic properties.
- Faces in Photos, with optional gender and age lookup.
- Objects and regions.
- Folder names.

If you are using ON1 Cloud Sync, you can set Photo RAW to sync or not sync AI-based keywords with your other devices.

See [“Keyword AI” on page 44](#) for detailed information about this feature.

## BRILLIANCE AI

This tab sets the default options for the Edit module's Brilliance AI feature.



### General Settings

- **White Balance Default:** Determines the white balance application when Brilliance AI is invoked. By default, Brilliance AI performs auto white balancing, but you can set it to any of six standard settings. If you don't want Brilliance AI to automatically adjust white balance, set the menu to 'As Shot.'
- **Apply NoNoise AI to Raw Photos Above:** Sets the minimum ISO threshold for when Brilliance AI automatically applies NoNoise. The default is off, but you can set it to 400, 800, 1600, 3200 or 6400.
- **Apply Portrait AI to Prominent Faces:** Tells Brilliance AI whether to add a Portrait AI pane for each larger face found in a photo. The default is 'Off.'

### Customize Brilliance AI

This section lets you tune Brilliance AI's parameters for the strength (Amount), color temperature, midtones, vibrance and contrast.

### Apply Local Adjustments Automatically

When checked, every time you apply Brilliance AI, it will search the photo for regions and create new local adjustments for those regions.

# USING ON1 PHOTO RAW MAX AS A PLUGIN TO EXTERNAL APPLICATIONS

- **Photoshop** ([page 285](#))
- **Photoshop Elements** ([page 286](#))
- **Lightroom Classic** ([page 287](#))
- **Apple Photos** ([page 293](#))
- **Corel PaintShop Pro** ([page 294](#))
- **Affinity Photo** ([page 294](#))
- **Capture One Pro** ([page 296](#))

# USING ON1 PHOTO RAW MAX AS A PLUGIN

Owners of Photo RAW MAX 2024 can use the app as a plugin to most major image editing apps, including Adobe Photoshop, Photoshop Elements, and Lightroom Classic, Apple Photos, Corel PaintShop Pro, Affinity Photo, and Capture One Pro. This section discusses how to use Photo RAW with each of those apps.

## USING ON1 PHOTO RAW MAX 2024 WITH ADOBE PHOTOSHOP

When you edit an image sent from Photoshop to Photo RAW's Edit module, you are editing Photoshop's currently selected layer. By default, Photo RAW makes a copy of the layer, so your original layer is saved, unless it is a Smart Object (see below). If you'd like to change this preference, see the Plug-Ins section of the Preferences window on [page 285](#).

**NOTE:** When resize an image using Photo RAW's Resize AI module from within Photoshop, the entire image is sent.

Photo RAW 2024 is accessible from within Photoshop in two ways, from the File > Automate menu, and from the Filter > ON1 menu. From the Automate menu, you can access the Develop, Effects, and Portrait tabs of the Edit module, as well as the Resize module; from the Filter menu, you can access the Develop, Effects and Portrait tabs (Browse is not accessible from within Photoshop.)

There are two options for editing an image in ON1 Photo RAW MAX 2024. Which method you choose depends upon whether you wish to be able to re-edit your image in Photo RAW.

### Editing a photo From Photoshop without preserving changes made in Photo RAW

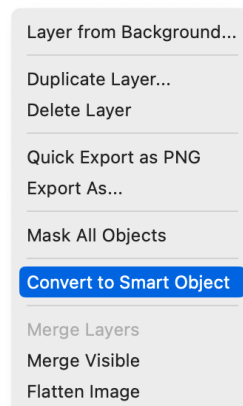
To use Photo RAW inside Photoshop, when you do not wish so be able to re-edit your operations:

1. Open the image you want to work on in Photoshop.
2. Select the layer you want to work on.
3. From the Filter menu, select ON1 and then the Edit module tab you would like to start in.
4. When you're finished editing your photo, click the Done button in ON1 Photo RAW 2024.

### Editing a photo From Photoshop to preserve changes made in Photo RAW

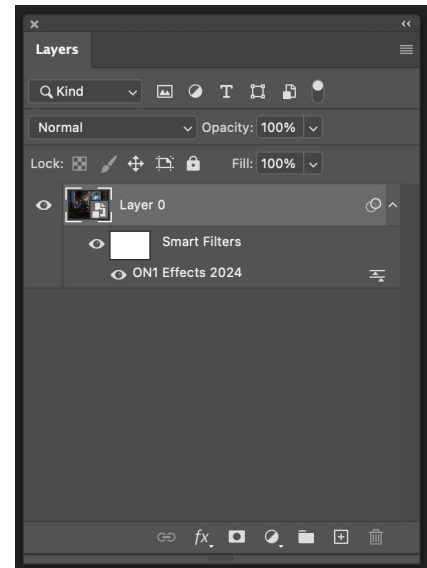
To be able to re-edit your Photoshop images at a later point inside Photo RAW, you will use Photoshop's Smart Object technology:

1. Open the image you want to work on in Photoshop.
2. Select the layer you want to work on.
3. Right-click on the layer and choose Convert to Smart Object.
4. From the Filter menu, select ON1 and then the tab that you would like to use.
5. When you're finished editing your photo, click the Done button in Photo RAW MAX 2024.



To re-edit your Smart Object layer again inside ON1 Photo RAW MAX 2024, double-click on the ON1 module name in the edited Smart Object layer in Photoshop. Photo RAW will then launch that module, and let you change your previous settings or make new ones.

**NOTE:** Smart Object re-editability is not possible when you add a layer to your photo in Photo RAW (in addition to the original, base layer). When you save your work, Photo RAW will flatten the image before it sends it back to Photoshop.



*To re-edit a Photoshop layer in Photo RAW, double-click the module name in the Smart Filters section of the Layers palette.*

## USING PHOTO RAW MAX WITH ADOBE PHOTOSHOP ELEMENTS

When you edit an image sent from Photoshop Elements to Photo RAW's Edit module, you are editing Photoshop Elements' currently selected layer. By default, Photo RAW makes a copy of the layer, so your original layer is saved. If you'd like to change this preference, see the Plug-Ins section of the Preferences window ([page 285](#)).

ON1 Photo RAW MAX 2024 is accessible from within Photoshop Elements in two ways, from the File > Automation Tools menu, or from the Filter > ON1 menu. From the Automate menu, you can access the Develop, Effects, and Portrait tabs of the Edit module, as well as the Resize module; from the Filter menu, you can access the Develop, Effects and Portrait tabs (Browse is not accessible from within Photoshop Elements.)

### Editing a photo in Photoshop Elements

To use Photo RAW inside Photoshop Elements, follow these steps:

1. Open the image you want to work on in Photoshop Elements.
2. Select the layer you want to work on.
3. From the Filter menu, select ON1 and then the Edit module tab you would like to start in.
4. When you're finished editing your photo, click the Done button in ON1 Photo RAW MAX 2024.

**NOTE:** Photoshop Elements does not support Smart Objects, so all edits done inside ON1 Photo RAW are final, once you return to Elements.

## USING PHOTO RAW MAX WITH LIGHTROOM CLASSIC CC

Photo RAW can be accessed as a plugin from within Adobe Lightroom Classic CC, providing an integrated, round-trip editing workflow for your images. With the exception of the Browse module, all modules and features inside Photo RAW are available when acting as a plugin.

There are two primary ways to use Photo RAW with Lightroom, via the Edit In command in the Photo menu and Plug-In Extras command in the File menu. Using the Photo > Edit In menu gives you quick access to the Edit module and Resize, while File > Plug-In Extras gives you additional, and more powerful, options for editing inside Photo RAW, including:

- Re-editability via ON1's proprietary Smart Photos format (see [page 292](#)), which saves all the edits made in Photo RAW, so that you can re-edit them at a later time.
- Batch processing of multiple images for editing in Photo RAW (see [page 285](#)).
- The capability to export multiple photos as layers to Photo RAW, so that they can be worked on for compositing or other purposes (see [page 285](#)).

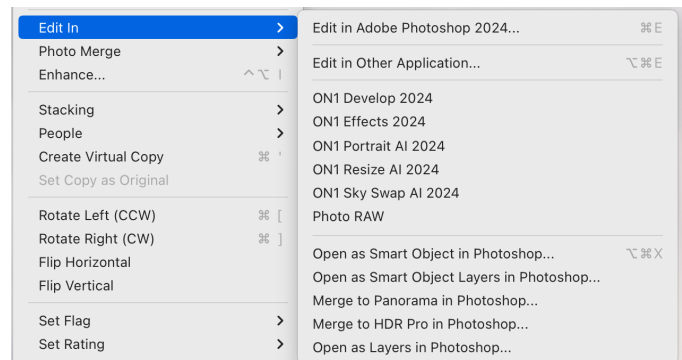
**NOTE:** Lightroom is a raw editor similar to Photo RAW; while both programs can open and edit raw files, their raw processing engines are not compatible with one another. Any edits made to a raw file in one program will not be visible in the other. For best practices, you should generally choose one program to be your organizational and raw editing tool. If you are a Lightroom Classic user and are thinking about switching to Photo RAW as your primary raw editor, see [“Moving Your Lightroom Catalog to Photo RAW” on page 298](#) for detailed information on the process, including the different options available and which editing parameters are preserved during conversion.

### Using ‘Edit In’

If you wish to make quick edits on a single image in Photo RAW, and don't need to preserve your edits or work with multiple photos, use the Edit In submenu from Lightroom's Photo menu. This is the easiest way to send a photo from Lightroom to Photo RAW. With this option, you are using Lightroom's plugin export system to control the characteristics of the edited file.

To use this method, select your image in Lightroom, go to the Photo menu and select the Edit In submenu and choose the module

you wish to work in (Develop, Effects, Portrait AI, Sky Swap AI or Resize AI). If you choose any of the Edit module tabs from the menu, you'll be able to move between the other tabs—including the Local tab—during your editing session inside Photo RAW. You can even switch from the Edit module to Resize and finish the image from within that module (although you cannot travel from Resize to the Edit module in any scenario).



*For quick editing of photos from Lightroom, you can choose Edit in from Lightroom's Photo menu.*



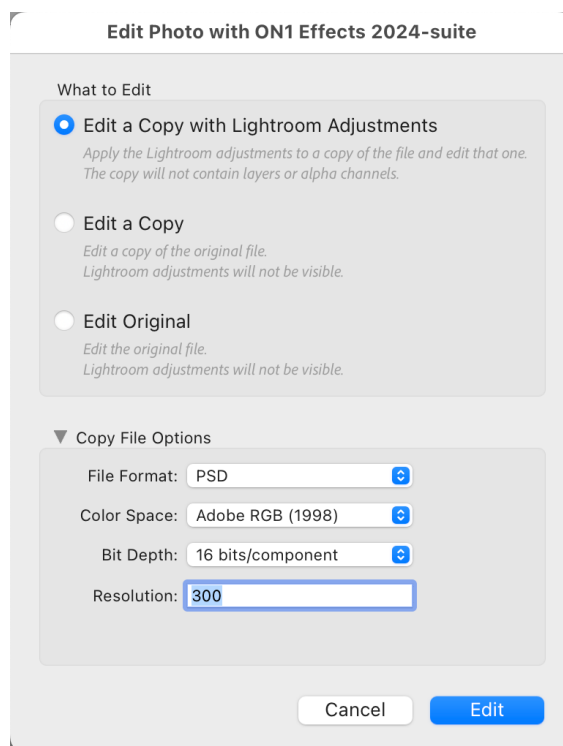
## File creation characteristics when using Edit In

When you use the Photo > Edit In submenu, Lightroom will ask you each time how you wish to edit the selected image. You have three editing options:

- **Edit a Copy with Lightroom Adjustments**, which makes a copy of the file that includes any edits you have made in the photo;
- **Edit a Copy**, which copies the original photo without any changes made in Lightroom; or
- **Edit Original**, which sends the original version of the photo to Photo RAW.

**NOTE:** Edit a Copy and Edit Original are not available when selecting a raw file to send to Photo RAW.

In the Copy File Options, you set the file type (TIFF, Photoshop PSD or JPEG), the color space and bit depth for the resultant file. PSD is the preferred file type, especially if you wish to create layers inside Photo RAW while editing the exported image. (The layers, along with any associated layer masks, will be saved, and can be re-edited by choosing Photo > Edit In and Edit Original from the Edit Photo window.)

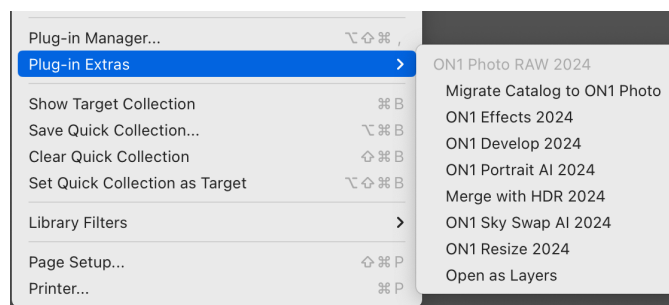


When you have set your options and click the Edit button, Lightroom will create a new file (or send the original) and launch Photo RAW. There, you can make your edits in any of the Edit module tabs—or inside Resize, if you chose that module from the Edit In submenu. When you're finished, click the Done button to save your changes, close Photo RAW, and return the file to Lightroom. To return to Lightroom without saving your edits, click Cancel.

**NOTE:** While you cannot create a Smart Photo PSD via Edit In, you can open an existing Smart Photo with Edit In. Select the Smart Photo, choose Edit In and the Edit module tab you wish to start in (Develop, Effects, Sky Swap AI or Portrait AI), and choose Edit Original in the window. Photo RAW will open the image in the chosen tab, with your previous edits intact. Any subsequent edits you make will be saved with the Smart Photo when you return to Lightroom. (Information about the Smart Photo format starts on [page 292](#).)

## Using 'Plug-In Extras'

Accessing ON1 Photo RAW MAX 2024 from Lightroom's File > Plug-in Extras menu is the preferred way to access the app. It gives you access to all Photo RAW modules (except Browse) and has the most flexibility in how the files are handled. To edit an image (or group of images, if you want) in Photo RAW, make your selection in Lightroom, go the File menu's Plug-In Extras submenu, and choose an option. What happens depends upon your selection:



The Plug-In Extras submenu is found in Lightroom Classic's File menu.

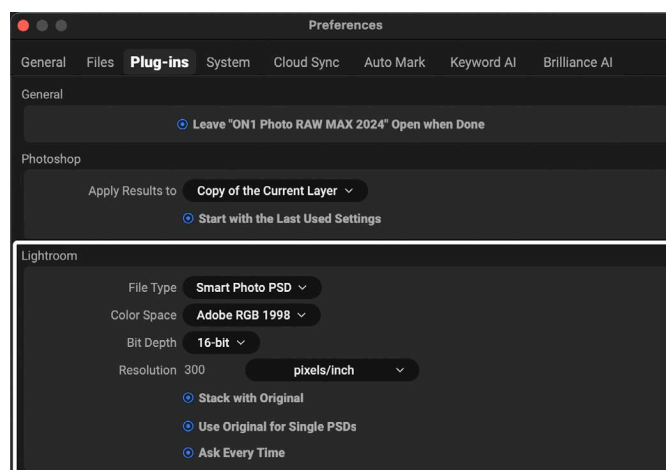
- If you choose Effects, Develop, Sky Swap AI or Portrait AI, Photo RAW will open in that tab within the Edit module, and you can move between the other tabs during your editing session. If you use the PSD file format as your conduit between Lightroom and Photo RAW, you can also create layers, which will be saved when you return to Lightroom. You can also move to Resize from the Edit module during your session, but when you return to Lightroom, the image will be saved as a flattened, resized Photoshop file.
- If you select multiple photos inside Lightroom and choose Effects, Develop, Sky Swap AI or Portrait AI, you will be presented with batch options in the Edit Photo window (see [page 285](#)).
- To merge a set of bracketed photos using Photo RAW, select the bracket, and choose Merge with HDR 2024.
- If you choose Resize, you can only work in that module.
- Choosing multiple files and selecting "Open as Layers" will create a layered document inside Photo RAW's Edit module.

**NOTE:** The Migrate Catalog to ON1 Photo item in the Plug-In Extras menu is designed to help you transition from Lightroom to Photo RAW as your primary raw processing app. For detailed information on this process, see [page 298](#).

## File creation characteristics when using Plug-In Extras

When you access ON1 Photo RAW MAX 2024 through Lightroom's Plug-In Extras menu, the default file-handling options are driven by the settings in the Plug-ins tab of Photo RAW's Preferences window (highlighted on the left). These options can be configured in advance, based on your workflow, and can be changed as desired. The file export options include the following settings:

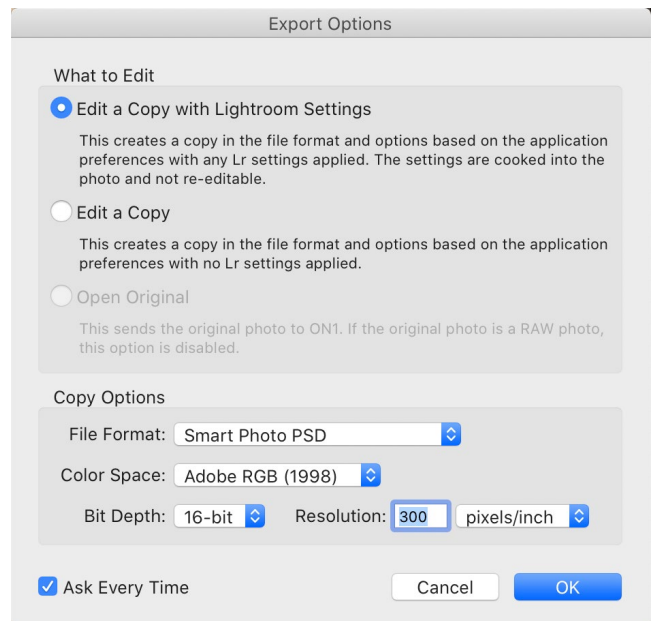
- **File Type:** This determines what type of file will be created. The default is



PSD, which maintains layers, but does not support re-editability. You can also select Smart Photo PSD, JPG or TIFF, if you prefer those formats. One other option, Same as Source, will edit the original file; if that file is in the Raw format, it will be sent as a PSD file.

- **Color Space:** The color space menu determines which RGB working color space is used; Adobe RGB 1998, sRGB or ProPhoto RGB.
- **Bit Depth:** Sets the exported file's bit depth to either 8 or 16 bits per pixel.
- **Resolution:** Determines the resolution of the newly created file.
- **Stack with Original:** When enabled, the new image is stacked with the original image upon return to Lightroom from Photo RAW.
- **Use Original for Single PSDs:** When enabled, if you select a single image in PSD format, the original file will be edited, rather than having a copy made.
- **Ask Every Time:** When checked, Lightroom will present these export copy options whenever you chose an item from the Plug-In Extras submenu. Turning this option off will bypass the file-export window inside Lightroom, using the options set in Plug-In Preferences window.

If you have the Ask Every Time option checked, you'll be presented with the Export window (shown on the right) inside Lightroom whenever you send an image to Photo RAW—or when you use the Open as Layers option with multiple images. The Export Options window lets you adjust the file format characteristics as needed, and is designed for users with variable workflow needs. If you find that you use the same options every time, then you can set those parameters in Photo RAW's Preferences window by unchecking the Ask Every Time option.



*If you have the Ask Every Time option turned on in Photo RAW's Plug-Ins Preferences window, whenever you send an image from Lightroom to Photo RAW, the Export Options window will be displayed.*

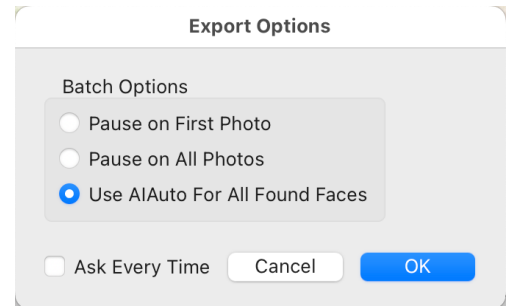
## Batch processing options with Plug-In Extras

You can process multiple images for editing in Photo RAW modules via Plug-In Extras. Select the images you wish to work with in Lightroom's Library module and chose a starting place via the Plug-In Extras submenu: Develop, Effects, Portrait AI or Resize. Then, the Export Options window will open with two or three batch options, depending upon the Photo RAW destination chosen from the Plug-In Extras submenu:

- **Pause on First Photo:** Use this option when you wish to apply *the exact same editing operations* to a group of photos. This option will open the first selected image inside Photo RAW. There, you can perform almost any editing option inside the Edit module (or Resize), including presets, retouching operations, text additions, cropping, masks, local adjustments and more. When you have finished with your edits, click Done. Photo RAW will then apply all of the edits to each image in the group, and return you to Lightroom.
- **Pause on All Photos:** This option lets you sequentially edit the images in the batch. Photo RAW will open each image in the destination tab, where you can edit it as desired. When you

are finished editing with one photo, click Done, and Photo RAW will save that photo and open the next one, with the previous photo's Edit module settings applied. (You can reset any or all of those settings as desired.) When you have finished editing the last photo in the group, clicking Done will save the image, close Photo RAW and return you to Lightroom.

- **Use AI Auto for all Found Faces:** This option is only available when Portrait AI is chosen as the destination from the Plug-In Extras submenu. Clicking OK will launch Portrait AI, automatically find all the faces in each photo and retouch each one according to the default setting—Subtle or Strong—set in Photo RAW's General Preferences. No other editing is done, and the batched photos are displayed inside Lightroom when the process is complete.



*The Batch Options window comes up when you wish to send a group of photos from Lightroom to Photo RAW for editing. (If you have the Ask Every Time option set in Photo RAW's Preferences, Batch Options will be displayed as a section in the Export Options window, and you will be able to set the file copy options for the photos in the batch.)*

**NOTE:** When using the Pause on First Photo batch processing option, most Edit module tools and operations are supported and carried through to the subsequent images in the batch. The only things that are not replicated are any layer operations, and any adjustments made with the Transform tool. If you apply edits made with these options, they will only be applied to the first image in the group.

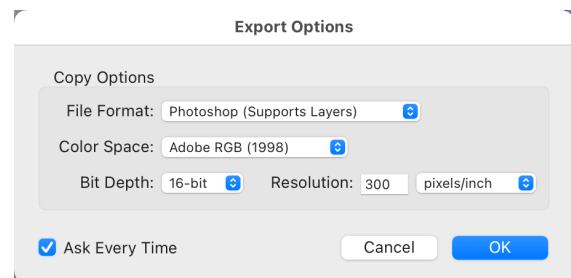
## Using Plug-In Extras to combine multiple photos as layers in Photo RAW

The other primary editing option you have with Plug-In Extras is to send a group of images to Photo RAW as a single file, with each photo on a separate layer. There, you can perform compositing and any other operations you can do with Photo RAW's Layers function.

Select a group of images in Lightroom, and choose Open as Layers from Plug-In Extras. Photo RAW will open them as a layered file inside the Edit module.

The Open as Layers option uses the file characteristics set up in the Preferences' Plug-ins tab as the final output format, with the following conditions:

- If you chose the Smart Photo PSD format, your layers and layer masks will remain embedded in the file, and any adjustments made in the Edit module on each layer will be retained when you save the file and return to Lightroom. (See [page 292](#) for information on working with—and re-editing—Smart Photos.)
- With the standard Photoshop PSD format, your layers and layer masks will remain embedded in the file, but any adjustments made in the Edit module on each layer will be lost when you



*When selecting a group of images in Lightroom to open as a single, layered file, the copy options are determined by the settings in Photo RAW's Preferences. If you have Ask Every Time set, you can select the finished image file type from Lightroom.*

save the file and return to Lightroom. You will still be able to edit the individual layers and layer masks inside Photo RAW or Photoshop, however.

- When using TIFF or JPEG as your copy format, when you are finished editing in Photo RAW and click Done, all of the layers, layer masks and any Edit module operations will be merged into a single composite layer.

For detailed information about Photo RAW's Layers feature, see [page 195](#).

## Working with Smart Photos

ON1's Smart Photo technology is a variation of the Photoshop file format that has been engineered to preserve all editing and retouching operations made within Photo RAW's Edit module: Develop settings, Effects filter operations, masks, local adjustments, portrait retouching, layers, text additions, and so forth. Smart Photos can only be created via the Plug-In Extras export method as discussed on [page 288](#), although you can re-edit them via either the Plug-In Extras or the Edit In menu options in Lightroom.

When you choose Smart Photo PSD as an option in the Plug-In Extras submenu from within Lightroom, Photo RAW creates a standard Photoshop file with "Smart Photo" at the end of the original file's name. As you work in Photo RAW's Edit module tabs, all of your editing operations are saved in a 'sidecar' file that sits alongside the PSD on disk inside the same folder as your original image. When you are done editing and return to Lightroom, your edited photo will look as it did in Photo RAW, but is completely re-editable.

To re-edit a Smart Photo from within Lightroom, select the image, and choose the appropriate Edit module tab from either the Plug-In Extras from the File menu or Edit In from the Photo menu. Depending upon the method chosen and your Photo RAW Preferences, the Smart Photo will open automatically, or you will need to select Edit Original from the Lightroom export window.

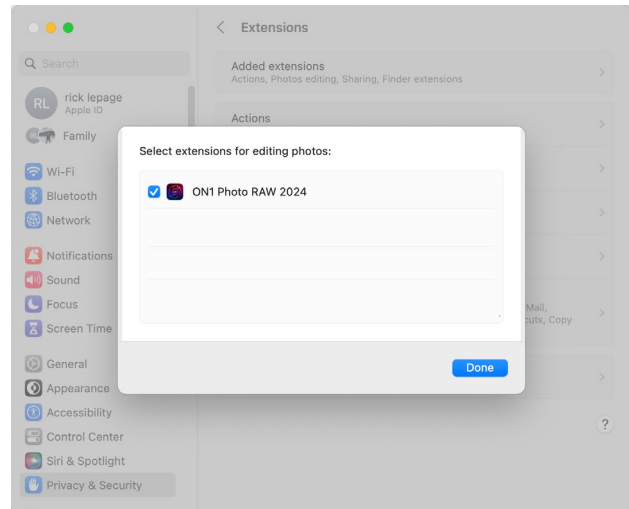
There are a few things to know about with regards to Smart Photos and re-editability:

- Smart Photos have been specifically designed to work as a conduit between Lightroom and Photo RAW to preserve re-editability. If you use Photo RAW as a standalone app, you can open and view a Smart Photo from within Browse, and can re-edit the photo in the Edit module, and, as long as your sidecar file is present, all of your edits will be present. However, when you return to Browse, Photo RAW will create a new .onphoto file with all your edits.
- If you open a Smart Photo in Adobe Photoshop, the layers will be merged into a single, composite layer. If you make any edits to the photo and save it, re-editability in Photo RAW will no longer be available.
- Smart Photos are not available as an option when exporting from Lightroom to ON1 Resize.

## USING PHOTO RAW MAX WITH APPLE PHOTOS

ON1 Photo RAW MAX 2024 integrates with Apple Photos (for MacOS only) and provides a seamless experience for enhancing your images.

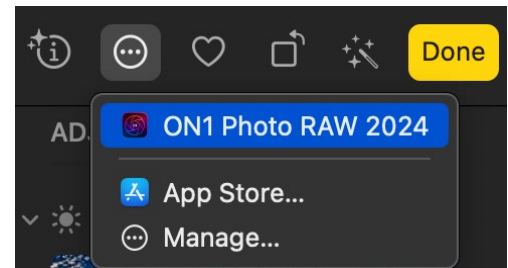
If you have Photos on your computer when you install ON1 Photo RAW MAX 2024, the appropriate plugin will be installed, but you will need to manually activate it in order to use it. To do so, go to Apple's System Preferences and click on the Extensions icon. In the Extensions pane, click on Photos, then check the ON1 Photo RAW MAX 2024 option. This will let you send images from Apple Photos to Photo RAW MAX 2024. (File Sharing must also be turned on in System Preferences for this to work.)



After installing ON1 Photo RAW 2021 on your Mac, you must turn the Photos extension on via Apple's Extensions System Preference.

To edit an image in ON1 Photo RAW MAX 2024 follow these steps:

1. Select the image you wish to edit in Photos.
2. Click on the Edit button.
3. On the right side of the window, at the bottom of the editing controls, you'll see an Extensions pop-up. Click that button, and choose ON1 Photo RAW MAX 2024. Your photo will open in Photo RAW's Edit module, and you can switch between all of the tabs in the module during your editing session.



In Apple Photos, click the pop-up menu next to the Extensions label when editing a photo and you'll see the options for sending your photo to Photo RAW 2024.

### Non-destructive editing with Apple Photos

When you send an image from Apple Photos to Photo RAW, any settings you apply will be saved with the image, so that you can send the image back to Photo RAW with your edits intact, *as long as you do not subsequently edit that image inside Photos*. To re-edit an image processed inside Photo RAW, click on the image in Photos and follow the same three steps above. When your image is opened inside Photo RAW, you will see all of the changes you made in your previous session.

Once you make any editing changes to your image inside Photos, your Photo RAW edits will be “baked in” to the image. You can send the image again to Photo RAW, but your original settings won't be visible.

If you wish to keep your original Photo RAW edits, duplicate the image inside Photos (Image > Duplicate), which will create a new virtual copy of the file. You can then edit one of the versions in Photos, using the other one to preserve your Photo RAW edits.



## USING PHOTO RAW MAX WITH COREL PAINTSHOP PRO

When you edit an image sent from Corel PaintShop Pro (Windows-only) to ON1 Photo RAW, you are editing PaintShop Pro's currently selected layer. To use Portrait inside PaintShop Pro, follow these steps:

1. Open the image you want to work on in PaintShop Pro.
2. Select the layer you want to work on.
3. From the Effects menu, select Plugins > ON1 > ON1 Photo RAW MAX 2024.
4. When you're finished editing your photo, click the Done button in Portrait.

PaintShop Pro does not support nondestructive editing with Photo RAW; if you would like to work on a copy, before you send the photo to Portrait, right-click on the layer in PaintShop Pro and choose Duplicate.

## USING PHOTO RAW MAX WITH AFFINITY PHOTO

ON1 Photo RAW can be accessed from within Affinity Photo, providing an integrated, round-trip workflow of your images on both MacOS and Windows. To use Photo RAW as a plugin to Affinity Photo, you must first activate the plugin from within Affinity Photo.

### Activating Photo RAW for use with Affinity Photo (Windows)

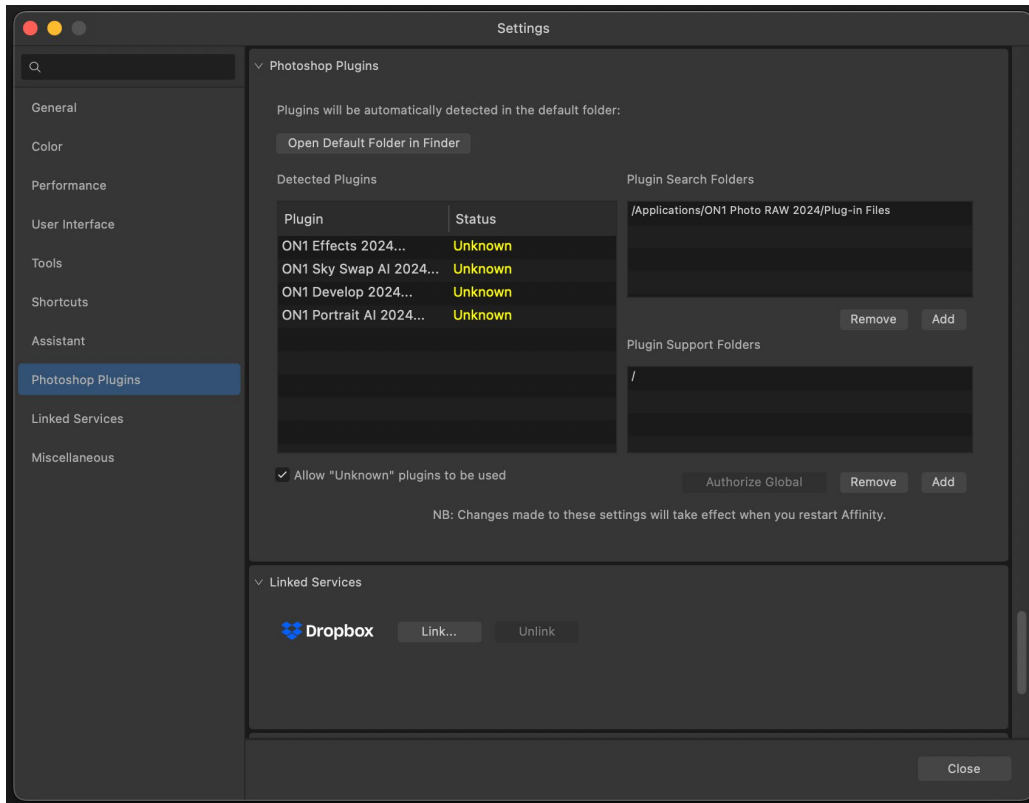
1. To setup Photo RAW as a plugin on Windows, go first to Edit > Preferences and click on the Photoshop Plugins icon.
2. Check the 'Allow "unknown" plugins to be used' box at the bottom of the screen.
3. Click on the Add button underneath the Plugin Search Folders area, and navigate to `\Program Files\ON1\ON1 Photo RAW MAX 2024\Plug-in Files\ON1 Photo RAW MAX 2024.plugin`.  
Click OK.
4. When you click on the Close button, Affinity Photo will prompt you to restart the app. When you do this, you should now see Photo RAW listed in the Detected Plugins section of the Photoshop Plugins preferences.

### Activating Photo RAW for use with Affinity Photo (MacOS)

Setting Affinity Photo up for MacOS is nearly identical to the Windows activation. There is only one additional step.

1. Go first to Preferences, located in the Affinity Photo menu on the top left. Click on the Photoshop Plugins icon.
2. Check the 'Allow "unknown" plugins to be used' box at the bottom of the screen.
3. Click on the Authorize Global button at the bottom of the window. MacOS will present you with a dialog box that shows the root folder of your system. Click on the Authorize button in this box.
4. Click on the Add button underneath the Plugin Search Folders area, and navigate to `Applications/ON1 Photo RAW MAX 2024/Plug-in Files/ON1 Photo RAW MAX 2024.plugin`.  
Click OK.

5. When you click on the Close button, Affinity Photo will prompt you to restart the app. When you do this, you should now see Photo RAW listed in the Detected Plugins section of the Photoshop Plugins preferences.



## Editing a Photo in Photo RAW from within Affinity Photo

When you edit an image sent from Affinity Photo to ON1 Photo RAW, you are editing Affinity Photo's currently selected layer. To use Portrait inside Affinity Photo, follow these steps:

1. Open the image you want to work on in Affinity Photo, and click the Develop button.
2. Select the layer you want to work on.
3. From the Effects menu, select Filters > Plugins > ON1 > ON1 Photo RAW MAX 2024.
4. When you're finished editing your photo, click the Done button in Portrait.

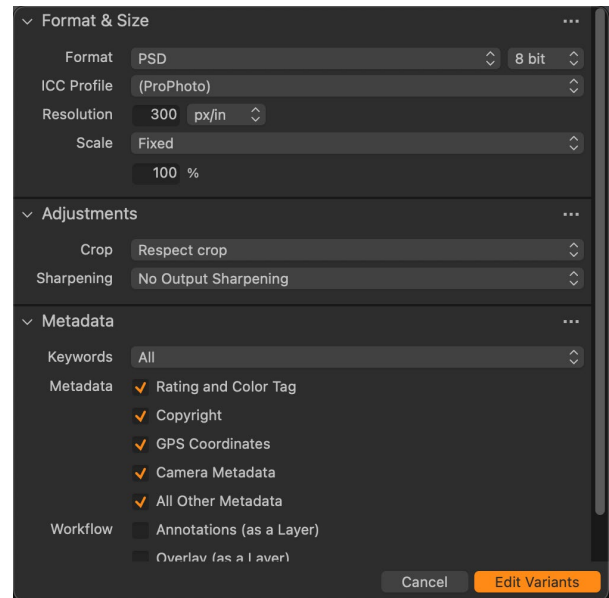
Affinity Photo does not support nondestructive editing with Photo RAW; if you would like to work on a copy, before you send the photo to Portrait, right-click on the layer in Affinity Photo and choose Duplicate.

## USING PHOTO RAW MAX WITH CAPTURE ONE

When you edit an image sent from Capture One to Photo RAW, Capture One creates a variant of the current photo. To use Effects inside Capture One, follow these steps:

1. Open the image you want to work on in Capture One.
2. From the Image menu, select Image > Edit With > [Photo RAW module of your choice]
3. Choose the file characteristics in the Format and Size section that you wish to use—File Type, Bit Depth, ICC Profile, and Resolution. You can also set the options in the Adjustments and Metadata tabs as desired. When you're done, click the Edit Variants button to launch Photo RAW.
4. When you're finished editing your photo, click the Done button in Photo RAW.

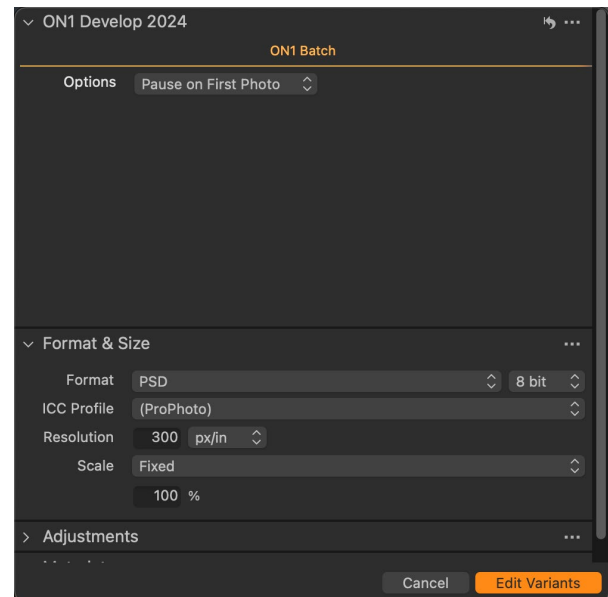
After you've returned to Capture One, your new variant will be visible in the current collection.



## BATCH PROCESSING IMAGES IN EFFECTS WITH CAPTURE ONE

You can process multiple images for editing in Effects with Capture One. Select the images you wish to work with in Capture One and choose Image > Edit With > [Photo RAW module of your choice]. The Export Variant window will open with an additional tab, ON1 Batch, which contains a pop-up with two options:

- **Pause on First Photo:** Use this option when you wish to apply *the exact same editing operations* to a group of photos. This option will open the first selected image inside Effects. There, perform any editing option you wish, including adding filters, applying presets, retouching operations, cropping, masks, local adjustments and more. When you have finished with your edits, click Done. Effects will then apply all of those edits to each image in the group, and return you to Capture One.
- **Pause on All Photos:** This option lets you sequentially edit the images in the batch. Effects will open each image in the destination tab, where you can edit it as desired. When you are finished editing with one photo, click Done, and Effects will save that photo and open the next one, with the previous photo's Effects settings applied. (You can reset any or all of those settings as



desired.) When you have finished editing the last photo in the group, clicking Done will save the image, close Effects and return you to Capture One.

Before sending multiple images to Effects from Capture One, you can also click on the Basic, Adjustments and Metadata tabs to change those options. Once you have all the options chosen, click the Edit Variants button and Effects will process that group based on your batch settings.

# MOVING A LIGHTROOM CATALOG TO PHOTO RAW

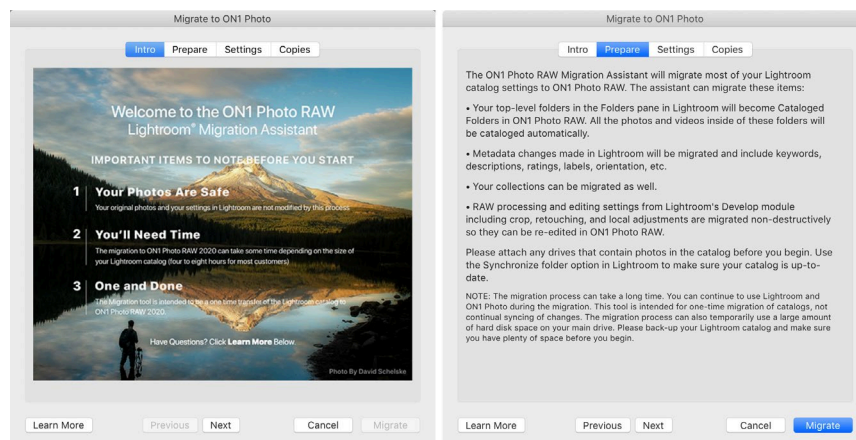
If you are a Lightroom user and you wish to make Photo RAW your primary editing application, you can use our Lightroom Migration Assistant to transfer most of your catalog settings and metadata from Lightroom into Photo RAW. You can even—with a few caveats—transfer photos that have been edited in Lightroom so that they appear inside ON1 Photo with corresponding (non-destructive) edits applied to them. And, it does this without changing any of the original files in your Lightroom catalog, or the catalog itself. Instead, we use machine learning to migrate the actual Lightroom edits in a re-editable, non-destructive way.

**NOTE:** This tool is designed for one-time migration of catalogs. As such, the migration process can take a long time. You can continue to use Lightroom and ON1 Photo RAW 2024 during the migration period. The migration process can also temporarily use a large amount of disk space on the drive (or drives) where you store your images. Make sure you have plenty of space before you begin.

This tool performs the following tasks:

- Top-level folders in Lightroom’s Folders pane become cataloged folders in Photo RAW. All the photos and videos in those folders will be cataloged automatically.
- Metadata changes made in Lightroom will be migrated, and include ratings, flags, keywords, descriptions, GPS data, color labels, orientation, and so forth.
- Standard Lightroom collections will be migrated as well. (Smart collections are not converted.)
- Most raw processing and editing settings made inside Lightroom’s Develop module are migrated non-destructively—and are editable—inside Photo RAW. These operations include crop, retouching, local adjustments, vignettes, noise reduction and sharpening, and more. (See [“Which Lightroom Settings are migrated?”](#) on page 301 for exact details of which settings are transferred and which ones are not.)

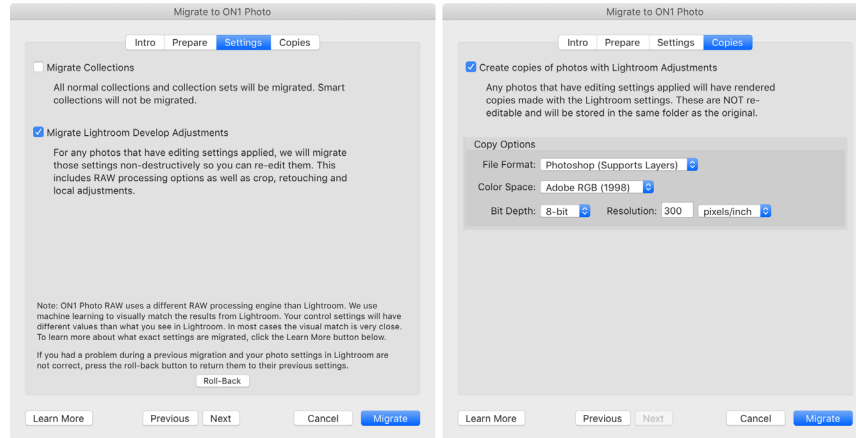
To migrate your catalog, open it inside Lightroom, and choose Migrate Catalog to ON1 Photo from File > Plug-In Extras. An assistant window will open up; the first and second tabs of the window have an



The Intro and Prepare tabs give you information about the Lightroom Migration assistant. Click the Learn More button to go to the ON1 website for more detailed information about the process.

introduction about the process. If you would like to see any additional up-to-date information on the Migration Assistant, click the Learn More button, which will take you to a help page on the ON1 website.

Click on the Next button when you're ready; this will take you to the Settings tab, where you can choose whether to have the Assistant transfer your standard Lightroom Collections (Smart Collections are not transferable) and any Develop adjustments made in Lightroom. Once you've made your selection, click on the Next button to go to the Copies tab.



The Settings and Copies tab offer multiple options for the conversion operation.

**NOTE:** If you migrated your Lightroom catalog, and your photo settings in Lightroom are not correct, launch the Migration Assistant again, go to the Settings tab and click the Roll Back button at the bottom of the tab. This will return your Lightroom settings to the state before you started the Migration process. (Click the Cancel button when the roll-back procedure is complete.)

The Copies tab lets you export copies of any photos that have Develop adjustments made to them inside Lightroom into a new file that includes all of those edits. These copies are created based on the options chosen in the Copies tab, and include the following options:

- **File Type:** This menu determines what type of file will be created. The default is PSD, which maintains layers. You can also select JPG or TIFF, if you prefer those formats.
- **Color Space:** The color space drop-down menu determines what RGB working color space is used; Adobe RGB 1998, sRGB or ProPhoto RGB.
- **Bit Depth:** This sets the copied file's bit depth to either 8 or 16 bits per pixel.
- **Resolution:** The resolution drop-down menu determines the resolution of the file.

When the Copies option is checked, any photo that has been edited inside Lightroom will have a new copy saved in same folder as the original image. Both images will be visible in Photo RAW after the migration process is complete.

Once you have set your options in the Assistant window, click the Migrate button. Once initiated, the following steps happen:

1. Using the Photo RAW plugin, small JPEG versions of all images in the catalog—used for comparison purposes during the migration—are exported to



Once you've clicked the Migrate button, Lightroom will begin the process of exporting catalog information to ON1 Photo RAW 2024.



a temporary location, as are separate sidecar files that contain metadata (.on1) and edit information (.on1meta) for each image.

2. If you checked the Copies option, those images are also exported and saved to the same folder as the original.
3. When the process is complete from within Lightroom, Photo RAW will launch, and the Lightroom catalog's folders will show up as Cataloged Folders inside the Browse module's Folders pane. (The thumbnails for the images will initially be based on the temporary JPEGs exported in Step 1 above.)
4. In the background, Photo RAW will go through the cataloged folders and, using the information stored in the .on1meta files, will perform a conversion process to align edits between the Lightroom versions and the new ON1 Photo RAW version.
5. When viewing migrated catalog folders inside Browse, any image that has not yet been converted will have a small 'LR' badge in the lower right corner of the thumbnail. Once Photo RAW has finished the conversion on that image, the badge will change to a small '+/-' badge.
6. As Photo RAW completes the conversion on each image, the temporary files are deleted, and the .on1 sidecar files are updated.

**NOTE:** Choosing the Create Copies option will create a copy of all photos that have *any* adjustment made to them. This includes such things as lens profiling or default noise reduction, which some people use as an import preset when bringing photos into Lightroom. We recommend examining your catalog, and determine how you wish best to proceed with the migration. In some cases, it might be better to use Lightroom's export dialog to selectively export edited photos into a new folder, and add them to ON1 Photo RAW as a new cataloged folder—or however you might wish to organize them inside Photo RAW.

The process, which, as noted, can take quite some time, although you can continue work inside Photo RAW once the Lightroom export component has been completed. If you quit Photo RAW and restart it later, the app will continue to work in the background until all of the migrated images are translated into ON1 Photo RAW edits.

**NOTE:** Migrating the Lightroom Develop adjustments does not affect either the original photos or their settings inside the Lightroom catalog. What ON1 Photo RAW does is apply a 'translation' of the Develop settings of your Lightroom edits to Photo RAW's Develop settings, and saves those edits in an ON1-specific sidecar file. When you open a migrated photo inside the Edit module, you'll see ON1's approximation of the edits you made in Lightroom.

## WHICH LIGHTROOM SETTINGS ARE MIGRATED?

Due to the complexities of moving editing settings from one raw development environment to another, not every setting in Lightroom is converted when you migrate your catalog. The following table lists key Lightroom features, if they're converted, along with some notes about the specific feature mentioned.

FEATURE	CONVERTED?	NOTES
Folders	Yes	All top-level Folders in Lightroom become top-level cataloged folders in Photo RAW.
Photos/Videos	Yes	All photos/videos in the cataloged folders are added. This may include some photos that are not cataloged in Lightroom. Photo RAW only migrates available photos and does not migrate photos from offline volumes.
Virtual Copies	Yes	Virtual Copies become Versions inside Photo RAW.
Stacks	No	
Collections	Yes	All normal collections are migrated to albums. Collection sets become album sets. Smart collections are not migrated.
Crop	Yes	
Spot Removal	Yes	Spot Removal is migrated to the Clone Stamp when used in Clone mode. When used in Heal mode it is migrated to the Perfect Eraser. The results will not be a pixel perfect match but will generally remove the same spots with comparable results.
Basics	Yes	Camera Profiles are matched for Adobe® and Camera profiles. Other LUTs or custom profiles are not migrated. Clarity is called Structure in Photo RAW. Dehaze is called Haze and will look a bit different.
Black & White	Yes	
Tone Curve	Yes	Point-based curve adjustments only.
HSL/Color	Yes	You will find this in the Color Adjustment filter in Effects.
Split Toning	Yes	You will find this in the Split Tone filter in Effects.
Detail	Yes	There are significant differences in the sharpening and noise reduction algorithms. We did our best to align them but they may require manual adjustments to taste before output.
Lens Correction	Yes	Automatic lens correction is applied if we have a matching lens profile. Manual distortion settings are not migrated.
Transform	No	Unfortunately, Lightroom's Transform function is very different and we couldn't find a practical way to migrate these settings. You can achieve similar results using the Transform pane in Develop in Photo RAW.
Effects	Yes	Found in the Vignette and Film Grain filters in Effects.
Camera Profiles	No	Profiles are proprietary to the developer of the raw engine.
Red Eye	No	You can reduce red-eye automatically in the Portrait module.
Graduated Filter	Yes	You will find these as adjustment layers in the Local module using the Adjustable Gradient. Range mask, Moiré and Defringe are not migrated at this time.

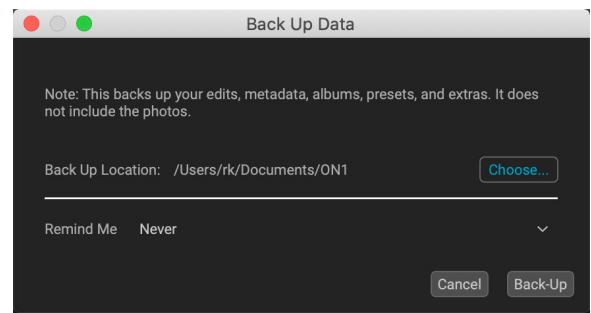
FEATURE	CONVERTED?	NOTES
Radial Filter	Yes	You will find these as adjustment layers in the Local module using the Adjustable Gradient. Range mask, Moiré and Defringe are not migrated at this time.
Adjustment Brush	Yes	You will find these as adjustment layers in the Local module using the Adjustment Brush, including the Auto Mask function. Range mask, Moiré and Defringe are not migrated at this time.

# BACKING UP YOUR WORK IN PHOTO RAW

To safeguard your peace of mind in the event of computer failure—or help you get set up quickly when you move to a new computer—ON1 Photo RAW 2024 includes a back-up and restore function. While this feature will not back up your photos, it will back up the following items related to your Photo RAW installation:

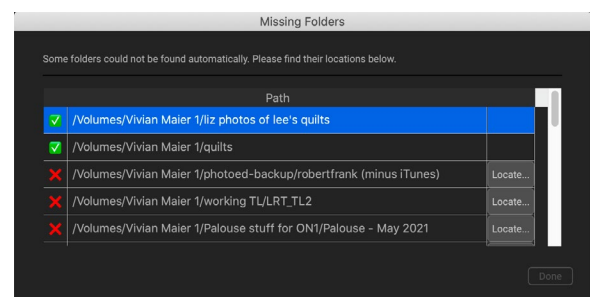
- All preferences, references to cataloged folders and other basic settings for Photo RAW.
- Albums created in Browse.
- Metadata changes made to images in Browse, including keywords, ratings, labels, and any data added via the Metadata pane.
- All presets and styles used in Photo RAW.
- All Extras, including any you have imported.
- All of the edits made on any image in the Edit module.

To back up your Photo RAW system, choose Back Up Data from the File menu in the Browse module. The Back Up Data window will let you choose a location for your backups, and also let you set a reminder schedule (daily, weekly, monthly, or no reminder) for backups. When you click the Back Up button, Photo RAW will create a .onbackup file in your chosen location, with the date and time embedded in the filename.



To restore your system to the latest backup, choose Restore Data from the File menu in Browse. (Depending upon the situation, you might need to reinstall ON1 Photo RAW 2024 first.) The Restore Data window will prompt you for the location of your backups, and will choose the most recent backup to restore from. (If, for some reason, you would like to use an earlier backup, just move the most recent one to another location on your hard drive.)

Clicking Restore will pull the information from the backup and apply it to your Photo RAW setup. During the restoration process, if Photo RAW can't find the proper folders with your photos, it will present the Missing Folders window, with a list of each folder that it can't find. You can click the Locate button to reconnect the folder, or you can click the 'X' to the left of the folder name in the window to remove it from Photo RAW's database.



**NOTE:** Photo RAW's back-up feature will not back up your photos; you should use other methods to ensure that your photos are backed up in a safe place.



# ON1 PHOTO RAW

## Common Keyboard Shortcuts

	Windows	macOS
<b>Change Modules/Tabs</b>		
Browse		G
Develop		D
Effects		S
Portrait		I
Local Adjustments		A
Resize		Y
<b>Preview Navigation</b>		
Zoom-in	^ +	⌘ +
Zoom-out	^ -	⌘ -
Fit to Screen	^ O	⌘ O
Zoom to 100% (1:1)	^ ⌘ O	⌘ ⌘ O
Pan Photo	hold space	
<b>View &amp; Window Modes</b>		
Grid View		G
Photo View		E
Filmstrip View		F
Compare View (Browse)		C
Fullscreen	n/a	⌘ ^ F
Hide Right Panel	^ →	⌘ →
Hide Left Panel	^ ←	⌘ ←
Hide Both Panels	→	
Split-Screen Compare (Develop/Effects)	^ Y	⌘ Y
<b>Preview and Masking Views</b>		
Original View (Preview Off)		\
Show Mask		O
Show Clipping	hold J	
Enable Soft Proof	⌘ S	⌘ S
<b>Browse</b>		
Change Thumbnail Size	+ / -	
Browse a Folder	^ B	⌘ B
Select All	^ A	⌘ A
Select None	^ D	⌘ D
Deselect	/	
Set Rating	1-5	
Set Label	6-0	
Dislike	X	
Like	P	
Clear Like/Dislike	U	
Delete	⌫	
Advanced Search	^ F	⌘ F
<b>Presets</b>		
Open Quick View Browser	⌘ ↑	⌘ ↑
Insert Preset	⌘ click	⌘ click

	Windows	macOS
<b>Photo Settings</b>		
Rotate 90	^ ]	⌘ ]
Rotate -90	^ [	⌘ [
Reset All Settings	⇧ ^ R	⇧ ⌘ R
Copy Settings	⇧ ^ C	⇧ ⌘ C
Paste Settings	⇧ ^ V	⇧ ⌘ V
Sync Settings	⇧ ⌘ S	⇧ ⌘ S
Create Version	^ '	⌘ '
Save Settings	^ S	⌘ S
<b>Brushing</b>		
Bigger Brush		]
Smaller Brush		[
Increase Brush Opacity	⌘ ]	⌘ ]
Decrease Brush Opacity	⌘ [	⌘ [
Increase Brush Feather		⇧ ]
Decrease Brush Feather		⇧ [
Rotate Brush Clockwise	⇧ ⌘ ]	⇧ ⌘ ]
Rotate Brush Counter-clockwise	⇧ ⌘ [	⇧ ⌘ [
Set Brush Opacity	⌘ 1-0	⌘ 1-0
Toggle Perfect Brush	^ R	⌘ R
Hold Perfect Brush Color	hold ^	hold ⌘
Toggle Paint-in/Paint-out	⇧ X or hold ⌘	⇧ ⌘ / \
Invert Mask	^ i	⌘ i
Draw Straight Line	⇧ click	
<b>Misc</b>		
Quick Export	⇧ ^ S	⇧ ⌘ S
Print	^ P	⌘ P
Undo	^ Z	⌘ Z
Redo	⇧ ^ Z	⇧ ⌘ Z
<b>Tools</b>		
Crop		C
Adjustment Brush		⇧ K
Adjustable Gradient		⌘ K
Spot Healing Brush		Q
Perfect Eraser		⇧ Q
Retouch Brush		R
Clone Stamp		S
Super Select		K
Masking Brush		B
Gradient Mask/Masking Bug		M
AI Quick Mask		W
Line Mask		⇧ P
Refine Mask		N
Zoom/Pan		Z
Move/Transform		V
Text		T
Portrait		⇧ I
Chisel		H
Blur		L



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*(Updates to NoNoise AI models, new Color Balance filter, Properties windows changes,  
as well as fixes to typos and other errata)*

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