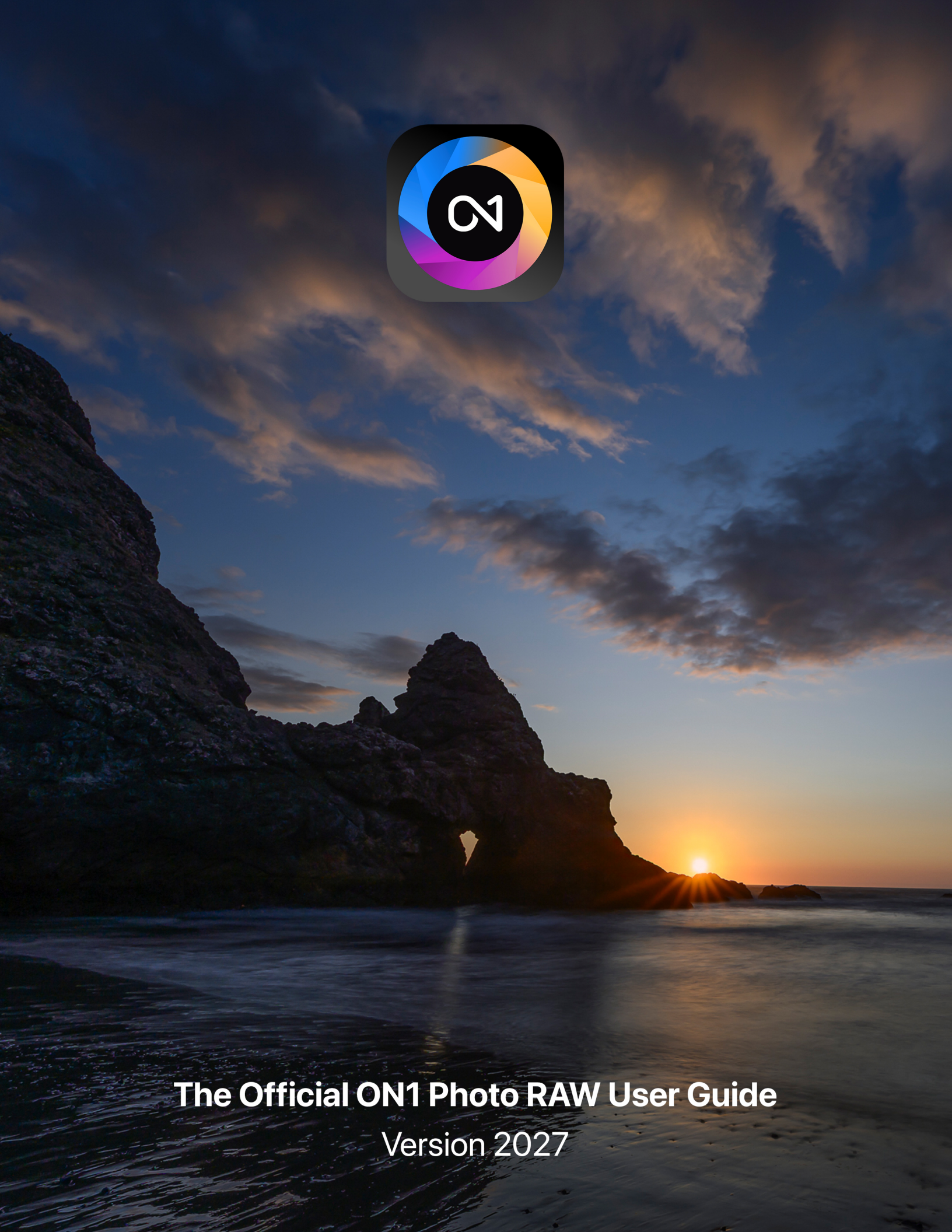


The Official ON1 Photo RAW User Guide

Version 2027

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About Photo RAW



ON1 Photo RAW 2027 is a complete photo editing solution built around a full-featured photo organizer, a sophisticated raw processing engine, and industry-leading image enlargement. Designed by photographers, for photographers, it pairs AI-based tools with controls you understand, so every creative decision stays in your hands.

At its core is an improved raw engine that delivers sharper detail, richer color, and better contrast straight out of the camera, with more natural shadow and highlight control. NoNoise AI adds new models matched to your subject, from wildlife and portraits to astrophotography and scanned film. TackSharp AI recovers out-of-focus detail, Portrait AI handles retouching, and Brilliance AI interprets each photo's color, tone, and detail to reflect your original vision.

You can make nearly every edit to the whole photo or to specific regions of it. In 2027, masking works the same way on every Layer, Effects filter, and Local Adjustment. Its controls sit right beside the sliders they affect, and hovering over a mask thumbnail previews it on your photo. Super Select AI and Mask AI select subjects, skies, people, and objects automatically, and you can still refine the masks yourself.

Perfect Eraser removes larger distractions without AI. Generative Erase and Crop remove people or cars and extend canvases naturally, and Photo RAW MAX users and subscribers can render them in the cloud for higher-quality results. In Browse, the Loupe pane, improved Compare view, and Focus Meter help you find your sharpest frames faster. Photo RAW MAX adds the Culling Assistant, which groups similar shots

and flags missed focus and closed eyes. Auto Import applies metadata and presets, and even exports, as soon as photos land in a folder.

Photo RAW also includes layers for compositing, plus panorama, HDR, focus stacking, and time-lapse tools. Many plugins made for Photoshop work inside it. ON1 Photo RAW MAX 2027 can also run as a plugin in Adobe, Apple, Affinity, and Corel apps (see Using Photo RAW as a Plugin).

Every edit is non-destructive, including on JPEG, PSD, PNG, and TIFF files, and your settings are remembered without saving extra versions. When you're finished, Resize AI enlarges your photos for print, and you can share straight to Flickr or through Windows' built-in sharing. On supported Windows hardware, AI tasks run faster. A new Light Theme and smoother onboarding make the app easier to use from the first launch. Add the optional ON1 Cloud Sync service to view and edit your photos across computers and mobile devices.

What's New in Photo RAW 2027



Photo RAW 2027 focuses on what photographers value most: image quality, stability, and ease of use. A stronger raw processing engine and new NoNoise AI models improve image quality. AI tools run faster and everyday workflows are more reliable. Masking has been redesigned, and new culling, comparison, and automation tools help you find, edit, and share your best photos with less effort.

Improved Raw Processing Engine

- Get better-looking images straight out of the camera, with sharper detail, richer color, and improved contrast.
- Bring out more natural shadows and highlights while preserving fine highlight detail.

Improved NoNoise AI

- Remove more noise while preserving natural-looking detail and reducing artifacts.
- Recover sharper results with fewer artifacts thanks to improved TackSharp deblurring.
- Choose the model that best fits your subject, from wildlife and portraits to astrophotography and scanned film.

Improved Brilliance AI

- Get more natural automatic enhancements across a wider range of photo styles and genres, with less manual adjustment.

Simplified Masking

- Apply masks the same way across layers, Effects filters, and local adjustments, so your workflow is predictable (Creating Masks).
- Preview a mask instantly by hovering over its icon.
- Adjust, mask, and blend right where you are working instead of switching to a separate pane.

Improved Retouching Tools

- Remove distractions over larger areas with Perfect Eraser, which preserves realistic detail and important lines without using AI.
- **MAX only:** ON1 Photo RAW MAX users and subscribers can use cloud-based AI rendering for Generative Erase and Generative Crop, for higher-quality results than local GPU processing.

Culling Assistant (MAX Only)

- Find groups of similar photos quickly so you can organize and review shoots with less effort (Using the Culling Assistant).
- Identify out-of-focus subjects and closed eyes before they make it into your final selection.
- Process large batches efficiently and spend less time on repetitive culling tasks.

Loupe Pane and Improved Compare View

- Inspect faces and subjects up close from Grid view without constantly zooming in and out.
- Compare more photos at once, and move through stacks with a single click to choose your best images faster (Working in Compare View).

Focus Meter

- Find the sharpest frame at a glance by comparing the same details, including eyes and faces, across several photos.

Auto Import

- Automate repetitive work by applying metadata and presets, and even exporting photos, as soon as you add them to a folder.

Sharing to Flickr and Windows

- Share directly to Flickr without leaving Photo RAW.
- On Windows, send photos to email and other destinations using native Windows sharing.

Faster and More Stable

- Complete AI-powered tasks faster on supported Windows hardware, using dedicated Windows ML execution providers.

Dozens of UX Improvements

- Work comfortably in a new Light Theme, and read menus and controls more easily with an updated font.

- Navigate with confidence thanks to higher-contrast colors and closer adherence to familiar UI guidelines.
- Get started sooner with an improved installation, sign-in, and onboarding experience.

Support for New Camera Raw Files

- OM System PEN
- Canon C50
- Canon EOS R8 II
- Panasonic Lumix DC-TZ300/ZS300
- Improved support for DNG varieties

Support for New Lenses

- Sigma 70mm f/2.8 DG Macro | Art 018
- Sony E PZ 16-50mm f/3.5-5.6 OSS I/II
- Tamron 70-180mm F2.8 A065 Z/E
- Tamron 70-300mm F/4.5-6.3 Di III RXD A047Z/E

For hardware and operating system requirements, see System Requirements.

System Requirements

When the application is launched, a test is performed to ensure your computer meets the minimum system requirements. If your computer does not, you may not be able to continue and use the application.

WINDOWS	MINIMUM	RECOMMENDED
OPERATING SYSTEM	Windows 11 x86 or ARM *current maintenance releases, 64 bit only*	Windows 11 x86 or ARM *current maintenance releases, 64 bit only*
PROCESSOR	Four-Core processor with 64-bit support; 2 GHz or faster	Eight-Core processor with 64-bit support; 2 GHz or faster processor with SSE 4.2 or Neon

	processor with SSE 4.2 or Neon.	or better
RAM	8 GB RAM (16GB if shared with the GPU)	32+ GB RAM
HARD DRIVE	10 GB for installation	10 GB for installation SSD drive
GRAPHICS	DirectX 12 compatible video card with 4GB VRAM, 1920x1080 resolution (at 100% scale factor)	DirectX 12 compatible video card with 8GB VRAM, 1920x1080 resolution (at 100% scale factor). NVIDIA RTX 3xxx or AMD Radeon RX 6xxx or better.
OPTIONAL APPLICATION INTEGRATION (PHOTO RAW MAX ONLY)	Adobe Photoshop Adobe Photoshop Elements Adobe Lightroom Classic Affinity Photo Corel Paint Shop Pro *current versions for all*	
MOBILE APP	Apple iPhone or iPad with iOS 16 or higher Android phone or tablet with 64-bit Android 11 or higher *current maintenance releases, 64 bit only*	
INTERNET	A high-speed internet connection and active account for installation, ON1 Cloud Sync, activation, auto-update checking, content downloads, and tutorials.	
SUPPORTED OPTIONS	Supports pressure-sensitive tablets for controlling brush size and/or opacity Supports ICC/ICM/DCP profiles for camera input, display, soft-proofing, and printing. Hardware display calibration tool is recommended	
SUPPORTED LANGUAGES	English, German, Spanish, French, Japanese, Korean, Simplified Chinese, Russian, Portuguese, Italian, Dutch	

MACOS	MINIMUM	RECOMMENDED
OPERATING SYSTEM	macOS® 13 and above *current maintenance releases*	macOS® 26 and above *current maintenance releases*
PROCESSOR	Four-Core Intel® processor or Apple Silicon	M2 Apple Silicon or better
RAM	8 GB RAM (16GB if shared with the GPU)	32+ GB RAM
HARD DRIVE	10 GB for installation	10 GB for installation SSD drive

GRAPHICS	Metal 2 compatible video card with 4GB VRAM, 1920x1080 resolution (at 100% scale factor)	Metal 3 compatible video card with 8GB VRAM, 1920x1080 resolution (at 100% scale factor)
OPTIONAL APPLICATION INTEGRATION (PHOTO RAW MAX ONLY)	Adobe Photoshop Adobe Photoshop Elements Adobe Lightroom Classic Affinity Photo Apple Photos *current versions for all*	
MOBILE APP	Apple iPhone or iPad with iOS 16 or higher Android phone or tablet with 64-bit Android 11 or higher *current maintenance releases, 64 bit only*	
INTERNET	A high-speed internet connection and active account for installation, ON1 Cloud Sync, activation, auto-update checking, content downloads, and tutorials.	
SUPPORTED OPTIONS	Supports pressure-sensitive tablets for controlling brush size and/or opacity Supports ICC/ICM/DCP profiles for camera input, display, soft-proofing, and printing. Hardware display calibration tool is recommended	
SUPPORTED LANGUAGES	English, German, Spanish, French, Japanese, Korean, Simplified Chinese, Russian, Portuguese, Italian, Dutch	

Viewing ON1 Account Info

You can sign in to your ON1 account at on1.com/login at any time to download the software, see how many computers you've registered, and update your account information, including your email address, password, and notification settings.

Getting Help

The Support section of the ON1 website (on1.com/support) has an extensive collection of video tutorials and help articles. It's the quickest way to learn the full ON1 workflow and discover new techniques for editing and organizing your photos. You can also search the Knowledge Base for answers to frequently asked questions and common issues.

Inside ON1 Photo RAW, the Home Module offers additional help.

If you need help installing or activating ON1 apps, contact **ON1 Technical Support** for software issues or **ON1 Customer Support** for account and product access issues. You can reach both from the Support page at on1.com/support.

App Installation

To install an ON1 app, double-click the installer icon and follow the prompts. Before you install or update, close any ON1 apps that are open.

Free Trial Version

ON1 apps can run as a fully featured trial for 30 days from the time you first choose **Free Trial** when you sign in. This gives you time to evaluate the app and see whether it fits your needs. You can download free trials from the ON1 Trials page.

macOS Installation Location

On macOS, ON1 apps are installed in an *ON1 (app name)* folder inside the main *Applications* folder.

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

Windows Installation Location

On Windows, ON1 apps are installed in an *ON1 (app name)* folder inside *\Program Files\ON1* (for example, *\Program Files\ON1\ON1 Photo RAW 2027*).

Support files are installed in *\ProgramData\ON1*. The ProgramData folder is hidden by default in Windows.

Upgrading from Previous Versions

If a previous version of the ON1 app is already installed on your computer, the installer transfers your data from that version to the new one, as long as you've upgraded one version at a time (for example, 2026 to 2027).

Backing Up Your Photo RAW Configuration

ON1 apps can back up and restore most of the app's settings, presets, extras, and the edits you've made to your photos. Your photos themselves aren't backed up. To learn more, see Backing Up Your Work in Photo RAW.

Launching ON1 Apps

macOS

In the Finder, open the *ON1 (app name)* folder inside the Applications folder, then double-click the app icon.

To keep the app in your Dock for quick access, click and hold its icon in the Dock and choose **Options > Keep in Dock**. You can also launch it from Launchpad.

Windows

Press the Windows key or click the Windows icon in the lower-left corner of your screen to open the Start menu. Choose *ON1 (app name)* from the list of apps, or start typing the app's name to search for it.

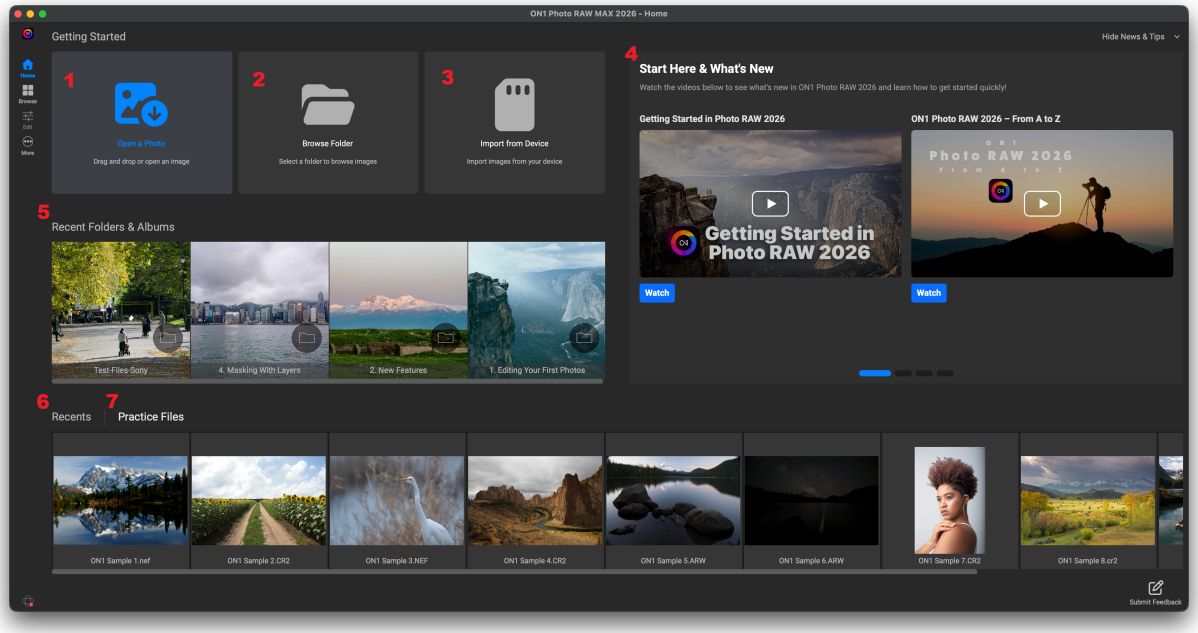
If you selected **Add Icon to Desktop** during installation, you can also launch the app from your desktop.

The Home Module

The Home module is the starting screen you see when you open ON1 Photo RAW or ON1 Photo RAW MAX. It helps you start common tasks quickly, get back to recent work, and discover updates and learning content without leaving the app.

NOTE: Some controls and labels may change as the Home module continues to be refined.

Home Module Overview



1. **Open a Photo:** opens a file browser so you can choose a photo to edit. You can also drag a supported file onto the Home module to start editing.
2. **Browse a Folder:** opens a folder so you can start browsing its photos in Grid view.
3. **Import from Device:** starts the import workflow for bringing in photos from a camera, memory card, phone, or other connected device.
4. **What's New:** shows updates, feature highlights, tutorials, and offers.
5. **Recent Folders and Albums:** lists folders and albums you've browsed recently so you can jump back to them in Browse.
6. **Recent Edits:** lists files you've opened or worked on recently so you can return to them quickly.
7. **Practice Files:** sample images installed with the app, often paired with training content so you can follow along and learn hands-on.

Changing the Startup Screen

You can choose whether Photo RAW opens to the Home module or goes straight to Browse.

Tips for First-Time Users

- Start with **Browse a Folder** to review an entire shoot or library location.
- Use **Open a Photo** when you already know which image you want to edit.
- Check **What's New** for tutorials, product updates, and suggested next steps.
- Use **Recent Edits** to quickly reopen files you were working on.

ON1 Photo RAW 2027 Modules

Photo RAW 2027 has four modules: Browse, Edit, Resize, and Restore. Each module focuses on one task, so you have just the tools you need to get it done:

- **Browse** handles file management.
- **Edit** is where you make non-destructive edits, using layers if you choose.
- **Resize** enlarges images, primarily for printing on large-format printers.
- **Restore** removes damage and restores color in old photos.

When you open Photo RAW, you start on the Home module, where you can jump into any of these modules or reopen recent work.

Browse is the default working module. Use it to navigate your drives and cloud services to find photos. You can also import photos in Browse and combine photos to create panoramas, high dynamic range (HDR) images, focus-stacked images, and time-lapse movies.

Editing in Photo RAW 2027 is non-destructive, and your edits are saved as you work. When you return to Browse from Edit, you'll see your edits in every view mode: Grid, Detail, Filmstrip, Compare, and Map.

The Edit module has five tabs, each for a specific kind of editing:

- **Develop** for basic editing
- **Local** for adjusting specific areas of a photo
- **Effects** for stylizing your photos
- **Sky Swap AI** for replacing skies
- **Portrait AI** for retouching portraits

Resize and Restore each create a new file instead of changing your original. They save a copy of the image, usually as a PSD file, in the same folder as the original.

The Module Selector

The Module Selector is on the left side of the screen and is visible at all times by default. Click the Browse or Edit icon at the top of the selector to go to that module.

Below those icons is the More menu, which takes you to any part of Photo RAW with a single click. It includes Resize AI, the Edit module tabs (Develop, Local, Effects, Sky Swap AI, and Portrait AI), and Layers, Pano, HDR, Focus, and Time (for time-lapse). Some items may be grayed out, depending on how many files are selected in Browse. For more about the More menu, see Working With Files.

You can also open Resize and Restore from the right side of the main window, along with icons for printing, sharing, and exporting photos (see Output and Sharing Overview).

Working with Files

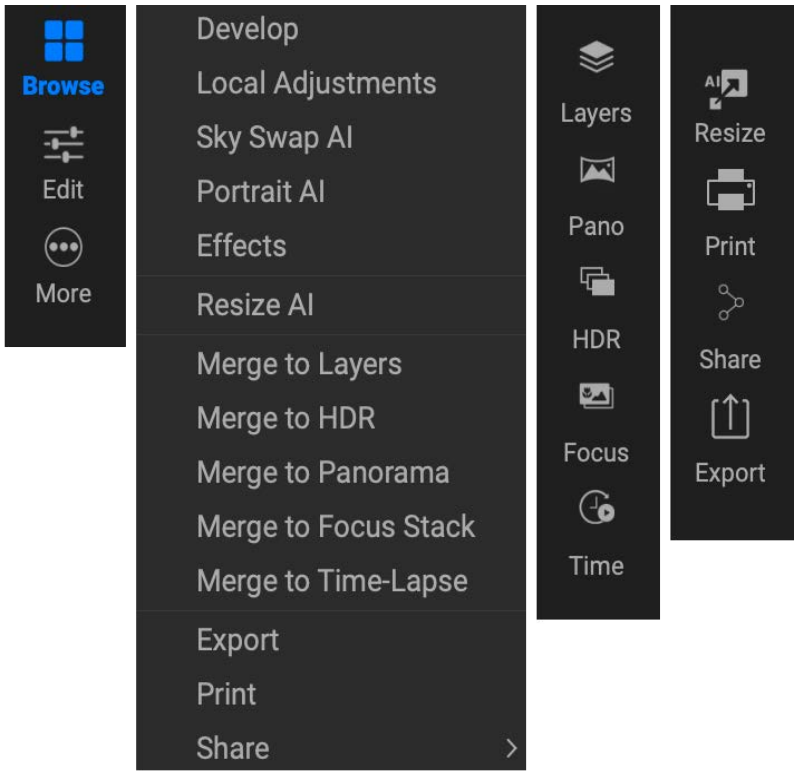
ON1 apps can view and open the following file types, in RGB or grayscale, at 8 or 16 bits per channel:

- Raw files from most major camera manufacturers (file extension varies by manufacturer)
- DNG
- PSD (Photoshop)
- PSB (Photoshop Large Document)
- TIFF
- JPEG and JPEG XL
- PNG
- HEIC
- ONPHOTO (ON1 Photo format)

You can export photos as PSD, PSB, TIFF, JPEG, JPEG XL, DNG, or PNG files.

Photo RAW works directly with your original files, including the raw files from your camera. Because editing is non-destructive, you can view any supported file in Browse and edit it in the Edit module without creating intermediate files. Your folders don't fill up with extra versions. Photo RAW remembers your edits and applies them to the original without changing it.

You don't need to open or save files to edit them. Photo RAW 2027 remembers your edits as you move between modules, even for layered photos. You only need to create a new file when you export or share a photo in a non-raw format, or when you use the Resize or Restore module.



The Module Selector on the left side of the window (left) lets you switch between Browse and Edit, and includes the More menu.

The More menu (center) links to all of Photo RAW's main functions. Some items may be grayed out, depending on how many photos are selected in Browse.

The right bumper (the two items on the right) shows icons for many of the More menu items, including Restore, Resize, Print, Share, and Export. It's shown by default in Photo RAW 2027. To hide or show it, choose **Window > Show Right Bumper**.

NOTE: Photo RAW 2027 can also view and catalog most standard video formats in Browse. You can't play or edit video in Photo RAW, but you can manage video files and edit some of their metadata. Double-click a video file to open it in your computer's default video player.

Using Photoshop Plugins with Photo RAW

ON1 Photo RAW can run many plugins made for Adobe Photoshop, even if you don't have Photoshop installed. When you run a photo through a plugin from the Edit module, the result is added to your photo as a new layer.

To set up Photoshop plugins:

1. Open Photo RAW's Preferences and click the **Plug-ins** tab.

2. Open Photo RAW's default Photoshop plugins folder and copy your plugins there, or click **Choose** to select another folder that contains plugin files.

3. Restart Photo RAW to make the plugins available.

To use a plugin, open a photo in the Edit module and choose **Filters** from the Layers menu. Photo RAW launches the plugin. When you're done and the plugin returns the photo to Photo RAW, it appears as a new layer that you can edit with any of the Edit module's tools. To learn more about layers, see Working With Layers.

Which Photoshop Plugins Work with Photo RAW?

Photo RAW doesn't support:

- Photoshop automation plugins, including plugins that create layers or change the canvas size, such as interpolation apps.
- Photoshop panels.

Even outside those exceptions, we can't guarantee that every Photoshop plugin will work properly with Photo RAW, so test each plugin you add to make sure it works as intended. You can find a current list of supported plugins in the ON1 Knowledge Base.

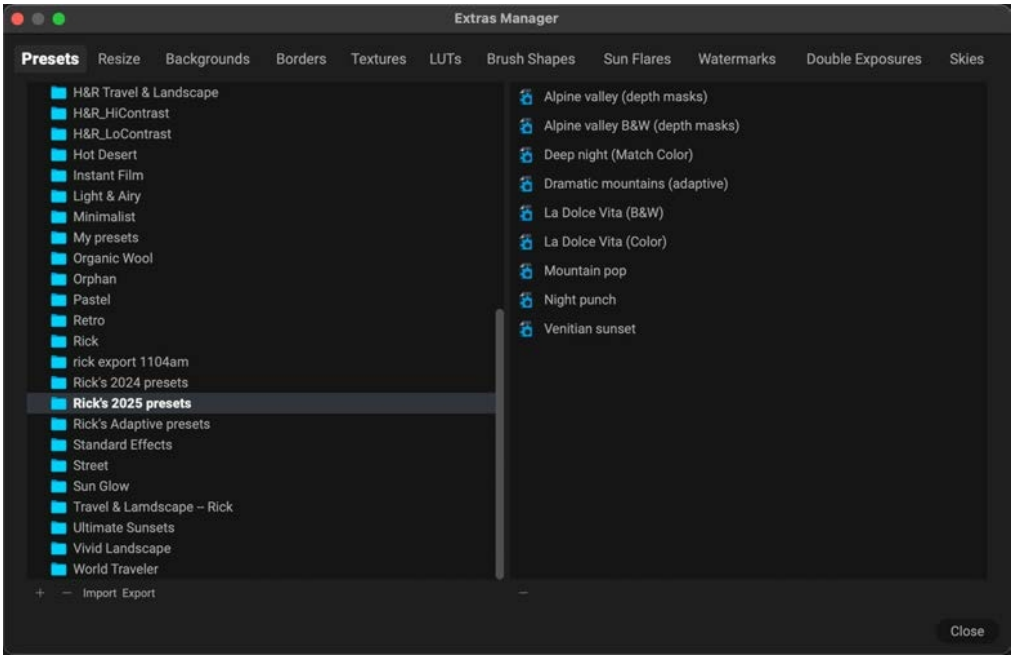
NOTE: ON1 Photo RAW MAX can also work as a plugin inside Adobe Photoshop, Photoshop Elements, Lightroom Classic, Affinity Photo, Apple Photos (macOS), and Corel PaintShop Pro (Windows). For details, see Using Photo RAW MAX as a Plugin.

Extras

Extras are additional files you can use in Photo RAW, such as presets, replacement skies, and watermarks. Use the Extras Manager to import, organize, and remove them.

Photo RAW supports these types of extras:

- **Presets:** for use in the Edit module



- **Resize presets:** for use in Resize
- **Backgrounds:** for use in Layers and Effects
- **Borders:** for use in Layers and Effects
- **Textures:** for use in Layers and Effects
- **LUTs (look-up tables):** for use with the LUT filter in Effects
- **Brushes:** custom brush shapes, usually saved as black-and-white TIFF files. You can also import brushes saved in the Adobe Brush Preset format (.abr).
- **Sun flares:** for use with the Sun Flare filter in Effects
- **Double exposures:** for use with the Double Exposure filter in Effects
- **Watermarks:** transparent PNG files for use with Export and Print
- **Skies:** replacement skies for use with Sky Swap AI in the Edit module

Photo RAW comes with a selection of extras already installed. You can also create your own or download more from the ON1 website.

In the Extras Manager, you can import extras, organize them into categories, and delete extras you no longer need.

How to Import Extras

To import extras, choose **File > Manage Extras** in Browse or Edit, then follow these steps:

1. At the top of the Extras Manager, click the tab for the type of extra you want to import. You can import only one type at a time.
2. Click **Import** at the bottom of the left column, then select the files you want to import. To import every file in a folder, open the folder, click the first file, then Shift-click the last file. Click **Import** when you're done.
3. Choose a category for your extras. This is where you'll find them in Photo RAW. You can pick an existing category or create a new one. The first time you import a type of extra, create a new category for it.

Your imported extras appear in the category you chose in the Extras Manager.

NOTE: Most types of extras also have an Import button in the pane or window where you use them, such as watermarks in the Export pane or skies in the Sky Swap AI pane. Clicking that button opens the Extras Manager. To import backgrounds and custom brushes, choose **File > Manage Extras**.

Organizing Presets

The Presets tab of the Extras Manager has extra options for working with large collections of presets. Use the **+** and **–** buttons in the bottom-left corner to add or delete preset categories.

You can also add subfolders to any preset category. To add one, click the category, then click **+**. To move a category inside another one, drag it there. When you import presets, you can add them to any category or subfolder.

You can also export presets from the Presets tab, to share them with other photographers or to archive ones you rarely use:

- To export a whole category, click it in the list on the left, then click **Export**. Photo RAW creates a folder containing a single .ONpreset file with every preset in that category.
- To export a single preset, click it in the list on the right, then click **Export**.

What Types of Images Can I Import as Extras?

Each type of extra accepts these file types:

- **Backgrounds and textures:** JPEG, TIFF, or Photoshop files.
- **Borders:** PNG or another format that supports transparency, since borders need a large transparent area in the center.
- **LUTs:** .3DL or .CUBE files.
- **Brushes:** Photoshop-compatible brushes saved as black-and-white TIFF files, or Photoshop .abr files.
- **Sun flares:** usually JPEG files with a black background.
- **Double exposures:** JPEG files.
- **Watermarks:** usually PNG files with transparent areas, since watermarks sit on top of your photo. JPEG files also work.
- **Skies:** any image file Photo RAW can open, most commonly JPEG or TIFF (see Replacing Skies with Sky Swap AI).
- **Resize presets:** .ONR files.

NOTE: If you download an .ONPreset or .ONP file for Develop or Effects, double-click it to install it. For more information, see Presets.

Using Extras with Layers

You can add extras to any photo in the Edit module as a new layer. Choose **Layer > Add Layer** to open a file browser, where you can pick an installed extra or any file on your computer. For more information, see Working With Layers.

Using Extras in Effects

Your imported borders, textures, LUTs, sun flares, and double exposures are available in Effects, alongside the extras installed with Photo RAW. To use one:

1. Open a photo in Effects.
2. Click **Add Filter** and add the filter for your extra: Borders, Textures, LUT, Sun Flare, or Double Exposure.
3. In the filter's Category menu, choose the category you imported. Categories you add appear at the bottom of the list.
4. Choose an extra from that category.

NOTE: Each filter has its own way of choosing extras. For details, see Borders, Textures, LUTs, Sun Flare, and Double Exposure. For custom brush shapes, see Using Custom Brushes to Add Overlays to Photos.

Using Watermarks and Skies

Imported watermarks appear in three places:

- The Logo section of the Watermark pane in Export
- The Logo section of the Watermark pane in Printing
- The My Extras tab when you add a new layer in the Edit module (see Adding a New Layer)

When you import replacement skies, each sky category you add appears in the Sky category list at the top of the Sky Swap AI pane. The skies in that category appear in the Skies menu below it. For more information, see Replacing Skies with Sky Swap AI.

How to Delete Extras

To remove imported extras in the Extras Manager:

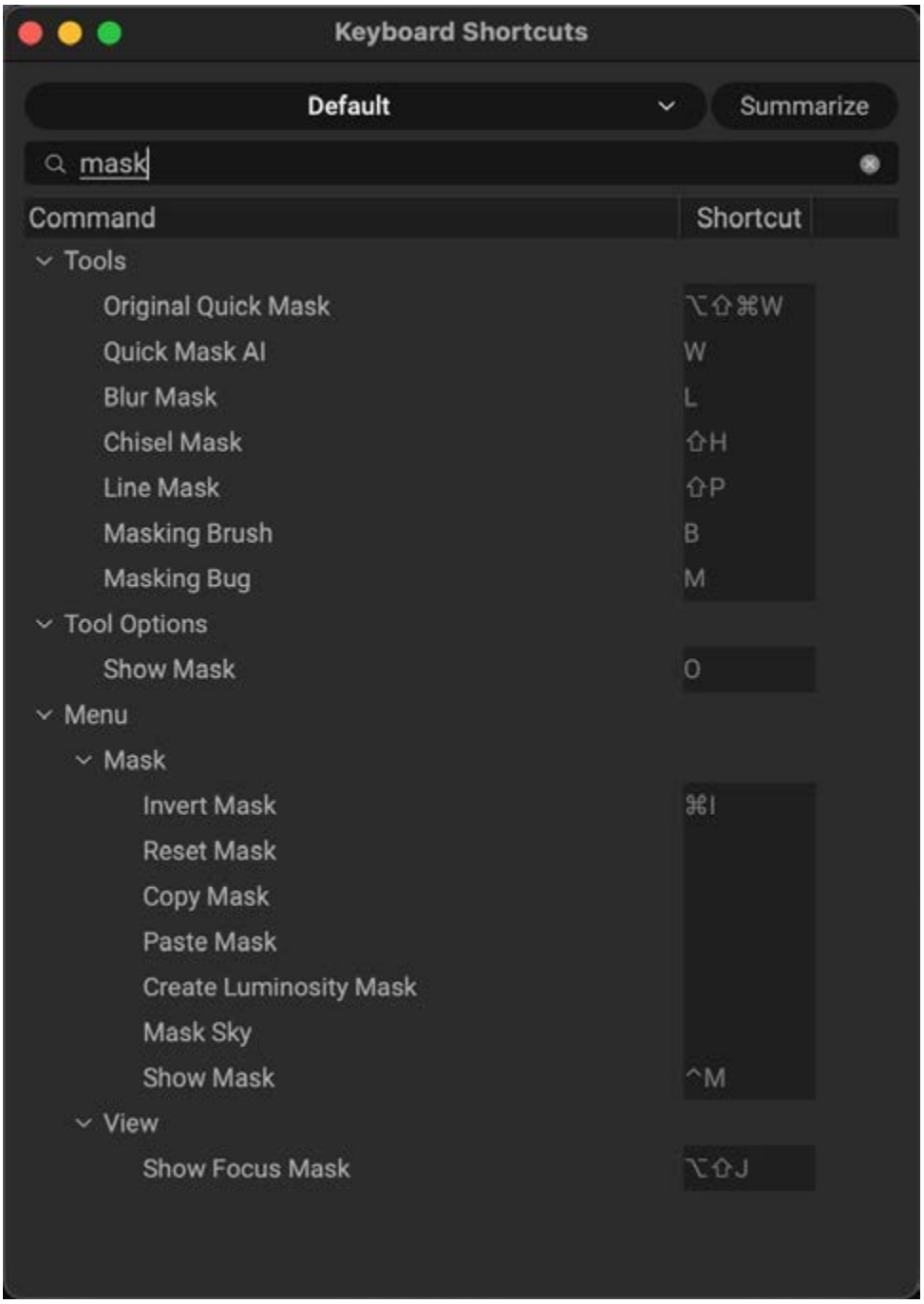
1. Choose **File > Manage Extras** in any module.
2. Click the tab for the type of extra you want to remove. The categories for that type appear.
3. To delete an entire category, select it in the left column, then click **Delete** at the bottom of that column.

4. To delete individual extras, select them in the right column, then click **Delete** at the bottom of that column. In the Presets tab, this button is labeled **–**.

NOTE: Deleting extras is permanent and can’t be undone.

Keyboard Shortcuts

You can customize Photo RAW's keyboard shortcuts in the Keyboard Shortcuts window. You can view and change the shortcut for any tool, tool option, module, or menu item, and add shortcuts to menu items that don't have one yet. You can also save multiple sets of shortcuts as presets, and create a summary of your shortcuts that you can view in any web browser.



To view or change shortcuts, choose **Edit > Keyboard Shortcuts**. Shortcuts are organized into five groups:

- **Modules:** commands for switching between modules.
- **Develop:** tone and color adjustments you can make from the keyboard while working in the Edit module (see Tone & Color).
- **Tools:** the tools in the Edit module.
- **Tool Options:** brush and mask viewing options in the Options Bar of any masking tool.
- **Menu:** every menu item in each module.

Click the triangle to the left of a group's name to open it. To find a command in any group, type a keyword in the search field at the top of the window.

The Shortcut column shows the key assigned to each command. It's empty for commands that don't have a shortcut. A grayed-out shortcut can't be changed.

NOTE: Some shortcuts can't be changed, including operating system commands such as Cut, Copy, and Paste, and the Browse module shortcut (G). You also can't use the Escape, Return/Enter, or Delete keys as shortcuts.

Modifying Shortcuts

You can't change the shortcuts in the Default preset, but you can create your own preset based on it. The first time you double-click a command to add or change its shortcut, Photo RAW asks whether you want to create a new preset. Click **Yes** and name the preset, and Photo RAW makes a copy of the Default set for you to customize.

Changing a Shortcut

1. Double-click the Shortcut field for the command you want to change. You can also add a shortcut to a command that doesn't have one.
2. When the field is highlighted, press the key or key combination you want to use.

If the shortcut is already assigned to another command, Photo RAW lets you know. Click **Cancel** to keep the existing shortcut, or click **OK** to remove it from the other command and assign it to this one.

When you change a shortcut from its default, a Reset arrow appears to the right of the Shortcut field. Click it to return that command to its Default setting.

To remove a shortcut, double-click its Shortcut field and press **Delete**.

Managing Shortcut Presets

Use the preset menu at the top of the Keyboard Shortcuts window to switch between presets, including the Default set. You can also use this menu to create a new preset or delete one you created. The Default preset can't be deleted.

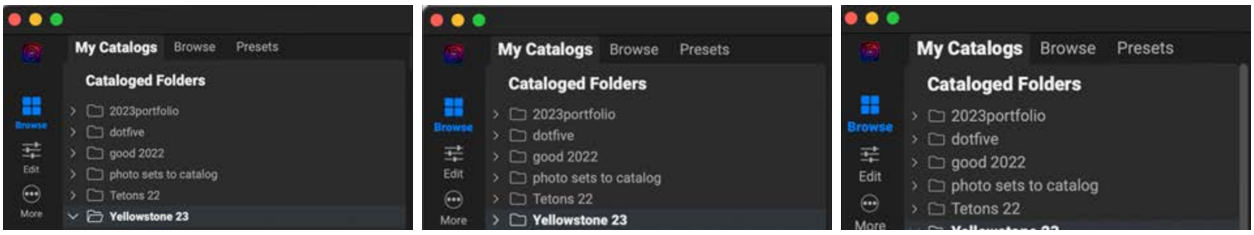
Printing a List of Your Shortcuts

Click **Summarize** at the top of the Keyboard Shortcuts window to save your current shortcuts as an HTML table. Choose where to save the file, then double-click it to open it in your web browser, where you can view or print it.

Changing the Font Size

By default, ON1 apps use a small font for panel names, labels, file names, and other interface text, so the workspace stays focused on your photos.

To change it, open Preferences and click the **General** tab. Choose **Small**, **Medium**, or **Large** from the Font Size menu, then restart the app for the change to take effect.



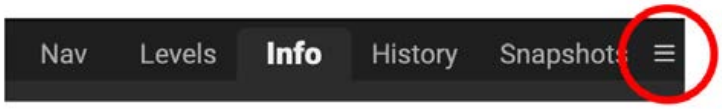
The three font size options: Small (left), Medium (middle), and Large (right).

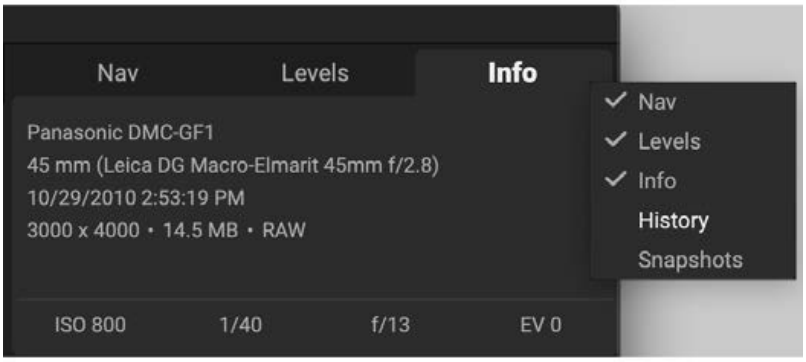
Customizing the Display and Order of Tabs and Panes

You can show, hide, and rearrange parts of the Photo RAW interface using the Tab options menu. It's available in the panes at the top of the right panel, in the Edit module's tabs, and in the Properties window or pane.

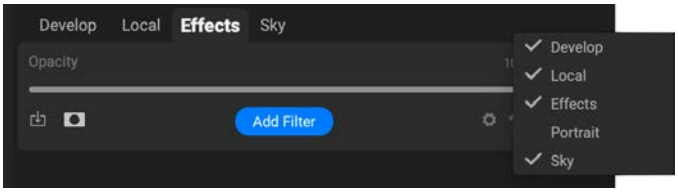
Showing and Hiding Panes and Tabs

To open the menu, hover over the right end of the top pane group, then click the Tab options icon (three vertical lines). The menu lists the panes in that group. By default, all five panes are shown: Nav, Levels, Info, History, and Snapshots. Choose a pane in the list to hide it, and choose it again to show it.





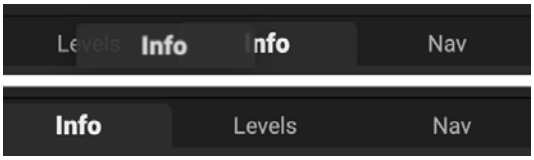
The Edit module's tabs have the same menu, so you can hide tabs you rarely use, such as Portrait.



The Properties window or pane has a similar Tab options icon that lets you hide the Blending, Masking, or Text tab.

Reordering Tabs

To reorder the tabs at the top of the right panel, click and hold a tab, then drag it left or right. Release the mouse button to drop it in its new position. You can rearrange the Edit module's tabs the same way.



Hiding Panes in Browse

Many panes in Browse can be hidden to give you more room. To hide a pane, such as Tethered Shooting or Metadata, click its pane options icon and choose **Hide**, or uncheck it in the **Window** menu. To show a hidden pane again, choose it from the **Window** menu.



NOTE: For details on the panes at the top of the right panel, see Navigators, Levels, Info, History and Snapshots. For the Properties window, see The Properties Window. For the panes on the left side of Browse, see My Catalogs, Browse, and Preset Panels.

Using ON1 Apps with a Scroll Wheel

If your mouse has a scroll wheel, you can use it throughout ON1 apps on both macOS and Windows:

- **Scroll** to pan up and down. In Browse's Grid view, this scrolls the window. In most other views, it pans the photo when your cursor is over the preview area. Hold **Shift** while scrolling to pan left or right.
- Hold **Option** (macOS) or **Ctrl** (Windows) while scrolling to zoom in or out.

In the Edit module, when you're using a tool with brush size and feather settings:

- Hold **Command-Option** (macOS) or **Ctrl-Alt** (Windows) while scrolling to change the brush size.
- Hold **Option-Shift** (macOS) or **Alt-Shift** (Windows) while scrolling to change the feather.

To use the scroll wheel only for adjusting brush size, turn on **Only Adjust Brush Size with Scroll Wheel** in the General tab of Photo RAW's Preferences.



Uninstalling ON1 Apps

Before you uninstall, sign out of the app to free up its license activation so you can use it on another computer. Open the app and choose **Help > Sign Out**.

macOS

Open the *Applications/ON1 (app name)/Documentation* folder and double-click the *Remove ON1 (app name)* script.

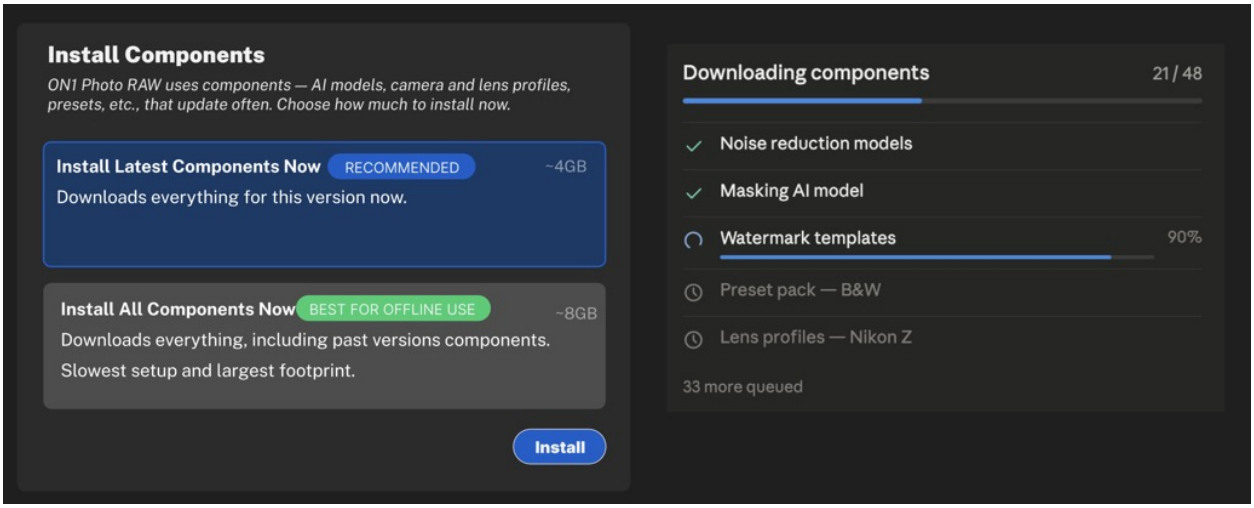
Windows

1. Open Windows Settings and choose **Apps > Installed apps**.

2. Scroll to or search for the ON1 app you want to remove.
3. Click the three dots to the right of the app's name and choose **Uninstall**.

Installing Components

Photo RAW relies on components that are updated often, such as AI models, camera and lens profiles, and presets. Instead of bundling everything in the installer, Photo RAW downloads these components separately so you always have the latest versions.



First Launch

The first time you open Photo RAW, the Install Components window asks how much to download now:

- **Install Latest Components Now** : Downloads everything for this version. This is the best choice for most people.
- **Install All Components Now** : Also downloads components from past versions. Setup takes longer and uses the most disk space, but everything is already on your computer if you'll be working without an internet connection.

Choose an option and click **Install**. The right side of the window shows each component as it downloads. The first download can take several minutes, depending on your connection.

Staying Up to Date

Each time you launch Photo RAW, it checks for updated components and downloads any it needs. These updates are usually small and quick.

TIP: Heading somewhere without reliable internet? Launch Photo RAW while you're still connected so it can download the latest components first.

Organizing with Browse

The Browse module in Photo RAW 2027 is a fast photo browser and manager. It gives you one place to find, view, and manage your photos, wherever they're stored.

Browse is ideal for sorting and editing quickly after a shoot. You can import and view your photos right away, without waiting for a long cataloging or preview-building process. You can rate photos, add keywords and flags, create albums, and remove photos, all within Browse. Keyword AI can also analyze your photos in the background and suggest keywords, so you can search your library in entirely new ways.

Browse's indexing system gives you quick access to your favorite folders. Add a folder to the My Catalogs pane, and Photo RAW indexes its photos in the background for faster access and more powerful searching.

With the ON1 Cloud Sync service, you can share a cataloged folder or album with your other computers and your mobile devices.

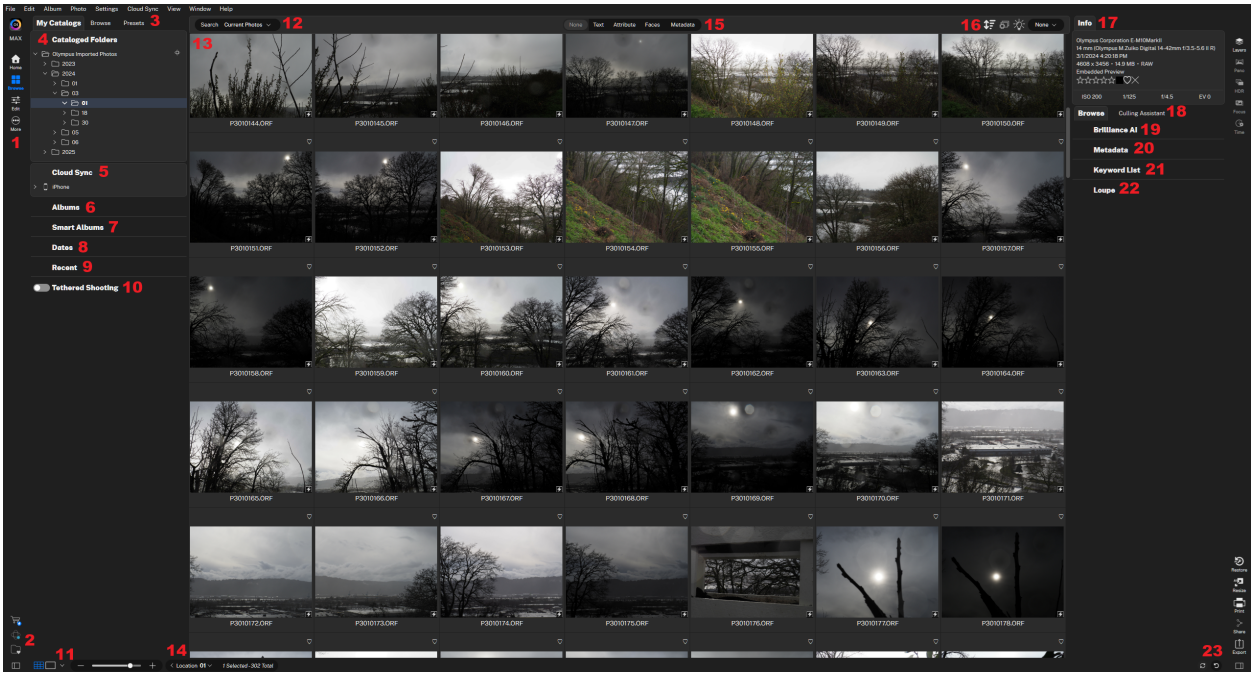
You can also apply Edit module presets directly to one photo or a group of photos in Browse, and copy edits from one photo and paste them onto others.

Browse Key Features

- Find photos fast, wherever they are (local drives, network drives, or cloud services), with the Search Bar. Save searches you use often as smart albums or filter presets.
- Narrow down a shoot quickly with the Culling Assistant (Photo RAW MAX), which groups similar photos and flags missed focus and closed eyes.
- Manage duplicates and similar photos with Smart Organize.
- Import photos from your camera, memory card, or other device, and use Auto Import to apply metadata and presets, or even export, as soon as photos are added to a folder.
- Use Keyword AI to add keywords automatically based on photo content, so you can skip time-consuming manual tagging and still find your photos later.
- Add metadata, from creator to keywords and GPS location, to a group of photos at once, and use metadata templates to apply common information during import.
- Catalog important folders for the fastest access to your photos across multiple sources, while keeping your folder structure and locations intact.

- View and cull a shoot in Grid, Filmstrip, Detail, and Compare views. Use the Loupe pane to check faces and details up close, and the Focus Meter in Compare view to find the sharpest frame. Use Map view to see where you took your photos or to add location information.
- Stack groups of similar photos to reduce clutter.
- Work on two displays, with Grid view on one and Detail view on the other, or use dual-display mode to present photos on a TV or projector.
- Apply Edit module presets to one photo or a group, sync edits across a group, or apply Brilliance AI right from Browse.
- Build panoramas and HDR images in Browse, and blend photos taken at different focus distances to increase depth of field.
- Create flicker-free time-lapse videos from sequences of raw photos.
- Connect your Nikon or Canon camera and capture photos directly, with full manual control, in tethered shooting mode.
- Find photos by capture date or any combination of metadata, including time of day, camera and lens, file type, and more.
- Create albums from selected photos, or create smart albums that update automatically based on metadata. Set an album as the target album to speed up culling.
- Copy, move, delete, and rename files.
- Sort, flag, rate, and color-label your photos, and share them directly to Flickr.

ON1 Browse Main Screen Overview



The Browse module has three main sections: the Catalogs/Browse/Presets panel on the left, the Preview area in the center, and the Photo Info panel on the right. Its main components are:

1. **Module Selector/More Options/Shortcuts:** icons for switching between Browse and Edit, a More button for basic Browse operations, and shortcuts to Getting Started, Smart Organize, Albums, and your most-used photo locations (see Customizing Tabs & Panes).
2. **ON1 Cloud Sync/Cataloged Folder Progress/Open and Close Left Panel:** opens the ON1 Cloud Sync status window (when available) and the Cataloged Folder Progress window. The icon at the bottom opens and closes the left panel (see Using ON1 Cloud Sync with Photo RAW).
3. **My Catalogs/Browse/Presets tabs:** switch between cataloged folders, local drives and cloud sources, and Edit module presets.
4. **Cataloged Folders/Favorites and Local Drives:** shows your cataloged folders (shown here) or your local disks and favorite folders, depending on the selected tab.
5. **Cloud Sync:** shows all of your ON1 Cloud Sync devices.
6. **Albums pane:** create albums (collections of photos) and group them into folders. Set any album as the target album so you can quickly add photos to it while you cull.
7. **Smart Albums pane:** albums that update automatically based on criteria you set in the Search Bar.
8. **Dates pane:** locate photos by capture date.
9. **Recent pane:** lists recently opened files and folders.

10. **Tethered Shooting pane:** connect your Nikon or Canon camera to your computer and capture photos directly into Photo RAW.
11. **View Selector/Preview Size:** switch between Grid, Detail, Filmstrip, Compare, and Map views. The Preview slider sets the thumbnail size in Grid view, or the size of the current photo in other views.
12. **Search Location:** part of the Search Bar. Choose where to search on disk.
13. **Preview:** where you view your photos as thumbnails or in detail.
14. **Breadcrumbs Bar:** shows the path to the selected photo or folder. Use its menu to move up the folder tree or choose a recent or favorite folder. On the right, it shows how many items are selected and how many are in the folder or search results.
15. **Search Bar criteria:** set the criteria for finding items in your library.
16. **Sort/Smart Album/Smart Organize/Saved Searches:** from left, change the sort order, save the current search as a Smart Album, open Smart Organize, and choose or save a search.
17. **Info pane:** shows detailed metadata for your photo when available. In Filmstrip, Detail, and Compare views, it also shows the Navigator and Histogram.
18. **Culling Assistant**: Alternate ***MAX-only*** Browse mode that allows for culling of photos using several techniques: grouping by similarity, subject focus, and subject eye state.
19. **Brilliance AI:** apply Brilliance AI to photos right in Browse.
20. **Metadata pane:** shows the metadata for the selected photo.
21. **Keyword List:** every keyword in your catalog.
22. **Loupe pane**: Shows identified subjects on selected photos
23. **Reset All:** removes all adjustments made in the Edit module from the selected photos.

Workflow Basics in Browse

Photo RAW 2027 gives you a lot of flexibility in how you work with your photos. You can browse photos in any folder connected to your computer, including cloud services like Dropbox, Google Drive, and Microsoft OneDrive, or import photos directly from your camera or another device. When you find the photos you want to work on, you can move to the Edit module with a single click.

If you keep your photo library in specific locations on one or more internal or external drives, you can have Photo RAW catalog those folders. Cataloging reads your photos' metadata and builds previews, so you can navigate and search your library much faster than an ordinary folder. Cataloging doesn't move or change your photos. It just makes them easier to find and work with in Photo RAW.

Using Shortcuts

The Shortcuts selector on the left side of the Browse panel is a column of icons for quick access to common locations and Browse functions. To show or hide it, choose **Window > Show Browse Shortcuts**.

From top to bottom, the icons are: Getting Started, Desktop, your default Browse location (Pictures), Cataloged Folders, Local Drives, Albums, Smart Organize, and ON1 Cloud Sync devices. Clicking a location icon shows its contents in the Preview area. Clicking Getting Started or Smart Organize opens that window.

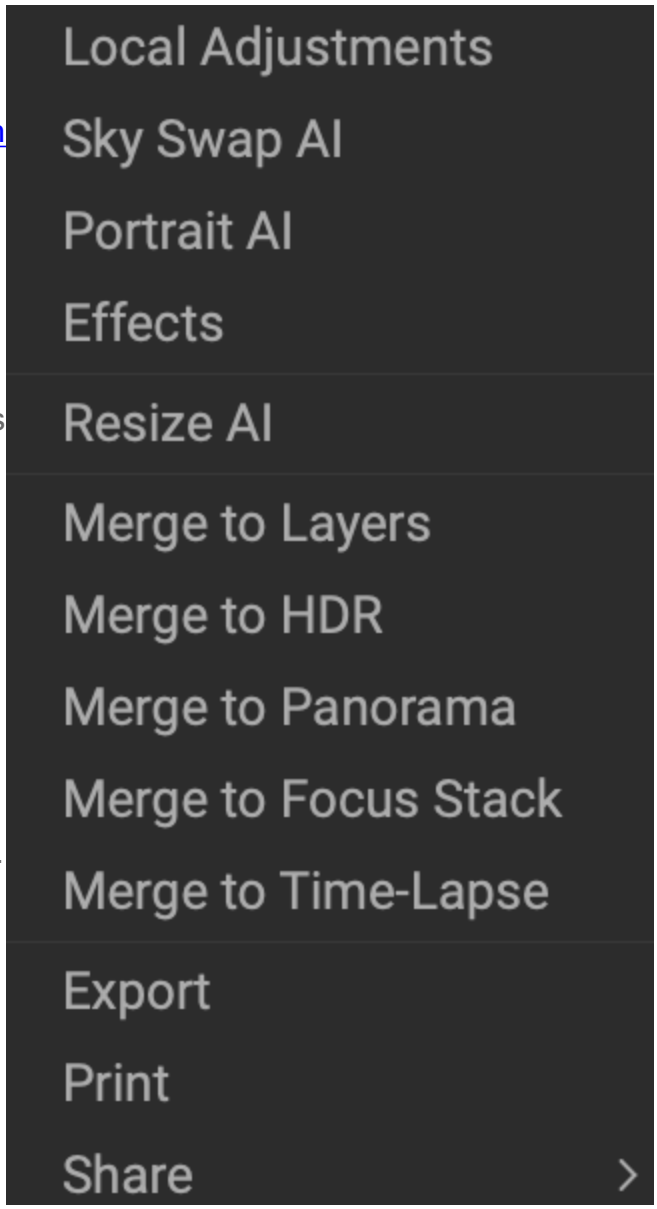
By default, the Pictures shortcut opens your Pictures folder (macOS) or My Pictures folder (Windows). You can change this location in the General tab of Preferences.



The More Menu

The More button, above the Shortcuts selector, opens a menu of additional Photo RAW functions. Choose an item to go straight to it. Some items take you out of Browse, and items marked “multiple photos only” are available only when you’ve selected more than one photo.

- **Develop:** opens the selected photo in the Develop tab (see Basic Global Editing with Develop).
- **Local Adjustments:** opens the selected photo in the Local tab (see Local Adjustments).
- **Sky Swap AI:** opens the selected photo in the Sky Swap AI tab (see Replacing Skies with Sky Swap AI).
- **Portrait AI:** opens the selected photo in the Portrait AI tab (see Retouching with Portrait AI).



- **Effects:** opens the selected photo in the Effects tab (see Stylizing with ON1 Effects).
- **Resize AI:** opens the selected photo in the Resize module (see Resize AI).
- **Merge to Layers** (multiple photos only): opens the selected photos as a new layered file in the Edit module (see Combining Photos).
- **Merge to HDR** (multiple photos only): opens the selected photos in the HDR Merge window (see Blending HDR Images).
- **Merge to Panorama** (multiple photos only): opens the selected photos in the Panorama Merge window (see Stitching Panoramas).
- **Merge to Focus Stack** (multiple photos only): opens the selected photos in the Focus Stack window (see Focus Stacking).
- **Merge to Time Lapse** (multiple photos only): opens the selected photos in the Build Time Lapse window (see Time Lapse).
- **Export:** opens the selected photos in the Export window (see Export).
- **Print:** opens the selected photos in the Print window (see Printing).
- **Share:** shares the selected photos to SmugMug or Flickr, or through your operating system's sharing options (see Sharing to SmugMug, Sharing to Flickr, and Other Sharing Options).

Many of these items also have icons on the right bumper, on the right side of the main window. The right bumper is shown by default. To hide or show it, choose **Window > Show Right Bumper**.

Working in the Preview Area

The Preview area is the largest part of the Browse workspace. It shows the contents of the folders, albums, or filters you choose in the Browse panel, including photos synced with ON1 Cloud Sync. There are five views:

- **Grid** (shortcut: **G**) shows thumbnails of your photos, plus folders so you can move up and down a folder hierarchy quickly. You can choose what information appears in each thumbnail cell.

- **Detail** (shortcut: **E**), also called Photo view, opens when you double-click a thumbnail. You can view the photo fit to the window or zoom in for more detail.

The View menu at the bottom left of the Browse window also offers these views:



- **Filmstrip** (shortcut: **F**) shows a strip of photos from the folder or album at the bottom of the screen, with the selected photo in the Preview area above it. Use the arrow keys or click a thumbnail to move through the folder. As in Detail view, you can view the photo fit to the window or zoomed in.

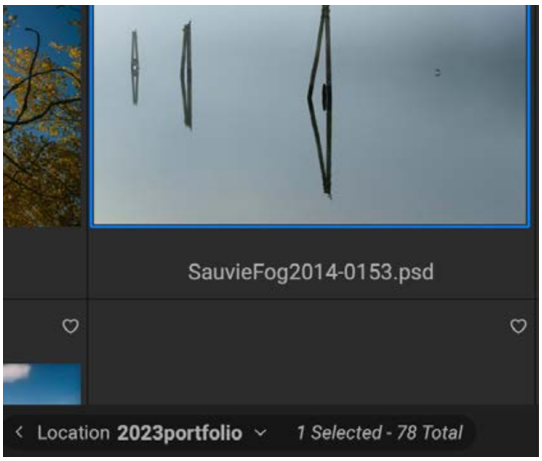
- **Compare** (shortcut: **C**) shows a group of photos side by side. You can zoom in on one or all of them and lock panning so the others move with the one you're viewing. It's the quickest way to find the best shot in a sequence for composition, sharpness, or expression (see Working in Compare View).

- **Map** (shortcut: **M**) shows where photos with GPS data were taken, and lets you search for a location to apply to one or more photos.

To switch views, click the view selector at the bottom of the window or use the shortcut keys above.

NOTE: You can also use your mouse's scroll wheel to navigate and zoom in Browse. See Using ON1 Apps with a Scroll Wheel.

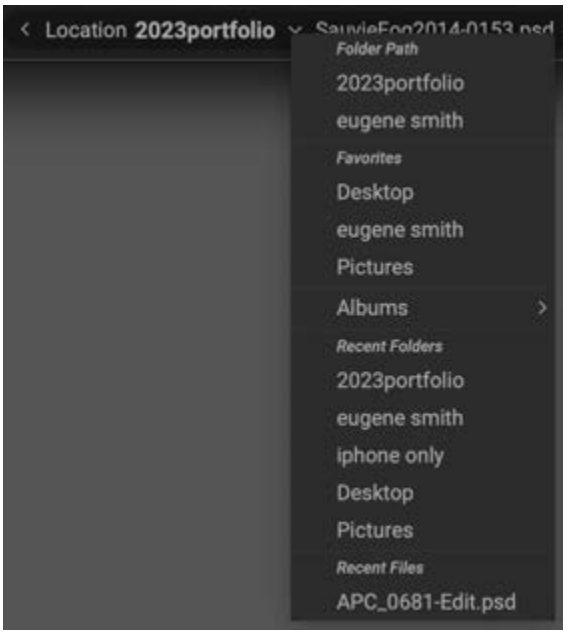
Using the Breadcrumbs Bar





The Breadcrumbs bar, at the bottom of the main window in Browse and Edit, shows the selected photo and the folder it's in. In Grid view, it shows how many photos are selected and the total number in the folder. In all other views, including the Edit module, it shows the current photo's position in the folder (based on the current sort order) and the total number of photos.

Click the down arrow to open a menu with the path to the current folder, your favorite folders (see Favorites), recent folders, and recent files. Choose any item to go to that folder and show its first photo. If the folder has no photos, the Preview area shows "No Photos Found."

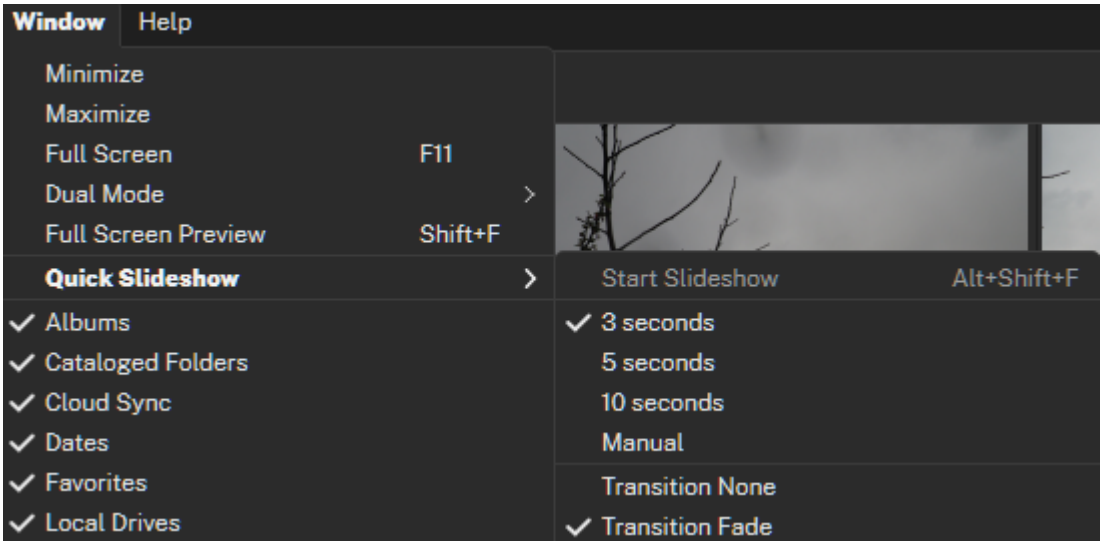


Alternative View Modes

In every Browse view, you can display the window in three ways:

- **Standard window:** Photo RAW's default, a window you can resize and move.
- **Full Screen Mode:** choose it from the Window menu, or press **Command-Control-F** (macOS) or **Option-Control-F** (Windows). The main window fills the screen and the menu bar is hidden. Move your cursor to the top of the screen to see the menu bar.
- **Full Screen Preview:** choose it from the Window menu, or press **Shift-F** (macOS only). The selected photo fills the screen with no other interface elements. Use the arrow keys to move between photos. It's a great way to review photos as large as possible without distractions.

Displaying Slideshows



You can play a quick full-screen slideshow of any group of photos in Browse. Select the photos in the Preview area and choose **Window > Quick Slideshow**. The slideshow loops until you press **Esc**. The Quick Slideshow submenu lets you set the time between slides and choose a fade transition or no transition.

Fast Preview Mode

After a shoot, you often want to go through a lot of photos quickly to find your best shots. To move from photo to photo with minimal lag, choose **View > Preview Quality > Fast**.

If color accuracy matters more than speed, choose **View > Preview Quality > Accurate**. Photo RAW builds a full-resolution preview using the photo's embedded color profile. This takes a few seconds, depending on the size of the raw file, but gives you a more accurate view of the photo's color.

Persistent Thumbnail Cache

As you browse a folder, Photo RAW caches its thumbnails, previews, and metadata, so the folder loads faster the next time. The cache also stores metadata you add or change, such as ratings, labels, keywords, captions, rotation, and GPS data. You can set the cache size and location in the System tab of Preferences (see System).

Focus and Clipping Views

When you're choosing the best photos from a group, you usually want to check both exposure and sharpness. Photo RAW offers two overlays to help: Clipping and Focus Peaking. In Browse, you can show them in Detail, Filmstrip, and Compare views. In the Edit module, you can show them in any tab.

Clipping



Clipping happens when shadows or highlights are cut off to pure black or pure white instead of fading smoothly. Large areas of pure white, often called "blown" highlights, can be distracting. Raw files often still contain recoverable detail in areas that look pure white or black on screen, and the Clipping overlay helps you judge how much of a problem a photo has and how easy it will be to fix.

To show the Clipping overlay temporarily, hold **J**. To keep it on, choose **View > Show Clipping**, or press **Option-J** (macOS) or **Alt-J** (Windows). Pure white pixels are shown with a red overlay, and pure black pixels with a blue overlay.

Focus Peaking

It can be hard to judge sharpness without zooming in to 100% or more, and checking every photo from a large shoot that way is tedious. The Focus Peaking overlay helps you narrow your shots down to the sharpest ones.

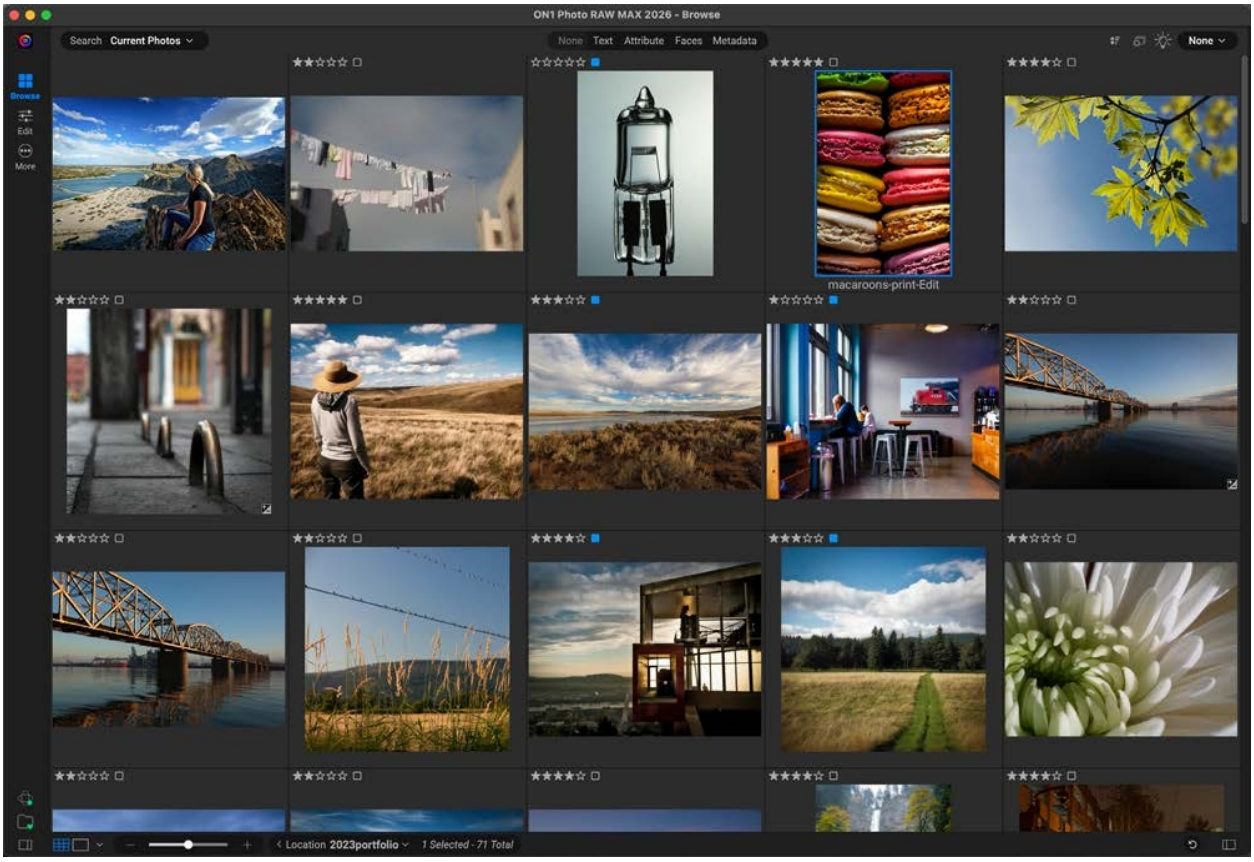
To turn on Focus Peaking, click the **Focus Peaking** button in the preview footer, choose **View > Show Focus Peaking**, or press **Shift-Option-J** (macOS) or **Shift-Alt-J** (Windows). The sharpest areas of the photo are highlighted in bright green. As you move through a folder, the strength of the overlay shows whether each photo is sharp where you need it. The overlay stays on as you zoom in.

You can show either Clipping or Focus Peaking, but not both at the same time.



Focus Peaking highlights the sharpest areas of a photo in bright green.

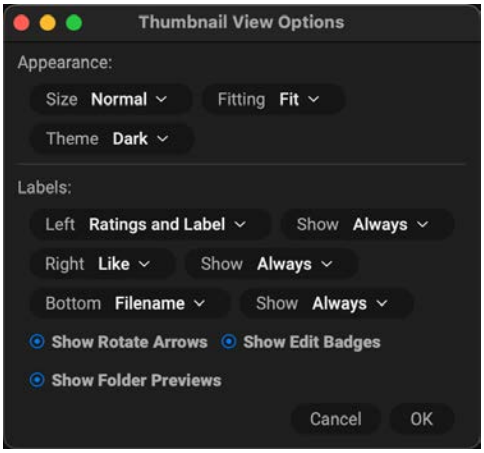
Working in Grid View



Grid view shows thumbnails of the folders and photos you select in the Folders or Albums panes. In Grid view, you can:

- Navigate with the Breadcrumbs bar. The **<** button goes up one folder.
- Select a photo and open it in one of the editing tabs.
- Change the thumbnail size with the slider, or press **–** and **+**.
- Choose **View > Show Subfolder Contents** to see the contents of all subfolders (cataloged folders only).
- Check faces and details at 100% without leaving the grid, using the Loupe pane.

Changing the Thumbnail Display Options



To change how each thumbnail cell looks, choose **View > Thumbnail View Options**, or right-click any thumbnail. The Thumbnail View Options window has two sections: Appearance and Labels.

In the **Appearance** section:

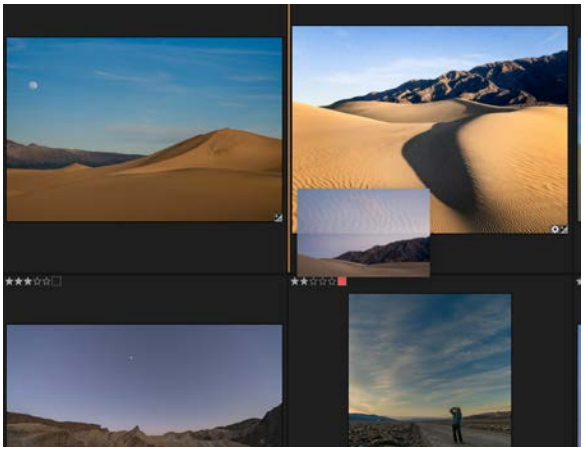
- **Size** sets the size of the label text (Small or Large).
- **Fitting** shows the whole photo in the thumbnail (Fit) or fills the thumbnail frame (Fill).
- **Theme** sets a Dark or Light appearance.

In the **Labels** section, you choose what appears in the top-left, top-right, and bottom labels of each thumbnail, and whether labels are always visible or appear only when you hover over the thumbnail. You can also choose whether to show rotation arrows, edit badges (which mark photos edited in Photo RAW), and folder previews.

By default, the top-left label shows the rating and color label, the top-right label shows the like/reject state, and the bottom label shows the filename. You can set any label to show more than 20 kinds of metadata, including filename, camera and lens, exposure and ISO, capture date, rating, image dimensions, and more.

NOTE: Most of the fields in Thumbnail View Options are also shown in the Metadata pane. See The Metadata Pane.

Sorting Photos in Grid View



To sort the thumbnails, choose an option from the **Sort By** menu at the top of the window: capture or modified date, color label, file name, file type, file size, or rating. The bottom of the menu has options to sort in ascending or descending order. If you're using a custom sort order, these options reverse it.

To create a custom sort order, drag a thumbnail between the two photos where you want it to go. The Sort menu changes to **Custom**, and Photo RAW remembers that order for the folder until you change it. Custom sorting also works in albums.

Viewing Metadata in Grid View

When the Photo panel is open on the right side of the screen, it shows the Info pane, with a summary of the selected photo, and the Metadata and Keyword panes, where you can view and edit the photo's metadata. When several photos are selected, the panes show information for the primary photo (the one with the heavier outline). Keywords and other metadata you add, such as author, location, or description, are applied to every selected photo. For more information, see The Photo Panel.

Working in Photo (Detail) View



In Detail view, also called Photo view, you can zoom to 100% to check fine detail and sharpness, view the histogram, and even apply a preset, all without leaving Browse.

Detail view shows a large version of your photo, starting in Fit mode so you see the whole image. Click the photo to zoom to 100%, and click again to return to Fit. When you're zoomed in, drag to look around the photo. Your zoom level stays the same as you move from photo to photo, so you can compare the same spot across several frames. Use the arrow keys to move to the next or previous photo in the folder.

When the Photo panel is open on the right, the Navigator (Nav), Levels, and Info panes appear as tabs at the top of the panel. Click a tab to show it:

- **Nav** lets you reposition the preview and change the magnification.
- **Levels** shows a composite histogram of the photo.
- **Info** shows a summary of the photo, including its rating and flag, which you can also change from the keyboard.

For details, see The Photo Panel.

You can also apply Brilliance AI in Detail view (and in Filmstrip and Compare views), and add the author, keywords, description, and other information in the Metadata and Keyword List panes.

Working in Filmstrip View



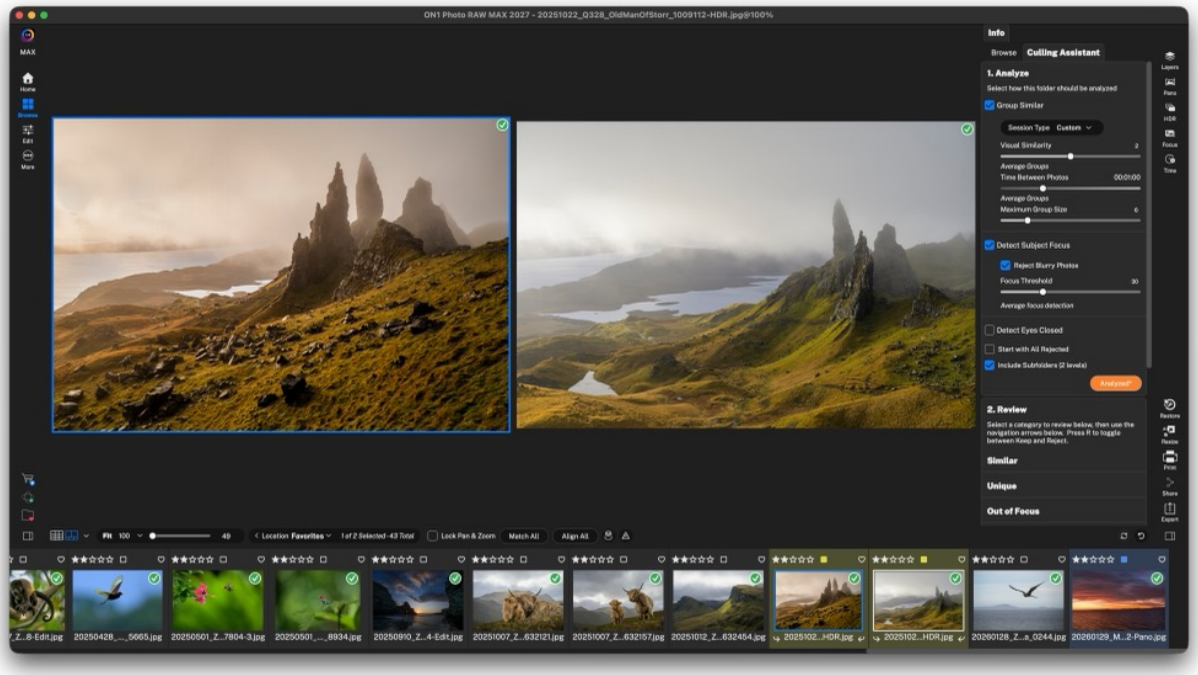
Filmstrip view is similar to Detail view, but also shows a strip of thumbnails from the current folder or album at the bottom of the screen. The selected photo appears large in the Preview area, with a blue outline around its thumbnail in the strip.

To move between photos, use the left and right arrow keys, or scroll the strip and click a thumbnail. The strip follows the current sort order, which you can change with the Sort menu above it. You can also rate and flag photos in this view.

When the Photo panel is open on the right, the Navigator (Nav), Levels, and Info panes appear as tabs at the top of the panel. Nav lets you reposition the preview and change the magnification, Levels shows a composite histogram, and Info shows a summary of the photo, including its rating and flag. For details, see The Photo Panel.

NOTE: Filmstrip view is also available in the Edit and Resize modules. In Edit, you can rate and flag photos with the same keyboard shortcuts and move from photo to photo as you edit. In Resize, Filmstrip view lets you batch-process multiple photos.

Working in Compare View



Compare view shows the photos you've selected side by side in the Preview area. It's made for the times you shoot a sequence of similar photos, such as a portrait session, a wedding, or a landscape series, and want to narrow it down to the best ones. You can check composition side by side, zoom in on all of them at once to check focus, rate your favorites, and reject the rest.

Opening Compare View

- **From Grid or Filmstrip view:** select the photos you want to compare, then press **C** or click the Compare icon in the View selector at the bottom left of the Browse window. To select a range of photos, click the first one, then Shift-click the last. To select photos that aren't next to each other, Command-click (macOS) or Ctrl-click (Windows) each one.

- **From Compare view:** press **C** or click the Compare icon, then select photos in the strip at the bottom of the window using the same Shift-click and Command/Ctrl-click methods.

Zooming and Panning

Your photos appear fit to their panes. The primary photo has a blue outline, and the other selected photos have a light gray outline. To change the primary photo, use the arrow keys or click inside another pane.

Click inside the primary photo to zoom in, and click and drag to pan around and check detail, sharpness, or expressions. Click again to return to Fit.

To zoom and pan all the photos together, turn on **Lock Pan & Zoom** at the bottom of the preview area. Now when you click in the primary photo, every photo zooms to the same spot, and when you drag, they all pan together. To pan just one photo, for example if its framing differs from the rest, click it to make it primary, then hold **Shift** while you drag. To bring every photo back to the same zoom position, click **Match All**.

Press the **Spacebar** to switch the primary photo between Fit and 100%. This zoom isn't locked, so the other photos don't follow it even when Lock Pan & Zoom is on.

To remove a photo from the comparison, select it and press **/** (slash). The remaining photos resize to fill the space. You can add more photos using the selection methods above.



Zoom in and pan to the same area in each photo to see which one is sharpest.

Aligning Photos

When you shoot handheld or your subject moves between frames, the same detail can land in a slightly different spot in each photo. Click **Align All**, next to **Match All** at the bottom of the preview area, to line up the photos you're comparing so you can judge them side by side.

- Align All shifts and rotates each photo to match the others. It doesn't scale, crop, warp, or correct perspective.
- It works only on the photos currently in Compare. If you change the selection, click **Align All** again to realign the new set.
- If a photo doesn't have enough matching detail to align, it's left as is.

Finding the Sharpest Photo with the Focus Meter

The Focus Meter measures how sharp the same spot is across every photo you're comparing, so you can find the sharpest frame at a glance instead of judging by eye.

1. Click the **Focus Meter** button in the footer of the preview area.
2. Move your cursor over a detail you care about, such as your subject's eye. The cursor becomes a box that shows the pixels underneath it.
3. The box appears in the same spot on every photo in Compare, with a sharpness score below it. The photo with the highest score is the sharpest at that spot.
4. To put the Focus Meter away, click its button again or choose another tool.

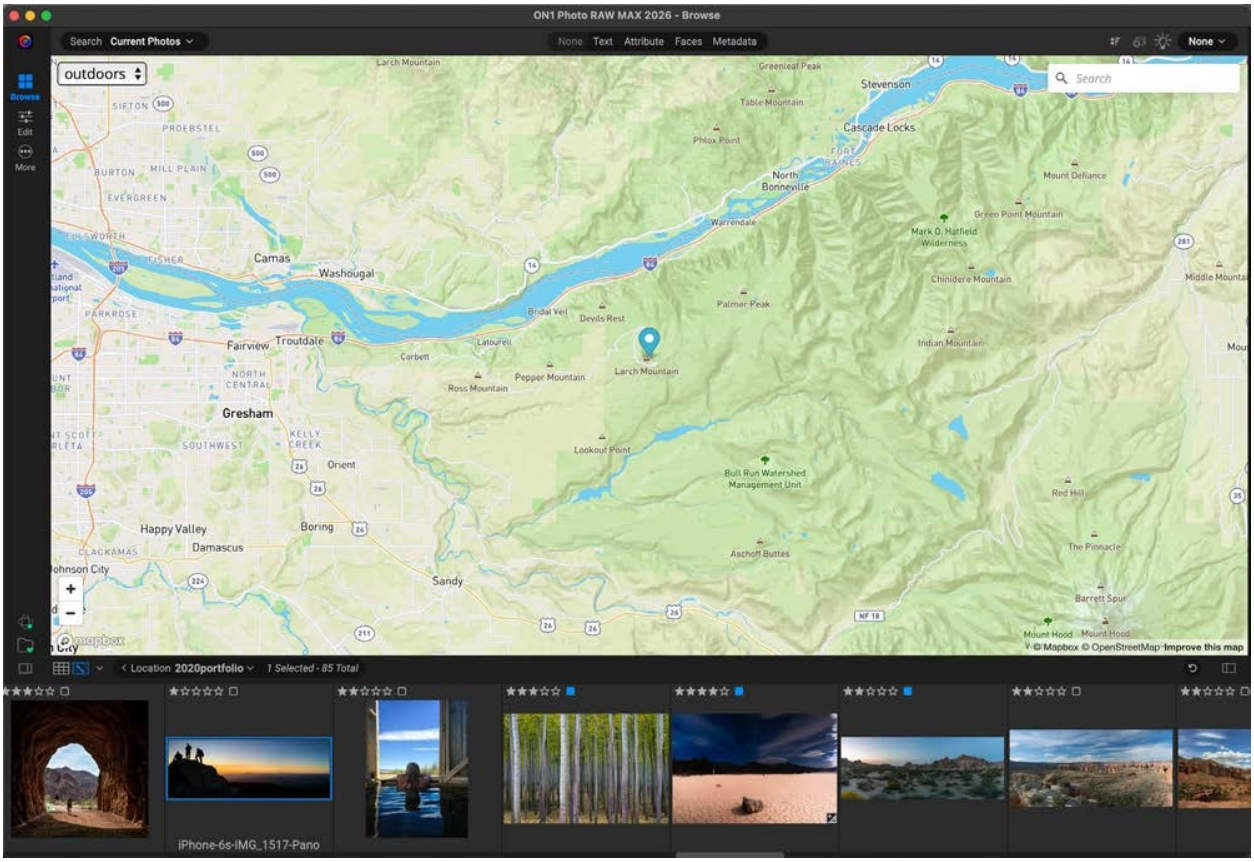
TIP: For the most accurate comparison, click **Align All** first so the Focus Meter measures the same detail in each photo. The Focus Meter is available in Browse.

Rating and Adding Metadata in Compare

In Compare view, ratings, flags, presets, and other metadata apply only to the primary photo (outlined in blue), with two exceptions:

- **Sync settings:** the Sync button at the far right of the Browse window, below the Info pane, copies all Edit settings from the primary photo to every photo you're comparing.
- **Albums:** the Create Album and Add to Album commands in the Albums menu add all the selected photos to a new album (when you check **Add Selected Items**) or to the album you choose. This is handy for setting aside photos for a client or splitting up a series.

Working in Map View



Map view lets you see where a photo was taken if it has GPS data, or add a location to photos by searching a web-based map. You need an internet connection to view or add map data.

The map has three sets of controls:

- Buttons in the upper-left corner switch between Street, Satellite, and Outdoors (topographic) maps.
- A search field lets you look up a place, such as a city, county, or road.
- Controls in the lower-left corner zoom in and out.

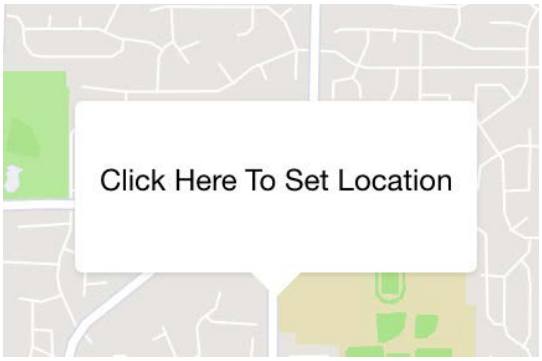
Drag the map to move around. The filmstrip shows the other photos in the current folder. Use the arrow keys or click a thumbnail to switch photos.

Viewing a Photo's Location

Select a photo with GPS data and click the Map view icon at the bottom of the Browse window. The photo's location appears on the map.

Adding a Location to Photos

1. Select one or more photos, then click the Map view icon at the bottom of the window.
2. Search for the place you want, then right-click the exact spot on the map.
3. Click inside the pop-up to confirm the location and set the pin. To choose a different spot instead, right-click somewhere else.



Right-click the map to show this pop-up, then click inside it to confirm the location.

Photo RAW adds the coordinates to the GPS field in the Metadata pane.

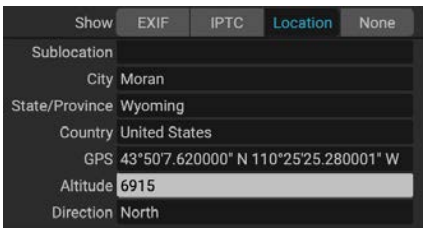


Photo RAW can also look up the city, state, and country from a photo's GPS coordinates and add them to the Location tab of the Metadata pane. Select the photos you want to update and choose **Photo > Set Location from GPS Coordinates**. For more information, see The Metadata Pane.

Stacking Photos

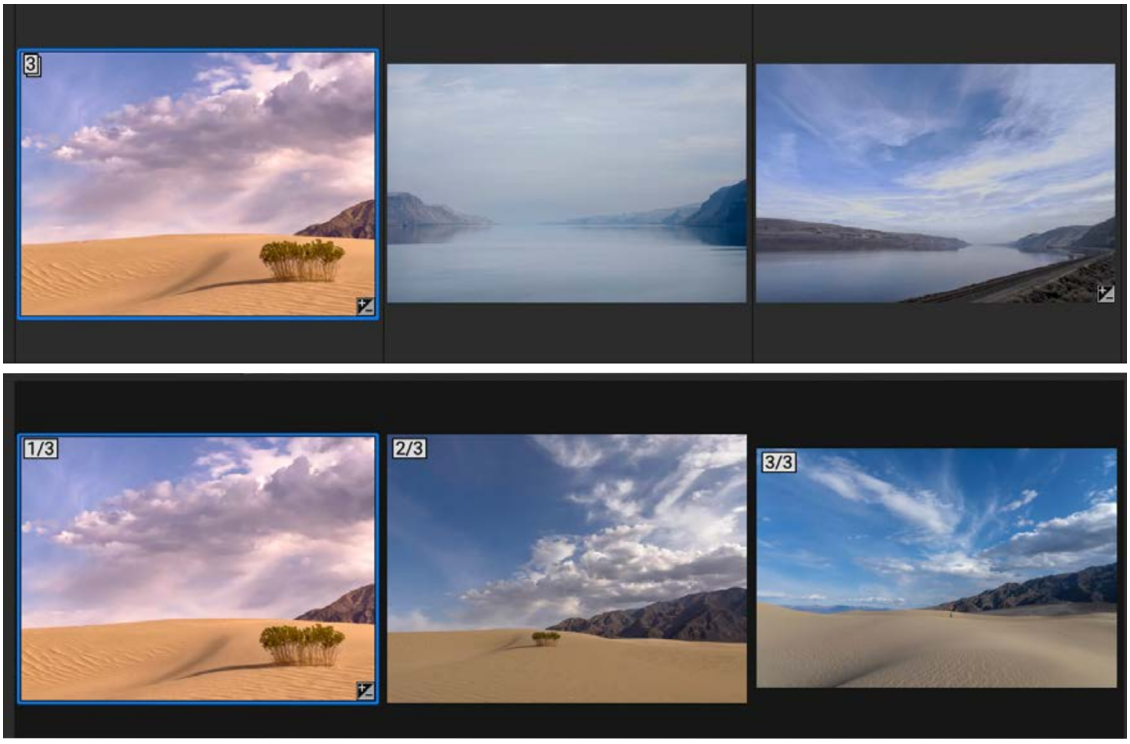
Stacks let you group related photos together in Browse to keep your library organized. A stack can be anything you like, for example:

- Photos with similar looks, subjects, or poses
- A bracketed set for focus stacking or HDR
- A series of photos for a panorama

The only requirement is that all the photos in a stack are in the same folder.

Creating a Stack

Select the photos you want to group, right-click one of them, and choose **Stacks > Group into Stack**, or press **Command-G** (macOS) or **Ctrl-G** (Windows). Photo RAW groups the photos and collapses the stack, using the primary selected photo (the one with the darker blue outline) as the stack's cover. A badge in the upper-left corner shows how many photos are in the stack. Click the badge to expand the stack, and click it again to collapse it.



A collapsed stack shows the number of photos it contains (top). Click the badge to expand it (bottom), and each photo's badge shows its position in the stack.

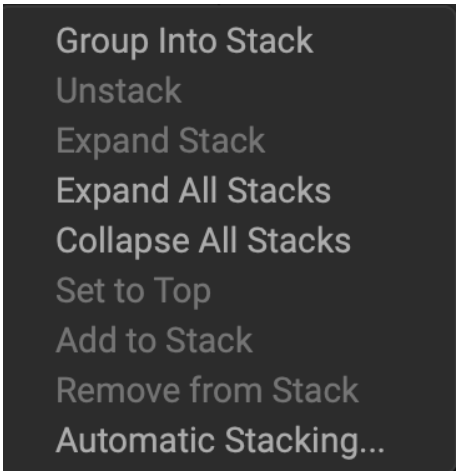
Stack Options

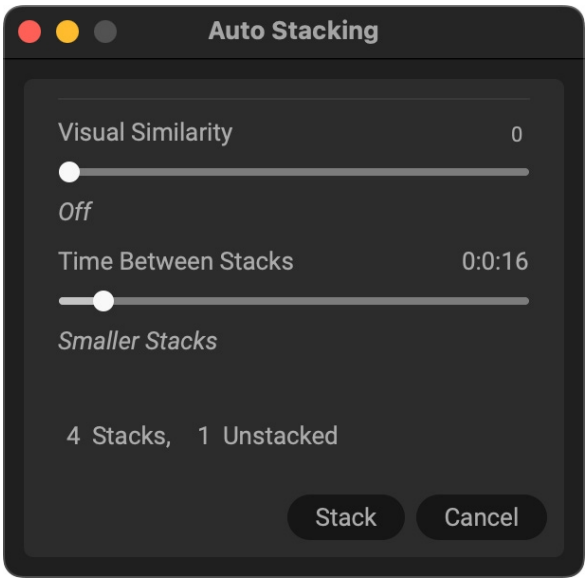
Right-click any photo in Browse and choose **Stacks** to see these options:

- **Group into Stack:** groups the selected photos into a stack.

- **Unstack:** ungroups the selected stack.
- **Collapse/Expand Stack:** collapses or expands the current stack.
- **Expand All Stacks:** expands every stack in the current folder.
- **Collapse All Stacks:** collapses every stack in the current folder.
- **Set to Top:** when one photo in a stack is selected, makes it the stack's cover photo.
- **Add to Stack:** adds photos to an existing stack. Select the collapsed stack, then Command-click (macOS) or Ctrl-click (Windows) the photos you want to add.
- **Remove from Stack:** removes the selected photos from their stack.
- **Automatic Stacking:** creates stacks automatically from the selected photos, based on visual similarity, time between shots, or both.

Stacks are visible and work in every Browse view except Detail view, and in the Edit module's filmstrip.





The Auto Stacking window creates stacks automatically based on visual similarity or the time between shots.

My Catalogs, Browse, and Presets Panels

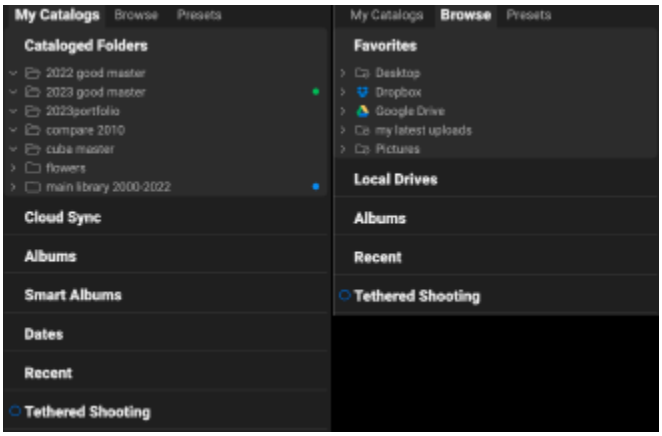
The left side of the Browse window has three tabs: My Catalogs, Browse, and Presets. My Catalogs and Browse help you organize and find your photos quickly. The Presets panel lets you apply Edit module presets to photos right in Browse (see Applying Edit Module Presets in Browse).

Click a tab at the top of the panel to switch between them. To hide the left panel, click the Show/Hide Panel icon at the bottom of the panel. Press **Tab** to show or hide the left and right panels together.

Differences Between the My Catalogs and Browse Tabs

The My Catalogs and Browse tabs show different views of your folders and other photo sources, designed to help with file-related tasks.

- **My Catalogs** lists your cataloged folders and registered ON1 Cloud Sync devices, plus the Albums, Smart Albums, Dates, Recent, and Tethered Shooting panes.
- **Browse** includes a Favorites pane for quick access to folders you visit often, a configurable list of cloud storage services, and the Local Drives, Albums, Recent, and Tethered Shooting panes.



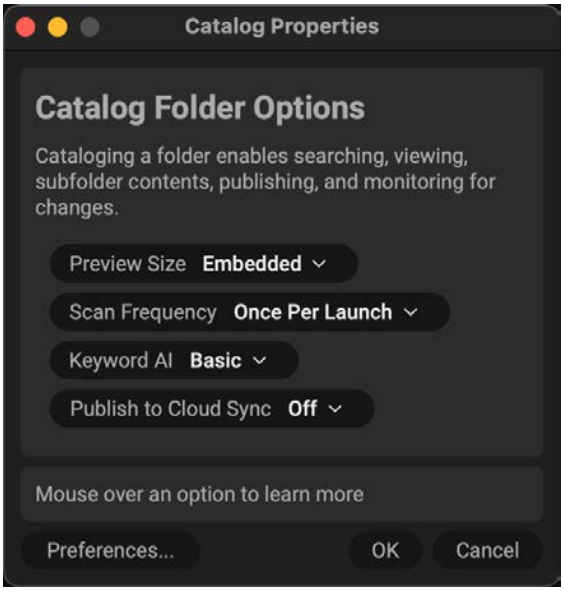
The My Catalogs tab (left) shows your cataloged folders and registered ON1 Cloud Sync devices. The Browse tab (right) shows your Favorites, attached local drives, and the cloud storage services installed on your computer.

Navigating Sources

Click a folder in the Cataloged Folders or Local Drives pane to show its photos and subfolders in the Preview area. To open a subfolder, click it in the Folders pane or

double-click it in the Preview area. Use the Breadcrumbs bar to move back up through your folders.

Cataloged Folders



A cataloged folder is a shortcut to a folder of photos you use often. Photo RAW caches cataloged folders in the background, so they and their subfolders load faster. Cataloged folders are ideal for portfolios, favorite photos, or your main photo library. With one exception, you also need cataloged folders to search for photos across multiple folders with the Search Bar (see Finding and Filtering Images with the Search Bar).

To catalog a folder, do one of the following:

- Click **+** at the top of the Cataloged Folders pane.
- Right-click a folder in the Preview area and choose **Make Cataloged Folder**.
- Choose **File > Add Cataloged Folder**.

Cataloging runs in the background, so you can keep working in any module. A small progress indicator appears next to the folder while it runs.

Catalog Properties

When you catalog a folder, the Catalog Properties window opens. First, choose the size of the previews Photo RAW creates:

- **Standard** (default) extracts the metadata and EXIF thumbnail, and creates a high-quality thumbnail and a screen-sized preview.

- **Medium** extracts the metadata and EXIF thumbnail, and creates a high-quality thumbnail.
- **Embedded** extracts only the metadata and EXIF thumbnail, and uses them until a high-quality preview is needed.

Standard is the best choice for most people. If your disk space is limited, or the folder is on a network drive, choose Medium or Embedded.

The Catalog Properties window also includes:

- **Scan Frequency:** how often Photo RAW checks the folder for new, changed, or removed photos and folders.
- **Keyword AI:** the level of AI keywording for the folder (see The Keyword AI Pane).
- **Publish to Cloud Sync:** whether to sync the folder to ON1 Cloud Sync and, if so, whether to upload the originals or editable proxies (see Using ON1 Cloud Sync with Photo RAW). Published folders show a Cloud Sync icon next to their name.

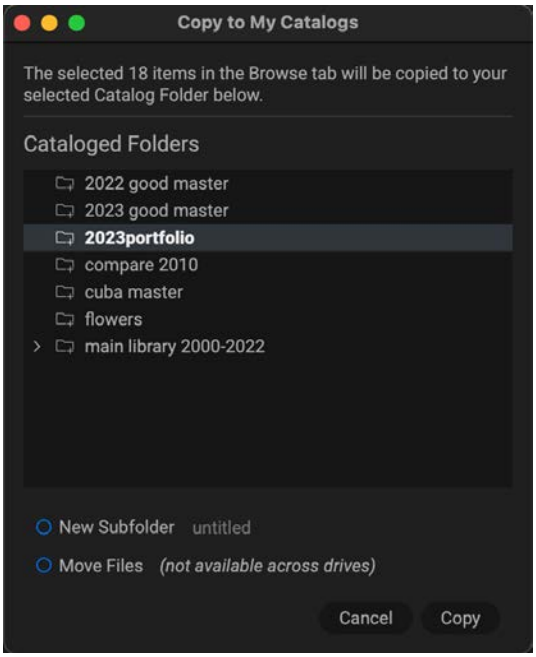
To change a cataloged folder's settings later, right-click it in the Cataloged Folders pane and choose **Catalog Properties**. To remove it, right-click and choose **Remove Cataloged Folder**. To stop syncing it, right-click and choose **Unpublish from ON1 Cloud Sync**.

Adding Photos to Existing Cataloged Folders

You can add photos from anywhere in Browse to a cataloged folder with **Copy to My Catalogs**. You need at least one cataloged folder to use it.

1. Select the photos you want to add.
2. Choose **File > Copy to My Catalogs**, click the folder icon with a **+** to the right of the Search Bar, or right-click a photo and choose **Copy to My Catalogs**.
3. Choose the cataloged folder to add the photos to, optionally in a new subfolder, and whether to move or copy them.

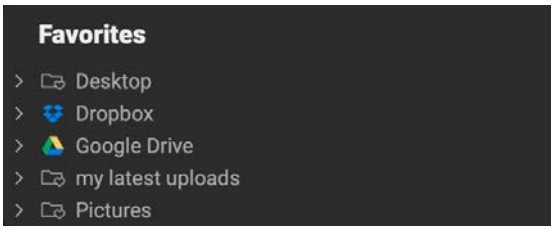
Moving is available only when the destination is on the same drive. Otherwise, Photo RAW copies the files. Photos added to a folder published with ON1 Cloud Sync are synced to the cloud automatically.



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

Favorites

Cataloged folders are great for keeping your main photo library organized, but you may have folders you use often and don't want to catalog, such as a folder where you export temporary images for social media. For those, add the folder to Favorites. Favorite folders appear in the Favorites pane, along with cloud storage services like Dropbox, Google Drive, and OneDrive.



The Favorites pane gives you quick access to folders you use often.

To add a folder to Favorites, do one of the following:

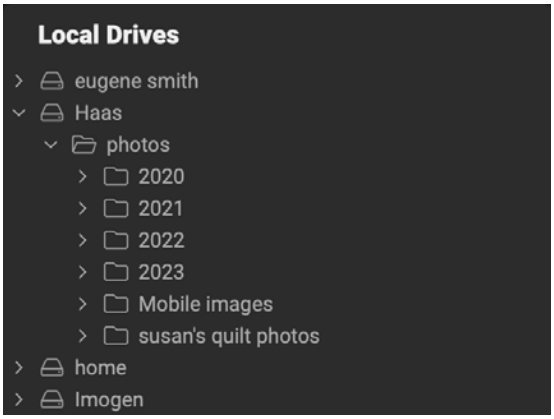
- Click **+** in the Favorites pane, select the folder in the window that opens, and click **Open**.
- Drag the folder from Browse onto the **+** icon in the pane.
- Right-click the folder and choose **Add to Favorites**.

Cloud Storage Services

Browse supports Dropbox, Google Drive, and Microsoft OneDrive. When these services are installed on your computer, they keep local copies of your photos, and Browse finds and monitors those locations automatically.

When you install Photo RAW 2027, it looks for these services in their default locations. To remove a service you don't use, right-click it in the Favorites pane and choose **Remove from Favorites**. If you install a service after installing Photo RAW, click **+** at the top of the pane and select its folder.

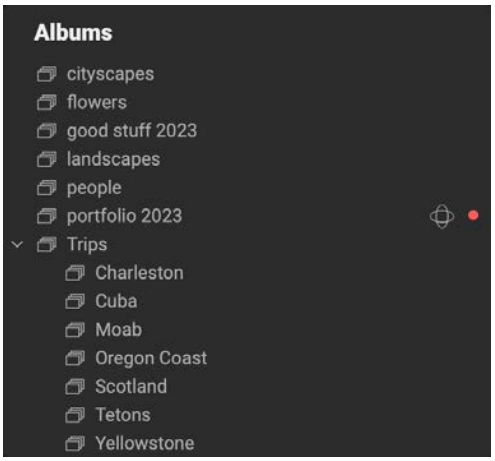
Local Drives



Browse automatically recognizes any disk inside or connected to your computer, including internal and external hard drives, optical drives, USB thumb drives, memory cards, cameras, other USB Mass Storage devices, and network drives (including mapped drives on Windows).

Disks appear in the Local Drives pane, below Favorites, with a hard drive icon next to them. Some disks, such as optical drives, are read-only. You can view their photos, but you'll be asked to save a copy to another location if you want to edit one.

Albums Pane

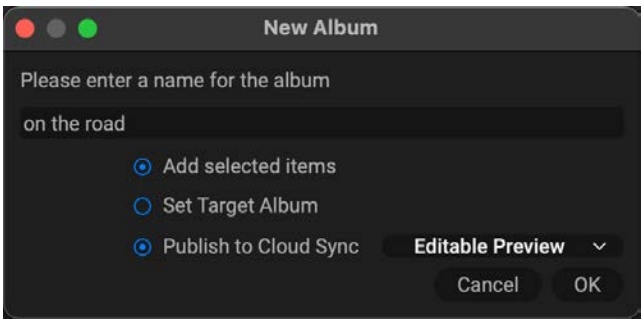


Albums let you collect and keep track of photos for a project, an event, or a broader category like a portfolio. You choose the photos and add them to a new or existing album, for example by dragging them onto the pane. You can nest albums to organize your collections, and you can publish albums to ON1 Cloud Sync, which shows a Cloud Sync icon to the right of the album name. Albums created on your other Cloud Sync devices appear in the Albums pane on all of your connected computers.

Creating an Album

Click **+** in the Albums pane and choose **Create Album**, or select photos and drag them onto the **+** icon.

In the New Album dialog, enter a name, and choose whether to add the selected photos to the album and whether to make it the target album (see Using the Target Album Feature).



If you use ON1 Cloud Sync, the dialog also lets you publish the album to the cloud. Check the box and choose **Editable Preview** or **Originals**, depending on how you plan to use the photos and how much storage you have. For more information, see Using ON1 Cloud Sync with Photo RAW.

Adding Photos to an Existing Album

To add photos to an album, do one of the following:

- Drag the photos onto the album's name.
- Select the photos, right-click one of them, and choose **Add to Album**.
- Choose **Album > Add to Album** and select the album.
- Select a photo and choose **Edit > Copy**, then click the album in the Albums pane and choose **Edit > Paste**.

Removing Photos from an Album

Select the photos and press **Shift-Delete**, choose **Album > Remove from Album**, or right-click and choose **Remove from Album**.

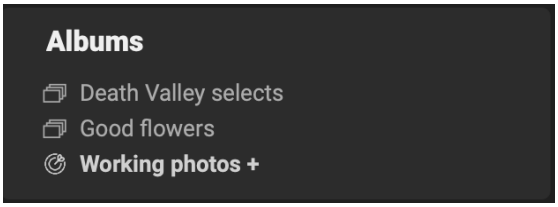
Deleting an Album

Right-click the album's name and choose **Delete**.

Using the Target Album Feature

To speed up culling and other organizing tasks, you can make any one album the target album. Then press **B** in any Browse view to add the selected photos to it.

You can have only one target album at a time. To set one, check **Set Target Album** when you create an album, or right-click an existing album and choose **Set Target Album**. To clear it, right-click the album and choose **Unset Target**.



The target album shows a target icon and a + after its name.

Publishing and Unpublishing Albums with ON1 Cloud Sync

To publish an album, right-click its name and choose **Publish to ON1 Cloud Sync**. To unpublish it, right-click and choose **Unpublish from ON1 Cloud Sync**. The album is removed from your other synced devices but stays on the device it was shared from.

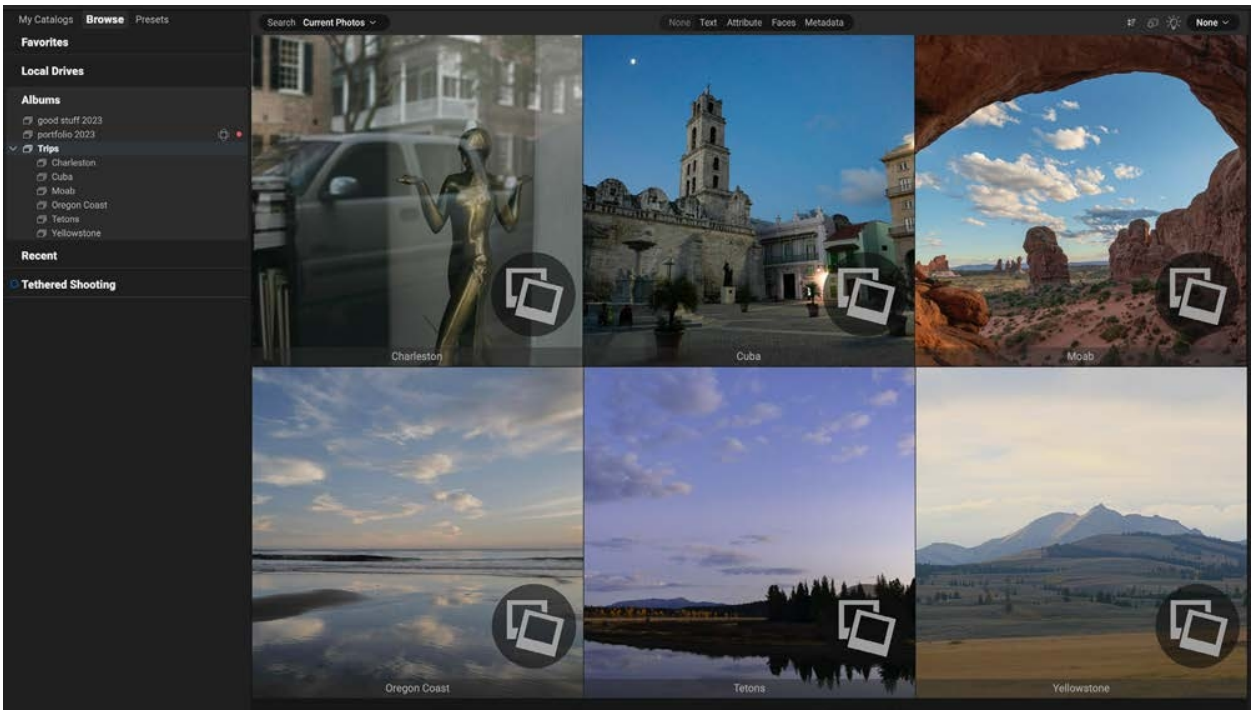
NOTE: You can unpublish a Cloud Sync album only from the device where it was created, but you can delete a published album from any Cloud Sync device, which removes it from all of your devices. For details, see Using ON1 Cloud Sync with Photo RAW.

Changing the Album Thumbnail

Double-click the album's name to open it, right-click the photo you want to use, and choose **Set Album Preview**.

Nesting Albums

To create a set of nested albums, click **+** in the Albums pane to create an empty album, then drag other albums onto it. When you click the parent album, Browse shows its sub-albums in a folder-style view. Double-click a sub-album to open it. To see every photo in the set at once, choose **View > Show Subfolder Contents**.

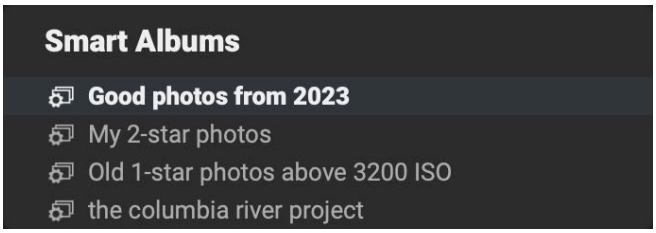


Click a nested album set to see its sub-albums, and double-click a sub-album to open it.

To move a sub-album back to the top level, drag it out of the parent album, or right-click it and choose **Move to Top**. If you drag an album onto one that already contains photos, the parent album shows its own photos alongside its sub-albums.

NOTE: Nested albums can't be used with ON1 Cloud Sync. If you move a synced album into a nested album, Photo RAW removes it from the cloud.

Smart Albums

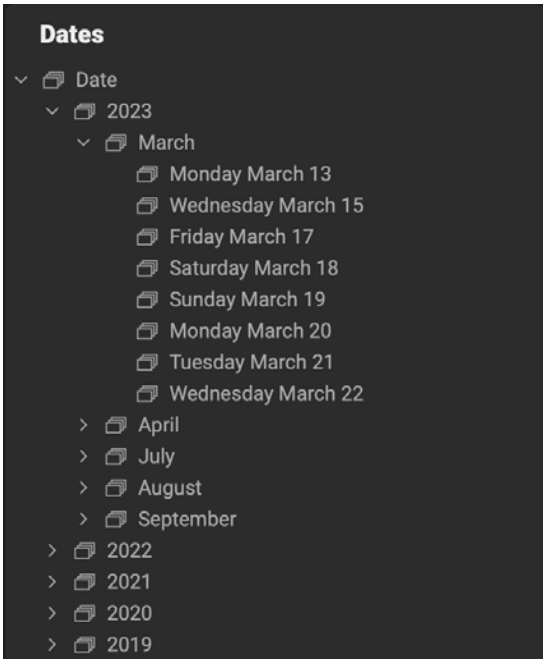


A smart album is a dynamic album based on a search you build with the Search Bar (see Finding and Filtering Images with the Search Bar). For example, if you search for all photos rated three stars or higher taken after June 2018, you can save that search as a smart album. Each time you click the smart album, Photo RAW runs the search again, so its contents are always up to date.

To add a color label to a smart album, rename it, or delete it, right-click its name. To change its criteria, select it, adjust your search in the Search Bar, and choose **Update Smart Album with Current Settings** from the menu at the far right of the Search Bar.

NOTE: Nested albums and smart albums can't be published to ON1 Cloud Sync.

Dates Pane

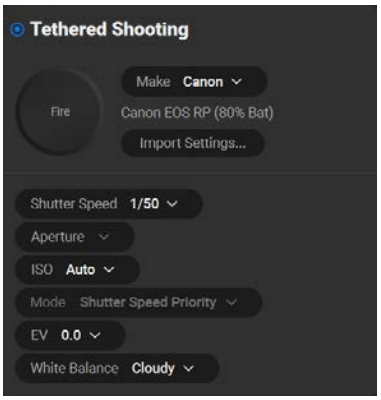


The Dates pane lets you find cataloged photos by when they were taken. Its simple timeline lets you drill down through your library by year, month, and day, which makes finding birthday and holiday photos easy.

The pane lists every year that has photos, with the most recent year at the top. Click a year to see all the photos taken that year. Click the arrow to the left of a year to list its months, and keep drilling down to individual days. At every level, the Preview area shows all the photos taken during that period.

NOTE: The Dates pane works only with cataloged folders.

Tethered Shooting



The Tethered Shooting pane lets you control many Nikon and Canon cameras connected to your computer by USB and capture photos straight to your computer. Each shot appears on your display right away, which makes tethering a great way to fine-tune lighting and composition in the studio.

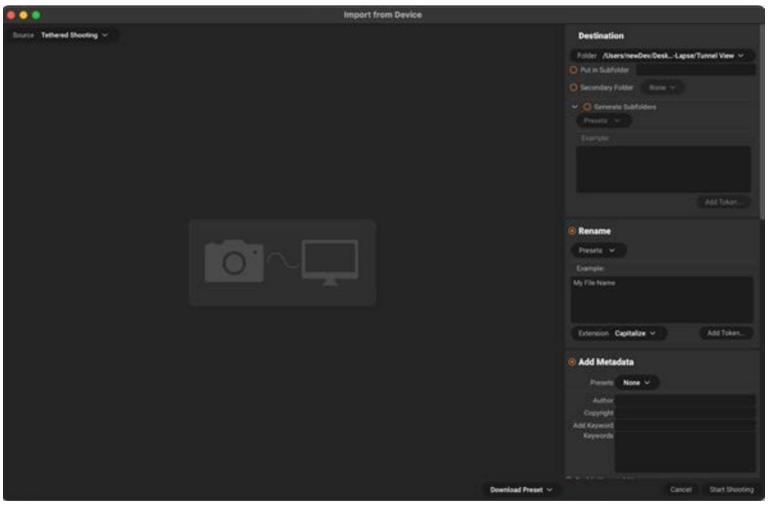
Starting a Tethered Session

1. Connect your camera to your computer with the right USB cable. Your camera's manual lists the cable you need if one wasn't included.

2. Turn on the camera, then turn on the Tethered Shooting pane by clicking the button to the left of its name.

3. Photo RAW looks for the camera and, when it finds it, opens the Import window. Use the panel on the right to choose how your shots are saved, including file name and location, metadata, Develop or Effects settings, and time adjustments (see Importing Photos into Browse).

4. Click **Start Shooting** at the bottom right of the Import window.



Shooting

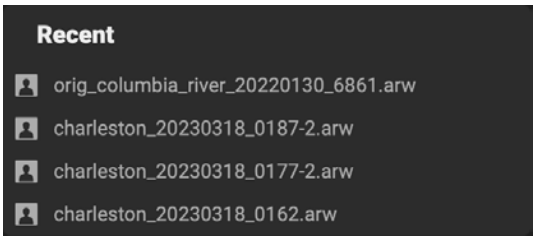
The Tethered Shooting pane now shows your camera model, with its current settings in the table at the bottom of the pane. From left to right and top to bottom, they are shutter speed, aperture, ISO, shooting mode (Manual, Aperture Priority, or Shutter Priority), exposure compensation, and white balance. You can change any setting that has a drop-down menu.

Click **Fire** to take a photo with the current settings. It's saved to the location you chose in the Import window. In Grid view, the new photo appears at the beginning or end of the grid, depending on your sort order. In Detail or Filmstrip view, it appears in the Preview area.

When you're done, turn off the Tethered Shooting pane by clicking the button next to its name, then turn off your camera and disconnect it.

NOTE: Tethered shooting in Photo RAW 2027 supports most Canon and Nikon digital cameras. For a list of supported cameras, see the ON1 Knowledge Base.

Recent



The Recent pane lists the files and folders you've opened recently, with the most recent first. Click an item to show it in the Preview area. To clear the list, click the **x** in the pane's title bar.

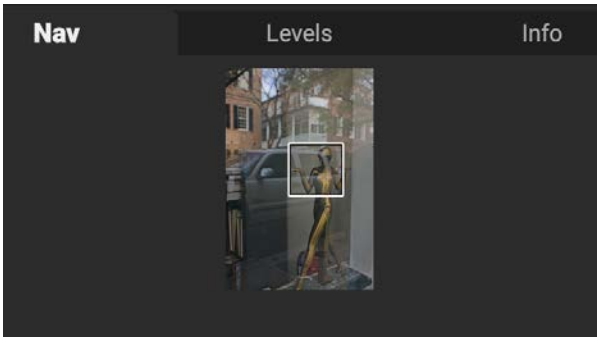
NOTE: You can show or hide most of the panes in the My Catalogs, Browse, and Presets tabs. See Customizing Tabs & Panes.

The Photo Panel

The panel on the right side of the screen shows information about the photo selected in the Preview area. At the top are the Nav, Levels, and Info panes. Below them, the Browse tab holds panes such as Metadata and Keywords, and Photo RAW MAX adds a Culling Assistant tab.

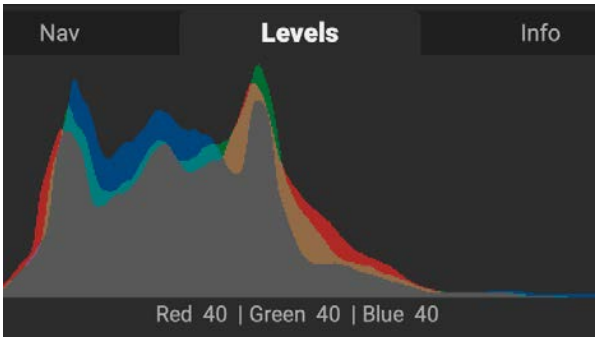
The Navigator Pane (Detail and Filmstrip Views Only)

The Navigator pane shows a thumbnail of the current photo. A white rectangle marks the area visible in the Preview area. Drag inside the rectangle to pan around the photo.



The buttons at the bottom of the pane set the zoom level. **Fit** fits the whole photo in the Preview area, and the percentage buttons, such as 100%, 50%, and 25%, zoom to that size. At 100%, you see the photo's actual pixels.

The Levels Pane (Detail and Filmstrip Views Only)



The Levels pane shows a histogram: a chart of the shadow, midtone, and highlight areas of a photo based on its RGB values. It's useful for spotting clipping, where parts of the photo are pure black or pure white and may have lost shadow or highlight detail.

Shadows are on the left of the histogram and highlights are on the right. A triangle at the top of each end lights up when that side is clipped. Click a triangle to turn on the clipping overlay, which shows pure black areas in blue and pure white areas in red. Click a triangle again to turn it off.

You can also hold **J** to show the clipping overlay temporarily, or press **Option-J** (macOS) or **Alt-J** (Windows) to turn it on or off. The overlay is especially helpful while you adjust a photo's brightness and contrast.

The bottom of the Levels pane shows the RGB values of the pixels under your cursor.

Info Pane (All Views)

The Info pane shows common metadata for the selected photo in a large, easy-to-read format:



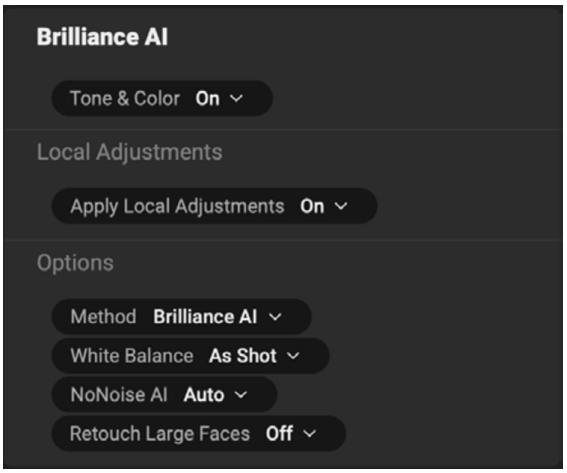
- Camera make and model
- Lens focal length
- Capture date and time
- File type
- ISO
- Shutter speed
- Aperture
- Exposure compensation
- Image dimensions

- File size
- Rating, color label, and like status

Fields with no information are left blank. You can also change the photo's star rating, color label, and flag right in the Info pane.

NOTE: The Settings Applied information that appeared in the Info pane in earlier versions of Photo RAW is now in the Layers pane in Edit (see Working With the Layers Pane).

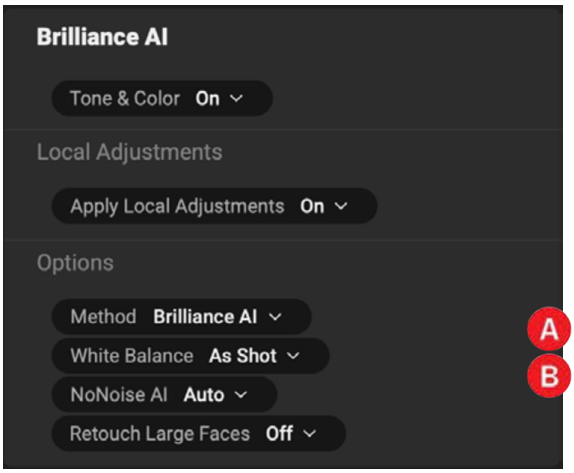
Brilliance AI Pane (Browse)



The Brilliance AI pane lets you apply Brilliance AI to photos without leaving Browse. Brilliance AI makes intelligent color and tone adjustments, applies NoNoise AI and Portrait AI automatically, and adds automatic local adjustments.

To use it, select one or more photos, click the control circle to the left of the pane's title, and adjust the settings. You can apply Brilliance AI to individual photos, groups of photos, or entire folders, with different settings for different kinds of photos. Anything you apply in Browse appears in the Edit module, where you can fine-tune it further. For details, see Brilliance AI.

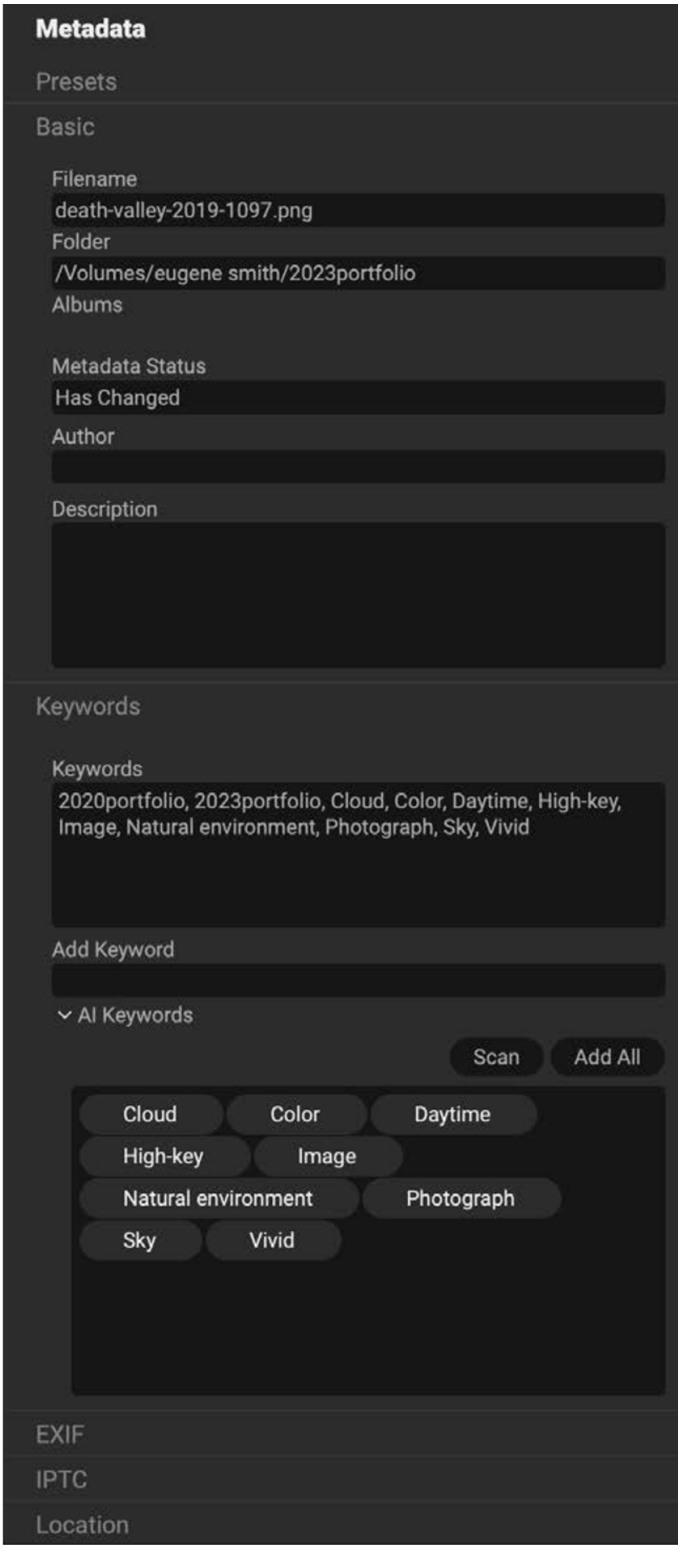
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The Metadata Pane



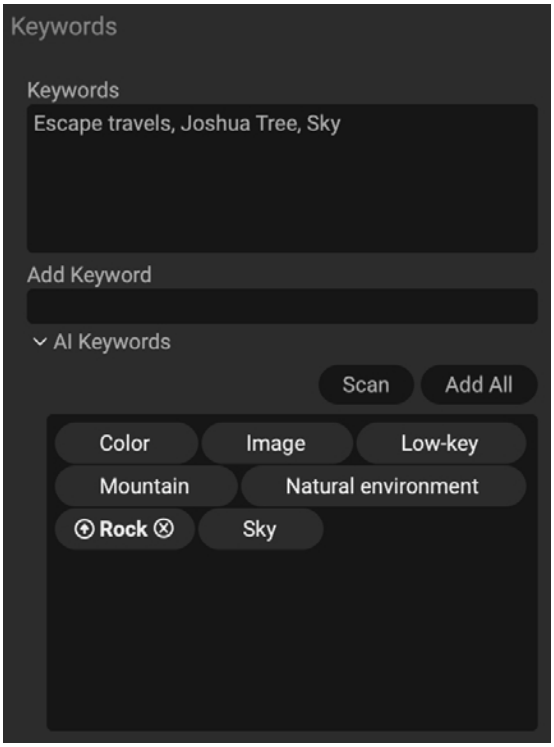
The Metadata pane shows all the available metadata for a photo in one place. Some of it is embedded by your camera, and some you can add yourself. With Keyword AI, Photo RAW 2027 can also scan your

photos and suggest keywords based on their content, so you can find photos by a wide range of details.

The Metadata pane has these sections:

1. **Preset:** applies a saved metadata preset, which can include any editable metadata in the pane (see Additional Metadata Options).
2. **Basic:** shows the selected photo's name and location and any albums it's in, and lets you enter author information and a description. The Author field is linked to the IPTC Creator field.
3. **Keywords:** add keywords and edit existing ones.
4. **AI Keywords:** keywords generated automatically from the photo's content.
5. **EXIF:** click the label to show the photo's EXIF information.
6. **IPTC:** click the label to show the photo's IPTC information.
7. **Location:** click the label to show the photo's location data.

The Keyword AI Pane



Keyword AI takes the work out of keywording your photos. It scans your photos and suggests keywords based on their content, location, and more, so you can find photos

quickly even if you've never added a keyword. Photo RAW can recognize hundreds of objects and regions, identify locations, find people, and understand photographic properties, and all of these become searchable terms.

You stay in control of the process. You can generate keywords manually for any photos, or automatically for cataloged folders. If you use other photo apps and want your AI keywords embedded in your photos' metadata, Photo RAW offers both automatic and manual options.

Generating Keywords Manually

Select a photo, a group of photos, or a folder in Browse, then click **Scan** in the AI Keywords section of the Metadata pane. You can also right-click and choose **Scan**.

The generated keywords appear in the AI Keywords section. You can leave them there, or move them to the main Keywords section:

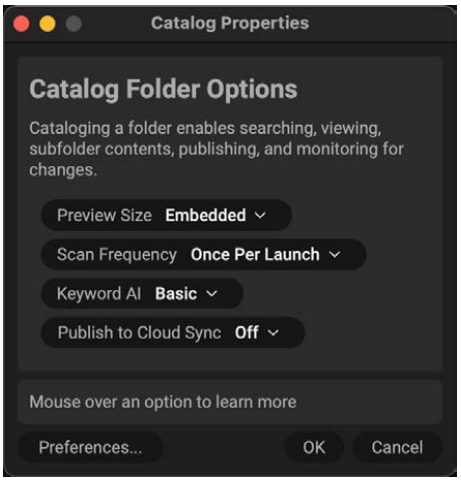
- To add one keyword, hover over it and click the up arrow.
- To remove one keyword, click its **x**.
- To add all of them, click **Add All**.

You can also have Photo RAW embed keywords automatically so other photo apps can see them (see Embedding AI Keywords).

Generating Keywords Automatically for Cataloged Folders

When you create a cataloged folder, the Catalog Properties window lets you choose whether its photos are scanned automatically. The Keyword AI menu has three options:

- **Off:** the folder isn't scanned.
- **Basic:** scans for the folder name, photographic properties, main regions in the photo, and some subjects, such as people, animals, and cars.
- **Honor Preferences:** scans using all the settings in the Keyword AI tab of Preferences (see Keyword AI).



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

By default, photos in all cataloged folders are scanned at the Basic level. Once a cataloged folder is set to generate AI keywords, photos added to it are keyworded automatically, based on the folder's Scan Frequency setting (see Catalogs).

NOTE: Photo RAW 2027 runs nearly all Keyword AI scanning on your computer. The only exception is looking up location information from GPS coordinates. Keyword AI never uploads or shares your photos.

Embedding AI Keywords

By default, Photo RAW doesn't embed AI keywords in your photos' metadata. AI keywords, whether generated automatically or manually, appear in the AI Keywords section of the Metadata pane and stay associated with the photo inside Photo RAW. When you search with the Search Bar (see Finding and Filtering Images with the Search Bar), Photo RAW searches AI keywords too.

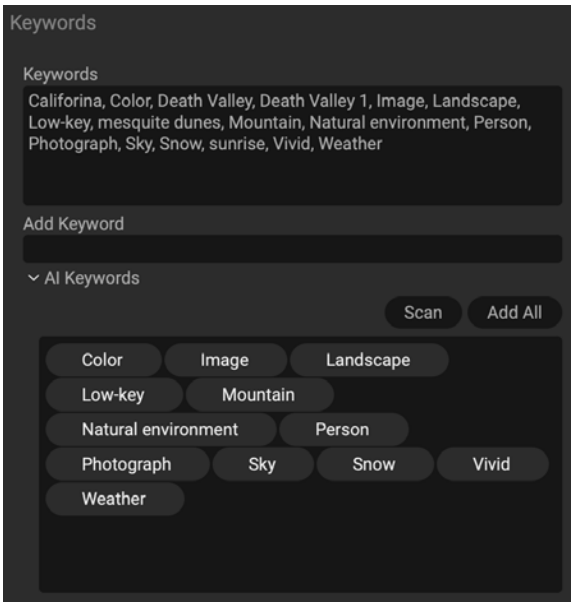
To make keywords available outside Photo RAW, embed them in the photo's metadata. To do it manually, select the photos and choose **Photo > Embed Metadata**. All keywords are then embedded and visible in any app that reads metadata properly, such as Lightroom, Capture One, and Affinity Photo.

To embed AI keywords automatically:

- **Raw files:** turn on **Write Keyword AI Results to XMP** in the Keyword AI tab of Preferences. Photo RAW adds all AI keywords to the Keywords section of the Metadata pane and writes them to an XMP sidecar file in the photo's folder. Most popular editing and cataloging apps can read sidecar files, which also store ratings and other metadata.

- **Non-raw files:** turn on **Photo > Automatically Embed Metadata** in Browse. AI keywords are embedded in each photo as it's scanned.

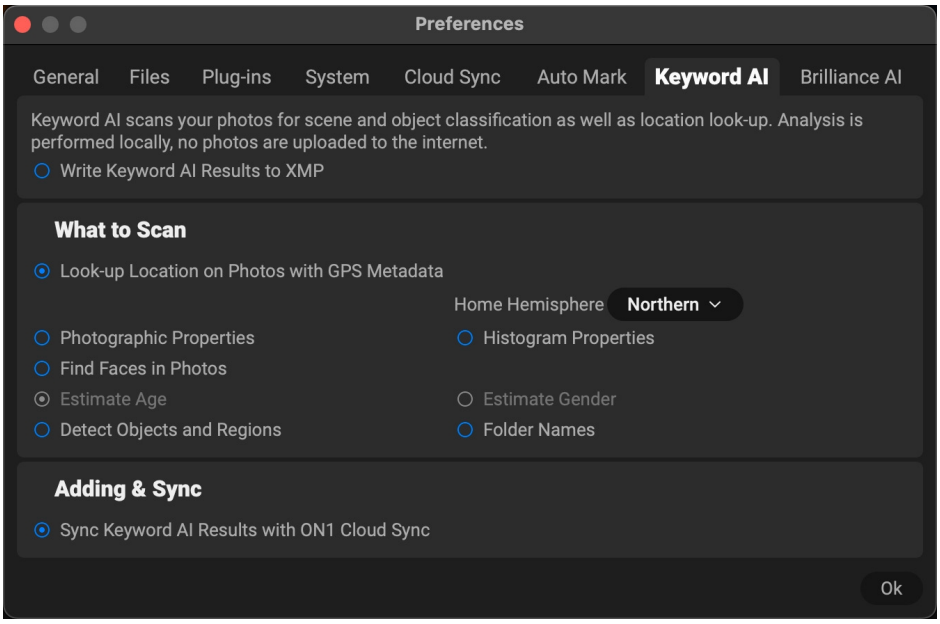
Turning off either setting affects only future scans. Metadata for photos that were already scanned, including AI keywords, stays intact.



With Write Keyword AI Results to XMP turned on, AI keywords are copied to the Keywords section and written to the photo's XMP sidecar file.

Fine-Tuning Keyword AI

In the Keyword AI tab of Preferences, you can choose what Photo RAW looks for when it scans your cataloged folders, including location data, photographic properties, histogram properties, faces, age and gender, and specific objects and regions. Restart Photo RAW for changes to take effect. Changing these options doesn't affect AI keywords that were already generated.



You can adjust Keyword AI settings, or turn off automatic scanning, in Preferences. You can still scan manually with the Scan button in the Metadata pane.

Using AI Keywords in Other Apps

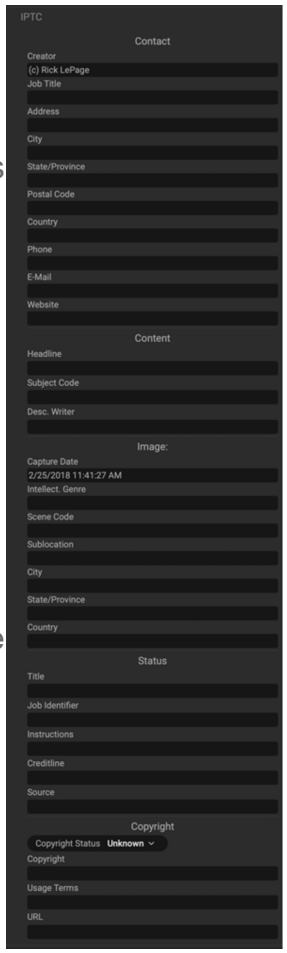
Most popular photo editing and organizing apps can read and write metadata. When you import photos tagged with Keyword AI into Lightroom or Capture One, for example, those apps recognize the keywords and other metadata you added in Photo RAW and save them in their own catalogs.

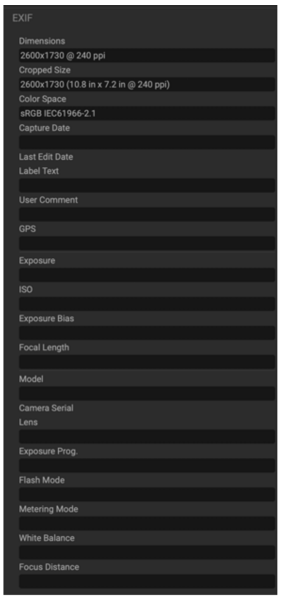
To use Keyword AI on photos cataloged in another app, open their folder in Browse. You'll see any existing keywords and other compatible metadata. Scan the photos, embed the AI keywords using one of the methods above, then read the updated metadata back into the other app. In Lightroom, photos with changed metadata are flagged. Select them and choose **Metadata > Read Metadata from File**. Capture One has a similar command in the Image menu, but it doesn't flag photos whose metadata has changed.

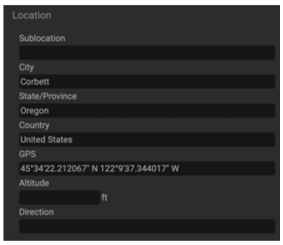
Additional Metadata Options

The bottom of the Metadata pane has three sections for viewing and adding specific kinds of information:

- **EXIF** (Exchangeable Image File Format) shows the data your camera embedded in the photo. How much appears depends on your camera, and many fields can be edited.
- **IPTC** (International Press Telecommunications Council) is an industry-standard format with much more detailed metadata than EXIF. Journalists and stock photographers have long used it to catalog and tag photos and to add copyright information, captions, and more. The IPTC Creator field and the Author field in the main Metadata pane share the same text, so anything you type in one appears in the other.
- **Location** includes GPS coordinates plus country, state or province, and city. For any photo with GPS coordinates, Photo RAW can look up this information automatically when you choose **Photo > Set Location from GPS Coordinates**.





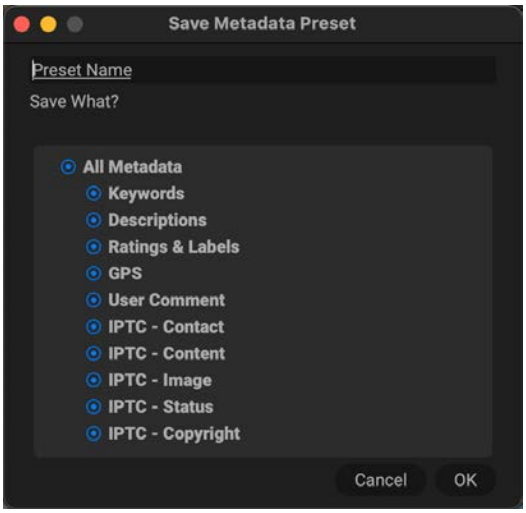


Click a section's label to open it, and click again to close it.

When you enter text in any EXIF, IPTC, or Location field, Photo RAW adds it to the selected photo. To change metadata for several photos at once, select them all, then edit the fields.

Metadata Templates

Metadata templates (presets) apply common information to your photos, such as copyright, author, contact information, and your website. You can apply them in the Metadata pane or during import (see Importing Photos into Browse).



To save a template:

1. Select a photo that already has the metadata you want, or select a photo without metadata and enter your common information in the Metadata pane.

2. Choose **Save New Preset** from the Preset menu at the top of the pane.

3. In the Save Preset dialog, choose which fields to include. For example, you might include copyright and contact information but leave out keywords, GPS, and descriptions.

To update a template, select it in the Preset menu, change the fields you want, and choose **Update Preset with Current Settings** from the Preset menu. You can choose which fields are saved. To delete a template, choose it from the Preset menu, then choose **Delete Preset**.

Embedding Metadata

For raw files, metadata you add in Browse is stored in industry-standard XMP sidecar files, so it can be read by any app that supports XMP. For other files, metadata is embedded automatically when you edit a photo, create a copy for editing, or use the Send To command.

To embed metadata manually, select your photos and choose **Photo > Embed Metadata**. Photo RAW opens each photo, updates its metadata, and saves it again. Embedding works with TIFF, PSD, PSB, and JPEG files. Raw and PNG files don't support embedded metadata.

Reading Metadata

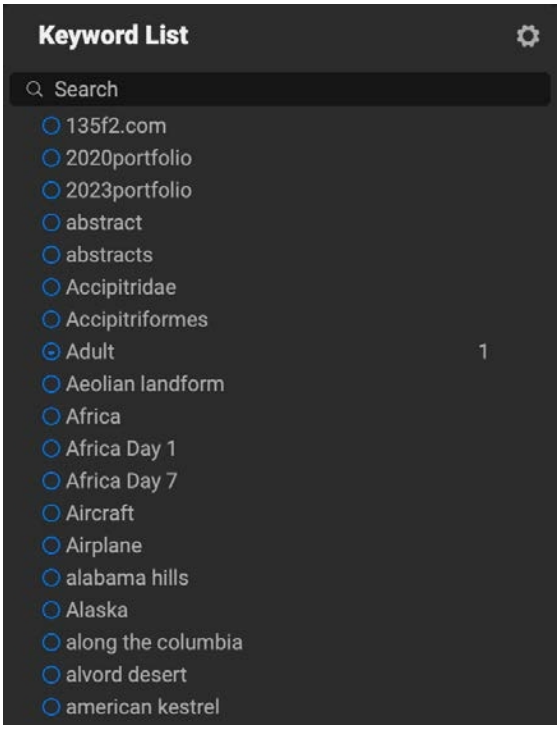
When you share raw photos between computers or with other people, their metadata can get lost or end up different from your original. To fix this, choose **Photo > Read**

Metadata. Photo RAW reloads the metadata from the file, or from its XMP sidecar file for raw photos.

Changing a Photo's Capture Date

To change the capture date of one or more photos, choose **Photo > Edit Capture Date**. You can set a specific date and time, adjust for a time zone change, or revert to the raw file's original embedded capture time.

Keyword List Pane



As you catalog folders or browse uncataloged ones, Photo RAW stores every keyword you've added to your photos in an internal database. The Keyword List pane shows that list. From there, you can search for keywords, find photos in your cataloged folders, manage your keywords, apply them to photos, and organize them into subcategories.

Double-click a keyword to search your cataloged folders for photos that use it. The results appear in the Preview area. Photo RAW runs this as a Search Bar search, so you can refine it there with more criteria. To search only the current folder, choose **Filter Current Photos** in the Search Bar.

To add a keyword to the selected photos in any Browse view, click the button to the left of the keyword. You can also type keywords in the Add Keywords field of the Metadata pane.

Right-click a keyword for these options:

- **Assign Keyword to Selected Photos:** adds the keyword to the selected photos.
- **Remove Keyword from Selected Photos:** removes the keyword from the selected photos.
- **Add Keyword:** creates a new keyword nested under the selected keyword.
- **Edit Keyword:** renames the keyword everywhere it's used in your cataloged and known photos.
- **Delete Keyword:** removes the keyword from all cataloged and known photos that use it.
- **Find Cataloged Photos with Keyword:** shows every photo in your cataloged folders that uses the keyword, in Grid view.

Searching the Keyword List

The Keyword List includes every keyword you've ever used, so it can get long. Type in the search field at the top of the pane to show only keywords that contain those letters, then select a keyword and use any of the options above.

Using Hierarchical Keywords

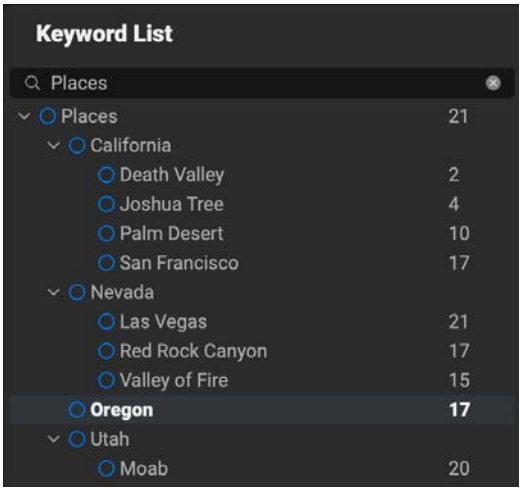


Photo RAW 2027 supports hierarchical keywords, which let you nest keywords inside a top-level keyword to keep them organized. For example, you could use states you've visited ("California," "Nevada," "Oregon") as top-level keywords, with places in each state ("Death Valley," "Joshua Tree," "Valley of Fire") nested inside.

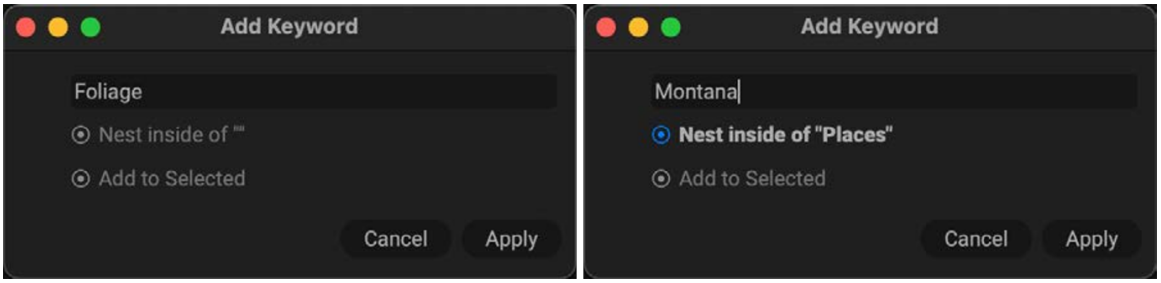
Top-level keywords with nested keywords show an arrow to their left. Click the arrow to show the nested keywords, with the number of photos for each on the right. As with regular keywords, double-click any nested keyword to show all the photos in your cataloged folders that use it.

To create a keyword hierarchy:

1. Click the gear icon at the top of the Keyword List pane and choose **Add Keyword**. Enter the top-level keyword and click **Apply**. If photos are selected and you don't want to add the keyword to them, uncheck **Add to Selected** first.

2. Right-click the top-level keyword and choose **Add Keyword**. In the dialog, check the option to nest the new keyword inside the top-level keyword, and choose whether to add it to the selected photos.

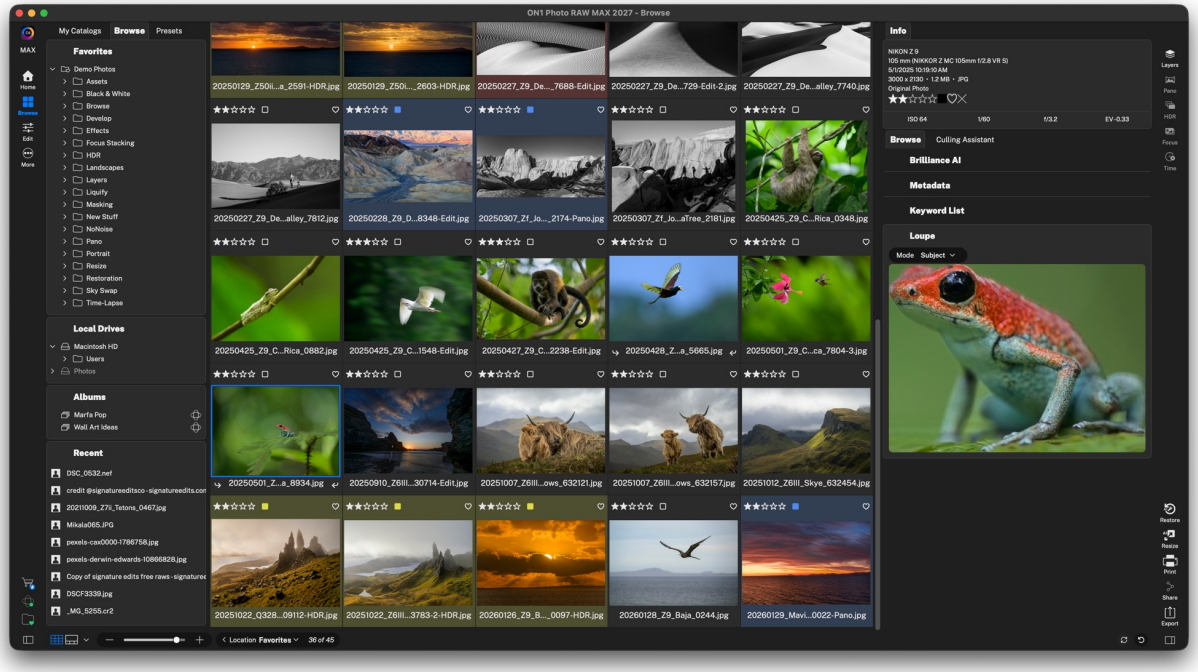
To build a hierarchy from keywords you already have, create the top-level keyword first, then drag the existing keywords onto it.



Right-click a top-level keyword and choose Add Keyword to nest a new keyword inside it.

NOTE: You can show or hide most of the panes in the Photo panel. See Customizing Tabs & Panes.

Loupe Pane

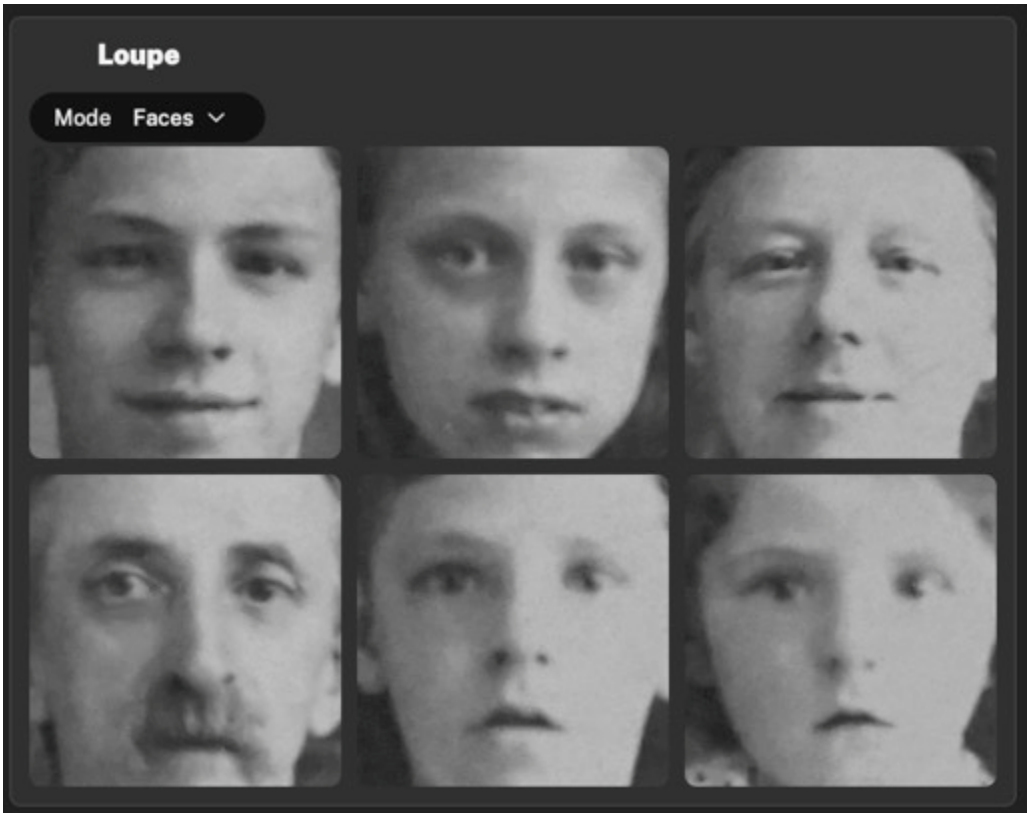


The Loupe pane gives you a close-up look at the photo you're working with, right in the Photo panel in Browse. Check faces, subjects, and fine detail without switching to Detail view and zooming in and out. It's especially handy when you're reviewing a shoot in Grid view, and it's also available in the Culling tab (see Using the Culling Assistant).

Choosing a Mode

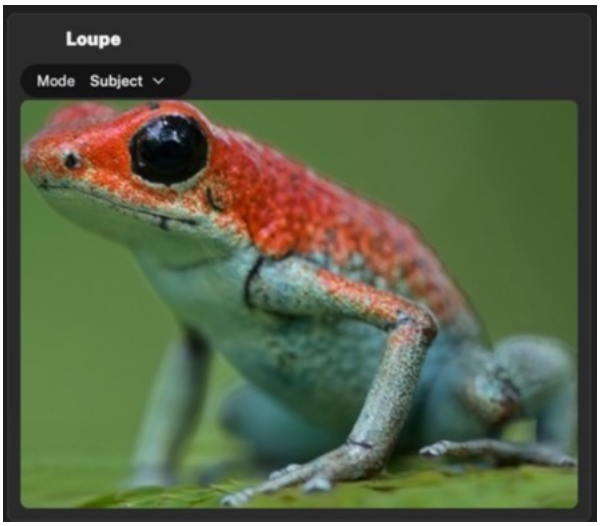
Choose a mode from the **Mode** menu at the top of the pane. Photo RAW remembers the mode you pick, so the Loupe stays the way you left it.

Faces



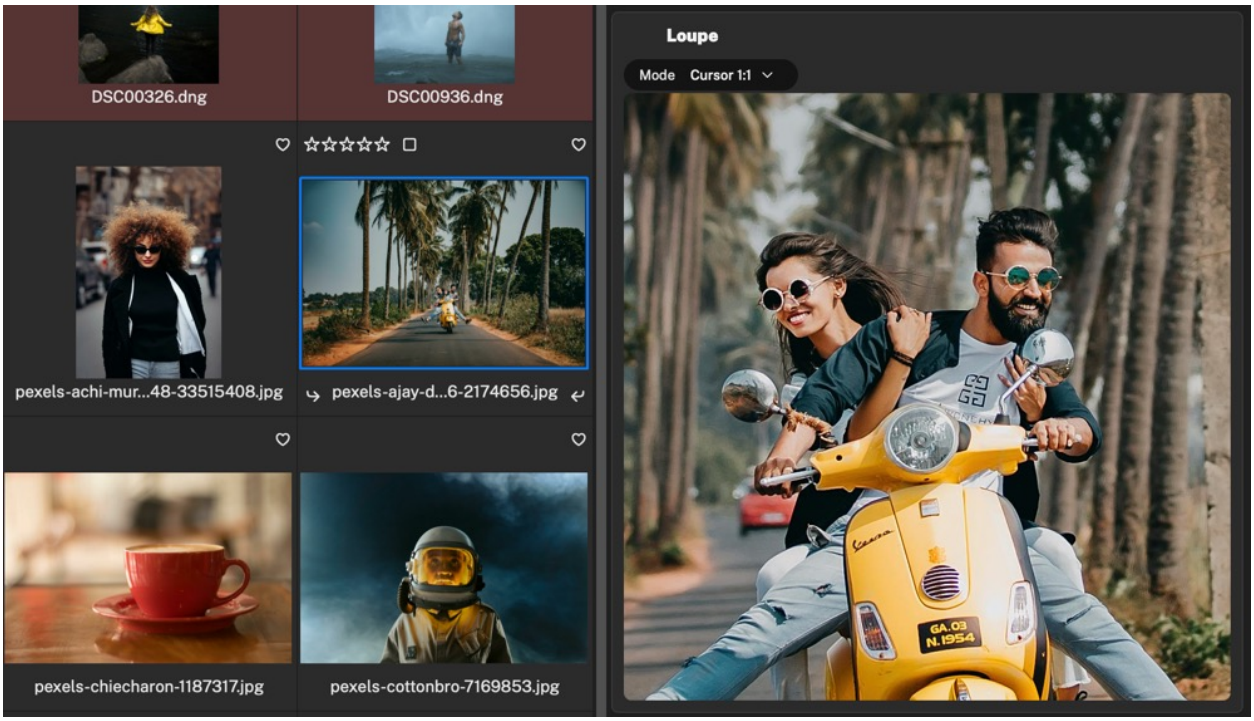
Faces mode finds every face in the selected photo and shows a close-up of each one, so you can quickly check for sharp focus, closed eyes, and expressions. To change how many faces fit across the pane, choose 1, 2, or 3 columns from the pane's menu.

Subject



Subject mode finds the main subject of the selected photo and shows a close-up of it. Use it to check focus and detail on your subject without zooming.

Cursor 1:1

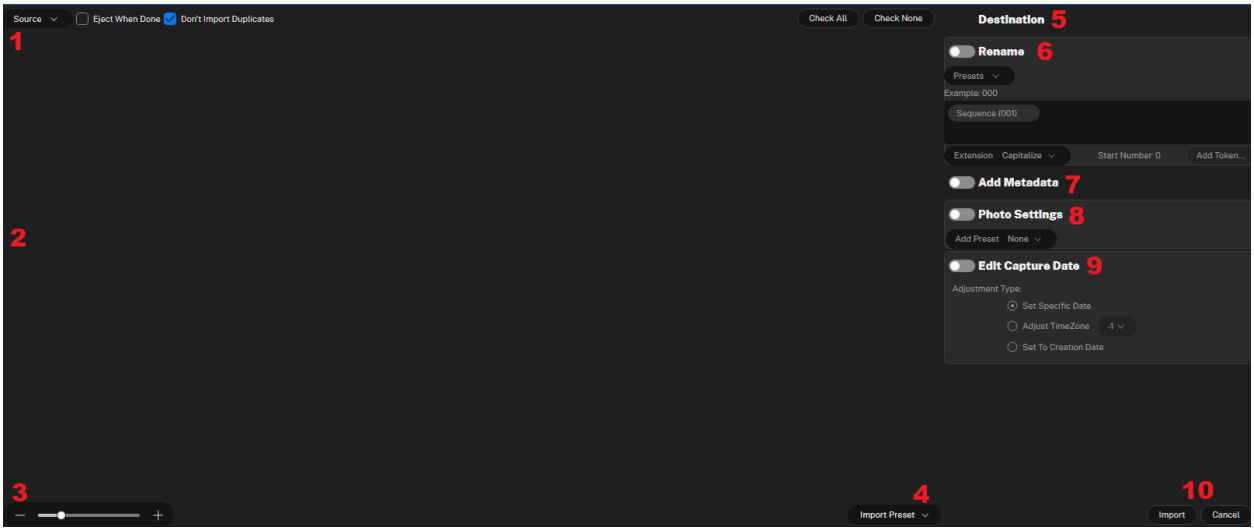


Cursor 1:1 mode works like a magnifying loupe on a light table. Move your cursor over a photo, and the Loupe shows the area under the cursor at 100% (1:1).

- **Grid view:** Select a photo, then hold the cursor over its thumbnail. After a short pause (about half a second), the Loupe shows the magnified area. Move the cursor to inspect other parts of the photo.
- **Detail and Compare views:** Move the cursor over the preview to see that area at 100%.

NOTE: The column options in the pane's menu apply only to Faces mode.

Importing Photos into Browse



Import lets you bring in photos from your camera, memory card, phone, tablet, or another source, such as a portable drive you filled in the field.

Connect your camera, card, or device and choose **File > Import** in Browse. The Import window has these options:

1. **Import Options bar:** choose the source (camera, memory card, or other device), eject the device when the import finishes, and skip photos you've already imported. You can also select all photos or none.

2. **Preview area:** shows the photos to be imported. All photos are included by default. Click the check mark on a photo to leave it out.

3. **Thumbnail size:** changes the size of the thumbnails in the Preview area.

4. **Preset selector:** applies an import preset, which can include any of the settings in the panel on the right, to the selected photos.

5. **Destination:** sets where the imported photos are saved, plus an optional second location for a backup copy (see Destination Pane Options).

6. **Rename:** renames the imported files using custom text, sequence numbers, and metadata. It uses the same token-based renaming and presets as the Rename Files dialog (see About Filename Tokens).

7. **Add Metadata:** adds metadata such as keywords and copyright information. Click **More** for all the IPTC fields, plus GPS coordinates and a description. To apply the same metadata to future imports, enter it and choose **Save New Preset** from the

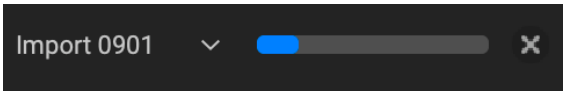
pane's Preset menu, or use an existing metadata preset (see The Metadata Pane).

8. **Photo Settings:** applies an Edit module preset to the imported photos. These settings aren't permanent, so you can adjust or reset them later (see Presets).

9. **Edit Capture Date:** changes the capture date of the imported photos. **Adjust Time Zone** is handy if you forget to change your camera's clock while traveling across time zones.

10. **Cancel/Import:** Cancel closes the Import window without importing any photos. Import brings in your photos with the settings you chose.

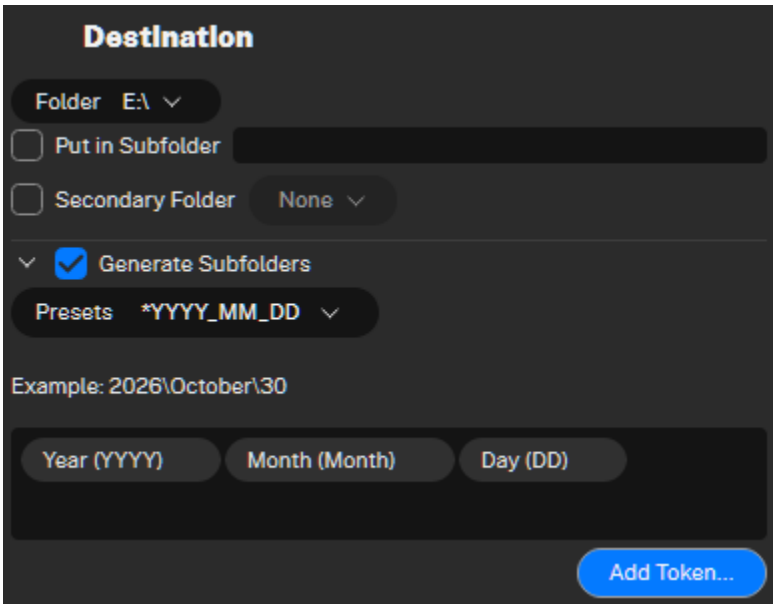
When your settings are ready and you've selected your photos, click **Import**. A progress bar appears at the bottom of the Browse window while your photos import. If you're importing into a cataloged folder, the new photos are indexed automatically in the background.



A progress indicator appears at the bottom of the Browse window while photos import from a camera or card.

TIP: To process photos automatically as soon as they're added to a folder, use Auto Import. Choose it from the File menu in Browse to apply metadata and presets, and even export, without opening the Import window each time.

Destination Pane Options



Destination is the only pane in the Import window you have to set up. It has these options:

- **Folder:** choose where to import your photos. Recent destinations are listed, or you can choose a different folder.
- **Put in Subfolder:** enter a name to import the photos into a new subfolder inside the destination folder. Photo RAW creates the folder for you.
- **Secondary Folder:** copies the imported photos to a second location, such as another drive, as a backup. Choose the location from the menu, which lists folders you've used before. The copy uses the same Put in Subfolder and Generate Subfolders settings.
- **Generate Subfolders:** creates subfolders automatically during import based on metadata or import information, using the same tokens as the Rename pane (see Renaming Files and Folders). For example, you could organize imported photos into a folder for each year, with a folder for each month inside it. Photo RAW puts each photo in the right folder and creates any folders that don't exist yet.

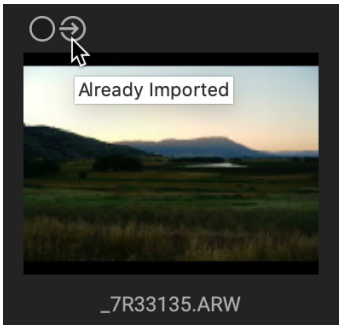
Photo RAW remembers your settings for the next time you import.

Bypassing Duplicate Files During Import

The **Don't Import Duplicates** option is helpful when you reuse a memory card in the field without deleting the photos already on it.

Each time you import, Photo RAW records every imported photo's filename and capture time. When you insert a card, Photo RAW checks that record. Any photo it has already imported is unchecked in the Import window and marked with an "Already Imported" icon next to its checkbox.

Because Photo RAW saves each photo's original filename and capture time, this works even if you rename photos during import. To import a photo again anyway, click its check mark to select it.



With Don't Import Duplicates turned on, photos you've already imported are deselected.

Saving Import Settings as a Preset

You can save import settings you use often, such as copyright and other metadata, file naming, and import locations, as a preset.

- **To save a preset:** set up the panes on the right side of the Import window, then choose **Save New Preset** from the preset menu. Choose the preset later to apply the same settings to an import.

- **To update a preset:** select it, make your changes in the panes, and choose **Update Existing Preset** from the preset menu.

When you choose **File > Import**, Photo RAW uses the import preset you used last.

Creating a New Folder

To create a folder inside the selected folder, right-click in the Preview area and choose **Add Subfolder**, or choose **Edit > Add Subfolder**. If you have photos selected, you can also move or copy them into the new folder.

Deleting a Folder

To delete a file or folder, select it and press **Delete**, or right-click it and choose **Delete**. Confirm that you want to move it to the Trash (macOS) or Recycle Bin (Windows). If you've selected several files or folders, they all move to the Trash.

If you make a mistake, choose **Edit > Undo**. Some files, such as those on a network drive, are deleted immediately and can't be restored.

Copying and Moving Files and Folders

You can copy and move files and folders in Browse the same way you do elsewhere on your computer. Select files or folders, choose **Edit > Copy**, then choose **Edit > Paste** to paste them in a new location, inside or outside Browse. For example, you can copy a file to another folder or attach a photo to an email.

You can also drag and drop files and folders, both within Browse and between Browse and other apps. Dragging moves an item if the destination is on the same drive, and copies it if the destination is on a different drive.

NOTE: Because editing in Photo RAW 2027 is non-destructive, copying a photo and pasting it outside Photo RAW pastes the original file. To get a version with your Edit module changes, use Export or Quick Export.

Show in Finder/Show in Explorer

To see a file or folder in the Finder (macOS) or File Explorer (Windows), right-click a photo or folder in the Preview area and choose **Show in Finder** or **Show in Explorer**.

Changing a Folder's Thumbnail Preview

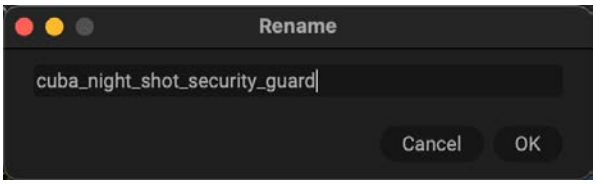
By default, Photo RAW picks a photo from each folder to use as its thumbnail. To choose a different one, double-click the folder to open it, right-click the photo you want to use, and choose **Set Folder Preview**.

Renaming Files and Folders in Browse

You can rename files and folders in Photo RAW 2027 one at a time or in batches.

Renaming a Single File or Folder

Select the item in most Browse views and choose **Edit > Rename File**, or right-click it and choose **Rename File**. Type the new name and click **OK**.

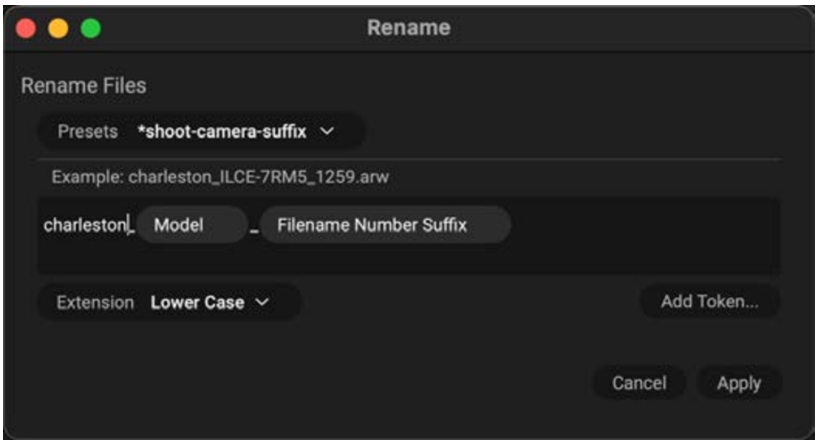


Renaming a single file or folder.

Batch-Renaming Files or Folders

Select the items you want to rename and choose **Edit > Rename File**, or right-click and choose **Rename File**. The Rename window opens, with options for building new names from custom text and photo metadata.

In the text field in the center of the window, enter any custom text you want every file to include, and insert tokens from the menu. Tokens come in four groups:



- **Filename:** the original filename, the number suffix the camera assigned, and the name of the enclosing folder.
- **Date/Time:** date (year, month, day) and time values you can combine in different ways.
- **Sequence:** an incrementing number for each file in the batch.
- **Metadata:** specific EXIF and IPTC metadata.

Each token set includes options for adding leading zeros.

NOTE: For a complete list of rename tokens, with explanations, see About Filename Tokens.

To build a name with tokens:

- Click **Add Token** and choose a token from the menu. It appears as a shaded item in the text field, and the Example above the field shows a sample filename.
- To change a token, click the arrow on its right and choose another one.
- To delete a token, double-click it and press **Delete**.
- To add custom text, click before, after, or between tokens and type spaces, dashes, underscores, or any other text.

Renaming can't be undone, so check the Example to make sure your text and tokens produce the filenames you expect. When you're ready, click **Apply**.

The Presets menu at the top of the Rename window includes common combinations you can use as a starting point. To save your own, set up the options you want and choose **Save New Preset** at the bottom of the menu. You can also update and delete presets from this menu.

NOTE: The Rename window remembers the settings you used last, which makes it easier to create presets.

The Culling Assistant helps you narrow a shoot down to your best photos. It analyzes a folder and groups similar shots together. It also flags frames where the subject is out of focus or someone's eyes are closed. You can then review each group side by side, mark photos as Keep or Reject, and rate, edit, or export your selects in a single batch, all without leaving Browse.

Photo RAW MAX only: The Culling Assistant is available to ON1 Photo RAW MAX owners and subscribers. If you don't have MAX, you can still open the Culling Assistant tab, but its controls are disabled and an **Upgrade Now** button is shown.

Who It's For

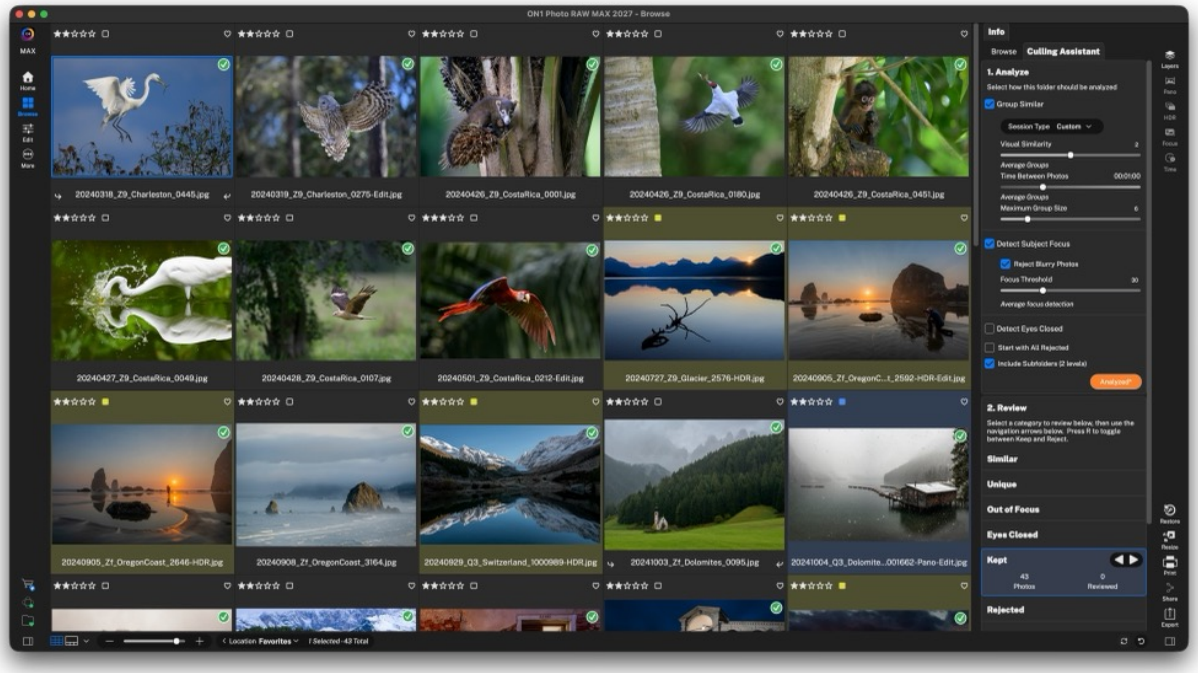
The Culling Assistant is built for any shoot where you capture lots of similar photos of a subject that keeps changing. Picking the best frame from a burst by hand is slow. The assistant does the sorting so you can focus on the decision.

- **Portraits and weddings:** Catch blinks and soft focus across hundreds of frames, then compare expressions side by side to pick the best one from each pose.
- **Birds and wildlife:** Group long bursts of a moving animal and use the Focus Meter to find the frame where the eye is sharpest.
- **Sports and action:** Break fast sequences into groups so you can choose the peak moment of each play.
- **Events and family sessions:** Sort large group shots so everyone has their eyes open and the frame is in focus.
- **Any high-volume shoot:** Street, concerts, kids, pets, or travel days where you shot more than you'll ever deliver.

Opening the Culling Assistant

1. In Browse, select the folder that holds your shoot.
2. In the right panel, click the **Culling Assistant** tab, next to the Browse tab.

The tab is laid out in three numbered panes that follow the culling workflow: **1. Analyze**, **2. Review**, and **3. Actions**. Work through them from top to bottom.



The Culling Assistant works on folders, including cataloged folders. It can't analyze albums or search results. While a search is active, the culling panes are disabled. Clear the search and your analysis comes back unchanged.

1. Analyze

The Analyze pane tells Photo RAW how to evaluate your shoot. Choose your settings, then click **Analyze**.

Session Type

The **Session Type** menu sets every Analyze control to suit a type of shoot, such as Sports & Wildlife. Start by picking the session type closest to your shoot. If you then move any slider by hand, Session Type changes to **Custom**.

Group Similar

Group Similar finds near-identical frames and puts them into groups, so you can review each burst as a set. Use the checkbox in the subpane header to turn grouping on or off.

Control	What it does
Visual Similarity	How closely photos must match to be grouped, from 0 (Off) to 4. Lower values make larger, looser groups. Higher values make smaller, tighter groups. Text under the slider reads Larger Groups, Average Groups, or Smaller Groups.
Time Between Photos	The longest gap in capture time allowed between photos in the same group, from Off to 1 hour. The default is 1 minute.
Maximum Group Size	The most photos allowed in one group, from 3 to 20. The default is 6. Smaller groups are easier to compare side by side.

After the first stage of analysis, the grid shows your groups right away. You can adjust the sliders and watch the groups update without losing your place in the grid.

Detect Subject Focus

Checks whether the main subject of each photo is sharp and flags the ones that aren't. Use the **Focus Threshold** slider to set how sharp a subject must be to pass. Turn on **Reject Blurry Photos** if you want photos that fall below it set to Reject automatically. This option is off by default.

Detect Eyes Closed

Flags any photo where a person's eyes are closed. Turn on **Reject Closed Eyes** if you want those photos set to Reject automatically. This option is off by default.

Other Options

- **Include Subfolders:** Analyzes photos up to two subfolder levels below the selected folder. This is handy when a wedding is split into folders like Getting Ready, Ceremony, and Reception. On by default.
- **Start with All Rejected:** Marks every photo as Reject to begin with, so you only have to mark the keepers. Use this when you only need a handful of selects from a large shoot. Off by default.

All of these settings are remembered between sessions. To return every control to its default, use the pane's reset button. You can also double-click a slider's label to reset just that slider.

Running the Analysis

1. Click **Analyze**. The analysis runs in the background, and you can watch its progress in the background progress indicator.
2. Photos appear grouped in the grid as soon as grouping finishes. Focus and closed-eye detection keep running afterward.
3. When the analysis is done, the button reads **Analyzed**, and the Review pane is ready to use.

Your analysis is saved with the folder. If you can't finish culling in one sitting, come back later and the groups, flags, and Keep/Reject decisions will still be there. Photos you add to the folder afterward won't be included until you click Analyze again. Turning Reject Blurry Photos, Reject Closed Eyes, or Start with All Rejected on or off applies right away, so you don't need to analyze again.

2. Review

The Review pane is where you decide which photos to keep. Pick a category to focus on, then step through its photos and mark each one as Keep or Reject.

Review Categories

Category	Shows
Similar	Groups of similar photos, one group at a time, in Compare view
Unique	Photos that didn't fall into any group
Out of Focus	Photos where the subject was detected as out of focus
Eyes Closed	Photos where closed eyes were detected
Unreviewed	Photos you haven't looked at yet, shown in Filmstrip view
Kept	Photos marked Keep
Rejected	Photos marked Reject
All	Every photo in the analysis

Each category shows how many photos it holds, and Similar also shows how many groups it has. You can also see how many photos you've reviewed and how many

you've kept. These counts update as you work. A photo counts as reviewed once you view it in any view other than Grid. If a category is empty, the preview area says so.

Keep and Reject

Once the Culling Assistant tab is open, every photo shows a Keep/Reject badge on its thumbnail. Photos start as Keep, unless you turned on Start with All Rejected or an auto-reject option caught them.

- Press R or click the badge to switch a photo between Keep and Reject.
- In Grid view, you can select several photos and press R to change them all at once.
- A badge with a **white outline** was set automatically by the analysis. A badge with a **black outline** was set by you. Hover over a badge to see which.
- To hand a photo back to the analysis, Alt-click (Windows) or Option-click (macOS) its badge.

Out-of-focus and eyes-closed badges also appear on flagged photos in Grid, Detail, and Compare views. Hover over any badge to see what it means.

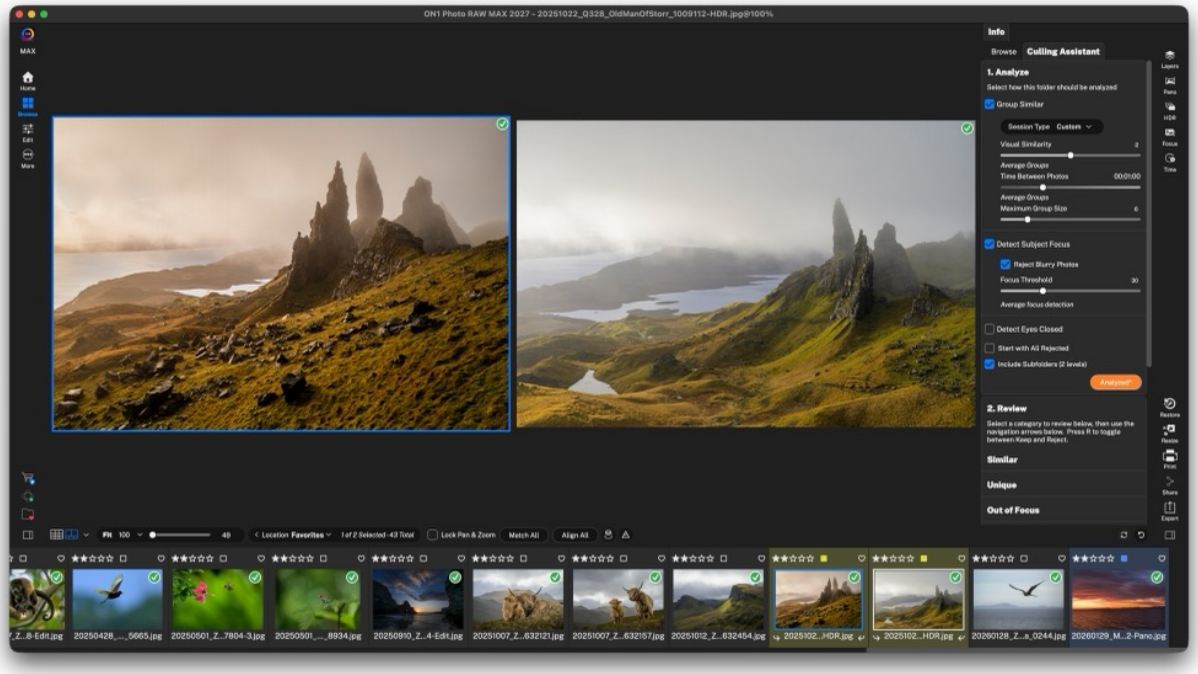
Moving Through Photos and Groups

The Review pane has four arrow buttons. The single arrows move to the previous or next photo. The double arrows jump to the previous or next group.

Action	Shortcut
Previous / next photo	← / →
Previous / next similar group	Shift+← / Shift+→
Switch between Keep and Reject	R
Hand the badge back to the analysis	Alt/Option-click the badge

Comparing a Group

When you choose **Similar**, Photo RAW selects the first group and opens it in Compare view so you can see every frame at once. If you switch to another view, Compare view comes back when you move to the next group. Clicking any photo in the grid or filmstrip selects its whole group. These tools help you pick the best frame:



- **Lock Pan & Zoom** and **Match All:** Zoom into one photo, for example on the subject's eyes, and every photo in the group zooms and pans to the same spot.
- **Align All:** Shifts and rotates the selected photos so a subject that moved between frames lines up. Press it again after changing the selection to realign.
- **Focus Meter:** Turn it on in the preview footer, then hover over a detail. A sharpness score appears for the same spot on every photo in the group, so you can see which is sharpest.
- **Focus Peaking:** Use the button in the preview footer to highlight the sharpest edges in each photo.
- **Hide Rejected in Compare:** Hides photos you reject. The remaining photos get larger as the group narrows down to the keeper.

The Loupe Pane

The Loupe pane gives you a close-up view without leaving Grid view. Choose a mode from the menu at the top of the pane:

- **Faces:** Shows a 100% view of every face in the selected photo, so you can check expressions and focus at a glance. The number of columns adjusts to the number of faces when set to Auto.
- **Subject:** Shows a magnified view of the main subject, whether that's a person, animal, or object. If no subject is detected, the whole photo is shown.
- **Cursor 1:1:** Hover over the selected photo in Grid, Detail, or Compare view to see the area under your cursor at 100%.

3. Actions

When you're done reviewing, use the Actions pane to process your photos in bulk. There's a button for each group: **Kept**, **Rejected**, and **All**. Each one opens the Batch Actions dialog for that group. Long-press a button to pick a saved batch action directly.

The Batch Actions Dialog

Set up any combination of the actions below. Anything you leave unset is skipped.

- **Apply Metadata:** Set a star rating, color label, or like/reject flag, and optionally apply a metadata preset. If an individual setting conflicts with the preset, the individual setting wins.
- **Apply Edit Settings:** Apply an edit preset to every photo in the group.
- **Apply Export Preset:** Export every photo in the group using one of your export presets.

Click **Apply** to run the actions. They only affect photos in the group you chose.

Saving Batch Actions

If you run the same steps after every shoot, save them as a batch action. Use the preset menu at the top of the dialog to **Save**, **Update**, **Rename**, or **Delete** a batch action. An asterisk next to the name means you've changed its settings since you loaded it. Photo RAW also includes a set of factory batch actions to start from.

A Typical Culling Workflow

1. Select your shoot's folder in Browse and open the **Culling Assistant** tab.
2. In **Analyze**, pick a Session Type. Turn on Reject Blurry Photos or Reject Closed Eyes if you want obvious misses rejected for you.
3. Click **Analyze**. Fine-tune the Group Similar sliders while you watch the groups in the grid.
4. In **Review**, click **Similar**. In each group, use Match All, the Focus Meter, or the Loupe pane to find the best frame. Press R to reject the rest, then press Shift+→ to move to the next group.
5. Check **Unique**, **Out of Focus**, and **Eyes Closed** for anything that needs a second look. Finish with **Unreviewed** to make sure you didn't miss any photos.
6. In **Actions**, apply a batch action to your Kept photos. For example, give them five stars, apply your edit preset, and export JPEGs for the client.

If your preferences pair raw and JPEG files, each pair counts as one photo. Any rating, label, or edit you apply affects both files.

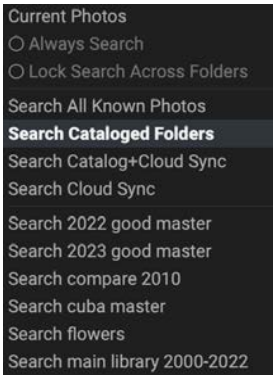
Finding and Filtering Images with the Search Bar



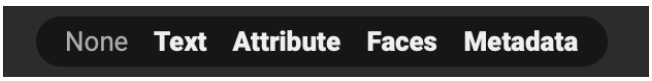
The Search Bar, shown with a complex search of all cataloged folders.

The Search Bar helps you find photos in your library using a wide range of photo-specific criteria and embedded metadata. You can search by any text associated with a photo; likes, color labels, and star ratings; dates, including creation and modification dates, time of day, and season; keywords, including AI-generated keywords; and nearly any metadata, from camera body and lens to aperture, ISO, and more.

You can search the current folder or album, or any or all of your cataloged folders. You can save any search as a preset to use again later. Searches of cataloged folders can also be saved as Smart Albums, which appear in the My Catalogs panel.



Use the Search menu at the left of the bar to choose where to search.



The Search Bar is always available at the top of the Browse window. Search is off by default. To start a search, click one of the four buttons in the center of the bar:

- **Text:** searches text associated with a photo. It searches all text by default, but you can use the menu to search only descriptions, filenames, keywords, or titles.
- **Attribute:** searches by like/reject status, rating, color label, and file type.

- **Faces:** finds photos with one face, two faces, or a group, and can filter by age category (Baby/Toddler, Child, Teenager/Young Adult, Adult, or Elderly) and gender. It finds only photos that Keyword AI has scanned with **Find Faces** turned on in the Keyword AI tab of Preferences.

- **Metadata:** builds complex searches from a broad set of metadata criteria and conditions (see Metadata Search Fields).

Click a button again to turn that option off. You can combine options to build more complex searches.

The Search Bar is dynamic. As you change options, the photos that match appear in Grid view, and the grid updates whenever you add or remove criteria or change where you're searching. To end the search and return to your previous view, click **None**.

Search Bar Options

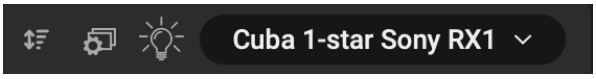
The menu at the far left of the Search Bar sets where Browse searches:

- **Current Photos** (default): the photos in the current view. With this option selected, you can also choose **Lock Search Across Folders** to keep your search criteria as you move from folder to folder.

- **Cataloged Folders:** all of your cataloged folders, or a specific one.

- **All photos Browse knows about:** cataloged folders, favorites, and any folders you've viewed.

To the right of the search options are three icons:



- **Sort:** sorts the photos in the current view by capture or modified date, color label, file name, file type, file size, or rating. You can also create a custom sort order by dragging a thumbnail between two others in the grid.

- **Create Smart Album:** when searching cataloged folders, saves the search as a smart album (see Smart Albums).

- **Smart Organize:** opens the Smart Organize window, where you can find duplicate photos, similar-looking photos, or photos taken at similar times or places (see Smart Organize).

The menu at the far right of the Search Bar lets you save a search to use again later (see Saving Search Criteria).

Setting the Search Criteria

The search criteria section has two parts: the Match option and the criteria themselves.

Match sets how the criteria are applied. You can find photos that meet all of the criteria, any of them, or none of them.

To build your search, add criteria from the **Add Field** menu. You can add as many as you need. Each new field starts as **Everything**, which searches all text-based metadata in your photos. Choose a different field from its menu to narrow it down. To remove a criterion, click the **x** on its right.

Saving Search Criteria

You can save searches to reuse later from the Styles menu at the far right of the Search Bar:

- **To save a search:** set up your search, then choose **Save New Style**.
- **To update a saved search:** make your changes, then choose **Update Style with Current Settings**.
- **To rename or delete a saved search:** choose **Rename** or **Delete** from the same menu.

If you're searching cataloged folders, you can also save the search as a Smart Album. Click the Smart Album icon in the Search Bar, or choose **Save as Smart Album** from the Search Bar's menu (see Smart Albums).

Metadata Search Fields

The Metadata option has 20 main search categories, many with subcategories:

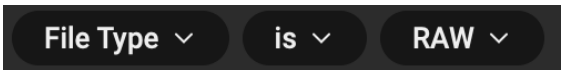
- **Album:** whether a photo is in an album. Smart albums aren't supported.
- **Camera:** camera and lens metadata, including aperture, shutter speed, ISO, focal length, camera name, and more.
- **Cloud Sync:** whether an item is synced with ON1 Cloud Sync.
- **Color Label:** photos with a specific color label, by icon or name. You can search for several labels at once, such as Red and Green.
- **Date:** capture date, edit date, or time of day (morning, afternoon, evening, or night).

- **Description:** the contents of the Description field in the Metadata pane.
- **Edited:** photos with adjustments from the Edit module, including adjustments in Develop, Effects, Local Adjustments, Portrait AI, and Sky Swap AI, as well as layers, NoNoise AI, cropping, retouching, the Liquify tool, and text.
- **Everything:** any text-based data associated with a photo, such as filename, keywords, and metadata.
- **File Type:** specific image and video formats. Image formats include raw, TIFF, PNG, JPEG, PSB, PSD, DNG, ONPHOTO, and HEIC. Video formats include M4V, MOV, AVI, WMV, MPEG, and MTS.
- **Filename:** the filename or the path of the folder the photo is in.
- **IPTC:** IPTC fields shown in the Metadata pane, including Copyright Status, Creator/Author, Job Identification, and Title.
- **Keyword AI:** AI-generated keywords only, or whether a photo has any.
- **Keywords:** applied keywords, or whether a photo has any.
- **Likes:** photos marked Like (filled heart), Reject (**X**), or Not Set (empty heart).
- **Location:** the Location section of the Metadata pane, and whether a photo has GPS data.
- **Object Type:** whether an item is a photo, a version (see Versions), or a video.
- **Rating:** photos with a star rating.
- **Season:** photos taken in spring, summer, fall, or winter, with Northern and Southern Hemisphere options.
- **Shared:** photos shared to SmugMug.
- **Size:** file size on disk, height and width, long and short edge, megapixels, and orientation (landscape, portrait, or square).

Search Field Operators

Each search field has an operator and a value. Fields whose value is chosen from a list (Edited, File Type, Likes, Object Type, and Shared) use simple **is** and **is not** operators. Fields with text or numeric values have more operators for precise searches:

- **is / is not:** finds an exact match for the value.



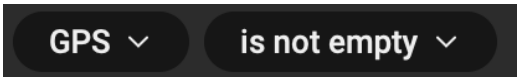
- **contains / does not contain:** finds matches that include the value anywhere.



- **starts with / ends with:** finds matches where the value is at the beginning or end. This is most useful for filenames, but it works with any text field.



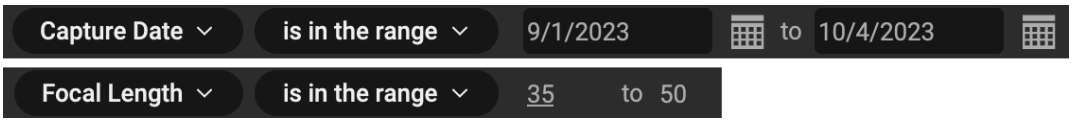
- **is empty / is not empty:** finds fields with or without information. This is helpful for finding photos without GPS data or a color label.



- **is greater than / is less than:** compares numeric values, such as ratings or camera settings. **Greater than or equal** and **less than or equal** are also available.



- **is in the range:** finds numeric or date values within a range you set.



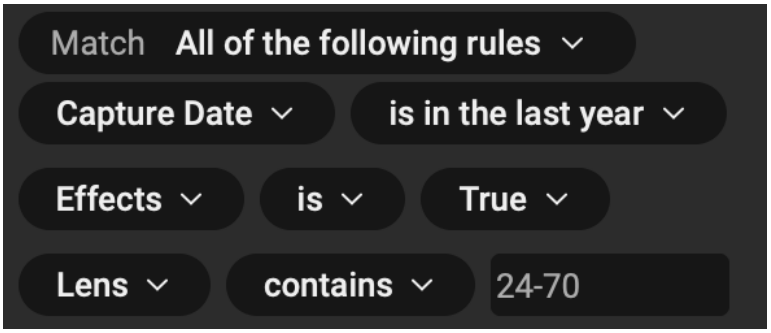
Date fields have a few more operators:

- **is / is not in the last:** photos taken within the number of days you specify.
- **is today / is yesterday:** photos taken today or yesterday.
- **is in the last week / month / year:** photos taken within that period.
- **is repeated annually:** photos taken on a specific day in any year, which is handy for holidays, birthdays, and other recurring events.

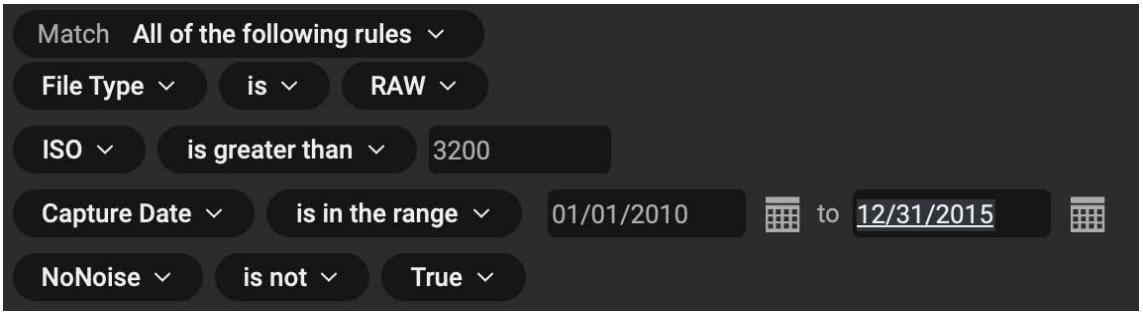
Creating Complex Searches

Many searches are simple, like finding photos from a date range or with a specific keyword or rating. The real power of the Search Bar is in combining as many criteria as you need.

For example, to find photos taken in the past year with a 24–70mm lens that have been edited in Effects, you'd use these criteria:



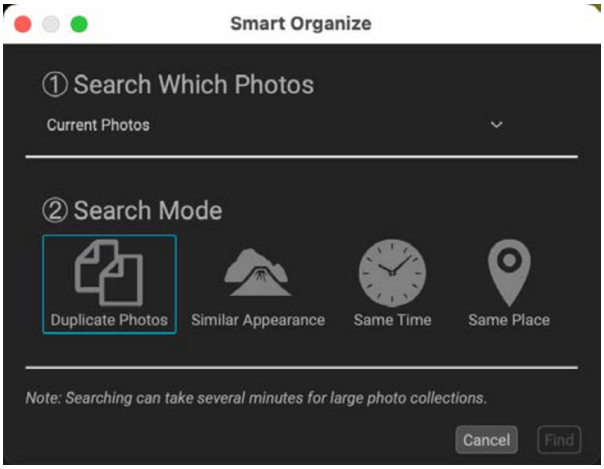
Or, to find raw photos from 2010 to 2015 with an ISO above 3200 that might benefit from NoNoise AI, you could use these criteria:



You might save that search as a style so you can run it again later. Adding the Edited criterion "NoNoise is not True" removes photos that already have NoNoise AI applied, so you can focus on the ones that could still benefit.

You can also use the same search field more than once with different values. In most cases, you'll need to set the Match menu to **Any of the following rules**. For example, to find all raw files and all DNG files, add two File Type criteria, one for each format, and set Match to Any.

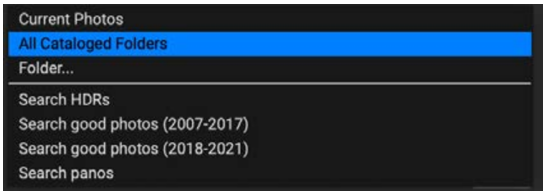
Using Smart Organize to Manage Duplicates and More



Smart Organize helps you get a large photo library under control. With thousands of photos, it can be hard to find duplicates or to sort out photos that look alike or were taken around the same time. You may also want to group HDR brackets, panorama frames, or photos for focus stacking. Smart Organize finds duplicates and groups photos with similar appearances, locations, or capture times, so you can narrow a series down to the best shots.

TIP: To cull a single shoot, try the Culling Assistant in Photo RAW MAX. It groups similar photos and flags missed focus and closed eyes.

To open Smart Organize, click its icon in the Shortcuts list or choose **File > Smart Organize**. The window has two sections, Search Options and File Info. At the top of Search Options, choose what to search:



- The photos in the current Browse view (Current Photos)
- All of your cataloged folders
- A specific folder you choose
- One of your cataloged folders

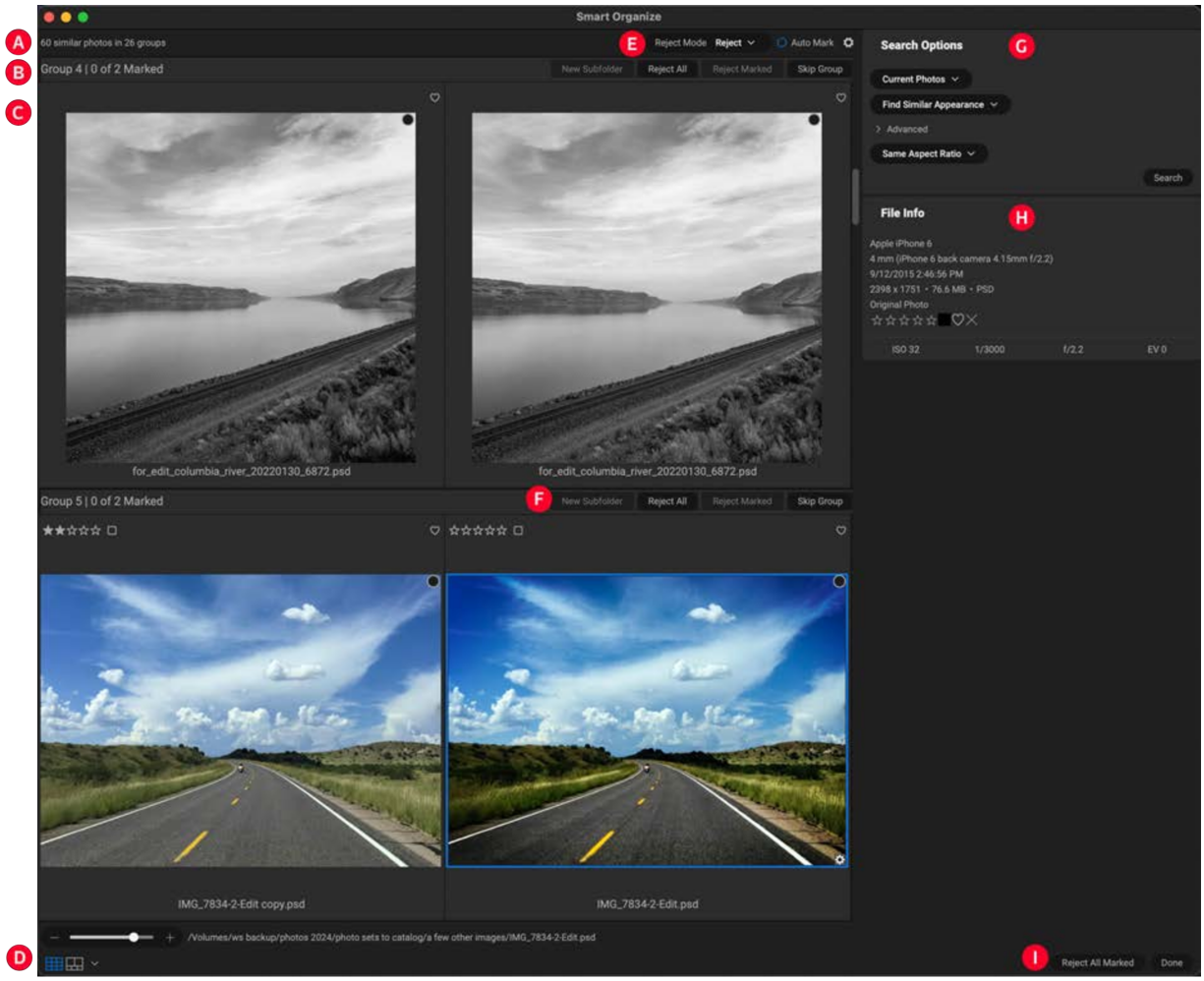
Then choose a search mode:

- **Duplicate Photos:** finds likely duplicates based on name, capture date, file size, and dimensions.
- **Similar Appearance:** uses machine learning to find photos with similar tones and colors, making it easy to group and sort a series, such as portraits of different people.
- **Same Time:** finds photos taken around the same time. Use it to group panorama frames or HDR brackets.
- **Same Place:** uses GPS data to find photos taken near each other.

Click **Find** to run the search and open the Smart Organize Results window (see The Smart Organize Results Window).

NOTE: With large collections, Smart Organize can take a while to show results.

The Smart Organize Results Window



The Smart Organize Results window contains:

1. **Results:** the total number of photos found and the number of groups.
2. **Group heading:** the group number and how many photos in it are marked.
3. **Preview area:** the results as thumbnails, organized by group.
4. **View Selector:** the zoom slider (top left), Grid and Compare view buttons (bottom left), and the file path of the selected photo.
5. **Reject/Delete and Auto Mark settings.**
6. **Group options:** create a subfolder from the marked photos, reject or delete marked photos, or skip the group.

7. **Search Options:** shows the original search, and lets you run a new one with different settings.

8. **Info panel:** EXIF and size information for the selected photo. It works the same as the Info pane in Browse (see The Info Pane).

9. **Close buttons: Reject/Delete All Marked** applies your Reject Mode to the marked photos in every group and closes the window. **Done** closes the window without making any changes.

Working Through the Search Results

Results are organized into groups based on the search mode you chose. A group can be a pair of photos or many more, depending on your library and the search. Use the slider to make the thumbnails larger or smaller, and switch between Grid and Compare views, which work the same as in Browse (see Working in Grid View and Working in Compare View).

Work through the results one group at a time. In each group, check the photos you want to act on, such as those to reject, delete, or move to a subfolder, then choose an action. The top of each group has these items:



1. **Group information:** the current group number out of the total, and how many photos are marked. Use the arrows on the left to move to another group.

2. **New Subfolder:** moves the marked photos into a new subfolder.

3. **Reject/Delete All:** rejects or deletes every photo in the group, depending on the Reject Mode at the top of the window.

4. **Reject/Delete Marked:** rejects or deletes only the marked photos, depending on the Reject Mode.

5. **Skip Group:** removes the group from the results without making any changes.

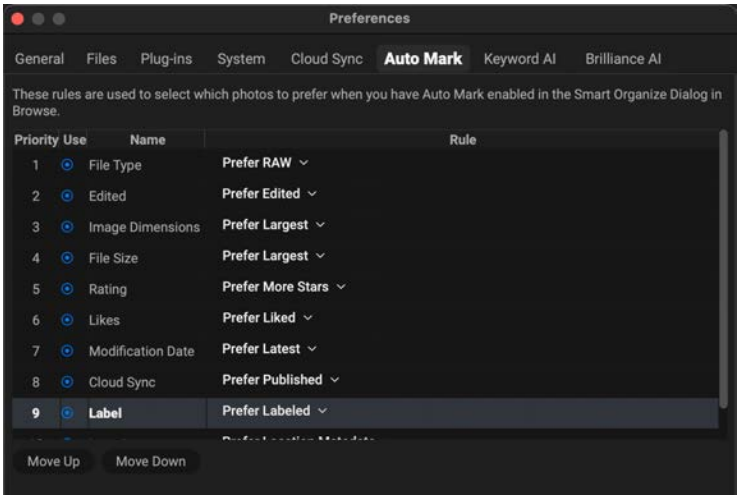
To mark a photo, click the checkbox in the upper corner of its thumbnail. You can mark several photos in a group. When you click New Subfolder, Reject/Delete All, or Reject/Delete Marked, Photo RAW applies the action and removes the group from the results.

TIP: To group photos for HDR, panoramas, focus stacking, or other uses, mark the photos and click **New Subfolder**. Enter a folder name and click **OK**, and Photo RAW moves the marked photos into the new folder. New Subfolder is unavailable if the marked photos are in different folders.

Using Auto Mark

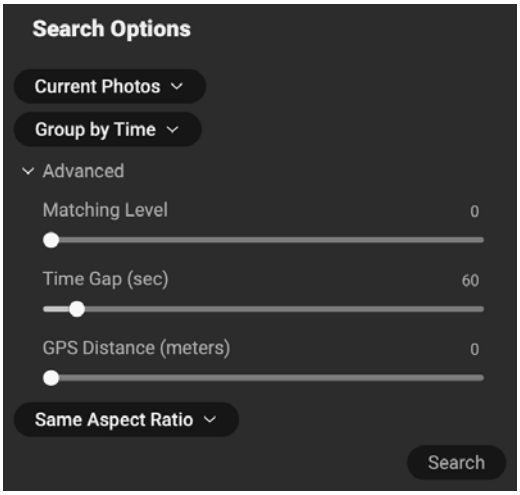
With **Auto Mark** checked at the top of the results window, Photo RAW marks the photos in each group that it thinks you'll want to act on, based on the Auto Mark tab in Preferences. Click the gear icon next to the Auto Mark checkbox to open that tab.

The Auto Mark tab has 10 criteria, including file type, editing status, and various metadata, that Smart Organize uses to decide which photos to mark. For example, you can prefer raw files over ONPHOTO, JPEG, or PSD files, and Photo RAW marks photos in each group accordingly.



Auto Mark only marks photos. It never rejects or deletes them on its own. In each group, you can accept its suggestions, change them, or skip the group. If you'd rather mark photos yourself, turn off Auto Mark at the top of the results window.

Adjusting Your Search Options



To run a different search, use the Search Options pane on the left of the results window. At the top are menus for the search location and the four search types (duplicates, appearance, time, and location).

For every search type, a menu at the bottom of the pane lets you limit results to photos with the same aspect ratio, the same pixel dimensions, or neither.

For similarity, time, and location searches, an Advanced section offers one more setting:

- **Matching Level** (Similar Appearance): how closely photos must match to be grouped. Lower values group photos that match less closely.
- **Time Gap** (Same Time): the maximum time between shots for photos to be grouped.
- **GPS Distance** (Same Place): the distance, in meters, within which photos are grouped.

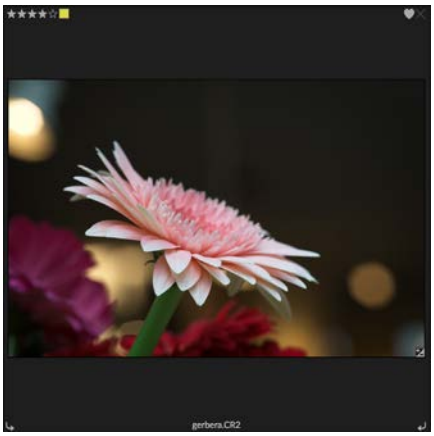
When your settings are ready, click **Search** to see the new results.

Editing Photos in Browse

Most of Photo RAW 2027's editing power is in the Edit module, but you can do a lot of editing right in Browse. Besides changing metadata, labels, and ratings, you can apply Brilliance AI or Edit module presets to one photo or a group (see Applying Edit Presets), and copy Edit module settings from one photo and paste them onto others. All of this also works with photos shared through ON1 Cloud Sync.

Ratings, Labels, and Likes

A standard rating and labeling system makes it easy to separate your favorites from the throwaways. Besides keywords and subfolders, Browse has three ways to mark and group photos. You can set each one from the Photo menu, the right-click menu, the badges on the thumbnail, or the footer of Detail view, and each has keyboard shortcuts.



A photo in Grid view with a rating, label, and like status.

- **Star ratings:** zero to five stars. Many photographers use five stars for favorites and one star for photos they'd rather not keep, but you can use them however works best for you. Press **1** through **5** to set a rating, or the **`** (backquote) key to clear it.

- **Color labels:** five colors, great for marking subsets of photos for special handling. Press **6** (red), **7** (yellow), **8** (blue), **9** (green), or **0** (purple).

- **Likes:** a quick way to mark the photos you love and the ones you want to delete. There are three states: Like (filled heart), Reject (**X**), and Not Set (empty heart). Photos start as Not Set. Press **P** to like a photo, **X** to reject it, or **U** to clear it.

Star ratings and color labels are industry standards. They're stored in the photo's metadata, so other photo apps like Lightroom can read them. Likes are unique to ON1 Photo RAW 2027 and appear only there.

TIP: You can change the information shown on each thumbnail with Thumbnail View Options (see Working in Grid View).

Using Auto Advance When Culling

Auto Advance helps you rate a series of photos quickly. Turn it on or off in the Photo menu. With Auto Advance on, when you apply a rating, color label, or like status to a photo, Photo RAW applies it and moves to the next photo automatically.

Applying Edit Module Presets in Browse



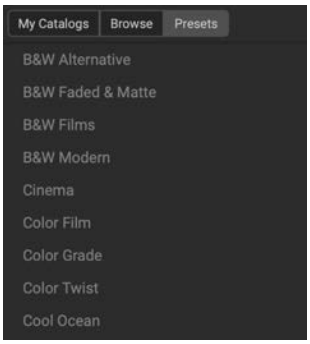
Apply a preset to any photo or group of photos in Grid, Detail, Filmstrip, or Compare view. Open the Presets tab, choose a category, and click a preset. If you don't like the look, undo it or choose another preset. Use the Fade slider to reduce the effect.

Photo RAW 2027's presets save your complete Edit module settings. They're always available in Browse, so you can quickly apply your favorites to one photo or a whole group.

Click the Presets tab to see the presets that come with Photo RAW, plus any you've created or installed. Presets are organized into categories, such as B&W Films and Cinema. Click a category to open it.

To preview presets at a larger size, click the Quick View Browser icon in the category's title bar. An overlay shows your selected photo with every preset in that category.

Click a preset in the category or in the Quick View Browser to apply it. Presets applied in Browse don't stack: clicking another preset replaces the previous one. If you've already edited the photo in Develop or Effects, those settings are replaced wherever the preset includes settings for that tab.

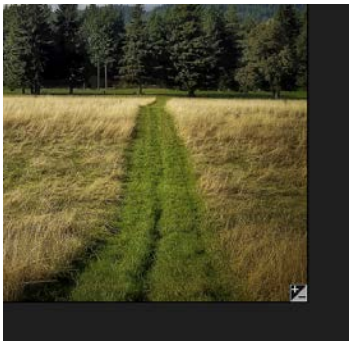


The Presets panel includes a broad range of presets you can apply in Browse.

Because Photo RAW is non-destructive, opening the photo in any Edit module tab shows all the settings the preset applied. You can then adjust them, switch presets, or keep editing.

To remove a preset, select the photo and choose **Settings > Reset All Settings**. You can also reset individual Develop or Effects settings instead. For details on creating and editing presets, see Presets.

NOTE: Photos with a preset applied in Browse, or edited in any Edit module tab, show a small **+/-** badge in the lower-right corner of their thumbnail in Grid, Filmstrip, and Compare views.



Copying Settings and Synchronizing Edits

Besides applying presets, you can copy all the edits from one photo and paste them onto others in Browse, including every kind of edit you can make in the Edit module. There are two ways to do this, Copy/Paste and Sync. Both get you to the same result, so use whichever you prefer.

Copying and Pasting Settings

1. Select the source photo and choose **Settings > Copy Settings**.

2. Select the photo or photos you want to update and choose **Settings > Paste Settings**.

3. In the window that opens, choose whether to paste all of the edits or only some of them, from individual settings in Develop's Tone & Color pane to masks, cropping, and text.

Copy/Paste is handy for applying settings to photos in different folders. Photo RAW remembers the last settings you copied for as long as your Browse session is open, so you can keep pasting them onto other photos.

Syncing Settings

1. Select the source photo.

2. Shift-click to add a range of photos, or Command-click (macOS) or Ctrl-click (Windows) to add individual photos. The source photo is outlined in blue and the other photos in gray.

3. Choose **Settings > Sync Settings**, then choose which edits to apply in the Apply Settings window.



In the Apply Settings window, you can apply nearly any Edit module setting to other photos. A filled circle next to a setting means it will be applied. Click the circle to leave that setting out.

Sync All Settings

To sync everything from the source photo, including cropping, text, and masks, without opening the Apply Settings window, select your source and destination photos and choose **Settings > Sync All Settings**.

Resetting Edits in Browse

You can completely reset any edits you've made in Photo RAW 2027 from Browse, including settings you pasted or synced in Browse and anything you did in the Edit module.

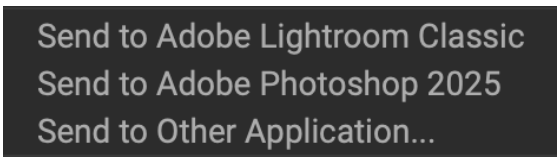
The Settings menu has these reset options:

- **Reset All Settings:** removes every Edit module adjustment from the photo. You can also click **Reset All** at the bottom of the Browse window.
- **Reset Develop Settings:** removes only Develop settings.
- **Reset Effects Settings:** removes only Effects settings.
- **Reset Sky Settings:** removes only Sky Swap AI settings.
- **Reset Portrait AI Settings:** removes only Portrait AI settings.
- **Reset All Retouching Tools:** removes all retouching made anywhere in the Edit module.
- **Reset Local Adjustments:** removes all local adjustment layers.
- **Reset Liquify Tool:** removes any Liquify edits.
- **Reset Crop:** returns the photo to its original, uncropped size.
- **Reset Text:** removes all text blocks.

You can undo any reset right after you make it.

NOTE: The reset options, along with Copy/Paste and Sync, aren't available for layered photos in Browse. You can still copy and paste settings between layers in the Edit module.

Send To



You can send photos from Browse to other apps for editing. Choose **Send To** from the right-click menu or the Edit menu. Browse detects common photo apps and lists the latest version you have installed:

- Adobe Photoshop
- Adobe Lightroom Classic
- Adobe Photoshop Elements



To add any other app, choose **Send to Other Application** and select the app. Photo RAW remembers it and lists it with your other Send To options. For example, you could add your email app to email photos quickly.

When you send a photo to another app, the Edit In dialog opens. Choose whether to send the edited photo or the original. If you send an edited copy, you can choose its file type, color space, bit depth, and resolution. If you use the same options every time, check **Don't ask me again**. You can change this later in the Files tab of Preferences.

Versions



Versions are virtual copies of a photo. You can edit a version completely differently from the original without duplicating the file, so you can try different presets, crops, and retouching without losing any work or using extra disk space.

To create a version, select or view a photo in any Browse view and choose **Settings > Create Version**, or press **Command-'** (macOS) or **Ctrl-'** (Windows). The version appears next to the original with "v1" added to its filename. More versions are numbered in order.

A version works like any other photo in Photo RAW. You can open it in any Edit module tab, crop and adjust it with all of Photo RAW's tools and filters, and edit its metadata

separately from the original. You can also export a version or use it in Resize, and Photo RAW creates a rendered file in those cases.

You can't create a version of an .onphoto file that has layers. Flatten it in the Edit module first (see Working With Layers).

Versions have "v1" or a higher number at the end of their filename, and a small square badge split into light and dark triangles in the lower-right corner of their thumbnail.

Using ON1 Photo RAW 2027 with Two Displays



Dual Mode opens a second browser-style window you can place on another display or use to present on a TV or projector.

Dual Mode opens a second window that shows your photos as thumbnails, so you can browse a folder in one window while viewing full-size photos in the main window. With a second monitor, this saves you from switching back and forth between Grid view and

Detail, Filmstrip, or Compare view. It's also useful for presenting photos on a projector or TV without showing the whole Photo RAW window.

Dual Mode works in the Browse and Edit modules:

- **In Browse,** you choose how the windows work together. One window shows Grid view while the other shows Detail, Filmstrip, or Compare view, or the other way around. As you move through photos in the grid, the other window shows the selected photo.
- **In Edit,** the second window shows only Grid view, with thumbnails of the current folder. Click a photo in the grid to open it in the main window.

Turning Dual Mode On

Choose **Window > Dual Mode > Show**. The first time you use Dual Mode, the second window opens on your main display. Drag it to your second display, and Photo RAW remembers where it goes from then on. To make the second window fill its display, choose **Window > Dual Mode > Full Screen Mode**.

The icons at the bottom of the second window are a subset of those in the main window. In Browse, you'll see Grid, Detail, and Compare views. In Edit, you'll see only Grid view. The Size slider changes the thumbnail size in Grid view, or the zoom level in Detail and Compare views.

Using ON1 Cloud Sync with Photo RAW



ON1 Cloud Sync is an optional cloud storage and sync service that lets you capture, edit, and access your photos across multiple computers and mobile devices. It's designed for sharing photos between the subscription versions of ON1 Photo RAW 2027 and ON1 Photo RAW for Mobile. Cloud Sync can also sync your custom presets and extras between two installations of Photo RAW.

Cloud Sync accounts come with 200 GB or 1 TB of storage, and there are several ways to sign up. If you have an ON1 Photo RAW subscription, Cloud Sync is available in both Photo RAW and ON1 Photo RAW for Mobile as soon as you sign in to your ON1 account.

In Photo RAW 2027, you publish photos to ON1 Cloud Sync through cataloged folders or albums. You can publish photos as editable previews or in their original format, including raw. See Cloud Sync File Formats for the differences and when to use each.

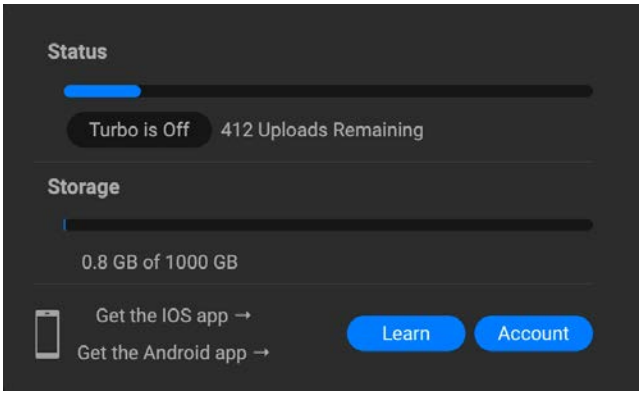
In ON1 Photo RAW for Mobile on your phone or tablet, all photos on the device are published to the cloud in their original format, in a single folder called Local Photos. You can also create albums in the mobile app.

Viewing Your ON1 Cloud Sync Status

The ON1 Cloud Sync status icon is at the bottom of the left sidebar. A small colored dot on the icon shows Cloud Sync's status on this computer:



- **Green:** connected to ON1 Cloud Sync, with no uploads or downloads in progress.
- **Blue:** uploading or downloading photos or other information.
- **Red:** there's a problem with your internet connection, you aren't signed in, or you're running low on storage.
- **Gray:** you don't have an ON1 Cloud Sync account.

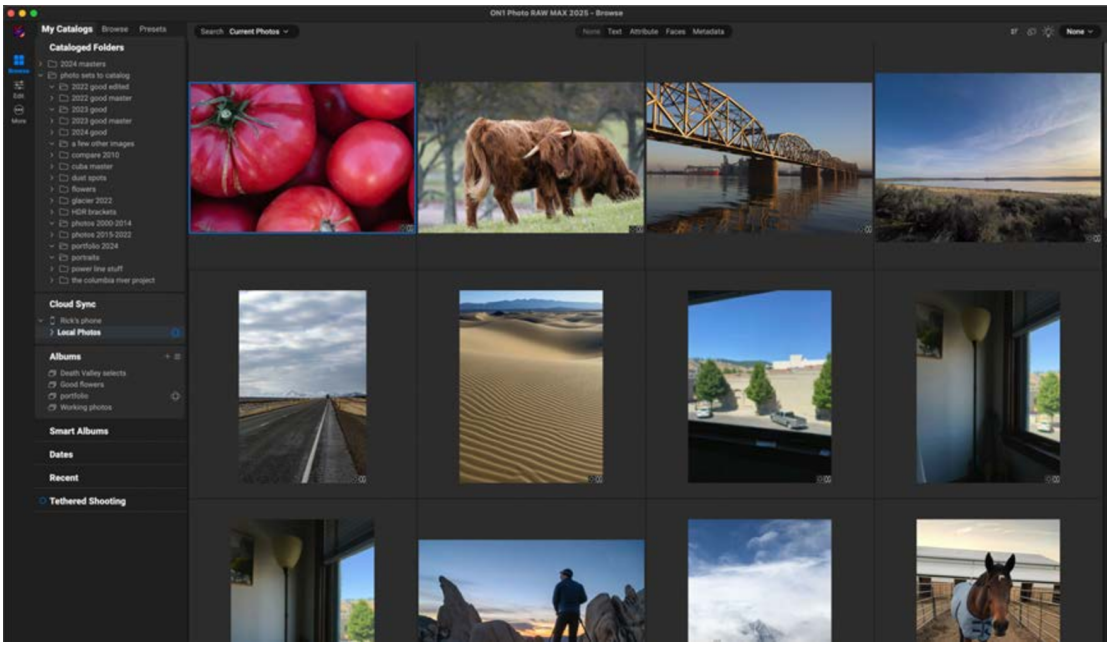


Click the status icon to open the ON1 Cloud Sync dashboard. It shows any uploads in progress and your available storage, and includes links to the ON1 Photo RAW for Mobile app for iOS and Android. Click **Account** to open your account page on the ON1 website, or **Learn** for help getting started with Cloud Sync.

Click **Turbo** to speed up uploads. Photo RAW uses as much processing power as it needs to sync photos, up to the limit of your upload bandwidth.

Viewing Other ON1 Cloud Sync Devices in Browse

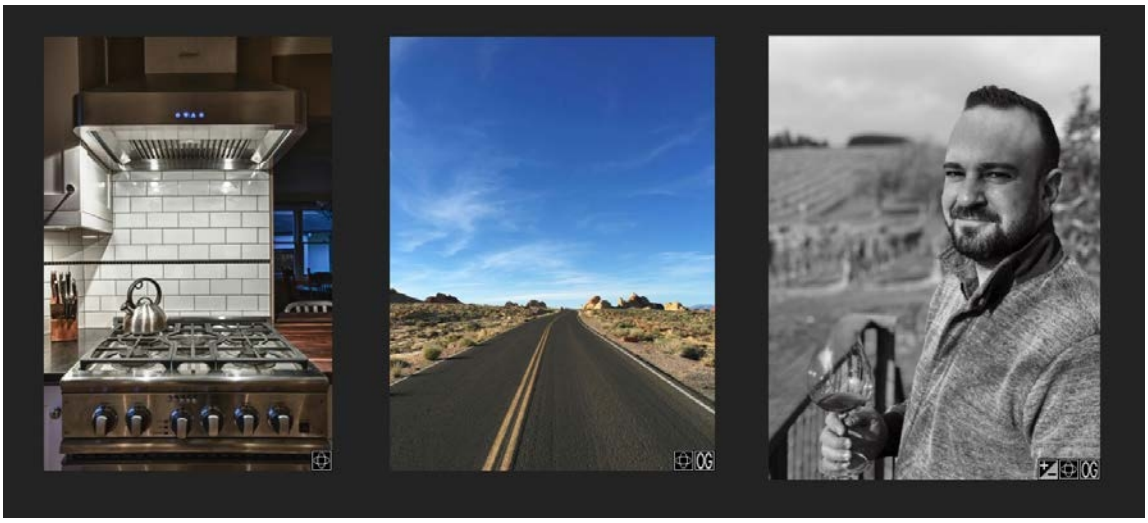
To see the devices you've connected to ON1 Cloud Sync, click the ON1 Cloud Sync icon at the bottom of the Shortcuts bar on the left side of the Photo RAW window.



Each connected device appears as a folder in the Preview area.

Your devices appear as folders in Grid view. Click a folder to see that device's synced photos. Mobile devices show a single folder, Local Photos, with all the photos on that device. Mac and Windows computers show all of their cataloged folders that are synced with Cloud Sync.

You can view and edit any photo on a synced device in Photo RAW 2027, and open its folders just like any other folder. You can sort the photos, add them to new or existing albums, edit their metadata, and add keywords.



Synced photos from other devices show badges in Grid view: a Sync badge for editable previews (left), an “OG” badge for originals (center), and a +/- badge for edited photos (right).

In Grid view, photos synced from another device show a small Cloud Sync badge in the lower-right corner of the thumbnail. Originals, as opposed to editable previews, also show an “OG” badge. These badges appear in all published folders, devices, and albums.

ON1 Cloud Sync File Formats

Photo RAW 2027 can publish photos to ON1 Cloud Sync in two formats: the original file, or an editable preview in a compressed raw format developed by ON1. Editable previews can be up to 75% smaller than the original raw file while preserving its tone and color, so you can keep more photos in the cloud. With either format, edits you make on one device sync back to the original computer, so the original file is updated with your edits and any metadata changes.

The storage savings can be substantial. As a rough guide, with a camera that creates 30 MB raw files:

- **Raw originals:** more than 5,500 photos with the 200 GB plan, or more than 27,000 with the 1 TB plan.
- **JPEG originals** from the same camera: more than 20,000 photos with the 200 GB plan, or more than 100,000 with the 1 TB plan.
- **Editable previews:** more than 33,000 photos with the 200 GB plan, or more than 160,000 with the 1 TB plan.

You can use either format in any combination. Your originals always stay safely on the device that created or imported them.

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

Choosing a Sync Format

If you work on two computers, such as a desktop and a laptop, editable previews are usually all you need. You can edit any metadata, including ratings and keywords, and use every tab in the Edit module. Previews have excellent fidelity and tonal range, and your edits apply to the originals on the other device.

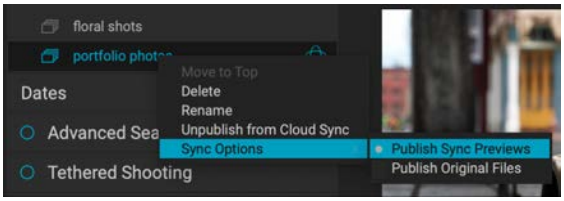
Sync folders and albums as originals when you need the original photo on another computer to:

- Create layered files
- Build HDR, panorama, or focus-stacked images
- Resize a photo in the Resize module
- Print at the highest possible quality

In these cases, if the original is on another Cloud Sync device, right-click the photo in Browse and choose **Download Original**. If the original is in the cloud, you'll be asked where to save a copy on your computer. Afterward, you can delete the copy or save it back to a published folder or album. For more information, see Using Layers with ON1 Cloud Files, Using Resize AI with Cloud Sync Files, and Printing Photos from Cloud Sync Devices.

Managing Sync Options in Photo RAW

Photo RAW 2027 manages Cloud Sync publishing by folder or album, so you can sync some folders and albums as editable previews and others as originals. To change a folder's or album's format at any time, right-click it and choose **Sync Options**.



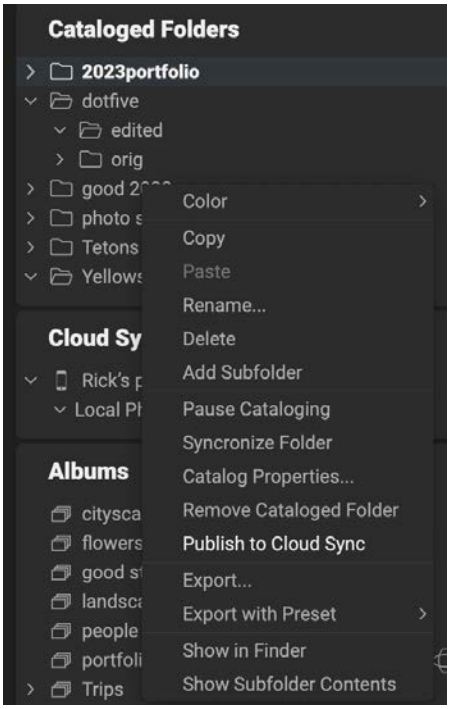
Right-click an album or cataloged folder and choose Publish to ON1 Cloud Sync or Unpublish from ON1 Cloud Sync at any time.

You can't change the sync format for individual photos, only for albums and folders. You can, however, set a different format for each subfolder in a cataloged folder.

Basic Cloud Sync Workflow in Photo RAW

Publishing photos from Photo RAW 2027 is simple. When you create a cataloged folder (see Catalogs) or an album (see Albums Pane), you can choose to publish its photos as originals or editable previews. Or you can publish later by right-clicking the folder or album and choosing **Publish to ON1 Cloud Sync**. Publishing this way uploads editable previews by default, but you can change that with **Sync Options** in the same menu.

For photos from another Cloud Sync device, whether it's a computer running Photo RAW or a phone running ON1 Photo RAW for Mobile, any metadata changes or Edit module edits you make are synced back to the original file on that device. This works whether the photo in the cloud is an editable preview or an original.

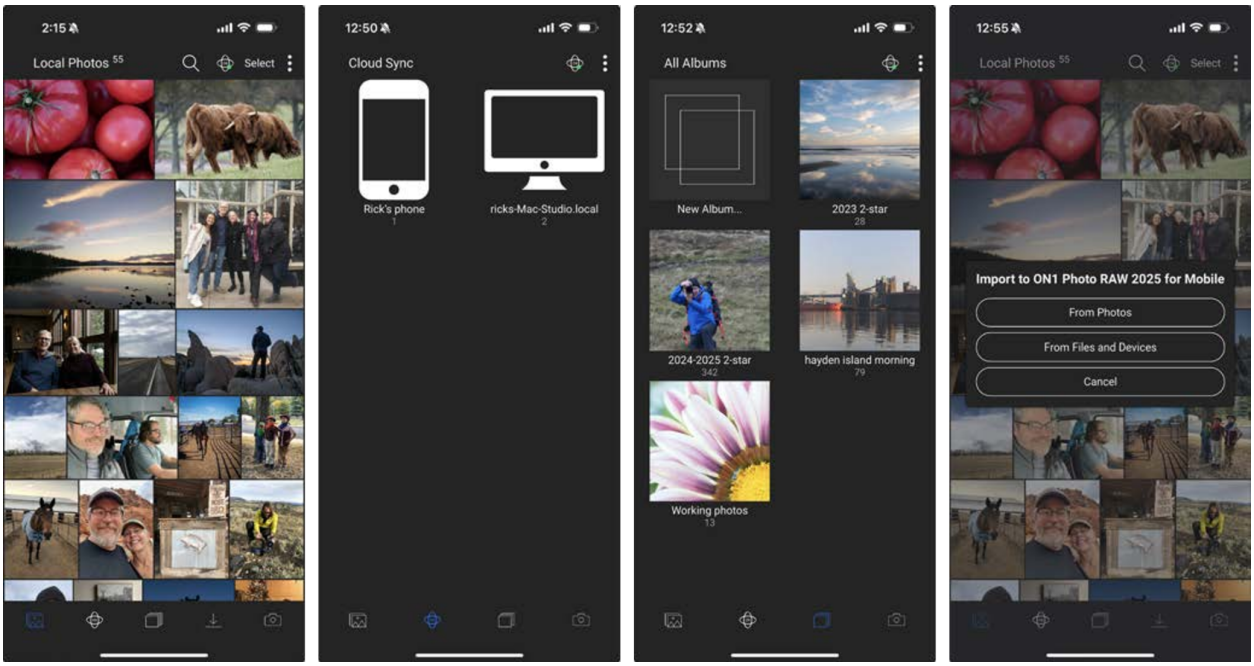


To change how an album or folder is published, right-click it and choose a format from the Sync Options menu.

Syncing Presets and Extras with Cloud Sync

Cloud Sync can also sync your presets and imported extras between your licensed computers. Turn this on or off with the **Sync Presets** checkbox in the Cloud Sync tab of Preferences.

Cloud Sync, Photo RAW, and Photo RAW for Mobile



ON1 Photo RAW for Mobile, for iOS and Android phones and tablets, lets you capture, edit, and share photos on your mobile device, and view and edit photos from your other ON1 Cloud Sync devices.

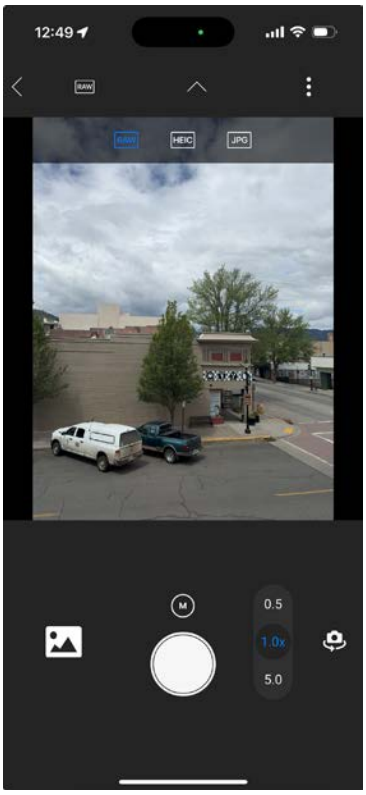
The app works as a camera with full raw capture and as an import tool that adds your photos to ON1 Cloud Sync right away. It also includes a subset of Photo RAW's Edit module. Shoot photos with your phone, edit them in the app, and add them to Cloud Sync albums, and they're automatically shared to the cloud for viewing and editing on your other devices.

Photos you shoot or import with the app are stored in a location on your device called Local Photos. That's what you see when you open a mobile device in the ON1 Cloud Sync pane in Photo RAW 2027.

The app has five tabs:

- **Local Photos:** the photos on this device.
- **Cloud Sync:** your synced devices, which you can open to view their photos.
- **Albums:** your synced Cloud Sync albums. You can also create new synced albums here.
- **Import:** imports photos from your device's camera roll or other folders.

- **Camera:** a full-featured, pro-level camera that captures raw, HEIC, or JPEG photos and syncs them to the cloud immediately.



The Camera tab in ON1 Photo RAW for Mobile.

ON1 Photo RAW for Mobile uses the same raw processing engine as ON1 Photo RAW, with a non-destructive raw editor built in. Its basic controls are similar to the Develop tab in Photo RAW's Edit module, with adjustments for Exposure, Contrast, Shadows, Midtones, Highlights, Whites, Blacks, White Balance, Noise, and Sharpening. It also includes a selection of filters from the Effects tab.



Viewing Photos in ON1 Photo RAW for Mobile

Use standard taps and gestures to view your photos, whether they're on the device or synced from the cloud. Tap an album to see its photos in a grid, and pinch to change the grid size. Tap a photo to open it in Detail view, and pinch to zoom in.

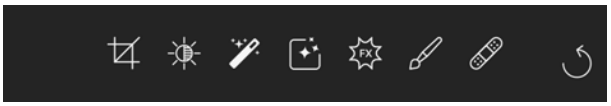
Managing and Editing Photos

Tap any photo in a grid to open it in Detail view. The photo's name appears with three icons at the bottom of the screen: Share, Edit, and Delete. You can delete only photos in this device's Local Photos folder.

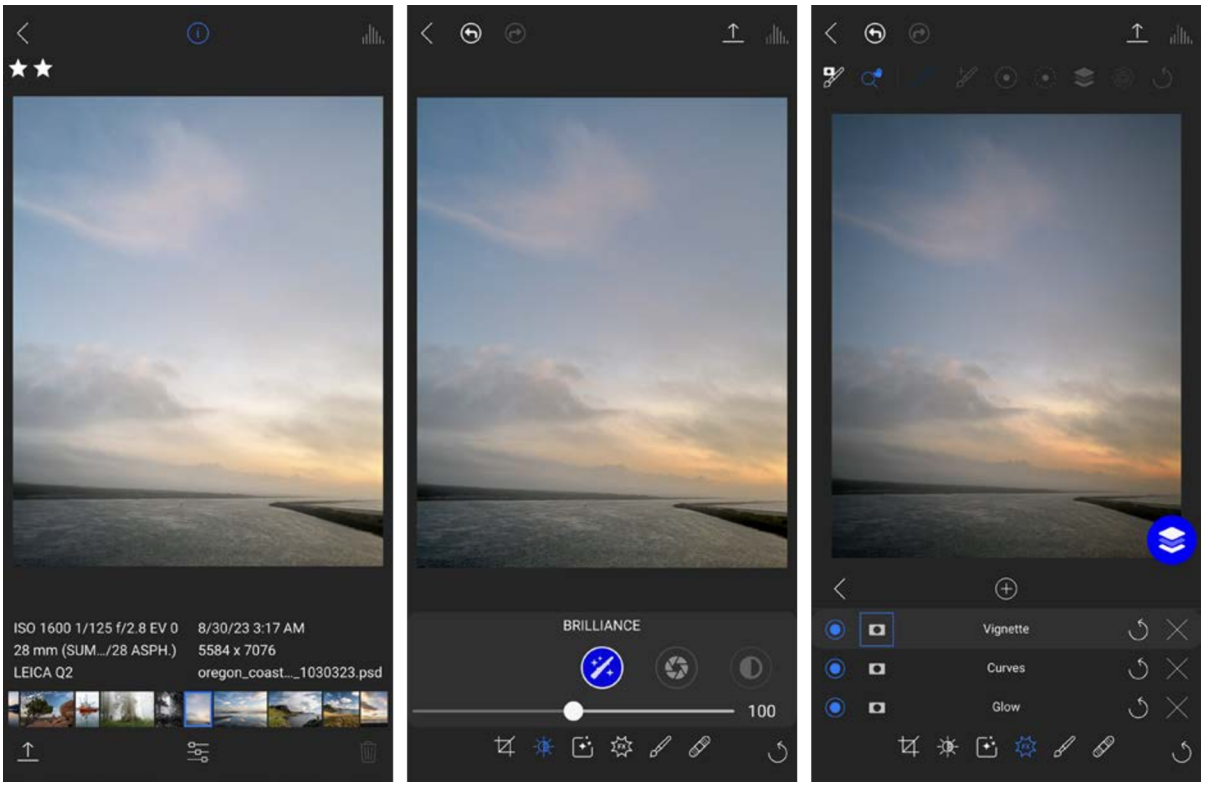
Share lets you save a copy to your camera roll or share it with your device's sharing options, at medium, large, or full size.

Editing in the app works much like editing in Photo RAW, although the app doesn't have every tool and filter from the desktop version. ON1 is committed to bringing the mobile app as close to the desktop version as possible over time.

Tap the Edit icon at the bottom center of the screen to show the editing tools below the photo:



- **Crop:** crop and straighten your photo.
- **Tone:** apply Brilliance AI; adjust exposure, contrast, highlights, shadows, midtones, and blacks; and add structure, dehaze, sharpening, and noise reduction.
- **Super Select AI:** tap areas of the photo to apply local adjustments and effects to them.
- **Presets:** apply a look with one tap from presets in several categories.
- **Effects:** 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:** fine-tune specific areas of your photo with the same masking tools as the desktop app.
- **Retouching Tools:** remove blemishes, dust spots, and more with Perfect Eraser and the Clone tool.
- **Reset:** the rightmost icon removes all of your edits and returns the photo to its original state.



Tap the center icon at the bottom of the screen to start editing. You can apply Brilliance AI (center) or stack Effects filters just as you would in Photo RAW.

To learn how these tools relate to Photo RAW 2027's editing engine, see About the Edit Module.

Mobile Editing Limitations with Synced Photos

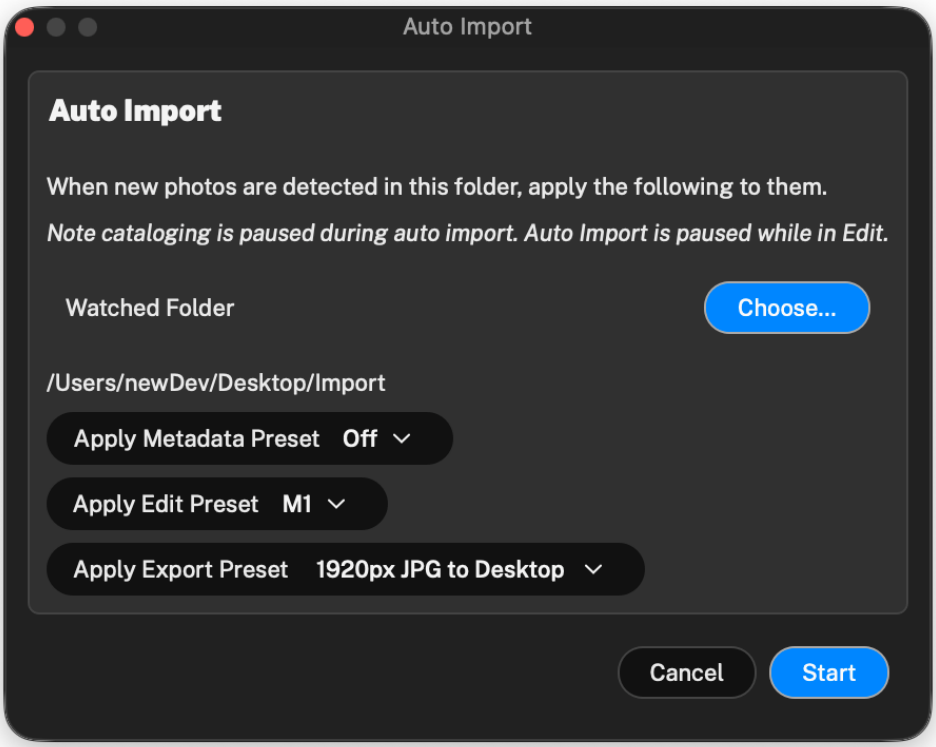
Cloud Sync and ON1 Photo RAW for Mobile are designed for seamless editing between desktop and mobile, but in two cases you can view a synced photo in the app without being able to edit it:

- The photo was edited in Photo RAW with an Effects filter that the mobile app doesn't have.
- The photo is an .onphoto file, including HDR, panorama, and focus-stacked images and layered files.

Any other synced photo can be edited in Photo RAW 2027 or ON1 Photo RAW for Mobile, whether it's an original or an editable preview. All Cloud Sync photos are visible on every Cloud Sync device, whatever their format.

Auto Import

Auto Import automates your workflow by watching a folder for new photos. When you add a photo to the folder, Photo RAW can apply a metadata preset, apply an edit preset, and export a copy, all automatically. It's ideal for tethered or studio workflows, for photos synced from another device, or anytime you want new photos tagged, styled, and delivered without extra steps.



Setting Up Auto Import

1. In Browse, choose **File > Auto Import**. The Auto Import window opens. You can keep working in Browse while it's open.
2. Next to **Watched Folder**, click **Choose** and select the folder to watch. The folder doesn't need to be cataloged.
3. Choose any combination of presets. Each one is set to **Off** by default:
    - **Apply Metadata Preset:** Adds metadata, such as copyright, keywords, or contact information. See The Metadata Pane.
    - **Apply Edit Preset:** Applies an Edit module preset. See Presets.
    - **Apply Export Preset:** Exports a copy of each photo using an export preset, such as a 1920-pixel JPEG to your desktop. See Exporting and Export Presets.

4. Click **Start**. The button changes to **Stop**, and Photo RAW begins watching the folder.

Now add photos to the folder, from a card, a tethering app, a sync service, or by dragging them in, and Photo RAW processes each one with the presets you chose.

How Auto Import Works

- **Only the watched folder:** Photos added to subfolders are ignored.
- **Each photo once:** Photo RAW keeps a log of the photos it has processed during the current session and doesn't process them again. The log is saved in the watched folder, so you can open it to see what was processed. It starts fresh with each session.
- **No loops:** If your export preset saves copies into the watched folder, Photo RAW recognizes them as Auto Import output and doesn't process them again.
- **Settings are remembered:** Your watched folder and preset choices are saved, so they're ready the next time you open Auto Import.

When Auto Import Runs

Auto Import only runs while the Auto Import window is open and you've clicked Start.

- Click **Stop**, close the window, or quit Photo RAW to stop it. Reopening the window doesn't restart it automatically; click Start again.
- Auto Import pauses while you're in the Edit module or another module and resumes when you return to Browse.
- Cataloging is paused while Auto Import is running and resumes when it stops.

TIP: Photo RAW won't stop every export preset that could cause trouble. To keep things simple, export copies to a different folder than the one you're watching.

About the Edit Module

Photo RAW 2027's editing power is in the Edit module, which has five tabs, each for a different kind of editing:

- Develop is for basic global edits, such as adjusting tone and color, removing noise and fixing motion blur and camera shake with NoNoise AI and TackSharp AI, correcting perspective, and converting black-and-white and color negatives. It's the perfect place to start editing. Brilliance AI speeds up your editing and makes almost any photo look great instantly, all non-destructively.

- Local Adjustments apply targeted edits to parts of your photo, making traditional tasks like dodging and burning easy. You can also add custom brush overlays here.

- Effects is Photo RAW's stylization center, with 37 filters you can stack in any order, each with extensive blending and masking options. With Mask AI, you can apply a filter to specific areas of a photo with a single click.

- Sky Swap AI replaces dull skies quickly. It masks the sky automatically so you can replace it with any of more than 100 included skies, or import your own right from the tab.

- Portrait AI uses machine learning to find and retouch every face in a photo, smoothing skin, reducing blemishes, and brightening eyes and teeth.

To fine-tune your edits, Photo RAW has 20 tools, from cropping (with AI-based canvas expansion) and transformation to one-click subject and background masks. Generative Erase removes large distractions from a scene, and Perfect Eraser automatically detects and removes common distractions like sensor dust and power lines. Super Select AI makes applying Effects filters and local adjustments easy: click an area of the photo and apply an adjustment in one step.

In Photo RAW 2027, masking works the same way on every layer, Effects filter, and local adjustment, with its controls right next to the settings they affect (see Creating Masks).

To switch tabs, just click the tab you want. Your settings in each tab are saved as you work, and every edit is non-destructive, so you can return to any photo at any time to make changes.

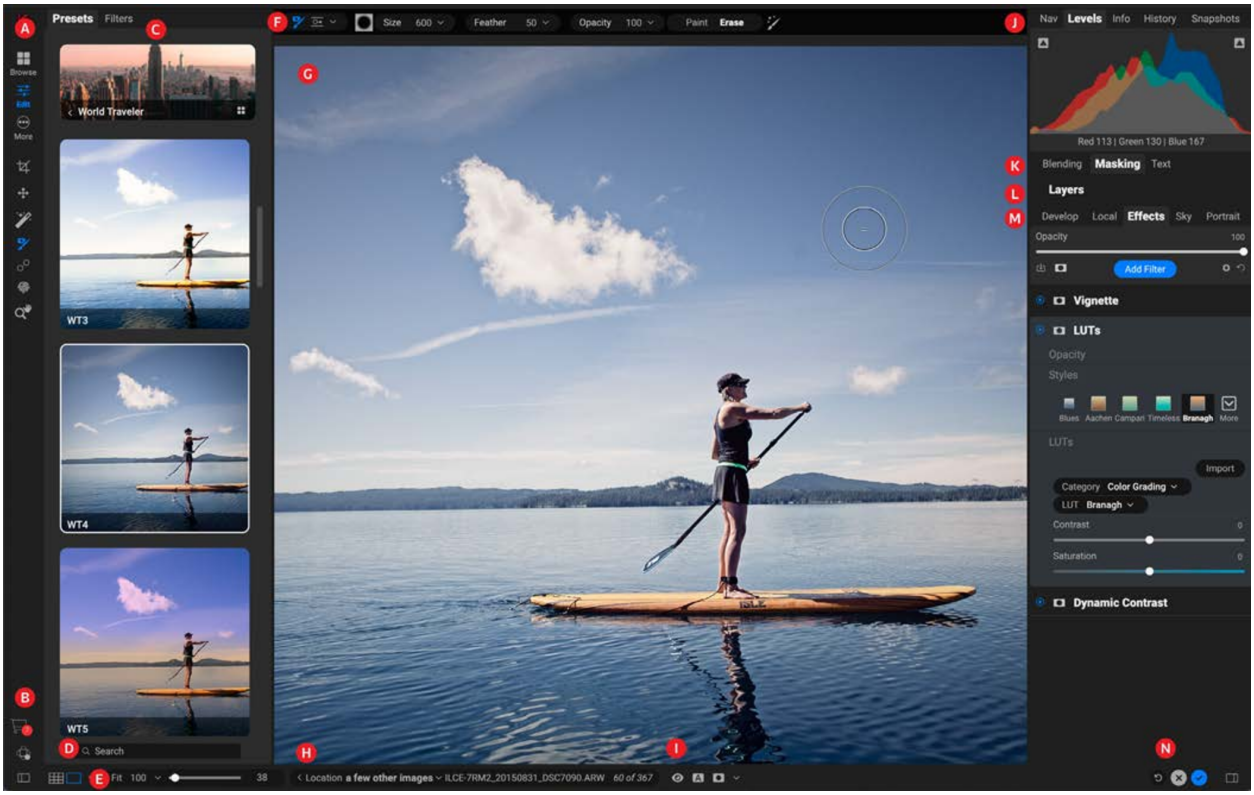
The Edit module also has a Layers pane for stacking multiple photos into sophisticated composites that many standalone photo editors can't create. You can add text as a layer, with full control over font, size, and placement. Because the Edit module is completely non-destructive when you use Photo RAW as a standalone app, you can re-edit your composites at any time.

Photo RAW's preset system lets you save settings from any editing tab, along with some retouching tool operations and masks, including AI-generated masks, to apply to other photos. You can apply presets in the Edit module or in Browse, and like everything else in Photo RAW 2027, they stay editable.

You can also copy and paste Edit module settings from one photo to another, or sync one photo's edits to a group, in any editing tab or in Browse (see Copying Settings and Synchronizing Edits and Applying Edit Module Presets in Browse).

With ON1 Cloud Sync, your synced photos can be edited in Photo RAW from any device. Your edits sync back to the photos on their original device and stay fully editable. The main exception is layered files, which must stay on the device that created them (see Using Layers with ON1 Cloud Files).

ON1 Edit Module Main Screen Overview



The Edit module gives you an easy-to-use workspace for editing your photos. Its main sections are:

1. **Tool well:** the Edit module's tools.
2. **ON1 Cloud Sync status/Left panel:** shortcuts to your ON1 Cloud Sync status and to open and close the left (Presets/Filters) panel.

3. **Presets/Filters panel:** all installed presets, by category. In the Effects tab, a Filters panel is also available.

4. **Preset/Filter search:** searches presets, and filters in Effects, by name.

5. **Window options and Preview size:** switch between Grid (which returns to Browse), Photo, and Filmstrip views, and set the zoom level.

6. **Tool Options bar:** options and settings for the selected tool. When you're using a tool group, such as Mask, you can also choose the other tools in that group here.

7. **Preview area:** shows the current photo in detail.

8. **Breadcrumbs bar:** shows the current photo's name and path and the number of photos in the folder. Use its menu to choose another folder.

9. **Preview options:** the first icon shows the original, unedited photo. The second turns the current mask overlay on and off, and the menu next to it sets the overlay mode.

10. **Photo information panes:** Navigator, Levels (histogram), Info, History, and Snapshots.

11. **Properties pane:** tabs for blending modes, masking options, and text layer settings. It can also be shown as a floating window (see The Properties Window).

12. **Layers pane:** add, edit, and manage layers.

13. **Edit tabs:** Develop, Local Adjustments, Portrait AI, Sky Swap AI, and Effects. Click a tab to show its settings.

14. **Reset/Revert/Save bar:** Reset removes all Edit module settings from the current photo. Revert undoes all edits from the current session. Save saves the photo's edits and returns to Browse.

The Edit module looks much like Browse, with changes specific to editing. On the left are the tool well and the Presets pane, plus a Filters tab when you're in Effects.

On the right are the same panes as in Browse (Navigator, Levels, and Info), plus the History pane, the Layers pane, and tabs for the five editing areas: Develop, Local Adjustments, Effects, Portrait AI, and Sky Swap AI. You can view photos in Photo or Filmstrip view, which work the same as in Browse (see Working in the Preview Area).

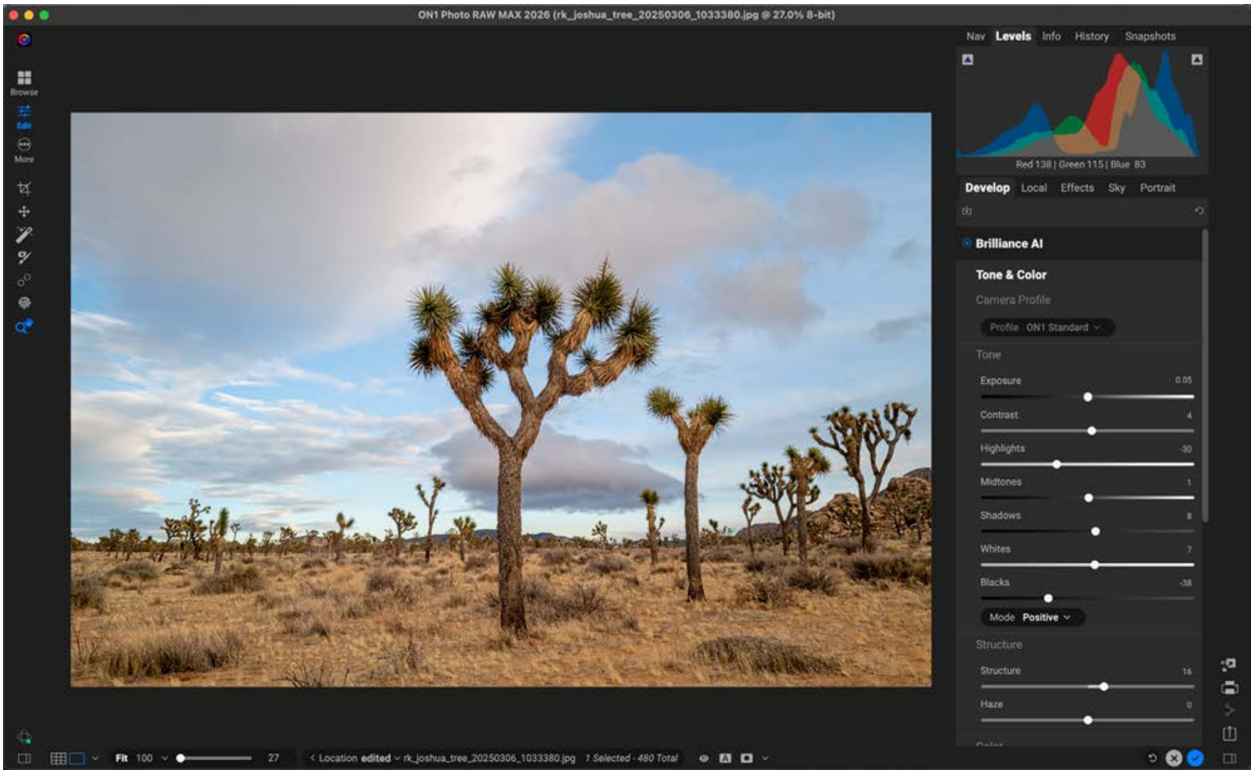
There are several ways to navigate and zoom in the Preview area:

- Your photo starts in Fit view with the Zoom tool selected. Click the photo to zoom to 100%, and the cursor changes to the Hand tool so you can drag to move around. Click again to return to Fit.

- You can also zoom with the View menu or the Navigator pane. The Navigator shows a box around the visible area. Drag the box to change what's shown, or click the buttons at the bottom of the pane to zoom to Fit, 100%, 50%, or 25%. The same buttons appear in the Zoom tool's Options bar.

- When you're zoomed in past the visible area and using any editing tool, hold the **Spacebar** to switch to the Hand tool temporarily, then drag to reposition the photo.

Basic Global Editing with Develop



Develop is where you make basic global edits: adjusting tone and color, removing noise, sharpening, and transforming a photo. It's the perfect place to start editing. With Brilliance AI, you can begin with AI-based automatic adjustments that jump-start your editing, so you can move straight on to stylizing your photo.

In Photo RAW 2027, Develop uses an improved raw processing engine that gives you sharper detail, richer color, better contrast, and more natural shadows and highlights right from the start.

Develop Adjustment Panes

The Develop tab's adjustments are in the Overall Settings panel. Unlike the Effects tab, where you can stack filters in any order, Develop always applies its adjustments in this order:

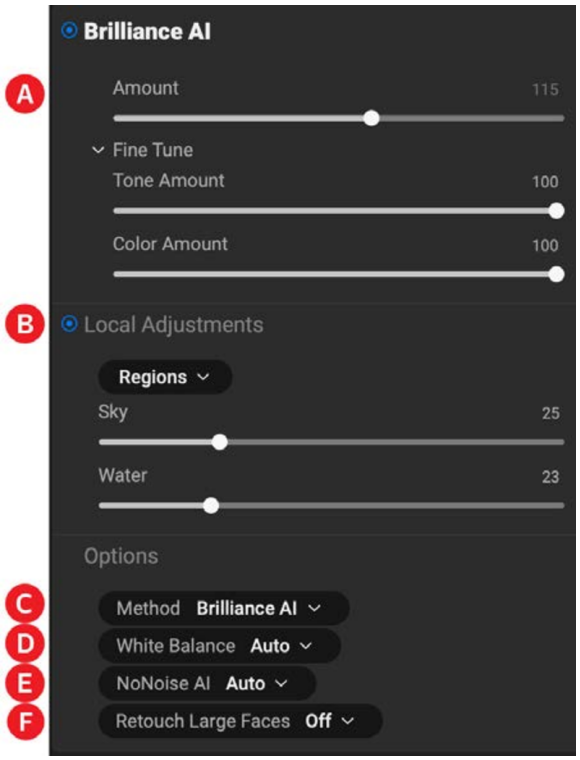
1. Brilliance AI
2. Tone & Color
3. Noise & Sharpening
4. Lens Correction
5. Transform

Brilliance AI

Brilliance AI takes care of the basic raw processing that starts every editing workflow. It analyzes your photo and automatically fixes tone and color problems. It can also apply noise reduction, targeted local adjustments to specific areas, and portrait retouching to any faces it finds.

Older "auto" buttons made basic white and black point adjustments and some color and saturation boosts. Brilliance AI uses artificial intelligence to do most of the heavy lifting at the start of the editing process, so your photos look great right away and you can move on to stylizing, local editing, or compositing in Layers.

Everything Brilliance AI does is non-destructive. You can remove or edit any of its adjustments, and you can set the defaults for each of its operations in the Brilliance AI tab of Preferences (see Setting Brilliance AI Defaults).



To use Brilliance AI, click the control circle to the left of the pane's title. The pane then shows these settings:

1. **Amount/Fine Tune:** the Amount slider sets the overall strength. Fine Tune lets you adjust the Tone and Color parts of the effect separately.

2. **Local Adjustments:** when turned on, Photo RAW finds regions in the photo and creates a local adjustment for each one. They appear as separate panes in the Local tab.

The Options section has four settings:

3. **Method:** Brilliance AI by default. AI Auto and AI Match are included for photos edited in earlier versions of Photo RAW.

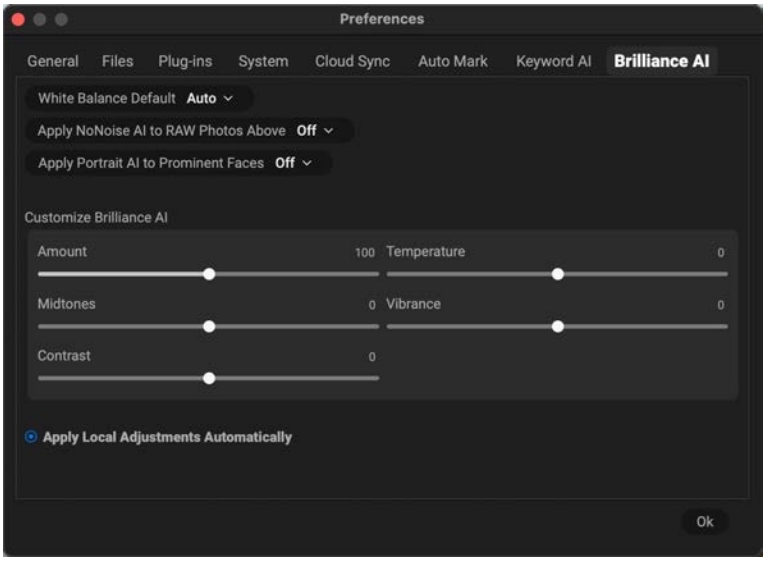
4. **White Balance:** automatic by default, or set it to As Shot or any of the standard white balance settings from the Tone & Color pane. To keep Brilliance AI from changing white balance, choose As Shot.

5. **NoNoise AI: On** always applies NoNoise AI. **Auto** applies it only when the photo's ISO is above the level set in the Brilliance AI tab of Preferences (see Brilliance AI (Preferences)). **Off** never applies it.

6. **Retouch Large Faces:** when on, Brilliance AI automatically retouches prominent faces with Portrait AI.

Setting Brilliance AI Defaults

You can customize Brilliance AI's defaults in the Brilliance AI tab of Preferences. The tab has three sections:



- The top section sets how Brilliance AI adjusts white balance, the minimum ISO for applying NoNoise AI (or whether to apply it at all), and whether to retouch prominent faces with Portrait AI.
- The middle section customizes the main Amount setting. If Brilliance AI regularly does too little or too much for your taste, adjust it here. You can also change the default Temperature, Midtones, Vibrance, and Contrast adjustments.
- **Apply Local Adjustments Automatically** sets whether region-based local adjustments are created.

NOTE: Whatever your defaults, you can turn any of Brilliance AI's adjustment categories on or off for a photo or group of photos in the Brilliance AI pane in Develop.

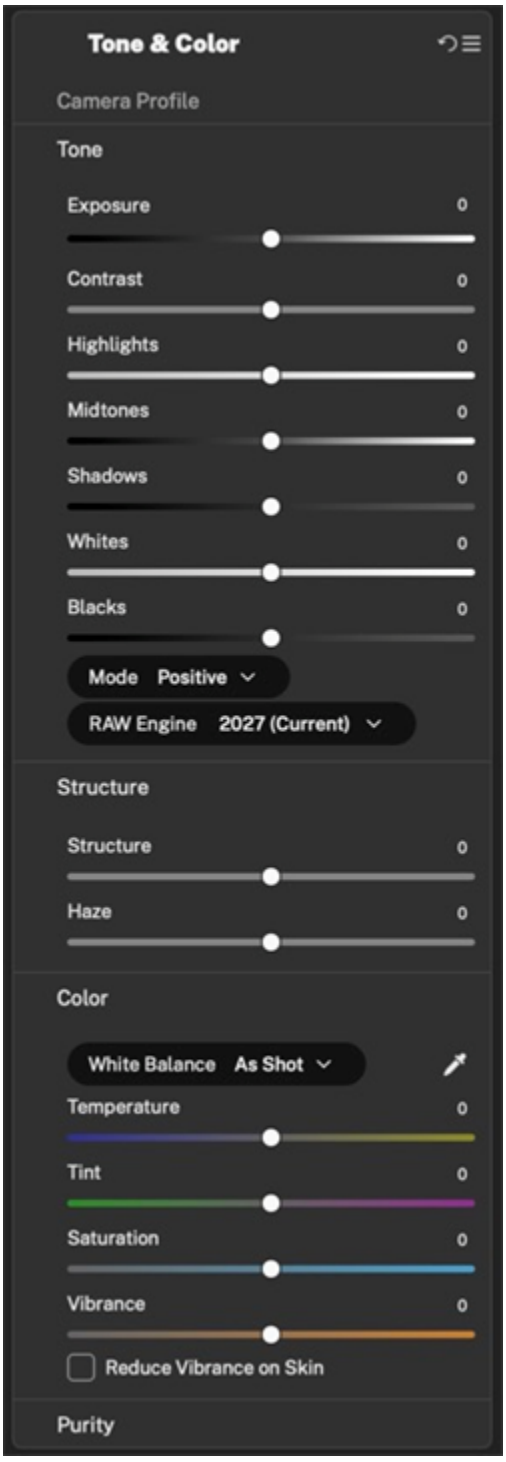
Editing Photos That Have Brilliance AI Applied

After applying Brilliance AI, you can refine its results in the Tone & Color, NoNoise AI, Portrait AI, and Local Adjustments panes. For example, you could fine-tune each local adjustment's mask with the mask refinement tools, or turn off a local adjustment you don't want. You can also add Effects filters, swap skies, and more without changing Brilliance AI's core adjustments.

If you turn off the Brilliance AI pane, Photo RAW resets the Tone & Color pane and turns off the NoNoise AI settings, local adjustments, and face retouching it applied. Turn

it back on to restore those settings, including any changes you made while Brilliance AI was on.

Tone & Color



The Tone & Color pane adjusts a photo's tone and color, so you can correct and enhance exposure, contrast, detail, and color. It has two sections, Tone and Color, with a Camera Profile option at the top.

Camera Profile

Camera profiles apply different interpretations of a photo's raw data for different genres or looks. The menu lists Photo RAW's built-in profiles: ON1 Standard, Landscape, Portrait, Vivid, and Neutral. If your camera has its own embedded profiles, they're listed too. You can also create and import custom camera profiles with X-Rite's ColorChecker and ColorChecker Camera Calibration software (see Custom Camera Profiles).

Camera profiles are non-destructive and work independently of your tone and color adjustments.

Tone

The Tone sliders control the photo's overall brightness and contrast:

- **Exposure:** drag right to lighten the photo, or left to darken it.
- **Contrast:** increases or decreases contrast.
- **Highlights:** darkens highlights to recover detail.
- **Midtones:** adjusts the middle tones.
- **Shadows:** lightens shadows to reveal detail.
- **Whites:** sets the white point, adding or removing contrast in the highlights.
- **Blacks:** sets the black point, adding or removing contrast in the shadows.
- **Mode:** converts color or black-and-white negatives (see Negative Mode).
- **Structure:** adjusts detail by changing local contrast.
- **Haze:** drag left to remove haze or fog, or right to add it.

Color

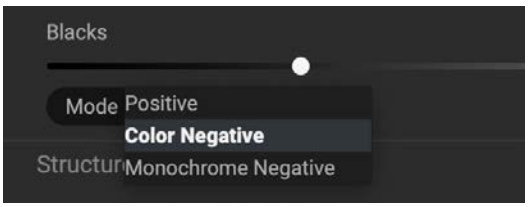
The Color settings remove color casts and enhance color. For raw and DNG files, color temperature is measured in Kelvin (K) by default, which gives you a wider, more accurate range of adjustment.

- **Auto:** detects and removes a color cast by adjusting the Temperature and Tint sliders.
- **Gray Dropper:** removes a color cast. Click the icon, then click an area of the photo that should be neutral gray.
- **White Balance:** sets white balance to a common preset: As Shot, Auto, Daylight, Cloudy, Shade, Tungsten, Fluorescent, Flash, or Custom. The default is As Shot, the white balance your camera recorded.
- **Temperature:** shifts color cooler (blue) or warmer (yellow). For raw files, the **K** button is blue, meaning the slider uses Kelvin. Click it to switch to a relative scale. Non-raw files always use the relative scale.
- **Tint:** shifts color toward green or magenta.
- **Saturation:** increases or decreases saturation.
- **Vibrance:** increases or decreases the color of muted tones, leaving already saturated colors alone.
- **Reduce Vibrance on Skin:** when on, Vibrance has less effect on skin tones, so you can make clothing and backgrounds more vibrant without affecting skin.
- **Purity – Highlights:** reduces saturation in the highlights.
- **Purity – Shadows:** reduces saturation in the shadows.

Negative Mode

If you digitize film negatives with your camera instead of a scanner, Negative mode inverts them and corrects their colors automatically.

Open the negative in Develop and choose **Color Negative** or **Monochrome Negative** from the Mode menu. Photo RAW converts it to a positive, and you can edit it in Develop and the other Edit module tabs just like any other photo.

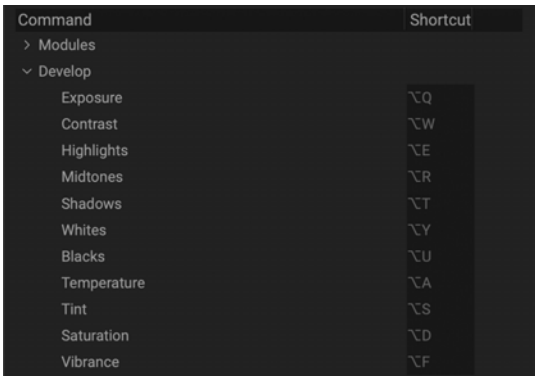


RAW Engine

The RAW Engine version selection used to change which version of the RAW Engine is used. Periodically the RAW Engine is enhanced and must be versioned. If a photo has existing settings, it will show the RAW Engine version used to edit it. When you open a photo with no settings, the latest version is used by default. You can always upgrade the processing to the latest version by selecting it in the drop-down menu. Note, the appearance my change and will need to be readjusted.

Adjusting Tone & Color with Keyboard Shortcuts

In any Edit module tab, you can adjust basic tone and color settings from the keyboard: Exposure, Contrast, Highlights, Midtones, Shadows, Whites, Blacks, Temperature, Tint, Saturation, and Vibrance.

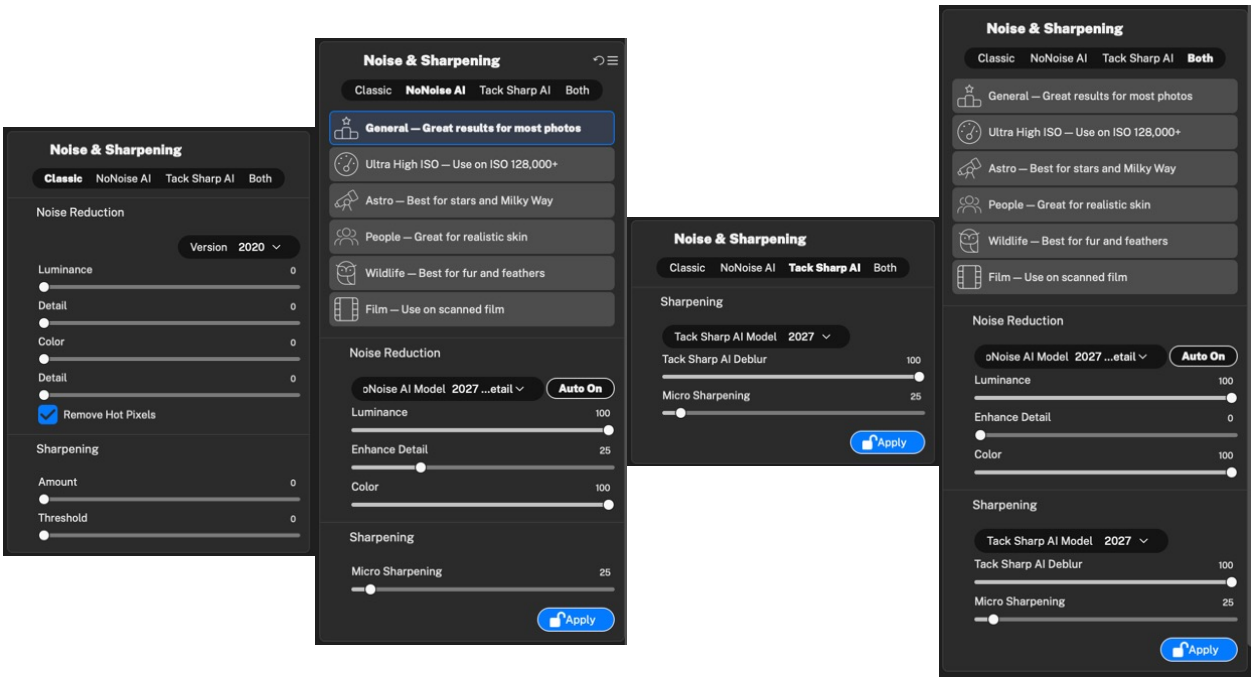


1. Press the keyboard shortcut for the setting you want to change. An overlay appears showing which setting you're adjusting.
2. Press the **Up** or **Down** arrow key to increase or decrease it.
3. Press **Esc** or click in the window when you're done.

This is handy when, for example, a stack of Effects filters darkens your shadows. Use the Shadows shortcut to adjust them right away without going back to Develop.

Photo RAW comes with shortcuts assigned to these adjustments in the Develop section of the Keyboard Shortcuts window, but you can change them (see Keyboard Shortcuts).

Noise & Sharpening



The Noise & Sharpening pane has four tabs: Classic for traditional noise reduction and sharpening (left), NoNoise AI (second from left), TackSharp AI with ON1's AI-based deblurring (second from right), and Both (right), which applies NoNoise AI and TackSharp AI at the same time.

Noise reduction and sharpening often work against each other, so they usually need to be balanced. The Noise & Sharpening pane brings them together in four tabs:

- **Classic:** Photo RAW's traditional noise reduction and sharpening.
- **NoNoise AI:** AI-based removal of luminance and color noise from photos shot at high ISOs.
- **TackSharp AI:** AI-based deblurring that sharpens slightly soft photos, removes motion blur, and can even rescue out-of-focus shots.
- **Both:** applies NoNoise AI and TackSharp AI at the same time.

Classic adjustments are applied in real time. NoNoise AI and TackSharp AI work at the base image level: they demosaic the photo from its raw data and apply noise reduction and sharpening to the base image. Because of this, you process the photo and then click Apply to lock the settings into the base image, although you can adjust them again at any time. NoNoise AI and TackSharp AI also take a little longer than Classic. For details on the order in which edits are applied, see The Editing Pipeline.

For low-ISO photos, start with Classic, unless you know noise will be a problem in your final edit or your photo has soft or out-of-focus details you want to fix.

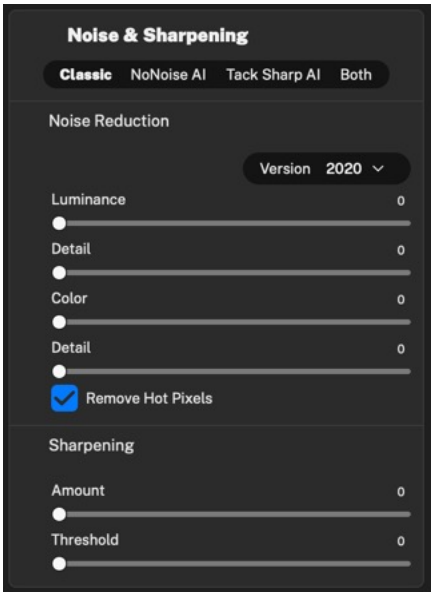
Using the Classic Tab

Classic is the default tab and the right choice for most photos.

NOTE: Work at 100% when you adjust noise or sharpening. Click **100** in the Navigator pane, choose **View > View Actual Pixels**, or press **Command-Option-0** (macOS) or **Ctrl-Alt-0** (Windows).

Noise Reduction

The Noise Reduction section reduces luminance and color noise while preserving detail. Photo RAW applies a small amount of noise reduction by default, based on your camera. You can refine it with these settings:



- **Luminance:** the strength of luminance noise reduction. Hold **Option** (macOS) or **Alt** (Windows) while dragging to view the luminance only.
- **Color:** the amount of noise reduction applied to color (chroma) noise.
- **Detail:** how much edge detail is protected for each type of noise reduction. Hold **Option** or **Alt** while dragging to see the edge mask.
- **Remove Hot Pixels:** replaces individual blown-out pixels with colors that blend with the surrounding pixels. It can also help reduce noise in long exposures.

- **Version:** the Classic noise reduction algorithm. The default is 2020, the latest version. Photos edited in earlier versions of Photo RAW use the 2017 model. You can switch any photo to the other model.

Sharpening

The Sharpening section sharpens a photo based on how it came out of your camera, for example to restore sharpness lost during capture. It has two controls:

- **Amount:** the strength of the sharpening. Hold **Option** (macOS) or **Alt** (Windows) while dragging to view the photo in grayscale, which makes the sharpening easier to judge.

- **Threshold:** limits sharpening in areas with little detail. At 0, every pixel is sharpened. Higher values sharpen only where neighboring pixels differ. Hold **Option** or **Alt** while dragging to see which areas are sharpened: white areas are sharpened and black areas aren't.

Work at 100% or higher, watch for halos from oversharpening, and use Threshold to keep large smooth areas from being sharpened. A Threshold of 2–4 usually works best.

To sharpen further for printing or other output, use the sharpening and noise reduction options in the Effects tab or the Resize module.

Using NoNoise AI

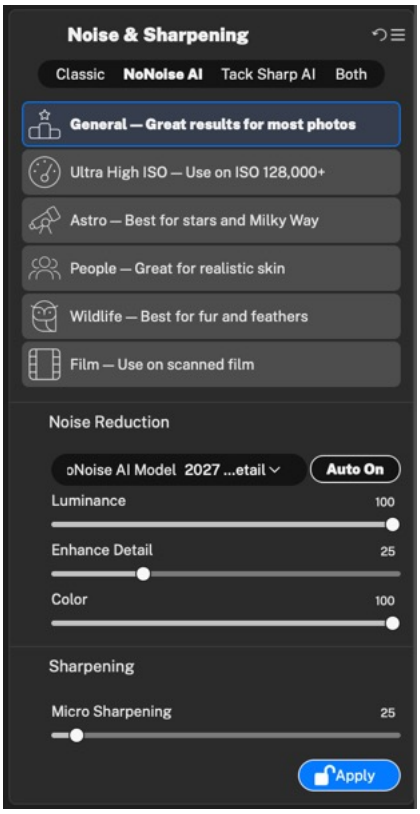
Click the NoNoise AI tab. Photo RAW analyzes your photo and applies ON1's AI noise reduction based on its content. The photo appears at 100%, split between the original on the left and the denoised version on the right.



NoNoise AI applies initial noise reduction based on the photo's content and your preference setting (High, Medium, or Low). Drag the preview slider (circled in red) to compare the original on the left with the denoised version on the right.

NoNoise AI's neural networks work at the deep raw level. They're trained to detect and reduce noise before the raw data is converted to a photo, so noise doesn't carry through the rest of the processing. As a result, NoNoise AI can tell noise apart from fine detail, keeping details sharper and reducing false color.

NoNoise AI sets noise reduction automatically, but you can adjust it to your taste. The controls are organized into sections, with action buttons in the top-right corner:



1. **Noise Reduction:** sets the amount of Luminance (brightness) and Color noise reduction. Enhance Detail preserves details that traditional noise reduction would lose. Color is always set to 100, and Luminance is set based on the photo's content and your Auto setting. The **Method** menu lets you choose an AI model. 2027 High Detail is the newest and best for most photos, but earlier models are included because they may work better for some photos, such as scanned film or astrophotography.

2. **Sharpening:** the Micro Sharpening slider enhances small details in the processed photo.

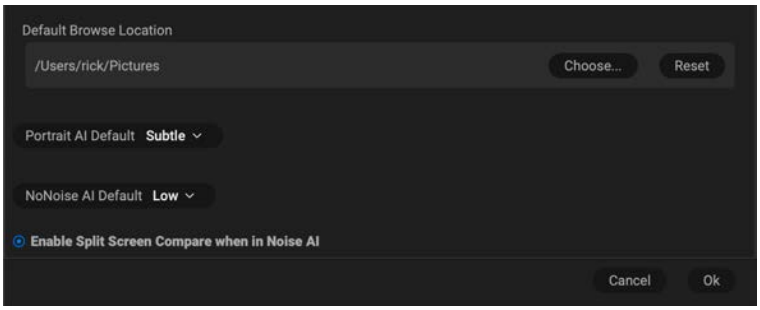
3. **Reset:** returns the tab to its default settings.

4. **Apply/Adjust:** when you open a photo, the button reads **Apply** (blue), and you can fine-tune the settings. Click Apply to lock them in, and the button changes to **Adjust** (red). Click Adjust to edit the settings again.

5. **Auto On/Off:** reads **Auto On** when NoNoise AI is using its default settings. If you change the Luminance slider, it changes to **Auto Off**. Click it to return Luminance to its automatic value.

NoNoise AI's Default Noise Reduction Settings

Noise reduction is as much about personal taste as technology. In the General tab of Preferences, you can set NoNoise AI to use Low, Medium, or High automatic noise reduction (the default is High) with the NoNoise AI Default menu. This affects only the Luminance slider. Color always defaults to 100, Enhance Detail to 50, and Sharpening Amount to 20.



Set NoNoise AI's automatic noise reduction to Low, Medium, or High in the General tab of Preferences.

We recommend trying each setting on a few representative photos from your library, then choosing the one you like best.

Fine-Tuning the Photo

Start with the Noise Reduction section, if needed. Zoom the preview to a level where you can see the important details, and use the Hand tool to move around. A good approach, especially while you're learning, is to set Luminance, Enhance Detail, and Sharpening to zero, then:

1. Increase **Luminance** while looking at an area with both fine detail and smooth tones, until the smooth areas have the noise reduction you want. This is usually between 80 and 100.

2. Increase **Enhance Detail** until you have the detail you want. Values between 20 and 50 are common. High values can bring noise back into smooth areas, so compare detailed and smooth areas as you go.

3. Adjust **Sharpening Amount** the same way. Values between 20 and 50 usually work best.

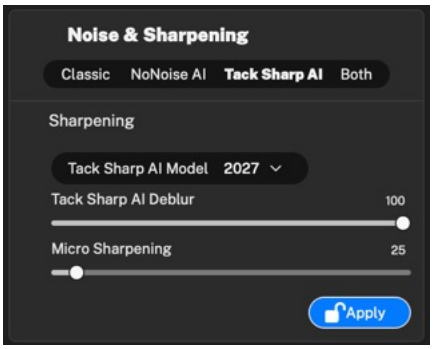
When you're done, click **Apply** to lock in your settings.

NOTE: Because NoNoise AI works best at the raw level, apply it before your basic edits (exposure, color balance, and so on) so it works with as much of the raw data as

possible. For non-raw files, even high-resolution 16-bit PSD or TIFF files, use the High Detail option in the Method menu.

Using TackSharp AI

The TackSharp AI tab is simpler than the NoNoise AI tab:



1. **Model:** lists the available AI models. The 2027 model is the newest and best for most photos, but earlier models are included because they may work better for some photos.
2. **TackSharp AI Deblur:** sharpens focus and reduces motion blur. The default is 100. In most cases you won't need to change it, but you can lower it if the sharpening looks too strong.
3. **Micro Sharpening:** enhances small details, like the slider in the NoNoise AI tab. It defaults to 100 here. As you adjust it, zoom in on fine details like hair or feathers. A little goes a long way.
4. **Reset:** returns the tab to its default settings.
5. **Apply/Adjust:** click **Apply** (blue) to lock in your settings, and the button changes to **Adjust** (red). Click Adjust to edit the settings again.

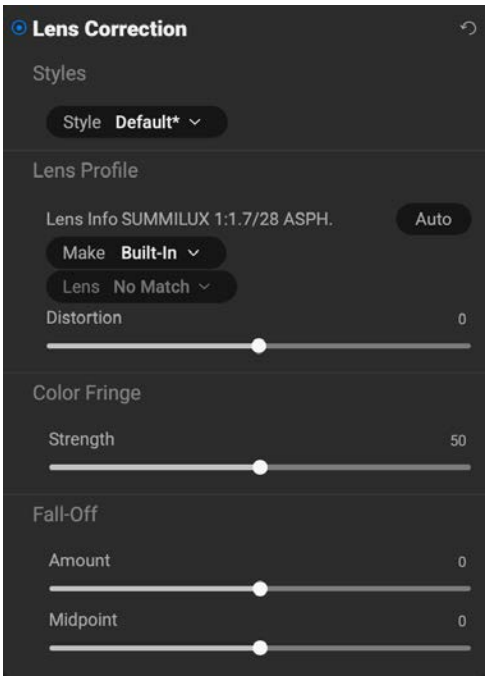


TackSharp AI shows the photo at 100%. Drag the preview slider to compare the original on the left with the sharpened version on the right.

Using NoNoise AI and TackSharp AI Together

The Both tab is for photos that need both sharpening and noise reduction. Applying NoNoise AI and TackSharp AI at the same time helps you find the right balance between them. It works the same as the individual tabs, except that Micro Sharpening appears only in the TackSharp section.

Lens Correction

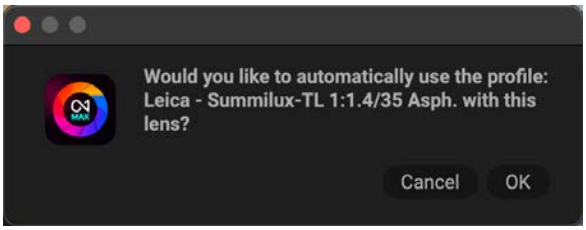


The Lens Correction pane reads the lens information embedded in a photo and looks for a matching profile in Photo RAW's lens database. If it finds one, it applies the profile automatically to reduce distortion, color fringing (chromatic aberration), and light fall-off at the edges. You can also make your own corrections manually.

Photo RAW detects the embedded lens profiles in modern lenses from Panasonic, Fujifilm, Canon, Nikon, and Sony. The database also has hundreds of profiles for third-party lenses from companies like Tamron, Sigma, Tokina, Zeiss, and Voigtländer. Profiles are applied automatically when the camera and lens are from the same manufacturer.

Third-Party Lenses

For a third-party lens, use the Lens Profile section of the pane to find the right profile and apply it. Photo RAW asks whether you want to use the profile for other photos taken with that lens. If you say yes, it's saved as a custom style and applied automatically whenever Photo RAW sees that camera and lens combination.



When you choose a third-party lens profile for your camera, Photo RAW asks whether to use it for all photos taken with that camera and lens combination.

If there's no profile for your lens, Photo RAW corrects the photo automatically in real time by comparing the raw file's embedded JPEG with the raw data. If the result looks right, you don't need to save it. If it needs adjusting, fine-tune it in the Manual section (see below), then save the correction as a style to apply to other photos taken with that camera and lens. Styles you save this way aren't applied automatically.

Manual Corrections

Most of the time, Photo RAW applies the right profile for standard lenses automatically. To make your own corrections, click the **Manual** arrow at the bottom of the pane and choose the lens manufacturer (or your camera's manufacturer). The Manual section adjusts:

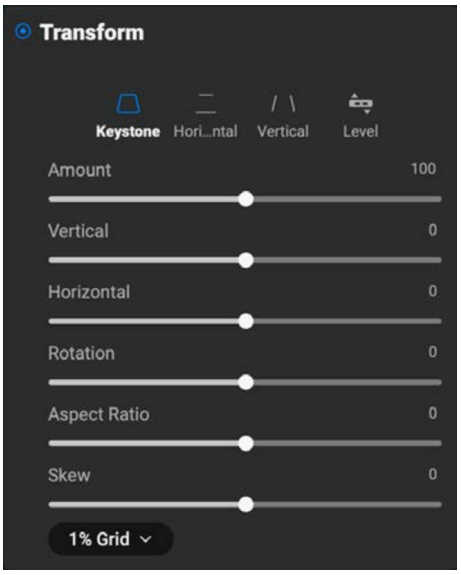
- **Distortion:** pincushion distortion, where straight lines curve inward, or barrel distortion, where they curve outward.
- **Color fringing:** purple or green fringes along edges.
- **Light fall-off:** vignetting at the edges of the frame at certain focal lengths or apertures.

To reuse your manual correction, choose **Save New Style** from the Style menu and apply it to other photos taken with the same lens.

NOTE: Lens corrections are applied automatically by default. You can turn this off in the Default Processing section of the Files tab in Preferences. If it's off, turn on the Lens Correction pane in Develop to correct a photo.

For a list of supported lens profiles, see the ON1 Knowledge Base.

Transform



The Transform pane corrects perspective and also lets you rotate and scale your photo. It's best for small adjustments to perspective and distortion.

The four tools at the top of the pane apply specific transforms:

- **Keystone:** corrects horizontal and vertical perspective at the same time, which is especially useful for architectural photos. A box with a handle at each corner appears. Drag the handles to line up with lines that should be straight and parallel, such as the edges of a window or door, then click **Apply** in the center of the box.
- **Horizontal** and **Vertical:** correct perspective side to side or up and down.
- **Level:** works like the level option in the Crop Tool. Drag across something in the photo that should be level.

The sliders make more specific adjustments:

- **Amount:** works like a fade or boost. Drag left to reduce all the pane's sliders proportionally toward zero, or right to increase them equally.
- **Vertical:** adjusts vertical perspective.
- **Horizontal:** adjusts horizontal perspective.
- **Rotation:** rotates the canvas up to 45° clockwise or counterclockwise.
- **Scale:** scales the photo from its center.

- **Aspect Ratio:** stretches the photo horizontally (drag left) or vertically (drag right).
- **Skew:** slants the photo horizontally or vertically without rotating or scaling it.

Use the **Grid** menu at the bottom of the pane to show a grid overlay while you adjust. The default is No Grid, and you can choose 10% (large), 5% (medium), or 1% (fine).

When you apply a tool or adjust a slider, Photo RAW scales the photo inward so the result fits the photo's original aspect ratio.

Transform usually works best in small amounts. It won't necessarily fix extreme perspective, but it can help a lot with slight corrections, especially combined with its other controls or the Manual section of the Lens Correction pane. Transform doesn't crop the photo, so when you're happy with the result, use the Crop tool to finish.



Before transform *Final after transform*

Keystone can fix perspective problems. Align the box's corners with an object that should have parallel lines (left), then click Apply and crop as needed. The Manual section of the Lens Correction pane can help reduce any distortion Keystone introduces.

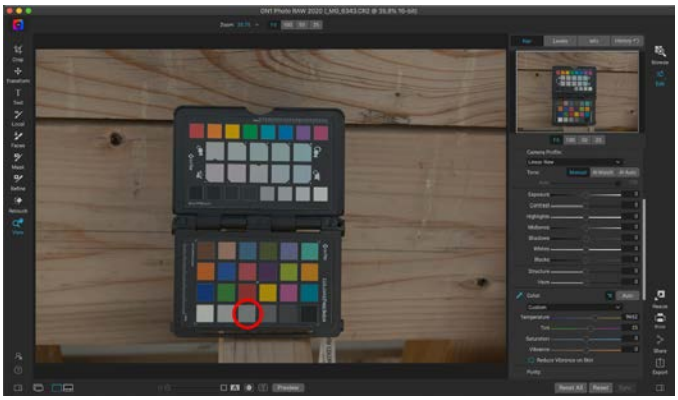
Creating and Adding Custom Camera Profiles

You can create your own camera profiles and import them into Photo RAW (see Tone & Color). Custom profiles can improve color accuracy, which some photographers find very useful.

To build a profile, you need a color reference target and profiling software. ON1 worked with X-Rite to create a workflow that makes this easier and gives consistent results. Besides Photo RAW 2027, you'll need a reference target, such as one from the ColorChecker series, and X-Rite's ColorChecker Camera Calibration app, a free download for owners of X-Rite targets.

To create a custom profile:

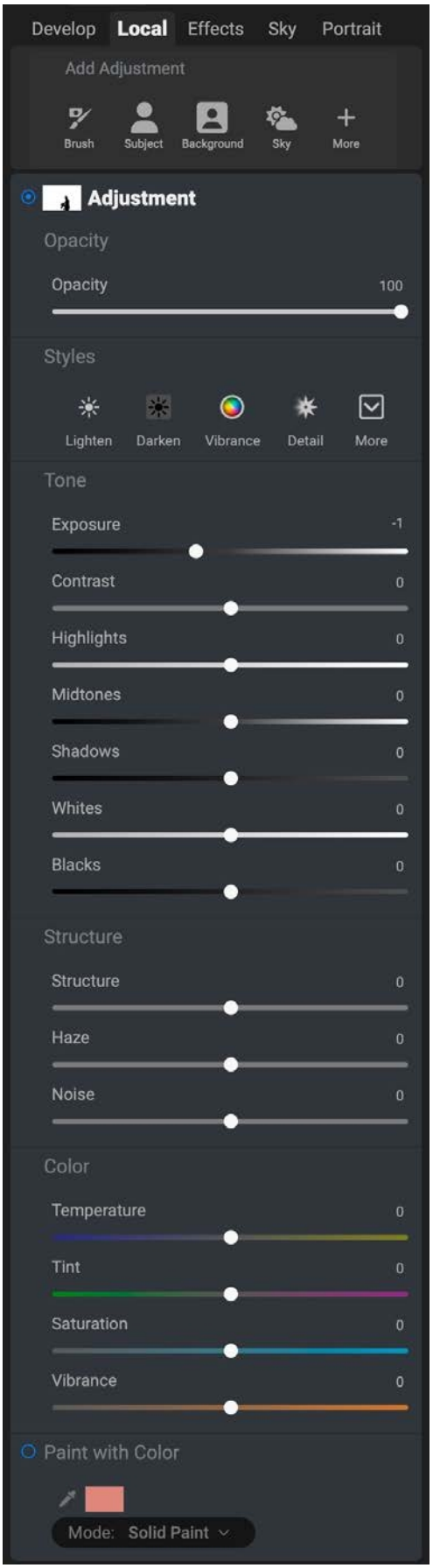
1. Turn off your camera's automatic white balance and set it to match the light you're shooting the target in: daylight, tungsten, flash, or fluorescent.
2. Place the color target in the center of the scene, in even light, and take the photo.
3. Open the photo in Develop.
4. In the Camera Profile section of the Tone & Color pane, choose **Linear Raw**.
5. Click the gray dropper in the Color section of the Tone & Color pane, then click one of the light gray patches on the target to neutralize the photo.
6. Export the photo as a TIFF, choosing **Camera Calibration** from the color space menu below the file type (see Export).
7. Open the exported TIFF in X-Rite's ColorChecker Camera Calibration app. If the app finds and aligns the target, click **Create Profile** and save the profile. If it doesn't, follow the app's guidelines for shooting a new photo that works better.
8. In Photo RAW, open a photo taken with the camera you profiled in Develop. In the Tone & Color pane, choose **Import Profile** from the Camera Profile menu, select the profile you saved, and click **Open**. Your profile is now installed.



With the camera profile set to Linear Raw, use the gray dropper to neutralize the photo by clicking one of the light gray patches (circled).



Local Adjustments


Develop
Local
Effects
Sky
Portrait
Add Adjustment
Brush
Subject
Background
Sky
More
Adjustment
Opacity
Opacity
100
Styles
Lighten
Darken
Vibrance
Detail
More
Tone
Exposure
-1
Contrast
0
Highlights
0
Midtones
0
Shadows
0
Whites
0
Blacks
0
Structure
Structure
0
Haze
0
Noise
0
Color
Temperature
0
Tint
0
Saturation
0
Vibrance
0
Paint with Color
Mode: Solid Paint

The Local tab uses Photo RAW's masking tools to apply edits to specific parts of a photo. You can create a local adjustment with any of the one-click masks (Subject, Background, Sky, Depth, and Luminance), with Super Select AI or any of the masking tools, or with Mask AI region selection. Brilliance AI in Develop can also create region-based local adjustments, which you can edit fully in the Local tab (see Brilliance AI).

Add as many local adjustments as you need by clicking in the Add Adjustment section at the top of the Local Adjustments panel.

For example, you can use a local adjustment to darken a sky with a gradient, or to add a more complex vignette. Each local adjustment is essentially an adjustment applied through a mask, and you can refine how it's applied with blending modes and luminosity options. In Photo RAW 2027, masking controls sit in tabs right next to each adjustment's sliders and work the same way as on layers and Effects filters (see Creating Masks).

Local adjustments can change:

- **Tone:** exposure, contrast, highlights, shadows, and detail
- **Color:** white balance, saturation, and vibrance
- **Detail:** structure and noise

Each local adjustment can have completely different settings and affect a different part of your photo. You can also use local adjustments to paint color onto part of a photo, retouch skin, or change the color of an object.

Local adjustments are independent of the Develop, Effects, Sky Swap AI, and Portrait AI tabs. You can create a local adjustment, switch to another tab, and your local adjustments are still there when you return to Local.

Creating Local Adjustments

To create a local adjustment, click any of the icons in the Add Adjustment section of the Local tab. These icons look different from the mask buttons on the Masking tab, but every mask-creation option is available here or in the More menu.

NOTE: For complete information on creating and adjusting masks, see The Masking Tab.

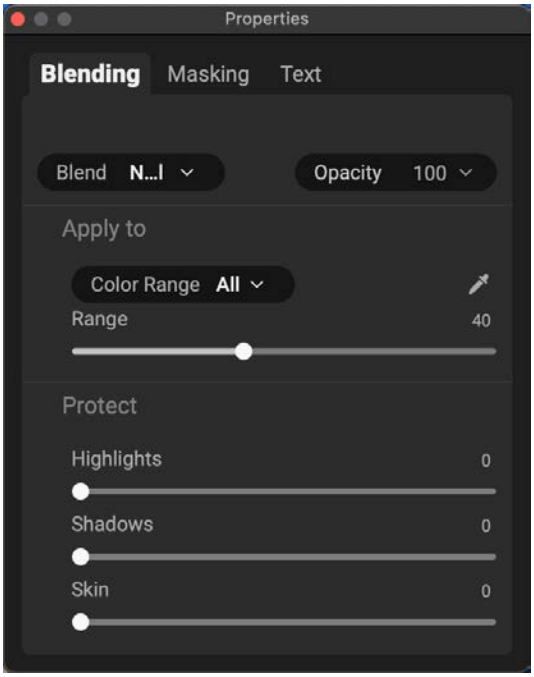
At the top of each adjustment pane is an **Opacity** slider that sets the adjustment's strength. The **Styles** section has ready-made styles to start from, including ones for lightening and darkening (dodging and burning), adding vibrance, fixing teeth and red eye, and more. You can save your own styles from the More menu.

The main section of the pane has the same settings as the Tone & Color pane in Develop: Exposure, Contrast, Highlights, Shadows, Detail, Temperature, Tint, Saturation, and Vibrance. It also has a **Noise** slider for reducing noise in targeted areas (most often the shadows), plus **Structure** and **Haze** sliders. These controls work the same way as in Develop.

TIP: To name an adjustment, double-click the word “Adjustment” in its pane. Names help you keep track of what each adjustment does when you have a lot of them.

Blending Options

A local adjustment is a layer on top of your global adjustments, so each one has blending options that control how it combines with what’s below it. Open the **Blending** tab next to the adjustment’s sliders (or in the Properties window):

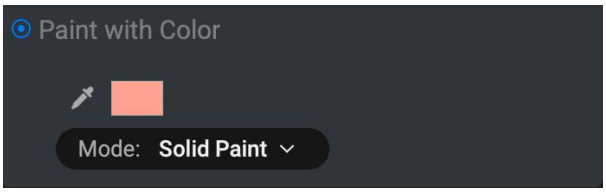


- **Blending mode:** a list of 24 common blending modes, including Normal, Screen, Multiply, Soft Light, Hard Light, and Overlay.
- **Opacity:** the strength of the blended adjustment, from 0% to 100%.
- **Apply To:** limits the adjustment to a specific tonal or color range: All (the default), Highlights, Midtones, Shadows, Reds, Greens, Blues, Magentas, Cyans, Yellows, Flesh Colors, Vivid Colors, or Neutrals. You can also select the Dropper tool and click a color in your photo.

When you choose a range, the adjustment affects only those parts of the photo. The **Range** slider expands or narrows the selection, and the **Highlights**, **Shadows**, and **Skin** sliders protect those areas from the adjustment.

For details on how each blending mode works, see Blending Modes.

Painting with Color



Paint with Color, at the bottom of the local adjustment pane, lets you choose a color and paint it into your photo with the Local Adjustment brush. It's designed for two jobs: softening or evening out areas by blending existing color, and changing the color of an object.

It has three modes, **Solid Paint**, **Replace Color**, and **Classic**, plus a color swatch. Click the eyedropper to pick a color from your photo, or click the swatch to choose one from the system color picker.

- **Solid Paint** paints over everything you brush with the chosen color, like painting in Normal blending mode.
- **Replace Color** changes the hue but not the brightness of what you brush over, like painting in Color blending mode, and preserves whites.

Solid Paint is ideal for softening skin. Use the eyedropper to pick a midtone area of skin, set a low opacity, and brush over the skin. It's also useful with custom brushes for adding overlays (see Using Custom Brushes to Add Overlays to Photos).

Creating Local Adjustments with the Super Select AI Tool

From any tab in the Edit module, you can use the Super Select AI tool to select an area of a photo, apply a local adjustment style to it, and open the result in the Local tab. For details on how Super Select AI works, see Super Select AI Tool.

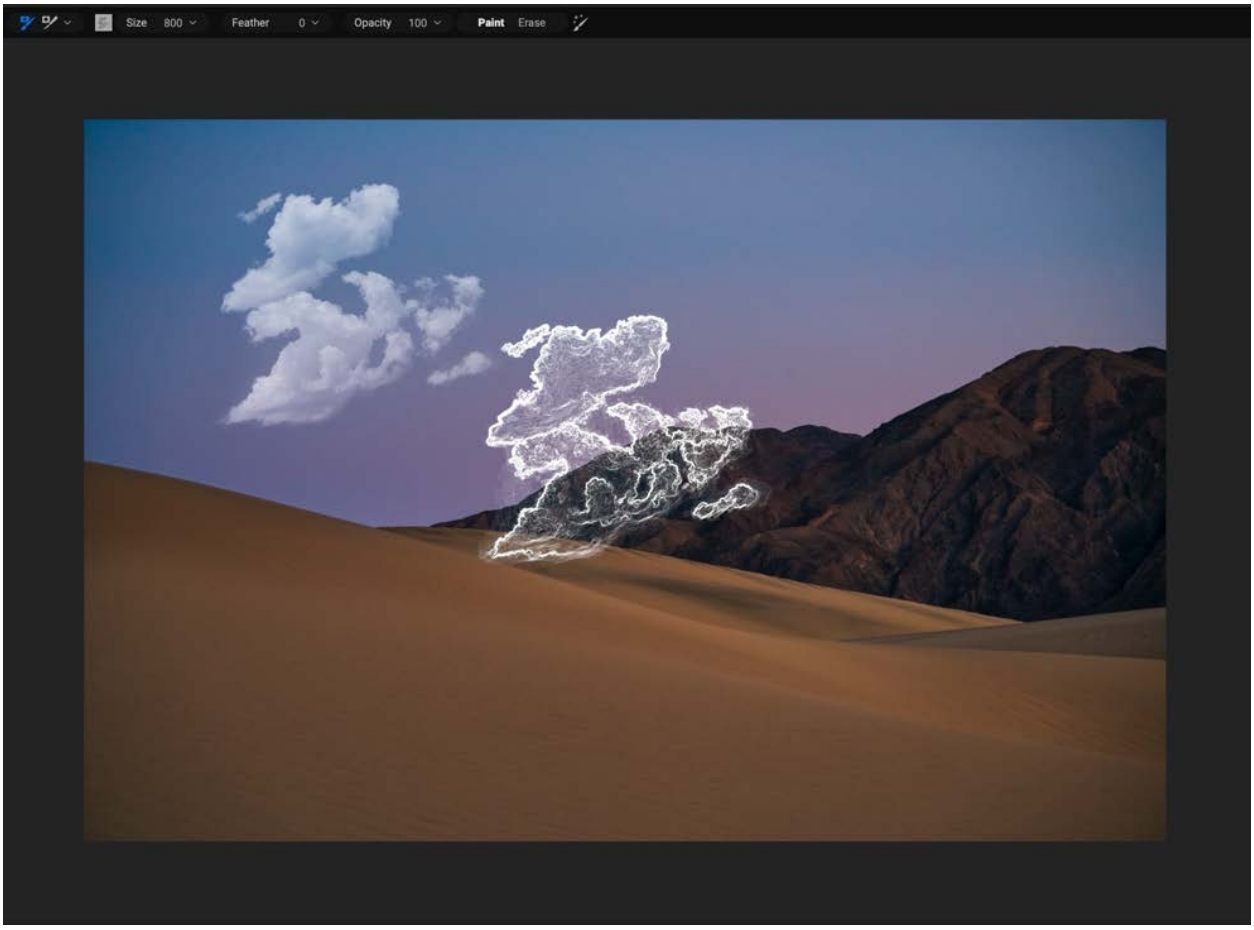
Using Custom Brushes to Add Overlays to Photos

A specialized use for local adjustments and Paint with Color's Solid Paint mode is adding overlays with custom brush shapes. You can paint in stamps, watermarks, and other shapes to create artistic effects or enhance a photo. For example, you could add interest to a dull sky with a cloud brush, or apply your own watermark exactly where you want it. Photo RAW comes with a collection of custom brushes, and you can import any

black-and-white TIFF file or Photoshop-compatible brush file (.abr) with the Extras Manager (see Extras).

To create a basic overlay with a custom brush:

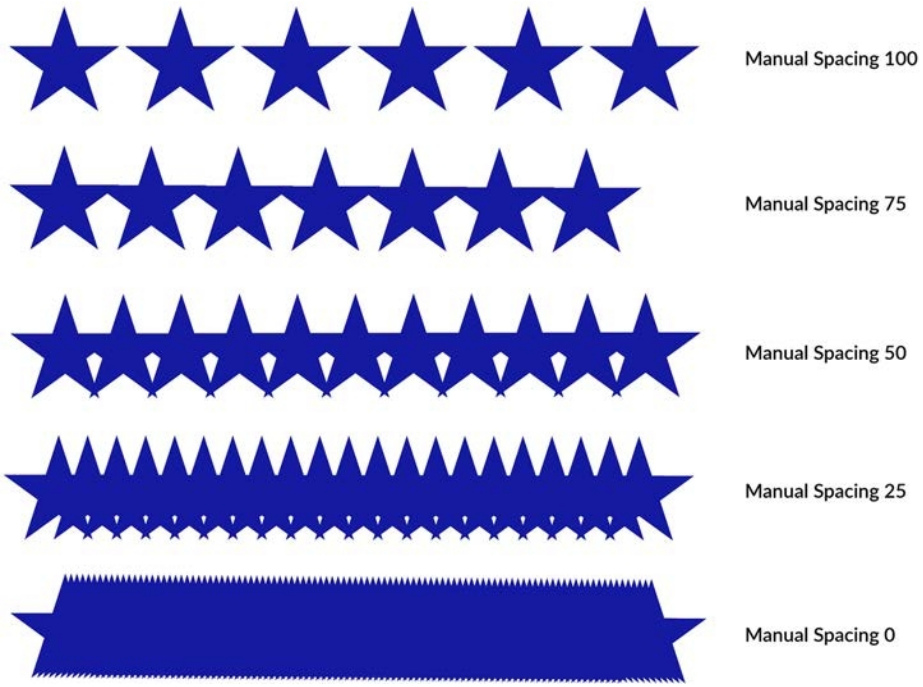
1. Click the Brush icon in the Add Adjustment section to create a new, empty local adjustment.
2. Choose a brush from the **Shape** menu in the Tool Options bar.
3. Set the brush size and angle. In general, keep Opacity and Flow high and Feather low (or 0), but this depends on the brush and what you're doing.
4. In the gear menu, turn on **Manual Spacing** and experiment with the Amount slider. As a rule of thumb, use low spacing for single stamps, and higher spacing when you want a stroke to repeat the shape with clear space between each one (see the chart below).
5. Turn on **Paint with Color**, set it to **Solid Paint**, choose a color, and paint on the photo.



Choose custom brushes from the Brush Shape menu in the Adjustment Brush's Tool Options bar to add realistic shapes to your photos.

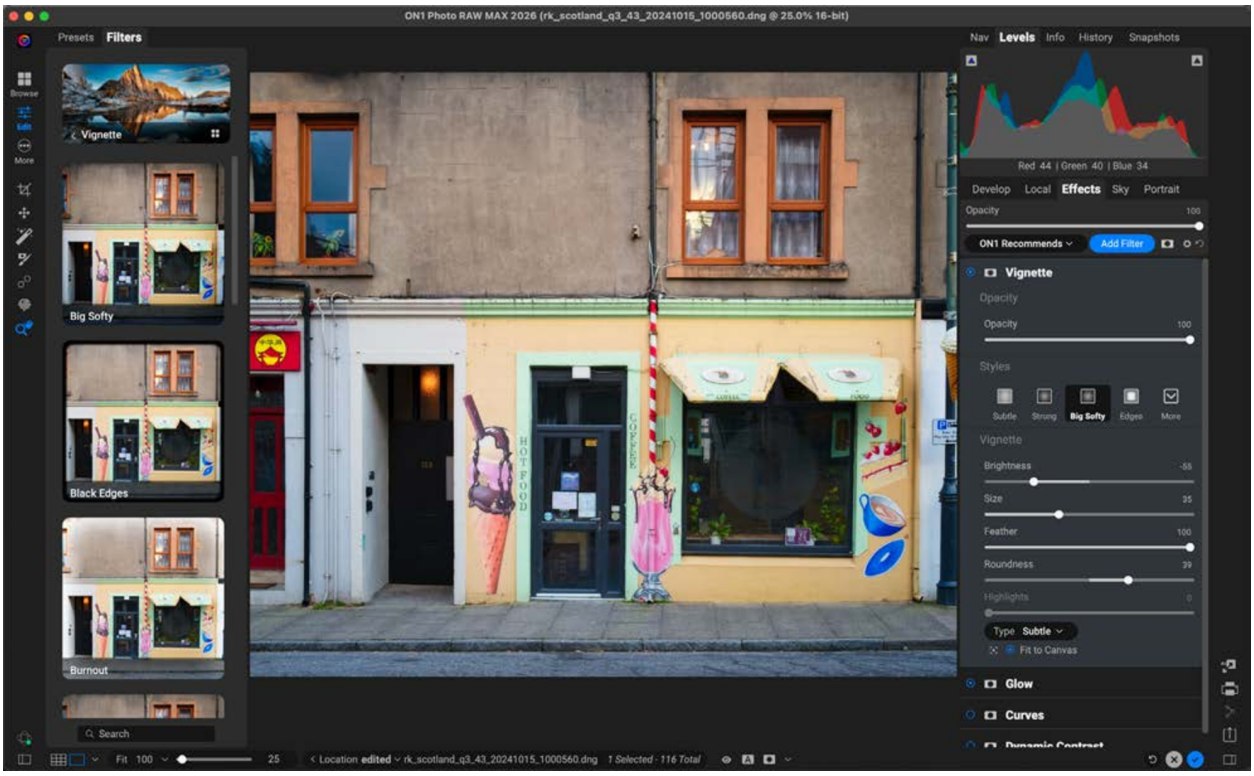
Tips for Using Custom Brushes

- Practice is the best way to start. Try some of the included brushes on a photo or a blank canvas.
- Use **Brush Styles** in the Tool Options bar to save your favorite brushes and their best settings.
- The largest brush size in Photo RAW is 2,500 pixels.
- To stamp a brush here and there on a photo, start with Feather at 0 and Opacity and Flow at 100. Set the size and angle, then click once on the photo.
- Paint with Color applies to every stroke on that adjustment. You can change the color with the color swatch in the pane. To stamp the same shape in different colors, create a separate adjustment for each color.



The effect of Manual Spacing on a stroke made with a star brush. At 100, the shapes are spaced well apart. At 0, they merge together, which may be fine depending on the brush.

Stylizing with ON1 Effects



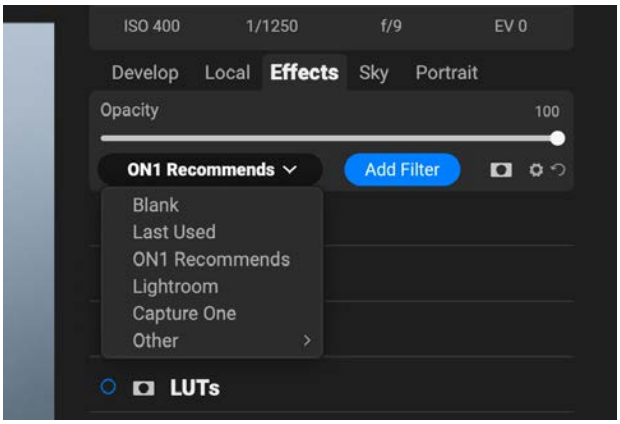
If Develop is where you start editing, Effects is where you finish. With 37 filters you can stack in any order, plus extensive blending and masking options, Effects makes it easy to create stunning, professional-looking photos. Because it's built on Photo RAW 2027's non-destructive editing engine, you can move between Browse, Develop, and Effects and keep all your edits and masks without saving multiple versions of your files.

Develop and Effects share the same tools, but Effects gives you much more control over how adjustments, called filters in Effects, are applied. Develop's adjustments are always applied in a fixed order, while Effects is completely flexible. In Effects, you can:

- Add filters in any order, including more than one of the same filter.
- Move filters up and down in the stack.
- Set blending options and opacity for each filter.
- Apply a filter to specific parts of a photo with masks from any of Photo RAW's masking tools, including AI tools like Super Select AI and Quick Mask AI, or create a mask with Mask AI right from the Add Filter window. In Photo RAW 2027, masking works the same way on every filter, layer, and local adjustment (see Creating Masks).

Besides using presets, you can copy and paste Edit module settings between photos, or sync one photo's edits to a group, in any editing tab or in Browse (see Copying Settings and Synchronizing Edits).

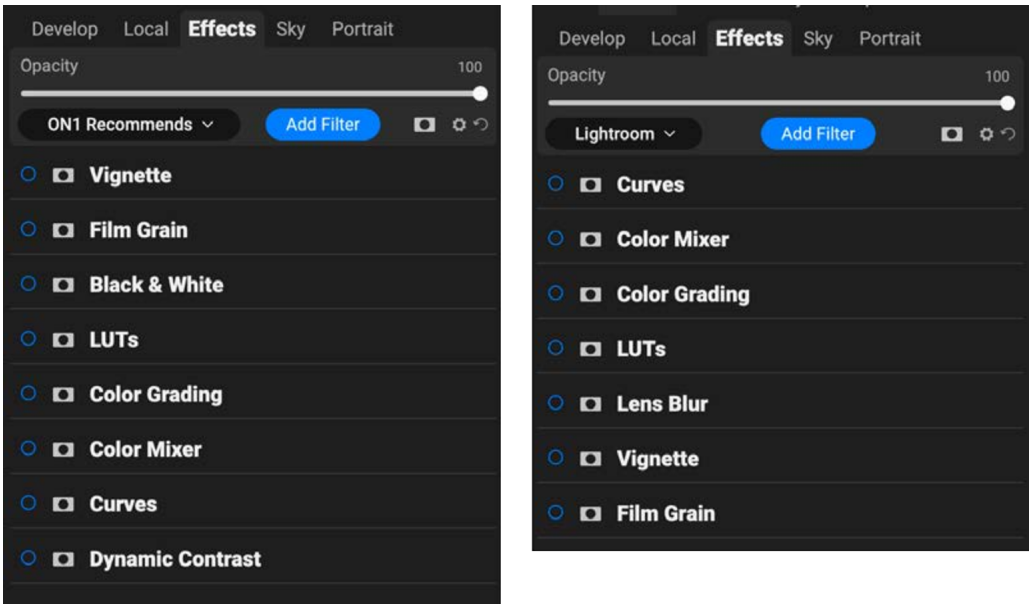
Effects Starting Points



Starting Points give the Effects tab a default set of filters every time you open a new photo in it. You can start with filters you use often, filters ON1 recommends, or filters that mimic editing in apps like Adobe Lightroom Classic or Capture One. In most starting points, the filters start turned off, so you just turn on the ones you want. You can also create your own starting points and switch between them as needed.

The Starting Points menu is on the Opacity slider at the top of the Effects stack. Your choice is "sticky": the starting point you choose is used every time you open a photo in Effects until you choose another one. The default is **Blank**, which starts with no filters. The menu also has three ON1 starting points, each with a group of filters turned off:

- **ON1 Recommends:** eight filters that Photo RAW users use often.
- **Lightroom:** filters that mimic Lightroom's Develop panel, except the Basic pane.
- **Capture One:** filters that mimic Capture One's basic editing tools.



The ON1 Recommends and Lightroom starting points.

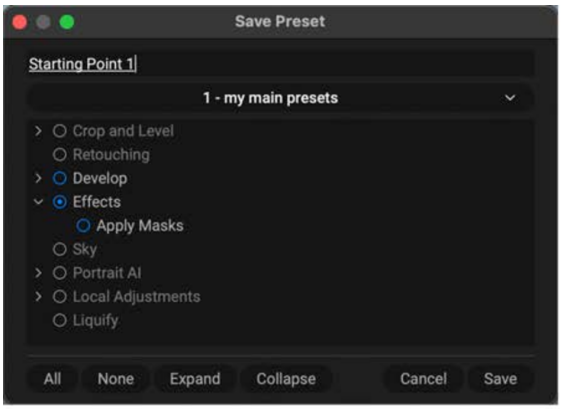
Last Used adds the filters you used on the previous photo in Effects. Unlike the built-in starting points, it leaves the filters turned on with their AI masks intact, and it also includes any changes made in the other Edit module tabs.

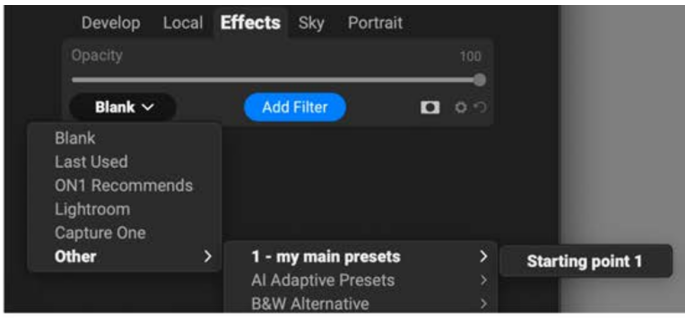
The **Other** submenu lists all of your presets. You can choose any of them as your starting point, but if the preset includes changes in other Edit module tabs, those changes are applied to every photo you open too.

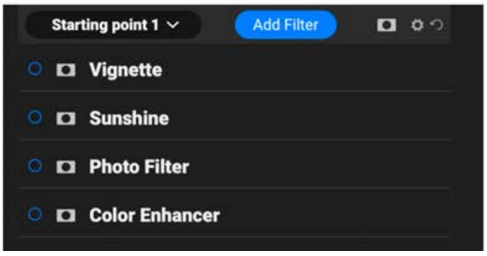
NOTE: Choosing a starting point replaces all the filters currently in the Effects stack.

Creating Your Own Starting Point

1. Set up the Effects stack with the filters you use most, in the order you like.
2. Turn the filters off, if you like, by clicking the control circle in each filter's title bar.
3. Choose **Save Settings as Preset**, and make sure the preset saves only Effects settings.







For complete information on creating and managing presets, see Presets.

Filters

Filters are the building blocks of Effects. Each filter is a type of adjustment, like the panes in Develop, but with much more functionality. Effects has 37 filters, which you can add with the **Add Filter** button at the top of the Effects tab, from the Filters pane on the left, or with the Super Select AI tool.

You can apply filters in any order and use the same filter more than once, which is handy when you're masking a photo and want to apply a filter differently to different areas. Like everything in Photo RAW, filters are easy to add, adjust, and remove, and they never change your original photo.

Each filter works like a movable, editable layer on top of your photo. Use masking tools to apply a filter to only part of a photo, and change its blending mode and opacity to control how it interacts with the filters above and below it. When you add a filter from the Add Filter window, you can also use Mask AI to select an area of your photo and apply the filter to it automatically, without using the masking tools.

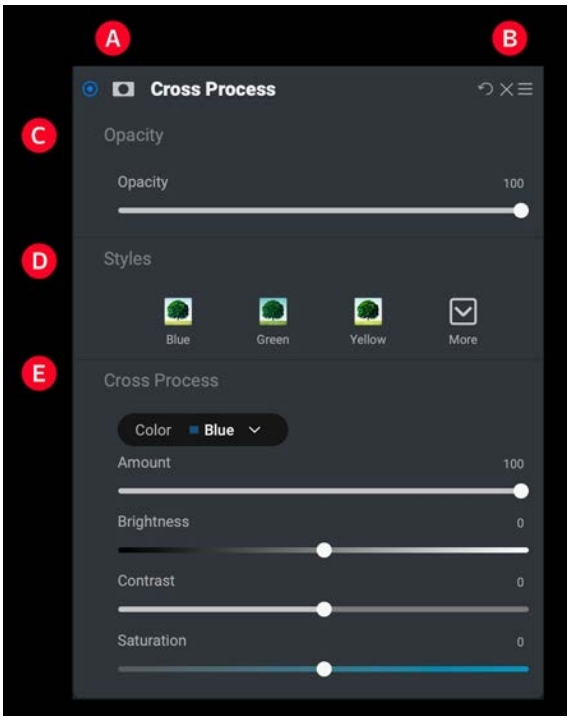
Filter Overview

Each filter has its own settings, but every filter pane has the same five sections:

1. **Title bar:** the on/off button (left), Show/Hide Mask (right), and the filter's name.

2. **Filter controls:** blending options (left), Reset (middle), and Delete (right). These appear only when your cursor is over the filter.
3. **Opacity:** the filter's opacity.
4. **Styles:** presets for that filter.
5. **Settings:** the controls specific to that filter.

You can collapse and expand the Opacity, Styles, and settings sections. Click a section's gray label to hide it.



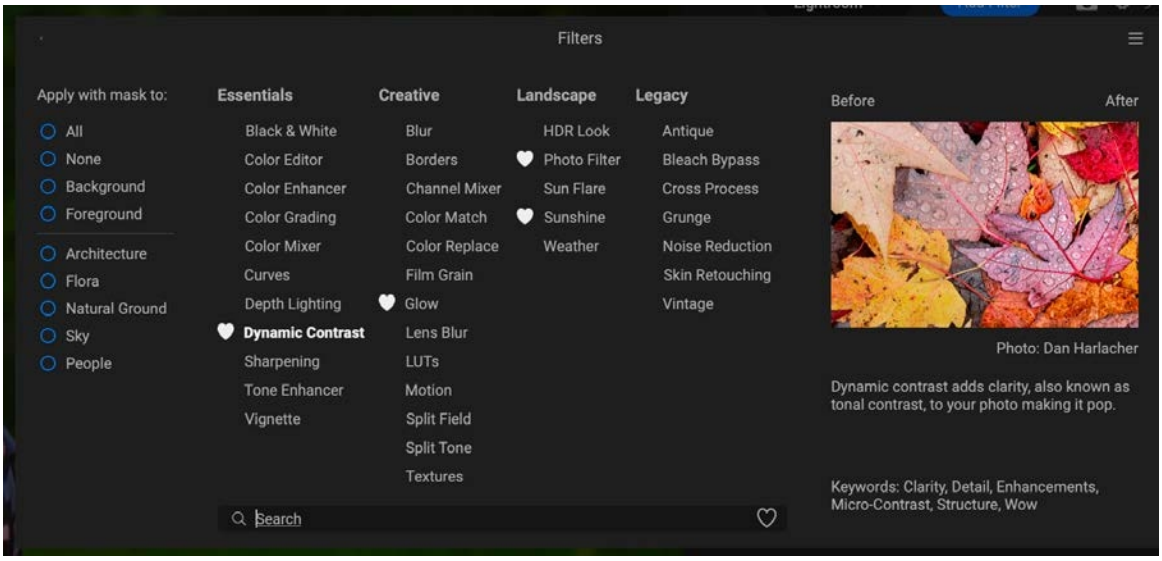
The parts of a filter pane, shown with the Cross Process filter.

In Photo RAW 2027, each filter's masking and blending options are in tabs next to its settings, so it's always clear which filter's mask you're editing (see Creating Masks).

TIP: To reset any slider in Photo RAW to its default, double-click its label or its handle.

The Filters Window

Click **Add Filter** at the top of the Effects tab to open the Filters window. All 37 filters are listed in the center, grouped into four categories: Essentials, Creative, Landscape, and Legacy. Legacy filters are older filters that are rarely used or have been replaced by newer ones.



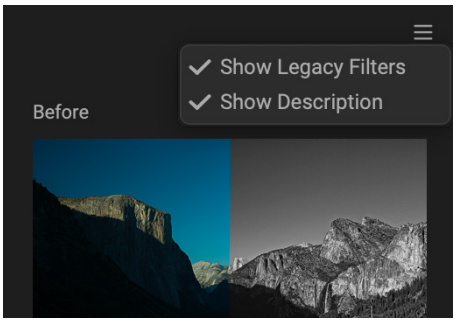
The Filters window has Mask AI controls (left), the list of filters (center), and a description of the filter under your cursor, with a before-and-after preview (right).

The **Mask AI** pane on the left lets you apply the filter with a region-based mask. On the right, the description area shows a before-and-after thumbnail, a short description, and related keywords for whichever filter your cursor is over. To make the window smaller, you can turn off the Legacy filters and the description area separately from the menu on the right side of the window.

Click the heart icon next to a filter to make it a favorite. To show only your favorites, click the heart icon in the search field at the bottom of the window.

Adding Filters

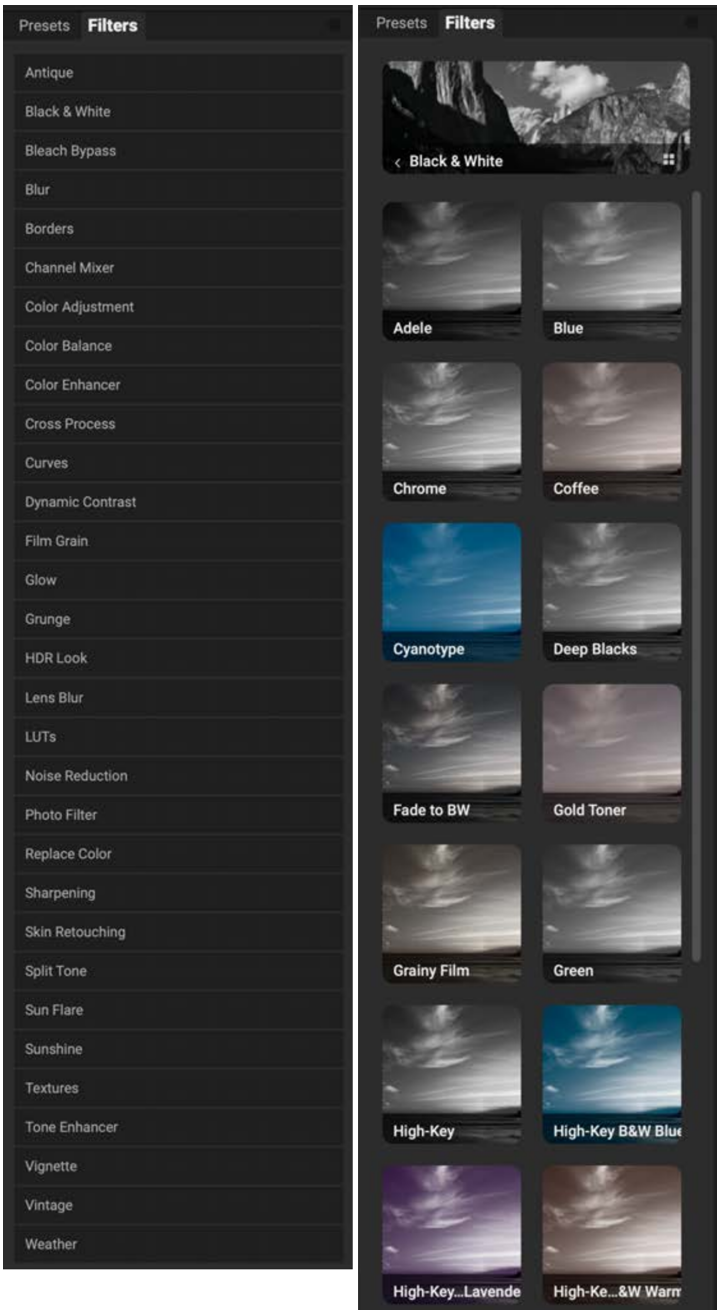
Click a filter's name to add it to the stack, above the current filter. If the stack is empty, the new filter goes at the top. To move a filter, drag its title bar up or down in the stack.



Turn off the Legacy filters and description sections from the menu on the right to make the Filters window smaller.

If you're not sure which filter you need, search by keyword, such as "monochrome," "contrast," or "sharpening," and Photo RAW shows the filters that match.

Adding Filters with the Filter Browser



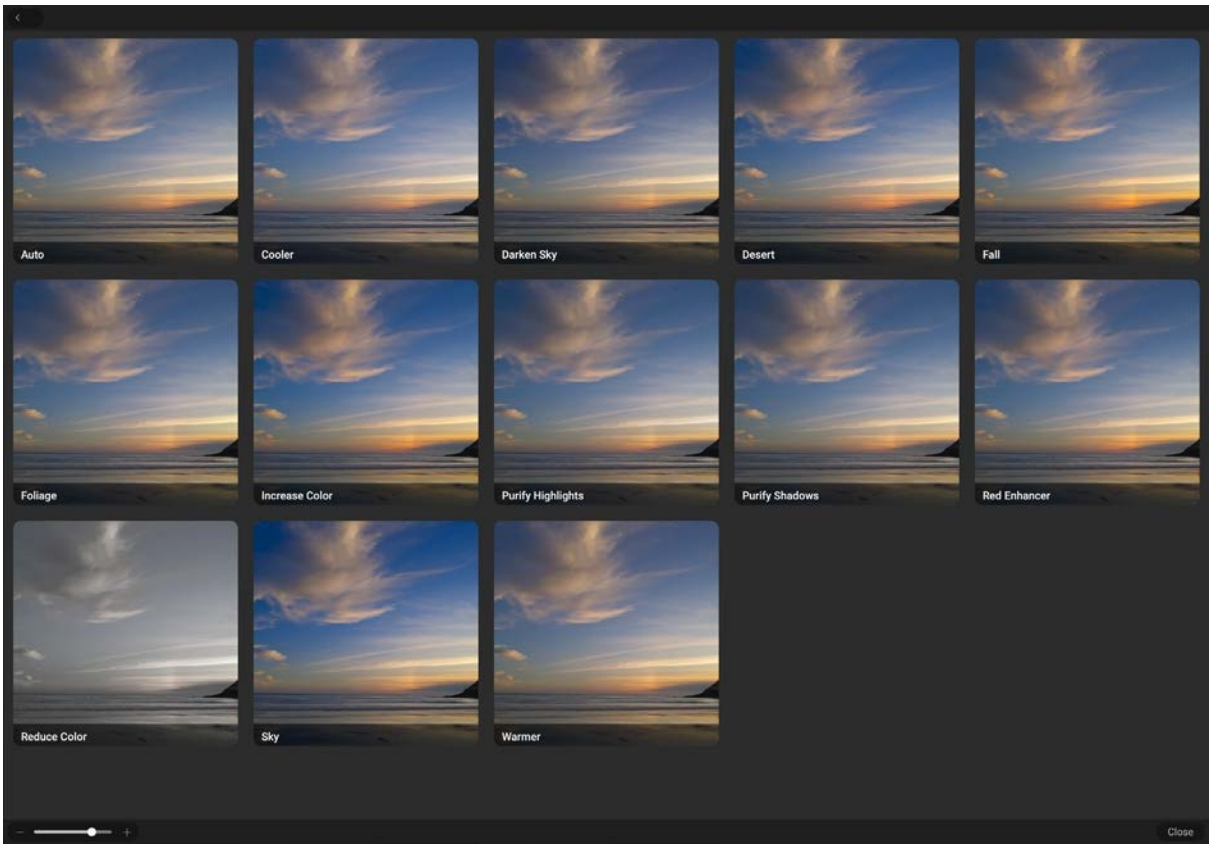
Besides the Presets panel found throughout Browse and Edit, Effects has a Filters panel on the left side of the screen. It lets you browse every filter in Effects and see previews of each filter's styles. Hover over a style to preview it on your photo in the main window.

Click the **Filters** tab to open the panel, then click a filter to see thumbnails of your photo with each of its styles. Click a style to add that filter to the stack. This replaces the currently selected filter. To add a new filter on top of the stack instead, click **Add Filter** at the top of the Effects tab and choose a filter. You can drag any filter's title bar to move it up or down in the stack.

To see larger previews of a filter's styles, click the Quick View Browser icon to the right of the filter's name. A window opens over the whole Photo RAW interface showing your photo with every style for that filter. Press **Esc** to close it. The Quick View Browser works the same way as in the Presets panel.

To change the size of the style thumbnails, choose **View > Browser Mode** and select One, Two, or Three Column Thumbnail View. Choosing **Thumbnail** shows the Filters and Presets panels as thumbnails.

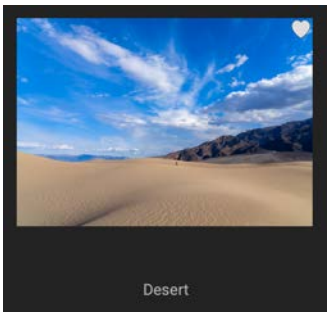
For help with what each filter does, click the **Info** button at the top right of the panel. When it's on, hovering over a filter shows a pop-up with the same description and before-and-after thumbnail as the Add Filter window. Click Info again to turn it off.



Searching for Filter Styles

Type a name in the search field at the bottom of the Filter Browser. The results appear in a new Search Results folder, which is selected automatically.

Saving Filter Styles as Favorites



Styles marked as favorites appear in the Favorites category.

Hover over a style's thumbnail in the Filter Browser or Quick View Browser and click the heart icon to add it to your Favorites category, at the top of the filter list. To remove a favorite, open the Favorites category and click the heart again. To apply a style, click it in either browser.

Working with Filter Panes

The filter stack starts out empty, unless you've applied a preset that includes Effects filters. In each filter pane:

- Click the button in the top-left corner to turn the filter on or off, which helps you see its effect alongside your other edits.
- Click the **X** in the title bar to delete the filter.
- Click **Reset** (⟲), next to Delete, to return the filter to its default settings.

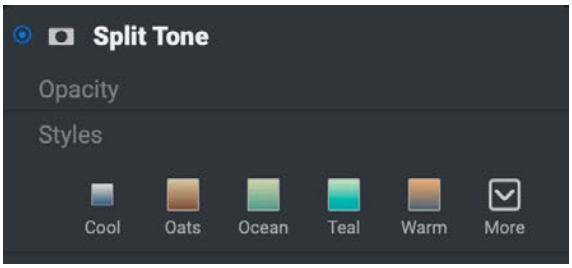
To move a filter, drag its title bar up or down. A heavy white line shows where the filter will go when you release the mouse button.

TIP: Click a pane's title bar to collapse it. To avoid scrolling through a long stack of open panes, choose **Window > Solo Mode**. Only the current pane stays open, and clicking another pane opens it and collapses the previous one.

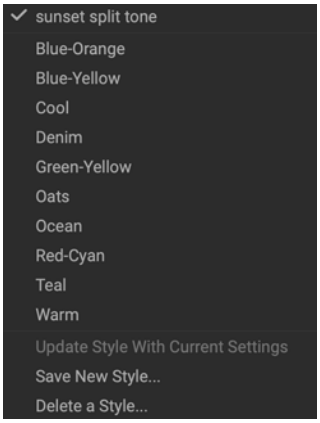
Styles

Every Effects filter includes built-in styles at the top of its pane. A style is a preset group of settings that gives you a starting point or applies a specific look.

Click a style's thumbnail to apply it, then fine-tune the sliders for your photo.



Styles for the Split Tone filter.



Saving Your Own Styles

1. Adjust the filter's settings.
2. Click the **More** icon at the right end of the styles list and choose **Save New Style**.
3. Name the style. It's added to the top of the More menu.

To apply a saved style, choose it from the More menu. To change a saved style, apply it, adjust the settings, then right-click the More menu and choose **Update Style with Current Settings**.

Filter Masks

Every Effects filter has its own mask, so you can apply its effect only where you want it. Open the filter's **Masking** tab to create a mask with one click, such as Subject or Sky, or use any masking tool, such as the Masking Brush or the Linear and Radial Gradient Mask tools.

A new filter has no mask, so its effect shows across the whole photo. Use the Masking Brush to paint the effect out of areas you want left alone, or create a mask that keeps the effect only on a subject or region. You can also mask a filter as you add it, using Mask AI in the Filter Browser. See Using Mask AI to Select Regions.

Viewing a Mask

Press O or click the mask overlay button in the footer below the Preview to show the current filter's mask as a red overlay or in grayscale. Click the arrow next to the button to change the view mode, color, and opacity. You can also hover over any mask thumbnail on the Masking tab to preview it.

For more on creating and refining masks, see Masking Basics and The Masking Tab. To mask the entire Effects stack at once, see Master Opacity, Blending, and Mask Options.

Deleting a Filter

To remove a filter, select it and click the **X** icon in the top-right corner of the filter's pane.

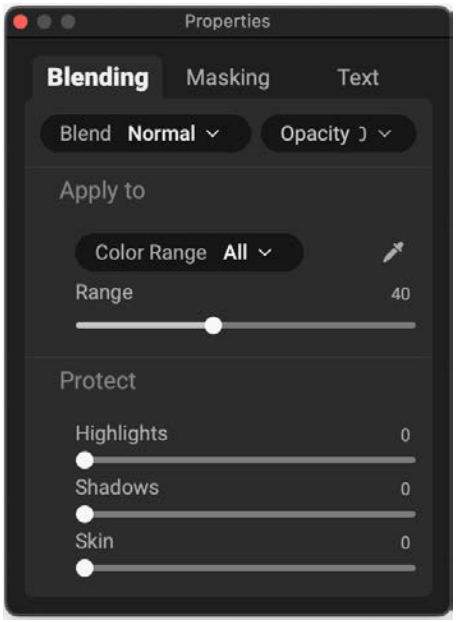
Filter Opacity

Every filter has an **Opacity** slider at the top of its pane that controls the filter's strength. It runs from 0 (no effect) to 100 (full effect), so at 50 the filter is applied at half strength. Lowering opacity is often the easiest way to soften an effect.

For example, to get a faded, muted color look from a Black & White filter, lower its opacity. The lower you go, the more of the original color comes back.

New filters start at 100 opacity. You can save presets with any opacity you like.

Blending Modes

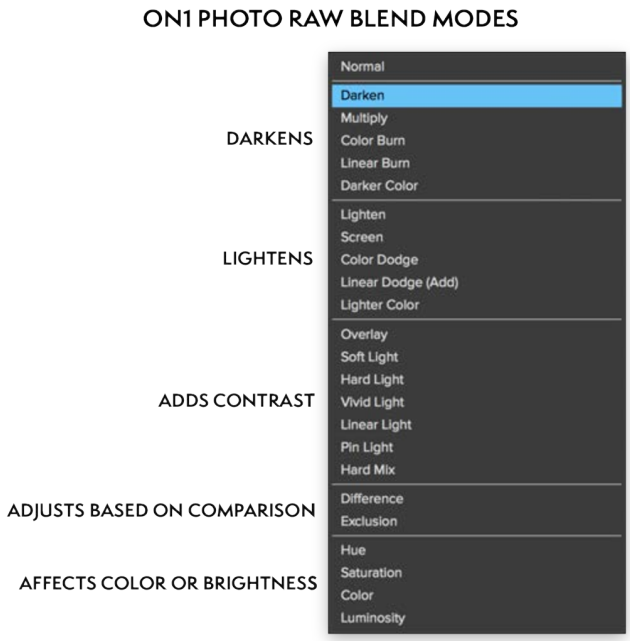


Besides opacity, blending modes give you a powerful way to control a filter's strength and character. A blend mode sets how a filter interacts with the filters below it in the stack. Some modes darken or lighten, others change contrast or color. You can also limit a blend to specific colors or tones, for example sharpening only the midtones of a landscape.

To open the blending controls, hover over the filter's pane and click the gear icon at the top right. This opens the **Blending** tab in the Properties window, which includes:

- **Blending Options:** A list of 24 blend modes, including Normal, Lighten, Darken, Screen, Multiply, Soft Light, Hard Light, Overlay, and Color.
- **Apply To:** Limits the blend to a tonal or color range: All (the default), Highlights, Midtones, Shadows, Reds, Greens, Blues, Magentas, Cyans, Yellows, Flesh Colors, Vivid Colors, or Neutrals. To pick a custom color, select the Dropper tool and click a color in your photo.
- **Range:** Expands or contracts the selected Apply To range.
- **Protect:** The Highlights, Shadows, and Skin sliders keep those areas from being affected by the blend.

How Blending Modes Work

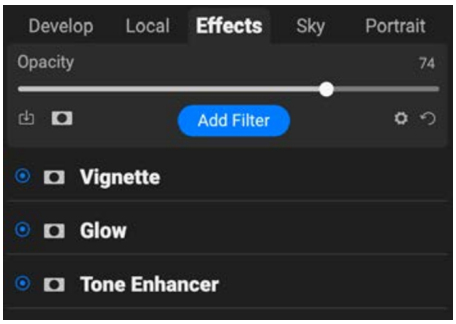


Blend modes determine how the pixels in one layer or filter interact with what's below it. The 24 modes fall into Normal (the default) and five groups: Darken, Lighten, Contrast, Comparison, and Color/Luminosity.

Normal is the most common. It applies the effect to every pixel at the filter's opacity.

The other modes apply their group's effect using different formulas, so the best one for a given photo isn't always obvious. Once you know the kind of change you want, such as darkening, try the modes in that group to see which works best.

Master Opacity, Blending, and Mask Options



Along with the opacity, blending, and mask on each filter, you can set master controls that apply to the entire Effects stack. They're at the top of the Effects tab, and you select them the same way you select a filter.

- **Master Opacity:** Sets the strength of the whole filter stack against your photo as it was before Effects.
- **Masking tab:** Masks the entire Effects stack, with the same options as a filter's Masking tab. See The Masking Tab.
- **Blending tab:** Sets the blend mode for the entire stack, with the same options as an individual filter. See Blending Modes.

Filter Types

Effects includes 33 filter types. Each filter has a row of styles at the top with popular starting points, and you can save your own styles from the **More** menu at the end of that row.

TIP: The blending (gear), reset, and delete icons appear when you hover over a filter in the Effects stack. Click a section label to collapse or expand that section of the pane. See Filter Overview for a description of each section.

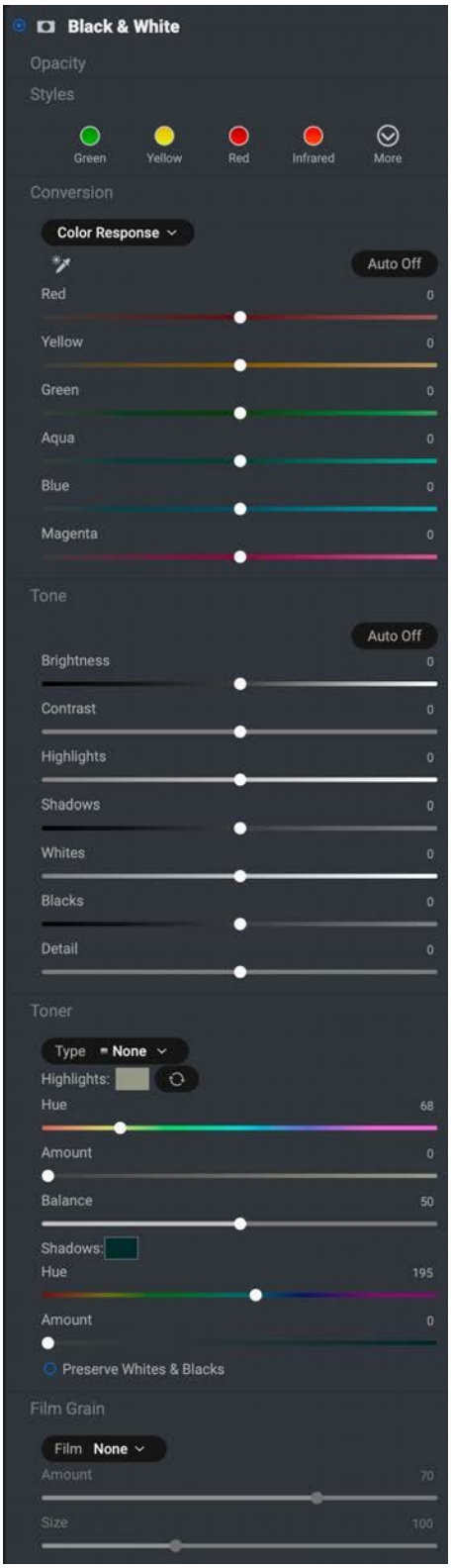
Antique



Antique gives your photo an aged look. Unlike the Vintage filter, it focuses on monochrome and hand-colored effects.

- **Color:** A list of duotone-style color options, similar to the Split Tone filter.
- **Brightness:** Adjusts overall brightness.
- **Fade:** Adds a white fill for the look of a faded print.
- **Saturation:** Drag left to decrease saturation or right to increase it.
- **Film Grain:** Amount sets the grain's strength and Size sets how large it appears.

Black & White


Black & White
Opacity
Styles
Green
Yellow
Red
Infrared
More
Conversion
Color Response
Auto Off
Red 0
Yellow 0
Green 0
Aqua 0
Blue 0
Magenta 0
Tone
Auto Off
Brightness 0
Contrast 0
Highlights 0
Shadows 0
Whites 0
Blacks 0
Detail 0
Toner
Type None
Highlights:
Hue 68
Amount 0
Balance 50
Shadows:
Hue 195
Amount 0
Preserve Whites & Blacks
Film Grain
Film None
Amount 70
Size 100

Black & White converts a color photo to monochrome and adds toning options. The styles at the top of the pane offer popular black and white looks, and the **Auto** button sets the black and white points for you.

To adjust tones manually, drag the color range sliders right to brighten or left to darken. You can also choose **Channel Mixer** from the Conversion menu and use its slider to emphasize the color tones you care about most.

TIP: To adjust tones directly in the photo, select the **Color Response** tool in the pane, then click and drag in the image to brighten or darken that color range.

Tone

Adjust brightness, contrast, highlights, shadows, whites, blacks, and detail without leaving the filter.

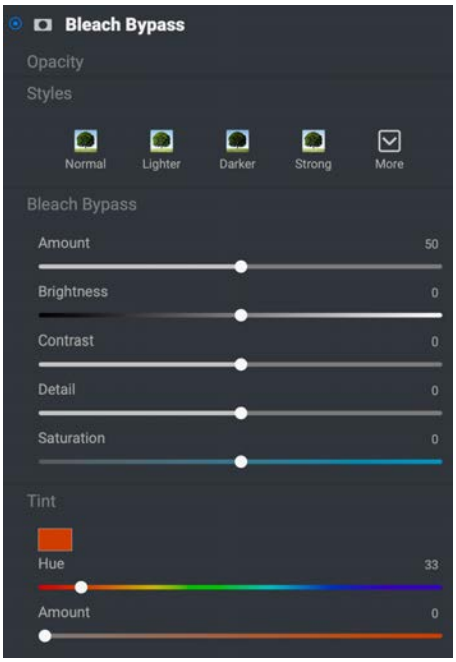
Toner

Toner recreates traditional darkroom paper toners, from sepia to platinum, selenium, coffee, and more. Choose from more than 20 options in the **Type** menu, then balance the paper color (Highlights) and silver color (Shadows) with their Hue and Amount sliders. The **Swap Tones** icon next to the Highlights color well switches the two colors, and **Preserve Whites and Blacks** keeps pure whites and blacks neutral.

Film Grain

Add a classic film grain look by choosing a popular black and white film from the list. **Amount** controls the strength of the grain and **Size** controls its scale.

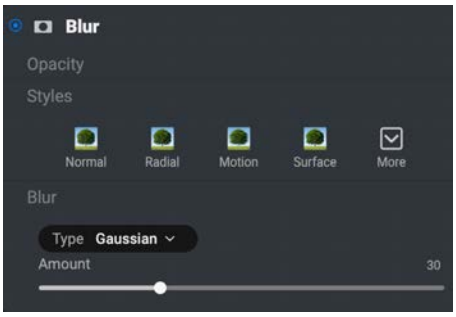
Bleach Bypass



Bleach Bypass is based on a classic color film processing technique that skips the bleaching step. It lowers saturation and boosts contrast.

- **Amount:** Sets the strength of the bleach bypass look.
- **Brightness:** Adjusts overall brightness.
- **Contrast:** Increases or decreases global contrast.
- **Detail:** Enhances detail by increasing micro-contrast.
- **Saturation:** Adjusts the underlying saturation.
- **Tint:** Pick a color with the color well or the Hue slider. Its **Amount** slider sets the strength of the tint.

Blur



The Blur filter offers five blur types, each with its own look:

- **Gaussian:** A simple, even blur. The **Amount** slider sets its strength by adjusting the radius.
- **Motion:** Adds the look of movement. **Amount** sets the strength, **Distance** sets how far the blur extends, **Angle** sets its direction, and **Smoothing** softens the motion lines.
- **Radial:** A circular blur that zooms out from a center point. **Amount** sets the strength, **Quality** runs from grainy (1) to smooth (100), and **Smoothing** softens the lines. To set the center, click the center spot selector at the bottom of the pane, then click your image.
- **Surface:** Blurs the image while preserving edges, for a simplified look. **Amount** sets the strength and **Threshold** sets how similar colors are grouped.
- **Box:** Similar to Gaussian but based on contrasting edges, so edges stay a little more defined.

NOTE: To reduce a blur's strength, use the Amount slider rather than the Opacity slider.

Borders

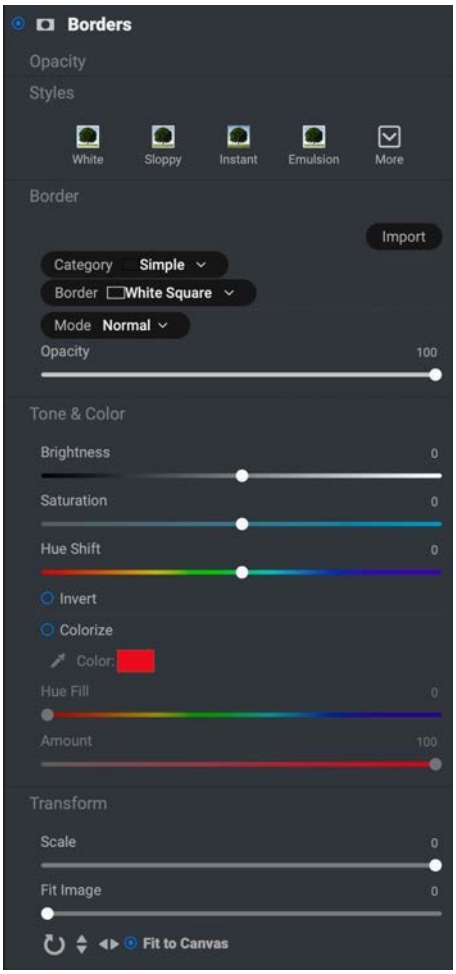


Photo RAW includes a large collection of borders and edges, from classic film borders and viewfinders to artistic edges and emulsion transfers. The Borders filter also gives you controls for size, color, and blending.

Choosing a Border

Use the **Category** and **Border** menus at the top of the pane to pick a border. There are eight built-in categories, and any borders you import appear here too.

Adjusting a Border

- **Blending and Opacity:** Set how the border blends with your photo.
- **Color:** Adjust hue, saturation, and brightness of a colored border, or colorize a black or white border.
- **Transform:** Scale the border up or down. The **Fit Image** slider resizes the photo under the border.
- **Rotate and Flip:** Use the buttons at the bottom of the pane to rotate or flip the border.

TIP: You can import your own borders in the Borders pane or with the Extras Manager in Browse. Borders must be PNG files with a large transparent center. See Extras for details on importing and preparing borders, textures, and other extras.

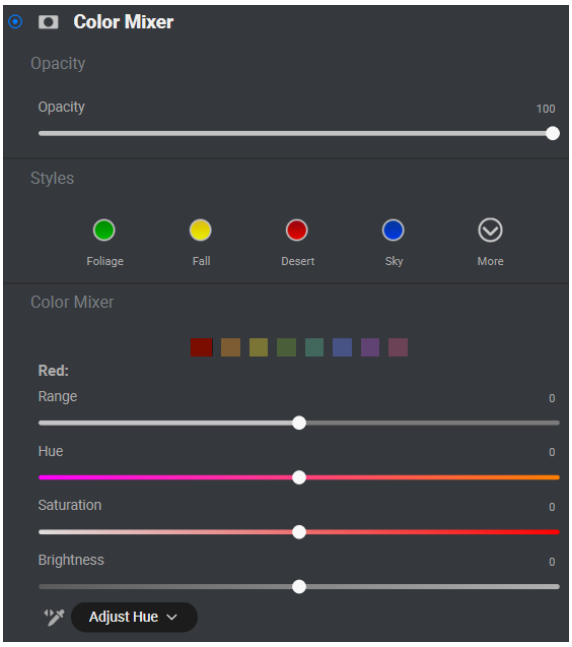
Channel Mixer



Channel Mixer adjusts the intensity and color of a photo's red, green, and blue channels. Use it for black and white conversions, channel swapping on infrared shots, or shifting entire color ranges.

Click a channel icon to select that channel, then use the **Red**, **Green**, and **Blue** sliders to raise or lower its values. The **Constant** slider adjusts the luminosity of the selected channel.

Color Mixer



Color Mixer adjusts specific color ranges in your photo. The styles at the top of the pane enhance common scenes such as Foliage, Fall, Desert, and Sky.

Below the styles are swatches for eight colors: red, orange, yellow, green, aqua, blue, purple, and magenta. Click a swatch to adjust that range:

- **Range:** Narrows or widens the selected color range.
- **Hue:** Shifts the hue of the range.
- **Saturation:** Adjusts the saturation of the range.
- **Brightness:** Adjusts the brightness of the range.

TIP: To adjust a color directly in the photo, click the **Targeted Dropper** tool and choose Hue, Saturation, or Brightness. Then click a color in your image and drag left to decrease or right to increase.

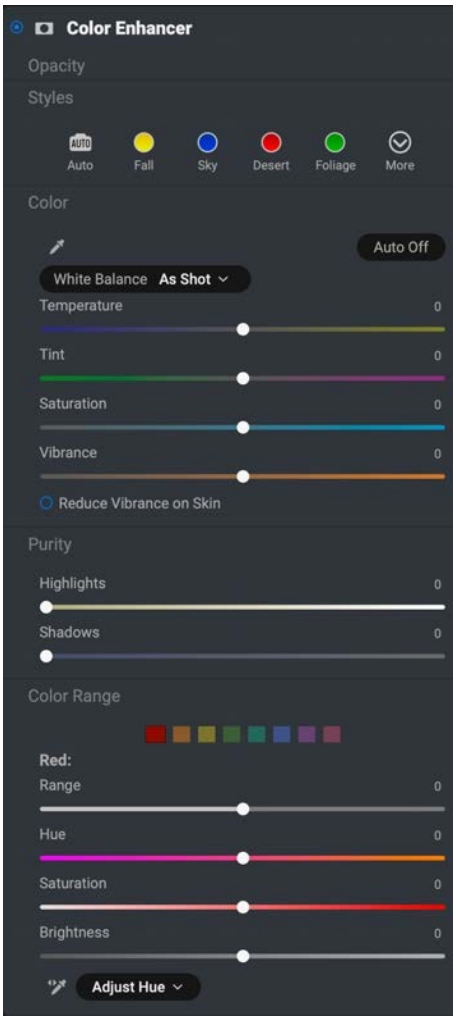
Color Grading



Color Grading adjusts the color of a photo's highlights, midtones, and shadows. Use it to grade a photo, remove color casts from shadows or highlights, or create duotone and tritone looks.

Each tonal range has its own color wheel. Drag the circle in the center of a wheel to shift that range's color. The angle sets the hue and the distance from the center sets the saturation. The slider under each wheel controls that range's brightness, and the readout around the wheel shows the current hue, saturation, and brightness.

Color Enhancer



Color Enhancer gives you full control over color, both globally and by individual color range. The styles at the top of the pane enhance common scenes such as Foliage, Fall, Desert, and Sky. Use the **Color** section for global adjustments and the **Color Range** section for specific colors.

Color

These controls remove color casts and enhance overall color:

- **Auto:** Detects and removes a color cast by adjusting Temperature and Tint.
- **Gray Dropper:** Click the icon, then click an area of the photo that should be neutral gray. The sliders adjust to match.
- **White Balance:** Choose a common setting: As Shot, Auto, Daylight, Cloudy, Shade, Tungsten, Fluorescent, Flash, or Custom. As Shot (the default) uses the white balance your camera recorded.

- **Temperature:** Shifts color cooler (blue) or warmer (yellow).
- **Tint:** Shifts color toward green or magenta.
- **Saturation:** Increases or decreases overall saturation.
- **Vibrance:** Boosts or reduces muted colors while leaving saturated colors alone.
- **Reduce Vibrance on Skin:** Limits Vibrance on skin tones, so you can boost clothing and backgrounds without oversaturating skin.
- **Purity Highlights:** Reduces saturation in the highlights.
- **Purity Shadows:** Reduces saturation in the shadows.

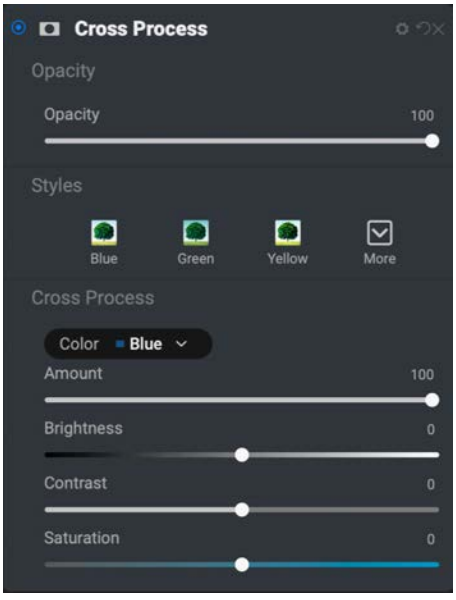
Color Range

Click one of the eight swatches (red, orange, yellow, green, aqua, blue, purple, or magenta) to adjust that range:

- **Range:** Narrows or widens the selected color range.
- **Hue:** Shifts the hue of the range.
- **Saturation:** Adjusts the saturation of the range.
- **Brightness:** Adjusts the brightness of the range.

TIP: To adjust a color directly in the photo, click the **Targeted Dropper** tool and choose Hue, Saturation, or Brightness. Then click a color in your image and drag left to decrease or right to increase.

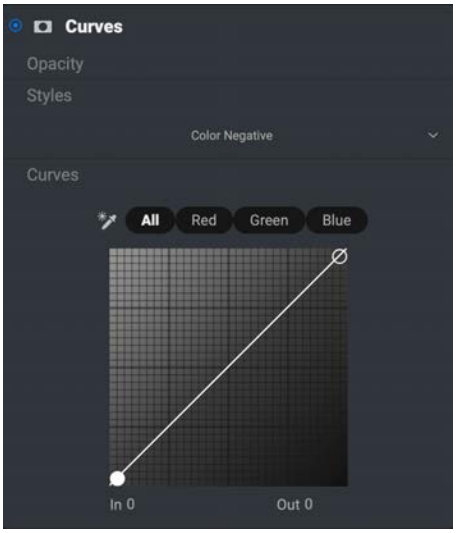
Cross Process



Cross Process simulates developing film in the wrong chemistry on purpose, producing unexpected colors and high contrast.

- **Color:** Choose a cross-processing type: Blue, Green, or Yellow, each with a Strong option.
- **Amount:** Sets the overall strength of the filter.
- **Brightness:** Adjusts overall brightness.
- **Contrast:** Adjusts overall contrast.
- **Saturation:** Adjusts the underlying saturation.

Curves



Curves is a powerful, advanced tool for adjusting contrast, tone, and color.

The pane shows your photo's histogram, with a gradient behind it that previews how tones change as you adjust the curve. The diagonal line represents the photo's tones from 0 to 255: the bottom-left point is the darkest tone and the top-right point is the lightest. Drag a point on the line up to lighten those tones or down to darken them.

The pane shows the composite RGB channel by default. Click the **Red**, **Green**, or **Blue** tab to adjust a single channel. The background gradient shows the color shift you'll get. For example, raising the Red curve shifts tones toward red and lowering it shifts them toward cyan.

Adding and Editing Control Points

- Click anywhere on the line to add a point, then drag it up or down.
- Click the **Dropper** tool to the left of the channel tabs, then click and drag in your photo to add a point at that exact tone.
- Drag an existing point along the curve or up and down to readjust it.
- Select a point and type values in the **In** and **Out** boxes for precise control.

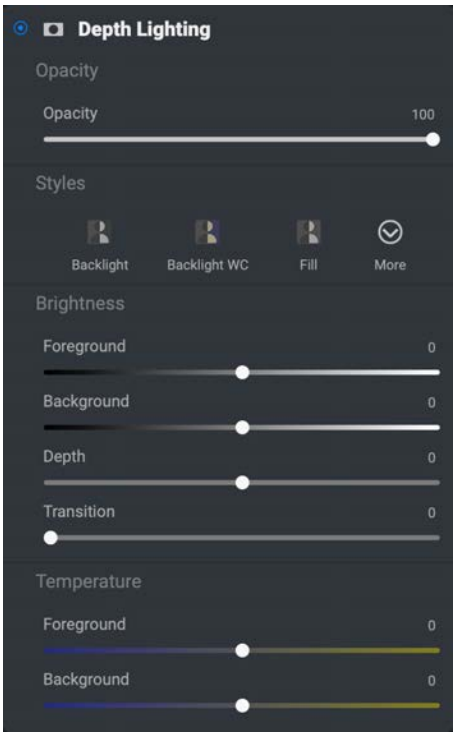


To remove a point, right-click it and choose **Remove Control Point**. One point is always selected. To reset your changes, right-click the grid and choose **Reset Channel** or **Reset All**.

TIP: The Curves styles include presets for color negatives, matte looks, and more. If you use the same curve often, such as a classic S-curve, set it up and choose **Save New Style** from the styles menu. To update a style you've adjusted, choose **Update Style with Current Settings**.

NOTE: The Curves section of the Tone Enhancer filter works the same way, but doesn't include curve styles.

Depth Lighting



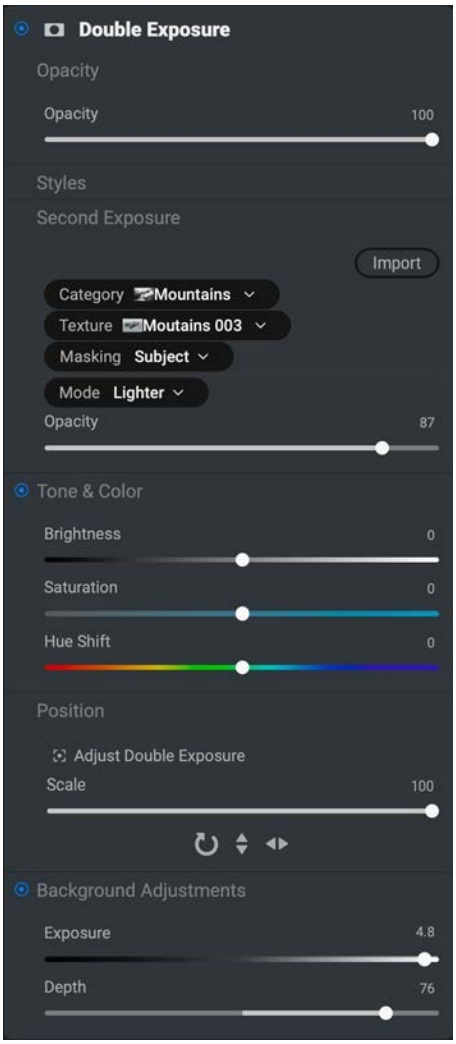
Depth Lighting lets you brighten or darken the foreground and background separately, improving the separation between your subject and its surroundings.

When you add the filter, Photo RAW builds a depth mask of the photo so you can adjust each area's brightness and temperature on its own.

- **Foreground and Background:** Independent brightness sliders. Drag right to brighten or left to darken.
- **Temperature:** Foreground and background temperature sliders run from cool (left) to warm (right).
- **Depth:** Sets where the foreground ends and the background begins.
- **Transition:** Feathers the depth mask for a smoother blend.

TIP: Hold Alt (Windows) or Option (Mac) while adjusting Depth or Transition to see the depth mask.

Double Exposure



Double Exposure creates creative double exposures using your photo as the base. Like the Textures filter, it overlays a second image on your photo, then uses AI masks and blend modes to combine them.

Getting Started

Import your own photo or choose one from the **Category** and **Texture** menus. You can also add your own double exposure images as extras (.jpg files). See Extras.

Controls

- **Masking:** Defaults to no mask. Choose to have the overlay mask the subject or the background, or use a standard or inverted depth mask.

- **Mode:** Five blend options (Normal, Subtle, Darker, Lighter, and Replace) for tuning the result.
- **Opacity:** Sets how strongly the overlay is applied.
- **Tone and Color:** Adjust the overlay's brightness, saturation, and hue.
- **Position:** Move the overlay with the Adjust Double Exposure target, scale it, and rotate or flip it.
- **Background Adjustments:** Uses depth masks to brighten or darken the background of the double exposure.

Dynamic Contrast

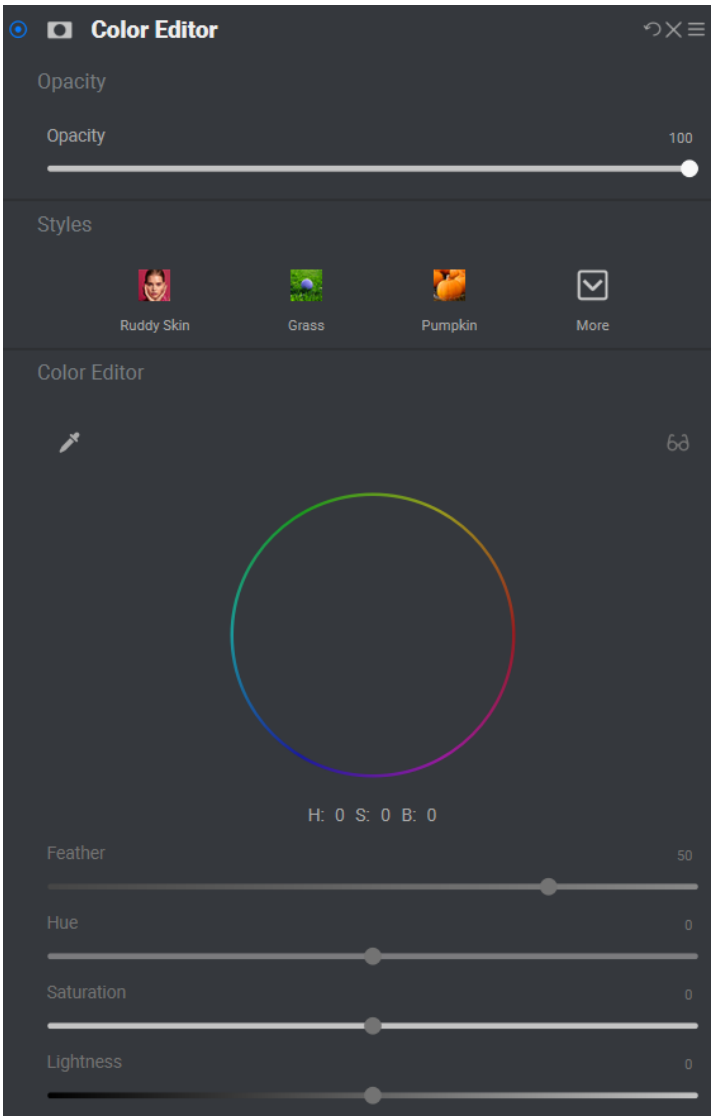


Dynamic Contrast adds clarity, also called tonal contrast, to make your photo pop. The effect can be strong, so it's often paired with a mask to reduce it in areas like skies, where clouds can look surreal with too much contrast.

The top of the pane adjusts contrast in **Small**, **Medium**, and **Large** details. Drag a slider left to reduce contrast or right to increase it.

Strong contrast adjustments can shift a photo's tones, so the bottom of the pane lets you recover detail in highlights, shadows, whites, and blacks, and adjust vibrance.

Color Editor



Color Editor targets a precise range of colors so you can make subtle changes to them. It offers the most precise color control of any filter in Photo RAW.

Selecting a Color Range

1. Click the eyedropper and select a color in your photo. The color wheel shows a slice covering that range, with your selected color marked by the α symbol.
2. Click the **Eyeglasses** icon to view the photo in grayscale, with only the colors in the selected range visible.
3. Refine the range:
    - Drag the handles at the edges of the slice to widen or narrow the hue range.

- Drag from the center (less saturated) or outer edge (more saturated) to limit the range by saturation.

4. Use the **Feather** slider to set how gradually the edges of the range blend. Lower values give more abrupt changes and higher values give smoother transitions.



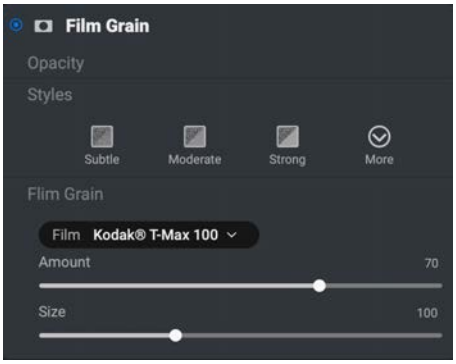
The hue handles (left) widen or narrow the range. The saturation controls (middle and right) limit it by saturation.

Adjusting the Colors

Once the range is set, use the **Hue**, **Saturation**, and **Lightness** sliders to change those colors.

TIP: Color Editor is built for subtle shifts. For bigger changes, or to swap one color for another, use Color Replace.

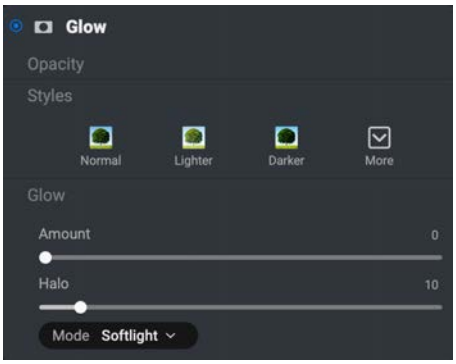
Film Grain



Film Grain adds a classic film grain look to your photos. It works the same as the Film Grain section of the Black & White filter, but without converting your photo to black and white.

Choose a grain type from the **Film** menu, which includes classic black and white negative films from Kodak, Ilford, and Fujifilm. **Amount** controls the strength of the grain and **Size** controls its scale.

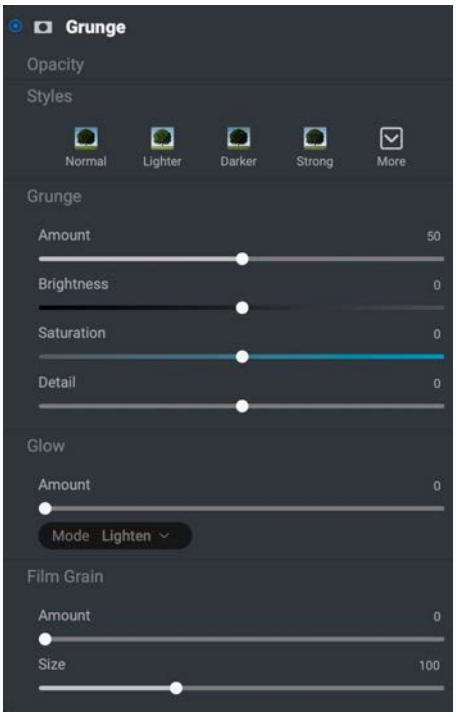
Glow



Glow adds a soft-focus glow to your photo. The styles and the More menu include several glow types, and different blend modes can strengthen the effect.

- **Amount:** Sets the overall strength of the glow.
- **Halo:** Sets the glow's radius. Higher values soften edges more.
- **Mode:** Sets the blend mode for the glow.

Grunge

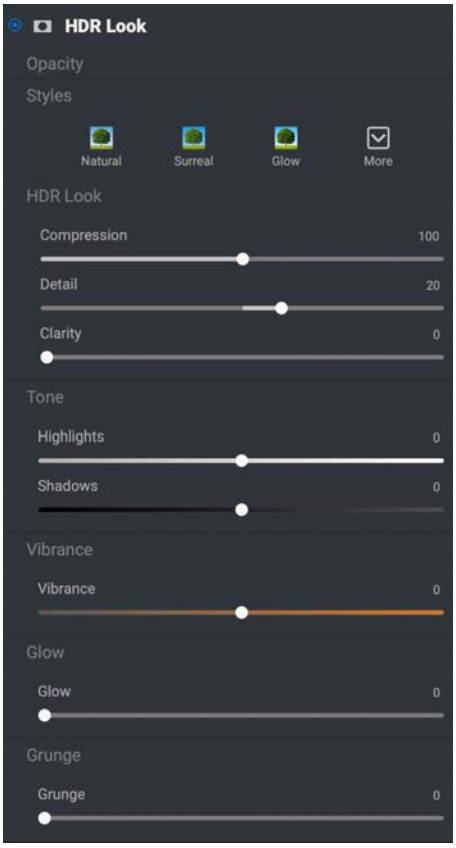


Grunge gives your photo a gritty, textured look.

- **Amount:** Sets the overall strength of the effect.

- **Brightness:** Adjusts overall brightness.
- **Saturation:** Adjusts the underlying saturation.
- **Detail:** Adjusts the amount of detail.
- **Glow Amount:** Adds a glow to the effect.
- **Mode:** Sets the glow's blend mode.
- **Film Grain Amount:** Adds film grain.
- **Film Grain Size:** Sets the size of the grain.

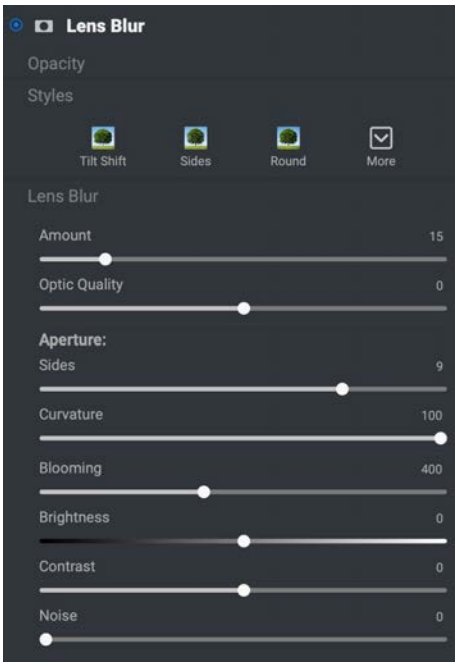
HDR Look



HDR Look recreates the tone-mapped HDR style, with accentuated edges and sharpening. Like Dynamic Contrast, it often works best with a mask or blend mode.

- **Compression:** Compresses tones to reveal highlight and shadow detail.
- **Detail:** Increases local contrast in details and edges.
- **Clarity:** Increases global contrast.
- **Highlights:** Recovers highlight detail.
- **Shadows:** Recovers shadow detail.
- **Vibrance:** Adjusts the vibrance of muted colors.
- **Glow:** Adds a bright glow.
- **Grunge:** Adds a dark, gritty look.

Lens Blur

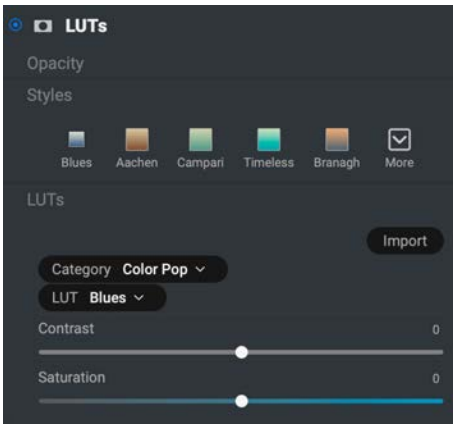


Lens Blur creates a blur that mimics a real lens, such as a tilt-shift or shallow depth of field look. Use the Gradient Mask to vary the blur across your photo, or brush the effect in or out where you want it.

- **Amount:** Sets the overall strength of the blur.
- **Optic Quality:** Controls the aperture shape in the inner and outer feather.
- **Sides:** Sets the number of aperture blades, which changes the bokeh shape.
- **Curvature:** Sets the curvature of the aperture blades.
- **Blooming:** Adjusts the highlight bokeh.
- **Brightness:** Sets the brightness of the blurred areas.
- **Contrast:** Sets the contrast of the blurred areas.
- **Noise:** Adds simulated film grain to the blurred areas.

NOTE: To reduce the blur's strength, use the Amount slider rather than the Opacity slider.

LUTs

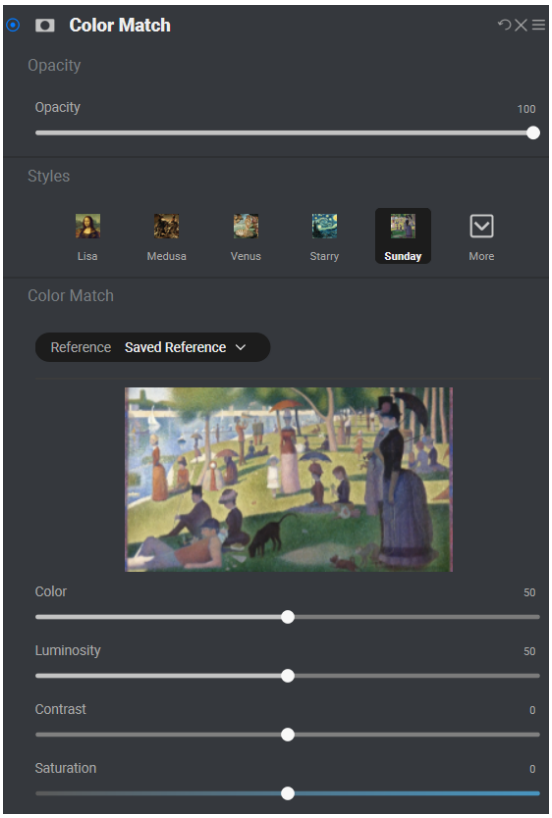


The LUTs filter applies a color lookup table (LUT) to transform the colors in your photo. LUTs started in video color grading and are increasingly popular in still photography. The styles include a few built-in looks, and you can import your own by clicking **Import** in the filter. Photo RAW supports common LUT formats, including .3DL and .CUBE.

- **Category:** Choose a built-in LUT category or one you've imported.
- **LUT:** Shows the LUTs in the chosen category.
- **Contrast:** Adjusts the underlying contrast.
- **Saturation:** Adds or reduces saturation.

NOTE: See Extras to learn how to import LUTs with the Extras Manager.

Color Match

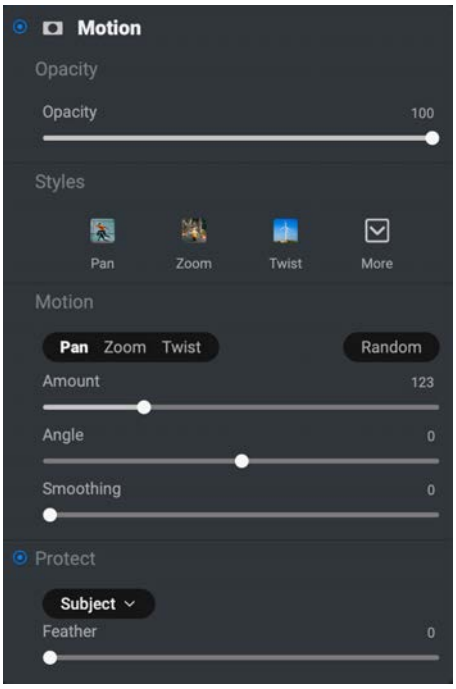


Color Match applies the color and tone of one image to another. The reference can be a layer in your current photo or a different file.

The **Reference** menu lists the current layers and a few photos you've recently worked on. You can also load another file from the menu, and it's saved there for later.

Use the **Color**, **Luminosity**, **Contrast**, and **Saturation** sliders to fine-tune the result.

Motion



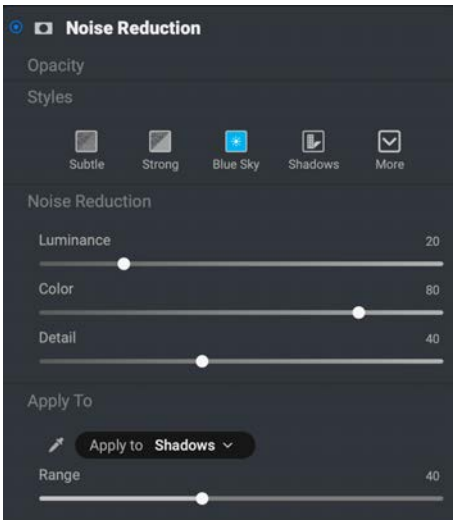
Motion adds the look of intentional camera movement (ICM) to a still photo, and can keep your subject or background free of the effect. Choose one of three motion types:

- **Pan:** Simulates moving the camera with the subject during the exposure.
- **Zoom:** Simulates zooming the lens in or out during the exposure.
- **Twist:** Simulates rotating the camera during the exposure.

For each type, **Amount** sets the strength and **Angle** sets the direction. **Smoothing** adds a little overall blur, which helps if the effect looks artificial. Zoom and Twist also include **Set Center** so you can place the center of the effect anywhere in the photo.

Use **Protect** to keep the subject or the background free of the effect, and **Feather** to soften the transition between them.

Noise Reduction



Noise Reduction reduces luminance and color noise while preserving detail. The styles offer noise reduction settings for different kinds of photos.

- **Luminance:** Sets the strength of noise reduction on luminance (detail) noise. Hold Alt/Option while dragging to view luminance only.
- **Color:** Sets the amount of noise reduction on color (chroma) noise.
- **Detail:** Sets how much edge detail is protected. Hold Alt/Option while dragging to see the edge mask.
- **Apply To:** Limits noise reduction to highlights, shadows, midtones, or specific color ranges. For a custom range, click the **Dropper** and click a noisy area of the photo, then use **Range** to widen or narrow it.

Photo Filter

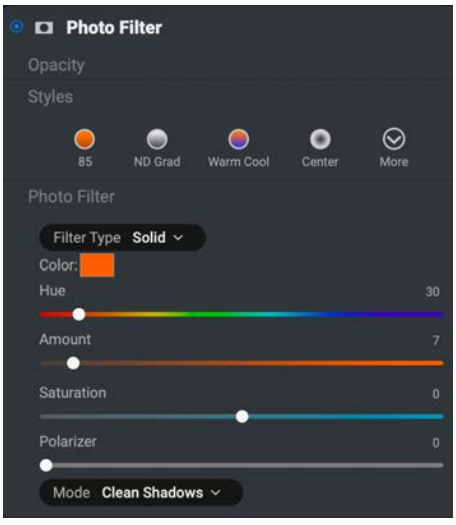
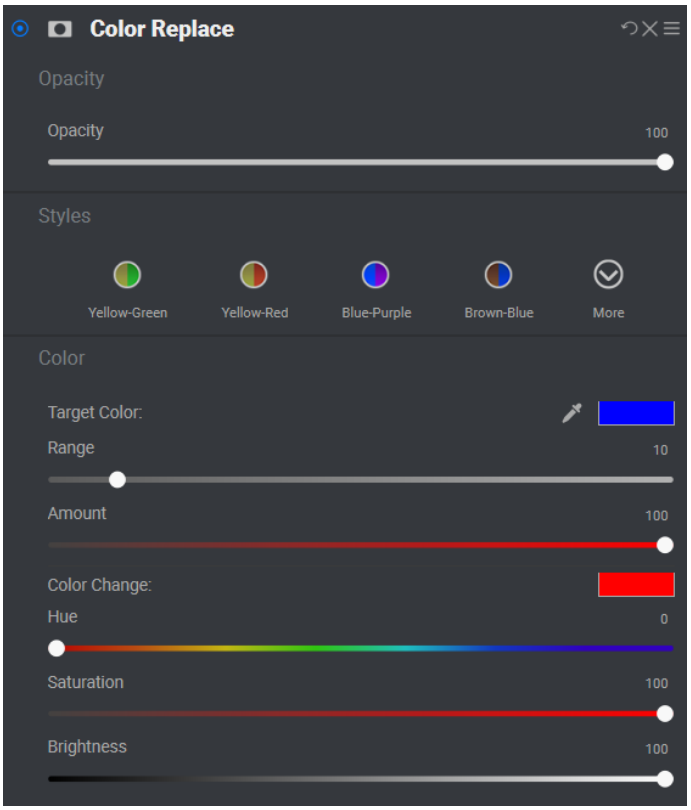


Photo Filter recreates traditional color lens filters for warming, cooling, graduated effects, and more. Choose a filter type from the menu at the top of the pane, then adjust its settings.

- **Solid:** Applies a single color. Use **Amount** to set its strength, **Saturation** to boost or reduce overall color, and **Polarizer** to add a polarizing effect that can cut haze and enrich blues and greens.
- **Graduated:** Applies a color that fades across the photo. Set the color, feather, and direction.
- **Bi-Color:** Like Graduated, but with two colors.
- **Center:** Radiates from the center of the photo. Choose whether the center is clear or colored.

Color Replace



Color Replace selects a color range and swaps it for a completely different color. Paired with a filter mask, it makes targeted color changes easy while leaving the rest of the photo alone.

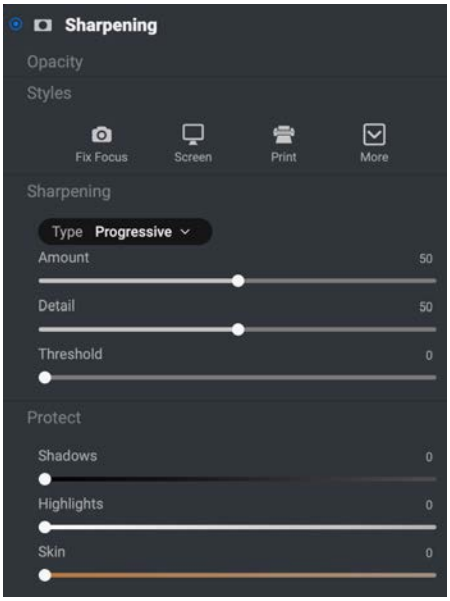
The top of the pane selects the target color and the bottom sets the replacement.

1. Use the eyedropper to pick a color in your photo, or click the swatch to choose one from the color wheel.

2. Adjust **Range** to include more or fewer similar colors. The preview updates in real time.
3. Set **Amount**. It works like opacity: below 100 (the default), the new color blends with the original.
4. In the **Color Change** section, click the swatch to pick the new color, or use the **Hue**, **Saturation**, and **Brightness** sliders.

TIP: Use the masking tools to paint the effect out of any areas you want to keep their original color.

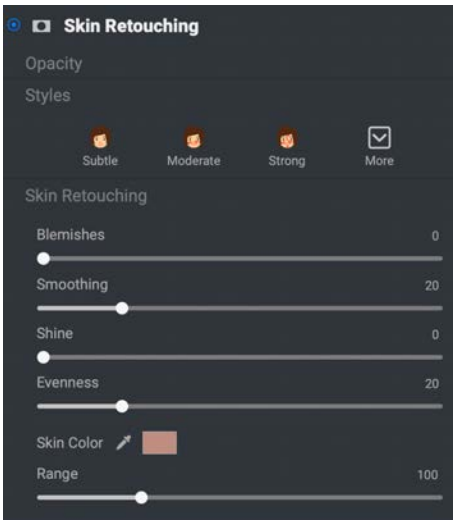
Sharpening



Sharpening adds crispness to your photos, whether to compensate for slight motion or soft focus, or for a stylized effect. Choose from three methods (High Pass, Progressive, and Unsharp Mask) depending on the photo and your taste. The styles and the More menu include many sharpening presets to start from.

- **Type:** Selects the sharpening method. Each method has its own sliders.
- **Amount** (all types): Sets the overall strength of the sharpening.
- **Halo** (Unsharp Mask, High Pass): Sets the sharpening radius. Small values preserve fine detail, and larger values exaggerate edges.
- **Threshold** (Unsharp Mask, Progressive): Limits sharpening based on contrast. Higher values leave smooth areas unsharpened.
- **Detail** (Progressive only): Controls sharpening of small details.
- **Protect:** Keeps sharpening off highlights, shadows, and skin tones.

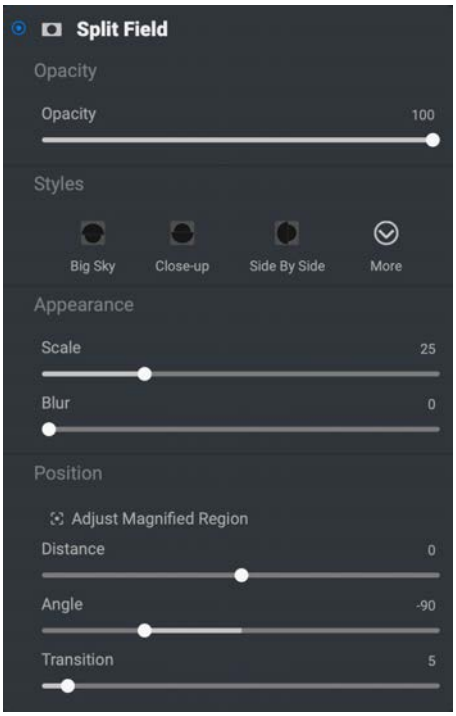
Skin Retouching



Skin Retouching reduces blemishes, smooths skin, and tames shine. The styles at the top range from subtle to strong, and the More menu has more options for different photos.

- **Blemishes:** Reduces acne, pores, and fine lines.
- **Smoothing:** Smooths skin, much like makeup foundation.
- **Shine:** Reduces skin shine.
- **Evenness:** Evens skin color across the face. Great for overly yellow highlights, greenish shadows, or red noses and ears.
- **Skin Color:** Click the Color Dropper, then click the subject's skin to set the skin color.
- **Color Well:** Shows the selected skin color. Click it to choose a different color.
- **Range:** Sets how precisely the skin color is matched.

Split Field



Split Field mimics the classic split diopter lens filter. It magnifies part of the scene to balance the size differences that wide-angle lenses create, bringing the background closer as if shot with a telephoto while keeping the wide-angle foreground.

- **Appearance: Scale** sets the size of the magnified area and **Blur** softens the background.
- **Position: Distance** sets where the split falls, along with the angle of the background and the transition between the magnified background and normal foreground. Use the **Adjust Magnified Position** target to move the background into place.
- **On-screen control:** Similar to the Gradient Mask tool, it lets you adjust the position, transition, and angle directly on the photo.

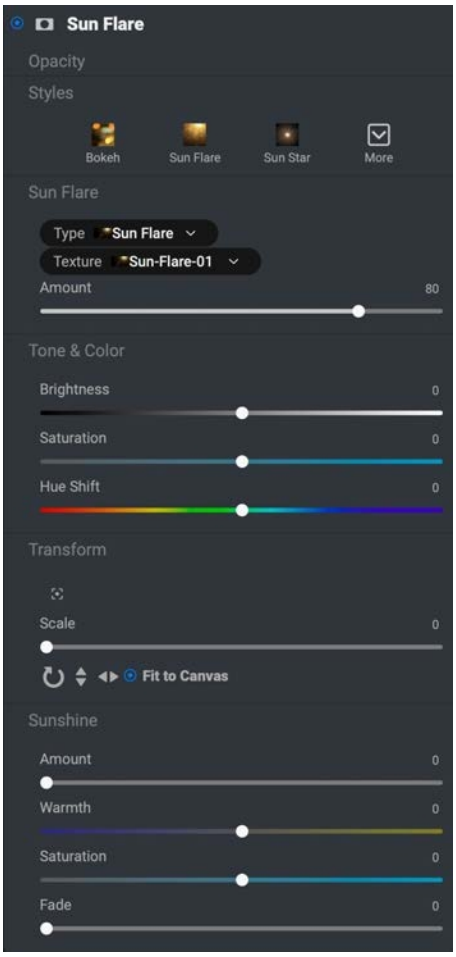
Split Tone



Split Tone creates a duotone-style effect with a gradient map that tints the shadows and highlights in different hues. It's great for antique and vintage looks. Start from one of the built-in styles or build your own.

- **Hue:** Sets the color for the highlights and for the shadows.
- **Amount:** Sets the strength of each color.
- **Balance:** Shifts the balance between shadow and highlight colors so one dominates.
- **Swap:** The button to the right of the Highlight color swaps the highlight and shadow colors.
- **Mode:** Sets the blend mode: Normal, Color, Lighten, Darken, Multiply, or Screen.

Sun Flare

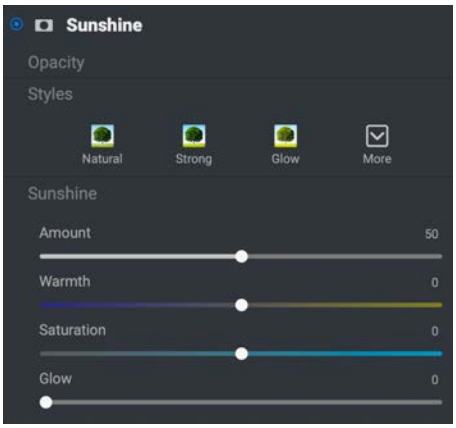


Sun Flare adds realistic sun flares, sun stars, and bokeh overlays to your photo. You can resize, move, and recolor the effect, and add warm toning similar to the Sunshine filter.

- **Type:** Choose Bokeh, Flare, or Star. The **Texture** menu shows the options for that type.
- **Tone & Color:** Adjust the overlay's brightness, saturation, and hue.
- **Transform:** Click the icon next to the Transform label, then drag the overlay into place. Use **Scale** to resize it, and the icons to the left of **Fit to Canvas** to rotate or flip it.
- **Sunshine:** The bottom of the pane adjusts the warmth and saturation of the overall effect, and **Fade** adds a matte look.

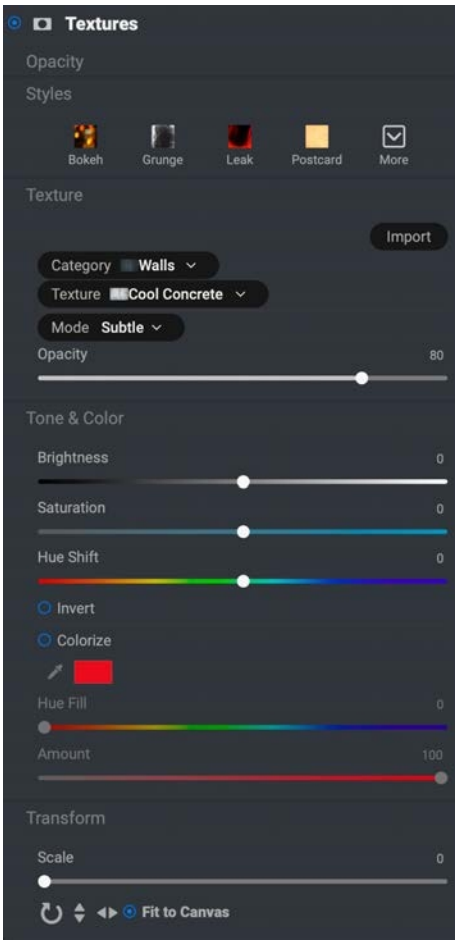
NOTE: See Extras to learn how to import your own sun flare files with the Extras Manager.

Sunshine



Sunshine boosts the look of sunlight in a photo, bringing life to flat, overcast scenes. Use **Amount** to set the strength, adjust **Warmth** and **Saturation**, and add a bright glow with the **Glow** slider.

Textures



Textures overlays a texture on your photo for a stylized look. It works much like the Borders filter. Photo RAW includes a large set of textures, from fabric and metal to stone, text, and more.

Choosing a Texture

Use the **Category** and **Texture** menus at the top of the pane. There are nine built-in categories, and textures you import appear here too. Textures rotate automatically to match your photo's orientation.

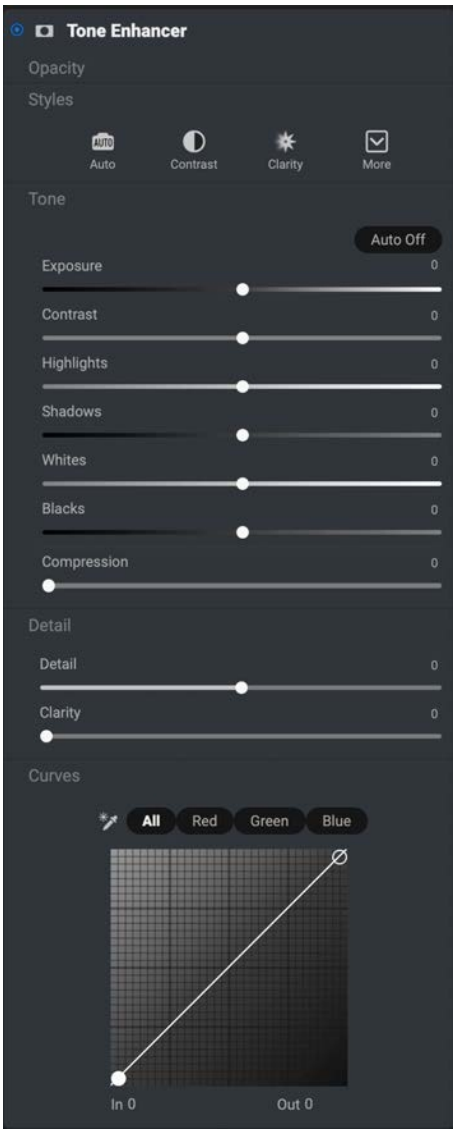
Adjusting a Texture

- **Blending and Opacity:** Set how the texture blends with your photo.
- **Color:** Adjust hue, saturation, and brightness of a colored texture, or click **Colorize** to tint a black or white texture.
- **Transform:** Scale the texture up or down.

- **Rotate and Flip:** Use the buttons at the bottom of the pane to override the automatic orientation.

TIP: You can import your own textures in the Textures pane or with the Extras Manager. Textures can be almost any image format, including JPEG, TIFF, raw, and Photoshop files. See Extras for details.

Tone Enhancer



Tone Enhancer controls brightness and contrast, recovers highlight and shadow detail, and sets the white and black points. It offers controls similar to the Tone section of the Tone & Color pane, plus curves.

- **Auto:** Sets the white and black points and balances the main tone settings automatically.
- **Exposure:** Drag right to lighten or left to darken.
- **Contrast:** Increases or decreases contrast.
- **Highlights:** Darkens or lightens the highlights.
- **Shadows:** Darkens or lightens the shadows.
- **Whites:** Sets the white point, adding or removing contrast in the highlights.
- **Blacks:** Sets the black point, adding or removing contrast in the shadows.
- **Compression:** Compresses tones to reveal highlight and shadow detail.
- **Detail:** Increases local contrast.
- **Clarity:** Enhances larger edges for added clarity.
- **Curves:** An advanced tool for adjusting contrast and color. See Curves.

Vignette

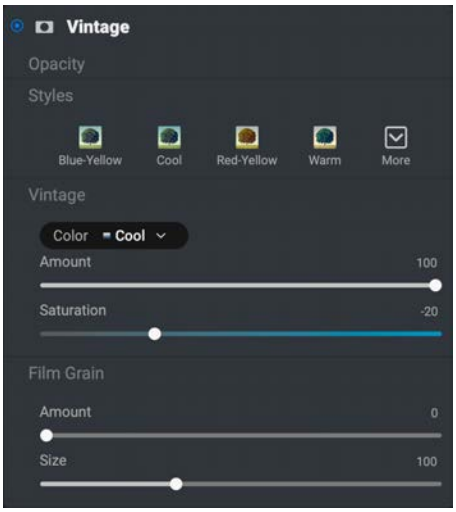


Vignette darkens or lightens the edges of the frame to draw the eye toward your subject. Apply a style to get started, then fine-tune it:

- **Brightness:** Sets how light or dark the vignette is.
- **Size:** Sets the size of the vignette.
- **Feather:** Sets how hard or soft the vignette's edge is.
- **Roundness:** Changes the shape from square to round.
- **Type:** Choose Normal, Subtle, or Soft. **Priority** preserves highlights under the vignette.

To move the vignette's center, click the **Center** tool at the bottom left of the pane, then click the spot in your photo you want as the center.

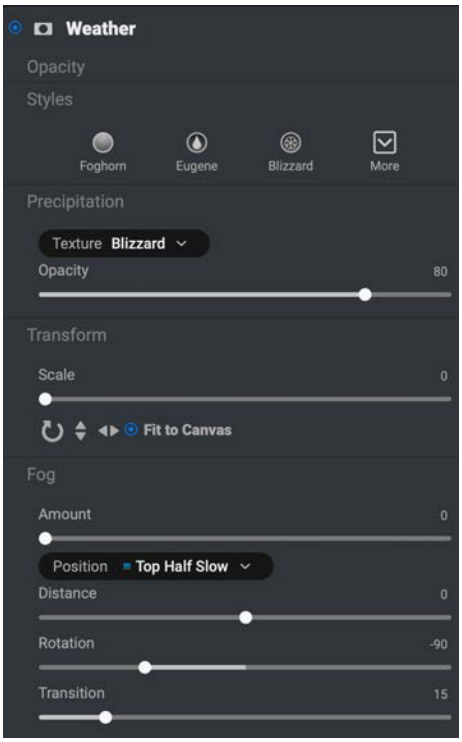
Vintage



Vintage adds an aged look inspired by films and photo papers from the mid-to-late 20th century.

- **Color:** Choose from a list of color styles.
- **Amount:** Sets the overall strength of the filter.
- **Saturation:** Adjusts the saturation of the original photo.
- **Film Grain Amount:** Adds film grain.
- **Film Grain Size:** Sets the size of the grain.

Weather



Weather adds rain, snow, and fog to your photos.

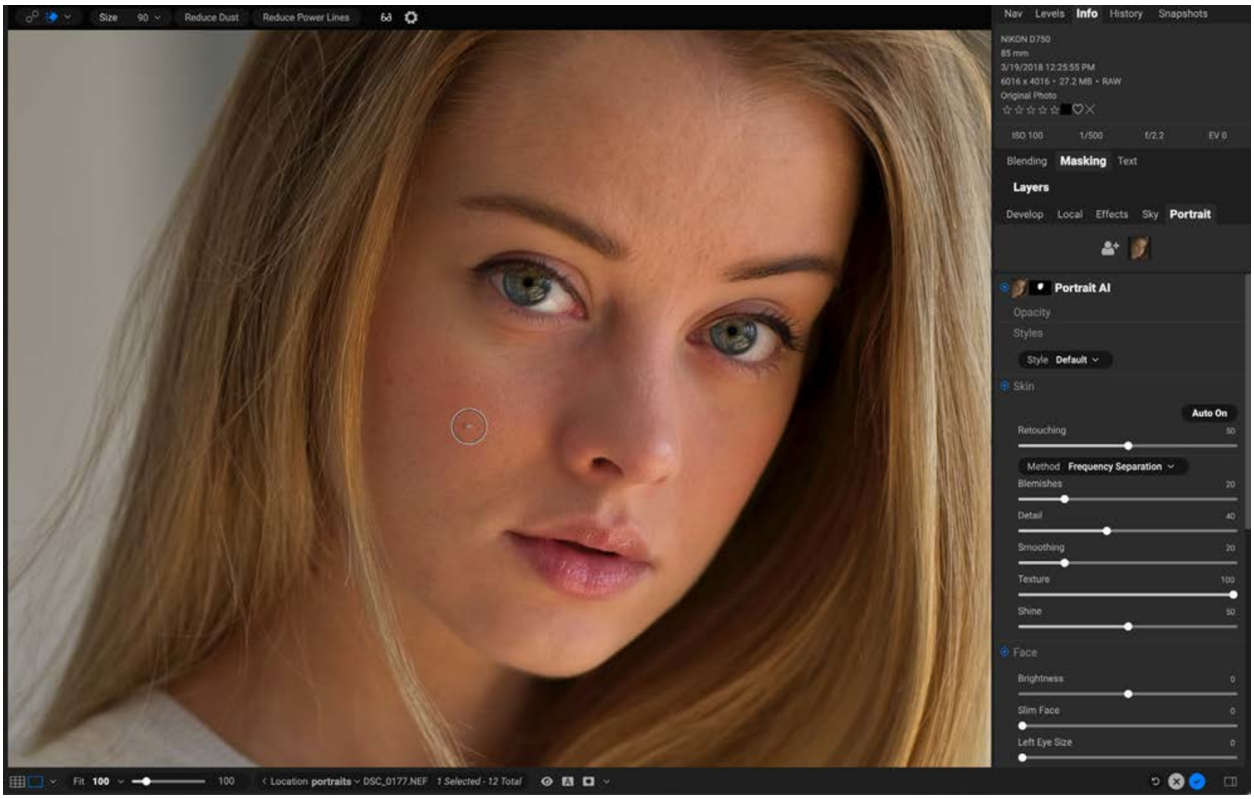
Precipitation

Choose a rain or snow overlay from the **Texture** menu, then adjust its opacity. Use the **Transform** section to scale, flip, or rotate the overlay.

Fog

Raise the **Amount** slider to add fog. The **Position** menu offers gradients for placing the fog; choose **All** to apply it to the whole photo. **Distance** and **Transition** set the intensity and length of the gradient, and **Rotation** sets its angle.

Retouching with Portrait AI



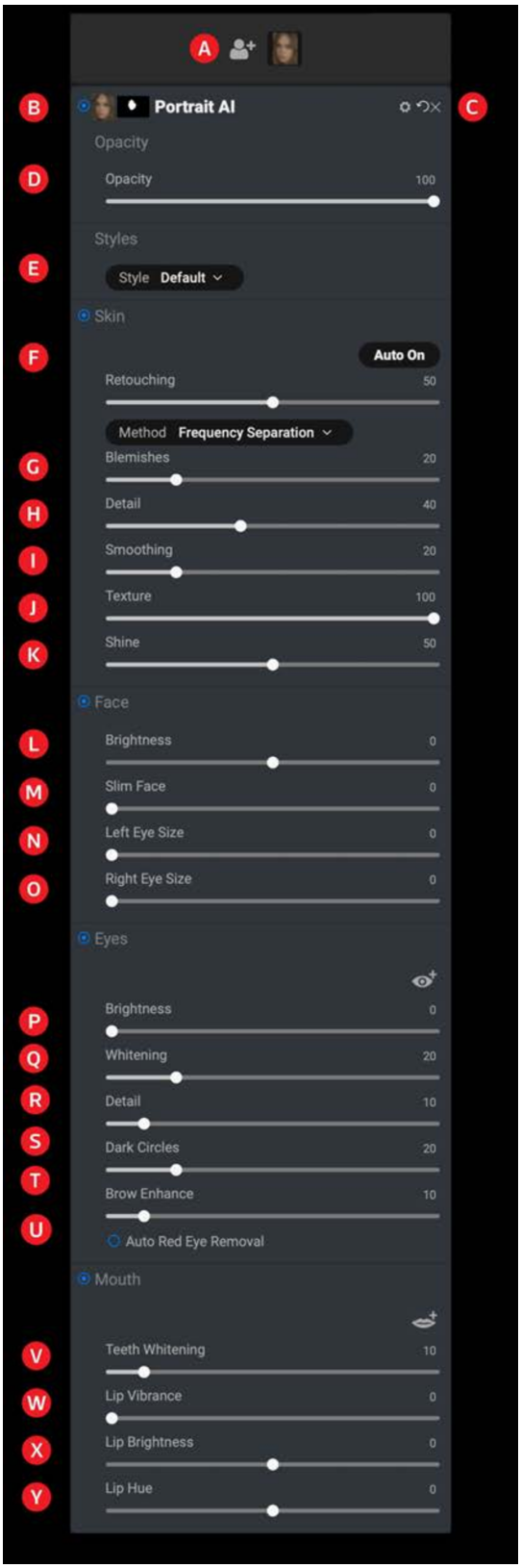
Portrait AI retouches faces quickly and naturally with as little manual work as possible. When you open a photo in the Portrait tab, Photo RAW finds each face, analyzes it, and applies the right amount of retouching based on your preferences.

You still have full control. Each face has its own settings, and you can adjust eye and mouth positions, refine the skin mask, and brush away blemishes.

Skin retouching uses frequency separation to keep natural skin texture while evening out color and tone. Beyond smoothing and blemish removal, Portrait AI can add fill light to brighten a face, slim the jawline, and adjust eye size. You can also brighten the whites of the eyes, sharpen irises, remove red-eye, whiten teeth, and adjust lip color and saturation.

Use the Masking Brush to paint skin in or out, and the Portrait pane to adjust each face's skin, eyes, and mouth.

Inside the Portrait Pane


A
B
Portrait AI
C
Opacity
D
Opacity 100
Styles
E
Style Default
Skin
F
Auto On
Retouching 50
Method Frequency Separation
G
Blemishes 20
H
Detail 40
I
Smoothing 20
J
Texture 100
K
Shine 50
Face
L
Brightness 0
M
Slim Face 0
N
Left Eye Size 0
O
Right Eye Size 0
Eyes
P
Brightness 0
Q
Whitening 20
R
Detail 10
S
Dark Circles 20
T
Brow Enhance 10
U
Auto Red Eye Removal
Mouth
V
Teeth Whitening 10
W
Lip Vibrance 0
X
Lip Brightness 0
Y
Lip Hue 0

Each face has its own Portrait pane with its mask and settings for skin, face, eyes, and mouth. Click a face at the top of the pane to view its settings. To rename a pane, double-click its Portrait AI label. The numbers below match the callouts in the screenshot.

Top of the Pane

1. **Face selection:** The Add Face button and each face found or added in your photo. Click a face to select its pane.
2. **Face and mask icons:** A thumbnail of the face for easy identification, plus that face's mask. Click the circle to the left to turn all of the pane's settings on or off, for a quick before and after. An empty circle means the adjustments are off.
3. **Blending, Reset, and Delete:** Change the blend mode, reset the pane, or delete the portrait layer. These appear when you hover over the pane.
4. **Opacity:** Sets the overall strength of the pane's settings.
5. **Style:** Presets for the pane. The Default style uses Portrait AI to apply Subtle or Strong retouching. Subtle is the default, and you can switch to Strong in the General section of Preferences. You can also save your own styles.

The lower part of the pane has four sections: Skin, Face, Eyes, and Mouth. Each has an on/off circle to the left of its label, so you can skip sections you don't need.

Skin

6. **Retouching:** The amount of skin retouching, based on Portrait AI's analysis.
7. **Blemishes:** Smooths fine lines, wrinkles, and blemishes.
8. **Detail:** Brings back detail lost during smoothing.
9. **Smoothing:** Adds more skin smoothing.
10. **Texture:** Sets the amount of artificial texture overlaid on the skin.
11. **Shine:** Reduces hot spots and evens skin tone.

NOTE: The Method menu offers Frequency Separation and Surface Blur. Surface Blur is included only for compatibility with presets from earlier versions of Photo RAW.

Face

12. **Brightness:** Brightens or darkens the face.
13. **Slim Face:** Slims the face along the jawline.
14. **Left Eye Size:** Enlarges the left eye.
15. **Right Eye Size:** Enlarges the right eye.

Eyes

16. **Brightness:** Brightens the eye area, which helps when a hat shades the face.
17. **Whitening:** Whitens the eyes.
18. **Detail:** Sharpens the irises and pupils.

19. **Dark Circles:** Brightens dark circles and bags under the eyes.
20. **Brow Enhance:** Darkens the eyebrows.
21. **Auto Red-Eye Removal:** Removes red-eye with one click.

Click the icon to the right of the Eyes label to show the eye control points when you hover over a face.

Mouth

22. **Teeth Whitening:** Whitens teeth.
23. **Lip Vibrance:** Increases lip color.
24. **Lip Brightness:** Adjusts lip brightness.
25. **Lip Hue:** Adjusts lip hue.

Click the icon to the right of the Mouth label to show the mouth control points when you hover over a face. See Portrait AI Workflow to learn how to adjust the eye and mouth overlays.

Portrait AI Workflow

Portrait AI is designed to give you great retouching automatically every time you open a photo. For most photos, the workflow is simple:

1. Make global edits in the Develop tab, including tone, color, noise reduction, and lens correction. Save sharpening for last.
2. Click the **Portrait** tab in the Edit module. If you're using Photo RAW as a plug-in, choose Portrait AI from your host app's menu.
3. Go through each person's Portrait pane and adjust the settings.
4. Use the retouching tools to remove or repair blemishes.
5. Refine the skin mask and reshape the eye and mouth overlays if needed.

Subtle vs. Strong Processing

Portrait AI's automatic retouching uses one of two settings. **Subtle**, the default, takes a lighter touch. **Strong** applies more retouching but still looks natural. To change the default, open the General tab of Preferences and choose an option from the **Portrait AI Default** menu. See General Settings.

Working with Individual Portrait Panes

Select each face in turn by clicking it at the top of the Portrait AI panel, or click its pane. Work from the Skin section down through Face, Eyes, and Mouth. Big slider moves help you see what a setting does, but avoid going so far that skin looks plastic. Work at 100% view to see your changes up close.

TIP: Portrait AI usually handles skin smoothing well on its own. Often, adjusting the **Retouching** slider is all you need to fine-tune the skin.

NOTE: When working with several faces, double-click the word Portrait in a pane's title bar to give it a name.

Using the Retouching Tools

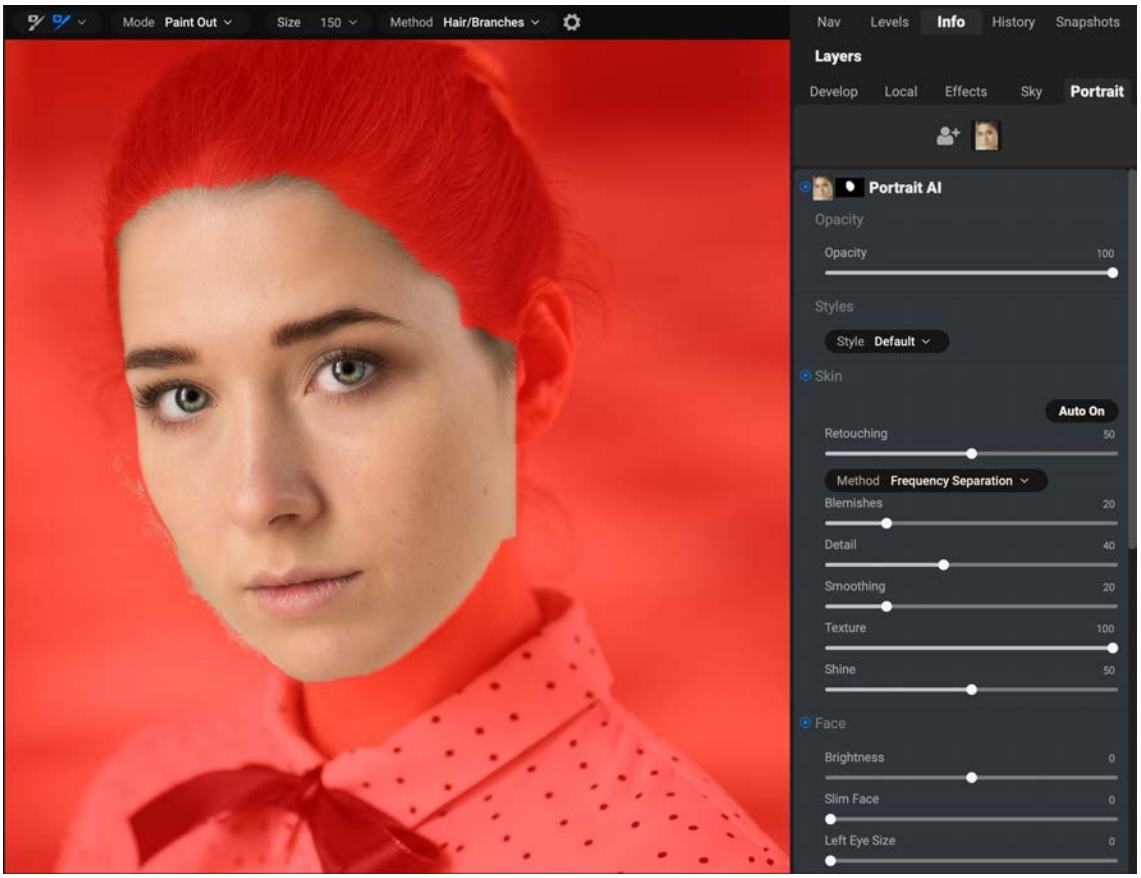
For specific blemishes and marks, use the Perfect Eraser, Retouch Brush, Clone Stamp, or Healing Brush. See Retouching Tools for details.

Making Manual Adjustments

Portrait AI's face detection is sophisticated but not perfect. You can adjust a face's mask, fine-tune the areas around the eyes and mouth, remove a false face, or add a face it missed.

Fine-Tuning a Face's Mask

Portrait AI builds a mask for each face so its retouching only applies there. The rest of the photo is masked out. The mask appears as the mask icon at the top of each pane.



The mask follows the contours of the face but doesn't include other skin. You may want to add skin under the chin or on the neck, or paint out hair across the forehead so it isn't softened.

1. Select the face's pane and click the **Show Mask** icon at the bottom of the window (to the right of the Before/After button), or press O. A red overlay shows areas the pane doesn't affect, and the Portrait AI brush is selected.
2. Set the brush mode (Paint In or Paint Out), size, feather, and opacity.
3. Paint to add or remove skin from the mask. Hold Option (Mac) or Alt (Windows) to switch between painting in and out.
4. When you're done, choose another tool and click **Show Mask** again to hide the mask.

TIP: Refining the mask works best with the mask visible and at 100% view or closer. You can also use the Masking Brush or other refinement tools.

Working with Eye and Mouth Overlays

Portrait AI finds the eyes and mouth on each face, even in three-quarter and profile shots, and creates an overlay for each one. Settings in the Eyes and Mouth sections only apply inside these overlays.

To see an overlay, click the icon to the right of the Eyes or Mouth label, then hover over the face. Each overlay has a blue center point and control points around its edges. Drag the center point to move the overlay, or drag a control point to reshape it.



Mouth overlays include control points for the top and bottom of each lip so you can account for the teeth. You usually won't need to change the overlays, but if you do, zoom in close for precise adjustments.

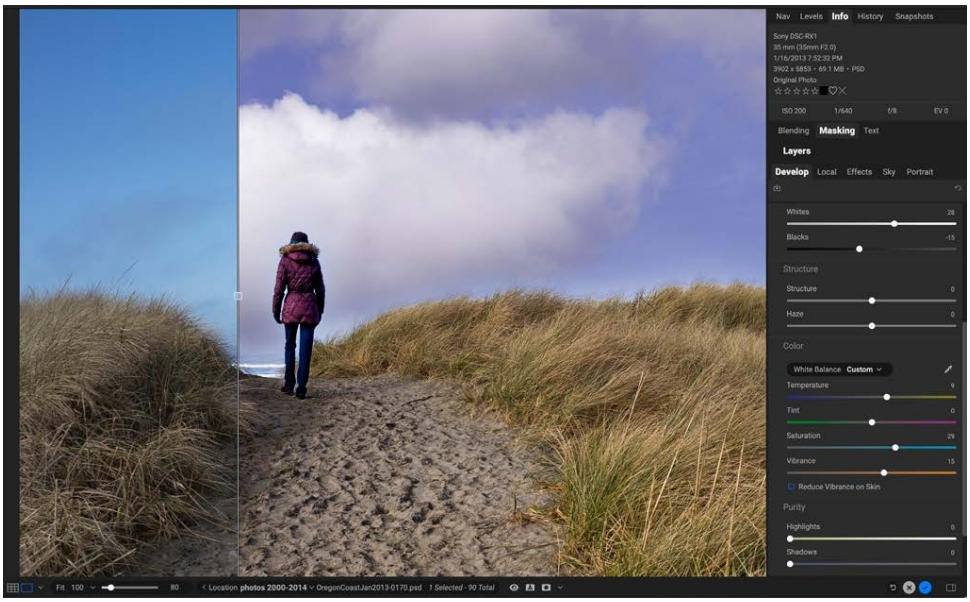
Handling Missing or Ghost Faces

If Portrait AI misses a face:

1. Click **Add Face** at the top of the Portrait tab.
2. Position and size the box around the face, then press Return. A new Portrait pane is created and selected.
3. Click the icon to the right of the Eyes label, then click the center of each eye. Adjust the overlays as needed.
4. Click the icon to the right of the Mouth label, then click the corners of the mouth. Adjust the control points to fit.
5. Turn on the sections of the pane you want to use, then work through it as you would for any face.

If Portrait AI creates a pane for something that isn't a face, right-click that ghost face at the top of the Portrait AI panel and choose **Delete Face**.

Replacing Skies with Sky Swap AI



Replace a dull sky (left) with a striking one (right) in the Sky tab of the Edit module.

The Sky tab makes replacing or enhancing a sky easy. It detects and masks the sky in your photo automatically, so you can pick a replacement from more than 100 included skies or import your own.

You have full control over the blend. Refine the mask with any of the masking tools, adjust the sky to match your foreground, or blur it to simulate a long exposure. Sky Swap AI can also adjust foreground lighting and color and add a reflection of the new sky to water in the scene.

Getting Started

1. In Browse, select a photo and choose **Edit in Sky** from the File menu. If you're already in the Edit module, click the **Sky** tab.
2. Photo RAW masks the sky and opens the Sky Swap AI panel.
3. Choose a sky from categories such as sunsets, storms, and night skies, or click **Import** to use your own.
4. Use the Sky Swap pane controls to fine-tune placement, intensity, foreground lighting, and reflection.
5. Refine the mask with any of Photo RAW's masking tools if needed. Quick Mask AI isn't available here because it overwrites the existing mask.

TIP: To keep working on the sky and foreground separately, copy the Sky Swap AI mask and paste it into an Effects filter mask, a new layer, or a local adjustment.

Generating Realistic Sky Replacements

Adding a new sky is easy. Making it look like it belongs takes a little more care. These tips will help:

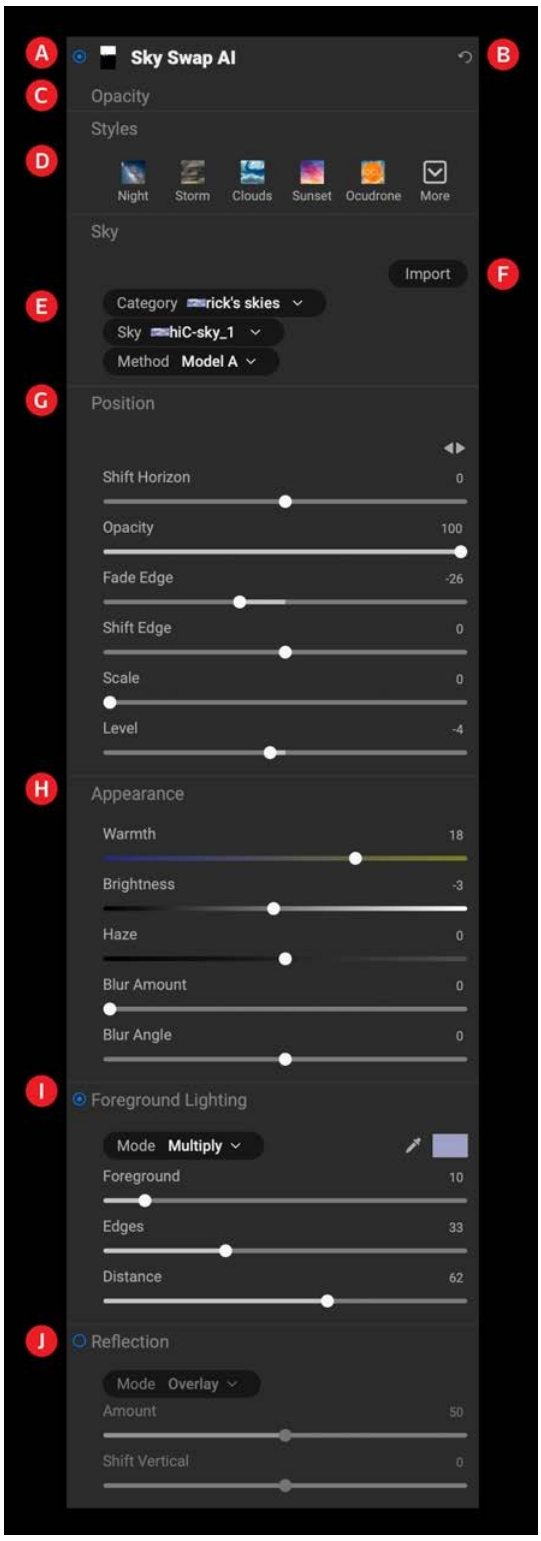
- **Match the light.** The most common problem is mismatched light, whether it's the sun's direction or the time of day. As you browse skies, ask whether the light makes sense with your foreground. The **Flip Horizontal** toggle in the Position section can fix a direction mismatch, but some skies just won't fit no matter how much you like them.
- **Expect to fine-tune.** A sky rarely works perfectly right away. Once the light fits, adjust the Position, Appearance, and Foreground controls to blend it in.
- **Compare options.** Use Undo, or better yet the History pane, to jump between versions as you compare skies.
- **Check the mask.** Sky Swap AI is excellent but not perfect. Use the masking tools to fix spots where the sky spills into the foreground or the foreground cuts into the sky.
- **Reuse the mask.** For example, to add Dynamic Contrast to the foreground only, choose **Copy Mask** from the Mask menu in the Sky Swap AI pane. Then add Dynamic Contrast in the Effects tab, choose **Paste Mask**, and choose **Invert Mask** so the filter applies only to the foreground. You can reuse the mask as often as you like.
- **Shoot your own skies.** When you see a great sky, capture as much of it as you can and import it with the Extras Manager. Knowing the light direction and time of day makes matching much easier.
- **Experiment freely.** Everything in the Sky tab is non-destructive. Click the Sky tab at any time to adjust your work, or reset the Sky Swap AI pane to return to the original sky.



Light direction is key to a realistic replacement. The sunset sky (top left) is beautiful, but the foreground is lit from behind and to the left, so it doesn't fit. The sky at top right is closer, but its light comes from the right. Flipping it (bottom left) helps, but it still feels too dark even after adjusting Brightness. A sky shot at about the same time of day (bottom right) blends naturally and looks realistic with only minor adjustments.

Inside the Sky Swap AI Pane

When you click the Sky tab, Photo RAW masks the sky in your photo and opens the Sky Swap AI pane. The numbers below match the callouts in the screenshot.



1. **Pane controls:** The on/off button (left) turns the replacement on or off. The Mask view button (right) opens the mask options. See Masking Opacity, Blending, and Mask Options.
2. **Reset:** Returns the pane to its original state. Hover over the pane to see it.
3. **Opacity:** Sets the overall opacity of the replacement sky.
4. **Styles:** Choose a preset sky, or create and apply your own style from the More menu.
5. **Sky selection:** Menus for sky categories and the skies in each one.
6. **Import:** Opens the Extras Manager so you can import your own skies. See Extras.
7. **Position:** Choose Method A or B, shift the horizon, set opacity, fade and shift the mask edge, scale the sky, and level it.
8. **Appearance:** Set the sky's warmth and brightness, remove or add haze, and blur the clouds to simulate motion.
9. **Foreground Lighting:** Adjust the intensity and color of light on the foreground.
10. **Reflection:** Add a reflection of the sky to water in the foreground, with blend mode, amount, and vertical shift controls.

Position

After choosing a sky from the **Category** and **Sky** menus, use the Position section to place and blend it.

- **Flip Horizontal:** Click the triangles to the right of the Position label to flip the sky, which helps match the light direction to your foreground.

- **Shift Horizon:** Moves the sky up or down within the mask.
- **Fade Edge and Shift Edge:** Blend the sky more naturally into the foreground.
- **Opacity:** At 100 (the default), none of the original sky shows. Lower it to blend the two.
- **Scale:** Enlarges the sky within the mask, for more dramatic clouds or when the sky doesn't fill your frame.

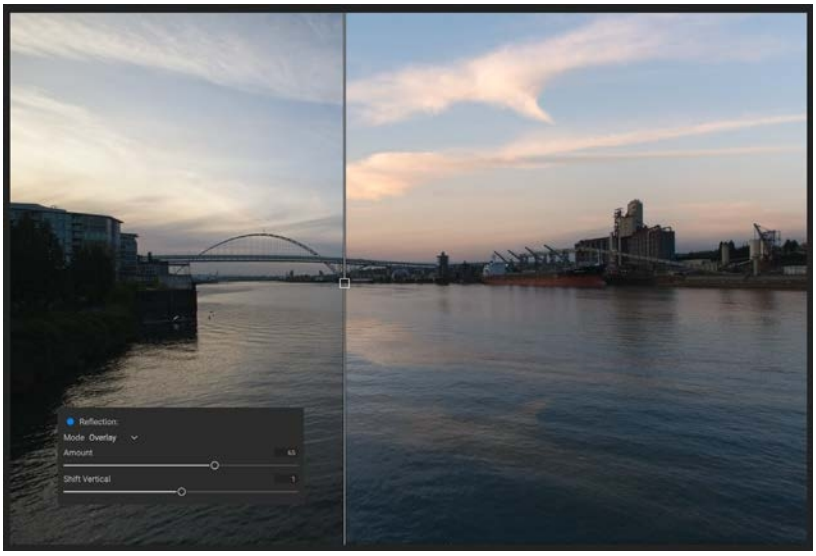
Method

Photo RAW has two sky detection methods. **Method A**, the default, gives the best results for most photos. If the mask isn't right, try **Method B**, and Photo RAW will reanalyze the scene and build a new mask.

Appearance

These sliders help match the new sky to your foreground. **Warmth** makes the sky warmer or cooler, and **Brightness** makes it brighter or darker. Drag **Haze** left to remove haze by adding contrast, or right to add it. **Blur Amount** and **Blur Angle** add motion blur to the clouds to simulate a long exposure.

Foreground



The Foreground Lighting and Reflection groups help blend the new sky into the scene. Click the on/off button to the left of each label to turn a group on.

Lighting

Lighting carries some of the sky's color onto the foreground. When you turn it on, Photo RAW samples a color from the sky and applies a subtle color fill. To choose a different

color, click the eyedropper next to the color patch. **Amount** sets the intensity and **Distance** sets how far into the foreground it reaches, much like a gradient. Choose **Multiply** to darken the effect or **Screen** to lighten it.

Reflection

Use Reflection when there's water in the foreground. It offers several blend modes, and the best one depends on the scene. See Blending Modes. **Amount** sets the reflection's intensity, and **Shift Vertical** moves it up or down, much like Shift Horizon in the Position section.

Generative AI Technology

Generative Crop and the Generative Eraser use generative AI that can run locally on your computer or in the cloud through Stability AI, which requires an internet connection. These tools help you enhance photos quickly and precisely. Generative AI isn't perfect, but it opens up new possibilities for creativity and efficiency.

Generative Eraser

The Generative Eraser is the next step beyond the Perfect Eraser and is ideal for removing large distractions such as photobombers, bystanders, signs, braces, and cars. For small or simple fixes, the non-destructive Healing Brush is still the best choice.

Generative Crop

Generative Crop is the next step beyond content-aware crop. When you use the Crop tool to expand the canvas beyond the original photo, Generative Crop fills in the new area so you can recompose the shot, like zooming out after the fact. Its results are far better than content-aware crop.

How Results Are Saved

Generative AI doesn't produce the same result twice from the same input, so its results are saved rather than replayed like other non-destructive edits. Both tools place their results on a new copy of the current layer, so you can try again as many times as you like.

Generative AI Processing Options

The Generative Eraser and the Canvas Extension option in the Crop tool can use several AI diffusion models:

- **Local Non-GenAI** – Uses AI, but a simplier form.
- **Local Gen AI** – Uses a small generative AI model that can be used on desktop hardware
- **Cloud GenAI** – Uses a robust modern generative AI model in the cloud. With twice the resolution of local models, this often yields the best results. *It is available for ON1 Photo RAW MAX owners and subscribers.*
- **Stability AI** – Fom the creators of Stable Diffusion, this hosted cloud generative AI model can also yield excellent results but requires an account and credits from Stability.

Local Gen AI

Local Gen AI requires a modern GPU with at least 4GB of VRAM and the latest drivers, such as:

- **NVIDIA:** RTX 2060, 3050, 4060, or better
- **AMD:** Radeon 5300 XT, 6400, 7600, or better
- **Apple Silicon:** 16GB of RAM or more

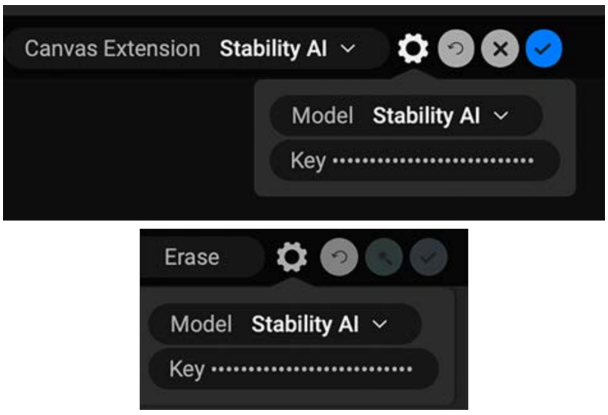
Running locally keeps your photos private, since nothing is uploaded, and lets ON1 offer generative AI without a subscription. Diffusion models usually run on large cloud servers with specialized AI hardware, so they've been scaled down to run on everyday Mac and PC GPUs. Results are generally good but may be less precise than some cloud options.

Cloud Gen AI

Uses a robust modern generative AI model in the cloud. With twice the resolution of local models, this often yields the best results. *It is available for ON1 Photo RAW MAX owners and subscribers.*

Stability AI

To use Stability AI, sign up for a free account at DreamStudio, Stability's consumer portal. New accounts receive free credits and a unique key that you enter in Photo RAW. Each use costs a few credits, and you need an internet connection.



Stability can sometimes produce different or better results, and may be faster depending on your hardware. Stability's terms of service protect your privacy.

Selecting the AI Model

Choose the model each time you use Canvas Extension or the Generative Eraser: from the Canvas Extension menu in the Crop tool, or the Gear menu in the Generative Eraser's Tool Options bar. The first time you choose Stability AI, paste your key into the **Key** field. Photo RAW remembers it for future sessions.

NOTE: If your computer can't run Local Gen AI and you don't want to use Stability, choose **Local NonGen AI** from the model menu. Results won't match the other two models, but may work for some photos.

For more, see Crop Tool and Generative Eraser.

Using Photo RAW as a Raw Editor

Photo RAW offers true non-destructive raw editing. Open a raw file from Browse in any part of the Edit module and apply edits, including cropping, healing, and local adjustments, and Photo RAW always works from your original file. You can return to Develop, Effects, Sky Swap AI, Local Adjustments, or Portrait AI at any time and change any setting.

When you work with layers, Photo RAW saves your work non-destructively in its own .onphoto format, which keeps all layer and editing information. When you're ready to share, export a flattened copy in any format Photo RAW supports.

The Editing Pipeline

Photo RAW lets you make many kinds of edits, from global exposure and color adjustments to effects, cropping, retouching, and local adjustments. It helps to know the

order in which they're applied. For a photo without additional layers, Photo RAW applies edits in this order:

1. The original image is always at the bottom of the stack.
2. Retouching, such as dust spot and blemish removal, comes first so every later edit includes those fixes.
3. Most Develop settings come next, including color profiles, exposure, color correction, sharpening, and noise reduction. If you use NoNoise AI or TackSharp AI, those are applied to the base image instead.
4. Local adjustments.
5. Transform operations.
6. Portrait tab edits.
7. Effects tab filters.
8. Text layers, which sit above the image stack.
9. Cropping and rotation.

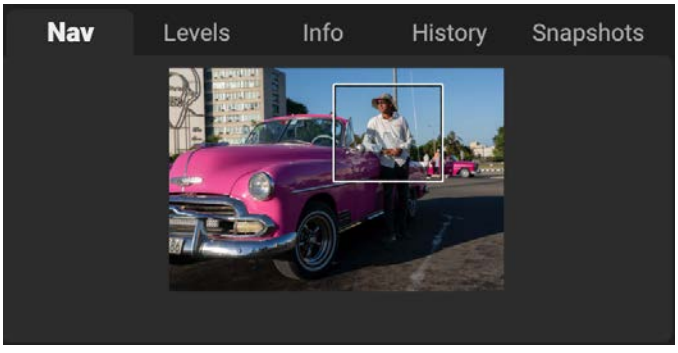
With multiple layers, steps 1 through 7 are applied to each layer from the bottom up. Then Photo RAW adds text, followed by cropping and rotation.

TIP: You don't have to edit in this order. If you spot a dust spot after adjusting exposure or adding a filter, just remove it with the Perfect Eraser and keep going. Photo RAW applies it in the right place in the stack.

Navigator, Histogram, Info, History, and Snapshots

The Navigator, Histogram, Info, History, and Snapshots panes sit at the top of the control panel on the right side of the window. Use them to inspect your photo, review the edits you've made in a session, and save snapshots of your work at specific points.

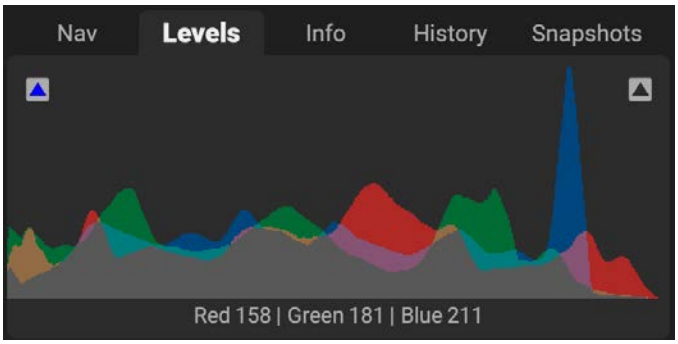
The Navigator Pane



The Navigator shows a thumbnail of your photo. The white box marks the area visible in the Preview, and you can drag inside the box to pan. The box updates as you use the Hand and Zoom tools.

TIP: You can also pan and zoom with your mouse's scroll wheel. See Using ON1 Apps with a Scroll Wheel.

The Levels Pane

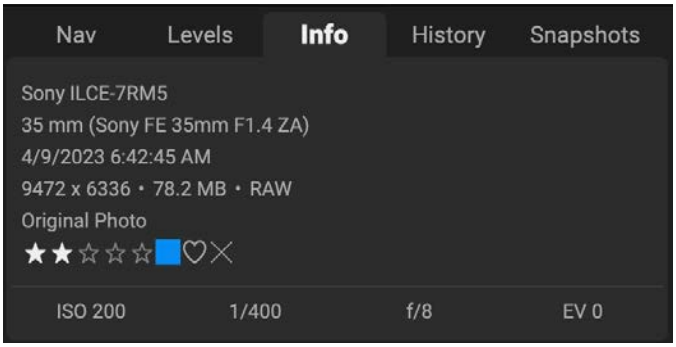


The Levels pane shows a histogram of your photo's shadows, midtones, and highlights based on its RGB values. It's useful for spotting clipping, where areas become pure black or pure white and lose detail.

The left side of the histogram represents shadows and the right side represents highlights. A triangle at the top of each end lights up when that side is clipping. Click a triangle to show the clipping overlay on your photo: blue marks pure black areas and red marks pure white areas. Click a triangle again to turn the overlay off, or hold J to show it temporarily. The clipping view is especially handy while adjusting brightness and contrast. See Focus and Clipping Views.

The bottom of the pane shows the RGB values under your cursor.

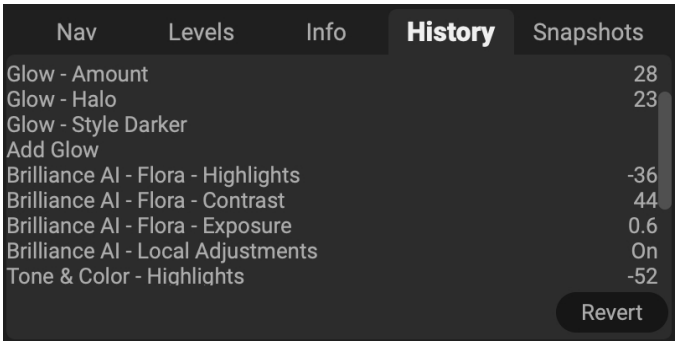
The Info Pane



The Info pane shows the current photo's metadata in an easy-to-read format, including camera make and model, lens focal length, capture date and time, file type, ISO, shutter speed, aperture, and exposure compensation. It also shows file details such as image dimensions and resolution. Any unavailable fields are left blank.

NOTE: The Settings Applied section from earlier versions of Photo RAW is now in the Layers pane. See Viewing Edit Module Settings for a Layer.

The History Pane



Undo is great for backing up a step or two, but pressing Cmd/Ctrl+Z over and over gets tedious. The History pane lists every edit you make in a session, so you can jump back to any point, all the way to how the photo looked when you opened it.

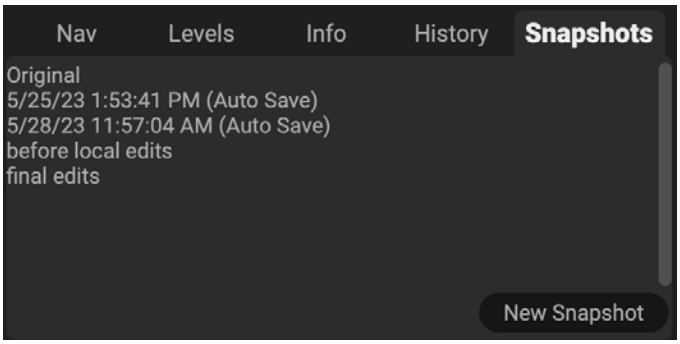
Each new edit is added to the top of the list, often with the slider values you set. Click any item to roll your photo back to that point. You can click up and down the list freely, and the full history is kept as long as you don't make a change. If you roll back and then make an edit, every step after that point is removed.

TIP: After clicking an item, use Undo and Redo to step through the list one edit at a time. To keep all of your edits, click the top item in the list.

NOTE: History isn't saved between sessions. It resets when you return to Browse, open another photo from the Filmstrip, or switch to Resize. To save a specific editing state, use a snapshot.

The Snapshots Pane

A snapshot saves all of a photo's edits exactly as they are at that moment, so you can return to that state later. Click a snapshot's name to go back to it. You can create as many snapshots as you like and switch between them.



Snapshots are handy for comparing treatments, such as color vs. black and white, or for marking a safe point before you try something new.

Snapshot Basics

Every photo's Snapshots pane starts with **Original**, the photo as it was when first opened in the Edit module. Each time you finish an editing session, Photo RAW also saves the final state as a snapshot named with the date and time and an (Auto Save) label.

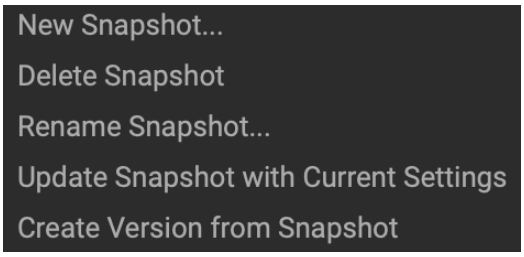
To create your own snapshot, click **New Snapshot** in the Snapshots pane. Enter a name or keep the default date and time.

To return to a snapshot, click it. To get back to where you were before, choose Undo, or use the History pane if you've made more edits since. You can also save a placeholder snapshot of your current state first so you can return to it later.

Managing Snapshots

Right-click any snapshot for these options:

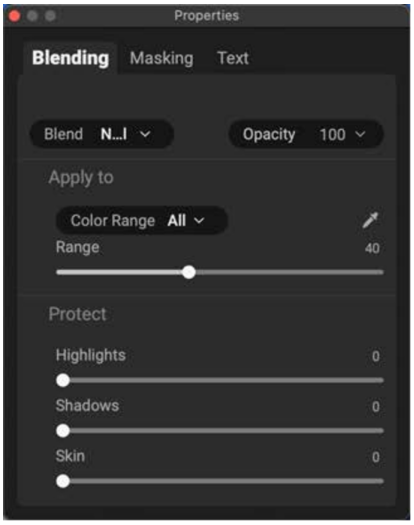
- **New Snapshot:** Creates a snapshot of the current editing state.
- **Delete Snapshot:** Permanently removes the snapshot.
- **Rename Snapshot:** Renames the snapshot. Auto-saved snapshots keep their (Auto Save) label.
- **Update Snapshot with Current Settings:** Replaces the snapshot's saved state with the current one.
- **Create Version from Snapshot:** Creates a virtual copy of the photo using the snapshot's settings. See Versions.

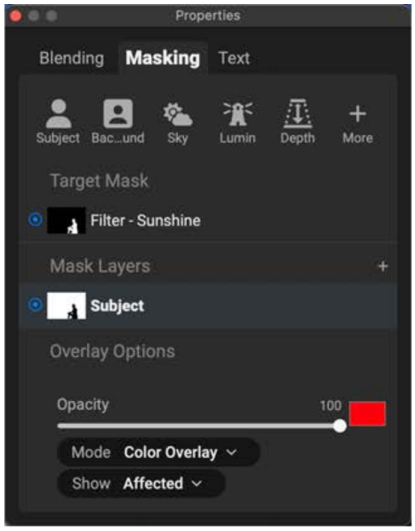


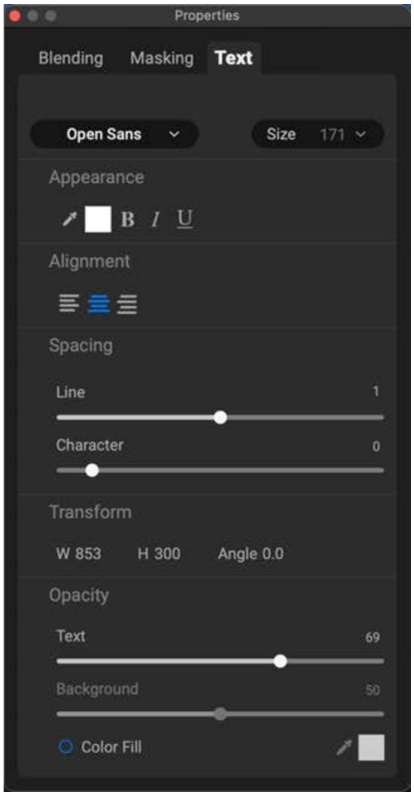
NOTE: You can show or hide most panes in the Edit module's right-side control panel. See Customizing Tabs and Panes.

The Properties Window

Masking, blending, and text controls now live in tabs right on each layer, filter, and local adjustment. The Properties window is still available for anyone who prefers it. It has the same Blending, Mask, and Text controls and stays in sync with the tabs on the object you're working on.







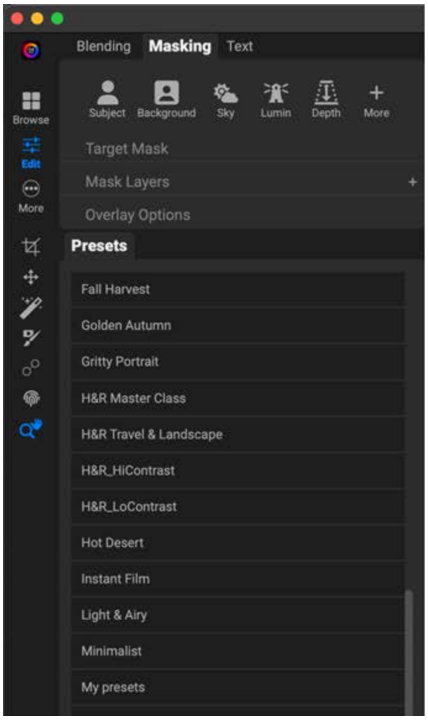
The Properties window is hidden by default and no longer opens on its own. To show it, choose **Window > Properties > Show**. Photo RAW remembers your choice.

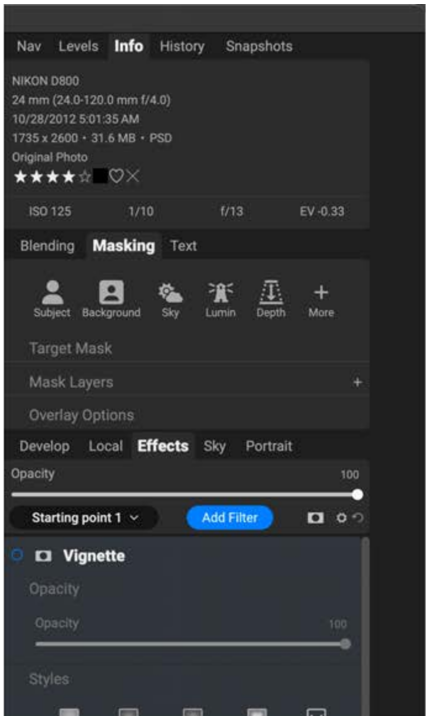
For details on the controls, see The Masking Tab, Blending Modes, and Adding a New Layer.

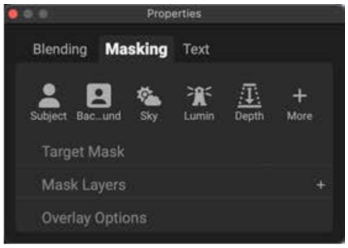
Configuring the Properties Window

Use the **Window > Properties** submenu in the Edit module:

- **Show:** Shows or hides the Properties window.
- **Nest:** Docks the window as a pane on the left or right side of the Edit module. Leave both options unchecked to keep it floating.
- **Auto Collapse:** Collapses the window or pane to its tab headings (Blending, Mask, Text). Hover over a tab to expand it.







NOTE: The Layers pane can also float or dock on either side of the window. See Configuring Layers Pane Location.

The Tool Well

The Edit module's 21 tools live in the Tool Well on the left side of the window. Crop, Transform, Super Select AI, and View each have their own icon. The Mask, Retouch, and Liquify tools are grouped: click a group's icon, then pick a tool from the Tool Options bar at the top of the window.

PHOTO RAW EDITING TOOLS



Tool	What It Does	Shortcut
Crop	Trims your photo to a size or ratio. Supports generative canvas expansion with ON1's Local Gen AI.	C
Transform (Move)	Moves, resizes, and rotates the current layer.	V
Super Select AI	Click regions of a photo to select them, then apply Effects filters or local adjustments to those areas.	K
Masking Brush (Mask)	Masks large, similar areas quickly. Includes the Perfect Brush option.	B
Linear Gradient Mask (Mask)	Creates a straight-line gradient mask. See Linear Gradient Mask.	M
Radial Gradient Mask (Mask)	Creates a circular or oval gradient mask. See Radial Gradient Mask.	Shift+M
Quick Mask AI Brush (Mask)	Creates masks by clicking regions of a photo, similar to Super Select AI.	W
Quick Mask Brush (Mask)	Creates high-quality masks from a few guide strokes.	Cmd+Option+Shift+W (Mac), Ctrl+Alt+Shift+W (Windows)
Line Mask (Mask)	Creates masks with straight lines, with curves and adjustable points.	Shift+P
Refine Brush (Mask)	Refines mask edges in difficult areas such as hair.	N
Chisel Brush (Mask)	Removes fringes from mask edges.	Shift+H

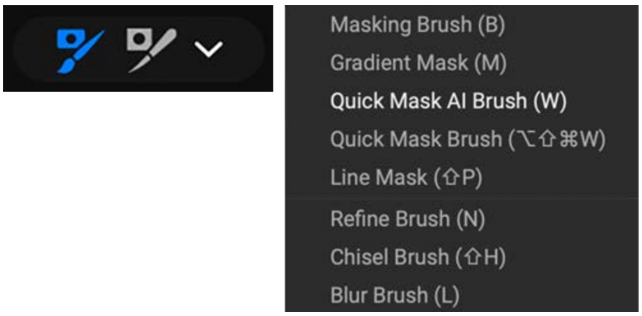
Tool	What It Does	Shortcut
Blur Brush (Mask)	Softens mask edges so they blend naturally.	L
Healing Brush (Retouch)	Removes distractions non-destructively with content-aware fill.	Q
Generative Eraser (Retouch)	Removes large distractions with ON1's Local Gen AI.	Option+Shift+Q
Perfect Eraser (Retouch)	Removes distractions, with automatic dust spot and power line removal.	Shift+Q
Retouch Brush (Retouch)	Removes blemishes such as dust spots and acne. Includes the Perfect Brush option.	R
Clone Stamp (Retouch)	Paints over one area with pixels from another.	Shift+S
Push (Liquify)	Pushes and warps areas with a brush, like finger painting.	Shift+L
Bloat (Liquify)	Warps and slightly enlarges the brushed area.	Option+L
Pinch (Liquify)	Warps and slightly shrinks the brushed area.	Shift+Option+L
View	Zooms and pans the Preview.	Z

NOTE: The Text tool from earlier versions has been replaced by Text layers, which you add from the Layers pane. See Adding a New Layer.

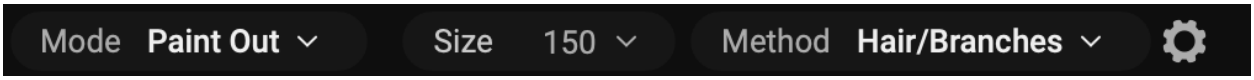
Accessing and Using Tools

Click a tool or press its shortcut key to select it. The tool is highlighted in your system's accent color, the cursor changes, and the tool's options appear in the Tool Options bar above the Preview.

If the tool belongs to a group, the Tool Well expands to show the other tools in the group. The Tool Options bar shows the group's primary tool, with the rest in a drop-down menu next to it. The primary tools are the Masking Brush (Mask group), Healing Brush (Retouch group), and Push tool (Liquify group).



The Mask group's options bar shows the Masking Brush. Click the drop-down menu to choose another tool in the group.



Every tool except View has an options bar for adjusting its settings. These are the Retouch Brush options.

Adjusting Tool Size and Feather

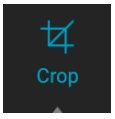
For tools with Size and Feather settings, you can adjust them several ways:

- **Options bar:** Use the Size and Feather sliders.
- **Keyboard:** Press [or] to change the size. Hold Shift to change the feather.
- **Scroll wheel:** Hold Cmd+Option (Mac) or Ctrl+Alt (Windows) and scroll to change the size. Hold Option+Shift (Mac) or Alt+Shift (Windows) to change the feather. See Using ON1 Apps with a Scroll Wheel.
- **Pressure-sensitive tablet:** Turn on pen pressure in the tool's Gear menu in the Tool Options bar.

Standalone Tools

Crop, Transform, Super Select AI, and View are standalone tools. Each has its own icon in the Tool Well and performs a single task.

Crop Tool



The Crop tool crops your photo non-destructively in the Edit module. It can suggest a crop at a chosen aspect ratio, and its generative Canvas Extension option can expand the frame, filling the new edges with realistic detail.

Cropping a Photo

1. Select the Crop tool in the Tool Well. The crop overlay appears.
2. Choose a ratio from the **Aspect** menu in the Tool Options bar. The default, Freeform, lets you crop to any size. A preset such as 4x6 locks the overlay to that ratio.
3. Drag the handles to set the crop. Corner handles adjust two sides at once and side handles adjust one side. Hold Shift to keep the proportions. The area outside the crop is darkened.
4. Drag inside the box to move the photo, or nudge it with the arrow keys. To rotate, move the cursor just outside a corner until it changes to the rotate cursor, then drag.
5. Click **Apply** or press Enter.

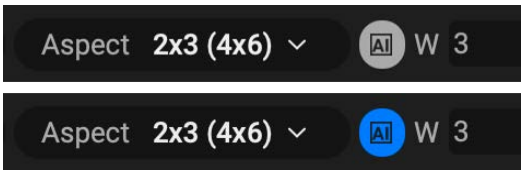


The Crop interface with a Rule of Thirds overlay and the Aspect menu open.

TIP: To straighten a photo, click the **Leveling** tool in the Tool Options bar and drag it along something in the photo that should be level.

AI Auto Crop and Level

Choose an aspect ratio, then click the **AI Auto Crop and Level** button to the right of the Aspect menu. Photo RAW analyzes the photo, crops and levels it at that ratio, and the button turns blue. You can adjust the result or choose another ratio.



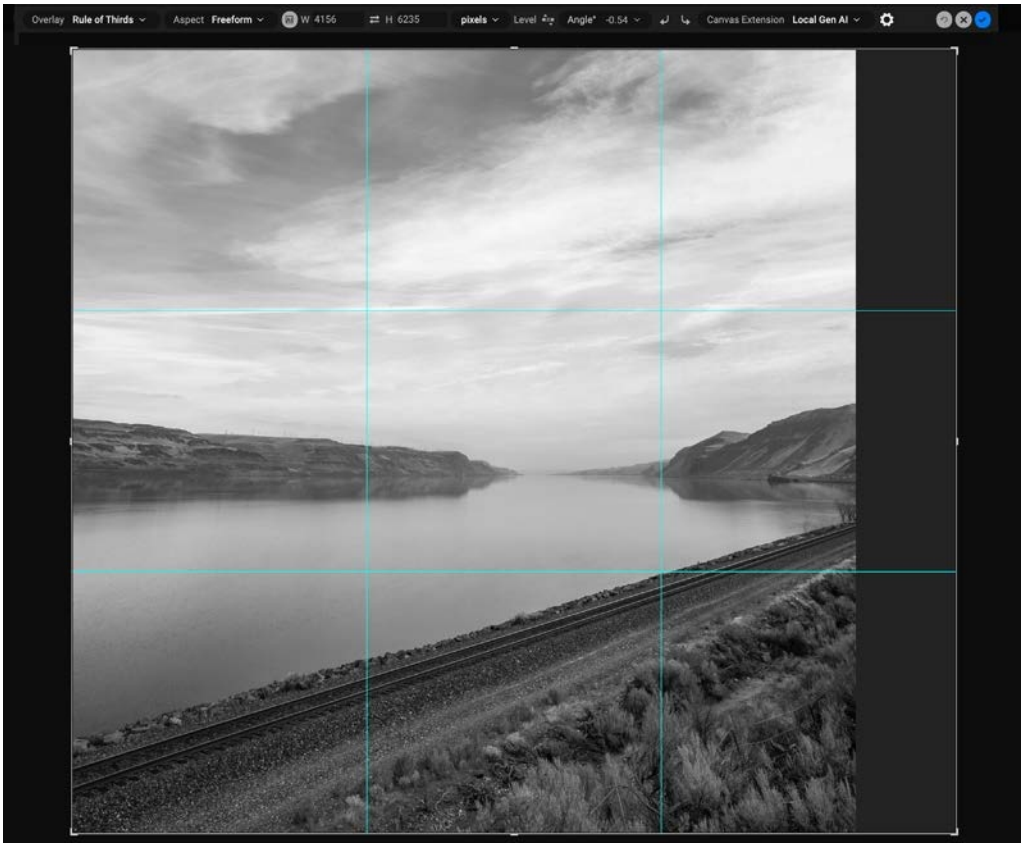
You can save AI Auto Crop and Level in a preset (see Creating Your Own Presets) or apply it to a group of photos with Copy Settings (see Copying Settings and Synchronizing Edits).

NOTE: If Freeform is selected, AI Auto Crop and Level uses the photo's original aspect ratio.

Expanding the Canvas with Generative AI

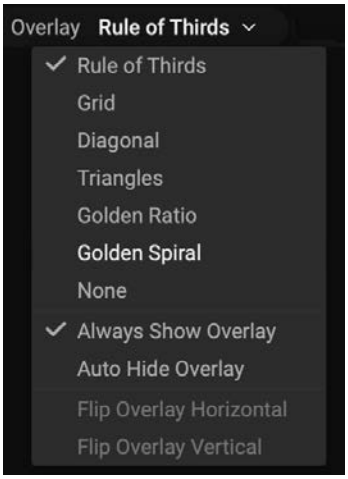
Canvas Extension uses Local Gen AI or Stability AI to expand the photo beyond its original edges, generating new content that matches the scene.

1. Choose a model from the **Canvas Extension** menu in the Tool Options bar.
2. Drag the crop border outward in the direction you want to expand.
3. Click the green Generate button to preview the results. If you want to try again, press the Generate button again.
4. **Apply**. Photo RAW generates the new area on a new layer.



To try again, press the generate button. To keep the current result and try another, hide the expanded layer, select the original layer, and crop again. See Generative AI Processing Options for details on the models and their requirements.

Crop Overlays



Overlays are compositional guides you can show while cropping. Choose one from the overlay menu in the Tool Options bar: Rule of Thirds, Grid, Diagonal, Triangles, Golden Ratio, Golden Spiral, or None. The menu also lets you:

- Show the overlay all the time, or only when your cursor is over the Preview.
- Flip the Triangles overlay vertically, or the Golden Spiral horizontally or vertically.

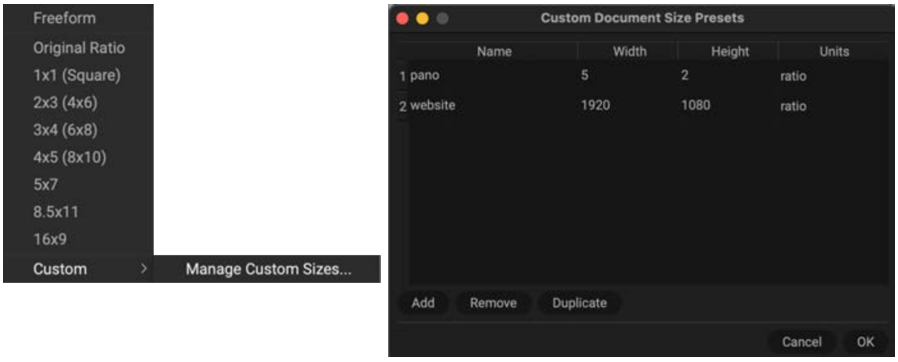
Crop Tool Options Bar



- **Overlay:** Selects an overlay, sets its visibility, and flips it.
- **Aspect:** Choose Freeform, a preset ratio, or a custom ratio.
- **AI Auto Crop and Level:** Crops and levels the photo automatically at the current ratio.
- **Width:** Sets the crop width.
- **Swap Dimensions:** Swaps width and height, which is handy for switching orientation.
- **Height:** Sets the crop height.
- **Leveling:** Drag across something in the photo that should be level.
- **Angle:** Shows and sets the rotation angle.
- **Rotate:** Rotates the photo 90° clockwise or counterclockwise.
- **Canvas Extension:** Selects a generative AI model (Local Gen AI or Stability AI) for expanding the canvas.
- **Reset:** Returns the crop to the original photo size.

- **Cancel:** Cancels the crop.
- **Apply:** Applies the crop.

Creating Custom Crop Sizes

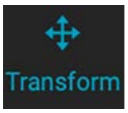


Along with the preset ratios, you can create your own. They're listed in the **Custom** submenu at the bottom of the Aspect menu.

1. Choose **Manage Custom Sizes** from the Custom submenu to open the Custom Document Size Presets window.
2. Click **Add**, then enter a name and the width and height ratio. Crop presets always use ratio as the unit.
3. Add as many as you like, then click **OK**.

NOTE: The Crop tool in Edit is non-destructive, while the one in Resize is destructive. Both can create custom presets, but Edit's presets are ratios only. If you change a preset's unit from ratio to a measurement such as inches in Resize, it no longer appears in the Edit module's Custom menu.

Transform (Move) Tool



The Transform tool moves, resizes, rotates, and flips the contents of a layer, even if your only layer is the base photo. Each layer can have its own transforms, which makes the tool useful for compositing and for adding backgrounds and textures in layered files.

When you select the tool, handles appear around the selected layer. When you're done, click **Apply** in the Tool Options bar or press Enter. To cancel, click **Cancel** or press Esc.

NOTE: The Transform tool isn't available when you use Photo RAW as a plug-in.

Repositioning a Layer

Drag inside the transform box, or press the arrow keys to nudge the layer one pixel at a time.

Resizing a Layer

Drag any handle. Corner handles adjust two sides at once and side handles adjust one side.

- Hold Shift to keep the proportions.
- Hold Option (Mac) or Alt (Windows) to resize from the center.
- Hold Shift+Option or Shift+Alt to resize proportionally from the center.

You can also type a width and height in the Tool Options bar, or click **Fill Canvas** to size the layer to fill the canvas.

Rotating a Layer

Move the cursor just outside a corner handle until it changes to the rotate cursor, then drag. You can also press Option/Alt with the left or right arrow key. To rotate in 90° steps, use the Rotate Left and Rotate Right buttons in the Tool Options bar.

Flipping a Layer

Click the Flip Horizontal or Flip Vertical button in the Tool Options bar.

Restoring a Layer After a Transform

Reset All in the Edit module doesn't undo transforms. To return a layer to its original state, select the Transform tool, undo any rotation and flips, then click **Fit to Canvas**.

Transform Tool Options Bar



- **Width:** Sets the layer width in pixels.
- **Height:** Sets the layer height in pixels.
- **Scale:** Scales the layer proportionally by percentage.
- **Rotation:** Rotates the layer by degrees.
- **Rotate Left/Right:** Rotates the layer 90° counterclockwise or clockwise.
- **Flip Horizontal/Vertical:** Flips the layer on either axis.
- **Fill Canvas:** Scales the layer to fill the document.

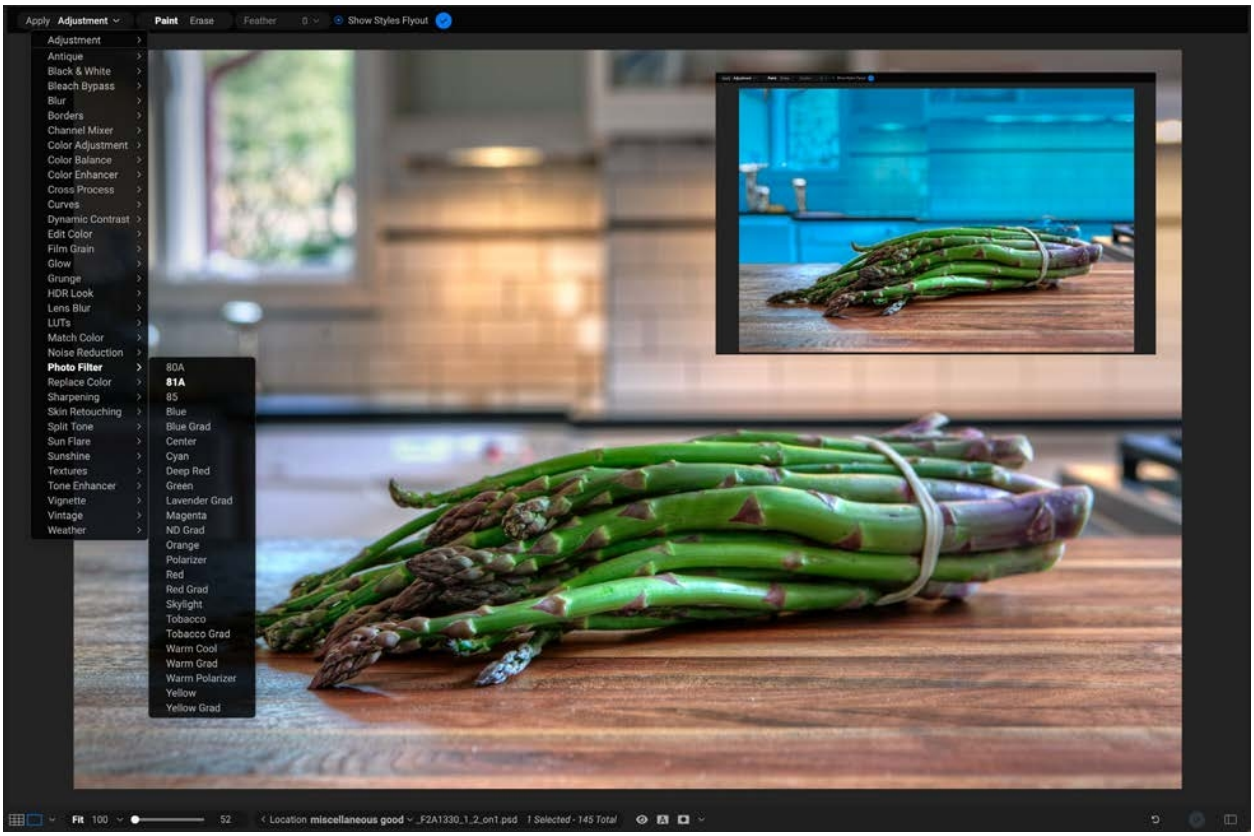
Super Select AI Tool



Super Select AI lets you select one or more regions of a photo with a click and then apply a local adjustment or Effects filter to them automatically.

Using Super Select AI

1. Select the tool in the Tool Well. Photo RAW analyzes the photo, and regions are highlighted in blue as you move the cursor.
2. Click a region to select it. Click more regions to add them, or click a selected region again to remove it.
3. Choose an option from the **Apply** menu in the Tool Options bar, or right-click the photo. Pick a local adjustment or an Effects filter. If **Show Styles Flyout** is on, you'll also see each option's styles. The photo previews each option as you hover.
4. Photo RAW adds the adjustment or filter in the Local or Effects tab, applies it to the selection, and clears the selection.
5. Make another selection to add more adjustments, or click **Done** to finish. Photo RAW switches to the View tool.



Here, the back wall (inset, upper right) was selected and warmed with an 81A photo filter, and the asparagus was selected and given a Vibrance + local adjustment to make it pop.

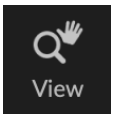
Super Select AI masks work like any other mask in Photo RAW, so you can refine them with any masking tool. See Masking Basics.

Super Select AI Tool Options Bar



- **Apply:** Chooses the local adjustment or Effects filter and style to apply.
- **Mode:** Paint In applies the adjustment to the selection. Paint Out applies it everywhere except the selection.
- **Feather:** Feathers the edges of the selection after you add an adjustment or filter.
- **Show Styles Flyout:** Shows the styles for each adjustment or filter in the Apply menu.
- **Done:** Exits the tool and selects the View tool.

View (Zoom) Tool



The View tool is selected by default when you open a photo in the Edit module. Click in the Preview to zoom in and center on that spot. Hold Option/Alt to switch to the Hand tool and pan around a zoomed photo. Double-click the tool in the Tool Well to view the photo at 100%, which is best for checking fine detail.

The View tool has no options bar. You can also zoom with Cmd/Ctrl++ and Cmd/Ctrl+-, or with the Preview Size selector at the bottom of the window.

Masking Tools

The Mask group includes nine tools for creating and refining selections. Complex masks often call for using several of them together.

At its simplest, a mask shows or hides the effect of a filter or adjustment. Masks are grayscale, from pure white to pure black. White shows the full effect, black hides it, and shades of gray act like opacity: darker grays reduce the effect and lighter grays let more through. For more, see Masking Basics.

Masking Brush

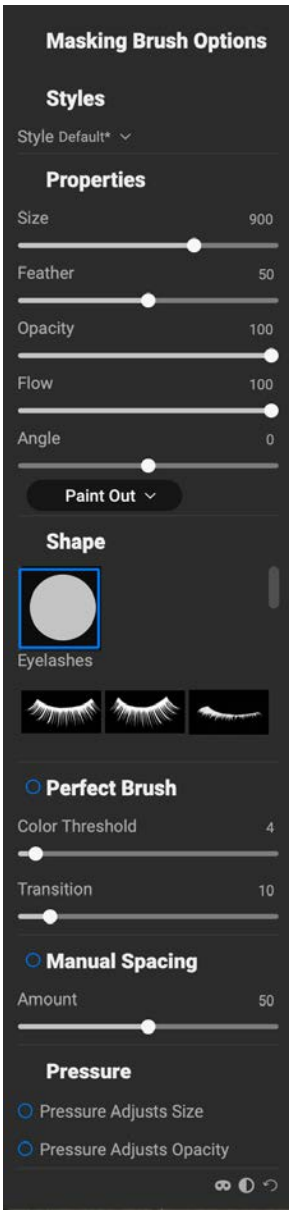


The Masking Brush paints masks for Effects filters, local adjustments, and layers. Its cursor shows two circles: the inner circle is the brush's hard edge and the outer circle is its soft, feathered edge. A plus in the center means you're painting the effect in, and a minus means you're painting it out.

Masking Brush Tool Options Bar



Click the first icon to open the full set of brush options (see Masking Brush Options Menu). The rest of the bar holds the most common settings:



- **Size:** Sets the brush size. Use a small brush at high magnification for precise work and a large brush at Fit to Screen for broad areas.
- **Feather:** Sets the brush's softness from 1 to 100 percent. Use a low feather up close for crisp edges and a high feather for broad, soft work. The outer circle of the cursor shows the feather.
- **Opacity:** Sets the brush's strength from 1 to 100 percent. Use high opacity to hide large areas quickly and lower opacity for subtle blending. You can also control opacity with a pressure-sensitive tablet, or hold Option/Alt and press a number key: 1 is 10% and 0 is 100%.
- **Paint Mode:** Paint restores the effect and Erase hides it. The plus or minus in the cursor shows the current mode. Switch modes in the options bar, press X, or hold Option/Alt to switch temporarily.

- **Perfect Brush:** Uses edge detection for precise masks. When it's on, the brush samples the colors under its center and only affects those colors, so it won't spill across edges like tree branches.

TIP: Think of opacity as the shade of gray you're painting into the mask. White shows 100% of the effect, black shows none, and grays show a percentage in between.

NOTE: To start with a hidden effect and paint it in, choose **Invert** from the mask options on the Masking tab, or press Cmd+I (Mac) or Ctrl+I (Windows).

Masking Brush Options Menu

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

Styles

Save the current brush settings as a style so you can reuse them. Choose a saved style to load its settings.

Properties

Mirrors the Size, Feather, Opacity, and Paint Mode settings in the Tool Options bar, plus two more:

- **Flow:** Sets how quickly the brush builds up to the Opacity setting. At a low flow, paint builds gradually as you brush back and forth. At 100, each stroke goes on at full opacity.
- **Angle:** Sets the angle of the brush shape. It has no effect on the default round brush but is useful with custom shapes. You can also rotate the shape with Shift+Option (Mac) or Shift+Ctrl (Windows) and [or].

Shape

Lists the brush shapes in your library. The top item is the default round brush, the standard for masking. Custom shapes let you paint in stamps, watermarks, and other shapes in the Local Adjustments tab, such as adding clouds to a dull sky or placing your own watermark precisely. See Using Custom Brushes to Add Overlays to Photos.

Perfect Brush

- **Color Threshold:** Controls how similar a color must be to the one under the brush center to be affected. Use a low value for precise work and a higher value to affect a broader range of similar colors.

- **Transition:** Sets the color-based feather. Increase it for a softer edge or decrease it for a harder one.

Manual Spacing

When checked, sets the spacing of the brush tip along a stroke. It's mainly used with custom brushes. See Using Custom Brushes to Add Overlays to Photos.

Pressure Options

The Masking Brush supports pressure-sensitive tablets. Click the gear icon in the Tool Options bar and turn on pressure control for size, opacity, or both.

Linear Gradient Mask Tool

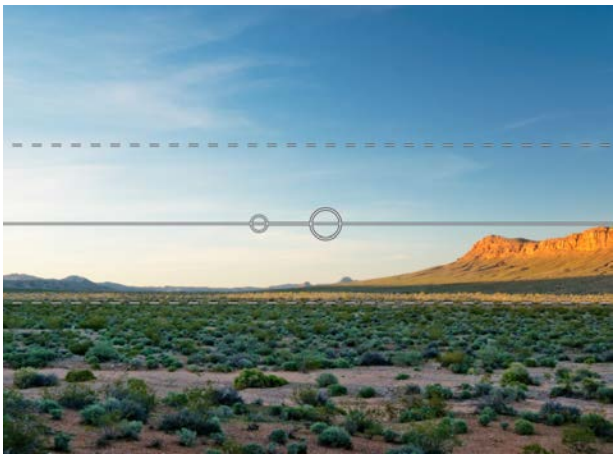


The Linear Gradient Mask tool creates a straight-line gradient mask that fades an adjustment, filter, or layer from full strength to none. A classic use is darkening a sky while keeping the foreground bright, just like a graduated filter on your lens. To create a circular or oval gradient instead, use the Radial Gradient Mask tool.

Select the tool in the Mask group of the Tool Well, or press M. You can also add a linear gradient from the Masking tab or the masking context menus.

Creating a Linear Gradient

1. Add an Effects filter or a local adjustment, or select a layer.
2. Select the Linear Gradient Mask tool.
3. Click where you want the effect to be at full strength, such as the top of the sky.
4. Drag toward where you want the effect to fade out, then release. The direction of your drag sets the angle, and the distance sets how gradual the transition is.



The gradient's outline is called a bug. You can add more than one, and each stays editable.

Adjusting a Gradient

With the tool selected, hover over the Preview to see the active gradient's controls:

- **Move:** Drag the center point.
- **Change the transition:** Drag either of the outer lines to make the fade longer or shorter.
- **Rotate:** Drag the rotation handle.

By default, Photo RAW shows the mask while you adjust a gradient so you can see exactly where the effect applies. The mask disappears when you let go.

Linear Gradient Mask Tool Options

- **Opacity:** Sets the maximum density of the mask.
- **Color Range:** Limits the mask to colors similar to those under the gradient. Higher values include a wider range.
- **Reflected:** Mirrors the gradient so the effect is at full strength in the center and fades out in both directions. Useful for a band across a horizon.
- **Invert:** Flips the mask so the effect applies to the opposite side. You can also press Cmd+I (Mac) or Ctrl+I (Windows).
- **Show Mask While Adjusting:** Shows the mask preview while you drag a gradient's controls. On by default. The preview style follows your mask view settings.
- **Add:** Adds a new gradient.
- **Delete:** Deletes the selected gradient.
- **Reset:** Clears the mask completely, removing all gradients and brushing.

Working with Multiple Gradients

Each mask can have up to six editable gradients. To add one, click **Add** or click outside the current gradient and drag.

You can adjust one gradient at a time. Inactive gradients show as small circles; click one to select it.

TIP: Gradients are subtractive: each one hides more of the effect, and overlapping gradients hide even more. You can always paint areas back in with the Masking Brush.

Radial Gradient Mask Tool

The Radial Gradient Mask tool creates a circular or oval gradient mask that fades an adjustment, filter, or layer from the shape's center to its edge. Use it to brighten a face, add a spotlight, draw attention to your subject, or create a custom vignette. For straight-line gradients, such as darkening a sky, use the Linear Gradient Mask tool.

Select the tool in the Mask group of the Tool Well, or press Shift+M. You can also add a radial gradient from the Masking tab or the masking context menus.

Creating a Radial Gradient

1. Add an Effects filter or a local adjustment, or select a layer.
2. Select the Radial Gradient Mask tool.
3. Click where you want the center of the shape.
4. Drag outward, then release. The distance sets the size and the direction sets the angle. Drag at a 45° angle to create a perfect circle.

New radial gradients start with a feather of 50 for a smooth transition. The gradient's outline is called a bug. You can add more than one, and each stays editable.

Adjusting a Gradient

With the tool selected, hover over the Preview to see the active gradient's controls:

- **Move:** Drag the center point.
- **Resize:** Drag the outer edge of the shape.
- **Feather:** Drag the inner edge to soften or harden the transition.
- **Rotate:** Drag the rotation handle.

By default, Photo RAW shows the mask while you adjust a gradient so you can see exactly where the effect applies.

Radial Gradient Mask Tool Options

- **Opacity:** Sets the maximum density of the mask.
- **Color Range:** Limits the mask to colors similar to those under the gradient. Higher values include a wider range.
- **Invert:** Flips the mask so the effect applies outside the shape instead of inside, which is handy for vignettes. You can also press Cmd+I (Mac) or Ctrl+I (Windows).
- **Show Mask While Adjusting:** Shows the mask preview while you drag a gradient's controls. On by default. The preview style follows your mask view settings.
- **Add:** Adds a new gradient.
- **Delete:** Deletes the selected gradient.
- **Reset:** Clears the mask completely, removing all gradients and brushing.

Working with Multiple Gradients

Each mask can have up to six editable gradients. To add one, click **Add** or click outside the current gradient and drag.

You can adjust one gradient at a time. Inactive gradients show as small circles; click one to select it.

TIP: Gradients are subtractive: each one hides more of the effect, and overlapping gradients hide even more. You can always paint areas back in with the Masking Brush.

Quick Mask AI Brush

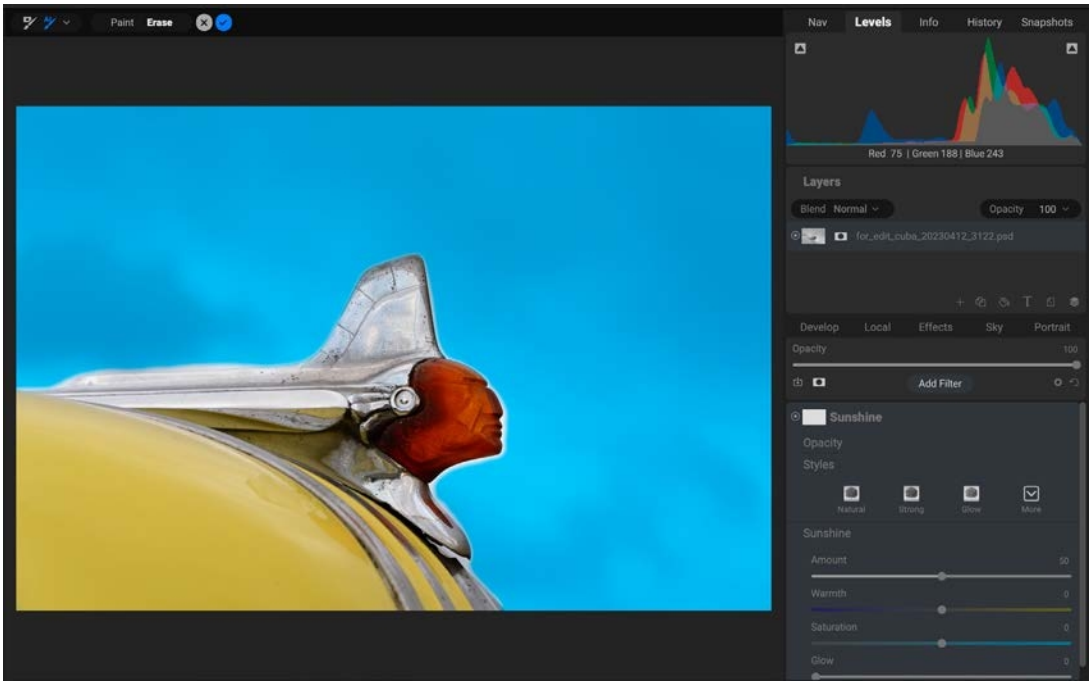


The Quick Mask AI Brush works like Super Select AI, but it only creates a mask for the current filter, local adjustment, or layer. It doesn't add a new filter or adjustment.

Using Quick Mask AI

1. Add a filter in Effects or a local adjustment in the Local tab, or select a layer or the master mask.
2. Select the Quick Mask AI Brush and move the cursor over your photo. Regions are highlighted in blue as you hover.
3. Click a region to select it. Click more regions to add them, or click a selected region again to remove it.
4. Choose **Paint** to apply the effect to your selection, or **Erase** to apply it everywhere except your selection.

5. Click **Done** (the checkmark). Photo RAW creates the mask and selects the Refine Brush so you can fine-tune it.



Here, a Sunshine filter was added. To keep it off the sky, the sky was selected with Quick Mask AI and Erase was chosen. Clicking Done creates a mask with the sky removed.

Quick Mask AI masks work like any other mask, so you can refine them with the other masking tools and the refinement sliders on the Masking tab. See Masking Basics and The Masking Tab.

Quick Mask AI Brush Options Bar



- **Mode:** Paint applies the effect to the selection. Erase applies it everywhere except the selection.
- **Cancel:** Cancels and switches to the View tool.
- **Done:** Creates the mask and selects the Refine Brush.

Quick Mask Brush

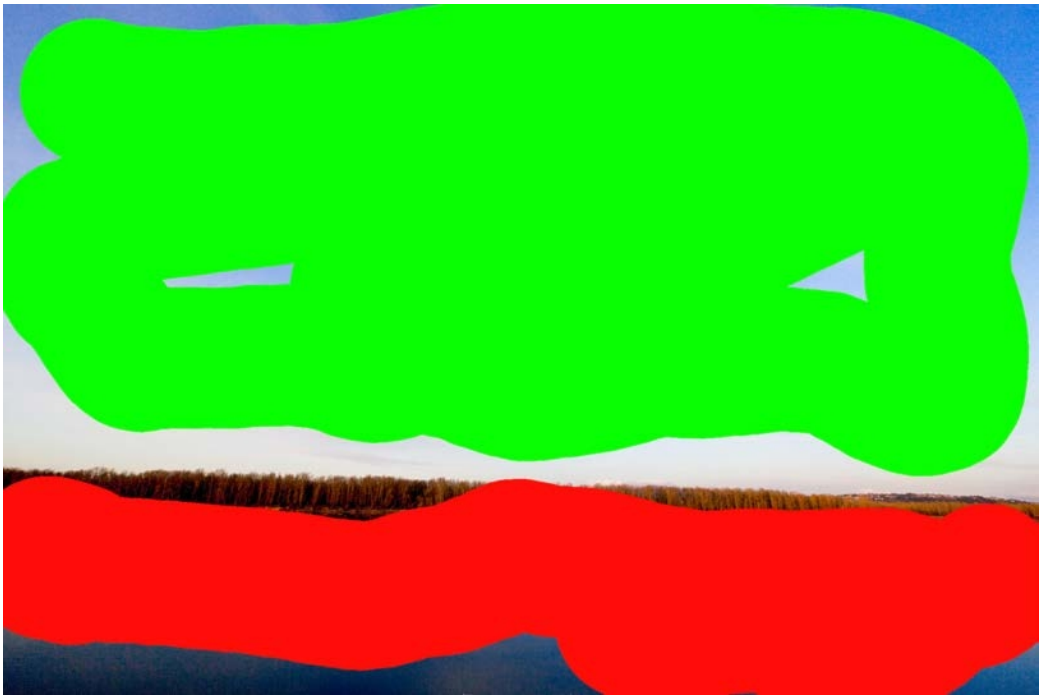


The Quick Mask Brush uses machine learning to create high-quality masks from just a few strokes. Paint green over areas you want to keep and red over areas you want to drop. Photo RAW analyzes the color, tone, and texture of those areas, finds the edges, and builds the mask for you. Use it with layers to replace skies or with filters to apply them selectively.

Using the Quick Mask Brush

Add a filter in Effects or a local adjustment, or select a layer, then select the Quick Mask Brush.

1. **Mark what to drop and keep.** You don't need to paint precisely or cover everything. A few representative strokes are enough. In Drop mode (the default), paint over areas to remove; these strokes appear red. Then switch to Keep mode in the Tool Options bar, or hold Option/Alt, and paint over areas to keep; these appear green.



2. **Preview the mask.** Click **Apply** in the Tool Options bar or the Quick Mask HUD. A temporary mask shows red areas masked out and green areas kept. Edges look rough at this stage and are smoothed when the final mask is created.

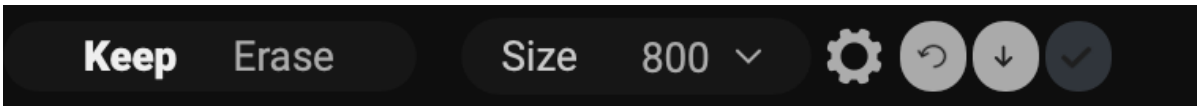


3. **Finish the mask.** If the preview looks good, click **Done**. If not, add more Keep and Drop strokes and click Apply again to update the preview. When you click Done, Photo RAW refines the edges precisely and switches to the Refine Brush.



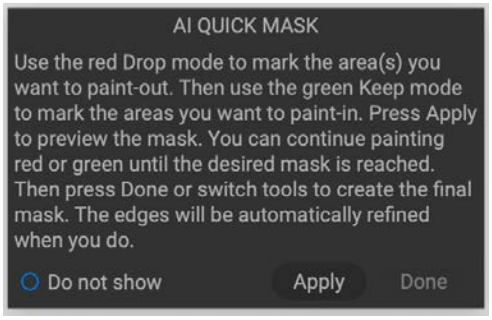
The finished mask (shown as a red overlay) is applied to the current filter. You can refine it further with any of the mask refinement tools.

Quick Mask Brush Options Bar



- **Mode:** Switch between Drop and Keep.
- **Size:** Sets the brush size. Use a small brush up close for precise work and a large brush at Fit to Screen for broad areas.

Click the gear icon in the Tool Options bar for more settings:



- **Pressure Adjusts Size:** With a pressure-sensitive tablet, pressing harder makes the brush larger, up to the current Size setting.
- **Refine Edge:** Automatically refines the edges of the finished mask for a more natural transition. On by default and recommended for most photos.
- **Show HUD:** Shows the Quick Mask HUD with instructions for using the tool.
- **Overlay:** Sets the opacity of the red and green overlays. At 100, only the mask shows. The default is 50.

Line Mask Tool

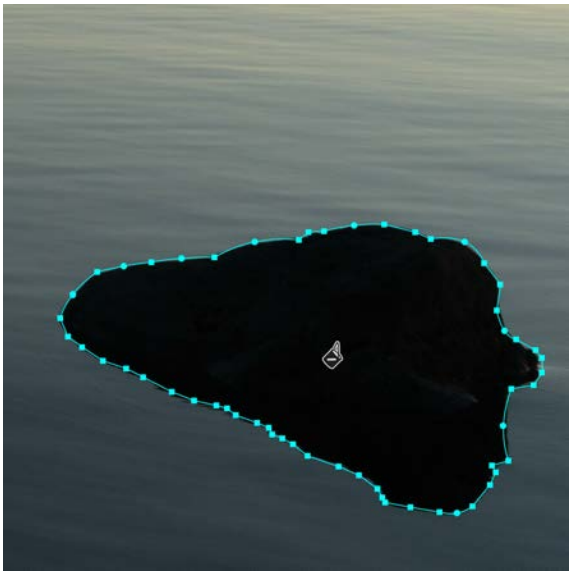


The Line Mask tool creates masks from straight lines that you can bend into curves to fit the object you're masking. Line masks are re-editable, can be copied and pasted like any other mask, and each mask can contain several of them.

Creating a Line Mask

1. Click along the outline of the area you want to mask. Each click (or pen tap) adds a point, shown as a small square.

2. To curve a segment as you go, move the cursor back over the line before the current point. Drag the circle that appears in or out, then click to place the next point.
3. To close the shape, click the first point. The cursor changes to a paint bucket.
4. Click inside the shape to create the mask.

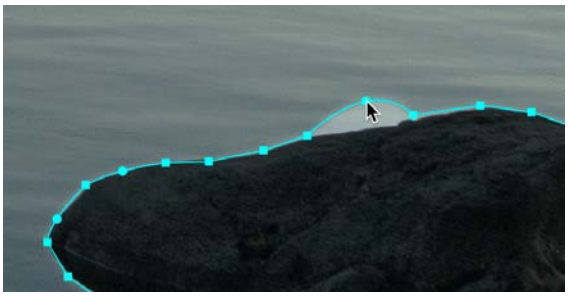


Editing a Line Mask

After closing the shape, you can set its feather and opacity and adjust its points:

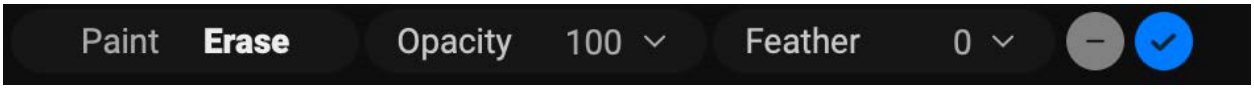
- Drag any point to move it.
- Hover over or click a point to show a circle between it and the previous point. Drag the circle to curve that segment.
- Hold Shift and click the line to add a point.
- Right-click a point and choose **Delete Point** to remove it, or **Delete Line Mask** to remove the whole mask.

When you're finished, click **Done** in the Tool Options bar, or create another line mask.



To edit a line mask later, select the filter, layer, or adjustment that holds it and choose the Line Mask tool. Hover over the masked area to see its outline in light blue, then click the outline to show its points and curve handles. (Curves shown exaggerated for effect.)

Line Mask Tool Options Bar



- **Mode:** Paint applies the effect inside the shape. Erase applies it everywhere except the shape.
- **Opacity:** Sets the mask's opacity from 1 to 100 percent. Lower values let more of the underlying layer show through.
- **Feather:** Sets the softness of the mask edge from 1 (hard) to 100 (soft and wide).
- **Delete:** Removes the selected line mask.
- **Done:** Saves the line masks and returns to the View tool.

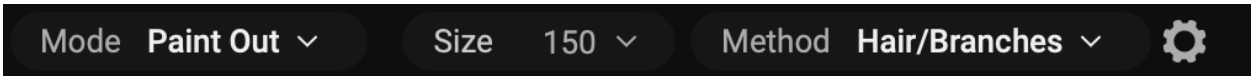
Refine Brush



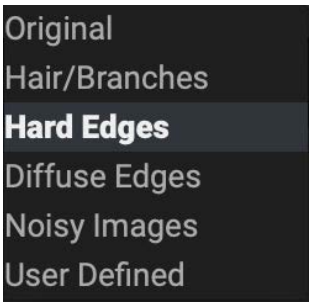
The Refine Brush is one of Photo RAW's most versatile tools. Use it to clean up intricate areas and mask edges, whether the mask came from the Masking Brush, Super Select AI, or another tool, or to create a new mask from scratch.

As you paint, your strokes appear as a red overlay. When you release the mouse button, Photo RAW refines the mask edge.

Refine Brush Tool Options



- **Mode:** Paint Out refines by removing from the mask, Paint In refines by adding to it, and Auto picks the best approach. Paint Out is recommended in most cases.
- **Size:** Choose a size just larger than the edge between subject and background. Oversized brushes are slower and can give lower-quality results. The maximum size is 500 pixels. You can also change size with the scroll wheel (see Using ON1 Apps with a Scroll Wheel).
- **Method:** Chooses the refinement algorithm for your subject. There are five methods, plus User Defined, which is created when you change any setting in the Gear menu.



- **Original:** The algorithm from earlier versions of Photo RAW (Mode 1 in the Gear menu).
- **Hair/Branches:** Optimized for fine detail such as hair and branches.
- **Hard Edges:** Best for masks with distinct edges.
- **Diffuse Edges:** Best where edge detail is soft or poorly defined.
- **Noisy Images:** Works well on photos with higher noise.

Gear Menu Settings

The Gear menu includes pressure control for brush size and lets you fine-tune the refinement methods:

- **Mode (1 or 2):** Mode 1 is the original algorithm and is still useful in many cases. Mode 2 is the newer algorithm.
- **Sensitivity (0–100):** Edge sensitivity. Use low values for diffuse edges and high values for hard edges. Mode 2 only.
- **Locality (0–30):** How widely the tool searches for similar areas along the brush edge. Higher values expand the search. Mode 2 only.
- **Smoothness (0–100):** Smooths the refined result. Higher values give smoother edges. Mode 2 only.
- **Noise (0–100):** A noise filter applied after refinement. Use higher values on noisier photos. Modes 1 and 2.



Any change in the Gear menu is saved to the User Defined method until you change it again. Most of the time, though, one of the five main methods will give you what you need.

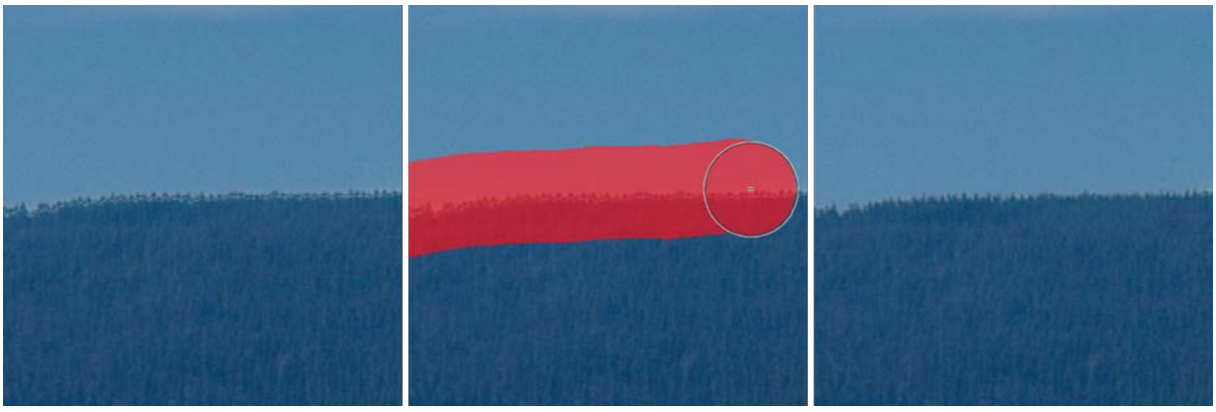
Working with the Refine Brush

Masks often struggle at edges and in fine detail. You'll notice it when an adjustment leaves halos along an edge or misses areas it should cover. The Refine Brush, along with the Chisel and Blur brushes, helps you fix these transitions for more realistic results. Common uses include:

- Painting along mask edges that are incomplete or need smoother transitions.
- Painting over large areas of fine detail, such as trees or hair.
- Encircling an area to add to or subtract from a mask, or to create a new one.

Refining an Edge

Set the brush just larger than the edge, choose the right method, and brush along it.



Here, a sky adjustment masked with Mask AI left halos along the tree line. Brushing with the Diffuse Edges method smoothed the transition. (Effect exaggerated for demonstration.)

Refining Fine Detail

For branches, hair, and other fine detail, paint over the whole area.



The Mask AI mask of this tree (left) filled in the interior branches completely. Broad strokes with the Hair/Branches method (center) let Photo RAW separate the branches from the sky for a much more realistic mask.

Encircling an Area

Draw an outline around the object you want to mask:

- If the filter or adjustment already has a mask, choose **Paint Out** to remove the circled area or **Paint In** to add it.
- If there's no mask yet, encircling creates a new mask of that area.



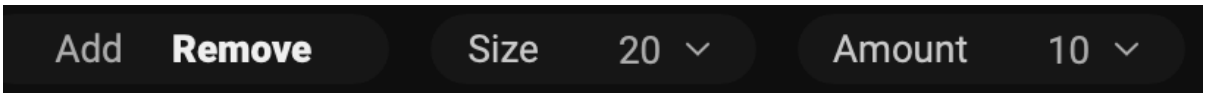
For more on masking, see Masking Basics.

Chisel Brush



The Chisel Brush removes fringes and halos along hard mask edges. Fringes are common when the background you're removing is brighter than the foreground. Like a woodworking chisel or plane, it shaves off just a sliver along the edge. Because it only affects edges, you don't have to be precise. Just drag along the edge you want to clean up.

Chisel Brush Options



- **Mode:** Remove from or add to the mask edge.
- **Size:** Sets the brush size. A large brush is fine and makes the work faster, since size doesn't change how much is removed.
- **Amount:** Sets how many pixels are removed or added with each stroke.

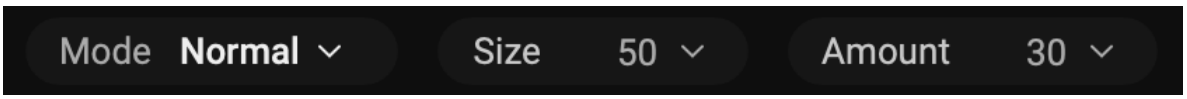
TIP: Double-click the Chisel Brush icon to apply it to the entire mask.

Blur Brush



The Blur Brush softens mask edges wherever you paint. Softening the edges of blurry or semi-transparent subjects such as hair helps them blend more naturally with a new background. Just brush over the edges you want to soften.

Blur Brush Options



- **Mode:** Remove blurs and lightens the mask edge, Add blurs and darkens it, and Normal blurs both.
- **Size:** Sets the brush size. A large brush is fine and makes the work faster, since size doesn't change the amount of blur.
- **Amount:** Sets the amount of blur. Use a low amount to keep detail.

TIP: Double-click the Blur Brush icon to apply it to the entire mask.

Retouching Tools

The Retouch group has five tools for removing distractions: the Healing Brush, Generative Eraser, Perfect Eraser, Retouch Brush, and Clone Stamp.

The Healing Brush is non-destructive, so you can adjust each fix at any time. The Generative Eraser places its results on a new layer. The other tools can't undo individual fixes, but you can reset all retouching from the Settings menu at any time (see Resetting Edits).

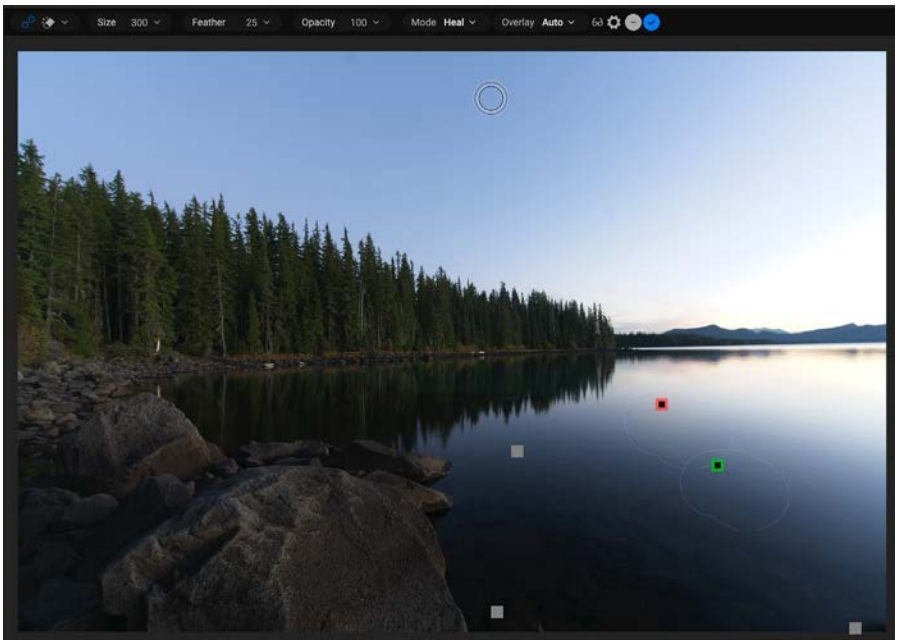
Healing Brush



The Healing Brush removes distractions such as dust spots, power lines, and unwanted people using content-aware fill. It's fully non-destructive: every area you brush can be edited or removed later.

Using the Healing Brush

Paint over a distraction, and Photo RAW blends in a matching area to replace it. Two markers appear: red for the area removed and green for the source used to fill it. Drag either marker to try a different spot. Inactive markers appear as gray squares until you click them. Press Delete to remove the selected fix.

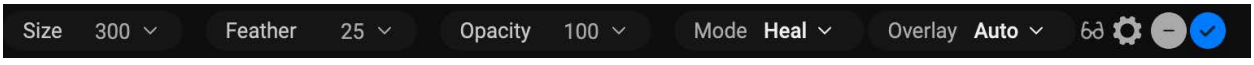


Healing Modes

- **Heal:** Uses content-aware matching from a nearby area to hide the object.
- **Stamp:** Copies the exact pixels from the source, like the Clone Stamp, but non-destructively.
- **Copy:** Duplicates the brushed object to a new spot instead of removing it.
- **Move:** Moves the brushed object to a new spot and fills in where it was.

NOTE: You can't change a fix's mode after it's applied. To change it, select the marker, click **Delete** in the Tool Options bar, choose the new mode, and brush the area again.

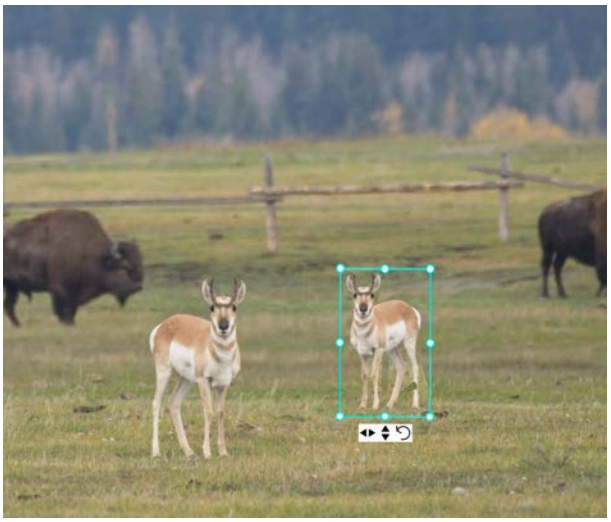
Healing Brush Options



- **Size:** Sets the brush size.
- **Feather:** Sets the brush hardness.
- **Opacity:** Sets the strength of the fix. Use 100% to remove a flaw completely or less to soften it.

- **Mode:** Heal, Stamp, Copy, or Move.
- **Overlay:** Auto shows all markers, with the current one in red and green and the rest in gray. Selected shows only the current marker; the others appear as you move over the photo.
- **Visualize Dust:** Shows a high-contrast view that makes sensor dust easier to spot.
- **Pressure Adjusts Size** (gear icon): Lets a pressure-sensitive tablet control brush size.

Transforming Retouched Areas



Hold Option (Mac) or Alt (Windows) and hover over the selected destination marker. A box appears around it:

- Drag the handles to resize. Hold Shift to keep proportions.
- Click and drag outside the box to rotate.
- Click the icons under the box to flip horizontally or vertically.

Combined with Copy or Move mode, this makes it easy to duplicate and transform subjects in your frame, like the copied pronghorn above.

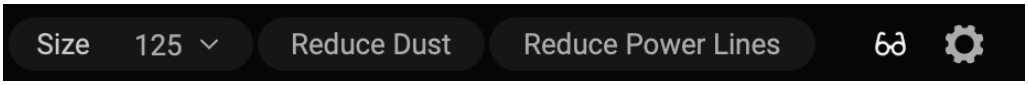
Perfect Eraser



The Perfect Eraser removes distractions and blemishes using a content-aware algorithm that fills the painted area with natural-looking results. It also removes dust spots and power lines automatically.

Paint over the entire area you want to remove. A red overlay shows where you've painted. If the first pass isn't perfect, paint over it again; the result improves with each pass. You can also fine-tune the area afterward with the Retouch Brush.

Perfect Eraser Options



- **Size:** The default is 125 pixels and the maximum is 500. Change it in the Tool Options bar or with [and].
- **Reduce Dust:** Scans the photo and removes obvious dust spots. It's intentionally conservative so it doesn't remove things that might not be dust, so a few spots may remain.
- **Reduce Power Lines:** Finds and removes clearly visible power lines.
- **Visualize Dust:** Shows a high-contrast overlay that makes sensor dust easier to find.
- **Gear menu:** Choose the algorithm used. The default is Patch Match, which works well for most cases. If you have a region with strong repeating lines such as brick, choose the Structure Shift option. The Legacy option is an earlier algorithm maintained for backwards compatibility only. You can also turn on **Pressure Adjusts Size** for a pressure-sensitive tablet.

Generative Eraser



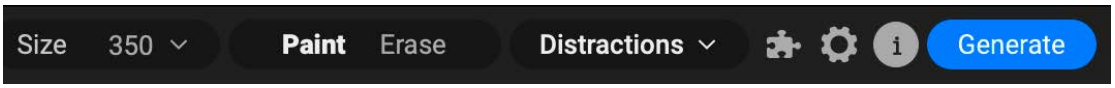
The Generative Eraser uses ON1's Local Gen AI to remove larger distractions than the other retouching tools can handle.

Using the Generative Eraser

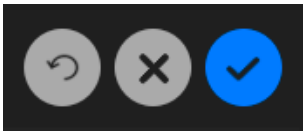
1. Paint over each object you want to remove, covering it completely. A red overlay shows where you've painted.
2. Click the green **Generate Content** button in the Tool Options bar. Photo RAW replaces the areas with content that blends seamlessly into the photo.
3. Click **Retry** to try again, or choose Undo to go back and adjust your selection.
4. Click **Apply** to keep the result.

The results go on a new layer, with your original photo at the bottom of the stack. When you return to Browse, the file is saved in .onphoto format.

Generative Eraser Options



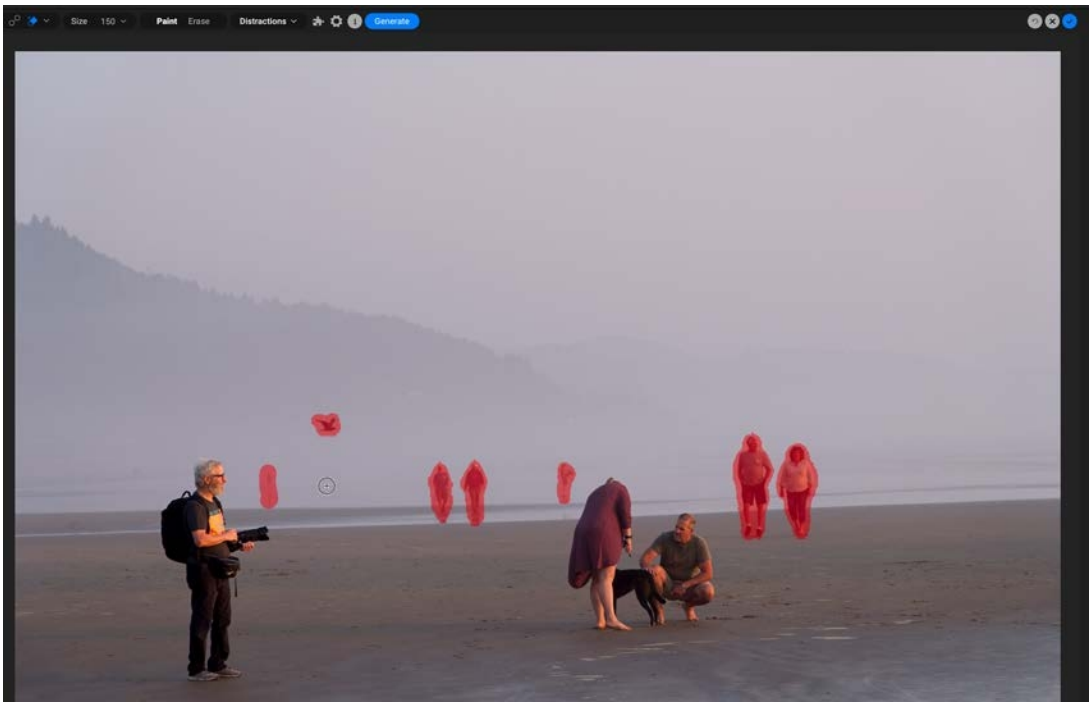
- **Size:** Sets the brush size.
- **Mode:** Paint (the default) marks objects for removal. Erase refines your selection or removes an object from it before you generate.
- **Distractions:** Selects all people, wires, or vehicles in the photo.
- **Quick Mask AI Brush** (puzzle icon): Click regions of the photo to add them to the selection. See Quick Mask AI Brush.
- **AI Model** (gear icon): Choose Local Gen AI, Local NonGen AI, Cloud Gen AI, or Stability AI.
- **Generate Content:** Removes the selected areas and fills them with generated content. Changes to Retry after you generate.



At the far right of the options bar:

- **Clear:** Clears the current selection.
- **Cancel:** Exits without applying any generated content and switches to the View tool.
- **Apply:** Applies the generated content to a new layer.

TIP: Combine tools to build your selection. For example, use Distractions to select every person, switch to Erase and paint over anyone you want to keep, then use the Quick Mask AI Brush to add other objects. Click Generate Content when you're ready.



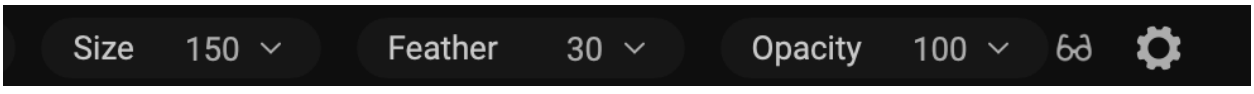
Retouch Brush



The Retouch Brush removes small imperfections such as sensor dust, acne, and blemishes. Dab it on a spot, and it fills the area with nearby color and texture. It's also great for retouching skin.

TIP: Use the smallest brush that covers the spot, and dab rather than making long strokes. If you don't like the result, choose Undo and try a smaller brush or a different stroke.

Retouch Brush Options



- **Size:** Sets the brush size.
- **Feather:** Sets the brush hardness. A feather above 50 usually blends most naturally.
- **Opacity:** Sets the strength of the fix. Use 100% to remove a flaw completely or less to soften it.

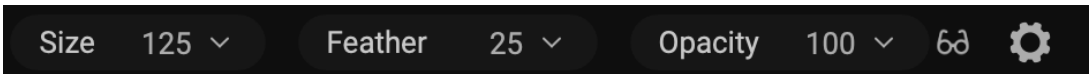
- **Visualize Dust:** Shows a high-contrast overlay that makes sensor dust easier to find.
- **Pressure Adjusts Size** (gear icon): Lets a pressure-sensitive tablet control brush size.

Clone Stamp



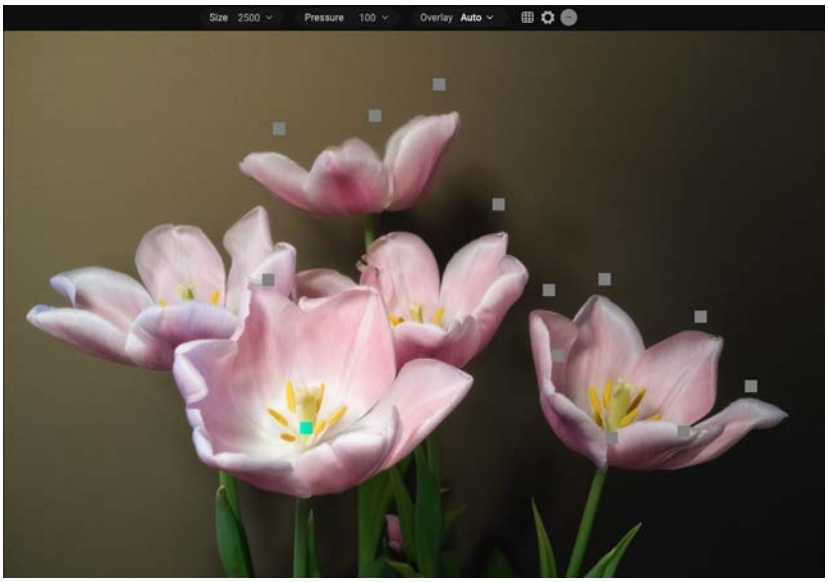
The Clone Stamp replaces one area of a photo with pixels from another. Hold Option (Mac) or Alt (Windows) and click the area you want to copy from. Then drag over the area you want to cover.

Clone Stamp Tool Options



- **Size:** Sets the brush size.
- **Feather:** Sets the brush hardness. A feather above 50 usually blends most naturally.
- **Opacity:** Sets the strength of the clone. Use 100% to cover an area completely or less to soften it.
- **Visualize Dust:** Shows a high-contrast overlay that makes sensor dust easier to find.
- **Pressure Adjusts Size** (gear icon): Lets a pressure-sensitive tablet control brush size.

Liquify Tools



Here, Bloat and Pinch were used to shrink some of the background tulips and enlarge the one in the foreground. Each region is marked with a gray square that you can click to reshape or delete it.

The Liquify group's three tools (Push, Bloat, and Pinch) push, enlarge, and shrink areas of a photo to fix flaws or add emphasis. They warp differently but share the same options, and like the Healing Brush, every adjustment is non-destructive.

The selected region is shown as a blue square and the others as gray squares. Click a square to select it, then move the stroke or change its Size and Pressure. Press Delete to remove it. You can't apply multiple strokes over the same region.

TIP: It's easy to overdo Liquify. Small, careful adjustments usually look most natural.

The Liquify Tools



Push warps pixels in the direction you brush, much like finger painting. It works the most like a regular brush of the three.

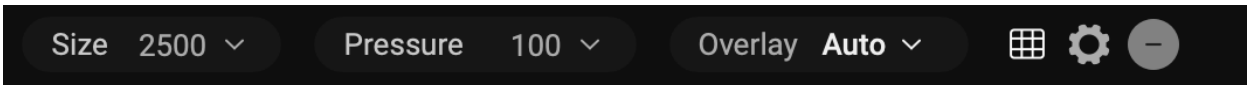


Bloat enlarges the area under the cursor. Click and hold, or click repeatedly, to increase the effect up to the Pressure limit. Changing the brush size is often more effective than long strokes.



Pinch shrinks the area under the cursor. Click and hold to increase the effect up to the Pressure limit. For larger areas, try adjusting the brush size or using several regions instead of one long stroke.

Liquify Tool Options



- **Size:** Sets the brush size.
- **Pressure:** Sets the strength of the warp.
- **Overlay:** Selected shows only the current stroke. Auto shows all Liquify strokes, with the selected one in blue and the rest in gray.
- **Show Mesh:** Shows a grid over the photo that distorts where Liquify has been applied, a handy live map for deciding whether a region needs more or less Size or Pressure.
- **Tablet Adjusts Size** (gear icon): Lets a pressure-sensitive tablet control brush size.
- **Tablet Adjusts Pressure** (gear icon): Lets a pressure-sensitive tablet control the Pressure amount.
- **Delete:** Removes the selected region.

Masking Basics

Masking is one of Photo RAW's most powerful features. Every layer, every Effects filter, every local adjustment, and the Effects stack as a whole can have its own mask. The Sky tab masks the sky for you automatically, and Portrait AI automatically masks each face it retouches.

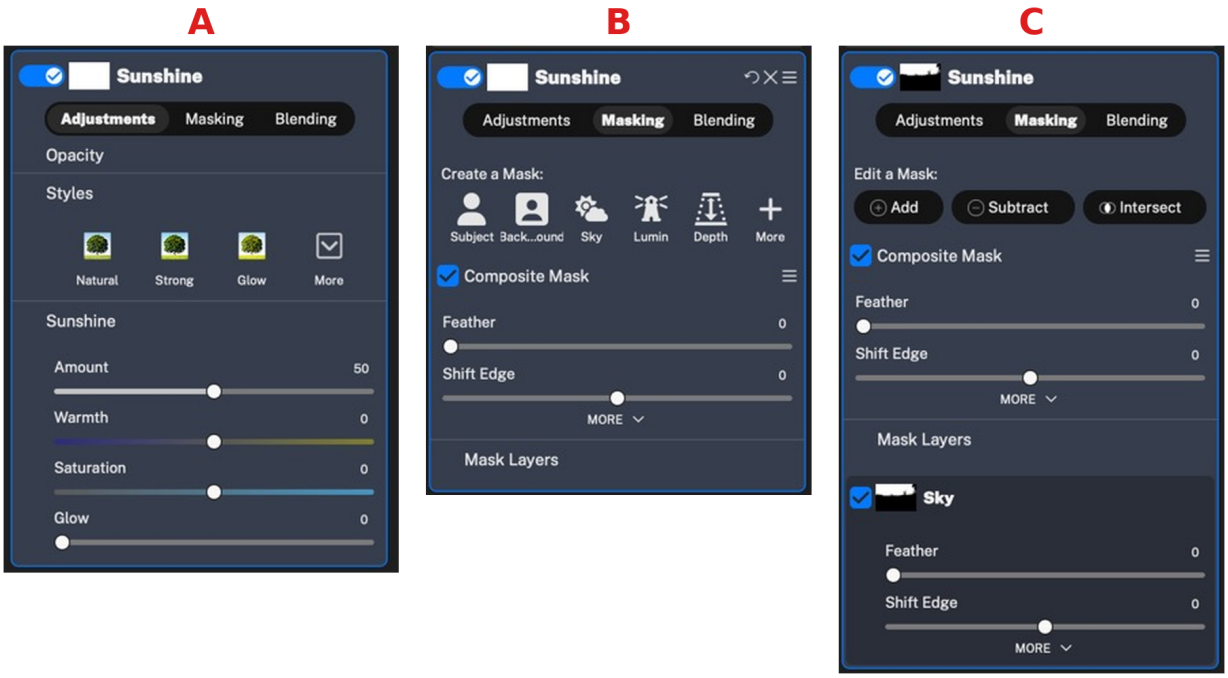
How Masks Work

A mask shows or hides the effect of a filter, adjustment, or layer. Masks are grayscale, from pure white to pure black. White shows the full effect and black hides it, which is easy to remember as "black conceals, white reveals." Shades of gray act like opacity: darker grays reduce the effect and lighter grays let more through.

You can paint with black, white, or any gray to remove or reduce an effect in parts of your photo, or let Photo RAW's AI build the mask for you. A single mask can combine several mask layers, such as a subject mask with a gradient subtracted from it. Photo RAW can also create luminosity masks, based on the brightness of each pixel, and depth masks, based on how far each part of the scene is from the camera.

Where Masking Lives

Masking controls live right on the layer, filter, or local adjustment they belong to. Each one has a set of tabs, such as **Adjustments**, **Masking**, and **Blending**, so you always know which mask you're working on. Open the **Masking** tab to create a mask, combine mask layers, and refine edges. See The Masking Tab.



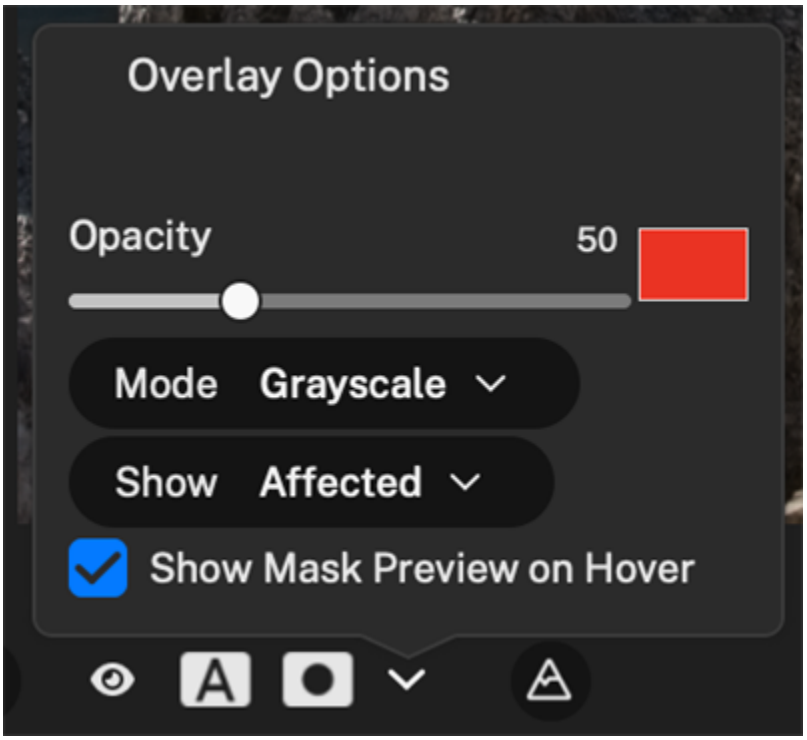
The tabs on a Sunshine filter: (A) the Adjustments tab holds the filter's styles and sliders. (B) Before a mask exists, the Masking tab shows the Create a Mask buttons. (C) After adding a Sky mask, the Masking tab shows Add, Subtract, and Intersect for editing the mask, along with the composite mask and its mask layers.

Every masking tool and button works the same way no matter where you use it. For example, a Subject mask always keeps the subject (white) and masks out everything else (black), whether it's on a layer, a filter, or a local adjustment.

NOTE: The Properties window is still available if you prefer it. It's hidden by default; choose it from the Window menu to show it. It stays in sync with the Masking tab. See The Properties Window.

Viewing Masks

Press O to view the current mask as a red overlay or as the grayscale mask itself. Hover over any mask thumbnail to preview just that mask on your photo. All of the overlay options are in one place, in the mask overlay menu in the footer below the Preview. See Creating Masks.



What's New in Masking

Masking was redesigned in Photo RAW 2027 to be easier and more consistent:

- **Masking on the object:** Masking and blending controls are now tabs on each layer, filter, and local adjustment, including the Effects stack as a whole.
- **Consistent behavior:** Every tool and mask button behaves the same on every object type, and combining mask layers with Add, Subtract, and Intersect is clearer.
- **Hover to preview:** Hover over a mask thumbnail to see that mask on your photo.
- **Refine controls up front:** Feather and Shift Edge are always on the Masking tab, with more refinement controls a click away.
- **Overlay options in one place:** Turn the mask preview on or off and set its mode, color, and opacity from the footer.
- **Two gradient tools:** The Gradient Mask tool is now the Linear Gradient Mask and Radial Gradient Mask tools, and you drag to create each gradient.

- **All tools visible:** Every masking tool appears in the Tool Well, with no hidden menu.

If you're used to the old workflow, don't worry. Picking a masking tool and painting works just as it always has. Only combining multiple mask layers on one object behaves differently.

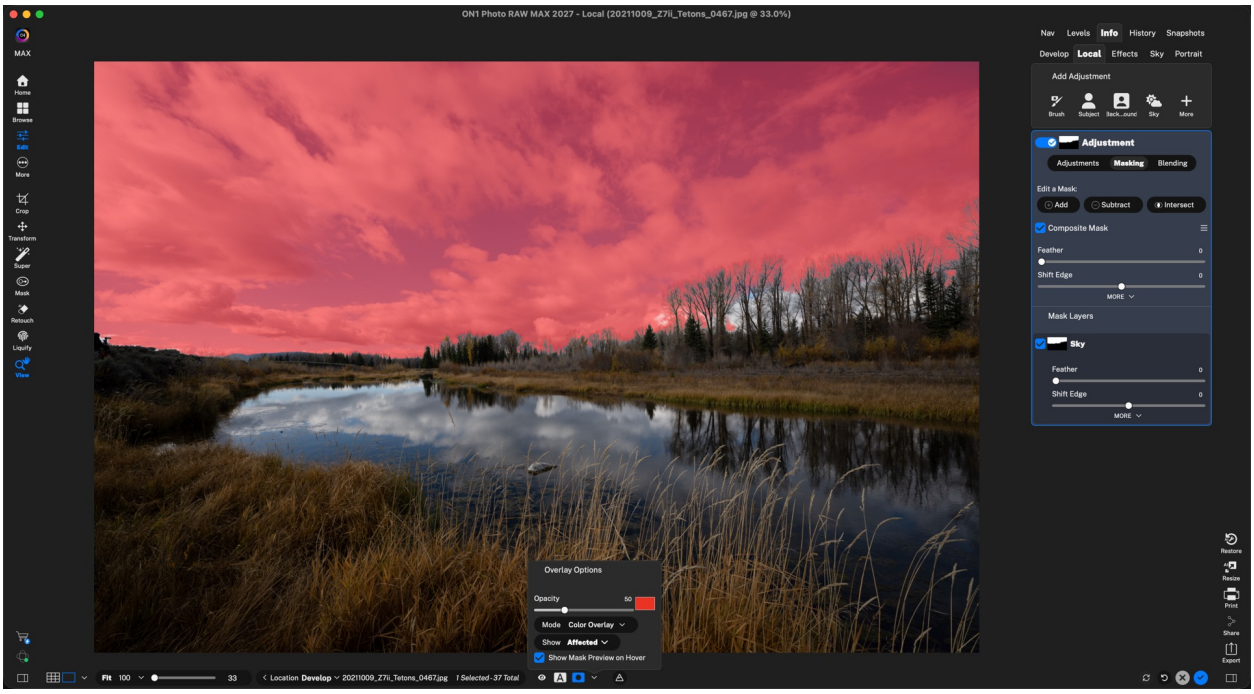
Creating Masks

Photo RAW gives you several ways to create a mask:

- **One-click masks:** On a layer, filter, or local adjustment, open the **Masking** tab and click **Subject**, **Background**, **Sky**, or another common mask type. Click **More** for the full list. See The Masking Tab.
- **Masking tools:** The Masking Brush, Linear and Radial Gradient Masks, Quick Mask AI Brush, Quick Mask Brush, and Line Mask, all in the Mask group of the Tool Well. See Masking Tools.
- **Super Select AI:** Click regions of a photo to add a local adjustment or Effects filter that's already masked to them. Once the adjustment is added, Photo RAW switches back to the View tool so you can start adjusting. See Super Select AI Tool.
- **Mask AI:** Select specific regions, such as people, plants, or buildings. See Using Mask AI to Select Regions.

When you create a mask automatically, such as with Subject or Sky, it starts black, with the selected region in white. Only that region gets the effect. You can then add more mask layers, subtract from the mask, or intersect it with another mask, and refine its edges with the Refine, Chisel, and Blur brushes or the refinement sliders on the Masking tab.

A new layer or Effects filter starts with no mask, so the effect applies everywhere. A new local adjustment starts with a black mask, so you paint or mask the adjustment in where you want it.



This local adjustment, masked with the Sky option, lightens the sky. The mask overlay is on, so the affected area appears in red.

Viewing a Mask

You can view a mask as a red overlay on your photo or as the grayscale mask itself. Press O or click the mask overlay button in the footer below the Preview to turn the overlay on or off.



Here's an example: (A) the original, (B) the red overlay after adding the sky mask, (C) the grayscale view, and (D) the result with the overlay off, showing the brighter sky.

Click the arrow next to the mask overlay button to open the overlay options:

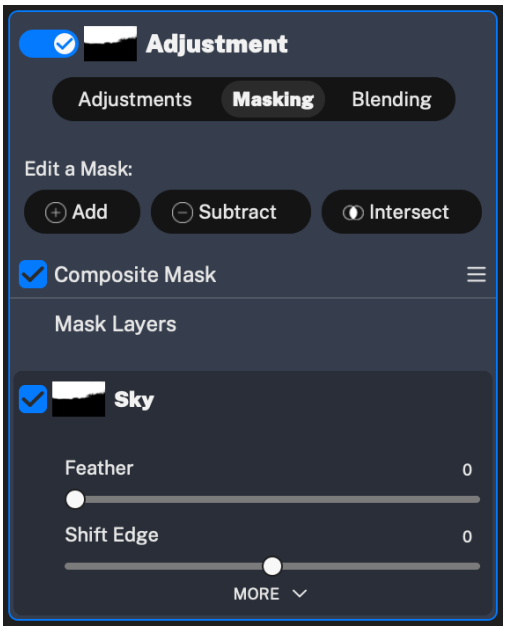
- **Mode:** Color overlay, color overlay only while brushing, or grayscale.
- **Color** and **Opacity:** Change the overlay color and how strongly it shows.

- **Show Mask on Mouseover:** When on (the default), hovering over a mask thumbnail previews that mask on your photo. Hover over the combined mask to see the whole mask, or over a single mask layer to see just that layer. Turn this off if the preview gets in your way.

TIP: All Edit module tools stay available while you view a mask. Zoom in for detail and use the refinement brushes on fine edges.

The Masking Tab

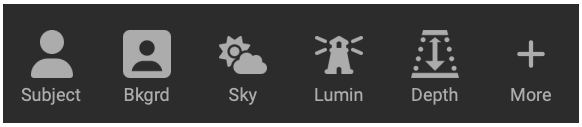
Every layer, Effects filter, and local adjustment has a set of tabs, such as **Adjustments**, **Masking**, and **Blending**. Text layers also have a **Text** tab. The **Masking** tab is your masking control center for that object, so there's never any doubt about which mask you're editing.



The Effects stack as a whole also has Masking and Blending tabs, at the top of the Effects tab with the master opacity. See Master Opacity, Blending, and Mask Options.

Creating a Mask

When an object doesn't have a mask yet, the top of the Masking tab shows buttons for the most common mask types:



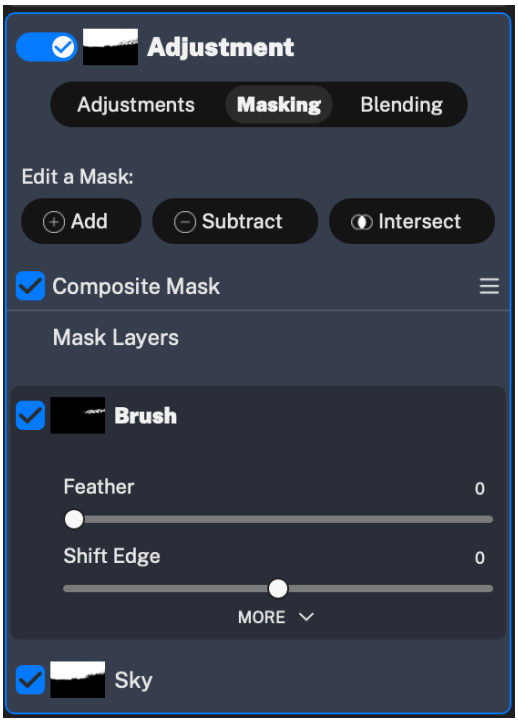
- **Subject:** Masks the main subject.

- **Background:** Masks the background.
- **Sky:** Masks the sky.
- **Luminosity:** Creates a luminosity mask. See Luminosity Masks.
- **Depth:** Creates a depth mask. See Depth Masks.

Click **More** for every mask type, including Color Range, Mask AI regions, and the masking tools (Masking Brush, Linear and Radial Gradient Masks, Quick Mask AI Brush, Quick Mask Brush, and Line Mask).

Automatic masks start black, with the selected region in white, so only that region gets the effect.

Mask Layers



A mask can be made of several mask layers. The Masking tab shows the combined mask at the top and each mask layer below it.

- **Preview a mask:** Hover over a thumbnail to see that mask on your photo. Hover over the combined mask to see the whole thing, or over a mask layer to see just that layer.
- **Edit a mask layer:** Click a mask layer made with a tool, such as a gradient or brush, and Photo RAW selects that tool for you.
- **The first mask layer** is always set to Add. Its mode can't be changed.

Add, Subtract, and Intersect

Once a mask exists, the top of the Masking tab shows three buttons. Choose what you want to do first, then choose the mask type:

- **Add:** Adds the new mask's area to the current mask. For example, add a Sky mask to a Subject mask to affect both.
- **Subtract:** Removes the new mask's area from the current mask. For example, to darken the background but not the sky, mask the background, then subtract a Sky mask.
- **Intersect:** Keeps only the area where the new mask and the current mask overlap.

Refining the Mask

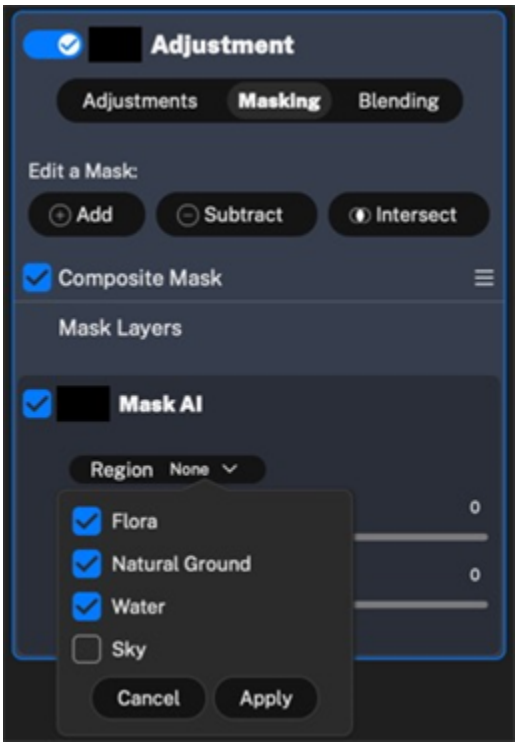
The refinement sliders are right on the Masking tab. **Feather** and **Shift Edge** are always visible, and the rest are in a section you can expand. See Mask Options and Refining Masks.

NOTE: If you prefer the Properties window, choose it from the Window menu. Its Mask tab works the same way and stays in sync with the Masking tab. See The Properties Window.

Using Mask AI to Select Regions

Mask AI is ON1's AI-based technology for selecting objects and regions, such as people, plants, water, or buildings. It powers the Super Select AI tool and is also available on the Masking tab of any layer, filter, or local adjustment, and in the Add Filter window in Effects.

1. On the **Masking** tab, click **More** and choose **Mask AI**. If the object already has a mask, first click **Add**, **Subtract**, or **Intersect**, then choose Mask AI. Photo RAW scans the photo and lists the regions it finds.
2. Hover over a region's label to highlight it in blue, then click one or more regions to select them.
3. Click **Apply** to create the mask.
4. Use the **Feather** slider on the Masking tab to soften the edges if needed.



Mask Options and Refining Masks

Mask Options

Open the options menu for the mask on the Masking tab for these commands:

- **Invert:** Inverts the mask. You can also press Cmd+I (Mac) or Ctrl+I (Windows).
- **Disable/Enable:** Turns the mask off or on.
- **Reset:** Clears the mask.
- **Copy:** Copies the mask so you can use it on another layer, filter, or local adjustment.
- **Paste:** Pastes a copied mask.

Refining a Mask

The refinement sliders are right on the Masking tab, below the mask layers. They apply to the combined mask.

- **Feather:** Softens the mask edges.
- **Shift Edge:** Expands or contracts the mask slightly to reduce halos.

Expand the section below them for more controls:

- **Density:** Sets the overall density of the mask from black (100) to white (0).

- **Levels:** Adjusts the mask's black point, white point, and gamma.
- **Window:** Limits the mask to the tones between the slider handles, which works well for luminosity masks. The numbered tones under the slider follow the Zone System to help you pick tones.

TIP: Feather and Shift Edge are especially good at smoothing transitions, and one may work better than the other depending on the photo. Density works like a reverse fade: at 100 the full mask applies, and at 0 the mask is entirely white, so lowering it strengthens the effect across the masked area.

NOTE: The Refine Mask window from earlier versions has been replaced by these sliders.

Depth Masks



The depth mask for this photo is shown on the right. Lighter tones are closer to the camera and darker tones are farther away.

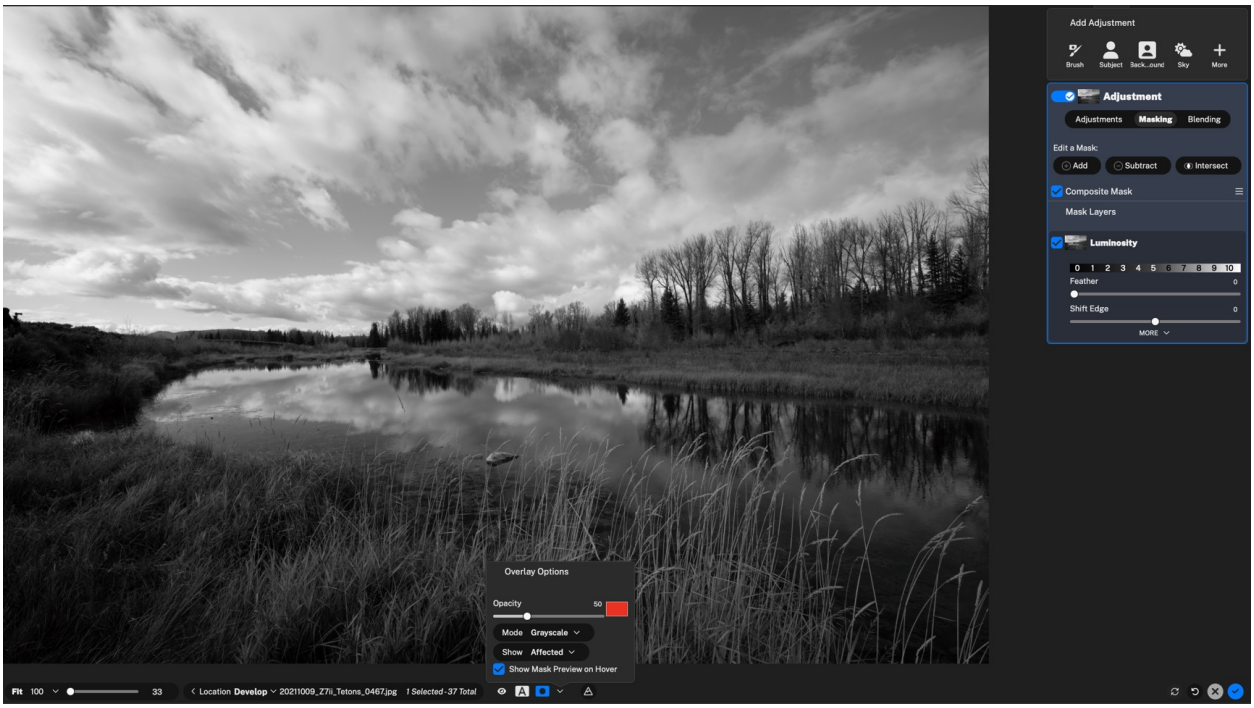
Depth masks use AI to estimate the depth of a scene, so you can apply adjustments and effects based on distance. They make effects such as lens blur look more natural.

Click **Depth** on the Masking tab to build the mask. If the object already has a mask, click **Add**, **Subtract**, or **Intersect** first, then choose Depth. White areas are closest to the camera, black areas are farthest, and grays fall in between. Closer areas get more of the adjustment and distant areas get less or none.

Use the Levels and Window refinement sliders on the Masking tab to add or remove tones, or choose **Invert** to reverse the effect. See Mask Options and Refining Masks.

Luminosity Masks

A luminosity mask uses the brightness values in your photo to target, or protect, specific tonal ranges. You can create one anywhere you can create a mask. It's ideal for subtle, precise work such as targeted sharpening and contrast or highlight control.



A luminosity mask looks like a black and white version of your photo. The lighter the tone, the more of the effect is applied.

To add one, click **Luminosity** on the Masking tab or choose **Create Luminosity Mask** from the Mask menu. If the object already has a mask, click **Add**, **Subtract**, or **Intersect** first. The effect is applied in proportion to each pixel's brightness: none on pure black, all on pure white, and a matching percentage on everything in between.

Targeting Tones

Expand the refinement section on the Masking tab to use these sliders:

- **Levels:** Set the black point (left triangle), white point (right triangle), and midpoint or gamma (middle triangle) to focus the mask on a narrow band of tones. For example, to target the midtones, drag the black and white points toward the middle and adjust the midpoint. This is much faster than painting with the Masking Brush.
- **Window:** Works like a black point slider from both ends. Everything outside the two triangles turns black, so only tones inside the window are affected. For

example, to affect only the shadows, drag the right triangle about two-thirds of the way to the left.

Color Range Selections

Color Range creates a mask from a specific color, either sampled from your photo or picked with your system's color picker.

1. On the **Masking** tab, click **More** and choose **Color Range**. If the object already has a mask, click **Add**, **Subtract**, or **Intersect** first.
2. Click the eyedropper and click the color you want to sample.
3. Drag the slider to adjust the range. Lower values select fewer related colors and higher values select a wider range.



Here, Color Range was used on a Color Enhancer filter. A blue in the sky was sampled, and the slider was adjusted while viewing the mask to fine-tune the selection.

Color Range with Gradient Masks

When you turn on Color Range for a linear or radial gradient in the Tool Options bar, it samples the color at the center of the gradient. To sample a different color, use the eyedropper on the Masking tab.

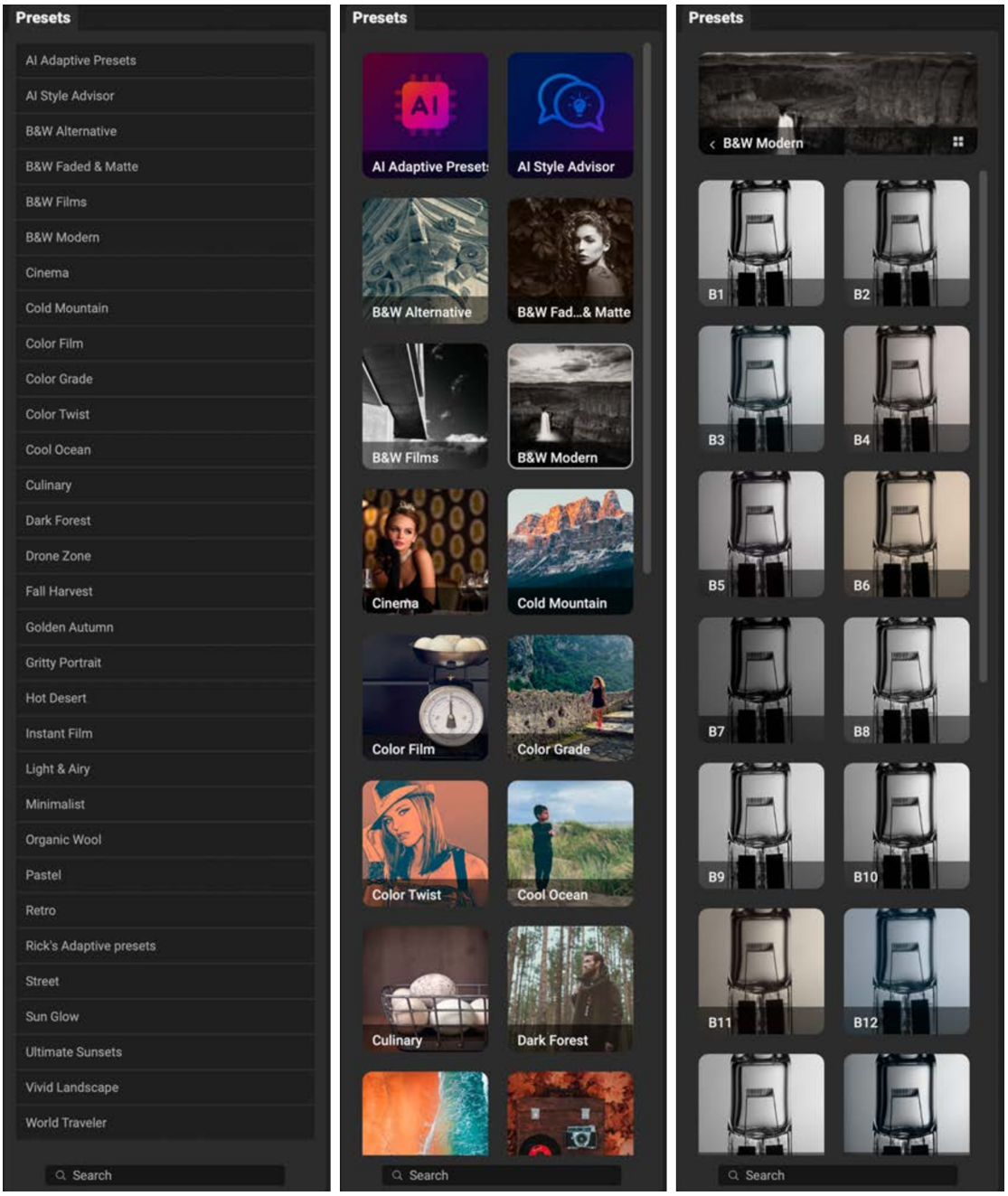
NOTE: If you sample a different color and then move the gradient, it resamples the color at the gradient's new center.

Masking Tips

- **Build masks in layers.** Start with the mask that does most of the work, such as Subject or Sky, then use **Add**, **Subtract**, and **Intersect** on the Masking tab to fine-tune it. For example, mask the background and subtract the sky to darken everything except the sky.
- **Hover to check.** Hover over the combined mask or any mask layer to preview it on your photo and see what each one is doing.
- **Check AI masks.** AI masking is excellent but not perfect. Inspect each AI mask and refine it with the other masking tools, the Refine, Chisel, or Blur brushes, or the refinement sliders.
- **Feather transitions.** Use the Feather slider on the Masking tab to smooth the edge between masked and unmasked areas.
- **Use Density to intensify.** Lowering Density strengthens an effect after you've created a mask. It works like a reverse fade: at 100 the full mask applies, and at 0 the mask is entirely white.
- **Mask a whole layer.** Masks aren't just for filters and local adjustments. Open the Masking tab on a layer to mask all of that layer's Edit module adjustments. This is especially useful with multiple layers of the same photo.
- **Mask the whole Effects stack.** Use the Masking tab at the top of the Effects tab to mask every filter at once.
- **Reuse masks.** Copy a mask from one filter and paste it into another. Use Invert to apply an effect to the opposite area, such as the foreground instead of the sky.
- **Masks stay with their pixels.** Masks are tied to the pixels of the current photo or layer, so you can't copy them to another photo or between layers.

Presets

Presets are saved recipes of Edit module adjustments that you can apply to one photo or hundreds, in Browse or Edit. They're a fast way to get consistent results across a set of photos and to build your own look. You can even create presets that use Mask AI and Sky Swap AI to mask regions automatically (see Creating and Using AI Adaptive Presets).



The Presets panel in List view (left) and Thumbnail view (center), which show the preset categories. Set the view in the **View > Preset Browser** submenu. On the right, an expanded category shows each preset as a thumbnail of the current photo, ready to apply.

Hover over a category to reveal the Quick View Browser icon to the left of its name. Click it to open a full-screen view of your photo with each preset in that category applied.

What Presets Can Include

Photo RAW comes with more than 200 built-in presets in more than a dozen categories, from landscapes and portraits to color grading and film looks. You can create your own, import presets from other photographers, and organize them into categories and subcategories (see Managing Presets and Categories).

A preset can include any Edit module operation, alone or in combination: Develop adjustments, Effects settings, sky swaps, Portrait settings, and local adjustments. It can also store the camera profile, Brilliance AI settings, crop, retouching, and masks made with any masking tool.

TIP: When you apply a preset that includes crop, retouching, or masks, check that the result is what you want. You can reset individual operations from the Settings menu.

Applying Presets

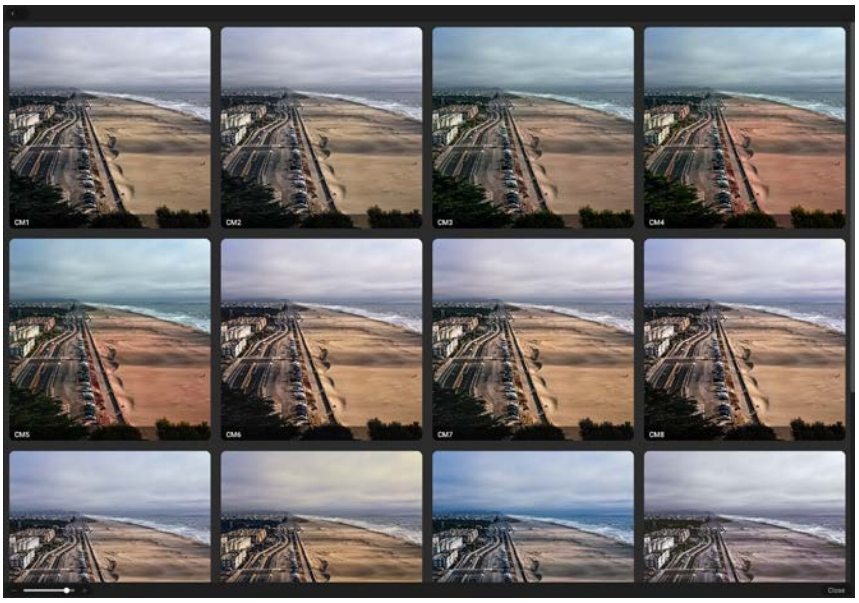


A preset category with the Quick View Browser icon, previewing your photo with that category's presets.

Open the Presets panel to see ON1's built-in presets, organized by category, along with any you've created or installed. Click a category to open it and see thumbnails of its presets. To change thumbnail size, choose **Browser Mode** from the View menu and pick One, Two, or Three Column View.

Previewing Presets

In the Edit module, hover over a preset to preview it on your photo in real time. For a larger view of every preset in a category, click the Quick View Browser icon in the category's title bar, or choose **Open Quick View Browser** from the Window menu. Press Esc to close it.



NOTE: Real-time preset previews are available only in the Edit module. In Browse, use the Quick View Browser.

Applying and Adjusting a Preset

Click a preset in the panel or the Quick View Browser to apply it. Presets aren't cumulative by default: clicking another preset replaces the previous one.



To reduce a preset's strength, hover over the applied preset and drag the **Fade** slider. Fade lowers the opacity of the preset's Effects filters only; Develop, Portrait, and local adjustments aren't affected.

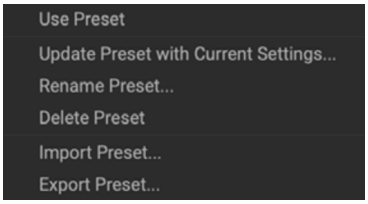
After applying a preset, you can still change any setting in Develop, Effects, or Local Adjustments, add or remove adjustments, retouch, or switch presets.

To remove a preset, choose a reset option from the Settings menu, or remove its settings from the panes in Develop and Effects. Removing settings individually is best if you want to keep masks or local adjustments you've made.

TIP: To mark a preset as a favorite, hover over its thumbnail and click the heart icon. It's added to the Favorites category at the top of the Presets panel. Click the heart again to remove it.

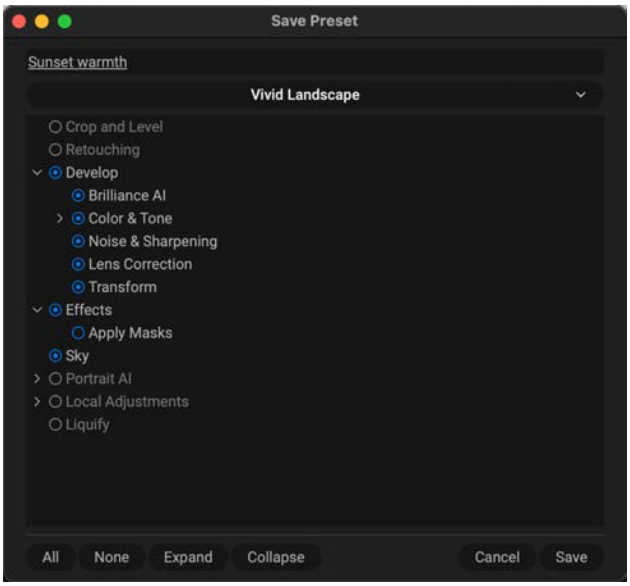
Inserting Presets (Effects Tab Only)

To add a preset on top of your existing edits instead of replacing them, right-click (or Control-click on Mac) the preset and choose **Insert Preset**. Its Effects filters are added above the selected filter, and your Develop and Local edits are kept.



NOTE: Insert Preset is available only in the Effects tab, and it adds only the preset's Effects filters. Develop adjustments and local adjustments aren't added.

Creating Your Own Presets



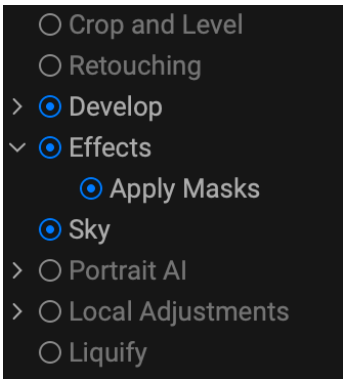
1. Edit a photo until you have settings you want to save.
2. Choose **Save Preset** from the Settings menu.
3. In the Save Preset dialog, choose which tabs' settings to include, name the preset, and pick a category. To create a new category, choose **Add New Category** from the category menu.
4. To include masks, including AI adaptive masks, check **Apply Masks** for each tab.
5. Click **Save**.

Nearly every Edit module setting can be saved in a preset, including crop, retouching, text, and masks.

Updating a Preset

If you apply a preset and then change its settings, choose **Update Preset with Current Settings** from the Settings menu, or right-click the preset in the Preset Browser. The update applies going forward; photos that used the earlier version keep their settings unless you reapply the preset.

Creating and Using AI Adaptive Presets



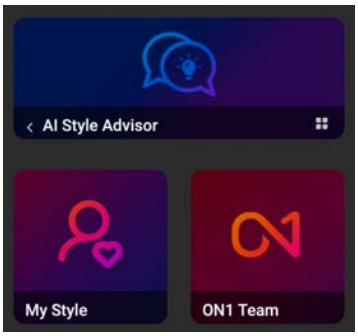
When you use Super Select AI, the Sky tab, or Mask AI in Effects, Local Adjustments, or the Layers pane, you can save those AI region selections in a preset by checking **Apply Masks** for the appropriate tab. When you apply the preset to another photo, each filter, sky swap, or local adjustment that used an AI mask, such as a sky, is applied to the matching region in the new photo. These presets are called adaptive because Photo RAW's AI models fit them to each photo.

Tips for Adaptive Presets

- **Use only AI masks.** Masks made with standard tools like the Masking Brush or Gradient Mask are applied at the same position as in the original photo, which may not fit a new image.
- **Mask adjustments are saved.** Changes made in the Mask tab of the Properties window are included in the preset.
- **Check the results.** After applying an adaptive preset, review its masks. You may need the refinement tools or the Masking Brush to fine-tune them.
- **Name them clearly.** Photo RAW includes a category of adaptive presets. Add your own there or create a new category, and name or categorize them so you know which presets use AI masks.

NOTE: After you apply an adaptive preset, its named AI masks appear in the Mask AI area of the Mask tab for each filter or local adjustment.

Using the AI Style Advisor



The AI Style Advisor is a special category of AI-generated presets. As you edit in the Edit module, Photo RAW learns how you work and, over time, adds and refines adaptive presets in your **My Style** category.

Suggested presets are based on the type of photo and the regions in it. For example, a portrait gets styles that use the Portrait AI settings you've used before. Hover over the thumbnails in the Presets panel or open the Quick View Browser to see them.

My Style starts out empty and begins filling in after you've edited about 200 photos. The more you edit, the better the suggestions get. To get you started, the **ON1 Team** collection includes AI styles from ON1's photographers.

NOTE: AI Style presets can't be imported or exported and don't appear in the Extras Manager. If you like one, apply it and save the result as a standard preset. See Creating Your Own Presets.

Managing Presets and Categories

You can import and export presets individually or by category, delete presets, and manage categories.

Importing and Exporting Presets

You can import presets downloaded from ON1 or other sources. Individual presets use the .ONP extension and preset packs, which contain several presets, use the .ONPreset extension.

To import, double-click the file or choose **Import Preset** from the Settings menu. Pick a category, and Photo RAW copies the presets into the app. You can delete the downloaded files afterward.

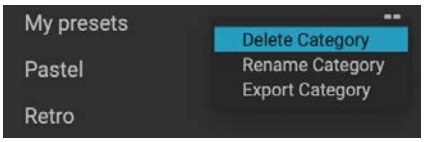
To export a preset, select it and choose **Export Preset** from the Settings menu. To export a whole category, use the category menu (see below).

Deleting Presets

Select a preset in the Presets panel and choose **Delete Preset** from the Settings menu, or right-click the preset and choose Delete Preset.

NOTE: You can delete any preset, including the built-in ones. To keep a copy, export it before deleting.

Managing Categories



Right-click a category name to open the category menu:

- **Delete Category:** Removes the category and its presets from the Presets panel.
- **Rename Category:** Changes the category's name.
- **Export Category:** Exports the category and all its presets as an .ONPreset pack.

TIP: Right-click a preset's name for many of the same options. This lets you update, export, or rename a preset without applying it to the current photo.

Creating Nested Categories

To organize large preset collections, you can nest categories in the Extras Manager. See Using Extras for details.

Camera-Based Presets

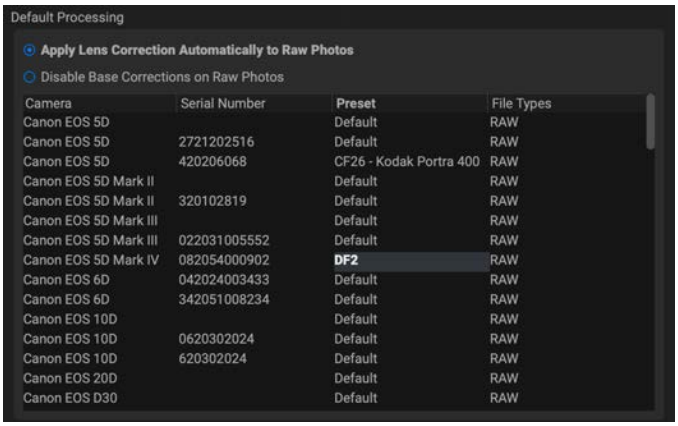
Photo RAW can automatically apply a preset to new photos from a specific camera, down to its serial number. This is handy if you've created a custom camera profile, converted a camera to infrared, or always make the same basic adjustments to a camera's photos.

Camera-based presets are applied to photos in cataloged folders, to imported photos, and whenever you open a folder in Browse. You can apply them to raw files, JPEGs, or both if you shoot Raw+JPEG.

NOTE: Photos that have already been edited in the Edit module don't get the camera-based preset.

Setting Up a Camera-Based Preset

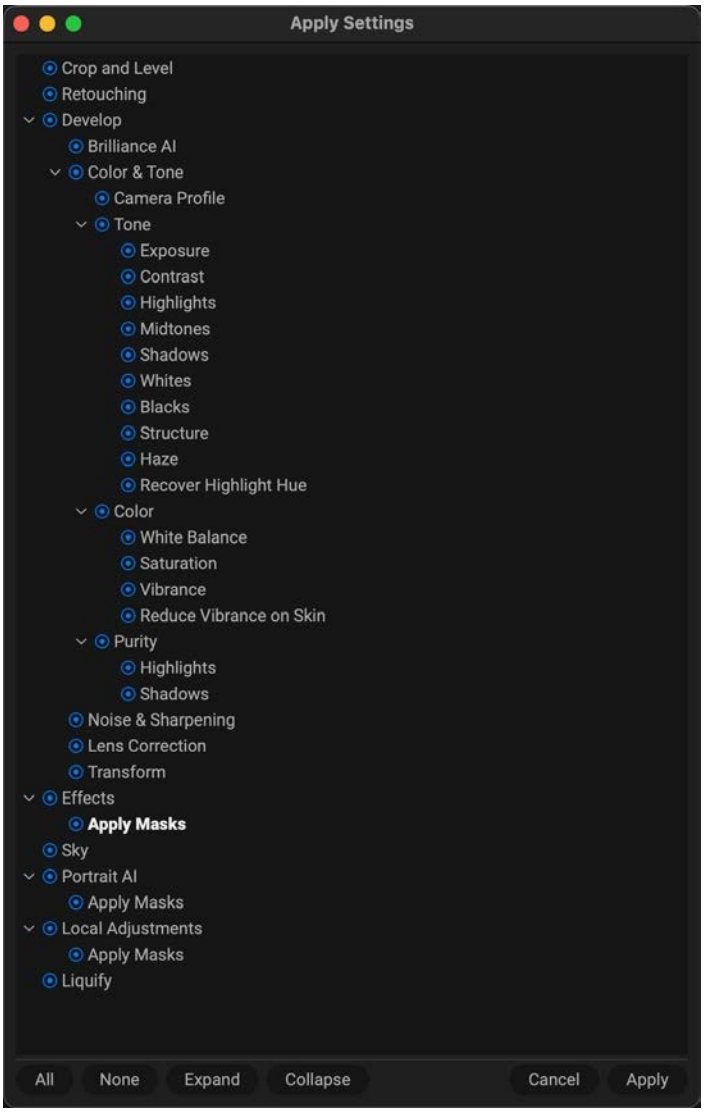
1. Create the preset. Because it applies to all of the camera's unedited photos, keep it focused, such as a camera profile, Develop's Tone & Color and Details settings, and few or no Effects filters.
2. Open the Files tab of Preferences. The Default Processing section at the bottom lists every camera Photo RAW has seen, with its name, serial number (if recorded in the metadata), preset, and file types.
3. Find the camera and choose a preset from its **Preset** menu.
4. Choose **Raw** (the default), **JPG**, or both from the File Types menu.
5. Close Preferences. Photo RAW applies the preset to that camera's existing unedited photos and to every new photo from it.



Editing Photos with Camera-Based Presets

Photos with a camera-based preset can be edited in the Edit module or given a different preset in Browse, like any other photo. However, Reset All Settings won't remove the preset, because it's now the default for that camera. To change the result, apply a different preset or adjust the individual settings.

Copying Settings and Synchronizing Edits



Besides presets, you can copy the edits from one photo, including anything you can do in the Edit module, and apply them to others. There are two ways to do it, Copy/Paste and Sync. Both get the same result, so use whichever you prefer.

Copy and Paste Settings

1. Select the source photo and choose **Settings > Copy Settings**.
2. Select the target photo or photos and choose **Settings > Paste Settings**.
3. In the Apply Settings window, apply all edits or choose specific ones, from individual Develop settings to masks and cropping.

Copy and Paste is handy for applying settings to photos in different folders. Photo RAW remembers the last copied settings for the rest of your editing session.

Sync Settings

1. Select the source photo.
2. Hold Shift to select a contiguous range, or Cmd (Mac) or Ctrl (Windows) to select individual photos, and click the photos you want to update. The source is highlighted in blue and the targets in gray.
3. Choose **Settings > Sync Settings**.
4. In the Apply Settings window, choose the edits to sync.

To sync everything without opening the Apply Settings window, choose **Settings > Sync All Settings**. All settings, including crop, text, and masks, are synced.

NOTE: When you copy or sync settings with Apply Masks turned on, AI-generated masks are applied to the matching regions in each target photo, just like AI adaptive presets. See Creating and Using AI Adaptive Presets.

Resetting Edits

You can reset any edits from the Edit module, including settings you pasted or synced in Browse. The Settings menu offers these options, depending on what's been applied to the photo:

- **Reset All Settings:** Removes all Edit module adjustments. You can also click **Reset All** at the bottom right of the Browse and Edit windows.
- **Reset Develop Settings:** Removes only Develop settings.
- **Reset Effects Settings:** Removes only Effects settings.
- **Reset Sky Settings:** Removes only Sky Swap AI settings.
- **Reset Portrait AI Settings:** Removes only Portrait settings.
- **Reset All Retouching Tools:** Removes retouching applied anywhere in the Edit module.
- **Reset Local Adjustments:** Removes all local adjustments.
- **Reset Liquify Tool:** Removes all Liquify adjustments.
- **Reset Crop:** Returns the photo to its original, uncropped size.
- **Reset Text:** Removes all text.

You can undo a reset immediately afterward. Otherwise, the reset is permanent.

NOTE: Copy, Sync, and Reset work one layer at a time. They aren't available for layered photos in Browse, and in the Edit module they apply only to the selected layer.

Resetting Individual Panes and Sliders

To return a pane to its default settings, click the **Reset** icon (⟲) at the top right of the pane.

To reset a single slider, double-click its label or its handle.

Soft Proofing

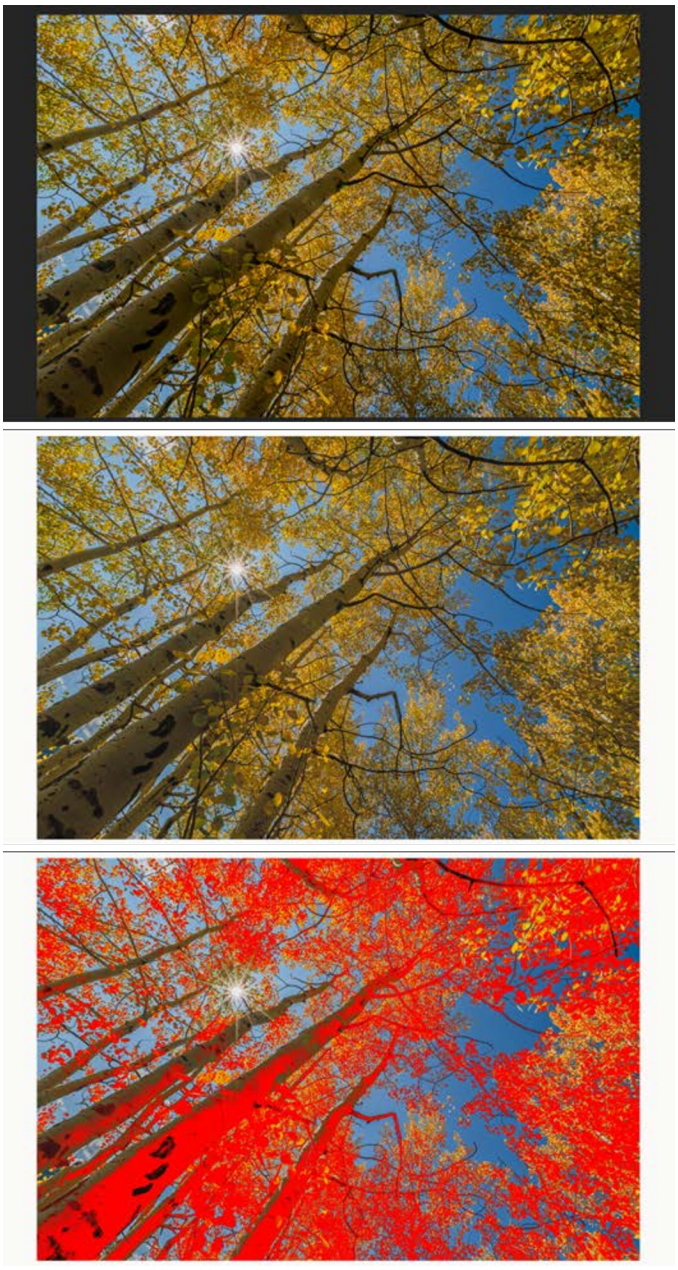
Soft proofing shows how a photo will look when printed, using the color profiles installed with your printer. It helps you spot problems before you print so you can adjust tone, color, and effects to get a print closer to your vision.

Normally you view photos through your monitor's display profile. Most displays have a wider color gamut than photo printers, so some colors you see on screen can't be printed. When that happens, the printer substitutes the closest color it can reproduce, which can cause subtle or noticeable color shifts, especially in certain ranges.

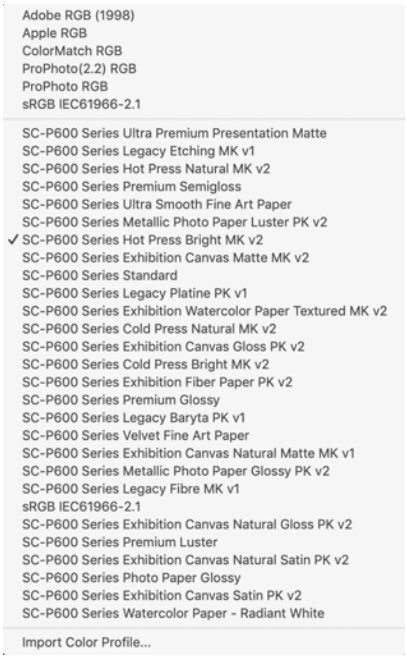
Turning On Soft Proofing

Choose **Enable Soft Proofing** from the View menu, then choose a printer profile from the **Profiles** submenu. Your photo changes to approximate how it will look on that paper. These options appear under Enable Soft Proofing in the View menu:

- **Gamut Warning:** Shows colors that are outside the current printer profile's gamut with a red overlay.
- **Profiles:** Lists the installed printer profiles. Choose one to proof with it, or import your own profiles.
- **Intent:** Sets how colors are converted for print. **Perceptual** compresses the whole gamut to preserve the relationships between colors. **Relative** converts only out-of-gamut colors, which can sometimes make an in-gamut and an out-of-gamut color identical.
- **Simulate Paper and Ink:** Uses the paper's white point and actual black density instead of your monitor's. Turn this on when you're trying to match a print.



Top: soft proofing off, using the display profile. Middle: soft proofing on with a profile for Epson Exhibition Matte paper. Bottom: Gamut Warning on, with out-of-gamut colors in red.

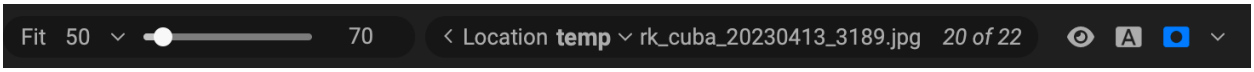


Tips for Soft Proofing

- Neither rendering intent is always best. It depends on the photo, your goals, and the paper, so switch between Perceptual and Relative to see which looks better.
- Don't get too caught up in eliminating every out-of-gamut color. Modern photo printers and online print services do a good job of approximating colors.
- Focus on matching tone, contrast, and color between screen and print. With a home printer, make test prints to dial in your adjustments.
- Use Versions to try different settings while fine-tuning a print.

Other Edit Module Preview Options

Besides soft proofing, the Edit module has preview options at the bottom of the window. You can compare before and after views of a photo, in split-screen or full-screen, and show the current mask overlay.



From left to right, the controls at the bottom of the window set the preview magnification, show the original photo with all edits hidden, turn Compare (before/after) view on or off, and show the current mask overlay.

Changing the Magnification

Along with the View tool and the Navigator pane, you can zoom with the magnification slider at the bottom of the window. Drag it right to zoom in or left to zoom out, or click the boxes at either end.

Before and After Previews

Compare mode shows how your edits change the photo, with the original on the left and the edited version on the right. Drag the box in the center of the divider left to see more of the edited version or right to see more of the original. You can use the magnification slider to zoom in or out while comparing.



Compare view, with the movable divider circled.

To see the original full-screen, click the **Preview** button at the far right of the preview toolbar or press \. A "Preview Off" label appears. Click the button or press \ again to return to your edited version.

Show/Hide Mask

You can view the current mask on any layer, filter, or local adjustment two ways:

- **Red overlay:** Masked areas are shown in transparent red over your photo.
- **Grayscale:** Shows only the mask. Black is fully masked, white is not masked, and grays represent partial opacity.

Click the mask overlay button in the footer below the Preview, or press O, to show or hide the mask.



The red overlay (left) and grayscale mask (right).

Overlay Options

All of the overlay options are in one place. Click the arrow next to the mask overlay button to open them:

- **Mode:** Color overlay, color overlay only while brushing, or grayscale.
- **Color** and **Opacity:** Change the overlay color and how strongly it shows.
- **Show Mask on Mouseover:** When on (the default), hovering over a mask thumbnail on the Masking tab previews that mask on your photo. Turn it off if the preview gets in your way.

Photo RAW remembers these settings. For more on masking, see Masking Basics.

Focus and Clipping Views

The Clipping and Focus Peaking overlays are powerful aids while editing and are available in every Edit module tab.

Clipping

Clipping happens when shadows or highlights are cut off to pure black or pure white instead of fading smoothly. Large areas of pure white, often called blown highlights, can be distracting. With raw files, areas that look pure white or black on screen often still

contain recoverable detail. The Clipping overlay shows how much of a problem you have and how hard it will be to fix.

Press J to show the overlay temporarily. To keep it on as you move between photos, choose **View > Show Clipping** or press Option+J (Mac) or Alt+J (Windows).



Pure white pixels are shown in red and pure black pixels in blue.

Focus Peaking

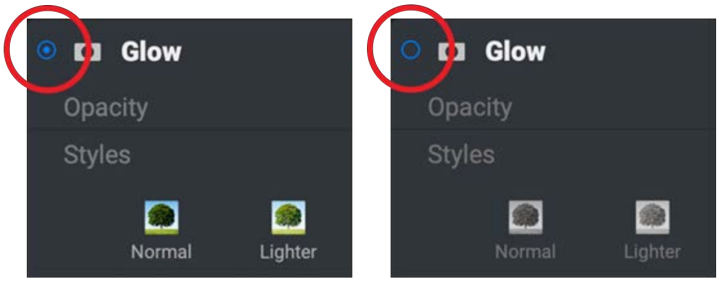


Checking sharpness usually means zooming to 100% or more, which gets tedious across a large shoot. Focus Peaking helps you quickly find your sharpest shots.

Choose **View > Show Focus Peaking** or press Shift+Option+J (Mac) or Shift+Alt+J (Windows). The sharpest areas are highlighted in bright green. As you move through a folder, the strength of the overlay shows whether each photo is sharp where it needs to be. The overlay stays on as you zoom.

Showing or Hiding Edit Module Adjustments

Most panes in the Develop, Effects, Portrait, and Local tabs have a Show/Hide control (a circle) in the upper-left corner. Click it to turn that adjustment off; an empty circle means it's off. Click again to turn it back on.



This isn't just a preview. An adjustment that's turned off isn't included in the edited photo. It's handy for comparing Effects filters or checking whether an adjustment really helps.

NOTE: The Tone & Color pane can't be turned off this way. To remove its settings, click the Reset icon (⟲) at the top right of the pane.

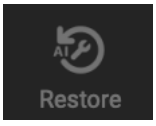
For a full description of the pane controls, see Filter Overview.

Saving Your Work

Photo RAW saves your non-destructive edits automatically when you leave the Edit module.

To save as you go, in case of an unexpected error, choose **Save Settings** from the Settings menu or press Cmd+S (Mac) or Ctrl+S (Windows).

Restore AI



Restore AI brings damaged and aging photos back to life. It automatically repairs common problems in old prints and scans, including dust, scratches, wrinkles, tears, faded color, heavy grain, and lost detail. It also improves clarity and definition so small or poorly digitized photos look their best. Whether your photos come from textured

paper, old albums, or decades-old film, Restore AI analyzes and rebuilds each image while preserving the original memory, ready to share, archive, or pass down.



Restore AI is available only in ON1 Photo RAW MAX.

Features

- **Automatic Photo Restoration:** Removes dust, scratches, wrinkles, tears, and other physical damage.
- **AI Refocus and Detail Recovery:** Improves clarity and rebuilds lost detail in soft or poorly digitized photos.
- **AI Colorization:** Turns black and white photos into realistic color images, with full control.
- **Fade and Color Shift Correction:** Restores natural color and tone to photos affected by age or poor processing.
- **Face Detection and Detail Enhancement:** Finds faces and restores lost facial detail.
- **Noise and Grain Control:** Reduces distracting noise or texture while keeping or adding natural film grain.
- **Advanced Sharpening:** Enhances detail and definition.
- **Creative Color Control:** Adjust tone, warmth, and saturation, and tint monochrome photos.
- **Batch Album Restoration:** Processes entire albums of scanned photos automatically.
- **Cloud-Powered Processing:** Handles complex restoration beyond what most computers can do on their own.
- **Integrated Photo Management:** Convert negatives, organize albums, add descriptions and metadata, and export or share your restored photos.
- **No Credits or Tokens Required:** Restore AI is fully included with ON1 Photo RAW MAX.

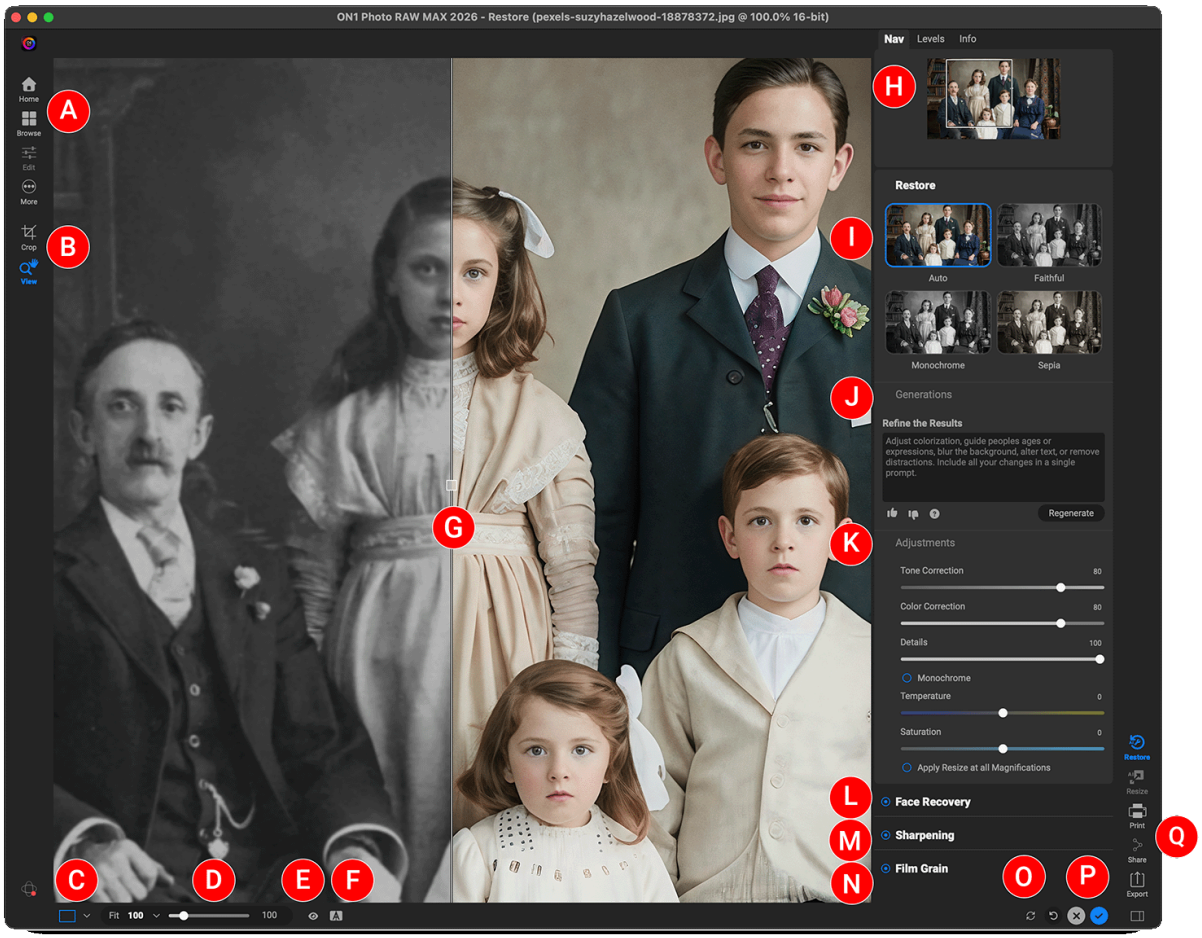
What to Expect from Restore AI



Restore AI does in seconds what used to take hours of careful retouching, and most photos come out looking great. Results depend on the condition of the original, though.

Faces are the hardest part and an area ON1 will keep improving. Restore AI enhances facial detail, but it won't be perfect every time. Expect a strong starting point: a photo that would have taken hours of manual work may be 90 percent of the way there. From there, refine it with the full power of Photo RAW MAX. The goal is to save you hours, not to make every decision for you.

Restore AI Main Window



- **A. Module selector:** Switch modules, such as returning to Browse.
- **B. Tool Well:** Select the Crop tool.
- **C. Filmstrip:** Shows other photos in the same folder or album. Press F to show it. Select multiple photos here to batch process.
- **D. Preview Size:** Sets the zoom level.
- **E, F. Preview controls:** Click the eye to see the original photo, or press A for a split-screen view like the one shown.
- **G. Split-screen divider:** Drag to adjust the split when split-screen preview is on.
- **H. Navigator:** Shows an overview of the photo when zoomed in. Also holds the Levels (histogram) and Info panes.
- **I. Restore Presets:** Apply a preset for colorization, black and white, and more.

- **J. Generations:** Guide Restore toward better results with a text prompt, and review each generation and its prompt.
- **K. Adjustments:** Fine-tune the look of the restored photo.
- **L. Face Recovery:** Adjust recovery for each face in the photo.
- **M. Sharpening:** Adds sharpness.
- **N. Film Grain:** Adds realistic film grain.
- **O. Sync All:** Applies the current photo's settings to all selected photos in the Filmstrip, for batch processing.
- **P. Action buttons:** Reset, Cancel, and Apply.
- **Q. Print, Share, and Export buttons.**

Navigating the Preview Area



The Preview area is where you view and work on your photo. With the View tool selected, click the Preview to zoom in and center on that spot. While zoomed in, drag to pan, and click again to return to a fit view. Double-click the View tool in the Tool Well to view at 100%, which is best for checking fine detail and judging Restore AI's detail and sharpening.

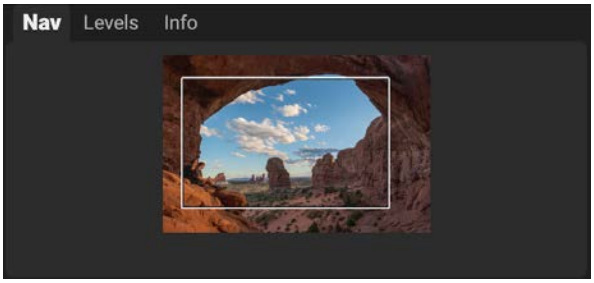
Split Screen

Click the **Split Screen** button at the bottom of the window to show the original on the left and the restored version on the right. Drag the square in the center to resize the panes, and use the View tool to zoom and pan. Click the button again to turn split screen off.

Navigator, Levels, and Info

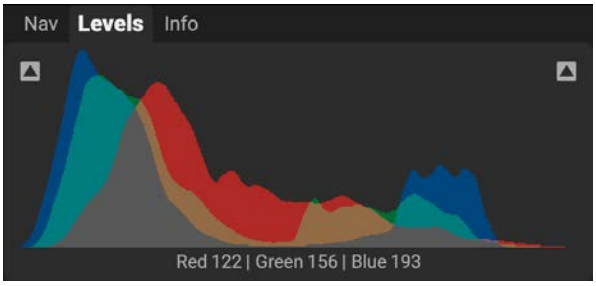
The Navigator, Levels, and Info panes sit at the top of the control panel on the right side of the window. Use them to inspect your photo.

The Navigator Pane



The Navigator shows a bird's-eye view of your photo, with the visible area marked by a white box. Drag inside the box to pan.

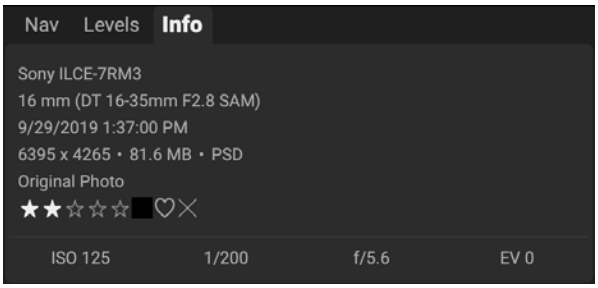
The Levels Pane



The Levels pane shows a histogram of your photo's shadows, midtones, and highlights, which helps you spot clipping, where areas turn pure black or pure white and lose detail.

Shadows are on the left and highlights on the right. A triangle at each end lights up when that side is clipping. Click a triangle to show the clipping overlay: blue marks pure black and red marks pure white. Click a triangle again to turn it off, or hold J to show it temporarily. The bottom of the pane shows the RGB values under your cursor.

The Info Pane



The Info pane shows the photo's metadata:

- Camera
- File type
- Focal length and lens
- Capture date and time
- Exposure information
- ISO
- Shutter speed
- Aperture
- Exposure value
- Filename
- Color space
- Dimensions
- File size

Using Restore AI

For most photos, restoring takes just a few steps:

1. Select the photo you want to restore, usually in Browse. You can also select it in Home.
2. Click the **Restore AI** button in the right bumper, or right-click the photo and choose Restore AI.
3. Restore AI loads and processes the photo. After a few seconds you'll see the default result.
4. Choose a preset for the look you want. Choose **Auto** to colorize or correct the color.
5. Click **Done** (the checkmark). In the Save As dialog, choose a file type and location. Restore AI saves the result as a new file.

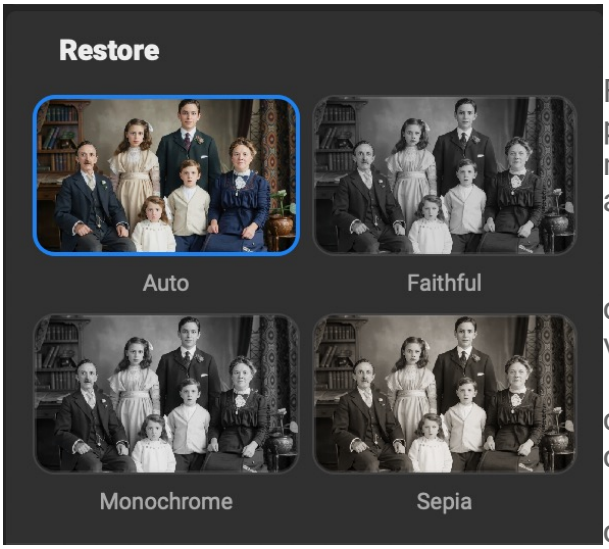
Advanced Options

Some photos benefit from more control:

- Crop
- Generations
- Adjustments
- Face Recovery
- Sharpening
- Film Grain

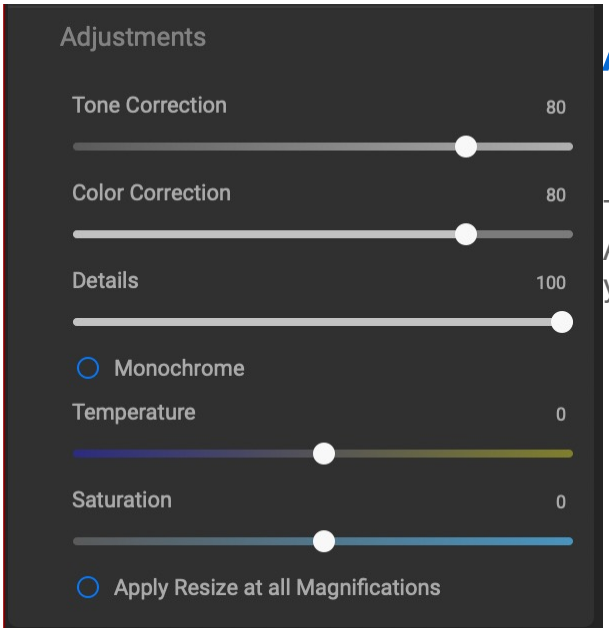
Restore Adjustments

Restore Presets



Four presets give you great results on most photos with a single click. Each applies AI restoration that improves detail and reduces artifacts:

- **Auto:** Adds AI tone and color correction. This gives the most optimized version of the photo.
- **Faithful:** Adds modest AI tone correction. This stays closest to the original.
- **Monochrome:** Adds AI tone and color correction, then converts to black and white.
- **Sepia:** Adds AI tone and color correction, then converts to a sepia tone.

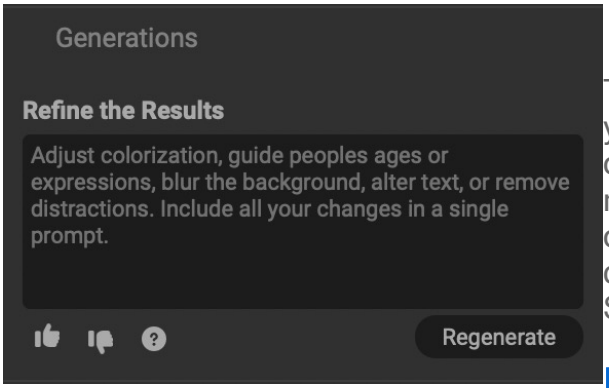


Adjustment Sliders

The presets set the controls in the Adjustments pane, which you can fine-tune yourself:

- **Tone Correction:** Sets the amount of AI tone correction, which lightens or darkens the photo as needed and improves contrast.
- **Color Correction:** Sets the amount of AI color correction. On color originals, it corrects colors that have shifted over time. On monochrome originals, it colorizes the photo.
- **Details:** Sets the amount of AI detail restoration. The default of 100 shows all the detail. If the result looks artificial, lower it; 50 to 80 usually looks best.
- **Monochrome:** Removes all color for a black and white result. You can still use Temperature and Saturation to tint it.
- **Temperature:** Makes the photo warmer or cooler to reduce a color cast or suit your taste.
- **Saturation:** Adjusts color saturation.
- **Apply Resize at All Magnifications:** Restore AI uses the same model as Resize AI for final scaling. Because it's processor intensive, it's normally previewed only at 100% and on final apply. With a powerful graphics card, turn this on to preview final scaling and detail at every zoom level.

Using the Generations Pane



The **Prompt** field in the Generations pane lets you guide how your photo is restored. Think of it as giving simple instructions to refine the result, whether that's correcting details, changing elements, or cleaning up distractions. Use clear, natural language. Short, direct instructions work best.

Editing People

Adjust how people look, including clothing, features, and even age.

Examples

- *"The man on the left is in the army. His uniform should be green."*
- *"Change the eye color to blue for the last woman in the second row."*
- *"Make the people look like they're in their 20s."*
- *"Open the man's eyes."*

Tips

- Be specific about position, such as left, right, or front row.

- Call out individual people when you can.
- Keep each sentence to one or two changes.

Editing the Background

Change or enhance the scene behind your subject.

Examples

- *"Blur the background."*
- *"Replace the sky with a sunset."*

Tips

- Use simple words like blur, soften, or replace.
- You can combine changes, such as a blur and a new sky, as long as the wording is clear.

Removing Distractions

Clean up unwanted elements.

Examples

- *"Remove the construction scaffolding."*
- *"Remove the lens flare."*
- *"Remove the reflection on the glass."*

Tips

- Name the object directly.
- Avoid vague requests like "fix this." Say exactly what should go.

Working with Text

Add, remove, or change text in the photo.

Examples

- *"Change the name of the boat to 'Vacasa.'"*
- *"Remove the text on the banners."*
- *"Add the text label 'Battle of the Bulge' to the bottom right corner."*

Tips

- Put exact text in quotes.
- Say where to place new text, such as the bottom right corner.

General Guidance

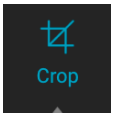
- Keep prompts concise and specific.
- Include all of your edits in the prompt. Each generation starts from the original photo, not the previous result.
- Describe what you want changed, not how to do it.

A good prompt can combine a few clear edits:

> *"Blur the background, replace the sky with a sunset, and remove the scaffolding."*

The clearer your instructions, the better your results.

Crop Tool



The Crop tool crops your photo and can suggest a crop at a chosen aspect ratio.

Cropping a Photo

1. Select the Crop tool in the Tool Well. The crop overlay appears.
2. Choose a ratio from the **Aspect** menu in the Tool Options bar. The default, Freeform, lets you crop to any size. A preset such as 4x6 locks the overlay to that ratio.
3. Drag the handles to set the crop. Corner handles adjust two sides at once and side handles adjust one side. Hold Shift to keep the proportions. The area outside the crop is darkened.
4. Drag inside the box to move the photo, or nudge it with the arrow keys. To rotate, move the cursor just outside a corner until it changes to the rotate cursor, then drag.
5. Click **Apply** or press Enter.

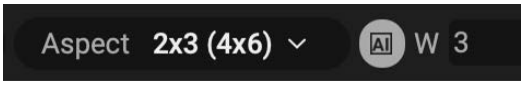


The Crop interface with a Rule of Thirds overlay and the Aspect menu open.

TIP: To straighten a photo, click the **Leveling** tool in the Tool Options bar and drag it along something in the photo that should be level.

AI Auto Crop and Level

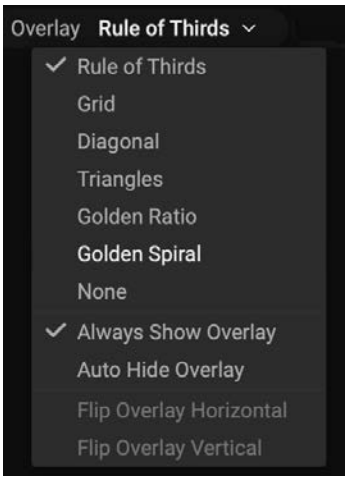
Choose an aspect ratio, then click the **AI Auto Crop and Level** button to the right of the Aspect menu. Photo RAW analyzes the photo, crops and levels it at that ratio, and the button turns blue. You can adjust the result or choose another ratio.





NOTE: If Freeform is selected, AI Auto Crop and Level uses the photo's original aspect ratio.

Crop Overlays



Overlays are compositional guides you can show while cropping. Choose one from the overlay menu in the Tool Options bar: Rule of Thirds, Grid, Diagonal, Triangles, Golden Ratio, Golden Spiral, or None. The menu also lets you:

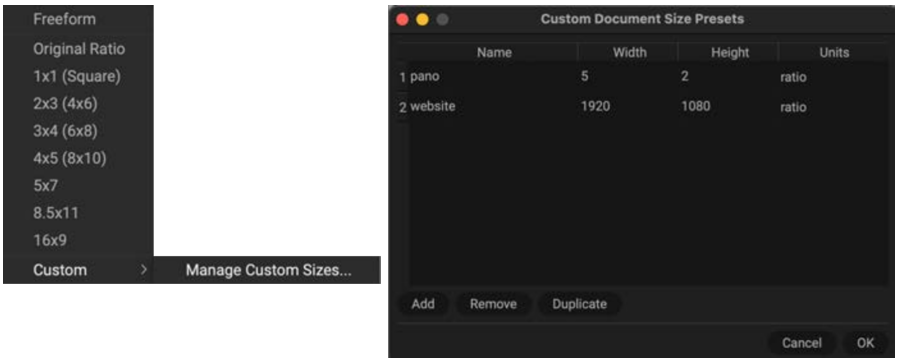
- Show the overlay all the time, or only when your cursor is over the Preview.
- Flip the Triangles overlay vertically, or the Golden Spiral horizontally or vertically.

Crop Tool Options Bar



- **Overlay:** Selects an overlay, sets its visibility, and flips it.
- **Aspect:** Choose Freeform, a preset ratio, or a custom ratio.
- **AI Auto Crop and Level:** Crops and levels the photo automatically at the current ratio.
- **Width:** Sets the crop width.
- **Swap Dimensions:** Swaps width and height, which is handy for switching orientation.
- **Height:** Sets the crop height.
- **Leveling:** Drag across something in the photo that should be level.
- **Angle:** Shows and sets the rotation angle.
- **Rotate:** Rotates the photo 90° clockwise or counterclockwise.
- **Canvas Extension:** Selects a generative AI model (Local Gen AI or Stability AI) for expanding the canvas.
- **Reset:** Returns the crop to the original photo size.
- **Cancel:** Cancels the crop.
- **Apply:** Applies the crop.

Creating Custom Crop Ratios



Along with the preset ratios, you can create your own. They're listed in the **Custom** submenu at the bottom of the Aspect menu.

1. Choose **Manage Custom Sizes** from the Custom submenu to open the Custom Document Size Presets window.
2. Click **Add**, then enter a name and the width and height ratio. Crop presets always use ratio as the unit.
3. Add as many as you like, then click **OK**.

NOTE: The Restore AI Crop tool uses ratios only. If you change a preset's unit from ratio to a measurement such as inches in Resize, it no longer appears in the Restore AI Custom menu.

Face Recovery Pane

Face Recovery is built for group photos where smaller faces lack detail. Upscaling such a photo with traditional resampling can make those faces even softer. Face Recovery restores them with more realistic features and texture.



Click **Select Faces** at the bottom of the Face Recovery pane to see the faces Restore AI found. Each face gets a box:

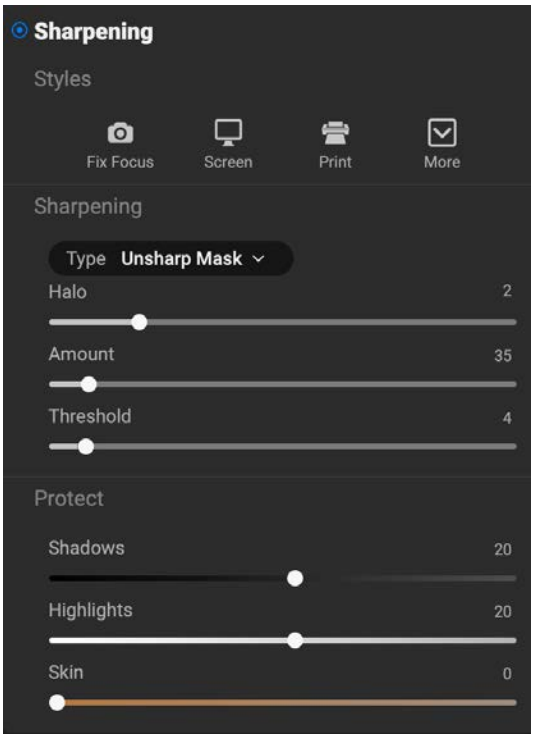
- **Green:** Smaller faces that will be recovered, at the level set by the **Strength** slider under each face.
- **White:** Larger faces that don't need recovery.

Click a box and adjust its slider to fine-tune recovery for that face.

What to Expect

Face Recovery is state of the art, but it isn't perfect. Small, blurry, or out-of-focus faces give it little to work with, so restored faces may not look exactly like the person you know. Lowering the slider can help with likeness but reduces the restoration.

Sharpening Pane



The Sharpening pane adds extra sharpness to your restored photo. Restore AI offers three methods:

- **Unsharp Mask:** Good for general sharpening, similar to Photoshop's Unsharp Mask. It's applied only to luminance to avoid color artifacts.
- **High Pass:** Helpful when the original photo is soft.
- **Progressive:** Like Unsharp Mask, but sharpens small details more than large ones.

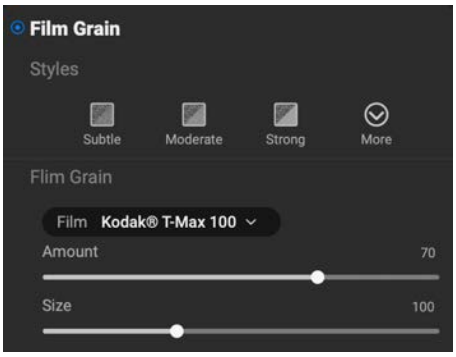
Sharpening here can save you a separate sharpening step before printing and helps compensate for softness from printer dot gain. Apply it as the last step. If you plan to retouch or composite the photo afterward, leave Sharpening off.

Sharpening a Photo

1. Zoom to 100% using the 1:1 preset in the Navigator pane.
2. Turn on Sharpening with the on/off control in the pane's title bar.
3. Choose a sharpening method. You may need to try each to see which works best.
4. Adjust the **Amount** slider.
5. Use the **Highlight** and **Shadow** sliders to keep sharpening off the lightest and darkest areas, which helps avoid sharpening noise.

6. Use the **Skin** slider to keep skin tones from being oversharpened.

Film Grain Pane



The Film Grain pane adds simulated film grain to your photo. A modest amount can make a photo look sharper and help hide imperfections such as JPEG artifacts. It's especially effective on monochrome photos.

1. Zoom to 100% using the 1:1 preset in the Navigator pane.
2. Turn on Film Grain with the on/off control in the pane's title bar.
3. Drag the slider until you have the amount of grain you want. Toggle the on/off control to compare with and without grain.

NOTE: Add grain as the last step. If you plan to retouch or composite the photo afterward, in Photo RAW or another app, leave Film Grain off.

Batch Processing with Restore AI

1. In Browse, switch to Filmstrip view and select the photos you want to restore. To select everything in a folder or album, choose **Select All** from the Edit menu.
2. Open Restore AI.
3. Set up the first photo the way you want. One of the four presets is usually a great starting point.
4. Choose **Sync All Settings** from the Settings menu, or click the **Sync All** button next to Reset.
5. Click **Done**. In the Export dialog, set the file names, destinations, and file types.

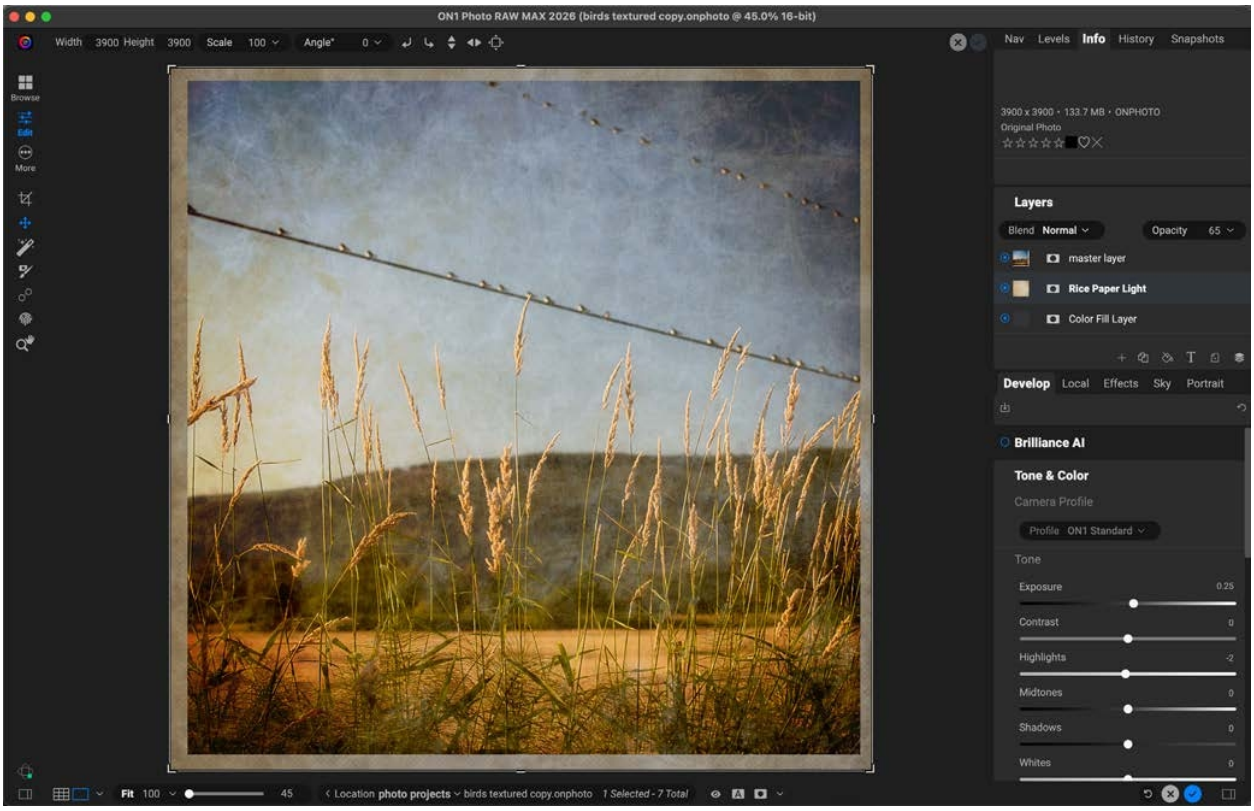
Combining Photos

Editing isn't always about a single photo. You might shoot several frames of a scene to blend for more dynamic range, stitch into a panorama, or merge for front-to-back sharpness, or you might build composites that need a layered workflow. Photo RAW includes a full set of tools for combining photos:

- Layers: A full layered workflow for collages, seamless composites, and more.
- Panorama: Stitches 2 to 25 photos, even handheld shots, into a seamless panorama. Supports batch processing.
- HDR: Blends photos shot at different exposures to capture a wider range of tones, from deep shadows to bright highlights, than a single shot can. Supports batch processing.
- Focus Stacking: Blends shots of the same scene taken at different focus points into one image that's sharp throughout.
- Time-Lapse: Creates smooth, flicker-free time-lapse videos from sequences of still photos.

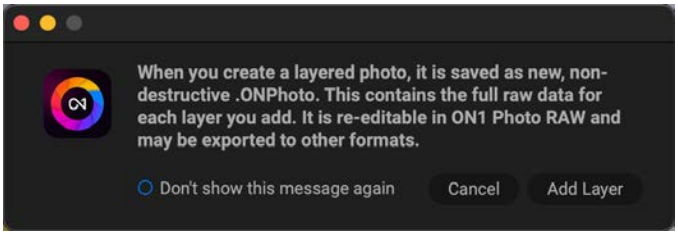
Like all editing in Photo RAW, these features are non-destructive. Your original photos are never changed, and the combined results stay fully re-editable.

Working with Layers



Layers in the Edit module let you build composites, blend multiple photos, paint in new skies or backgrounds, add text, align layers by content, and more. Layers are fully non-destructive and tightly integrated with the Edit module, so every setting on every layer stays editable and your original photos are never changed.

You can combine different photos or copies of the same photo. Each layer can be moved, sized, and masked on its own, and each keeps its own non-destructive settings all the way back to the original raw data. That means every editing feature, from exposure and camera profiles to portrait retouching and Effects filters, works on layers.



When you add a layer, Photo RAW creates a new .onphoto document and leaves your original photo untouched. The .onphoto file appears in Browse and holds all of the layer and editing information.

A layer can be a copy of the current photo, for more complex adjustments to part of an image than local adjustments allow. It can also be another photo, for replacing a sky or background, adding a texture, or building a collage. A document can have up to 14 layers.

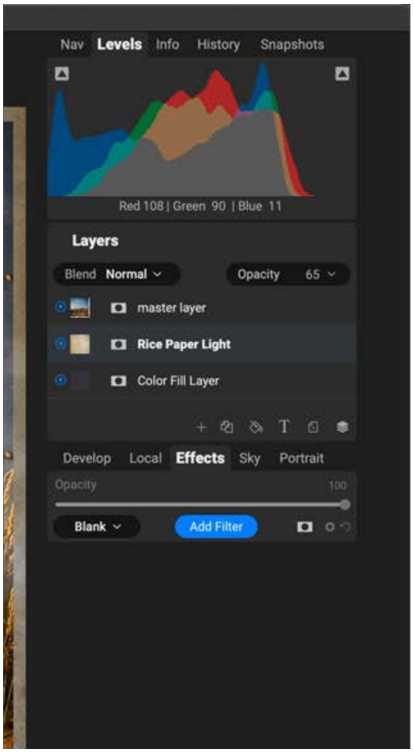
Once you add a layer, the whole Edit module is available for it. Select a layer to add adjustments from any of the edit tabs, create masks, and more. Use the Transform tool to move, rotate, and scale a layer independently.

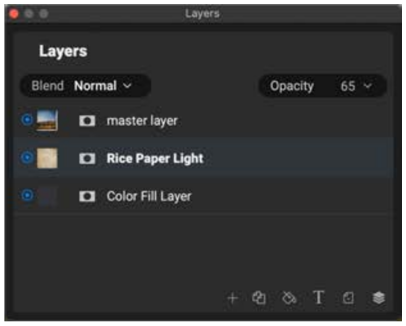
NOTE: The Crop tool works on the whole document, so you can't crop individual layers.

Configuring the Layers Pane Location

Like the Properties window, the Layers pane can dock in the left or right panel or float as its own window. You can also hide it in any configuration.

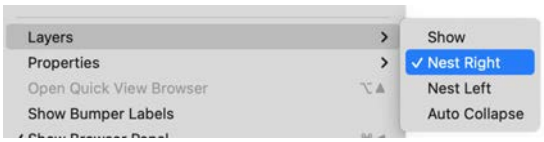






Use the **Window > Layers** menu:

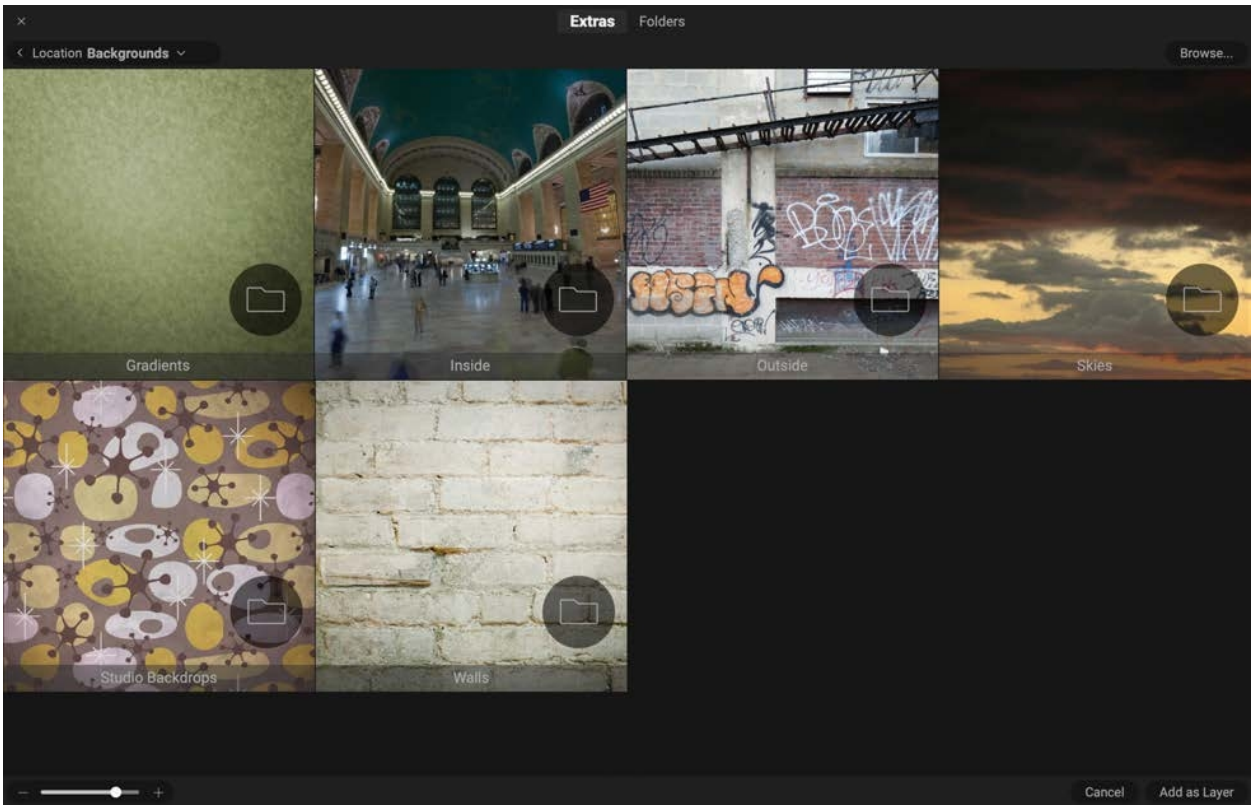
- **Left Side / Right Side:** Docks the pane on that side. Uncheck both to make it a floating window.
- **Show:** Shows or hides the pane.
- **Auto Collapse:** Collapses the pane to its title bar when your cursor moves away and expands it when you hover over it.



Adding a New Layer

The easiest way to add a layer is to choose **Add Layer from File** from the Layer menu. The Add Layer window has two tabs:

- **Extras:** The ON1 folder holds the extras installed with Photo RAW, such as backgrounds, textures, borders, and skies. The My Extras folder holds extras you've added with the Extras Manager (see Extras).
- **Folders:** Browse your computer for photos and other supported files.



To open a specific file, click **Browse** at the top right of the window and navigate to it. Any file Photo RAW supports can be added as a layer.

TIP: You can also copy image pixels from another app and choose Paste in the Edit module to add them as a new layer.

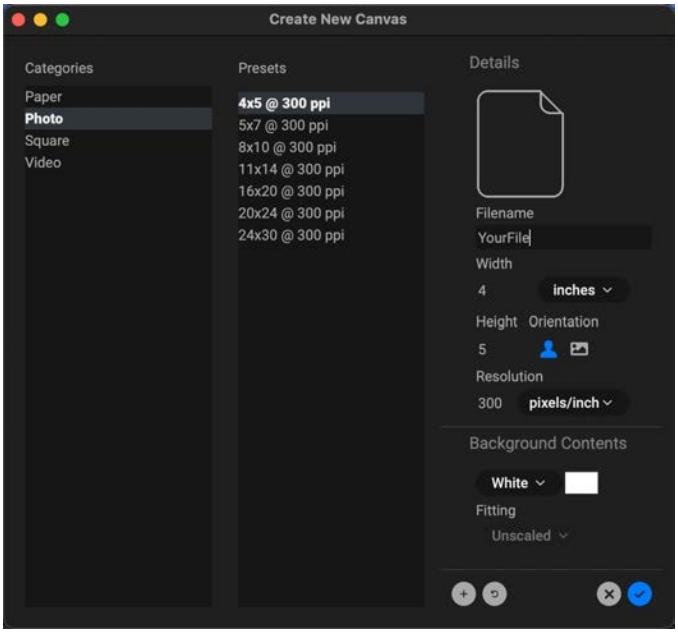
Opening a Layered Photoshop File

Photo RAW can open most layered Photoshop files in the Edit module:

- Files with basic layers and masks open with each layer and mask in the Layers pane.
- Files with smart objects, text layers, or layer styles are flattened and open as a single layer.

Either way, Photo RAW converts the file to .onphoto and leaves your original document unchanged.

Creating a Blank Canvas



Choose **New Canvas** from the File menu in Browse or Edit to create a new file at any size. Choose from presets for common paper, photo, square, and video sizes, name the file, and set the background color or transparency.

In Browse, you can also start the canvas with selected photos by choosing **Selected Photos** from the Background Contents menu. The Fitting menu then lets you add them Unscaled, Fit (inside the canvas), or Fill (scaled to fill the canvas). Background Contents can also paste an image from the clipboard as a new layer, with the same Fitting options. The clipboard image must be in a format Photo RAW supports (see Working with Files).

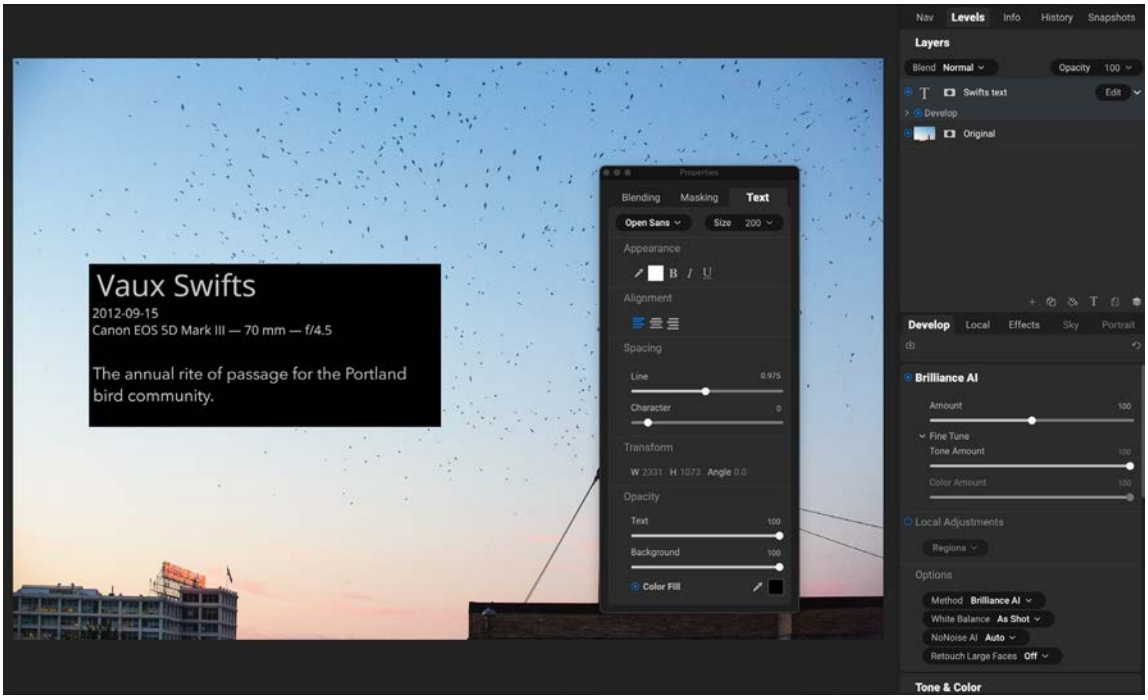
Click **OK** to create a new .onphoto file with a single layer, then add photos and extras as described on this page. To resize an existing canvas, choose **Canvas Size** from the File menu in the Edit module.

Creating Text Layers

Text layers add text to a photo or composite, from simple watermarks to more complex layouts. You control the block size, font, type size, line and letter spacing, color, and alignment, and you can add a background fill and set the opacity of the text and background.

1. Choose **Add Text Layer** from the Layer menu, or click the text icon in the Layers pane toolbar. A text layer is added with placeholder text selected, and the Text tab of the Properties window opens.
2. Type your text and set the font, size, and other options in the Properties window.
3. Click outside the block, then drag a corner to resize it or drag inside it to move it.

To edit text, select the Text layer and double-click the block. To add another text block, add another text layer. To remove one, select it in the Layers pane and choose Delete from the Layer menu. Photo RAW remembers your last text settings, which is handy for watermarks.



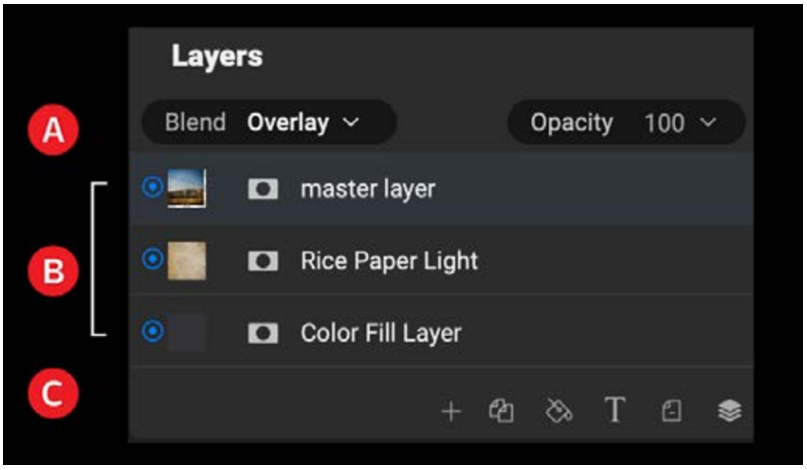
TIP: You can insert photo metadata into a text block by typing a field name in curly braces, such as {Aperture}. Click outside the block to see the result. Available fields: Name, FileName, Date, Time, Shutter, Aperture, ISO, Camera, Lens, Focal, Description, Author, Copyright, and Path.

Creating a Color Fill Layer

A solid color layer is useful for composites and blend mode effects. Choose **Add Color Fill Layer** from the Layer menu, or click the Color Fill icon in the Layers toolbar, then pick a color. To change it later, select the layer and choose **Edit Color Fill** from the Layer menu.

Working with the Layers Pane

The Layers pane has three sections:



1. **Blending and Opacity:** Set the blend mode and opacity of the selected layer.
2. **Layers:** Every layer in the document, with thumbnails of its contents and mask (if it has one). The selected layer has a slightly different background.
3. **Layer tools:** The toolbar at the bottom of the pane for common layer tasks (described below).

Layer Visibility

Click the button to the left of a layer's thumbnail to show or hide it. A hidden layer has no effect on the image.

Changing Opacity

The Opacity slider sets the layer's strength. At 100% (the default) it's fully opaque; lower values blend it with the layers below. Combining opacity and blend modes creates a wide range of color and tone effects.

Changing Blend Modes

Blend modes set how the selected layer combines with the layers below it. The default, Normal, keeps the upper layer fully opaque. Other modes change brightness, contrast, and color. Change the blend mode in the Blending tab of the Properties window. See Blending Modes.

Changing the Layer Order

Drag layers up or down to reorder them.

Renaming Layers

Double-click a layer's name, type a new one, and press Enter.

Layer Masks

Using any masking tool on a layer, including Super Select AI and Quick Mask AI, creates a layer mask automatically. Click the layer's mask icon to see the standard mask options. All of the Edit module's masking tools work on layer masks, including Mask AI. You can copy and paste layer masks, including masks from Effects filters, from the Mask tab or the Mask menu. See Filter Masks and Masking Tools.

Adding Layers from the Filmstrip

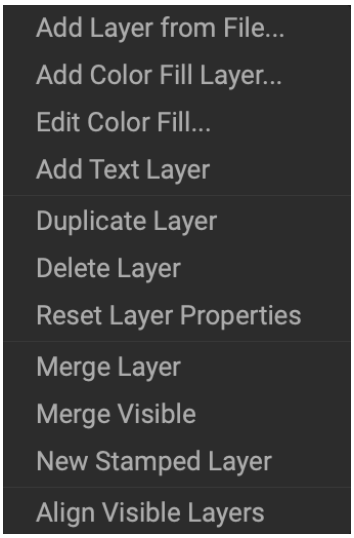
In Filmstrip view in the Edit module, drag a photo from the strip into the main window to add it as a new layer. See Working in Filmstrip View.

NOTE: If an added photo's dimensions don't match the document, resize it with the Transform tool. Hold Shift to keep its aspect ratio.

Layers Pane Toolbar



Every layer command is available in the Layer menu and by right-clicking a layer. The toolbar at the bottom of the pane holds the essentials. From left:



- **New Layer:** Opens the Add Layer from File window.
- **Duplicate Layer:** Duplicates the layer, including its Edit module adjustments.
- **New Color Fill Layer:** Adds a solid color layer.
- **New Text Layer:** Adds a text layer.
- **Delete Layer:** Deletes the selected layer.
- **Merge Layer:** Merges the selected layer with the one below it.

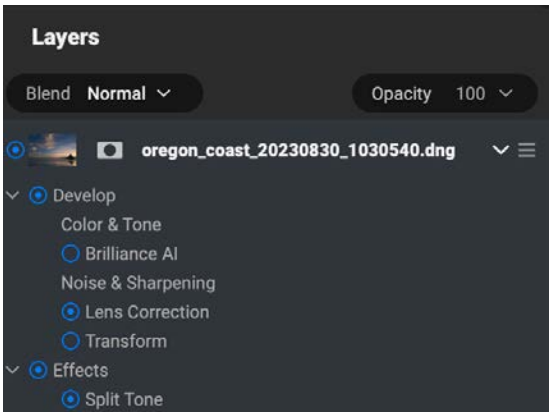
More commands in the Layer menu or right-click menu:

- **Reset Layer Properties:** Removes the layer's masks and transforms. To reset its Develop, Effects, Portrait, or local adjustments, click **Reset Layer** at the bottom right of the window.
- **Merge Visible:** Merges all visible layers into a single layer with all effects applied.
- **New Stamped Layer:** With the top layer selected, adds a new composite layer at the top of the stack with all effects applied.
- **Align Visible Layers:** Aligns visible layers based on their content.

Viewing Edit Module Settings for a Layer

Each layer in the Layers pane has a hidden list of every Edit module operation applied to it. Click the layer's title once to open the list.

The list shows each Edit module tab with adjustments, and you can expand Develop, Effects, Portrait, Sky, and Local Adjustments to see the specific changes. Double-click any item to jump to that setting in the Edit module. Click the layer's title again to close the list.



NOTE: This replaces the Settings Applied section that was in the Info pane in earlier versions of Photo RAW.

Using the Transform Tool with Layers

Use the Transform tool in the Tool Well to move, resize, rotate, and flip layers. When you select it, handles appear around the selected layer. You can transform one layer at a time.

When you're done, click **Apply** in the Tool Options bar or press Enter. To cancel, click **Cancel** or press Esc.

Repositioning a Layer

Drag inside the transform box, or press the arrow keys to nudge the layer one pixel at a time.

Resizing a Layer

Drag any handle. Corner handles adjust two sides at once and side handles adjust one side.

- Hold Shift to keep the proportions.
- Hold Option (Mac) or Alt (Windows) to resize from the center.
- Hold Shift+Option or Shift+Alt to resize proportionally from the center.

You can also type a width and height in the Tool Options bar, or click **Fill Canvas** to size the layer to fill the canvas.

Rotating a Layer

Move the cursor just outside a corner handle until it changes to the rotate cursor, then drag. You can also press Option/Alt with the left or right arrow key. To rotate in 90° steps, use the Rotate Left and Rotate Right buttons in the Tool Options bar.

Flipping a Layer

Click the Flip Horizontal or Flip Vertical button in the Tool Options bar.

Aligning Layers

Photo RAW can align multiple layers based on their content. This is a big help with handheld shots when you want to blend parts of one frame into another, such as swapping in a better sky.

With the layers in the Layers pane, choose **Align Visible Layers** from the Layer menu or the right-click menu. Photo RAW analyzes the layers and aligns them to the one they have the most in common with, moving or rotating them slightly as needed. Then use the masking tools to show or hide parts of each aligned layer.

Using Layers with Synced ON1 Cloud Files

You can create a layered file from a synced photo that lives on another device, with two restrictions.

- **The new file is saved locally.** Layers creates a new .onphoto file, which must be saved on the device you're editing on. If you save it to a published folder or album, it syncs, and you can edit it on another computer running Photo RAW (see below).
- **Previews have less detail.** If the synced photo is an editable preview, Photo RAW warns you that it has lower fidelity than the original. A preview may be fine for some uses. For the best-quality base layer, copy the original to your current computer, or set the folder or album to sync Originals and download it from ON1 Cloud Sync.

For more on these settings, see Cloud Sync.

Editing Synced Layered Files

A layered .onphoto file synced to ON1 Cloud in any way (folder or album, preview or original) is fully editable on another synced device running Photo RAW. Edit module changes to existing layers sync back to the original file. If you add or remove layers, you're prompted to save the edited file to the current computer.

NOTE: Synced layered photos can be viewed, but not edited, in Photo RAW for Mobile.

Stitching Panoramas



Photo RAW stitches multiple photos into a panorama right from Browse, and can batch process a group of panoramas.

A panorama combines multiple frames, or slices, of a scene. Panoramas can be horizontal or vertical, wide or compact, and give you a higher-quality image with more detail and a wider view. Photo RAW can stitch as few as two photos or more than 25.

Creating a Panorama

1. In Browse, select the photos in Grid view, or select a folder containing the frames.
2. Choose **Merge to Panorama** from the More menu in the left bumper, or **Create Panorama** from the File menu.
3. The Create Panorama window shows a preview of the stitched panorama and an Options panel where you set the projection, edges, output size (100% or 50%), the module to open the result in, and panoramic metadata.



Projection

For most landscape panoramas, use **Auto** or **Spherical**, which maps the photos onto the inside of a sphere. **Collage** lays the photos flat instead, sometimes called scrapbook style.

Edges

- **None:** Leaves the panorama uncropped.
- **Crop:** Trims the edges to the best rectangular crop.
- **Warp to Fill:** Stretches the edges to fill a rectangle without cropping.

Panorama Edge Options

These panoramas show the three edge options in Create Panorama:



None



Crop



Warp to Fill

Top: None. Middle: Crop. Bottom: Warp to Fill. Because the scene has sky and grassland at its edges, Warp to Fill could add enough pixels to fill out the top of the frame.

Warp to Fill uses ON1's content-aware fill to stretch the edges of your scene to fill as much of the frame as possible, giving you a larger usable area.

TIP: Content-aware fill isn't perfect. After using Warp to Fill, check the edges for smudges or bad fills. It works best on scenes with skies and open vistas, and less well when there's lots of detail at the edges.

Other Panorama Options

- **Open In:** Choose whether to stay in Browse or open the finished panorama in the Develop or Effects tab.
- **Add Panoramic Metadata:** Lets panorama-aware websites and apps, such as Facebook and Google, display your panorama interactively so viewers can pan around it.

Click **Save**. Photo RAW stitches and blends the photos, saves the result as an .onphoto file, and opens it where you chose in Open In.

Batch Processing Panoramas

1. Put the frames for each panorama in their own folder.
2. In Browse, select all of the folders.
3. Choose **Create Panorama**. Photo RAW builds a panorama from each folder using the default options: Auto projection, cropped edges, and 100% size.

Each finished panorama is saved in the same folder as its frames.

Tips for Creating Great Panoramas

Panoramas capture grand vistas in a way a single frame can't. These practices will help you get great results:

- **Use a tripod** and keep it and your camera level across the entire sweep of the scene.
- **Lock exposure and focus.** Use the same aperture, shutter speed, and ISO for every frame.
- **Overlap each frame by about 50 percent** so Photo RAW has plenty of data to work with.
- **Try fewer frames.** If the result isn't what you hoped, especially the exposure, and you have plenty of overlap, remove a few frames and stitch again.

- **Prep in Develop.** Make basic edits and turn on Lens Correction before stitching. Save styling for after the panorama is merged.

Blending HDR Images

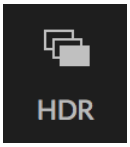
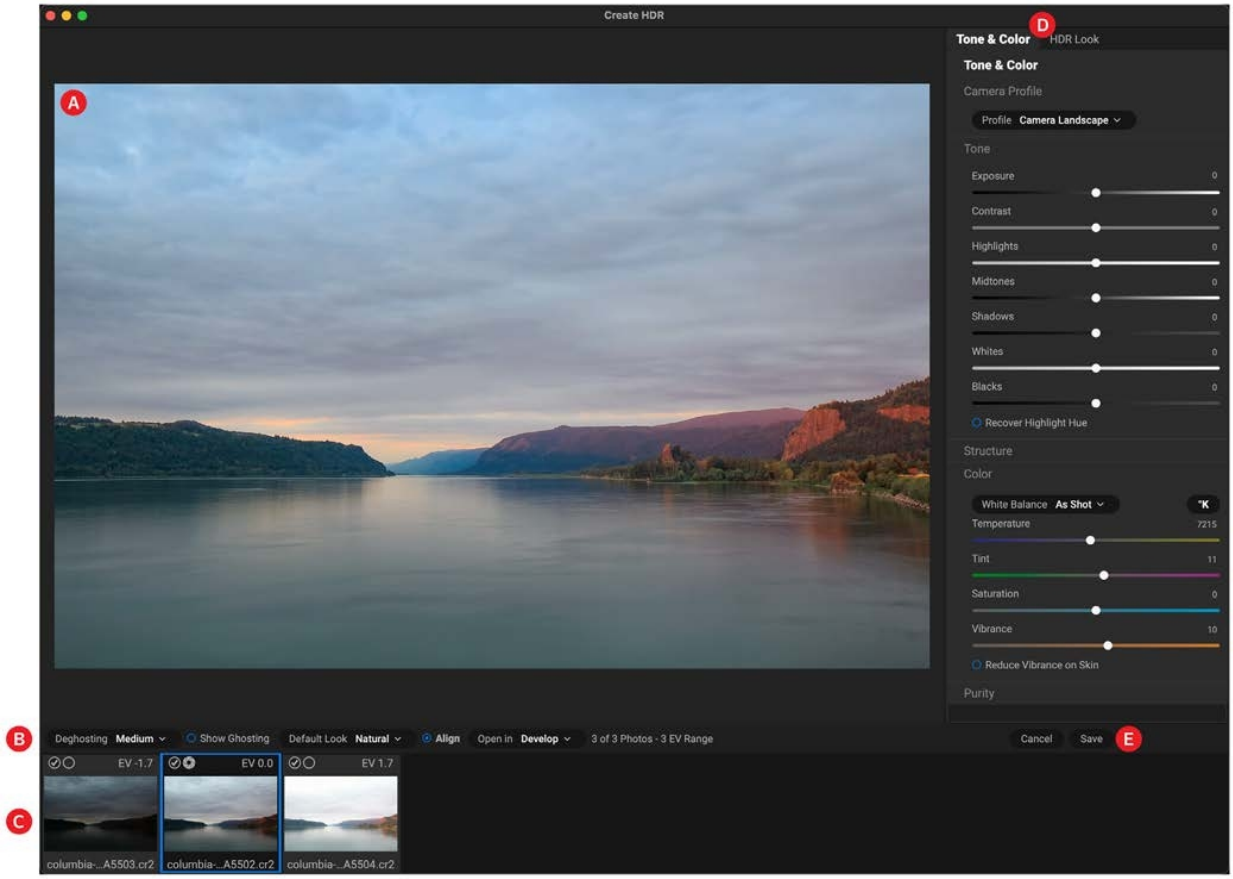


Photo RAW's HDR feature blends several shots of a scene taken at different exposures, capturing shadows, midtones, and highlights across the series, into one image with a much wider tonal range than a single shot. Like panoramas, HDR supports batch processing.



Creating an HDR Image

In Browse, select the photos in Grid or Filmstrip view, then choose **Merge to HDR** from the More menu in the left bumper, or **Create HDR** from the File menu. The Create HDR window includes:

1. **Preview:** A resizable preview of the merged HDR.
2. **Options bar:** Settings for deghosting, a default look, alignment, and the module to open the result in.
3. **Reference panel:** The source photos and their exposure values relative to the base image. The outlined photo is the base for deghosting, and the aperture icon next to the checkmark marks the base for exposure.
4. **Editing panes:** The Tone & Color pane from Develop and the HDR Look pane from Effects for fine-tuning.
5. **Save and Cancel** buttons.

Choosing Base Images

Photo RAW picks the photo closest to the middle of the series as the base for both exposure and deghosting. To change the deghosting base, click a different photo in the Reference panel. To change the exposure base, click the aperture icon on a different photo.

Default Look

The **Natural** and **Surreal** looks use the matching HDR Look styles. They're just a starting point; you can change any setting in the two editing panes.

Deghosting

Deghosting fixes areas that moved during the series, such as clouds, flowing water, or branches. Choose one of four levels, or none. Click **Show Ghosting** to see affected areas in red, then pick the right level. If there's too much movement, you may want to cancel and choose a different set of photos.



The Create HDR preview with Show Ghosting turned on.

Align

Align is on by default, so Photo RAW aligns the photos by their content as it builds the HDR. Turn it off if alignment produces a bad result or you don't want alignment, such as with star photography. With Align off, Photo RAW uses the selected base image.

Saving the HDR

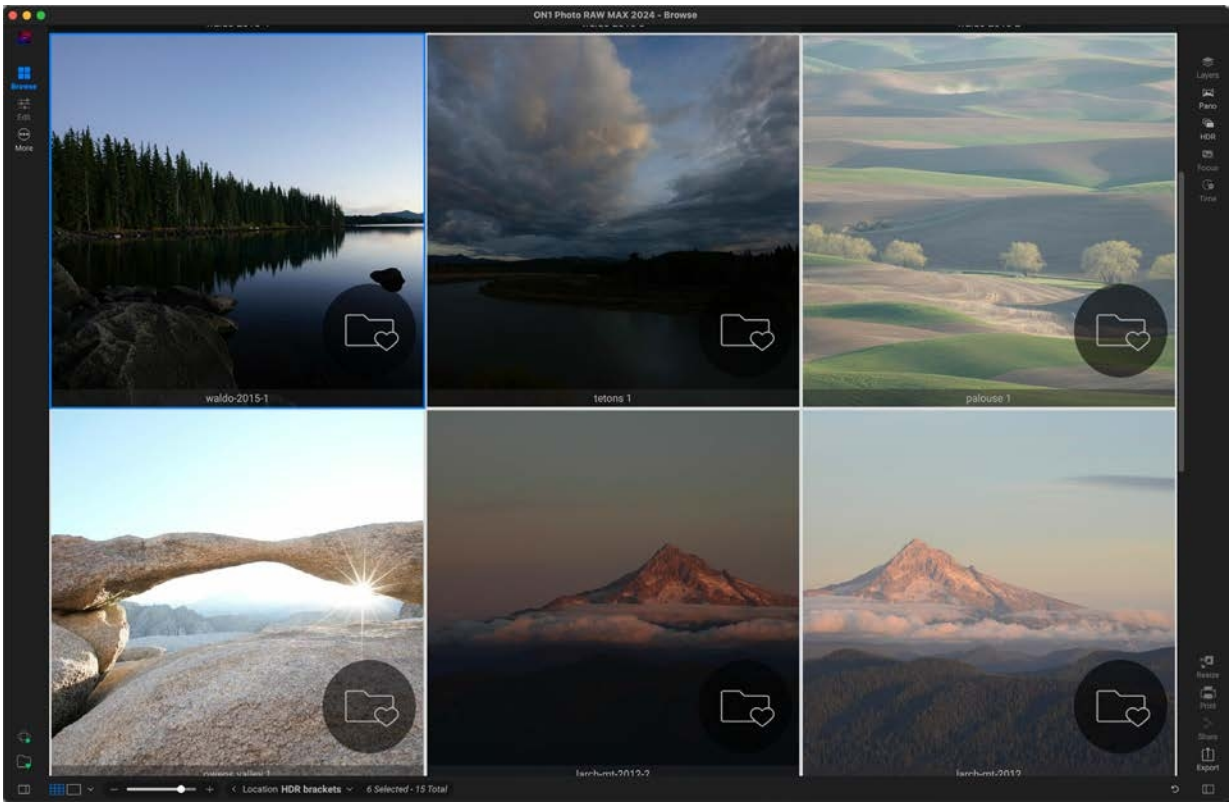
Use **Open In** to stay in Browse or open the result in the Develop or Effects tab. Click **Save**, and Photo RAW builds the HDR, saves it as an .onphoto file, and opens it where you chose. Your Create HDR settings carry over to the Tone & Color and HDR Look panes, and because everything is non-destructive, you can keep refining the HDR, change its HDR Look style, or add more effects at any time.

Batch Processing HDR Images

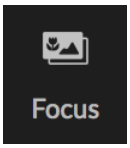
Batch HDR turns multiple sets of bracketed shots into HDR photos automatically. Each set becomes its own .onphoto file, ready to open in the Edit module.

1. Put the exposures for each HDR in their own folder.
2. In Browse, select all of the folders.
3. Click the **HDR** button. Photo RAW builds an HDR from each folder using the default options.

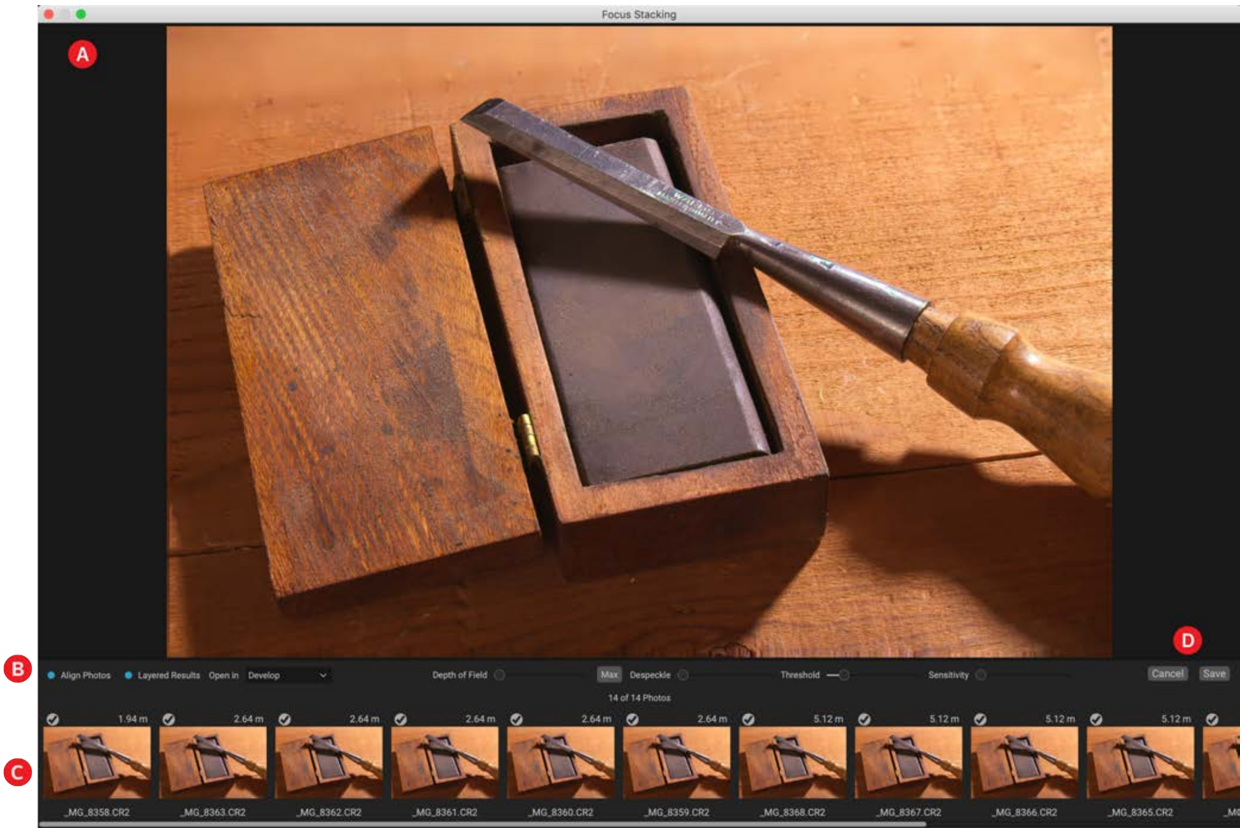
Each finished HDR is saved in the same folder as its source photos.



Focus Stacking



Getting everything sharp from foreground to background in a single shot can be difficult or impossible. Focus Stacking blends a series of photos taken at different focus distances to give you more depth of field than any one photo. You can even adjust the focus in real time, just like turning the focus ring on your lens. Think of it as HDR for focus.



Creating a Focus Stack

In Browse, select the photos and choose **Merge to Focus Stack** from the More menu. The Focus Stacking window includes:

1. **Preview:** A resizable preview of the blended photo.
2. **Options bar:** Settings for alignment, Layered Results, the module to open the result in, depth of field, and fixing problem areas between source photos.
3. **Reference panel:** The source photos with their focus distances, taken from the metadata when available. Click a photo's checkbox to leave it out.
4. **Save and Cancel** buttons.

Adjusting the Result

When focus metadata is available, the sources are listed from nearest to farthest with their focus distances, and the preview shows the suggested result. Photo RAW aims for the greatest depth of field possible.

- **Depth of Field:** Narrows the sharp range. Drag the left handle in for less sharpness up close, or the right handle in for less sharpness in the distance. Click **Max** to return to maximum depth of field.

- **Despeckle:** Helps remove ghosting or distractions when something moved between shots, such as leaves.
- **Threshold:** Reduces noise in smooth areas, but can remove subtle detail if pushed too far.
- **Sensitivity:** Shifts how Photo RAW decides which photo is sharpest for each pixel. Low values favor broad, low-frequency detail; high values favor fine, high-frequency detail and may reduce noise.

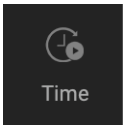
TIP: Balancing Threshold and Sensitivity is like adjusting noise reduction: look for the best compromise between the two.

Saving the Stack

Click **Save**. Photo RAW blends the photos into a new .onphoto file and opens it in Browse, Develop, or Effects, based on your **Open In** setting. If you chose **Layered Results**, each source photo appears on its own layer with its mask.

Like every photo in Photo RAW, focus-stacked photos can be edited non-destructively in any Edit module tab.

Time-Lapse

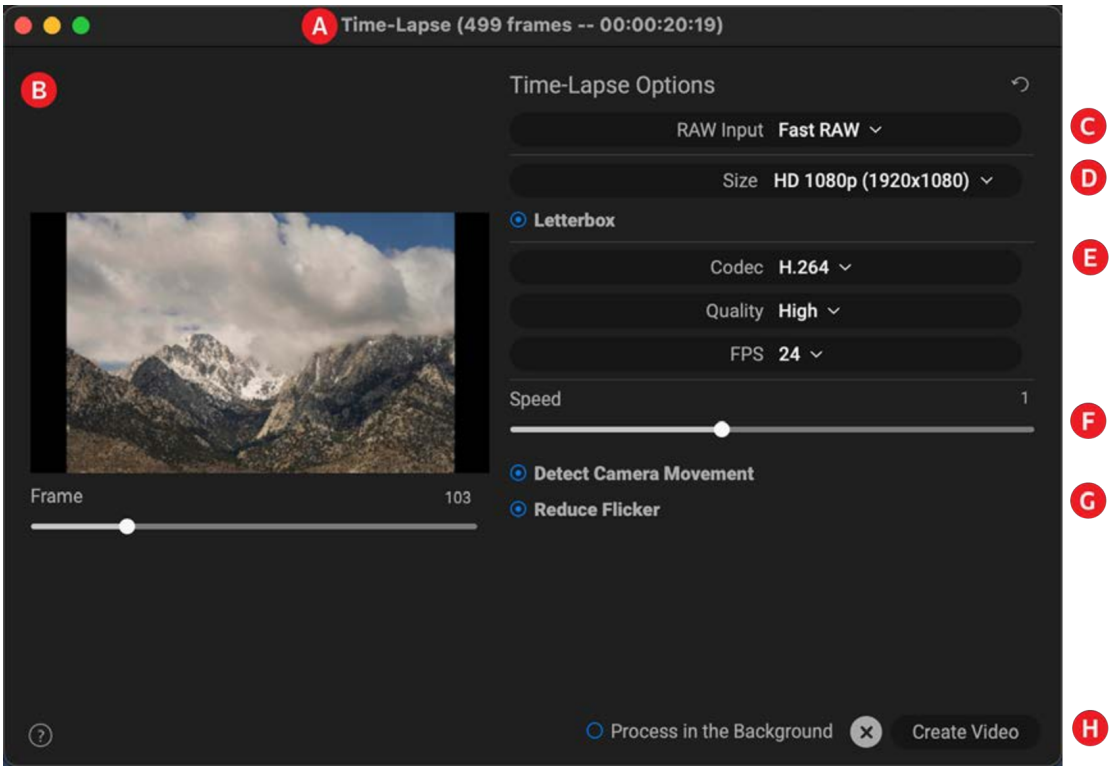


Time-Lapse turns a series of still photos into smooth, flicker-free HD or 4K videos in a few clicks, right from Browse. Preview the result in the dialog and create quick proofs or high-quality finals.

Photo RAW detects when the camera was bumped and filters out misaligned frames. It also evens out exposure changes automatically, so you can create "holy grail" day-to-night sequences. You can speed up or slow down the result to stretch short sequences into longer, smooth videos.

Creating a Time-Lapse

In Browse, select the photos in Grid view and choose **Merge to Time-Lapse** from the More menu. The Time-Lapse window opens:



1. **Title bar:** Shows the number of frames and the estimated video length at the current speed.
2. **Preview:** A small preview of the video. Drag the Frame slider to scrub through it.
3. **RAW Input:** Sets the source used to build the video: Embedded JPEG (fastest), Fast RAW (the Detail view from the Browse cache), or Full RAW (the full raw file).
4. **Size:** HD 720p (1280x720), HD 1080p (1920x1080), 4K (3840x2160), or 4K (4096x2304).
5. **Video settings:** Codec (H.264 or ProRes), quality (High, Medium, or Low), and frame rate (FPS).
6. **Speed:** Shortens or lengthens the video.
7. **Options:** Detect Camera Movement removes misaligned frames, and Reduce Flicker evens out exposure.
8. **Create Video, Cancel, and Process in the Background** buttons.

Click **Create Video**. Photo RAW saves the video in the same folder as the photos, where it appears in Browse. Double-click it to play it in your computer's default video app.

Building Effective Time-Lapse Videos

Unlike Photo RAW's other combining tools, Time-Lapse works best when you finish editing the photos *before* you create the video.

- **Simple sequences:** Edit the first photo, or a representative one, in the Edit module, then use Sync Settings to apply those edits to the whole sequence (see Copying Settings and Synchronizing Edits). Turn on **Reduce Flicker** to let Photo RAW even out exposure as it builds the video.
- **Complex sequences:** Split the sequence into groups with similar exposure. Edit one frame from each group and sync it across that group. Keep Reduce Flicker on; the extra care often gives a better result on long sequences.

TIP: Make quick proof versions first. Use Embedded JPEG or Fast RAW in the RAW Input menu with a 720p or 1080p size. They build much faster and let you check your edits and settings before rendering the final 4K video from full raw files.

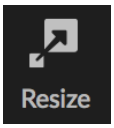
Output and Sharing

Editing may be most of what you do in Photo RAW, but sometimes you need to do something more with your photos. Whether you're enlarging for a high-quality print, sharing online, or printing at home, Photo RAW's output tools get your photos where they need to go.

This section covers:

- Resize: The industry standard for enlarging photos and preparing them for print.
- Restore: AI restoration, using local and cloud processing, to repair and revive old photos.
- Export: The power of Resize in a quick, easy-to-use panel for exporting with flexibility and control.
- Print: Print photos at any size, individually or as contact sheets.
- Share: Share your photos quickly, including to SmugMug.
- Send To: Edit photos in other apps.
- Other Sharing Options (Mac only).

Resize AI



Resize AI is ON1's professional enlargement tool. Its generative AI model uses diffusion technology to recreate detail and sharpness the original photo lacks, producing exceptionally high-quality enlargements. It's ideal for low-resolution photos, AI-generated art, and tight crops.

Traditional enlargement creates new pixels by copying their neighbors, which leads to less detail, soft edges, and more noise. Resize AI's super-resolution technology enlarges photos while keeping and recovering detail and sharpness.

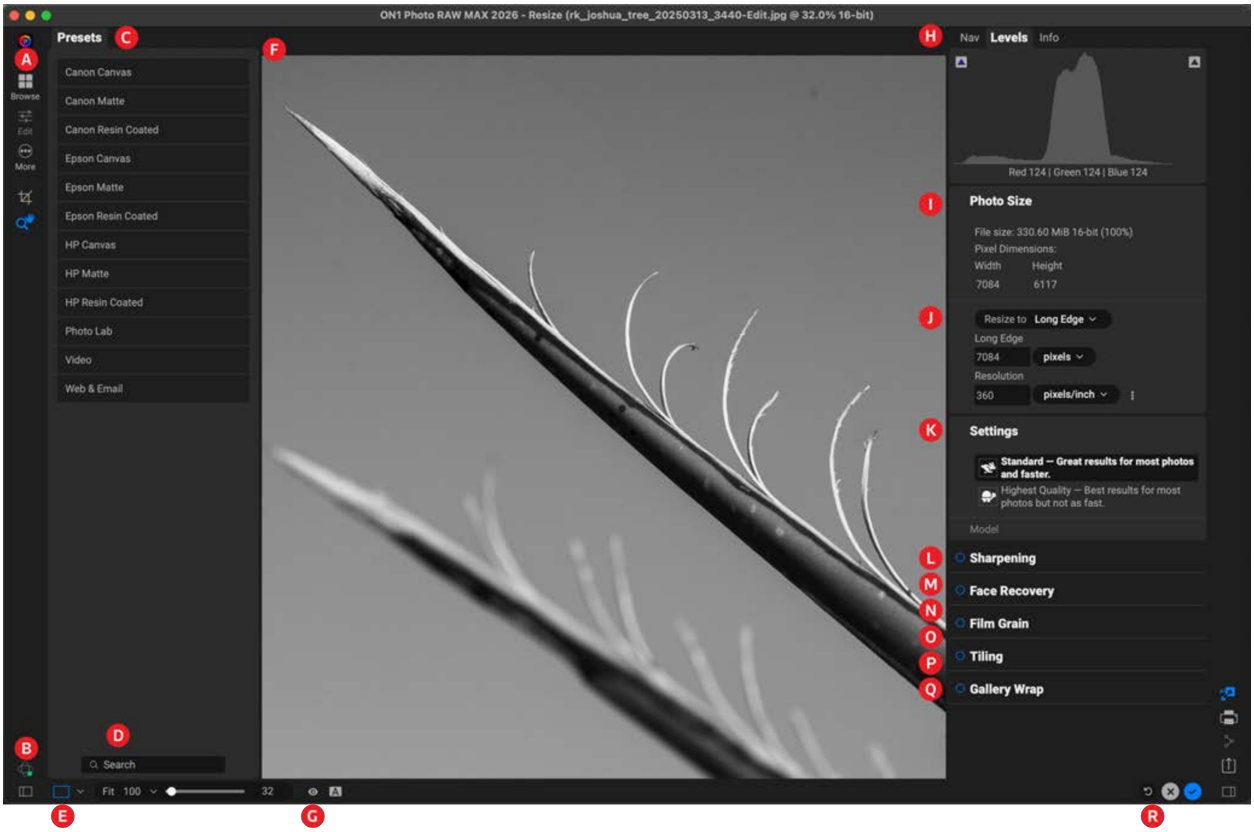
Features

- **Large prints:** Make stunning poster-size prints. Crop to a paper size, enlarge with maximum detail, then print directly or save the file for a lab.
- **Crisp detail:** Upscale to any size with excellent sharpness. Even a tight crop keeps amazing detail, like having a longer lens without the cost or weight.
- **New life for old photos:** Remaster early digital photos to make them bigger, sharper, and cleaner.

- **Face Recovery:** A machine-learning model detects small faces and rebuilds them with realistic features and texture.
- **AI noise reduction:** Reduce noise and JPEG artifacts during resizing, powered by NoNoise AI, for higher-quality enlargements.
- **Gallery wraps:** Add reflected or stretched edges so you can make a canvas gallery wrap without losing image area.
- **Tiling:** Divide a photo into tiles or strips for printing murals, with control over tile size and overlap.
- **Batch processing and export:** Enlarge a group of photos at once and save them with Export, with full control over names, locations, file types, and more, including text or graphic watermarks.
- **Print presets:** Pick your printer type, paper, and size, and Resize AI sets the right resolution and sharpening.
- **Complete printing support:** Print directly from Resize, and use soft proofing to preview the print with specific printer and paper profiles.

NOTE: For more on resolution and print size, see "How Big Can I Print?" and "How Much Resolution Do I Need?" in the Resize AI FAQ.

Resize Main Window Overview



1. **Tool Well:** The Crop and View tools, plus buttons to return to Browse and Edit.
2. **ON1 Cloud Sync status / Close Left Panel:** The top button shows ON1 Cloud status, and the bottom button shows or hides the Presets pane.
3. **Presets:** A library of presets for different printers, papers, and print sizes.
4. **Search:** Find presets by name.
5. **View selector:** Switch between Detail and Filmstrip views. Use Filmstrip to batch process or work through photos in the same folder.
6. **Preview:** Where you view and work on your photo.
7. **Preview controls:** The magnification slider, side-by-side before/after comparison, and an original/edited preview toggle.
8. **Navigator, Levels, and Info:** Navigation, histogram, and photo information.
9. **Photo Size:** Shows your photo's pixel dimensions.
10. **Resize To:** Sets the dimensions of the resized photo.
11. **Settings:** Choose the resizing method and adjust smoothness.
12. **Noise Reduction:** Reduces noise during resizing.
13. **Sharpening:** Sharpens the resized photo.
14. **Face Recovery:** Enhances detail in small faces.
15. **Film Grain:** Adds realistic film grain.
16. **Tiling:** Splits the result into tiles for murals and other oversized prints.
17. **Gallery Wrap:** Adds an edge for canvas gallery wraps.
18. **Reset bar: Reset** returns all settings to their defaults. **Sync** copies the current Resize settings to selected photos in Filmstrip view. **Cancel** returns to Browse without saving. **Done** saves the photo in Detail view, or opens Export in Filmstrip view.

Basic Resize AI Workflow

Resize AI is built around resolution on demand. Edit at a modest file size, which is faster and uses less disk space and memory, then enlarge and sharpen with Resize AI as one of your last steps before printing. There's no need to keep multiple versions of a file at different print sizes; just create what you need when you need it.

Open Resize from anywhere in Photo RAW by clicking Resize in the module selector, either with one or more photos selected in Browse or while editing a photo in the Edit module.

Setting the Output Size

- Crop to a specific paper size with the Crop tool (see Crop Tool (Resize)).
- Set the output size, with or without cropping, in the Photo Size pane (see Photo Size Pane).
- Use a preset for a specific printer, paper, and size. Presets can include crop and paper size, output sharpening, film grain, and more (see Presets (Resize)).

You can change any of these as you work. Then adjust the Sharpening, Film Grain, Tiling, or Gallery Wrap panes as needed. The Preview updates as you go. Click **Preview** at the bottom of the window to toggle between original and edited, or **Compare** for an adjustable split-screen view.

Saving

Click **Done** to name and save the photo in your chosen format and return to Browse. You can also use Export to fine-tune the file format or save different versions.

NOTE: When working with a group of photos, clicking Done opens Export for the selected photos, then returns you to Browse. See Working with Multiple Images in Resize.

Using Resize AI with ON1 Cloud Sync Files

You can resize a synced photo that lives on another device, with two restrictions:

- **The new file is saved locally.** Resize creates a new file, which must be saved on the device you're working on.
- **Previews have less detail.** If the synced photo is an editable preview, Photo RAW warns you that it has lower fidelity than the original. For the best quality, copy the original to your current computer, or set the folder or album to sync Originals and download it from ON1 Cloud Sync.

For more, see Using ON1 Cloud Sync with Photo RAW.

Navigating the Preview Area

The Preview area is where you view and work on your photo. With the View tool selected, click the Preview to zoom in and center on that spot. Hold Option/Alt to pan around a zoomed photo. Double-click the View tool in the Tool Well to view at 100%, which is best for checking fine detail and judging Resize's sharpening and resampling.

The preview updates in real time as you change settings in the Resize panel. For very large enlargements, it may take a few seconds to fully update.

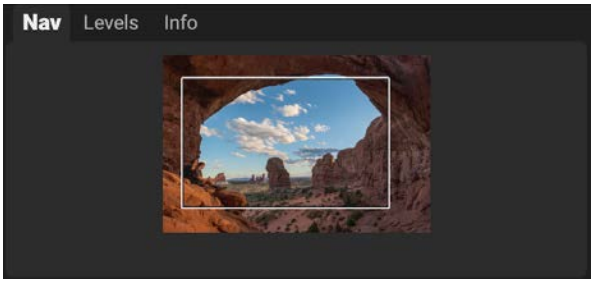
Split Screen

Click the **Split Screen** button at the bottom of the window to show the original on the left and the resized version on the right. Drag the square in the center to resize the panes, and use the View tool to zoom and pan. Click the button again to turn split screen off.

Navigator, Levels, and Info

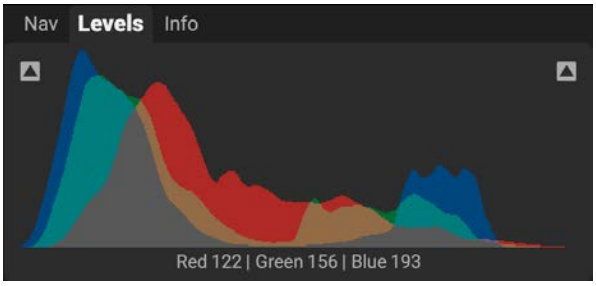
The Navigator, Levels, and Info panes sit at the top of the control panel on the right side of the window. Use them to inspect your photo.

The Navigator Pane



The Navigator shows a bird's-eye view of your photo, with the visible area marked by a white box. Drag inside the box to pan.

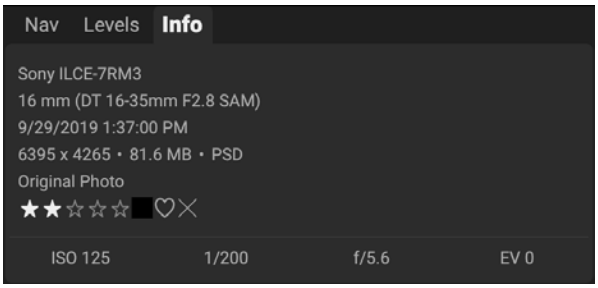
The Levels Pane



The Levels pane shows a histogram of your photo's shadows, midtones, and highlights, which helps you spot clipping, where areas turn pure black or pure white and lose detail.

Shadows are on the left and highlights on the right. A triangle at each end lights up when that side is clipping. Click a triangle to show the clipping overlay: blue marks pure black and red marks pure white. Click a triangle again to turn it off, or hold J to show it temporarily. The bottom of the pane shows the RGB values under your cursor.

The Info Pane



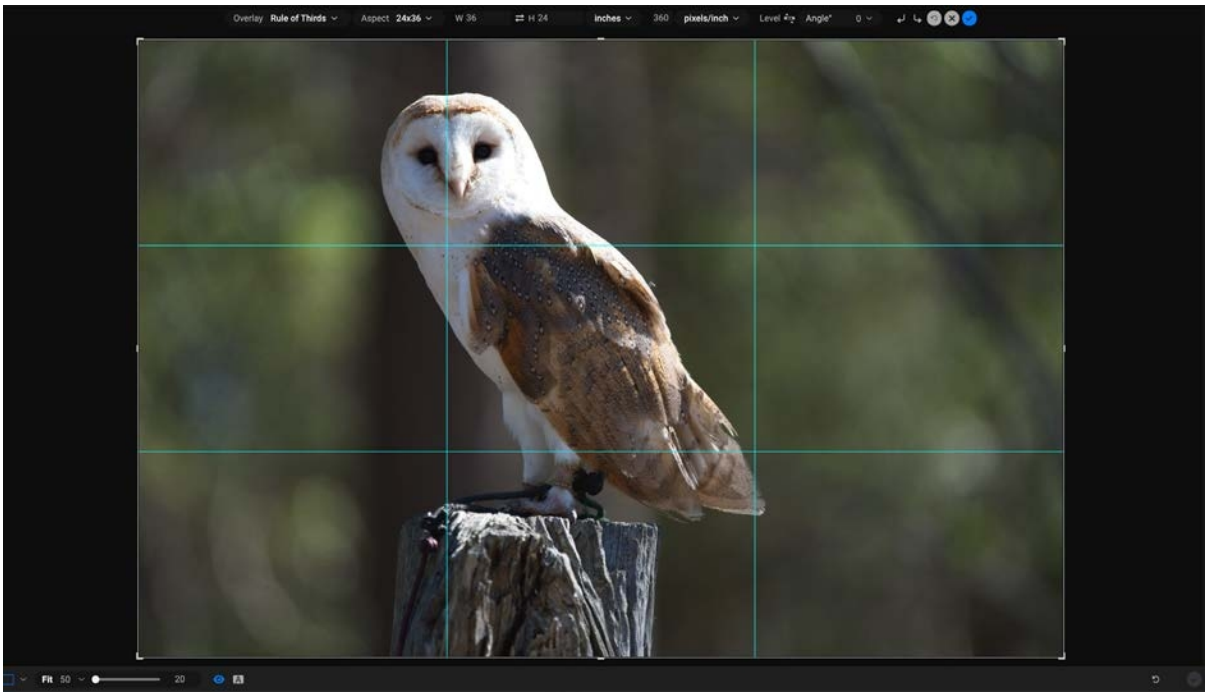
The Info pane shows the photo's metadata:

- Camera
- File type
- Focal length and lens
- Capture date and time
- Exposure information
- ISO
- Shutter speed
- Aperture
- Exposure value
- Filename
- Color space
- Dimensions
- File size

Crop Tool

The Crop tool in Resize crops and resizes the whole photo for output. Unlike the Crop tool in the Edit module, it's destructive: it removes pixels outside the crop box and changes the canvas size. It doesn't support generative canvas extension.

Select the Crop tool and drag the corner handles. The area outside the crop box is darkened. You can resize and move the photo inside the box. Click **Apply** in the Tool Options bar or press Enter when you're done.



Working with the Crop Overlay

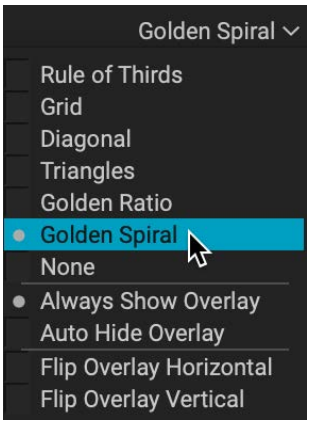
- **Move:** Drag inside the crop box, or nudge with the arrow keys.
- **Resize:** Choose a preset, then drag any handle. The box resizes to match the print size in the Tool Options bar.
- **Rotate:** Move the cursor just outside a corner until it changes to the rotate cursor, then drag.

Crop Tool Modes

Choose a mode from the Preset menu in the Tool Options bar:

- **Freeform:** Adjust the crop box any way you like. Areas outside are trimmed, but the photo isn't resized. Use it to reshape or recompose for general use.
- **Aspect Ratio:** Locks the box to a ratio so only its size changes. Use it to trim pixels at a set ratio without resizing.
- **Document Size Presets:** Crops and resizes at the same time, ideal when you know the print size. Many common sizes are included, and you can create your own.

Crop Overlays



Overlays are compositional guides you can show while cropping. Choose one from the overlay menu in the Tool Options bar: Rule of Thirds, Grid, Diagonal, Triangles, Golden Ratio, Golden Spiral, or None. The menu also lets you:

- Show the overlay all the time, or only when your cursor is over the Preview.
- Flip the Triangles or Golden Spiral overlays.

Crop Tool Options Bar



- **Overlay:** Selects an overlay, sets its visibility, and flips it.
- **Preset:** Sets the crop mode, aspect ratio, or document size. Choose Custom to create your own.
- **Width:** Sets the crop width.
- **Swap Dimensions:** Swaps width and height, which is handy for switching orientation.
- **Height:** Sets the crop height.
- **Units:** Pixels, inches, centimeters, and more.
- **Leveling:** Drag across something in the photo that should be level.
- **Angle:** Shows and sets the rotation angle.
- **Rotate:** Rotates the photo 90°.
- **Cancel:** Resets the Crop tool.
- **Apply:** Applies the crop and resizes the photo.

Leveling the Photo

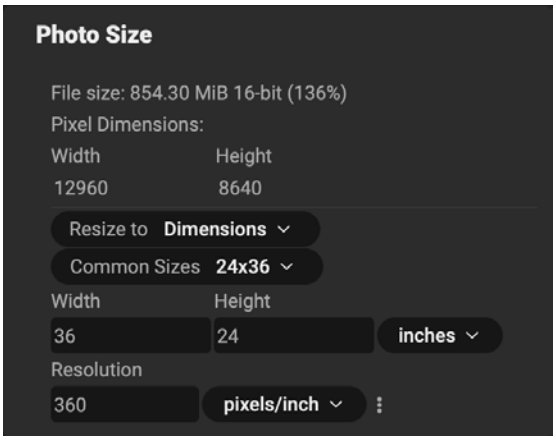
1. With the Crop tool selected, click the **Leveling** tool in the Tool Options bar.
2. Drag a line along something in the photo that should be level, horizontally or vertically. When you release, the photo rotates to the correct angle.

Creating Custom Document Sizes

Resize includes many common print, paper, and video sizes, and you can add your own:

1. From the Preset menu, choose **Custom > Manage Custom Sizes** to open the Custom Document Size Presets window.
2. Click **Add**.
3. Double-click the untitled name and enter a name.
4. Double-click the width and height and enter the values.
5. Click the units and choose the correct unit.
6. Click **OK**.

Photo Size Pane

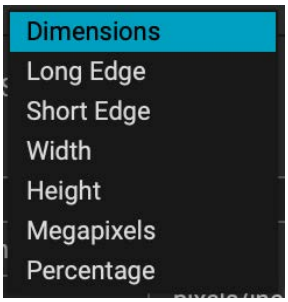


The Photo Size pane is the core of Resize. The top section shows your photo's file size and pixel dimensions, and the bottom section holds the resizing options.

When you open a photo, the top section shows the original file's information. As you resize with a preset, the Crop tool, or the Resize To options, it updates to show the new size. You can always see the original dimensions and file size in the Info pane.

Resize To Options

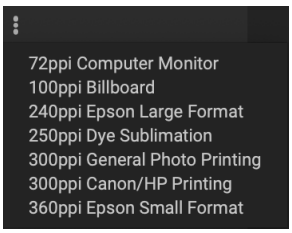
The **Resize To** menu offers seven ways to resize. All of them scale proportionally except Dimensions, which opens the Crop tool because you're choosing a specific output size.



- **Dimensions:** Sizes your photo to common paper and print sizes, or custom sizes you've created, like the document size presets in the Crop tool (see Crop Tool (Resize)). Choosing a size opens the Crop tool so you can crop to fit.
- **Long Edge and Short Edge:** Locks one edge to a set length in pixels, inches, centimeters, or millimeters. Great for batch processing photos in mixed orientations to the same long or short edge.
- **Width and Height:** Scales the photo to a set width or height.
- **Megapixels:** Scales the photo to a specific megapixel count.
- **Percentage:** Scales by percentage. Below 100 reduces the photo and above 100 enlarges it.

Resolution

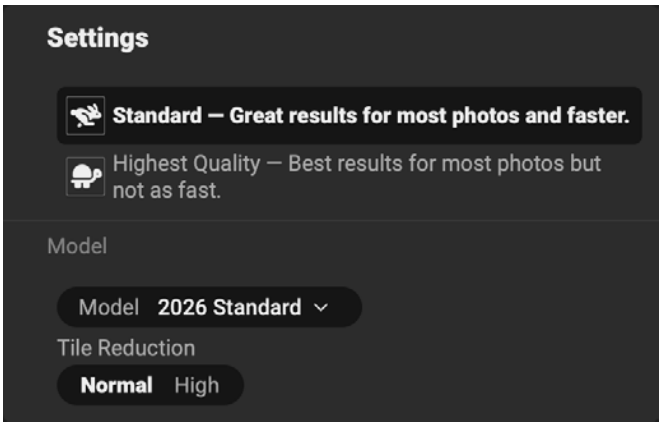
Every Resize To option includes a resolution setting in pixels per inch or per centimeter. The menu next to the field lists common settings for printers and other outputs. See the Resize AI FAQ for help choosing resolution and size.



You can change any of these settings at any time. Switch options, use the Crop tool, or choose a preset, and Resize recalculates.

Settings Pane

The Settings pane is where you choose the resizing method and its settings. Shortcuts at the top select the two main models, Standard and Highest Quality. The **Model** menu has four options:



- **2027 Standard:** Excellent results on most photos, including low-quality, noisy, or artifact-filled originals, while staying fast for batch processing, large output, and older GPUs.
- **2027 Highest Quality:** A state-of-the-art generative AI model that delivers the highest-quality results. It uses diffusion to recreate detail and sharpness the original lacks and removes noise and artifacts. Perfect for small or low-quality originals, AI-generated art, and extreme crops. It takes longer than Standard, but the results are often worth the wait.
- **Genuine Fractals:** The classic patented fractal-based algorithm from Perfect Resize, included only for compatibility with earlier versions of ON1 Resize.
- **Bicubic:** For reducing photo size. It has no settings.

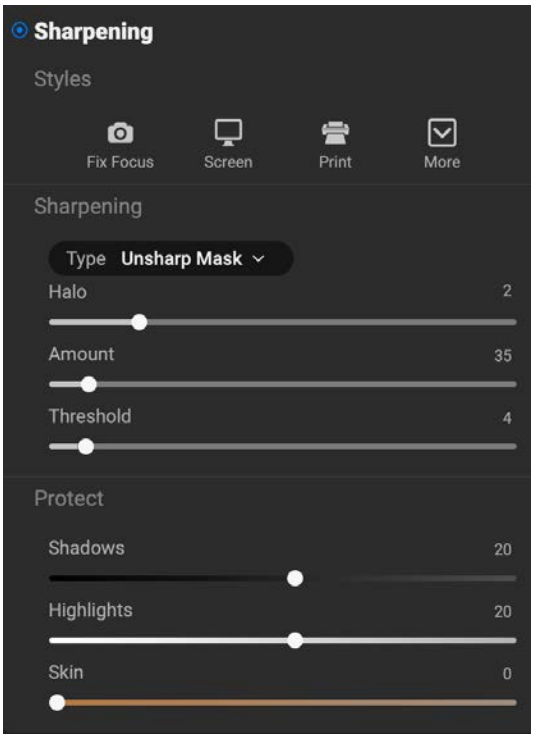
Tile Reduction rarely needs changing. On photos with very smooth backgrounds you may be able to see where tiles overlap. Setting it to High reduces that, but takes longer to process.

Genuine Fractals Settings

If you use Genuine Fractals, three sliders control the result:

- **Texture:** Controls detail in flat, non-edge areas. Use 1 to 2 for large areas of continuous tone and 3 to 5 for lots of fine detail. Values above 5 can add a bumpy noise pattern but work well for scanned film.
- **Threshold:** Controls how much hard-edge detail is enhanced. The default is 25. Lower values focus on edges, which can help with portraits or noise. Higher values add fine detail in flatter areas; up to 100 works well for highly detailed subjects like hair or feathers.
- **Smoothness:** Reduces artifacts along hard curved edges. Use the lowest setting you need.

Sharpening Pane



The Sharpening pane adds output sharpening to your resized photo. Resize offers three methods:

- **Unsharp Mask:** Good for general sharpening, similar to Photoshop's Unsharp Mask. It's applied only to luminance to avoid color artifacts.
- **High Pass:** Helpful when the original photo is soft.
- **Progressive:** Like Unsharp Mask, but sharpens small details more than large ones.

Sharpening here can save you a separate sharpening step before printing and helps compensate for softness from printer dot gain. Apply it as the last step. If you plan to retouch or composite the photo after resizing, leave Sharpening off.

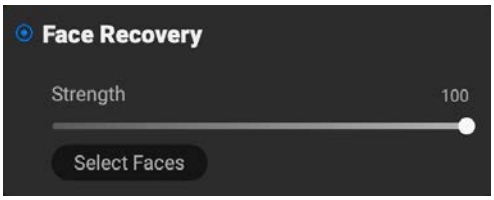
Sharpening for Output

After setting the size in the Photo Size pane:

1. Zoom to 100% using the 1:1 preset in the Navigator pane.
2. Turn on Sharpening with the on/off control in the pane's title bar.
3. Choose a sharpening method. You may need to try each to see which works best.
4. Adjust the **Amount** slider.

5. Use the **Highlight** and **Shadow** sliders to keep sharpening off the lightest and darkest areas, which helps avoid sharpening noise.
6. Use the **Skin** slider to keep skin tones from being oversharpened.

Face Recovery Pane



Face Recovery is built for group photos where smaller faces lack detail. Upscaling such a photo with traditional resampling can make those faces even softer. Face Recovery enlarges them with more realistic features and texture.



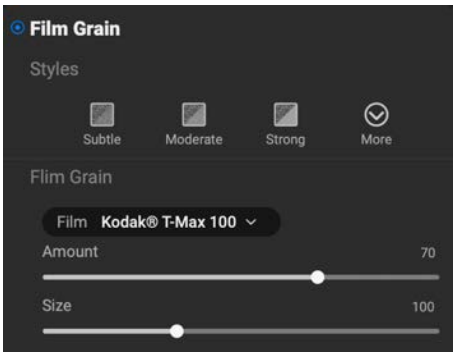
Using Face Recovery

1. Click the button to the left of the pane's label to turn it on. Resize finds the faces and applies recovery to smaller ones (under 512 pixels square in the original) at the **Strength** setting.
2. Click **Select Faces** at the bottom of the pane to see each face. Green boxes mark faces that will be recovered and white boxes mark larger faces that won't.
3. Click inside a box to turn recovery on (green) or off (white) for that face.
4. View each face at 100% and adjust Strength as needed. Strength applies to all selected faces; you can't set it per face.

5. Click **Done**. To return to the pane later, click Select Faces. Photo RAW remembers each face and its on/off state.

TIP: Face Recovery can sometimes help larger faces too, such as ones that are slightly out of focus. Toggle that face's box on and off at 100% to see whether it improves the result.

Film Grain Pane

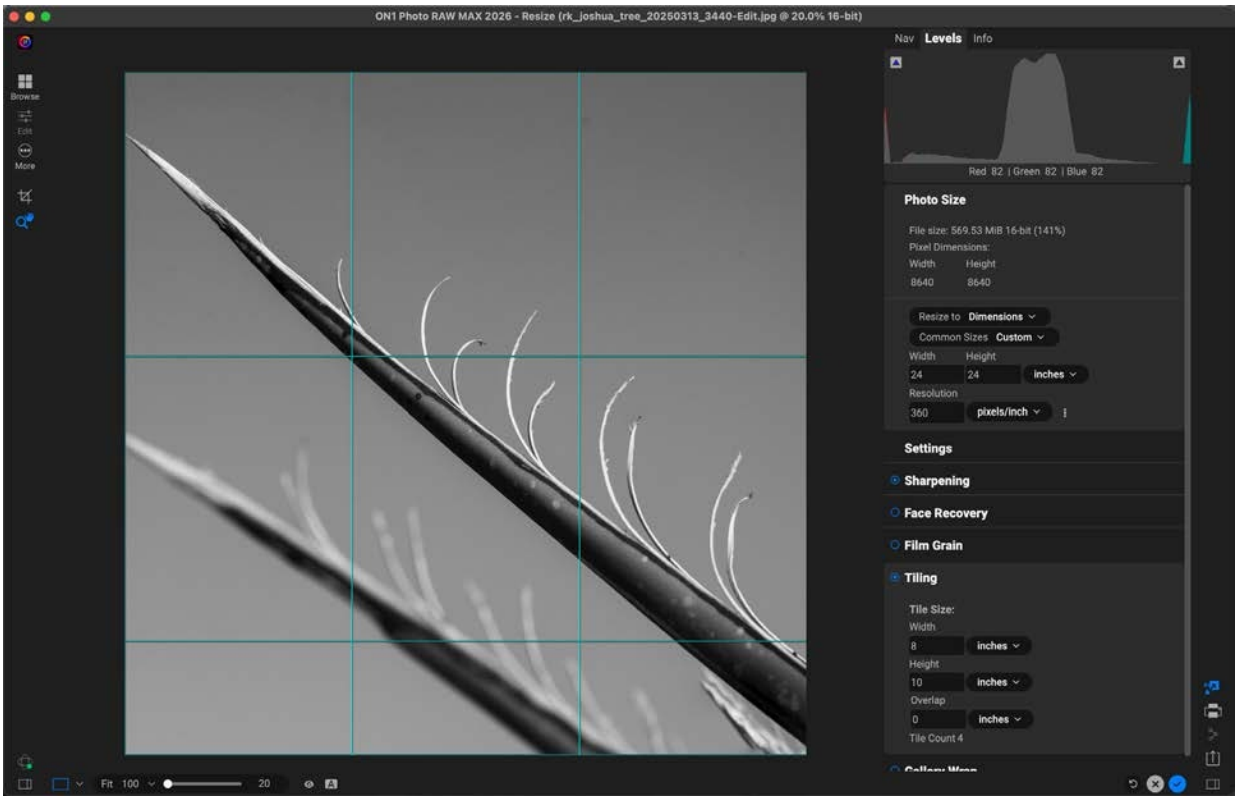


The Film Grain pane adds simulated film grain to your resized photo. A modest amount can make a photo look sharper and help hide imperfections such as JPEG artifacts. It's especially effective on monochrome photos.

1. Zoom to 100% using the 1:1 preset in the Navigator pane.
2. Turn on Film Grain with the on/off control in the pane's title bar.
3. Drag the slider until you have the amount of grain you want. Toggle the on/off control to compare with and without grain.

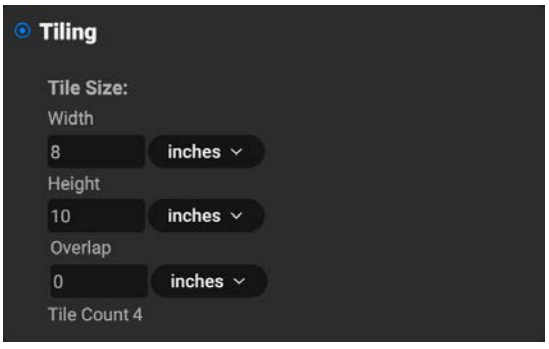
NOTE: Add grain just before printing. If you plan to retouch or composite the photo after resizing, in Photo RAW or another app, leave Film Grain off.

Tiling Pane



Want to print big without a big printer? Tiling divides an enlargement into smaller pieces you can print on the paper you have. For example, for a mural 8 feet tall and 12 feet wide on a printer that handles 24-inch-wide paper, Tiling can create six files, each 24 inches wide and 8 feet tall, so you can assemble the mural in sections.

Just tell Resize the paper size and how much overlap you want, and it resizes the photo and splits it into tiles.



1. Turn on Tiling with the on/off switch in the pane's title bar.
2. Set the **Width** and **Height** to your paper size and orientation, or set the number of rows and columns.

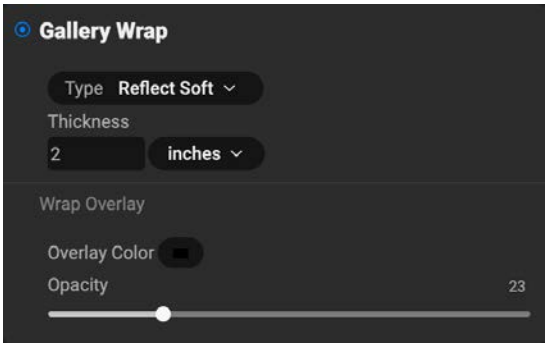
3. Set the **Overlap**. Overlapping tiles are easier to tape together and account for printer margins if you're not printing borderless.

Cyan guides in the Preview show each tile, and the bottom of the pane shows how many tiles will be created.

Gallery Wrap Pane



Gallery Wrap helps you print on canvas. Canvas prints are usually wrapped around wooden stretcher bars, which can hide important detail near the edges. Gallery Wrap adds extended margins by reflecting or stretching the edges, so you don't lose any of the original photo.

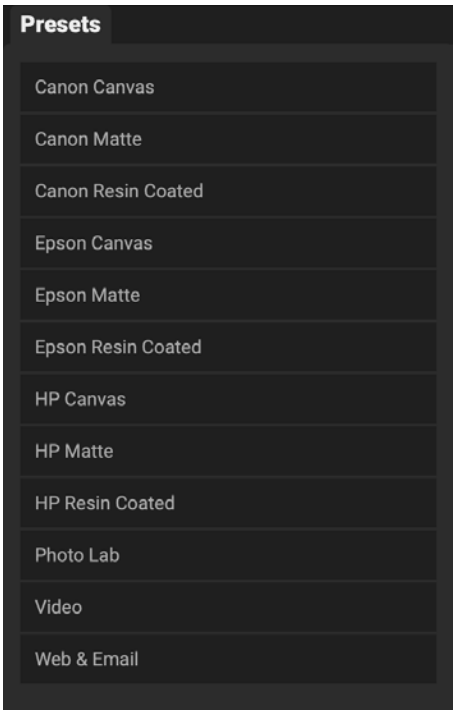


1. Turn on Gallery Wrap with the on/off switch in the pane's title bar.
2. Set **Thickness** to the margin you want to add. A good rule of thumb is the stretcher bar depth plus half an inch; 2 inches works well for most wraps.
3. Choose a wrap **Type** (see below).
4. To darken the wrap or add a solid color, set the **Overlay Color** and **Opacity**. Opacity defaults to 0, which adds no color.

Wrap Types

- **Reflect:** Copies a band of the image equal to the thickness, flips it, and adds it as the margin. A good general-purpose choice.
- **Reflect Soft:** Like Reflect, but softens the margins.
- **Stretch:** Stretches the area near the edge to create the margin.
- **Stretch Soft:** Like Stretch, but softens the margins.

Presets



Resize has its own preset system, similar to the one in Develop and Effects but designed for precise crops across a wide range of papers and printers. It includes settings for photo lab print sizes and many Epson, Canon, and HP large-format printers with multiple media types.

Along with document size and the settings in the other panes, every Resize preset includes a crop. When you apply one, Resize selects the Crop tool and shows the crop overlay so you can resize or reposition it.

Applying a Preset

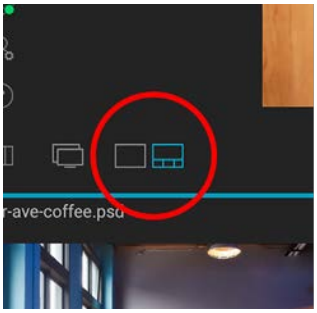
Click a category in the Presets panel to expand it, then click the preset you want.

Saving a Preset

- **Save:** Choose **Save Preset** from the Preset menu and pick a category.
- **Update:** After changing the settings of an applied preset, choose **Update Preset with Current Settings** from the Preset menu.
- **Delete:** Right-click the preset in the Presets panel and choose **Delete Preset**.

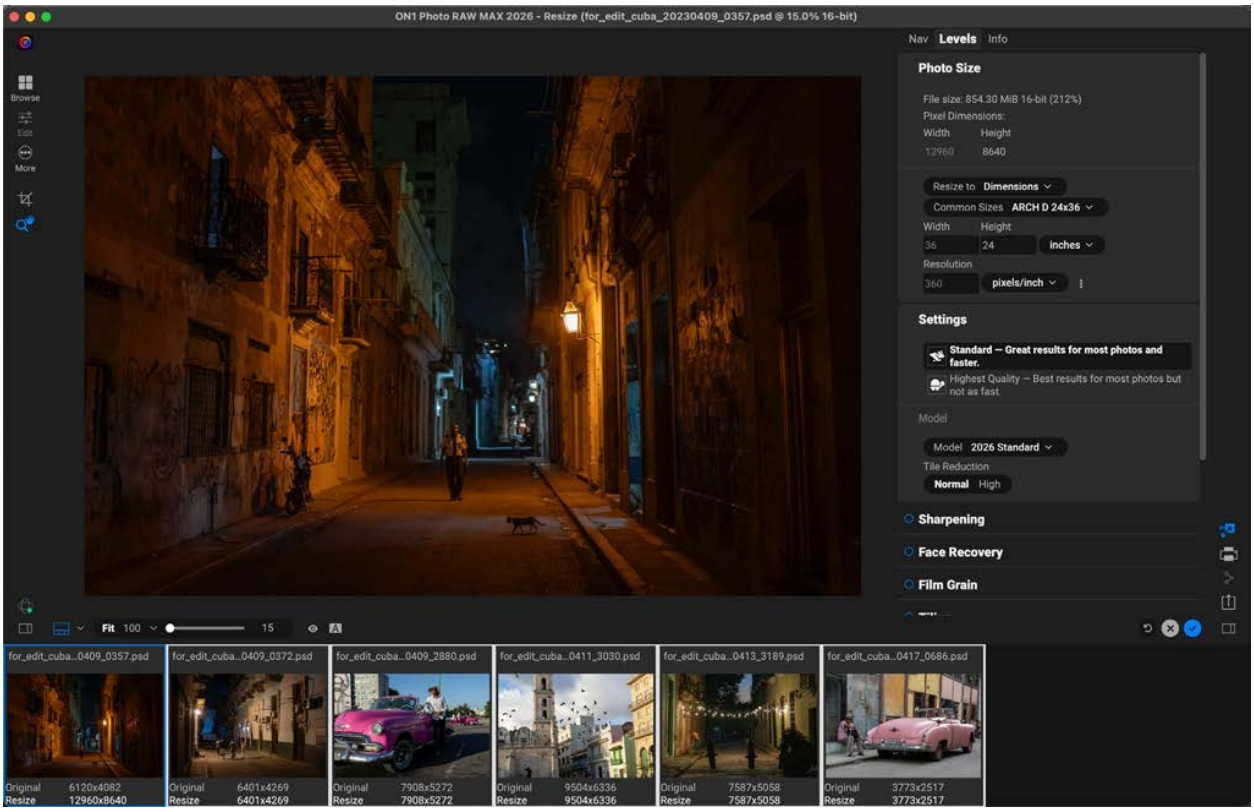
NOTE: You can also import and delete Resize presets (.onr files) in the Extras Manager. See Extras.

Working with Multiple Images in Resize



Filmstrip view lets you resize multiple photos in a folder. Click the Filmstrip icon in the View Selector at the bottom of the window, to the right of the Detail view icon, to show the photos in the current folder. Resize each photo individually, or set up one and sync its settings to others. When you click **Done**, Resize saves the photos through Export (see Export).

Each photo in the filmstrip shows its original pixel dimensions and, once resized, its new dimensions. Click a photo or use the arrow keys to move between them.



The current photo has a bolder highlight. Press Cmd+A (Mac) or Ctrl+A (Windows) to select all.

Syncing Settings

Edit one photo, select the others you want to match in the filmstrip, and click **Sync** at the bottom of the Resize window. All of the current photo's settings, including the crop and its position, are applied to the selected photos. You can still change the crop on any photo during the session; just click it and make your changes.

Tips for Batch Processing

- If you select photos in Browse's Filmstrip view and open Resize, the selection is kept and Resize opens in Filmstrip view. From Grid view, the selection is kept but Resize opens in Detail view; click the Filmstrip icon to see the rest of the folder.
- Cmd-click (Mac) or Ctrl-click (Windows) to select or deselect individual photos. Click the first photo and Shift-click the last to select a range.
- Only selected photos are exported when you click Done. If you've changed the selection and want to export everything, choose Select All first.
- Reset All affects only the current photo. To reset everything, click Cancel to return to Browse and reopen the batch, or reset each photo in turn.



After resizing, each thumbnail in the filmstrip shows its new pixel dimensions.

Soft Proofing in Resize

Soft proofing shows how a photo will look when printed, using the color profiles installed with your printer, so you can spot problems before you print.



Top: soft proofing off, using the display profile. Middle: soft proofing on with a profile for Epson Exhibition Fiber paper. Bottom: Gamut Warning on, with out-of-gamut colors in red.

Normally you view photos through your monitor's display profile. Most displays have a wider gamut than photo printers, so some colors you see on screen can't be printed.

The printer substitutes the closest color it can, which can cause subtle or noticeable color shifts.

Turning On Soft Proofing

Choose **Enable Soft Proofing** from the View menu, or click the soft proofing icon to the left of the Preview button at the bottom center of the window. The preview background changes to approximate the paper color. These options appear under Enable Soft Proofing in the View menu:

- **Gamut Warning:** Shows out-of-gamut colors for the current printer profile with a red overlay.
- **Profiles:** Lists the installed printer profiles. Choose one to proof with it.
- **Intent: Perceptual** compresses the whole gamut to preserve relationships between colors. **Relative** converts only out-of-gamut colors, which can sometimes make an in-gamut and an out-of-gamut color identical.
- **Simulate Paper and Ink:** Uses the paper's white point and black density instead of your monitor's. Turn this on when you're trying to match a print.

NOTE: You can't adjust tones in Resize, so soft proof in the Edit module before bringing an important photo into Resize.

Tips

- Neither intent is always best. Switch between Perceptual and Relative to see which prints better.
- Don't get too caught up in eliminating every out-of-gamut color. Modern printers and print services approximate colors well.
- Focus on matching tone, contrast, and color between screen and print, and use test prints with a home printer.
- Use Versions to try different settings while fine-tuning a print.

Resize AI FAQ

How Big Can I Print?

If your original photo is sharp, detailed, and low in noise, you can print almost as big as you like. The real limits are the size of your printer and your computer's ability to handle large files. In practice, even the largest prints are rarely more than 400 percent larger than the original.

The standard viewing distance for a print is generally about twice its diagonal. An 8x10-inch print is ideally viewed from just over two feet away, while an 80x100-inch print, the

kind of mural you might see in an airport or mall, is viewed from over 21 feet. Photographers often look closer than that, but most viewers don't.

We perceive photos through color, tone, texture, and sharpness. Traditional interpolation keeps color and tone but sacrifices texture and sharpness by inflating the image uniformly. The photo looks similar but not crisp, and with heavy enlargement the softness can be obvious even at normal viewing distances. Resize AI maintains color, tone, texture, and sharpness at every size, and can actually create new detail at the proper scale.

How Much Resolution Do I Need?

You need to know two things:

1. The size of the print you want to make.
2. The resolution your printer needs for best results.

Print size is limited only by your printer's maximum size, and tiling can get around that.

Resolution is pixel density, usually in pixels per inch or per centimeter. Most inkjet printers are rated at 1200 to 4800 dots per inch, but that really means droplets of ink per inch. A common mistake is setting your file's resolution to the printer's rating. Except for a few specialty printers such as dye-sublimation, this creates huge files that print poorly, if at all.

The human eye can't see more than about 250 to 300 pixels per inch, so aim for a file resolution close to that. Once you know the print size and resolution, enter them in the **Resize To** section of the Photo Size pane. Resize AI calculates the other dimension from your photo's proportions.

Matching Proportions

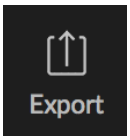
Film, camera sensors, and paper often have different proportions. Most camera sensors are 2:3 (1:1.5), while US Letter paper (8.5x11 inches) is about 1:1.3. Mismatches like this mean you'll need to crop to fit the paper. If cropping would ruin the composition, choose a print size with a longer dimension instead.

How Resize AI Differs from Interpolation

Enlarging a photo requires creating new pixels, called interpolation or resampling. The most common method, bicubic (and its variants, bicubic smoother and bicubic sharper), averages neighboring pixels to color each new one. It's fast, but it doesn't recognize edges, so sharpness and detail drop uniformly across the photo.

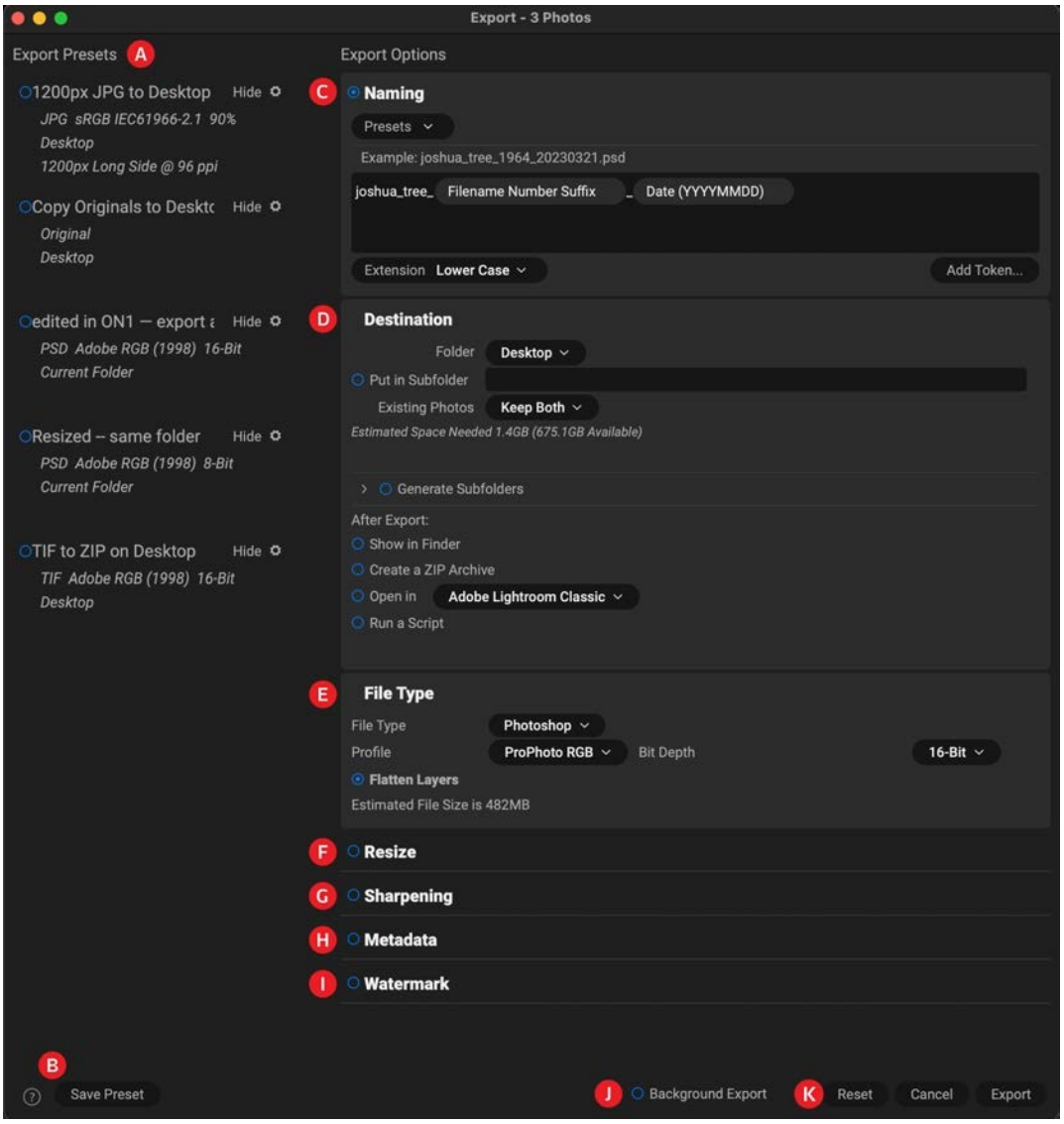
Resize AI uses a neural network trained on millions of photos. It analyzes your photo and recreates natural textures at the proper scale while keeping detail sharp and reducing noise and artifacts. It takes a little longer than single-pass methods like bicubic, but the results are far better.

Export



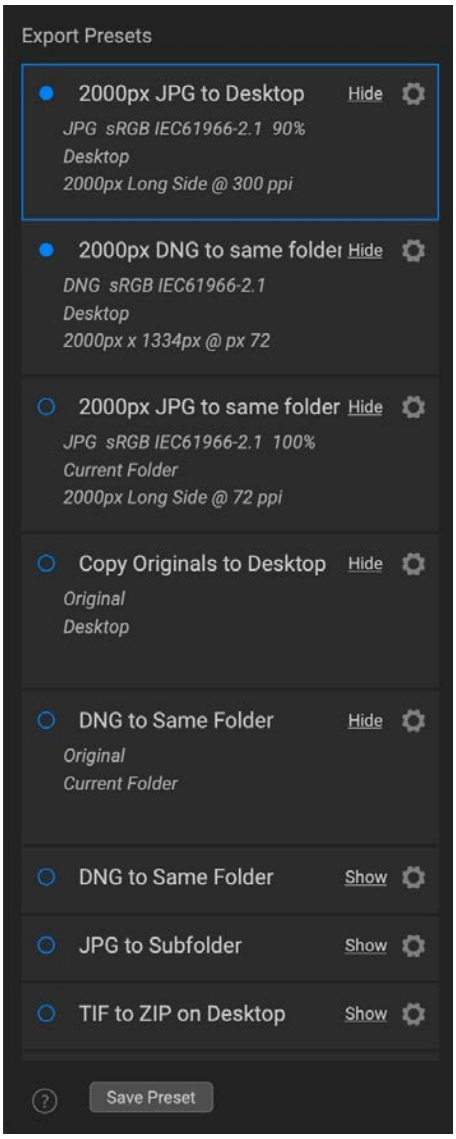
Export is available throughout Photo RAW, in Browse, Edit, and Resize AI. It puts much of the power of Resize in an easy-to-use panel so you can export photos with flexibility and control.

The Export window has two panels: **Export Presets** and **Export Options**. The Options panel covers renaming, destination, file type, and more. If you use the same options often, save them as a preset.



1. **Export Presets:** The current preset has a selection box, and a filled circle to the left of a preset means it will be used when you click Export. To use the Options panel without a preset, turn off all presets and click the current preset once.
2. **Save Preset:** Saves the current options as a preset.
3. **Naming:** Renames exported files using the criteria you set.
4. **Destination:** Where exported files are saved. Required.
5. **File Type:** The file type for each export. Required.
6. **Resize:** Sets the size of each photo. Not available when exporting from Resize AI.
7. **Sharpening:** Sharpens exported photos.
8. **Metadata:** Includes or removes metadata.
9. **Watermark:** Adds a text or graphic watermark.
10. **Background Export:** Exports in the background so you can keep working.
11. **Export/Cancel:** Starts the export, or cancels and returns you to Photo RAW.

Exporting and Export Presets



Each preset shows its file type, destination, and resize information. Click **Hide** to collapse a preset to just its name.

Export can be as simple or as detailed as you like. At its simplest, set the **Destination** and **File Type**, leave the other panes alone, and click **Export**. Photo RAW remembers your last settings, including Naming, for next time. Use the Show/Hide buttons in each pane's title bar to see only the settings you care about.

Using Export Presets

- **Save a preset:** Set up your options and click **Save Preset** in the Presets panel. Clicking that preset later applies its settings.
- **Turn presets on or off:** The selected preset has a box around it in the app's accent color. A filled circle means the preset is on and will be used when you click Export. To export without a preset, turn off every preset's circle.
- **Update a preset:** If you change a selected preset's settings, Photo RAW asks whether to update it when you click Export or switch to another preset.
- **Export with several presets at once:** Every preset that's turned on is used in the export. This is handy for making backups on another drive or creating proxy copies while you keep editing the originals.

Naming

The Naming pane builds custom filenames from tokens and your own text, in any combination. The **Example** label above the entry box shows what the first file in the export will be named.



Click the circle to the left of the pane's label to turn Naming on. Then type custom text or click **Add Token** to insert information from the photo. The Add Token menu has four submenus:

- **Filename:** The original filename, the number suffix recorded by the camera, and the enclosing folder name.
- **Date/Time:** Date (year, month, day) and time values you can combine in different ways.
- **Sequence:** An incrementing number for each file and the total number of files in the batch, with optional leading zeros.
- **Metadata:** Specific EXIF and IPTC fields.

Building a Filename

- Tokens appear as shaded items in the entry box. Click the down arrow on a token to swap it for another, or double-click it and press Delete to remove it.

- Click before, after, or between tokens to add spaces, dashes, underscores, or other text.
- The Example label updates with every change.

Naming Presets

The **Presets** menu at the top of the pane includes common combinations to start from. To save your own, set up the naming and choose **Save New Preset** at the bottom of the menu. You can also update and delete presets there.

TIP: Check the Example label before you export to make sure the filenames come out as expected.

NOTE: For a complete list of tokens, see Renaming Files and Folders.

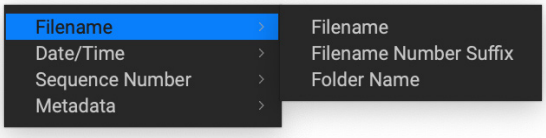
About Filename Tokens

Naming in Export, along with Rename and Import in Browse, uses tokens to build filenames from photo information such as the original filename, capture date, and EXIF and IPTC fields. Combine tokens with your own text in any way you like.

- Click **Add Token** and choose a token. It appears as a shaded item in the entry box, and the Example label shows a sample filename.
- Click the down arrow on a token to swap it for another, or double-click it and press Delete to remove it.
- Click before, after, or between tokens to add spaces, dashes, underscores, or other text.

Tokens fall into four categories, described on the following pages: Filename, Date/Time, Sequence, and Metadata.

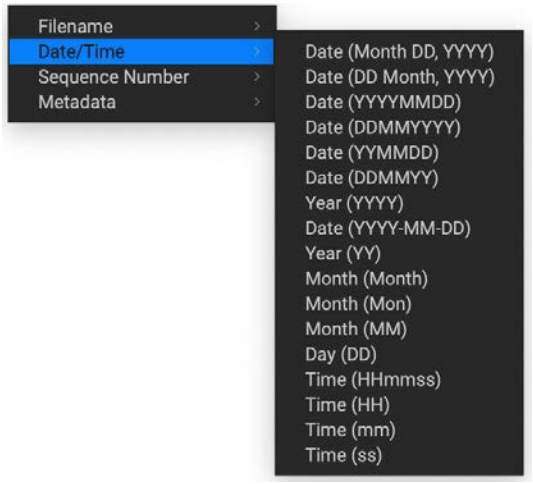
Filename



Filename tokens use the file's name or its folder:

- **Filename:** The file's current name.
- **Filename Number Suffix:** The shot number from the original file, if available.
- **Folder Name:** The name of the folder the file is in.

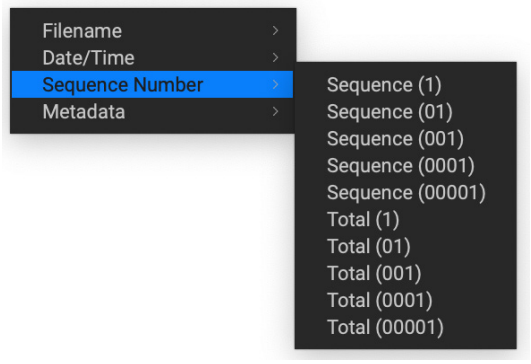
Date/Time



The Date/Time submenu offers 17 date and time tokens drawn from the photo's metadata. Use a prebuilt combination, such as 20270104 for year-month-day, or build your own from the individual tokens.

- **Year:** Four or two digits.
- **Month:** Number, full name, or three-letter abbreviation.

Sequence Number

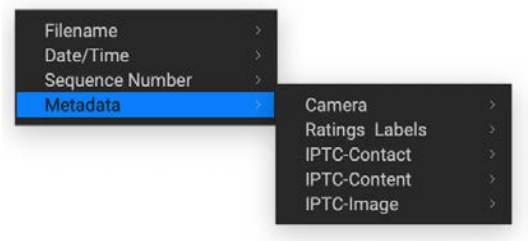


Sequence tokens are used when exporting, importing, or renaming a group of files. Both offer options for leading zeros:

- **Sequence:** Numbers each file, starting at 1 for the first file and increasing by one.
- **Total:** The total number of files in the group.

Combine them to create names like *filename_07 of 22*.

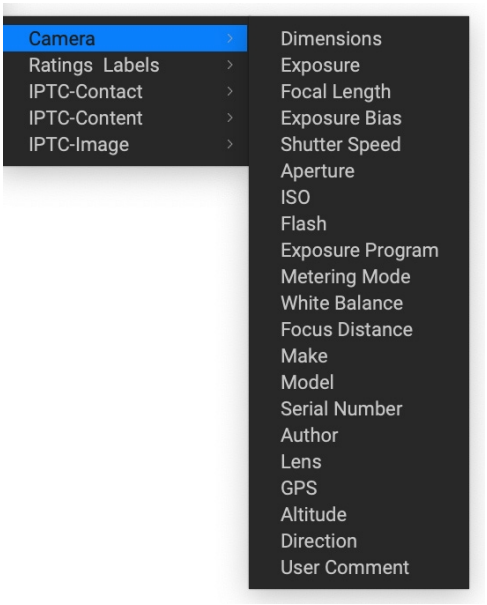
Metadata



The Metadata submenu has five items, each with its own submenu, that pull information from the embedded metadata of each file you rename, import, or export. Camera and IPTC values match what you see in the EXIF and IPTC tabs of the Metadata pane. Ratings and Labels come from what you've applied in Photo RAW.

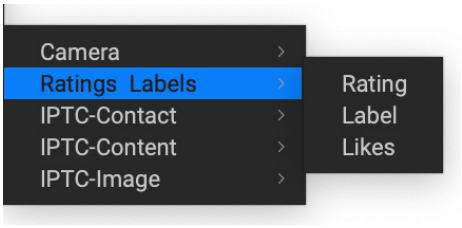
NOTE: If a photo has no value for a token, the token is skipped.

Camera



The Camera submenu has 21 tokens taken directly from a photo's EXIF data. Not every camera records every field, but most save essentials like exposure settings and focal length. To see a photo's camera information, open the EXIF tab of the Metadata pane in Browse.

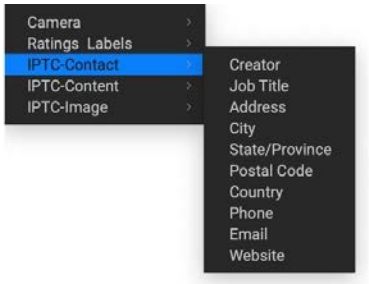
Ratings and Labels

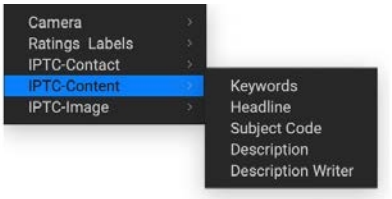


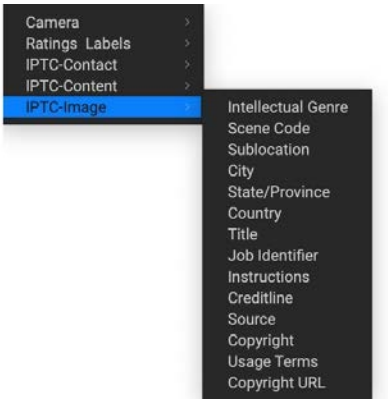
- **Rating:** The photo's star rating.
- **Label:** The color label (red, yellow, green, blue, or purple).
- **Likes:** Liked, Not Set, or Disliked.

IPTC Metadata

IPTC (International Press Telecommunications Council) is an industry-standard metadata format with much more detail than EXIF. Journalists and stock photographers have long used it to catalog photos and add copyright, captions, and more. The IPTC submenus hold nearly 30 tokens, grouped into Contact, Content, and Image. All of these fields appear in the IPTC tab of the Metadata pane and can be added during import.

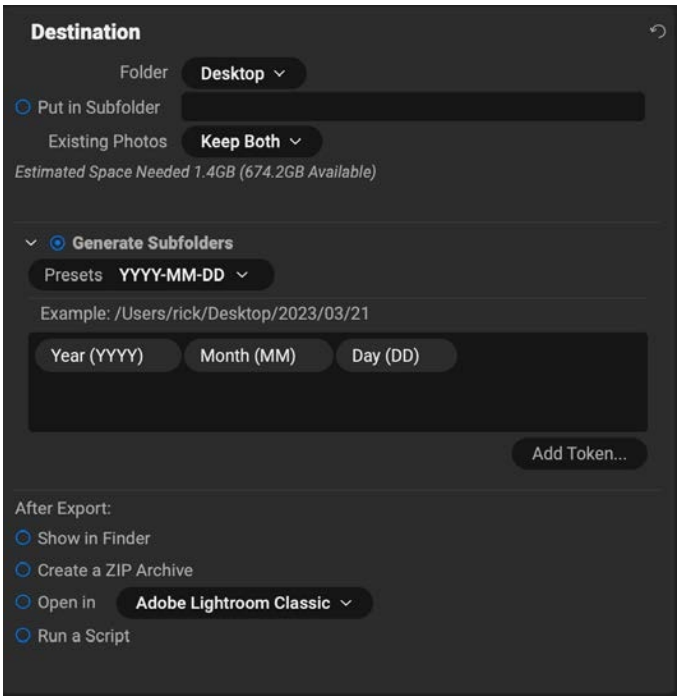






IPTC tokens are most useful if you consistently add metadata during or shortly after import.

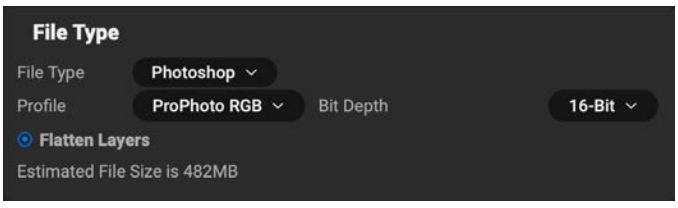
Destination



The Destination pane sets where exported photos are saved. A destination folder is required, and the pane offers several options:

- **Folder:** Save to the same folder as the originals, choose another folder, or have Photo RAW ask each time, which is handy with export presets.
- **Put in Subfolder:** Saves to the subfolder named in the text field, creating it if needed.
- **Existing Photos:** Handles name conflicts. Replace overwrites the existing file, Skip leaves it and doesn't export the new one, and Keep Both adds a 1 to the end of the new file's name.
- **Generate Subfolders:** Sorts exports into subfolders based on metadata, creating them as needed. It uses the same tokens and presets as the Naming pane.
- **After Export:** Choose what happens when the export finishes: show the files in Finder (Mac) or File Explorer (Windows), create a ZIP archive, open them in another app, or run a script.

File Type



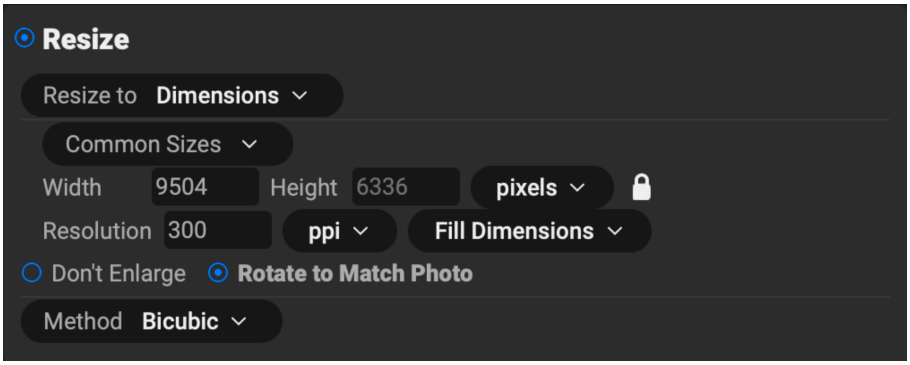
File Type is the other required setting for Export. Photo RAW can export the original file or DNG, PSD, TIFF, JPEG, or PNG. Each type has its own options:

- **Original:** Embed metadata and save an ON1 sidecar file with each photo.
- **JPEG:** Set the quality and attach a color profile.
- **Photoshop:** Attach a color profile, set the bit depth, and choose whether to flatten layers.
- **TIFF:** Choose compression (None, LZW, or ZIP), attach a color profile, set the bit depth, and preserve transparency.
- **DNG and PNG:** No additional options.

The pane also shows an estimated file size for the first photo.

Resize

The Resize pane sets the final dimensions of exported photos using the same Resize AI technology as the Resize module.



The Resize pane with the Dimensions option open.

Choose from seven options: Dimensions, Long Edge, Short Edge, Width, Height, Megapixels, and Percentage. Each includes a resolution setting (pixels per inch) and a **Don't Enlarge** option, which keeps a photo from being upscaled past its original size while still exporting it.

NOTE: The Resize pane isn't available when exporting from the Resize AI module, since the module sets the size.

Dimensions

Dimensions sets an exact width and height. It's best for single photos, groups that share the same aspect ratio and orientation, or when you need an exact size.

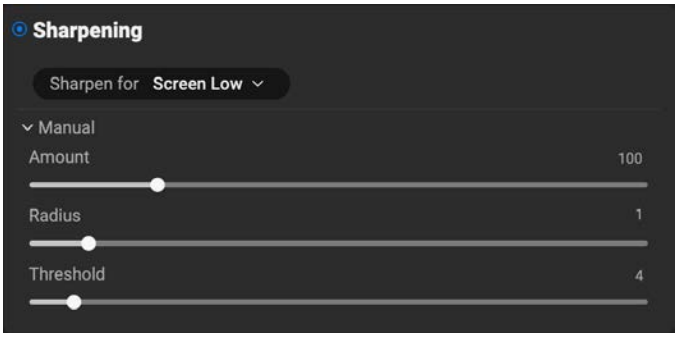
- **Common Sizes:** Choose from common paper, photo, square, and video sizes, or save your own sizes for reuse.

- **Lock:** With the lock on, entering a width or height scales proportionally. Turn it off to set an exact width and height.
- **Fit in Dimensions:** Fits the whole photo inside the width and height.
- **Fill Dimensions:** Scales the photo to fill the width and height completely, cropping from the center if the aspect ratios differ.
- **Rotate to Match Photo:** Rotates photos to best fit the dimensions. For example, if you export to a landscape size, portrait photos are rotated.

Other Options

- **Long Edge and Short Edge:** Locks one edge to a set length and scales the other proportionally. Ideal for groups with mixed orientations.
- **Width and Height:** Scales every photo proportionally to the same width or height, regardless of orientation.
- **Megapixels:** Exports to a specific megapixel count.
- **Percentage:** Scales by percentage. Below 100 reduces and above 100 enlarges.

Sharpening



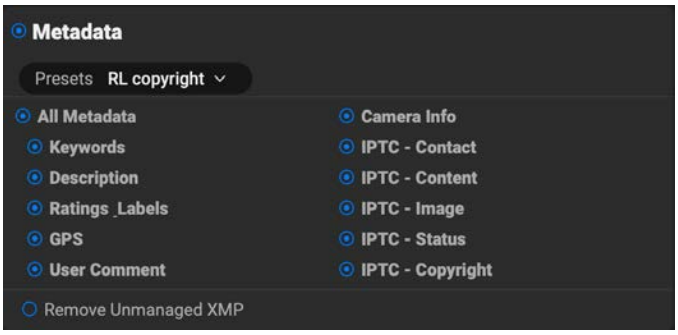
The Sharpening pane has two modes:

- **Sharpen For:** Choose one of six presets based on where the photo is going. Four are for print (Glossy Paper High, Glossy Paper Low, Matte High, and Matte Low) and two are for screens, such as social media or online sharing (Screen High and Screen Low).
- **Manual:** Set the **Amount** (overall strength), **Radius** (detail size), and **Threshold** (which skips low-contrast areas) yourself.

For more on the manual sharpening controls, see Sharpening Pane.

Metadata

The Metadata pane sets which metadata is included with your exported photos. Click the circle to the right of **All Metadata** to include everything.

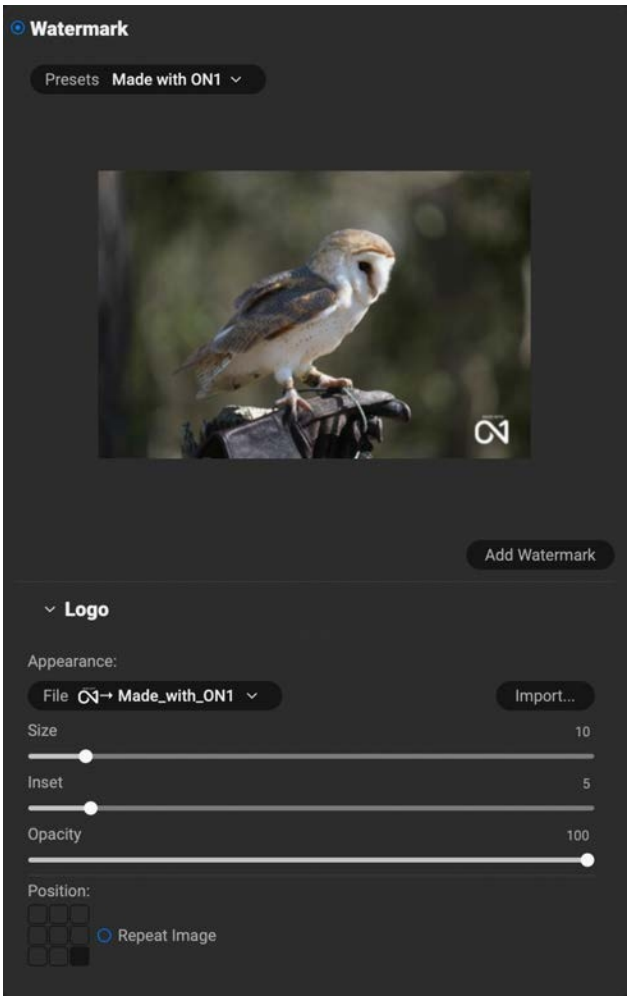


Turn All Metadata off to choose individual items by clicking their labels. The available metadata matches the Metadata pane in Browse (see The Metadata Pane), and any metadata presets you've saved are in the Presets menu.

Check **Remove Unmanaged XMP** to export only the metadata shown in Photo RAW's Metadata pane, leaving out metadata added by other apps.

Watermark

The Watermark pane adds text or graphic watermarks to exported photos, with control over size, position, opacity, font, and more. You can import your own logos and save either type as a preset.



The pane previews the watermark on the first photo in the export so you can position it precisely.

Adding a Watermark

1. Click the circle to the right of the pane's label to turn it on.
2. Choose a preset from the Presets menu, or click **Add Watermark** at the lower right and choose **Text** or **Logo**.
3. Adjust the settings that appear. To remove the watermark, click **Cancel** next to the Logo or Text label.

Graphic Watermarks

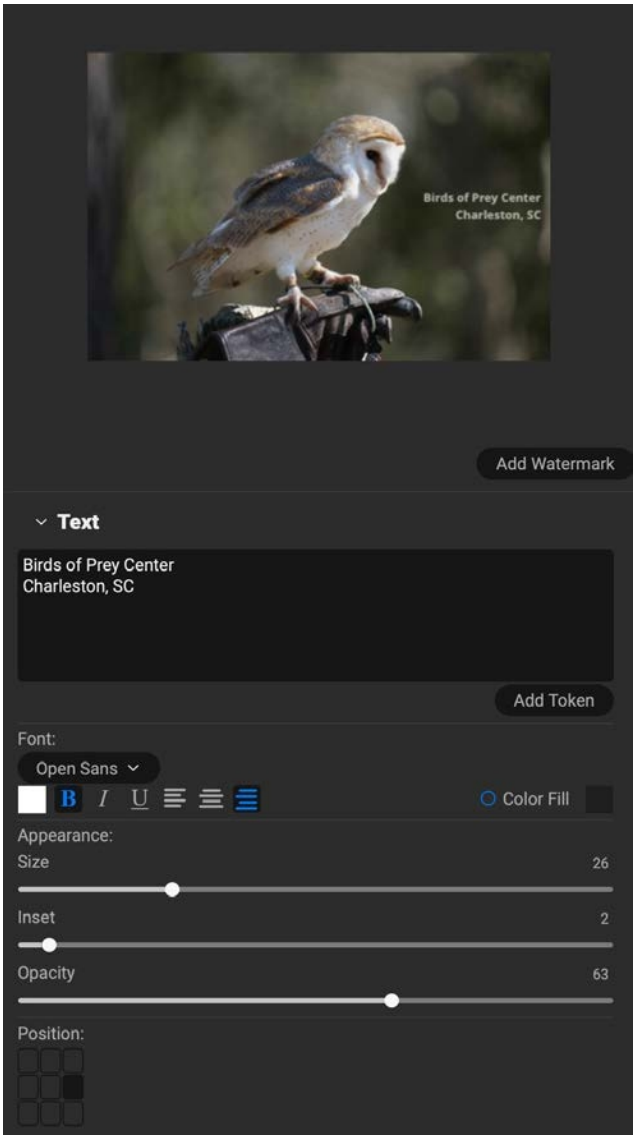
Choose a watermark imported with the Extras Manager from the **File** menu, or click **Import** next to the menu to add one.

- **Position:** Use the grid to choose a location, and the Size and Inset sliders to fine-tune it.

- **Opacity:** Sets the watermark's transparency.
- **Repeat Image:** Repeats the logo to the right from the chosen position. To cover the whole photo, choose a position on the left side of the grid.

TIP: Make sure your logo file is large enough. To appear 2 inches wide at 300 ppi, it needs to be at least 600 pixels wide. To span a whole photo for the web, it should match your export size, usually over 1000 pixels. A file that's too small looks pixelated. Logos are usually PNG files with transparency, though JPEGs can work for some logos.

Text Watermarks



Text watermarks can be a simple line with your business name or data-driven text built with tokens.

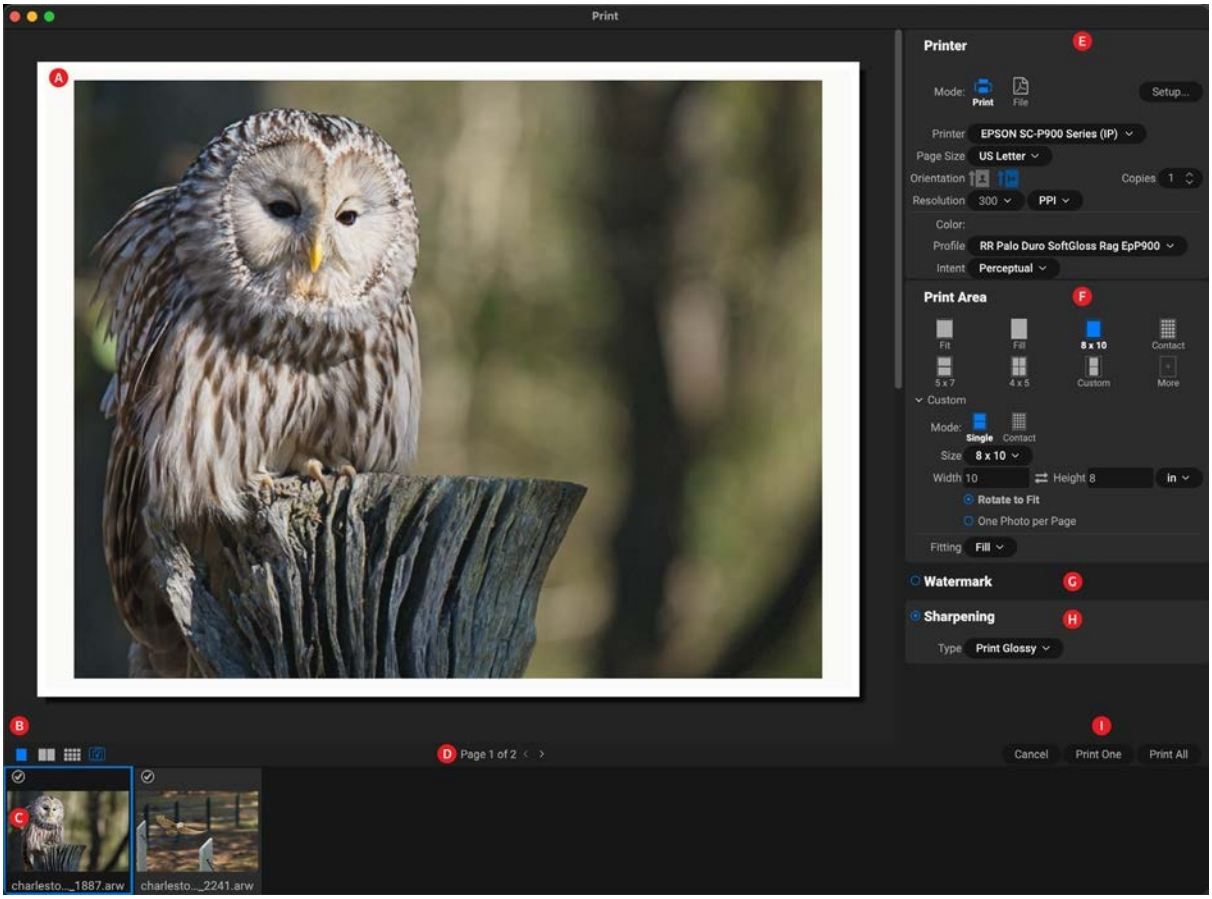
- **Text:** Enter one or more lines. You can use the same tokens as the Naming pane, which is handy for informational slides.
- **Font:** Choose a font, and click the swatch below the font name to set its color. Set bold, italic, or underline, and left, center, or right alignment.
- **Color Fill:** Adds a background color behind the text.
- **Position and Opacity:** Work the same as for graphic watermarks.

Saving Watermark Presets

Set up a logo or text watermark and choose **Save New Preset** from the Presets menu. To change a preset later, such as with a new logo, select it, make your changes, and choose **Update Preset with Current Settings**. You can also rename and delete presets from this menu.

Printing

Photo RAW's flexible print engine prints photos at any size, from any module. Print photos individually, several to a page in package style, or as contact sheets for reviewing your work.

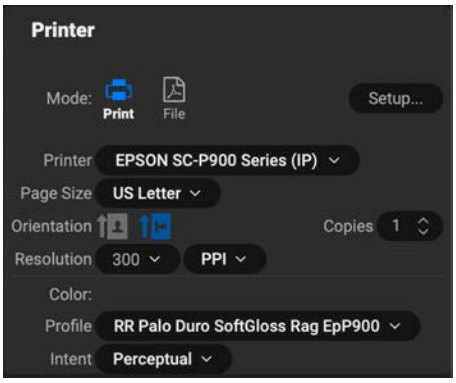


To open Print, click **Print** in the module selector or choose **Print** from the File menu. The Print window includes:

1. **Preview:** Shows the photos being printed.
2. **View Selector:** View pages individually, as facing pages, or in a grid. The icon at the far right turns soft proofing on and off.
3. **Filmstrip:** Shows all photos selected for printing, with checkmarks to include or exclude each one. Hidden when you're printing a single photo.
4. **Page view:** Shows the number of pages and lets you move between them.
5. **Printer pane:** Output (printer or PDF), printer, page setup, paper size, copies, resolution, printer profile, and rendering intent.
6. **Print Area pane:** Options for fitting and sizing the print.
7. **Watermark pane:** Adds a watermark to prints.
8. **Sharpening:** Output sharpening for prints.
9. **Print/Cancel:** Print One (the current photo), Print All, or Cancel.

Printer Pane

The Printer pane sets printer-specific options. Click the icon at the top of the pane to choose a mode: **Print** sends the job to a connected printer, and **File** saves it as a PDF.



Printing to a Printer

Choose the printer, paper size, resolution, orientation, and number of copies. Use your printer's optimal resolution; most photo printers work best between 240 and 360 ppi. Photo RAW resamples your photo to the resolution you choose.

At the bottom of the pane, choose the color profile for the paper you're printing on.

The rendering intent controls how colors are converted to fit the printer's gamut. **Perceptual**, the default, shifts all colors proportionally to fit. **Relative Colorimetric** changes only out-of-gamut colors to the closest printable color. Perceptual is usually the best place to start. Use Soft Proofing to see out-of-gamut colors before you print.

NOTE: Print supports borderless printing. Choose your printer's borderless option in Page Setup. Settings vary by printer, so check your printer's manual.

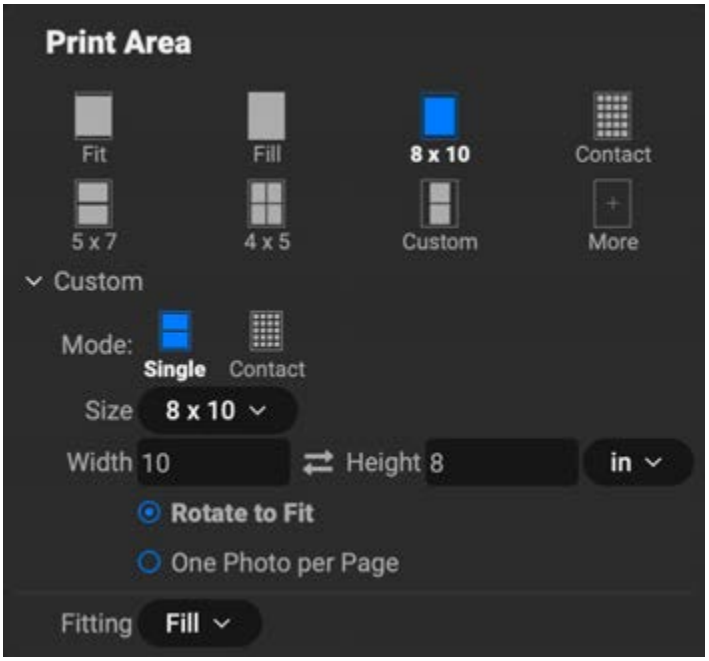
Printing to a File

Saving a print job as a PDF is useful for online print services or printing elsewhere.

1. Click the **File** icon at the top of the pane, then choose a filename and location.
2. Choose a size from the **Page Size** menu and adjust the print area settings.
3. Click **Print**. Photo RAW creates a PDF of your photos and saves it where you chose.

Print Area Pane

The Print Area pane sets the print size and layout, whether you're printing photos individually, package style, or as a contact sheet.



- **Styles:** The top of the pane has styles to fit the photo inside the print size or fill the print size, plus common sizes such as 8x10, 5x7, and 4x6, and contact sheet layouts.
- **Custom:** Set your own width and height and choose whether to fit or fill. To reuse it, choose **Save as New Style** from the More menu at the top of the pane.
- **One per page:** When printing multiple photos, Photo RAW fits as many as it can on the paper size set in the Printer pane. To print one photo per page, turn on that option at the bottom of the pane.

Page Size vs. Print Size

Page size is the paper you're printing on, set in the Printer pane. Print size is the size of each photo, set in the Print Area pane. Sometimes they're the same. For example, to print on 4x6-inch paper, choose 4x6 for both.

Then choose Fit or Fill depending on your photo's aspect ratio:

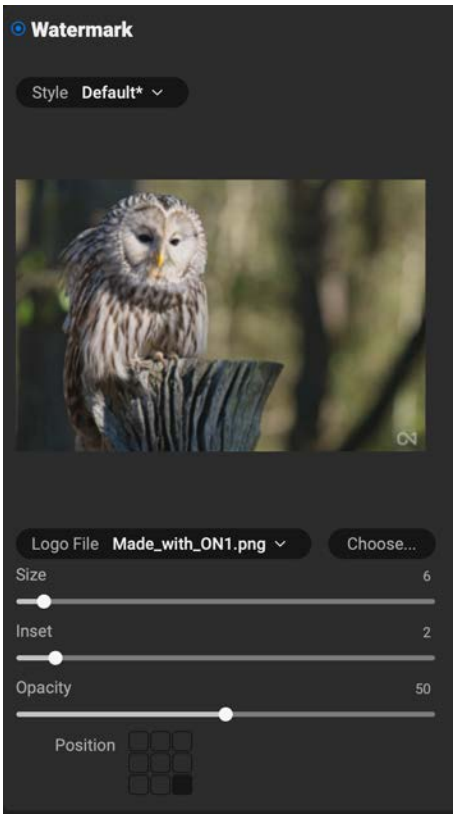
- **Fit:** Fits the entire photo inside the print size, which may leave white space.
- **Fill:** Scales the photo to fill the print size, centered, which may crop it.

A 4x6-inch print has a 2:3 aspect ratio, so a 2:3 photo fills it with either option and no cropping.

TIP: For package printing, set the larger paper size in the Printer pane and the size of each print in the Print Area pane.

Watermark Pane

The Watermark pane overlays a logo, signature, or copyright on your prints. Watermarks usually need a transparent background, so use a PNG or PSD file.

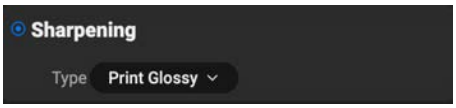


- **Choose:** Select the watermark file. It's then saved in the Logo File menu.
- **Size:** Sets the watermark's size.
- **Inset:** Sets how far, as a percentage, the watermark sits from the edge at the chosen position.
- **Opacity:** Sets the watermark's opacity.
- **Position:** Click a square in the grid to place the watermark.

TIP: Make sure your watermark file is large enough. To appear 2 inches wide at 300 ppi, it needs to be at least 600 pixels wide, or it may look pixelated.

Sharpening Pane

The Sharpening pane applies output sharpening to your photos as they print. The menu includes options for standard prints, glossy papers, fine detail, high-pass sharpening, and more.



Most prints need this extra sharpening on top of any you applied in the Edit module, and some papers, such as glossy, benefit from more. The right amount depends on the photo, so try test prints of small sections to dial it in.

Basic Printing

You can print from anywhere in Photo RAW. With a photo open in Edit or Resize, or selected in Browse's Grid or Detail view, click **Print** to open the Print window with that photo. Set the options in the panes on the right and click **Print**.

TIP: To preview the print on screen using the color profile for your paper, click the soft proofing icon below the Preview before printing.

Printing Photos from ON1 Cloud Sync Devices

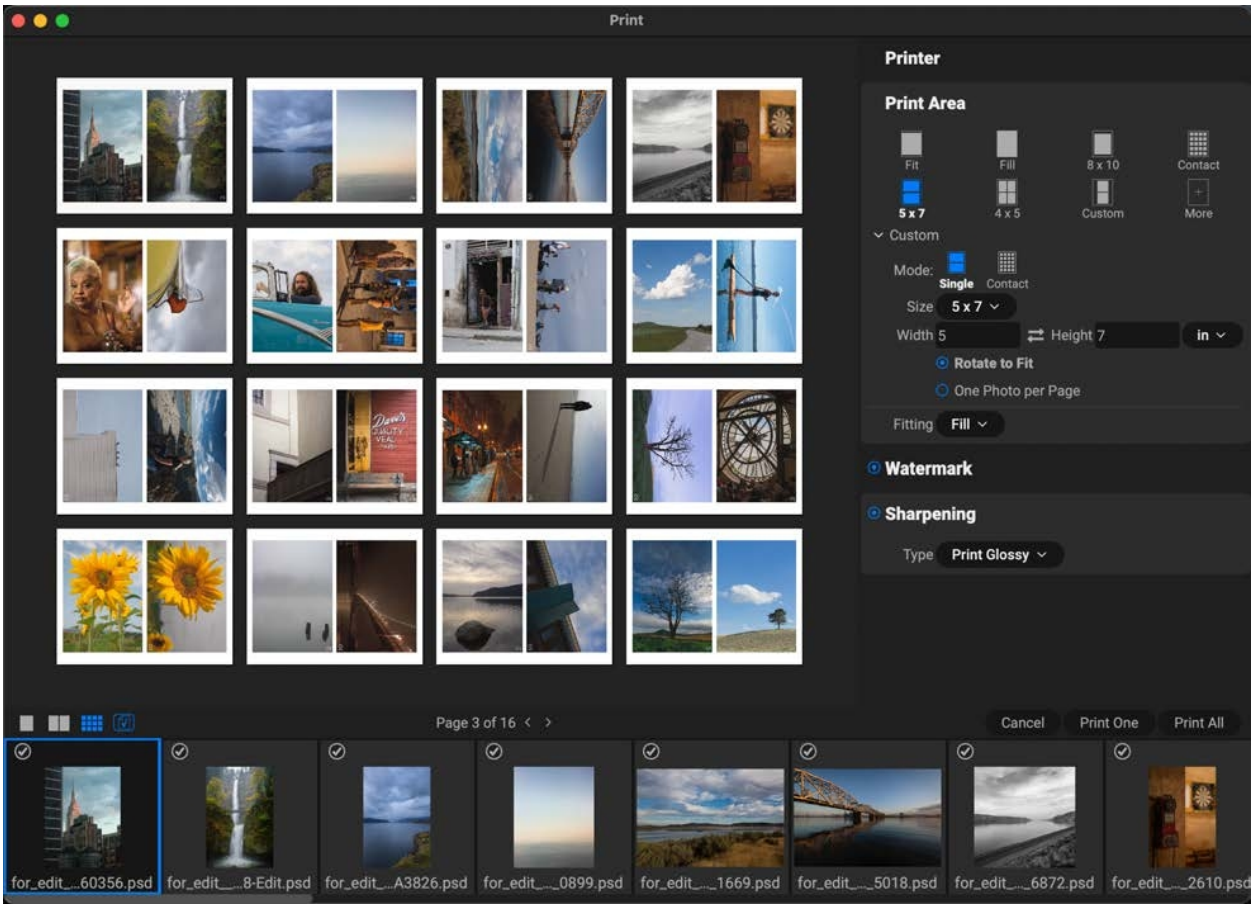
You can print any photo you can see on your computer, including previews of photos stored on your other ON1 Cloud Sync devices. For most prints, especially 8x10 and smaller, a preview has plenty of resolution for high-quality results.

For larger prints, or to use every bit of image data, copy the original from the synced device to your computer, or change that folder's sync setting on the other device so the original is stored in ON1 Cloud.

Printing Multiple Photos

To print several photos as a package or contact sheet, select them in Grid or Filmstrip view in Browse or Edit and click **Print**. The photos appear in the filmstrip at the bottom of the window, and the Preview shows the current page at your page and print size settings.

Use the Page View buttons below the Preview to move between pages, or click **Facing Pages** or **Show All Pages** at the bottom left to see more at once.

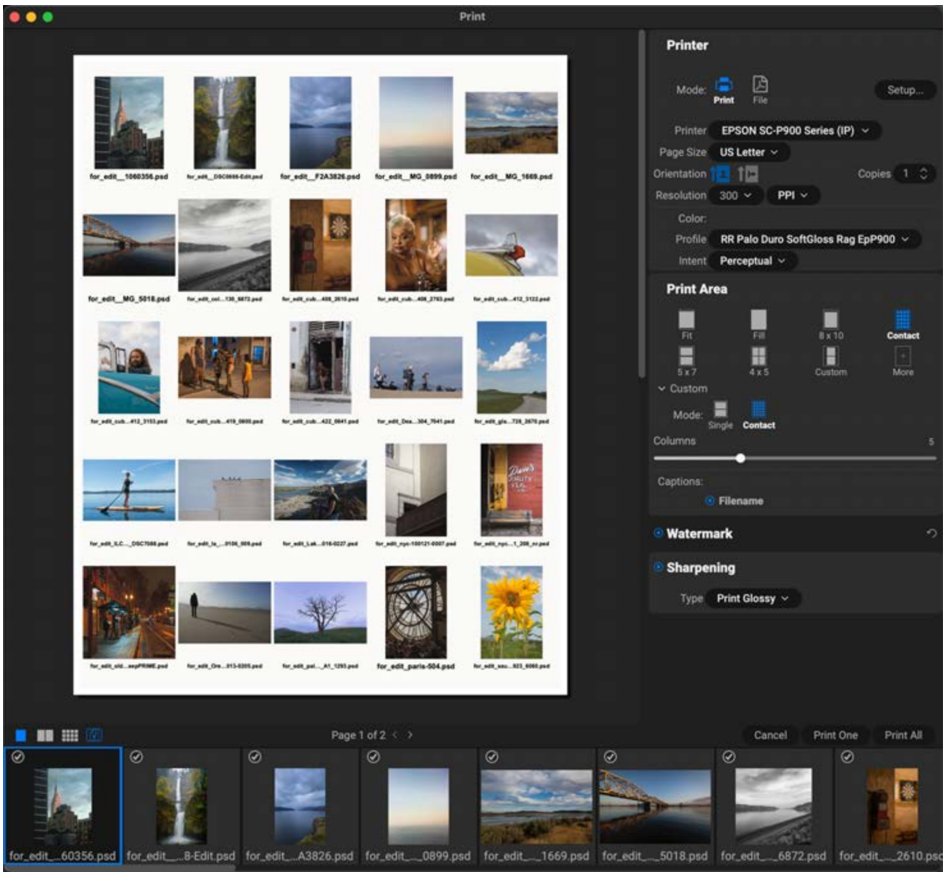


Here, 32 photos are set to print at 5x7 inches on letter-size paper with an Epson P600. Show All Pages displays every page.

- To skip a photo, clear its checkmark in the filmstrip.
- To make a test print, click **Print One** to print only the current page.
- Click **Print All** to print everything.

Printing Contact Sheets

Contact sheets let you review a group of photos without using lots of photo paper. Select the photos, set the paper size in the Printer pane, and click the **Contact** icon in the Print Area pane.



In Contact mode, the Custom section of the Print Area pane offers:

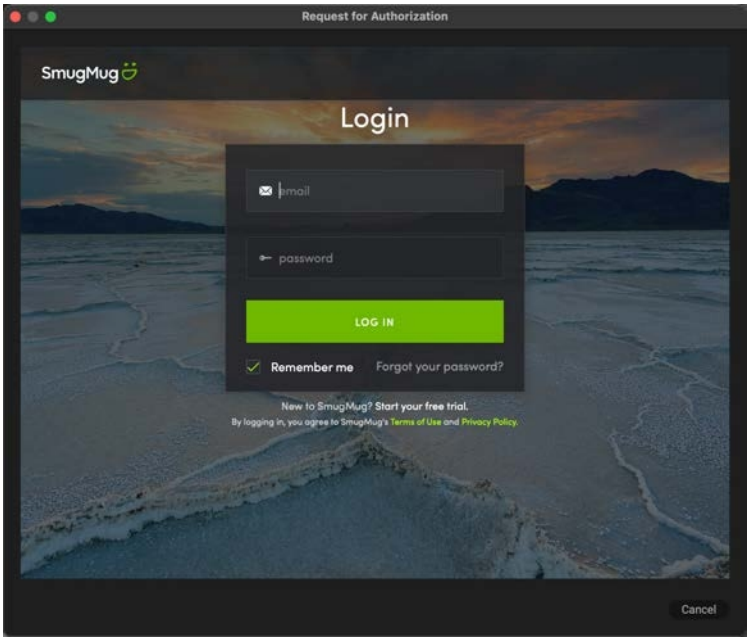
- **Columns:** The number of columns across the page. Fewer columns means larger cells.
- **Captions:** Adds the filename below each photo. Click the button to the left of the label to turn it on or off.

Use the Page View controls to review the pages, then click **Print All**.

Sharing to SmugMug



If you're a SmugMug member, Photo RAW makes it easy to post one or more photos to the service. Use the **Share** menu at the lower right of the module selector, available throughout Photo RAW. On Windows, the Share menu contains only SmugMug; on Mac, it includes additional sharing options.



Posting to SmugMug

1. Select one or more photos and choose **SmugMug** from the Share menu.
2. The first time, an authorization window opens. Sign in to your SmugMug account and click **Authorize** to let Photo RAW post to your galleries.
3. In the upload window, set your options:
    - **Use Photo Metadata:** Uses each photo's metadata for its title, caption, and keywords.
    - **Gallery:** Choose an existing gallery or create a new one. Click **Open Gallery** to view the selected gallery in your browser.
    - **Size:** Full size, or 4000 or 2000 pixels on the long edge.
4. Click **Share**. Photo RAW creates high-quality JPEGs and publishes them to SmugMug.



Learn more about SmugMug at smugmug.com.

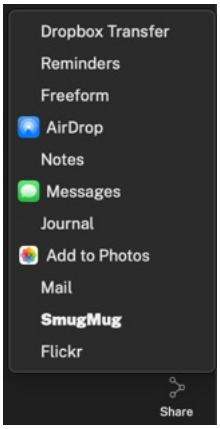
Other Sharing Options

Besides SmugMug and Flickr, Photo RAW can share photos through your operating system's built-in sharing on both macOS and Windows. Open the **Share** menu at the lower right of the module selector.

Every option works the same way: Photo RAW exports a full-size JPEG of the selected photo and hands it to the app or service you choose. The options you see depend on your operating system and the apps you have installed.

macOS

On a Mac, the Share menu lists your sharing options directly, along with SmugMug and Flickr:

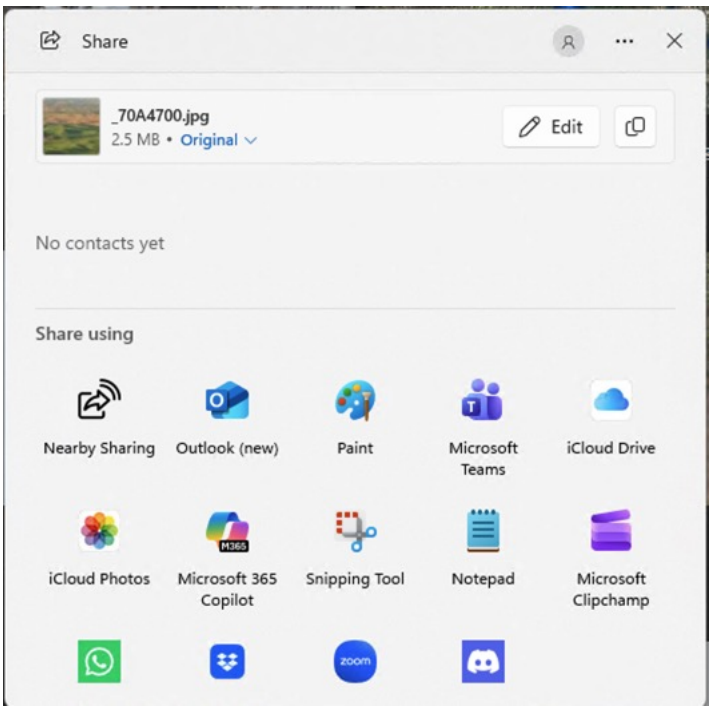


- **AirDrop:** Shares with nearby Mac, iPhone, and iPad devices.

- **Mail:** Creates a new Apple Mail message with the photo attached.
- **Messages:** Shares the photo in Messages.
- **Notes:** Adds the photo to a new or existing note.
- **Add to Photos:** Adds the photo to Apple Photos.
- **Freeform** and **Journal:** Adds the photo to a Freeform board or a Journal entry.
- **Reminders:** Adds the photo to Reminders.
- **Other apps:** Any installed app that supports macOS sharing, such as Dropbox Transfer, also appears in the list.

Windows

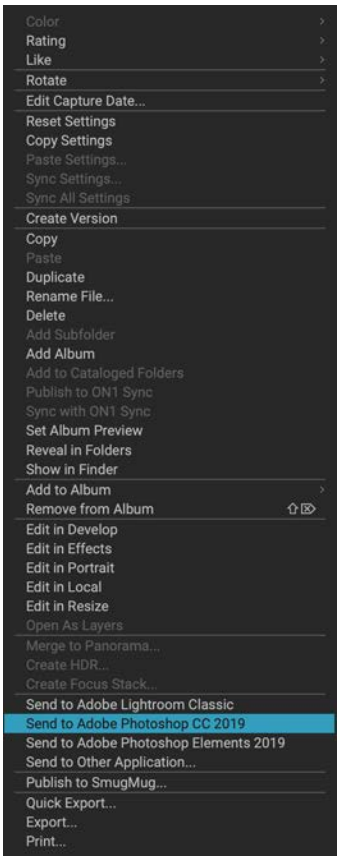
On Windows, Photo RAW opens the Windows Share window with your photo ready to send:



- **Nearby Sharing:** Sends the photo to nearby Windows PCs.
- **Contacts:** Share directly with people you've shared with before. They appear at the top of the window.
- **Share using:** Send the photo to any installed app that supports Windows sharing, such as Outlook, Microsoft Teams, iCloud Photos, WhatsApp, Dropbox, or Discord.
- **Edit** and **Copy:** Use the buttons next to the file name to open the photo in an editor or copy it to the clipboard.

For posting to photo services, see Sharing to SmugMug and Sharing to Flickr.

Send to Other Applications



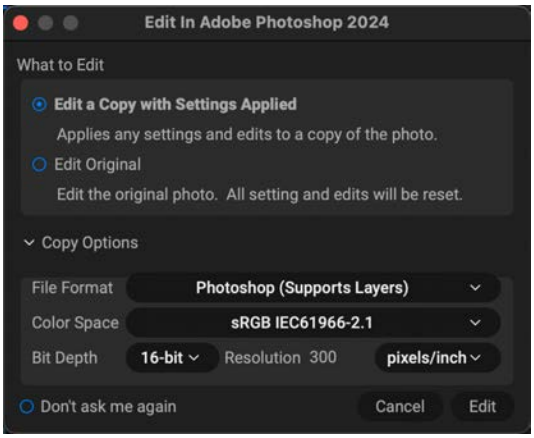
Browse can send the photos you're viewing to other apps for editing. Right-click a photo, or open the Edit menu, and choose **Send To**. Photo RAW automatically detects these apps and lists the latest installed version:

- Adobe Photoshop
- Adobe Photoshop Lightroom
- Adobe Photoshop Elements

To add any other app, choose **Send to Other Application** and select it. Photo RAW remembers it and lists it with your other Send To options. For example, add your email app to email photos quickly.

The Edit In Dialog

When you send a photo, the Edit In dialog asks whether to send the edited photo or the unedited original. If you send a copy, choose its file type, color space, bit depth, and resolution.



The Edit In dialog with Copy Options expanded.

TIP: If you always use the same options, check **Don't ask me again**. To change this later, go to the Files tab of Preferences.

Using ON1 Photo RAW MAX as a Plug-in

With Photo RAW MAX, you can use the app as a plug-in for most major image editors. This section covers each one:

- Adobe Photoshop
- Adobe Photoshop Elements
- Adobe Lightroom Classic
- Apple Photos
- Corel PaintShop Pro
- Affinity Photo

Using ON1 Photo RAW MAX with Adobe Photoshop

When you send a photo from Photoshop to the Edit module, you're editing Photoshop's selected layer. By default, Photo RAW works on a copy of the layer so your original is preserved, unless the layer is a Smart Object (see below). To change this, see the Plug-ins section of Preferences.

NOTE: When you use Resize AI from Photoshop, the entire image is sent.

You can open Photo RAW from two places in Photoshop:

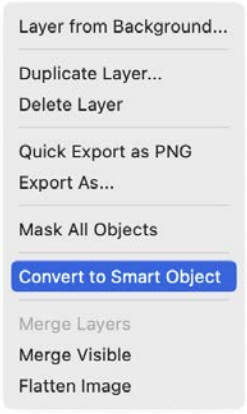
- **File > Automate:** The Develop, Effects, and Portrait tabs of the Edit module, plus Resize.
- **Filter > ON1:** The Develop, Effects, and Portrait tabs.

Browse isn't available from Photoshop. How you edit depends on whether you want to be able to re-edit your work in Photo RAW later.

Editing Without Re-editability

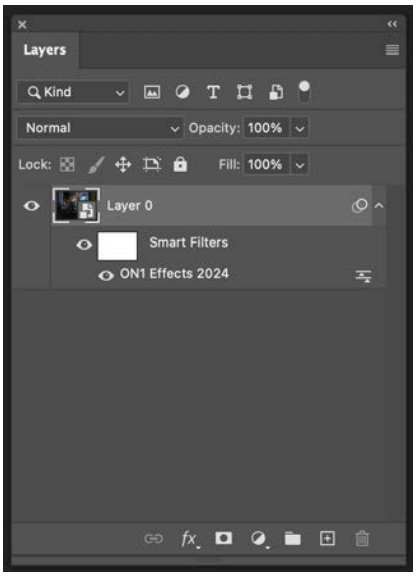
1. Open the photo in Photoshop and select the layer you want to edit.
2. Choose **Filter > ON1** and the Edit module tab you want to start in.
3. When you're done, click **Done** in Photo RAW.

Editing with Re-editability



To re-edit your work in Photo RAW later, use a Smart Object:

1. Open the photo in Photoshop and select the layer you want to edit.
2. Right-click the layer and choose **Convert to Smart Object**.
3. Choose **Filter > ON1** and the tab you want to use.
4. When you're done, click **Done** in Photo RAW.



To re-edit, double-click the ON1 module name under Smart Filters on the layer in Photoshop's Layers panel. Photo RAW opens that module with your previous settings.

NOTE: Smart Object re-editing isn't available if you add layers in Photo RAW. Photo RAW flattens the photo before returning it to Photoshop.

Using ON1 Photo RAW MAX with Adobe Photoshop Elements

When you send a photo from Photoshop Elements to the Edit module, you're editing the selected layer. By default, Photo RAW works on a copy of the layer so your original is preserved. To change this, see the Plug-ins section of Preferences.

You can open Photo RAW from two places in Photoshop Elements:

- **File > Automation Tools:** The Develop, Effects, and Portrait tabs of the Edit module, plus Resize.
- **Filter > ON1:** The Develop, Effects, and Portrait tabs.

Browse isn't available from Photoshop Elements.

Editing a Photo

1. Open the photo in Photoshop Elements and select the layer you want to edit.
2. Choose **Filter > ON1** and the Edit module tab you want to start in.
3. When you're done, click **Done** in Photo RAW.

NOTE: Photoshop Elements doesn't support Smart Objects, so your Photo RAW edits are final once you return to Elements.

Using ON1 Photo RAW MAX with Lightroom Classic

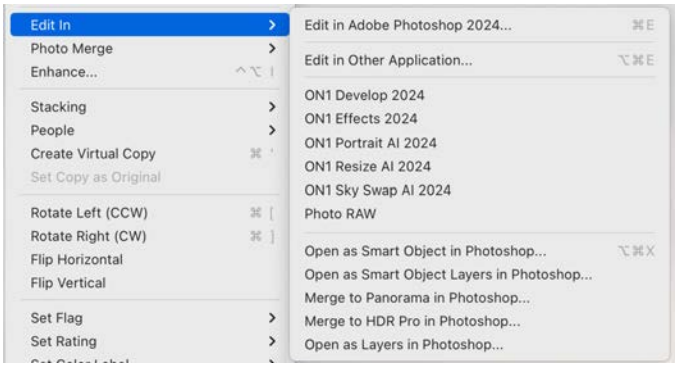
Photo RAW works as a plug-in for Adobe Lightroom Classic, giving you a round-trip editing workflow. Every Photo RAW module and feature except Browse is available as a plug-in.

There are two ways to send photos from Lightroom:

- **Photo > Edit In:** Quick access to the Edit module and Resize.
- **File > Plug-in Extras:** More powerful options, including re-editable Smart Photos, batch processing, and sending multiple photos as layers.

NOTE: Lightroom and Photo RAW are both raw editors, but their raw engines aren't compatible. Raw edits made in one won't appear in the other, so it's best to choose one app for organizing and raw editing. If you're thinking of switching from Lightroom Classic, see Moving a Lightroom Catalog to Photo RAW.

Using Edit In

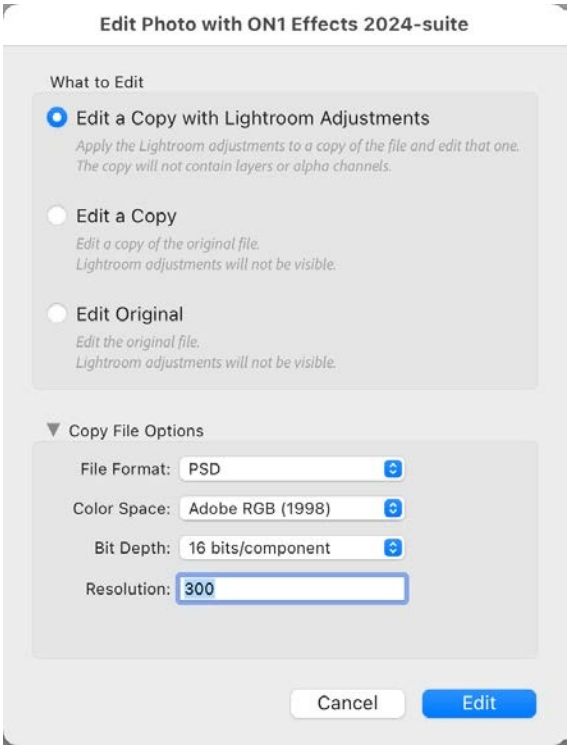


Edit In is the easiest way to make quick edits to a single photo when you don't need to keep your Photo RAW edits re-editable or work with multiple photos. It uses Lightroom's plug-in export system to create the edited file.

Select a photo in Lightroom, choose **Photo > Edit In**, and pick a module: Develop, Effects, Portrait AI, Sky Swap AI, or Resize AI. If you start in an Edit module tab, you can move between all the tabs, including Local, and even switch to Resize to finish. You can't move from Resize back to the Edit module.

Edit In File Options

Each time you use Edit In, Lightroom asks how to edit the photo:



- **Edit a Copy with Lightroom Adjustments:** Sends a copy that includes your Lightroom edits.
- **Edit a Copy:** Sends a copy of the original without Lightroom edits.
- **Edit Original:** Sends the original file.

NOTE: Edit a Copy and Edit Original aren't available for raw files.

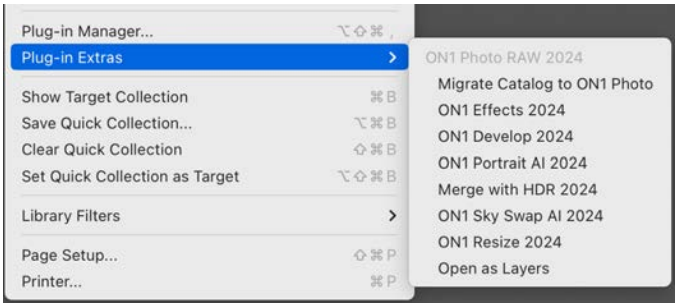
In Copy File Options, set the file type (TIFF, PSD, or JPEG), color space, and bit depth. PSD is best, especially if you'll add layers in Photo RAW; layers and masks are saved and can be re-edited by choosing Edit In and Edit Original.

Click **Edit**. Lightroom creates the file, or sends the original, and opens Photo RAW. Make your edits, then click **Done** to save and return to Lightroom, or **Cancel** to return without saving.

TIP: You can't create a Smart Photo with Edit In, but you can open one. Select the Smart Photo, choose Edit In and an Edit module tab, and choose **Edit Original**. Your previous edits open intact, and new edits are saved with the Smart Photo.

Using Plug-in Extras

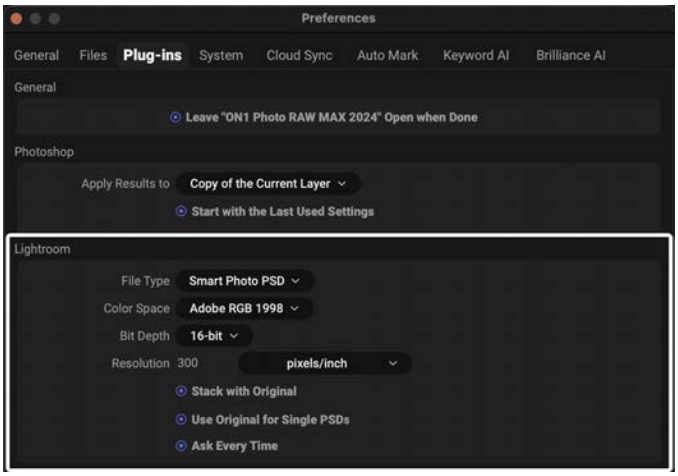
Plug-in Extras is the preferred way to use Photo RAW from Lightroom. It offers every module except Browse and the most flexibility in how files are handled. Select one or more photos in Lightroom, choose **File > Plug-in Extras**, and pick an option:



- **Develop, Effects, Sky Swap AI, or Portrait AI:** Opens that Edit module tab, and you can move between tabs. With PSD as the file format, layers you create are saved when you return to Lightroom. You can switch to Resize, but the photo returns to Lightroom as a flattened, resized PSD.
- **Multiple photos with an Edit module tab:** Shows batch options (see below).
- **Merge with HDR:** Merges a set of bracketed photos.
- **Resize:** Opens Resize only.
- **Open as Layers:** Combines multiple photos into one layered document in the Edit module.

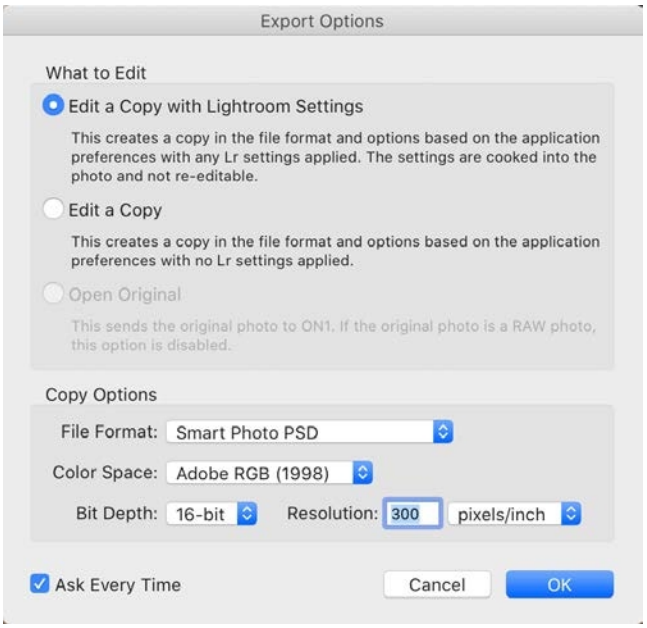
NOTE: The **Migrate Catalog to ON1 Photo** item helps you move from Lightroom to Photo RAW as your main raw editor. See Moving a Lightroom Catalog to Photo RAW.

Plug-in Extras File Options



Plug-in Extras uses the settings in the Plug-ins tab of Photo RAW's Preferences, which you can set up ahead of time:

- **File Type:** PSD (the default) keeps layers but isn't re-editable. You can also choose Smart Photo PSD, JPEG, or TIFF. Same as Source edits the original file; raw files are sent as PSD.
- **Color Space:** Adobe RGB (1998), sRGB, or ProPhoto RGB.
- **Bit Depth:** 8 or 16 bits per channel.
- **Resolution:** The resolution of the new file.
- **Stack with Original:** Stacks the new file with the original when it returns to Lightroom.
- **Use Original for Single PSDs:** Edits a single PSD directly instead of a copy.
- **Ask Every Time:** Shows these options in Lightroom each time you use Plug-in Extras. Turn it off to skip the window and use your saved settings.



With Ask Every Time on, the Export Options window appears in Lightroom whenever you send photos to Photo RAW or use Open as Layers. It's useful if your workflow varies. If you always use the same settings, turn Ask Every Time off in Photo RAW's Preferences.

Batch Processing with Plug-in Extras

Select the photos in Lightroom's Library module and choose Develop, Effects, Portrait AI, or Resize from Plug-in Extras. The window shows two or three batch options, depending on the destination:



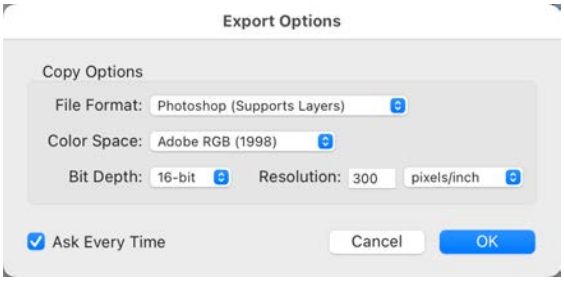
- **Pause on First Photo:** Applies the same edits to every photo. Edit the first photo, including presets, retouching, text, crop, masks, and local adjustments, then click Done. Photo RAW applies the edits to the rest and returns you to Lightroom.
- **Pause on All Photos:** Lets you edit each photo in turn. Click Done to save a photo and open the next, which starts with the previous photo's settings (you can reset them). Clicking Done on the last photo returns you to Lightroom.
- **Use AI Auto for All Found Faces:** Available only with Portrait AI. Finds and retouches every face using your default Subtle or Strong setting from Photo

RAW's General preferences, then returns the photos to Lightroom. No other edits are made.

If Ask Every Time is on, the batch options appear as a section of the Export Options window, along with the file options.

NOTE: With Pause on First Photo, nearly all Edit module operations carry over to the other photos. Layer operations and Transform tool adjustments apply only to the first photo.

Opening Photos as Layers



Select several photos in Lightroom and choose **Open as Layers** from Plug-in Extras. Photo RAW opens them as one layered file in the Edit module, ready for compositing. The result uses the file type from the Plug-ins tab of Preferences, or the one you choose in Lightroom if Ask Every Time is on:

- **Smart Photo PSD:** Keeps layers, masks, and each layer's Edit module adjustments when you return to Lightroom.
- **PSD:** Keeps layers and masks, but each layer's Edit module adjustments are baked in. You can still edit the layers and masks in Photo RAW or Photoshop.
- **TIFF or JPEG:** Merges everything into a single layer when you click Done.

For more on layers, see Working with Layers.

Working with Smart Photos

A Smart Photo is a Photoshop file that preserves every Edit module operation: Develop settings, Effects filters, masks, local adjustments, portrait retouching, layers, text, and more. Smart Photos can only be created with Plug-in Extras, but you can re-edit them with either Plug-in Extras or Edit In.

When you choose Smart Photo PSD, Photo RAW creates a PSD with "Smart Photo" added to the filename. Your edits are saved in a sidecar file in the same folder. Back in Lightroom, the photo looks just as it did in Photo RAW and stays fully re-editable.

To re-edit, select the photo in Lightroom and choose an Edit module tab from Plug-in Extras or Edit In. Depending on the method and your Preferences, it opens automatically or you choose **Edit Original**.

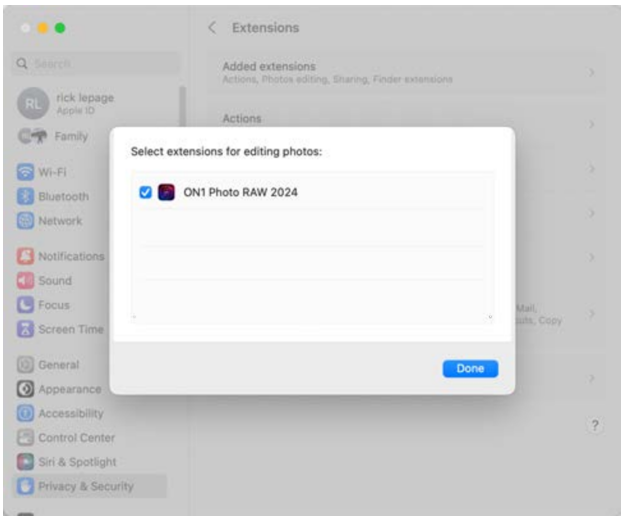
- In standalone Photo RAW, you can view a Smart Photo in Browse and re-edit it in the Edit module as long as its sidecar file is present. When you return to Browse, Photo RAW saves a new .onphoto file with your edits.
- Opening a Smart Photo in Photoshop merges its layers. If you edit and save it there, it's no longer re-editable in Photo RAW.
- Smart Photos aren't available when sending from Lightroom to Resize.

Using ON1 Photo RAW MAX with Apple Photos

On Mac, Photo RAW MAX integrates with Apple Photos so you can enhance your photos without leaving your library.

Turning On the Extension

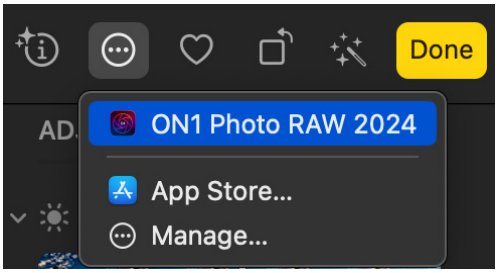
If Photos is on your Mac when you install Photo RAW MAX, the extension is installed automatically, but you need to turn it on. Open **System Settings > Privacy & Security > Extensions > Photos Editing** and turn on ON1 Photo RAW MAX. (In older versions of macOS, open System Preferences, click Extensions, then Photos.) File Sharing must also be turned on.



Editing a Photo

1. Select the photo in Photos.
2. Click **Edit**.

3. Click the **Extensions** menu at the bottom of the editing controls and choose ON1 Photo RAW MAX. The photo opens in the Edit module, where you can move between all of its tabs.



Non-Destructive Editing with Apple Photos

Your Photo RAW settings are saved with the photo, so you can reopen it in Photo RAW with your edits intact by following the same steps, as long as you don't edit it in Photos afterward.

Once you make changes in Photos, your Photo RAW edits are baked in. You can still send the photo to Photo RAW, but your earlier settings won't be there.

TIP: To keep your Photo RAW edits available, choose **Image > Duplicate** in Photos first. Edit one copy in Photos and keep the other for Photo RAW.

Using ON1 Photo RAW MAX with Corel PaintShop Pro

When you send a photo from Corel PaintShop Pro (Windows only) to Photo RAW, you're editing PaintShop Pro's selected layer.

1. Open the photo in PaintShop Pro and select the layer you want to edit.
2. Choose **Effects > Plug-Ins > ON1 > ON1 Photo RAW MAX**.
3. When you're done, click **Done** in Photo RAW.

NOTE: PaintShop Pro doesn't support non-destructive editing with Photo RAW. To work on a copy, right-click the layer in PaintShop Pro and choose **Duplicate** before sending it.

Using ON1 Photo RAW MAX with Affinity Photo

Photo RAW works as a plug-in for Affinity Photo on Mac and Windows, giving you a round-trip editing workflow. First, turn on the plug-in in Affinity Photo.

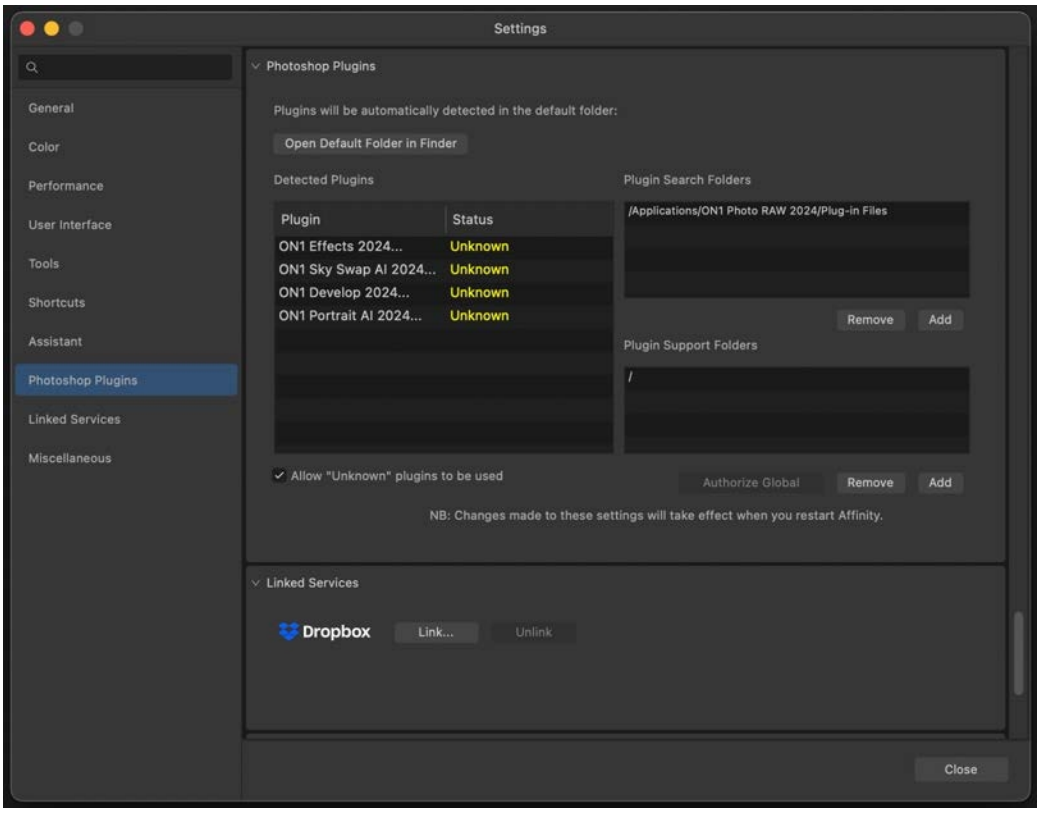
Activating the Plug-in (Windows)

1. Choose **Edit > Preferences** and click **Photoshop Plugins**.
2. Check **Allow "unknown" plugins to be used** at the bottom of the window.

3. Click **Add** under Plugin Search Folders, navigate to `\Program Files\ON1\ON1 Photo RAW MAX 2027\Plug-in Files\ON1 Photo RAW MAX 2027.plugin`, and click **OK**.
4. Click **Close** and restart Affinity Photo when prompted. Photo RAW now appears under Detected Plugins.

Activating the Plug-in (Mac)

1. Choose **Affinity Photo > Preferences** and click **Photoshop Plugins**.
2. Check **Allow "unknown" plugins to be used** at the bottom of the window.
3. Click **Authorize Global**. In the dialog that shows your system's root folder, click **Authorize**.
4. Click **Add** under Plugin Search Folders, navigate to `Applications/ON1 Photo RAW MAX 2027/Plug-in Files/ON1 Photo RAW MAX 2027.plugin`, and click **OK**.
5. Click **Close** and restart Affinity Photo when prompted. Photo RAW now appears under Detected Plugins.



Editing a Photo

When you send a photo from Affinity Photo, you're editing its selected layer.

1. Open the photo in Affinity Photo. If it's a raw file, click **Develop** first.
2. Select the layer you want to edit.

3. Choose **Filters > Plugins > ON1 > ON1 Photo RAW MAX**.
4. When you're done, click **Done** in Photo RAW.

NOTE: Affinity Photo doesn't support non-destructive editing with Photo RAW. To work on a copy, right-click the layer in Affinity Photo and choose **Duplicate** before sending it.

Moving a Lightroom Catalog to Photo RAW

If you use Lightroom and want to make Photo RAW your main editor, the Lightroom Migration Assistant transfers most of your catalog settings and metadata. It can even bring over photos you've edited in Lightroom with matching, non-destructive edits applied, using machine learning to translate your Lightroom edits. Your original files and your Lightroom catalog aren't changed.

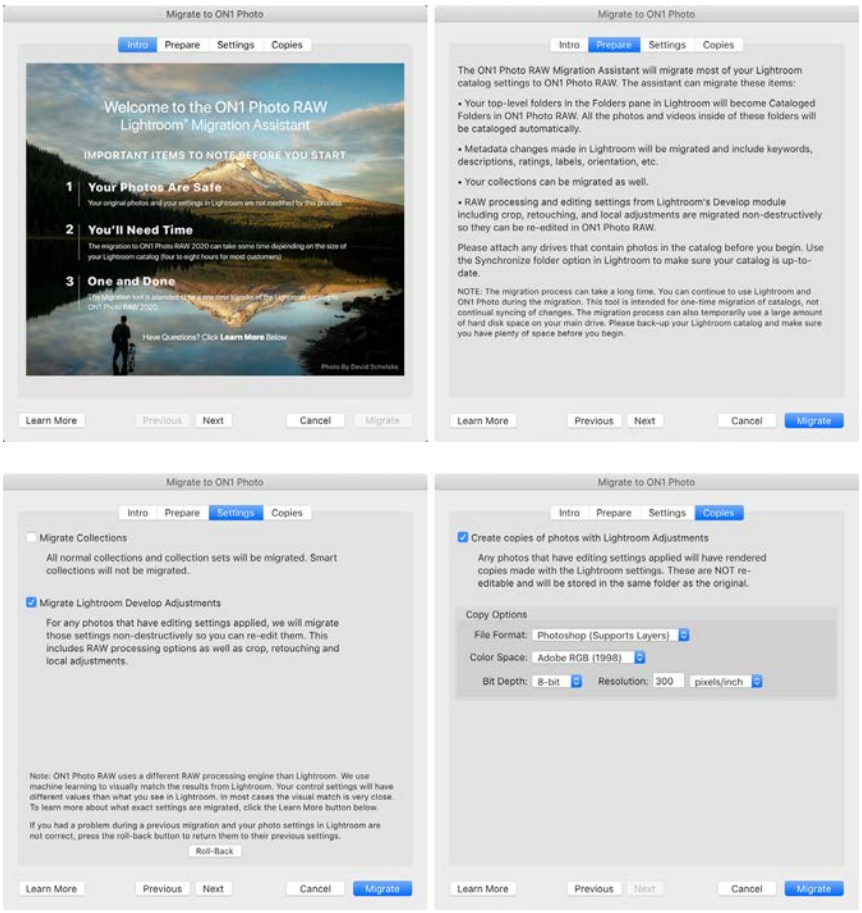
NOTE: The assistant is designed for a one-time migration and can take a long time. You can keep using Lightroom and Photo RAW while it runs. It can also temporarily use a lot of disk space on the drives where your photos are stored, so make sure you have plenty of room before you start.

What the Assistant Does

- Top-level folders in Lightroom's Folders panel become cataloged folders in Photo RAW, and all of their photos and videos are cataloged.
- Metadata is migrated, including ratings, flags, keywords, descriptions, GPS data, color labels, and orientation.
- Standard collections are migrated. Smart collections aren't.
- Most Develop module settings are migrated as non-destructive, editable settings in Photo RAW, including crop, retouching, local adjustments, vignettes, noise reduction, and sharpening.

Migrating Your Catalog

1. Open the catalog in Lightroom and choose **File > Plug-in Extras > Migrate Catalog to ON1 Photo**. The assistant opens. The Intro and Prepare tabs explain the process; click **Learn More** for details on the ON1 website.
2. Click **Next** to go to the Settings tab. Choose whether to transfer standard collections and Develop adjustments, then click **Next**.
3. On the Copies tab, choose whether to export copies of edited photos (see below).
4. Click **Migrate**.



TIP: If your migrated settings don't look right, open the assistant again, go to the Settings tab, and click **Roll Back**. This returns your Lightroom settings to how they were before the migration. Click Cancel when the roll back is finished.

Copies Options

The Copies tab can export a new file of every photo with Lightroom Develop adjustments, with those edits baked in. Each copy is saved in the same folder as its original, and both appear in Photo RAW.

- **File Type:** PSD (the default), JPEG, or TIFF.
- **Color Space:** Adobe RGB (1998), sRGB, or ProPhoto RGB.
- **Bit Depth:** 8 or 16 bits per channel.
- **Resolution:** The resolution of the copy.

NOTE: Create Copies makes a copy of every photo with any adjustment, including lens profiles or default noise reduction that some people apply on import. Review your catalog first. Sometimes it's better to export your edited photos from Lightroom into a new folder and add it to Photo RAW as a cataloged folder.

What Happens During Migration



1. Lightroom exports small JPEG previews of every photo to a temporary location, along with sidecar files for metadata (.on1) and edits (.on1meta).
2. If you chose Copies, those files are exported to the same folder as each original.
3. Photo RAW opens, and your Lightroom folders appear as cataloged folders in Browse. Thumbnails start out using the temporary JPEGs.
4. In the background, Photo RAW uses the .on1meta files to translate your Lightroom edits into Photo RAW settings.
5. Photos waiting to be converted show an LR badge in the lower-right corner of the thumbnail. When a photo is done, the badge changes to +/-.
6. As each photo finishes, its temporary files are deleted and its .on1 sidecar is updated.

You can keep working in Photo RAW once Lightroom finishes exporting. If you quit and reopen Photo RAW, conversion picks up where it left off.

NOTE: Migration doesn't change your original photos or their Lightroom settings. Photo RAW translates your Lightroom Develop settings into its own and saves them in an ON1 sidecar file, so a migrated photo shows ON1's close approximation of your Lightroom edits.

Which Lightroom Settings Are Migrated?

Because raw editors work differently, not every Lightroom setting can be converted:

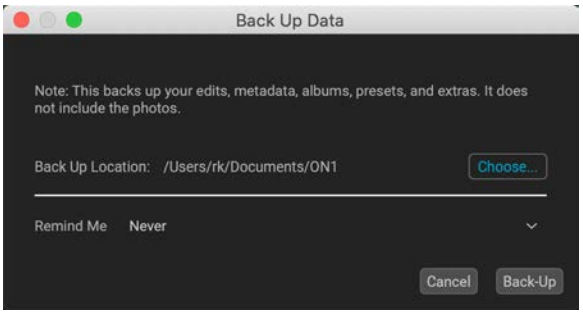
Feature	Converted?	Notes
Folders	Yes	All top-level Lightroom folders become top-level cataloged folders in Photo RAW.
Photos/Videos	Yes	All photos and videos in the cataloged folders are added, which may include some that weren't in your Lightroom catalog. Photos on offline volumes aren't migrated.
Virtual Copies	Yes	Become Versions in Photo RAW.
Stacks	No	
Collections	Yes	Collections become albums and collection sets become album sets. Smart collections aren't migrated.
Crop	Yes	
Spot Removal	Yes	Clone mode becomes the Clone Stamp and Heal mode becomes the Perfect Eraser. Results won't be pixel-perfect but generally remove the same spots.

Feature	Converted?	Notes
Basics	Yes	Adobe and camera-matching profiles are matched. Other LUTs and custom profiles aren't migrated. Clarity becomes Structure, and Dehaze becomes Haze, which looks a little different.
Black & White	Yes	
Tone Curve	Yes	Point curve adjustments only.
HSL/Color	Yes	Found in the Color Mixer filter in Effects.
Split Toning	Yes	Found in the Split Tone filter in Effects.
Detail	Yes	Sharpening and noise reduction work quite differently, so you may need to adjust them before output.
Lens Correction	Yes	Automatic lens correction is applied when a matching lens profile exists. Manual distortion settings aren't migrated.
Transform	No	Lightroom's Transform works too differently to migrate. Use the Transform pane in Develop for similar results.
Effects	Yes	Found in the Vignette and Film Grain filters in Effects.
Camera Profiles	No	Profiles are proprietary to each raw engine.
Red Eye	No	Remove red-eye automatically in the Portrait tab.
Graduated Filter	Yes	Becomes a local adjustment using the Adjustable Gradient. Range Mask, Moiré, and Defringe aren't migrated.
Radial Filter	Yes	Becomes a local adjustment using the Adjustable Gradient. Range Mask, Moiré, and Defringe aren't migrated.
Adjustment Brush	Yes	Becomes a local adjustment using the Adjustment Brush, including Auto Mask. Range Mask, Moiré, and Defringe aren't migrated.

Backing Up Your Work in Photo RAW

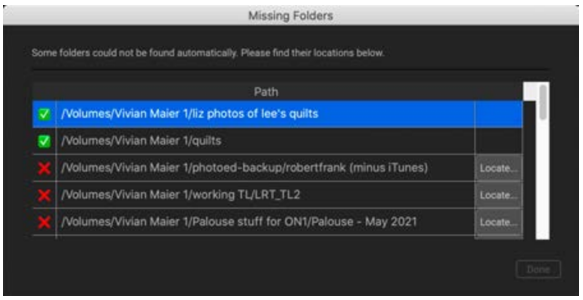
Photo RAW's Back Up and Restore feature protects your setup in case of a computer failure. It doesn't back up your photos, but it does back up:

- Preferences, cataloged folder references, and other settings.
- Albums created in Browse.
- Metadata changes made in Browse, including keywords, ratings, labels, and anything added in the Metadata pane.
- All presets and styles.
- All extras, including ones you've imported.
- All Edit module edits on every photo.



Backing Up

In Browse, choose **File > Back Up Data**. Choose a location for your backups and, if you like, a reminder schedule (daily, weekly, monthly, or none). Click **Back Up**, and Photo RAW creates a .onbackup file in that location with the date and time in its name.



Restoring

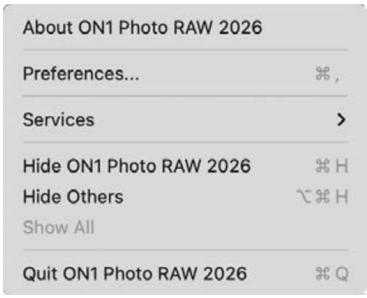
In Browse, choose **File > Restore Data**. You may need to reinstall Photo RAW first. Choose your backup location, and Photo RAW restores from the most recent backup. To use an earlier one, move the newer backups somewhere else first.

Click **Restore**. If Photo RAW can't find some of your photo folders, the Missing Folders window lists them. Click **Locate** to reconnect a folder, or click the X next to it to remove it from Photo RAW's catalog.

NOTE: Back Up Data doesn't back up your photos. Use a separate backup method to keep your photos safe.

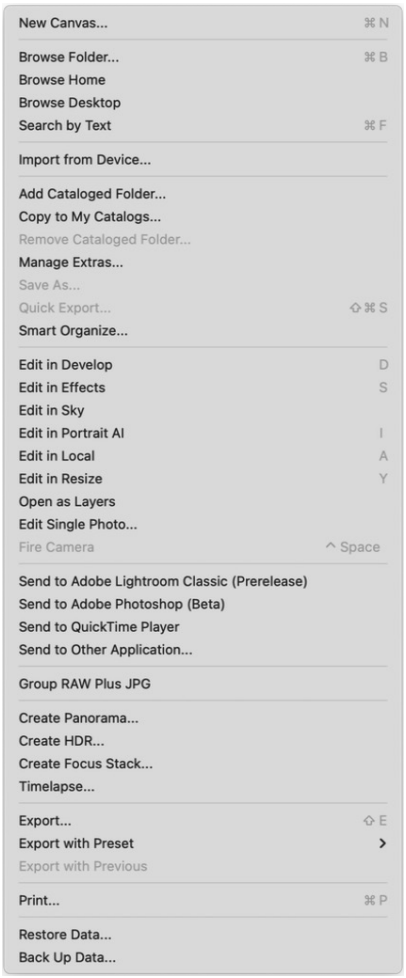
Browse Menus

ON1 Photo RAW (Mac Only)



- **About ON1 Photo RAW 2027**: Opens the About box, displays your version number. (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 2027.

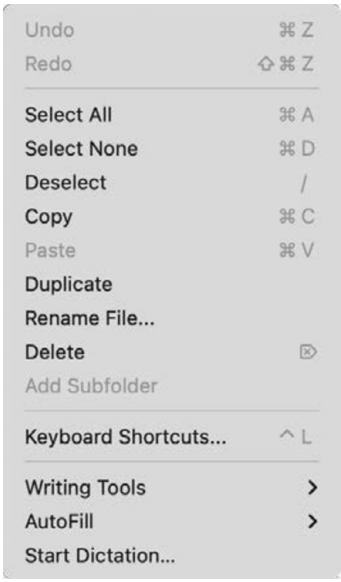
File



- **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.

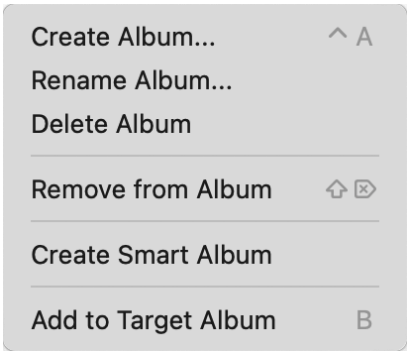
- **Manage Extras**: Opens the Extras Manager for importing and exporting backgrounds, presets, textures and more.
- **Save As**: Saves the currently edited image in a variety of file formats.
- **Quick Export**: Saves the current image in Photoshop, TIFF, JPEG or PNG format.
- **Smart Organize**: Opens 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.
- **Create 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 the Print window.
- **Restore Data**: Restores your ON1 Photo RAW 2027 system settings and environment to a previous backup.
- **Back up Data**: Backs up your current Photo RAW system settings and environment.

Edit



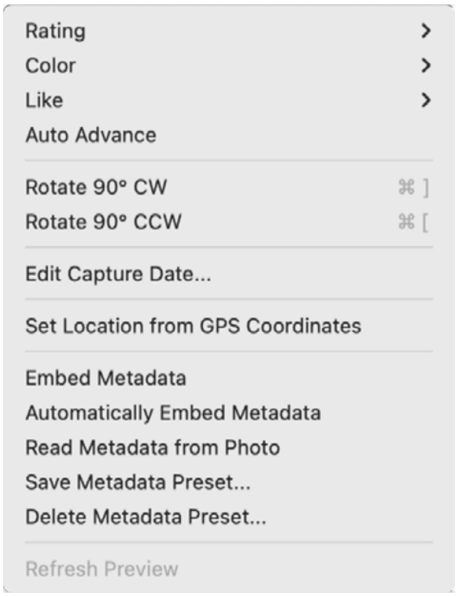
- **Undo**: Removes the last file operation.
- **Redo**: Redoes the undo operation. This is only available if the last thing you did was an undo.
- **Select All**: Selects all the images in the current folder.
- **Select None**: Deselects all the images in the current folder.
- **Deselect**: Deselects 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.
- **Add to Target Album**: Adds the current photo(s) to the Target Album.

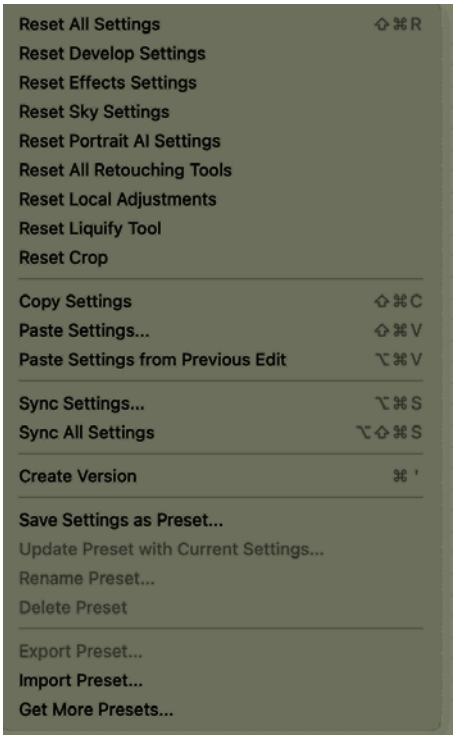
Photo



- **Rating**: Sets star rating (0 to 5 stars)
- **Color**: Sets the color rating of a photo (None, Red, Yellow, Green, Blue, Purple)
- **Like**: Sets a photo to Like, Dislike, 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**: Lets 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.)

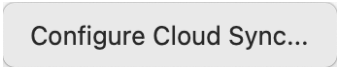
Settings



- **Reset All Settings**: Resets all the applied settings on a photo.
- **Reset Develop Settings**: Resets only the settings applied in the Develop tab.

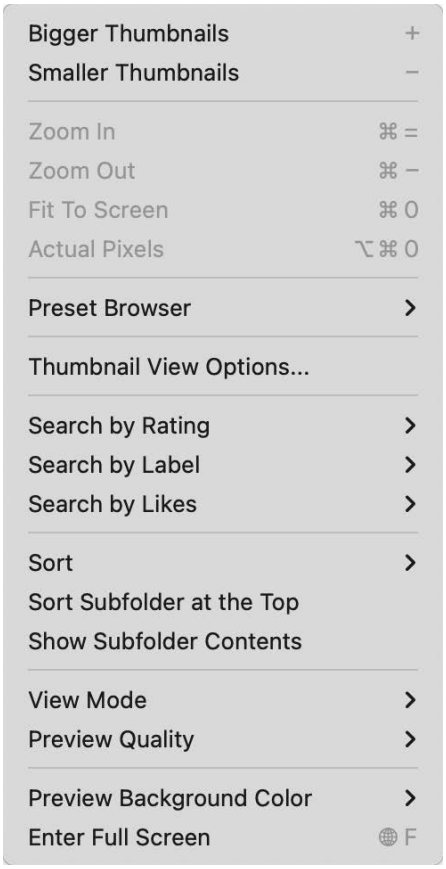
- **Reset Effects Settings**: Resets only the settings applied in the Effects tab.
- **Reset Sky Settings**: Resets the Sky Swap AI tab.
- **Reset Portrait Settings**: Resets Portrait settings.
- **Reset All Retouching Tools**: Resets any retouching applied in the Edit module.
- **Reset Local Adjustments**: 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**: Applies Edit settings from the primary selected image (represented by the super selection) to the rest of the images in a selection (with options).
- **Sync All Settings**: Syncs all Edit settings from the primary 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.

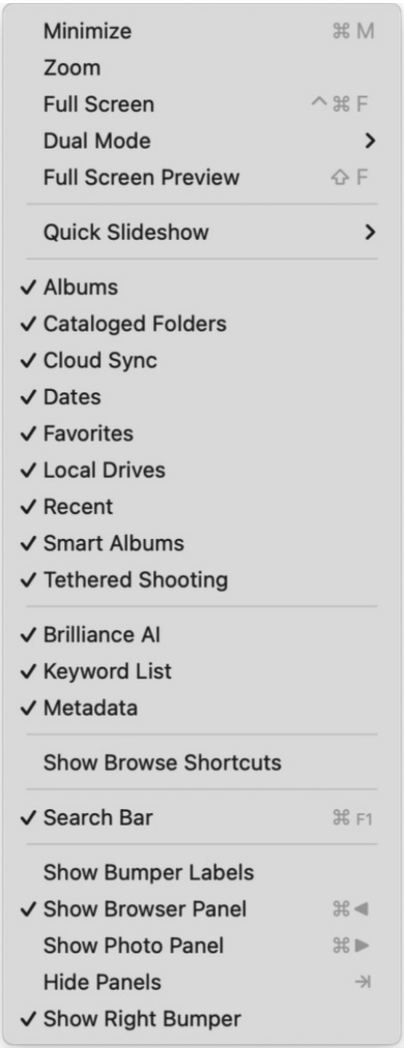
View



- **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.
- **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.
- **Enter Full Screen**: Enters full screen mode, displaying only the Photo RAW window, without menus.

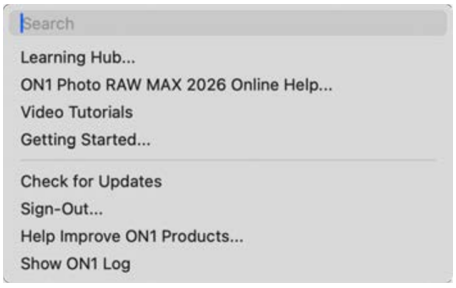
Window



- **Minimize**: Minimizes ON1 Photo RAW 2027.
- **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.
- **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.
- **Brilliance 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.
- **Hide 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

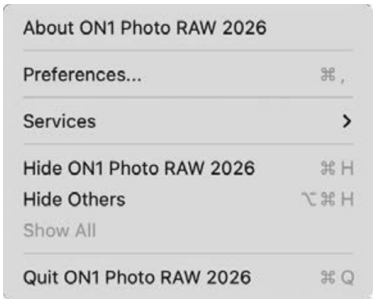


- **Search**: Searches the menu options (MacOS only).
- **Learning Hub**: Opens the Learning Hub inside Photo RAW.
- **ON1 Photo RAW 2027 Online Help**: Opens ON1.com support page in your default web browser.
- **Video Tutorials**: Opens ON1.com product training page in your default web browser.

- **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 2027** (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 2027

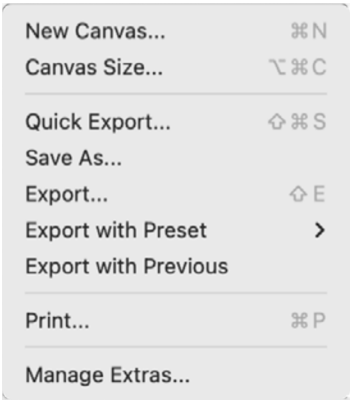
Edit Menus

ON1 Photo RAW (Mac Only)



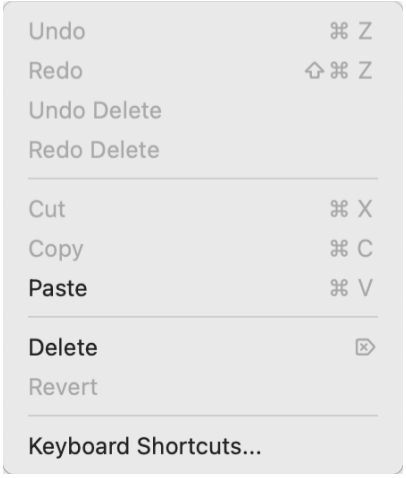
- **About ON1 Photo RAW**: Opens the About box and displays your version number. (In the Help menu on Windows.)
- **Preferences**: Opens the preferences dialog. (In the Edit menu on Windows.)
- **Quit ON1 Photo RAW**: Quits ON1 Photo RAW.

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 file 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 the Print window.
- **Manage Extras**: Opens the Extras Manager window.

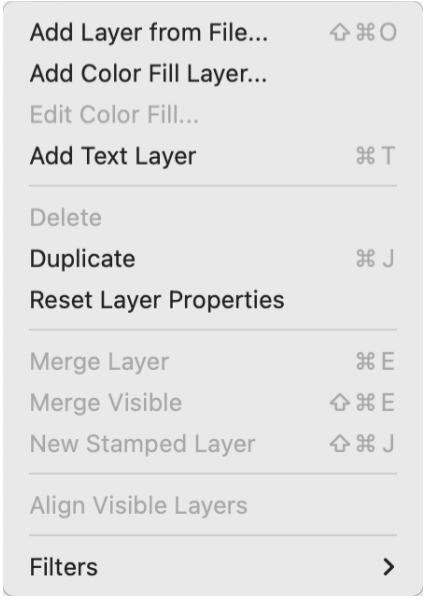
Edit



- **Undo**: Removes the last file operation.
- **Redo**: Redoes the undo operation. This is only available if the last thing you did was an undo.

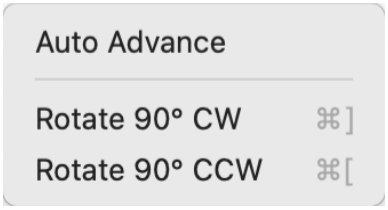
- **Cut**: Cuts the currently selected item.
- **Copy**: Copies the currently selected item.
- **Paste**: Pastes (copies) the items in the clipboard to the current location.
- **Delete**: Deletes the current image (Filmstrip mode only).
- **Revert:** Reverts to the photo's original state.
- **Preferences** (Windows): Opens the Preferences dialog.
- **Keyboard Shortcuts**: Lets you add or modify the hotkeys for many of Photo RAW's commands.

Layer



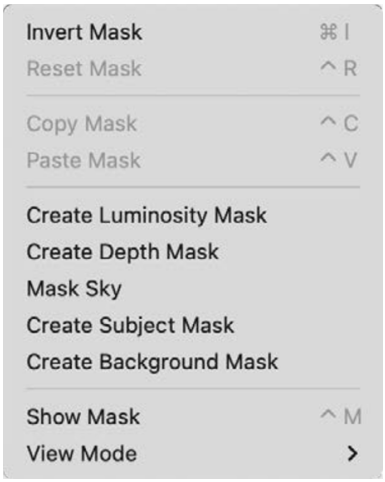
- **Add Layer from File**: Lets you add a new file to the current document as a layer.
- **Add Color Fill Layer**: Adds a new layer consisting of a solid color.
- **Edit Color Fill**: Lets you change the color of a selected color fill layer.
- **Delete**: Deletes the currently selected layer.
- **Duplicate**: 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



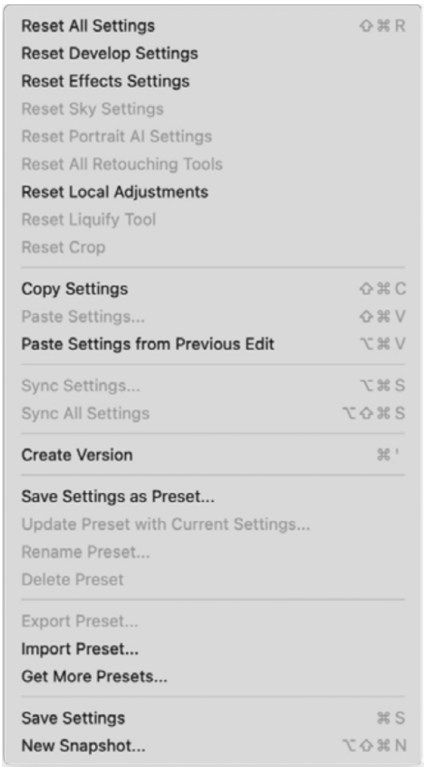
- **Auto Advance**: When checked, any color, rating or like setting applied to a photo will save it for that photo, then move on to the following photo.
- **Rotate 90 Degrees CW**: Rotates an image clockwise 90°.
- **Rotate 90 Degrees CCW**: Rotates an image counterclockwise 90°.

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.
- **Create Depth Mask**: Creates a depth mask.
- **Mask Sky**: Automatically creates a mask of the sky in the current image.
- **Create Subject Mask**: Finds the photo's subject and creates a mask of it.
- **Create Background Mask**: Selects the background of a photo and creates a mask of it.
- **Show Mask**: Displays the current mask either as a red overlay or as grayscale.
- **View Mode**: Sets the Show Mask mode to either color overlay, color overlay only when brushing, or grayscale.

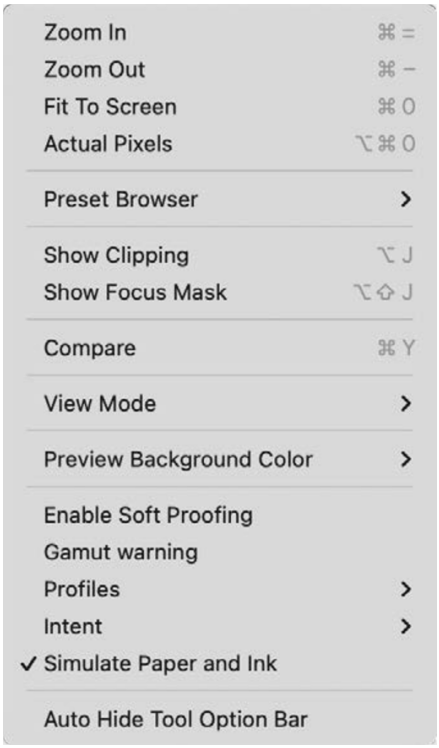
Settings



- **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 primary selected image to the rest of the images in a selection.
- **Sync All Settings**: Applies all of the Edit module settings from the primary 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.

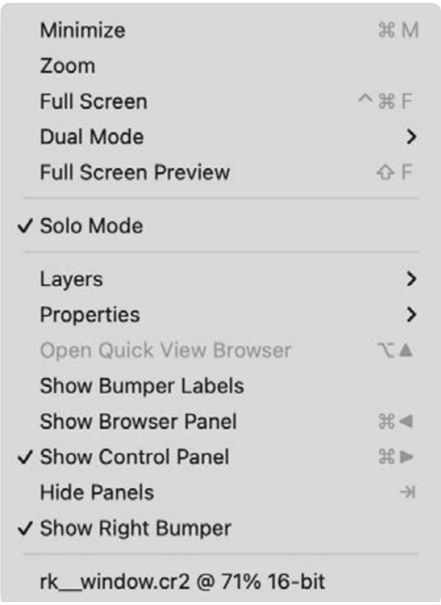
View



- **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.

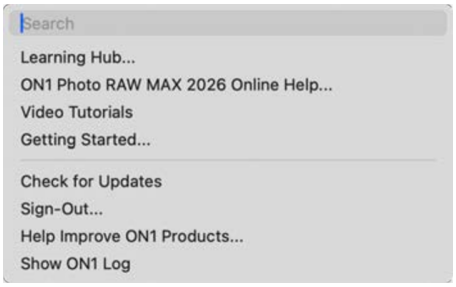
- **Actual Pixels**: This sets the preview image so that it zooms to actual pixels or 1:1 also called 100%. This setting allows you to see every pixel in the image. This is useful when making precision adjustments.
- **Preset Browser**: Sets the Preset panel browser view to 1, 2 or 3 columns.
- **Show 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.
- **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.
- **Solo Mode**: Keeps only one pane open at a time.
- **Layers**: Sets display and nesting options for 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

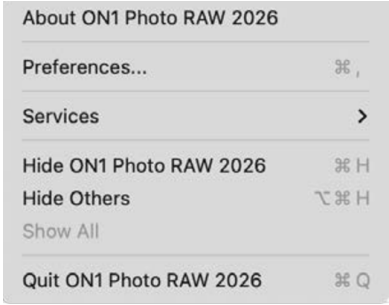


- **Search**: Searches the menu options (MacOS only).
- **Learning Hub**: Opens the Learning Hub.
- **ON1 Photo RAW 2027 Online Help**: Opens ON1.com support page in your default web browser.
- **Video Tutorials**: Opens ON1.com product training page in your default web browser.
- **Getting Started**: Opens the initial Photo RAW startup screens.
- **Check for Updates**: Checks the ON1 update server for a newer version. If one is available, you're notified and walked through the update.
- **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.

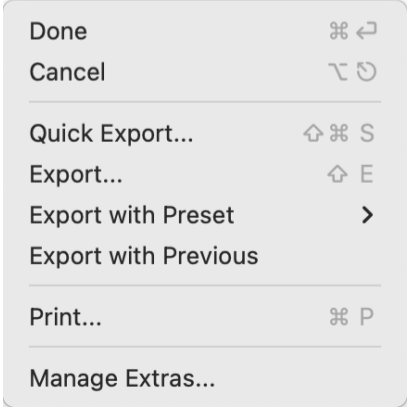
Resize Menus

ON1 Photo RAW (Mac Only)



- **About ON1 Photo RAW**: Opens the About box and displays your version number. (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.

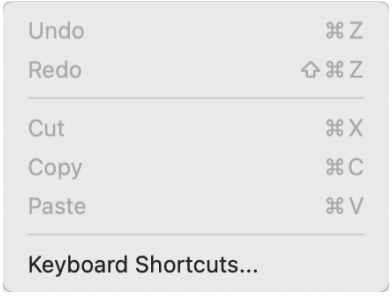
File



- **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.

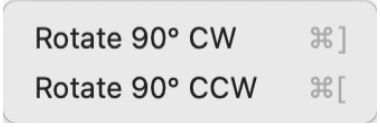
- **Export with Previous**: Exports the current image with the last-used Export setting.
- **Print**: Opens the Print window.
- **Manage Extras**: Opens the Extras Manager window.

Edit



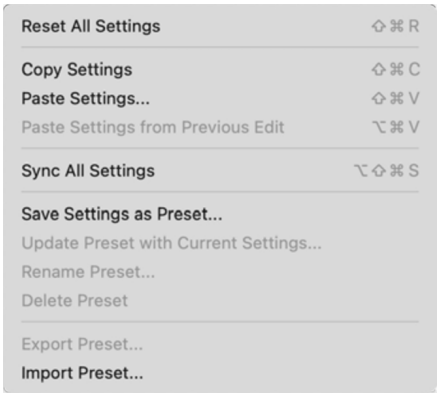
- **Undo**: Removes the last file operation.
- **Redo**: Redoes the undo operation.
- **Cut**: Cuts the currently selected item.
- **Copy**: Copies the currently selected item.
- **Paste**: Pastes the items in the clipboard.
- **Preferences** (Windows): Opens the Preferences dialog.
- **Keyboard Shortcuts**: Lets you add or modify the hotkeys for many of Photo RAW's commands.

Photo



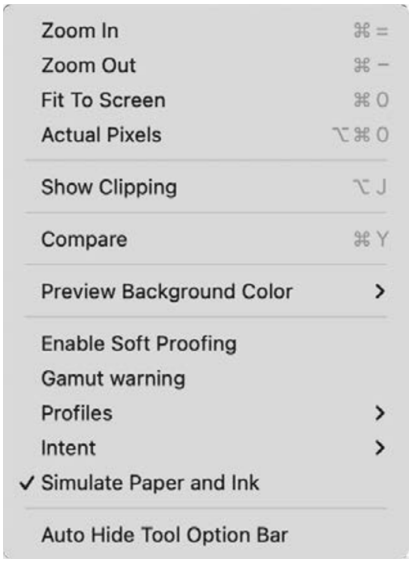
- **Rotate 90 Degrees CW**: Rotates an image clockwise 90°.
- **Rotate 90 Degrees CCW**: Rotates an image counterclockwise 90°.

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 primary 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



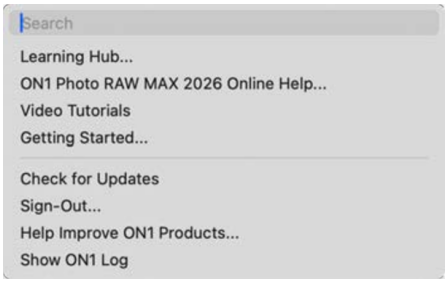
- **Zoom In**: Zooms the preview window in one increment. This will make the preview image larger.
- **Zoom Out**: Zooms the preview window out one increment. This will make the preview images smaller.
- **Fit to Screen**: This sets the preview image so that the entire image is on screen at once. Think 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.
- **Compare**: Displays an adjustable split-screen view of the current image, with the Before view on the left side of the preview area.
- **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 panel.
- **Show Control Panel**: Hides/shows the right 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 2027 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 Photo RAW.

Preferences

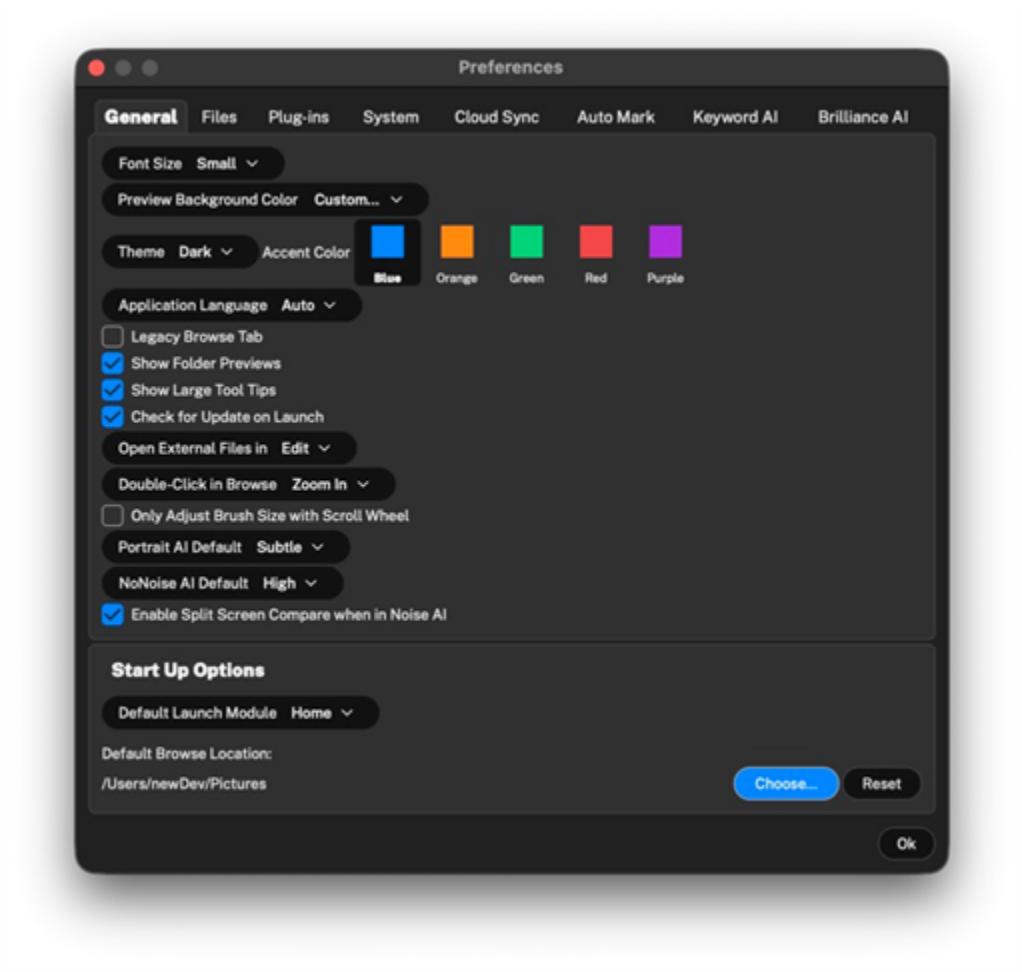
Preferences hold Photo RAW's app-wide settings. To open them, click the gear icon at the lower left of the window, or choose **Preferences** from the ON1 Photo RAW menu (Mac) or the Edit menu (Windows).

The Preferences window has these tabs:

- General
- Files
- Plug-ins
- System
- Cloud Sync
- Auto Mark
- Keyword AI
- Brilliance AI

General Settings

The General tab sets up the basics of the Photo RAW workspace, including colors, scrolling, and default behaviors.



Font Size

Sets the size of interface text, such as labels, panes, and menus: Small, Medium, or Large. Restart Photo RAW for the change to take effect.

Preview Background Color

Sets the color behind the photo in the Preview: Black (the default), White, Light Gray, Dark Gray, or Custom, which opens a color picker.

Theme

Sets the interface theme; either the default dark or light option.

Accent Color

Sets the color used to highlight selected items in the interface.

Application Language

Sets Photo RAW's display language. Auto uses your system language.

Legacy Browse Tab

Replaces the separate My Catalogs and Browse panels with the single Browse panel from earlier versions. See My Catalogs, Browse, and Preset Panels.

Show Folder Previews

Shows a thumbnail from inside each folder in Browse.

Check for Update on Launch

On by default. Photo RAW checks ON1's update server when it starts and, if an update is available, asks whether to download it or skip it.

Open External Files

Sets where a photo opens when you double-click it in Finder (Mac) or File Explorer (Windows): Browse (the default) or the Edit module, using Edit a Single Photo mode.

Double-Click in Browse

Sets what happens when you double-click a photo in Grid view: zoom in (the default) or open it in the Edit module.

Only Adjust Brush Size with Scroll Wheel

When on, the scroll wheel only changes brush size when a brush tool is selected. When off, the scroll wheel scrolls, zooms, pans, and adjusts brush size and feather depending on the modifier keys you hold. See Using ON1 Apps with a Scroll Wheel.

Default Browse Location

Changes the folder used by the Pictures shortcut in Browse. The default is Pictures (Mac) or My Pictures (Windows).

Portrait AI Default

Sets the strength of Portrait AI's automatic retouching when you open a photo in the Portrait tab: Subtle (the default) or Strong. See Portrait AI Workflow.

NoNoise AI Default

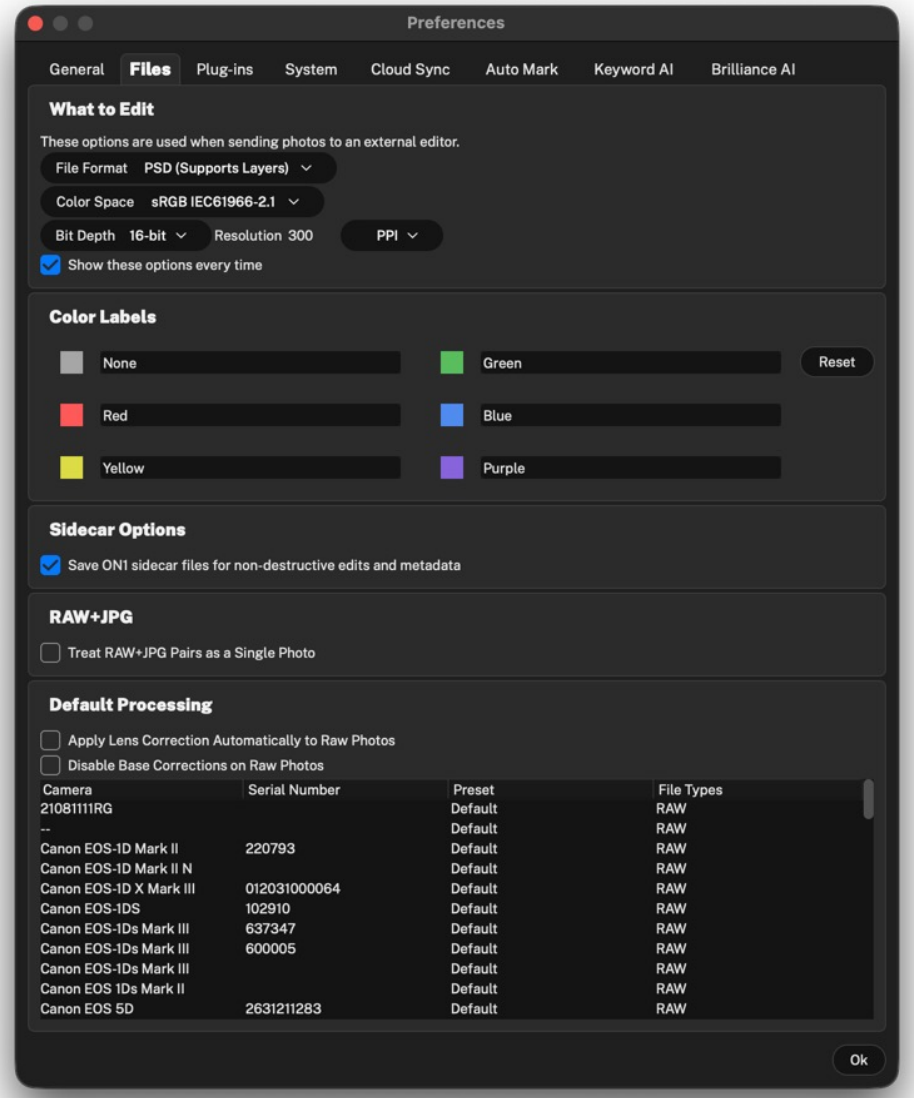
Sets the default strength of NoNoise AI noise reduction in Develop: Low, Medium, or High (the default). See Noise & Sharpening.

Enable Split Screen Compare when in NoNoise AI

When on, Photo RAW switches to before/after Compare view automatically when you open the NoNoise tab in Develop. When off, click the Compare button at the bottom of the window to turn it on.

Files

The Files tab sets the file type Photo RAW creates when you open a file in Resize or send copies to another app from Browse. It's also where you set up camera-based presets.



What to Edit

1. **File Format:** PSD, TIFF, or JPEG. Choose PSD for a layered workflow.
2. **Color Space:** The default color space for copies: Adobe RGB (1998), Apple RGB (Mac), sRGB, ProPhoto RGB, or ColorMatch RGB, plus any profiles you've imported.
3. **Bit Depth:** The bit depth for copies.
4. **Resolution:** The resolution for copies.
5. **Show These Options Every Time:** Check this to choose file settings each time instead of using these defaults.

Color Labels

You can set the text values associated with the metadata color labels, rather than the simple color names. These will be visible throughout the application. Note they will not be stored in metadata using these custom names as they are not supported in most other applications.

Sidecar Options

Check this to have Photo RAW save ON1 sidecar files as you edit. This is helpful if you use the same photo library on more than one computer, such as on an external drive, and want your edits to show up on each one.

Treat RAW+JPG Pairs as a Single Photo

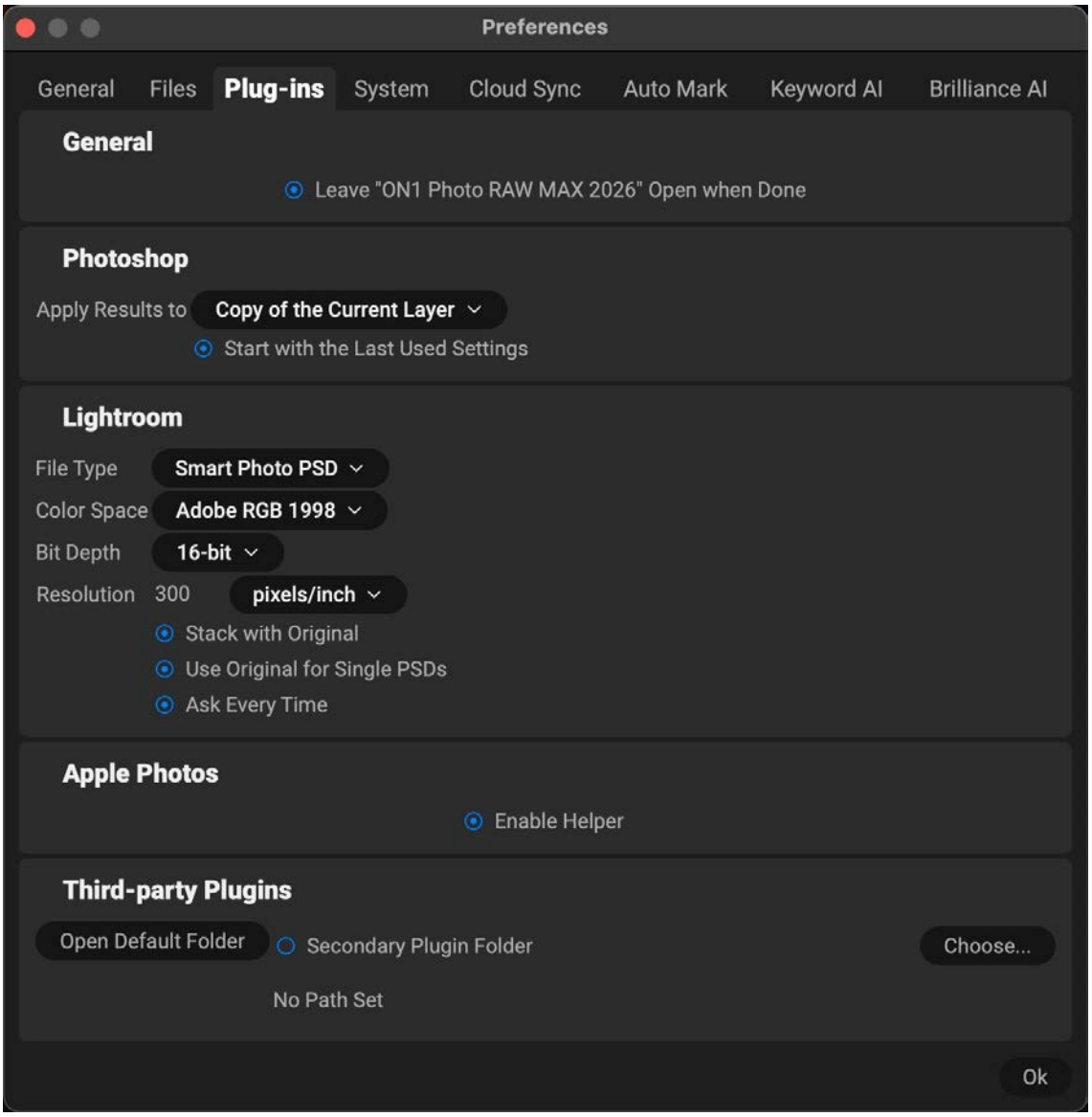
If you shoot Raw+JPEG, this stacks each pair in Browse. Pairs show a small icon in the lower-left corner of the thumbnail.

Default Processing

- **Apply Lens Correction Automatically:** Applies lens correction to raw photos when you view them in Detail, Filmstrip, or Compare view.
- **Disable Base Corrections:** Turns off Photo RAW's basic raw corrections, which can help with scientific and technical photography, time-lapse, and other specialized work.
- **Camera-Based Presets:** Lists the cameras you've shot with. Choose a preset for a camera to apply it automatically. See Camera-Based Presets.

Plug-ins

The Plug-ins tab loads third-party Photoshop plug-ins for use in Photo RAW. In Photo RAW MAX, it also sets options for using Photo RAW as a plug-in in other apps.



General (Photo RAW MAX Only)

Check **Leave ON1 Photo RAW MAX Open When Done** to keep the app open after you finish editing a photo from another app.

Photoshop (Photo RAW MAX Only)

- **Apply Results To:** Apply your edits to a copy of the current layer or to the current layer itself.
- **Start with the Last Used Settings:** Uses your last settings when you send a photo from Photoshop.

Lightroom (Photo RAW MAX Only)

These options apply to files opened from Lightroom's Plug-in Extras menu:

- **File Type:** PSD (the default) keeps layers. Smart Photo keeps your edits re-editable from Lightroom. JPEG and TIFF are also available. Same as Source keeps the original file type, except raw files, which are saved as PSD.
- **Color Space:** Adobe RGB, sRGB, or ProPhoto RGB.
- **Bit Depth:** 8 or 16 bits per channel.
- **Resolution:** The resolution of the file.
- **Stack with Original:** Stacks the new file with the original.
- **Use Original for Single PSDs:** Edits a single PSD directly instead of a copy.
- **Ask Every Time:** Shows these options each time you use Plug-in Extras. Turn it off to always use these settings.

For more on Smart Photos and re-editing from Lightroom, see Using ON1 Photo RAW MAX with Lightroom Classic.

Apple Photos (Photo RAW MAX, Mac Only)

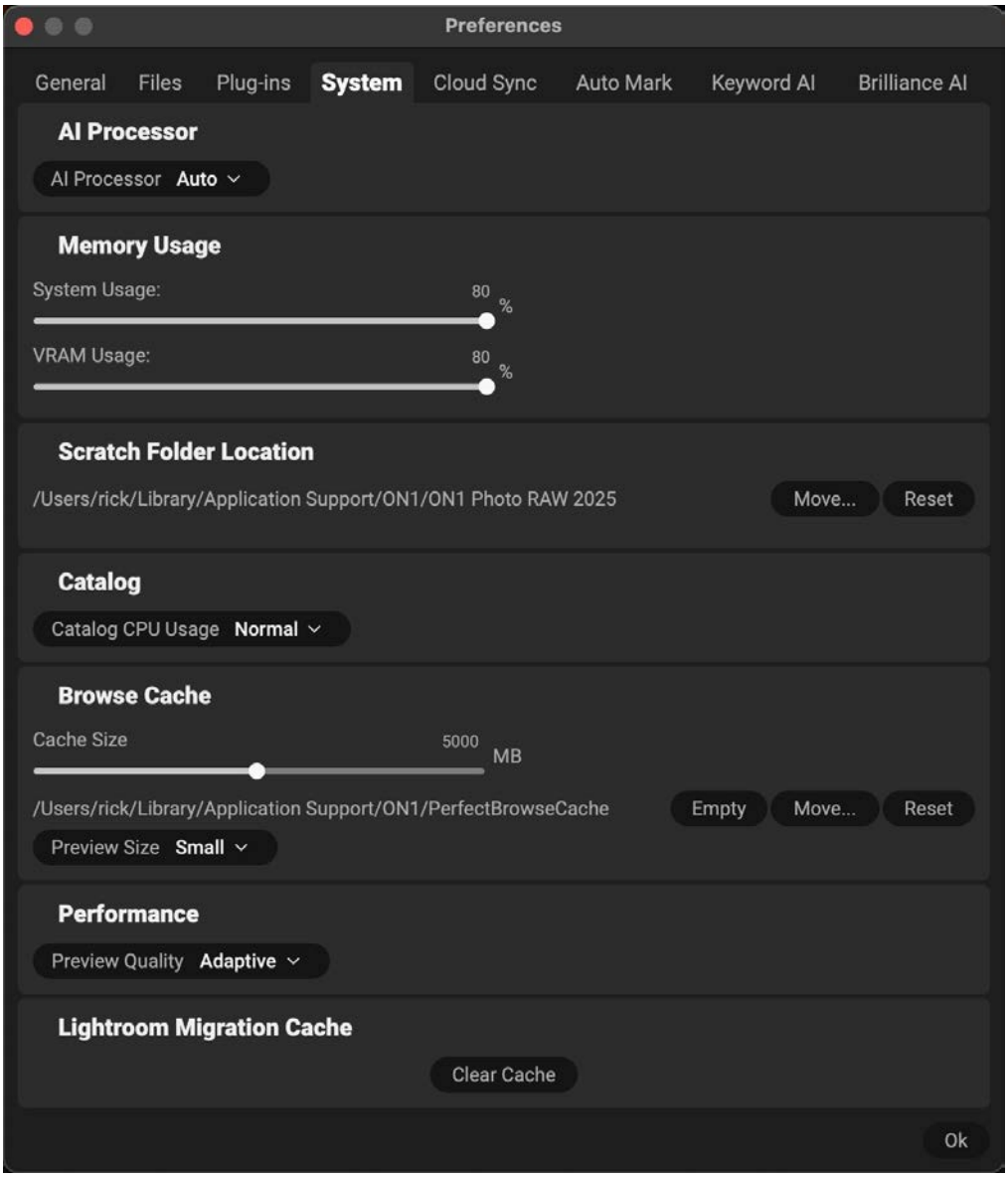
Enable Helper keeps the connection between Apple Photos and Photo RAW running smoothly. Leave it on.

Third-Party Plug-ins (All Versions)

Click **Open Default Folder** and copy Photoshop plug-in files there. To use a second plug-in folder, check the box and click **Choose** to select it. See Using Photoshop with Photo RAW.

System

The System tab adjusts Photo RAW's performance settings.



AI Processor

Sets what handles Photo RAW's AI tasks. Auto (the default) uses the best combination of your system's resources. If NoNoise AI, Sky Swap AI, or other AI features run slowly, try setting it to your CPU or your graphics card.

Memory Usage

- **System Usage:** The share of RAM Photo RAW can use. The default and maximum is 80%.
- **VRAM Usage:** The share of video memory Photo RAW can use. The default and maximum is 80%.

Scratch Folder Location

Moves or resets the scratch cache Photo RAW uses to speed up editing. This helps if your system drive is short on space and you'd rather use a fast external drive. The cache is cleared each time you quit.

Catalog

Catalog CPU Usage sets how hard Photo RAW works on your cataloged folders in the background: Low, Normal (the default), High, or Turbo. Higher settings use more of your CPU.

Browse Cache

Photo RAW saves thumbnails and previews on disk so folders load faster the next time you browse them. Here you can set the cache size, empty it, move it, or reset it if Browse is having problems. **Preview Size** sets the size of cached previews: Small (the default) or Large (HQ).

TIP: If you use cataloged folders and have a small SSD system drive, move the Browse cache to another drive to save space and improve performance.

Performance

Sets preview quality to suit your computer: Low, Adaptive (the default), or High.

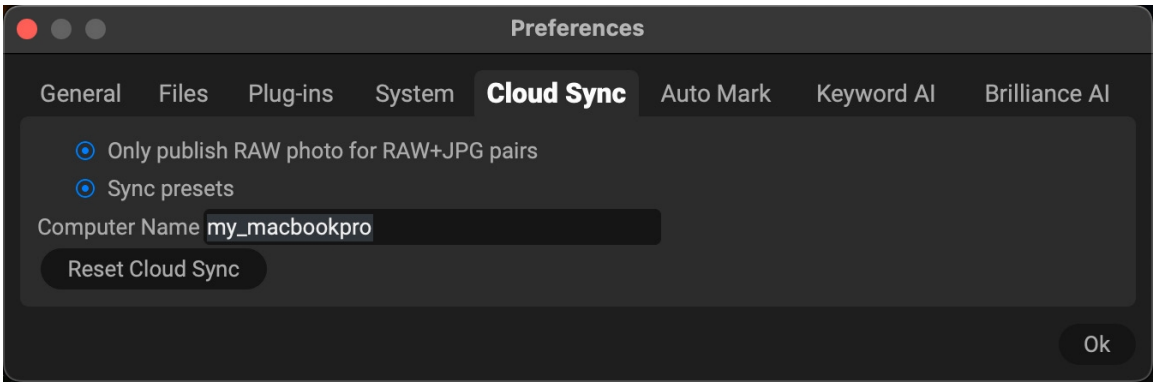
Lightroom Migration Cache

If you have trouble with the Lightroom Migration Assistant, clear its cache here. See Moving a Lightroom Catalog to Photo RAW.

Cloud Sync

If you subscribe to ON1 Cloud Sync, this tab sets your device's name, which appears on your other synced devices, and whether to publish Raw+JPEG pairs, presets, and imported extras.

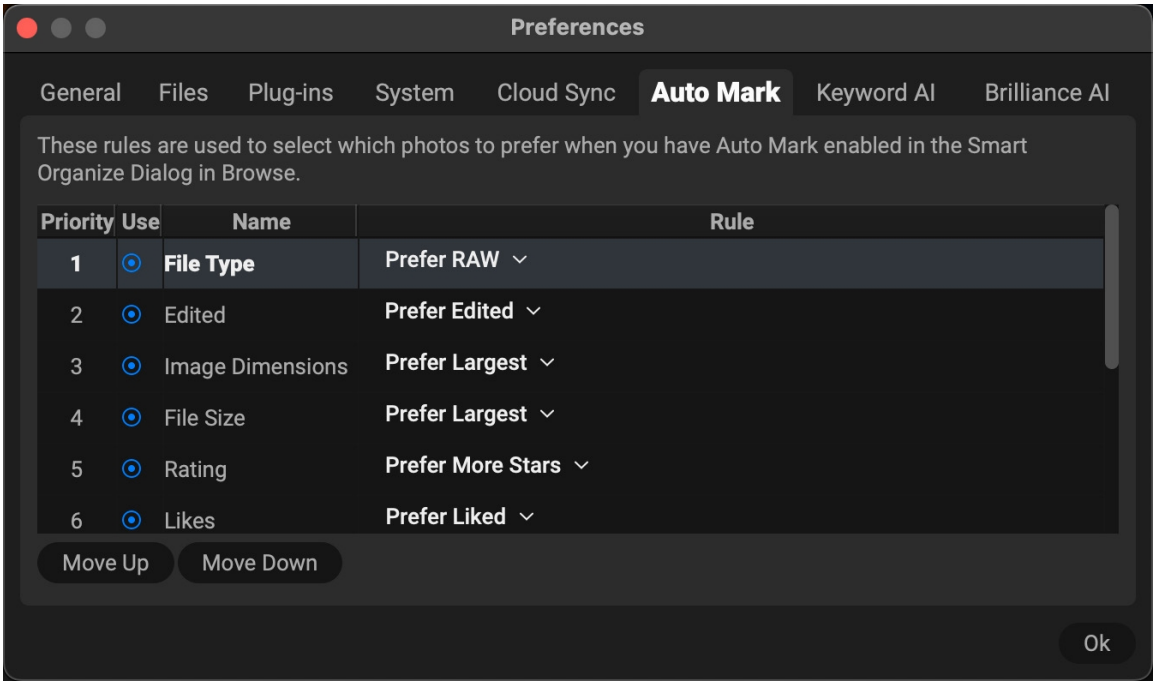
Reset Cloud Sync returns your sync setup to its original state, removing all synced photos and devices.



For more, see Using ON1 Cloud Sync with Photo RAW.

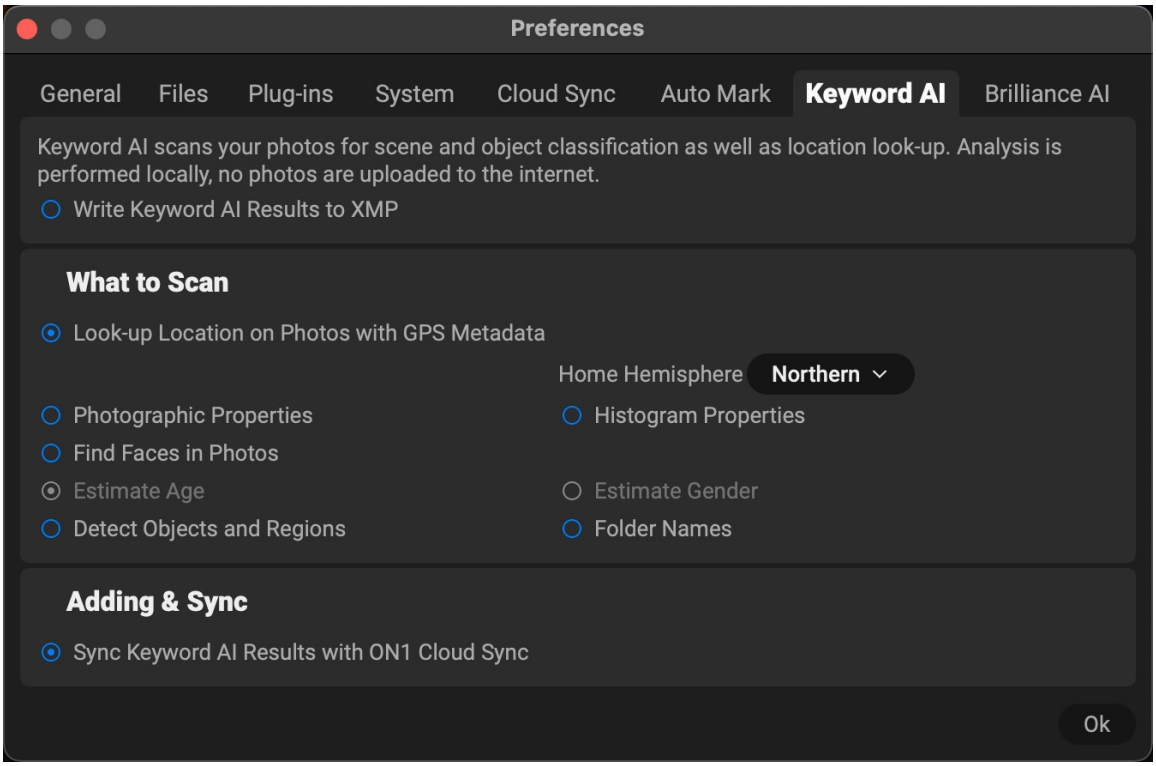
Auto Mark

The Auto Mark tab sets the criteria Photo RAW uses when Smart Organize in Browse marks photos. See Smart Organize for details on Smart Organize and how to adjust these settings.



Keyword AI

The Keyword AI tab adjusts the Keyword AI feature in Browse. By default, Photo RAW scans every photo in your cataloged folders and creates keywords based on what's in them.



To turn Keyword AI off, uncheck **Scan Cataloged Folders with Keyword AI**. With it on, you can choose what it uses to create keywords:

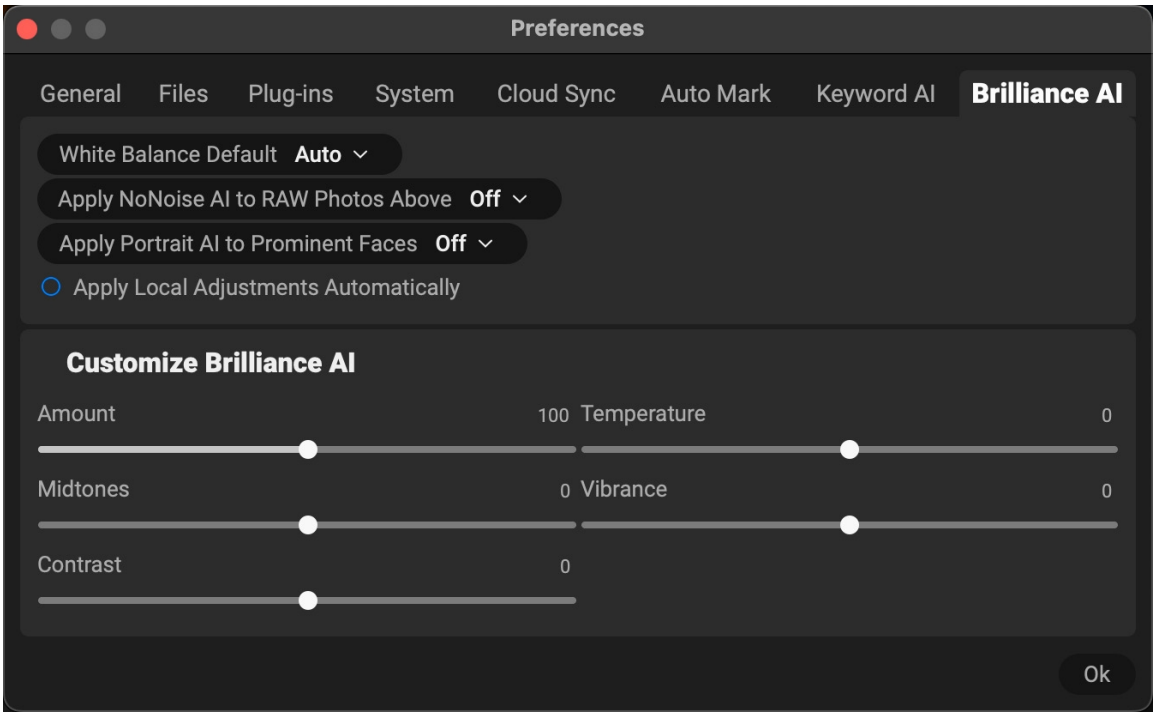
- Location lookup from GPS metadata
- Photographic properties
- Faces, with optional gender and age estimates
- Objects and regions
- Folder names

If you use ON1 Cloud Sync, you can also choose whether AI keywords sync to your other devices.

For more, see The Keyword AI Pane.

Brilliance AI

The Brilliance AI tab sets the defaults for Brilliance AI in the Edit module.



General Settings

- **White Balance Default:** Brilliance AI sets white balance automatically by default. You can choose one of six standard settings instead, or As Shot to leave white balance alone.
- **Apply NoNoise AI to Raw Photos Above:** The ISO above which Brilliance AI applies NoNoise AI automatically: Off (the default), 400, 800, 1600, 3200, or 6400.
- **Apply Portrait AI to Prominent Faces:** Adds a Portrait AI pane for each larger face found. Off by default.

Apply Local Adjustments Automatically

When checked, Brilliance AI finds regions in the photo and creates local adjustments for them each time you apply it.

Customize Brilliance AI

Fine-tune Brilliance AI's strength (Amount), color temperature, midtones, vibrance, and contrast.