DxO Photolab 4 Workshop

Created and Presented by Barry Headrick

Presented on February 20, 2021, this document was updated on February 21, 2021

This Workshop

Welcome to the DxO Photolab 4.1 Workshop!

All prices, latest version numbers, free trials, and links in this handout were current as of February, 2021.

In this two hour introductory level workshop, you will learn how to use the amazing DeepPRIME noise reduction tool in the Elite version of DxO Photolab 4. We will cover the Photolab 4 user interface and some of its tools, particularly DeepPRIME. We will demonstrate two custom presets (an edit preset and an export preset) for noise reduction with my Lightroom workflow.

Here is the announcement (abbreviated) from DxO on October 21, 2020: Today, DxO is unveiling DxO PhotoLab 4. This version features DxO DeepPRIME, a revolutionary demosaicing and denoising technology based on artificial intelligence and trained with deep learning.

Jimmy Cheng, an Olympus Ambassador in London, England, posted his 10 minute noise reduction app comparison video on November 27, 2020 https://www.youtube.com/watch?v=2A8kxG4xCCM. The Joy of Editing with Dave Kelly channel on YouTube has a noise reduction comparison video https://www.youtube.com/watch?v=xVSyVVZD0XQ&t=477s. Robin Whally has a video on using Photolab 4 with Lightroom https://www.youtube.com/watch?v=THR8X47khO4

DxO offers a 30-day free trial with all DxO PhotoLab features unlocked. https://www.dxo.com/dxo-photolab/download/ The trial version is a fully-functional version of the ELITE edition. When the trial period is over, the software still functions, but all output images will contain a watermark.

Photolab 4 Overview

This product is highly recommended for all raw files that have a high level of noise. Noise is normally caused by using a high ISO setting. You can check the highest recommended ISO value for your camera, based on its signal-to-noise ratio, at DxOMark https://www.dxomark.com/Cameras/

	Model	Mpix	Sensor Format	Launch Price	Launch Date	Overall Score ▼	Portrait	Landscape	Sports
	Nikon D3s	12.1	Full Frame	$5510	Oct. 2009	82	23.5	12.0	3253

	Model	Mpix	Sensor Format	Launch Price	Launch Date	Overall Score ▼	Portrait	Landscape	Sports
	Olympus OM-D E-M1 Mark II	20.4	4/3"	$2000	Sep. 2016	80	23.7	12.8	1312

This product is also recommended for anyone who uses an X-Rite ColorChecker Passport https://www.vistek.ca/store/435798/xrite-colorchecker-passport-photo-2 Don't forget to ask about your IACC member discount price at Vistek https://www.imagesalberta.ca/discounts.html

This product is NOT recommended for anyone does NOT shoot in RAW, who does not have any concerns about image quality due to high ISO noise, who has a slow computer (and does not wish to buy a fast expensive computer), who does not wish to learn a new product, who needs fast turnaround for their edit workflow, who wants a simple workflow with no additional steps, or anyone who is low on disk storage space. DeepPRIME CANNOT be used by anyone who shoots in jpeg file format, it only works with raw files.

DxO costs $129 USD for the Essential version or $199 USD for the Elite version. This is a perpetual (permanent) license.

DxO PhotoLab

Choose the best edition that fits you !

Essential	Elite
$ 129	$ 199
BUY NOW →	BUY NOW →
–	PRIME denoising (RAW)
–	DeepPRIME denoising (RAW) [NEW]
–	DxO ClearView Plus
–	Anti-moiré tool
–	DxO Instant Watermarking [NEW]
–	DCP and ICC profile support
–	Multiple exports
–	Presets editor
–	Batch renaming [NEW]
2 activations	3 activations
DxO Smart Workspace [NEW]	DxO Smart Workspace [NEW]
Control Points (U Point Technology)	Control Points (U Point Technology)
Local adjustments masks management	Local adjustments masks management
HSL and DxO ColorWheel + Hue Picker [IMPROVED]	HSL and DxO ColorWheel + Hue Picker [IMPROVED]

Shortcut Keys for Hiding, Maximizing, and Re-Opening Panels

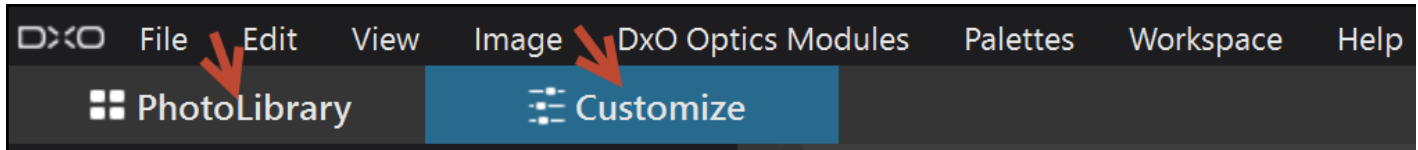F9 - hide/restore both sidebars (Customise tab only)

Ctrl-F9 - hide/restore the filmstrip at the bottom of the screen

F12 - maximize/restore the app window and hide/restore menu bar and the filmstrip

F11 – maximize (full screen)/restore the image in the middle of the screen or ESC to restore the image

The User Interface

There are two main tabs as shown below.

- PhotoLibrary tab – similar to the Library module in Lightroom, sometimes called Organize in other apps
- Customize tab – similar to the Develop module function in Lightroom, sometimes called Edit in other apps)

There are various palettes that you can display or hide, and move around on the screen, and create a custom Workspace (palette layout). You can hide panels that you don't want to use and display them later if you wish.
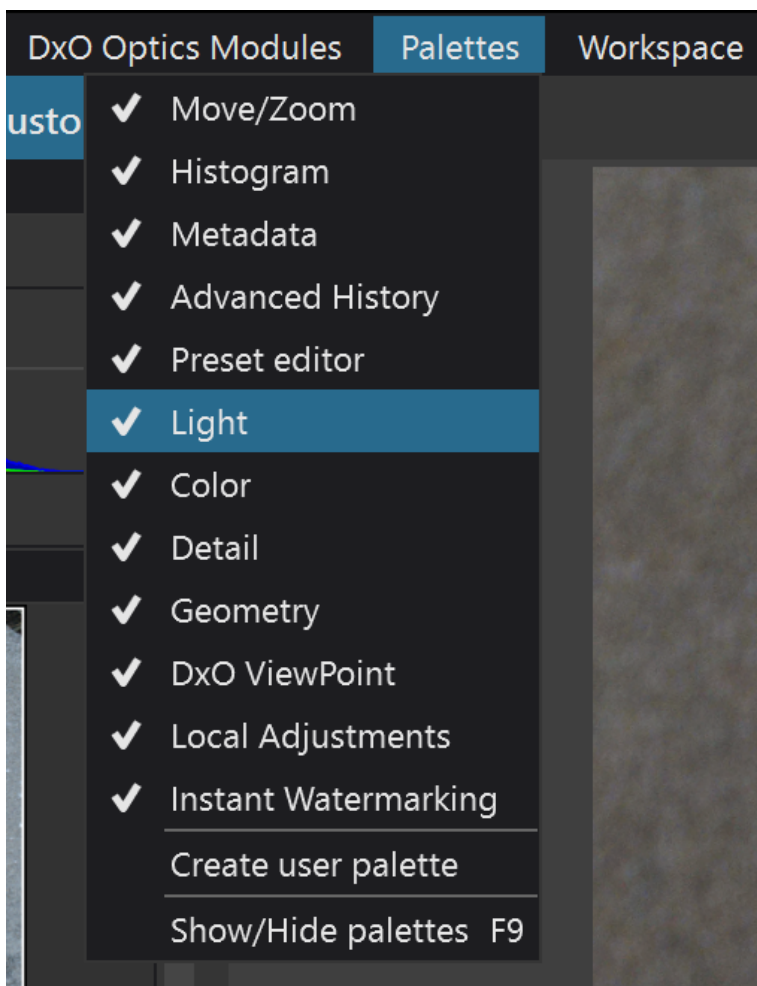
Workspaces

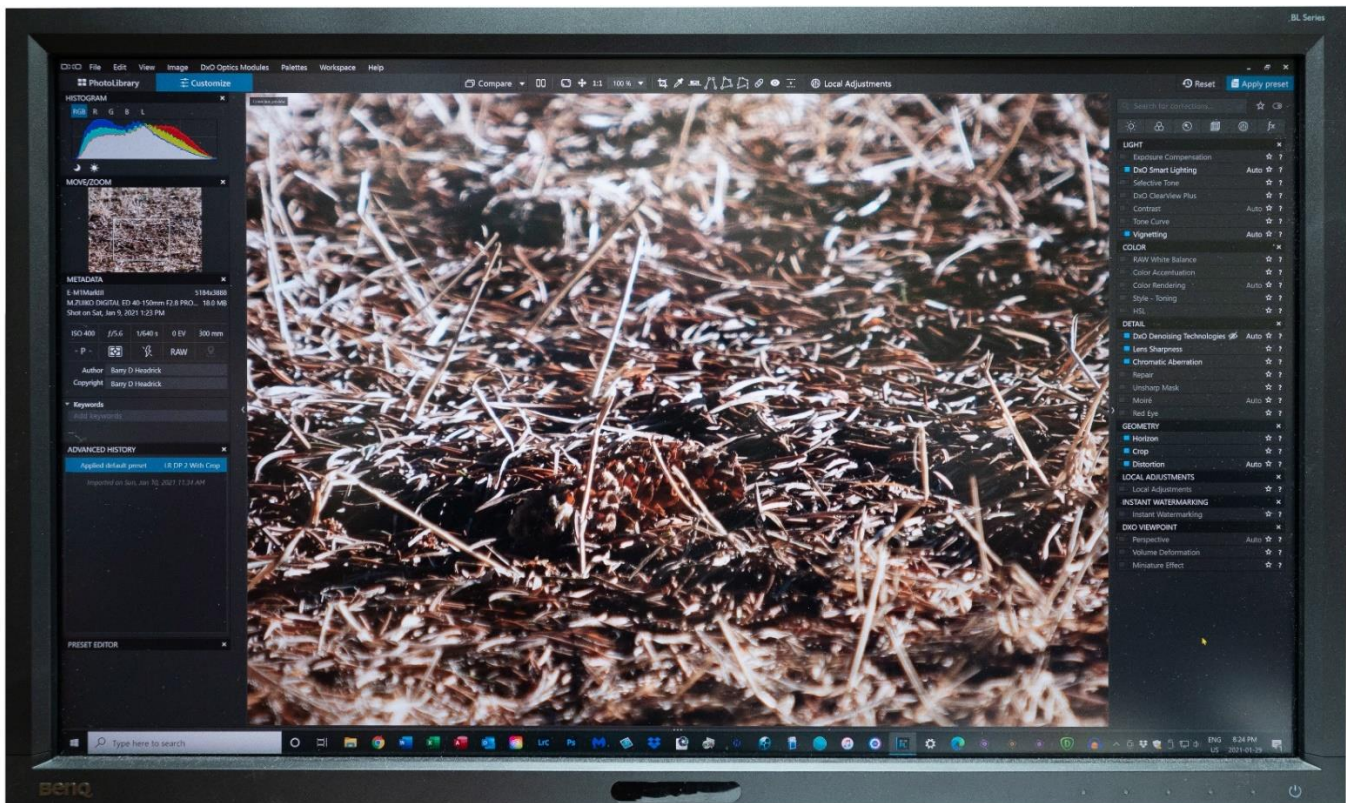TIP: always use the DxO Advanced Workspace in the Workspace menu. NOTE: the Workspace menu appears ONLY when you are using the Customize tab.
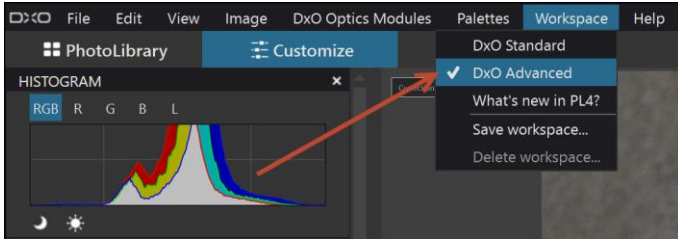
The DxO Advanced Workspace is a bit crowded.

You can move palettes to your second monitor to make more room for your image.

You can restore the DxO Advanced Workspace layout just by clicking on the DxO Advanced Workspace in the Workspace menu in the Customize tab.

Tools

There are 24 tools in 6 palettes. There are 3 more tools in the DxO Viewpoint tab if you purchase and install DxO Viewpoint.

You can turn on and turn off tools as needed, look for the blue square in the top left corner of each tool.

Several tools have a fully automatic setting. It appears as a magic wand on the top left corner of the tool panel. This can be turned off for manual controls if you prefer.

You can save your tool settings as an edit preset.
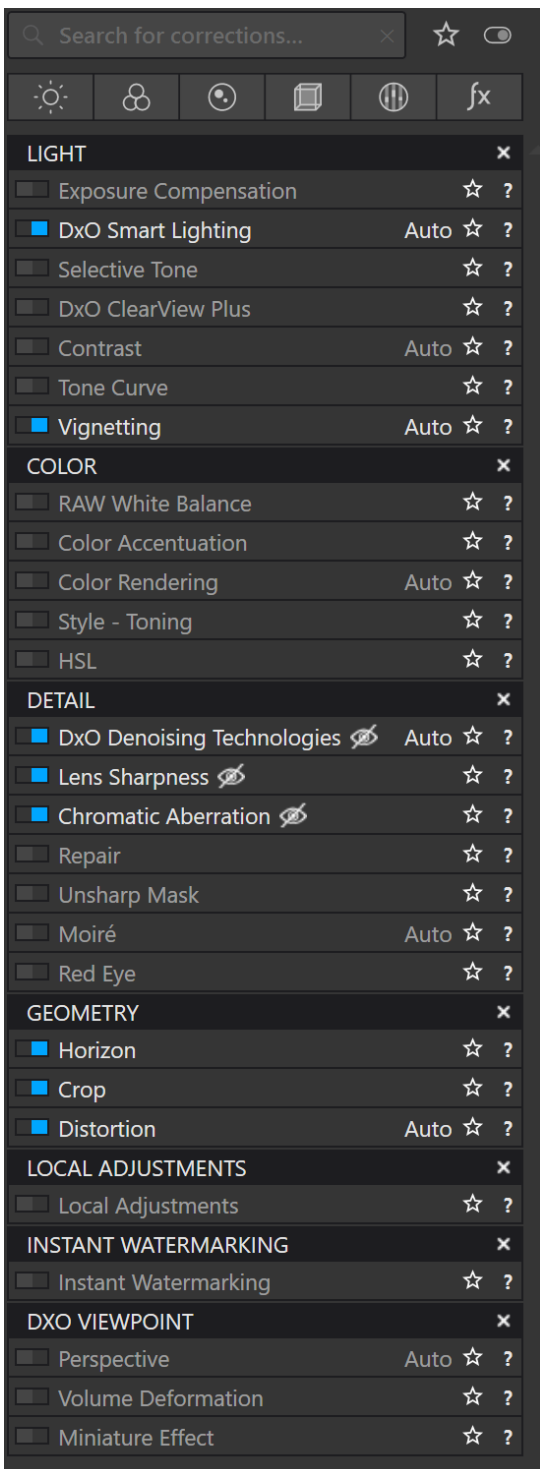
How to Create a New Edit Preset for Using DeepPRIME With Lightroom

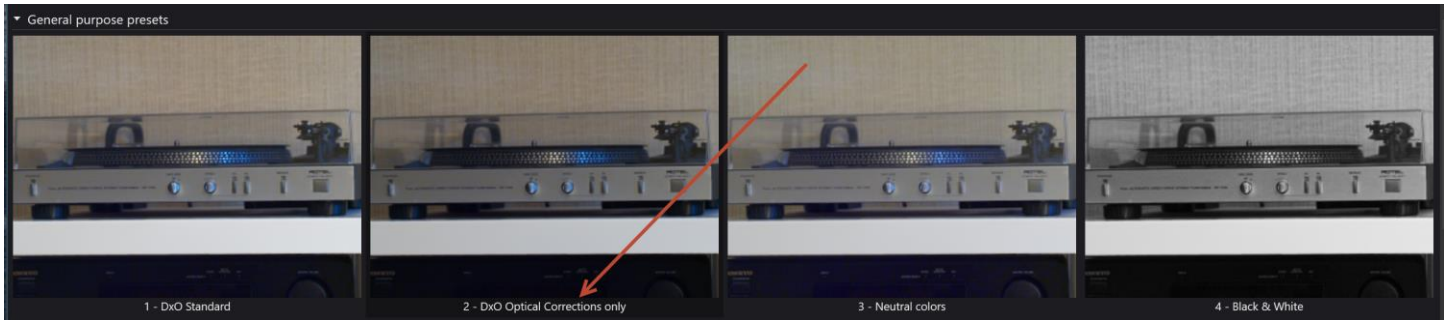1. Select Edit Preset number 2: DxO Optical Corrections only. This activates 4 tools: Chromatic Aberration, Distortion, Lens Sharpness, and Vignetting. These tools are highly recommended for all image files. These tools are based on custom lens profiles that are created by DxO for most combinations of camera and lens.

2. Activate four more tools: Crop (choose Manual and Unconstrained), DxO Denoising Technologies (choose DeepPrime), DxO Smart Lighting (just use the default automatic settings), and Horizon (choose Manual).
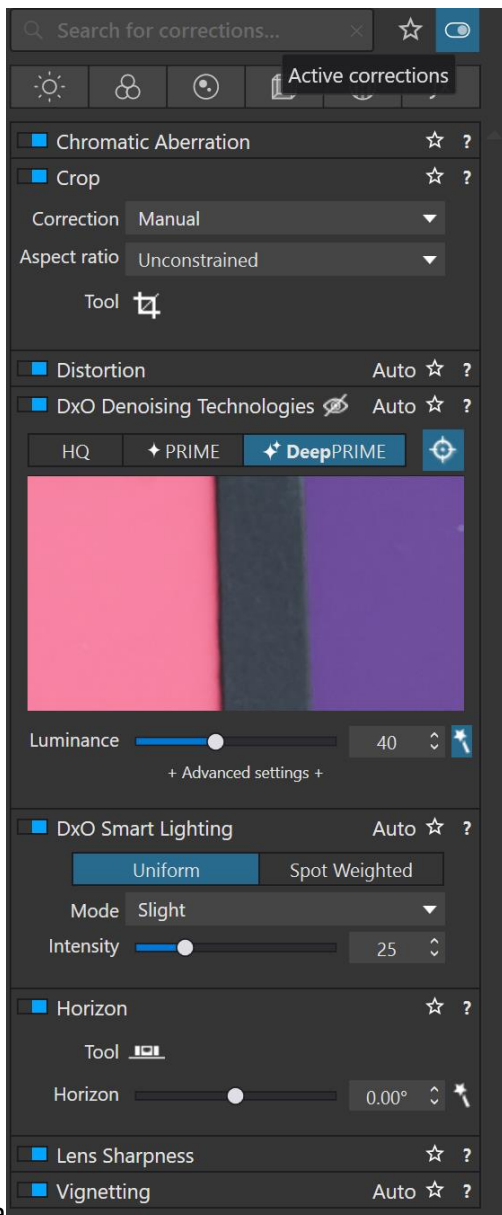
fa

3. The DxO Denoising Technologies tool in the Detail panel has three options. Select DeepPrime.

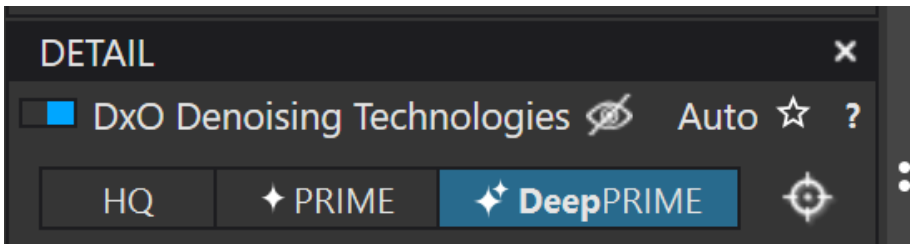- The HQ (High Quality) option works with all file types and is the fastest option. The image window updates dynamically when you select this option.
- The Prime option works with raw files only. It was replaced by DeepPRIME. It is available only in the Photolab Elite version. This was my go-to noise reduction tool (the best on the market in my opinion) for many years before DeepPRIME arrived in version 4 of Photolab. There is no live update of the image window. You can see the effect in the thumbnail image in the tool panel.
- The DeepPRIME option works with raw files only. It is available only in the Photolab Elite version. There is no live update of the image window. You can see the effect in the thumbnail image in the tool panel. It can take a long time to export images. The noise reduction is applied to your image only when you export.

4. Create a new edit preset. <u>You must have one and only one image selected to create a preset based on its current settings.</u>
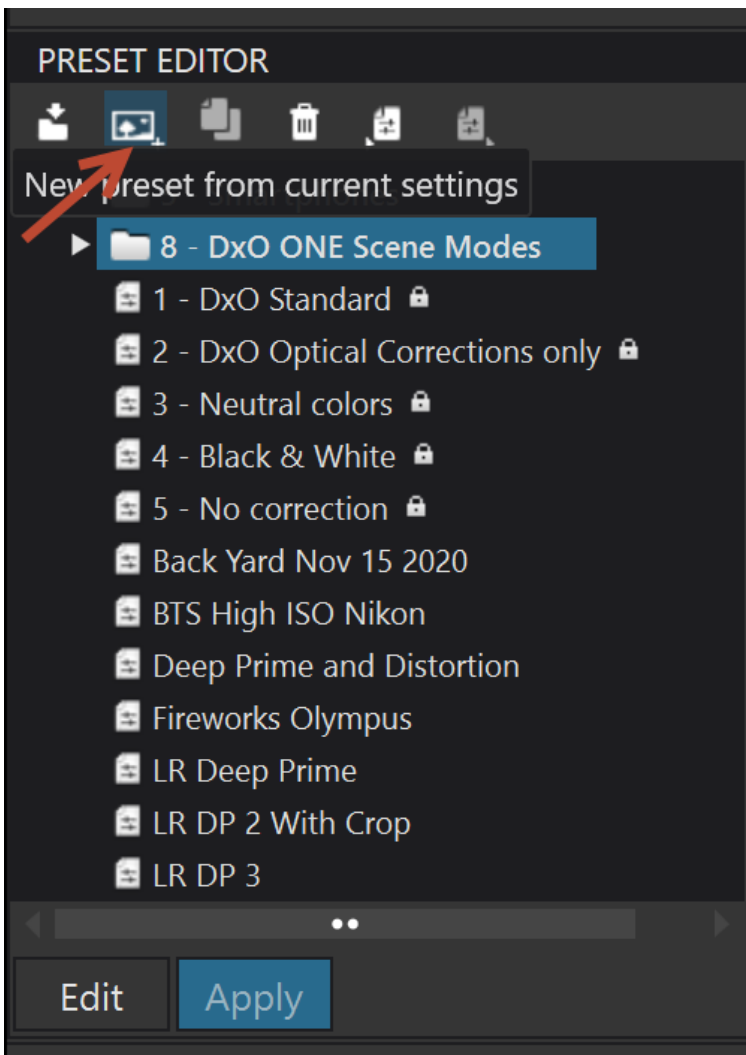
5. Give your new preset a suitable name, something like DP for LR (DeepPRIME for Lightroom) and save it. It will be automatically saved in your Photolab Presets folder (see the screen shot below).
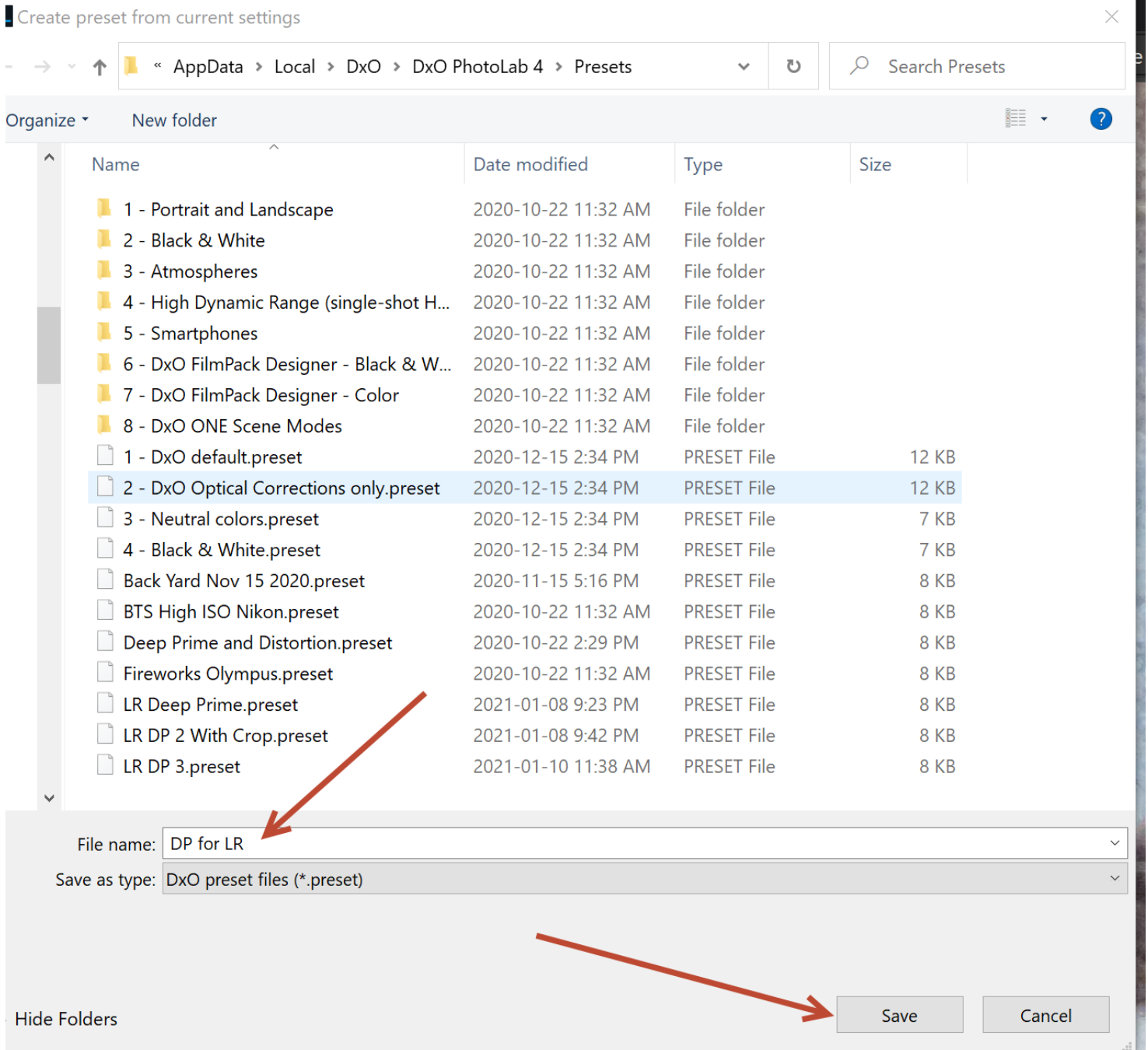
7. Make this new preset the default edit (correction) preset for RAW Images. Go to Edit → Preferences and select your new preset for raw files. From now on, any raw files that are opened in Photolab will have this preset.
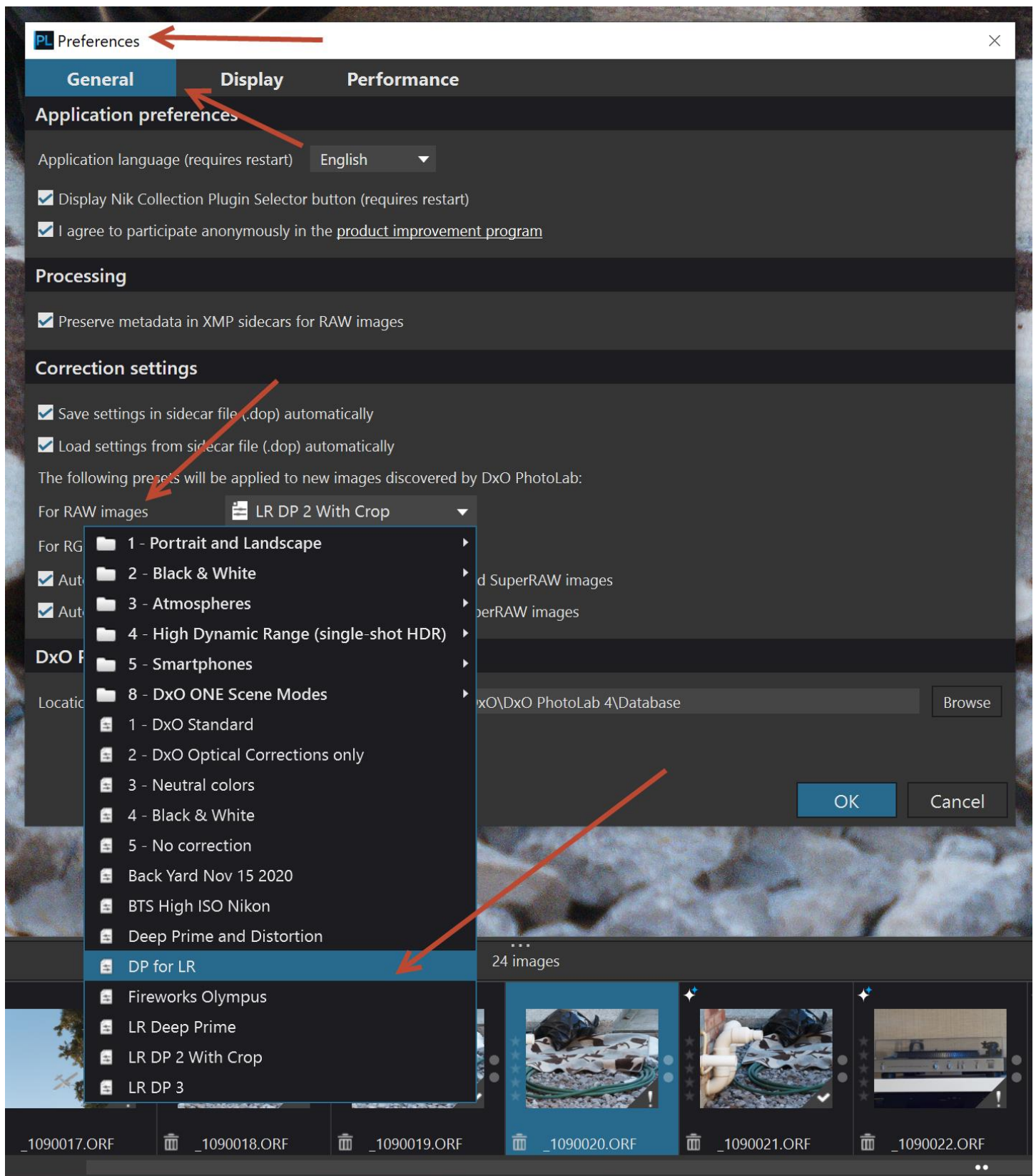
8. You can export your edit preset if you want to share it with others.

How to Create an Export Preset for Use with Lightroom

1) On the Export to disk – Options panel, enter the following options.
   a) Action: Export as DNG (all corrections applied). . NOTE: DNG is used instead of TIFF because your DCP profiles from your Color Checker Passport can be applied in Lightroom to DNG files but not to TIFF files.
   b) Destination: Custom folder
   c) Path: enter some subfolder name like "DxO for LR" or something like that.
   d) Suffix enter some file name suffix like "DXO_LR" or something like that.
2) Click on the Add new option button to create the new export preset. Give the new export preset a meaningful name like "DNG DP for LR" or something like that.
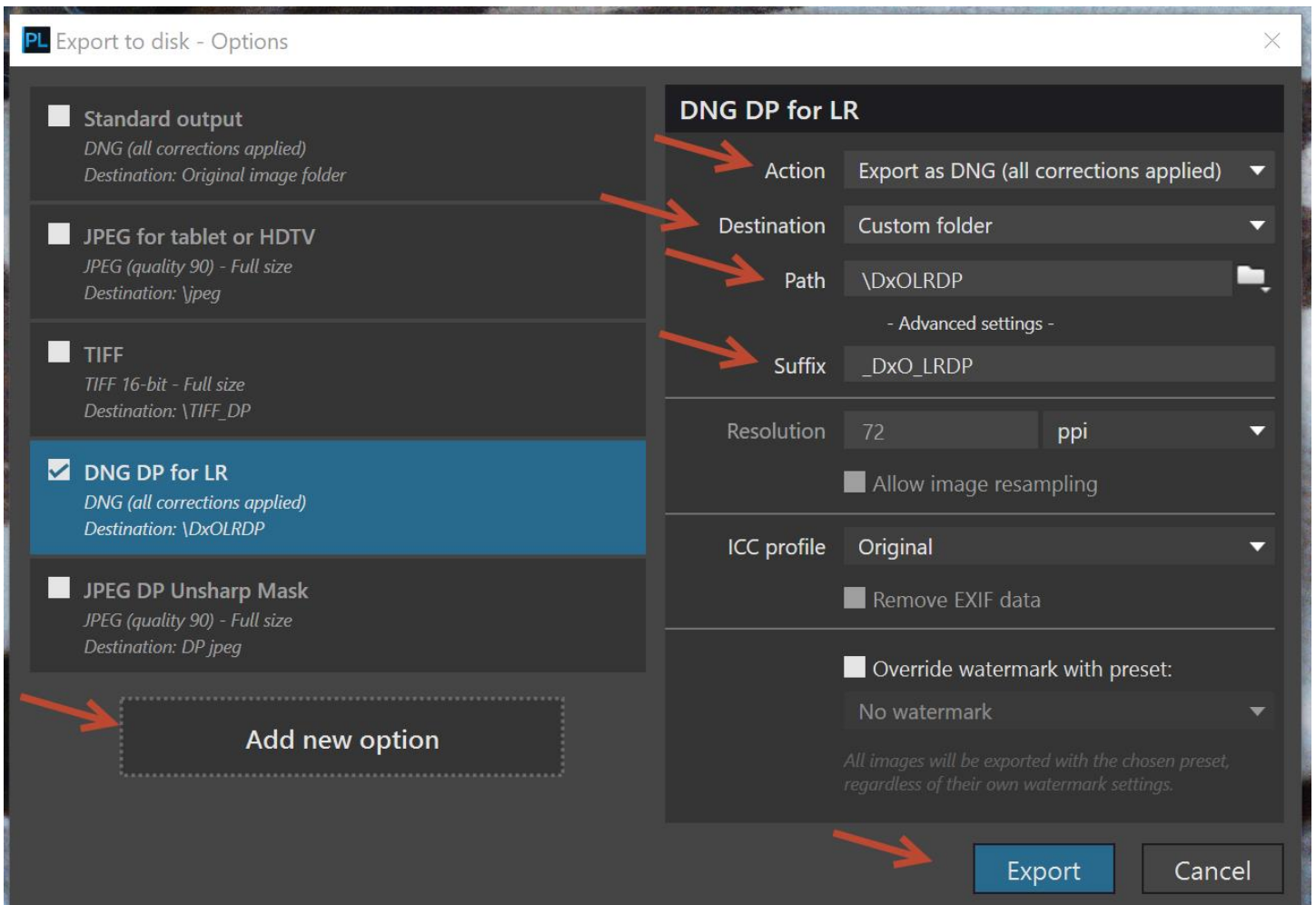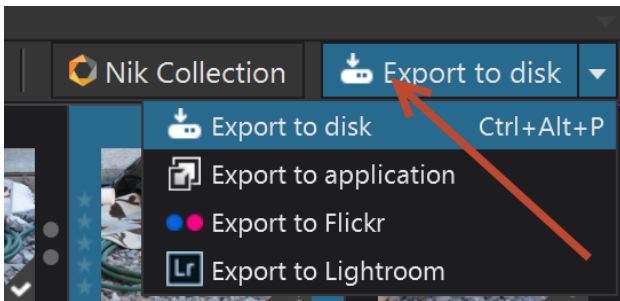
Workflow with DxO Photolab 4 and Lightroom

1. Copy your raw files from your camera to a new folder that has no subfolders.
2. Make sure that the edit preset that you created is the default edit preset for raw files in Photolab.
3. Right-click on any image in the folder. Select Open in DxO Photolab 4.
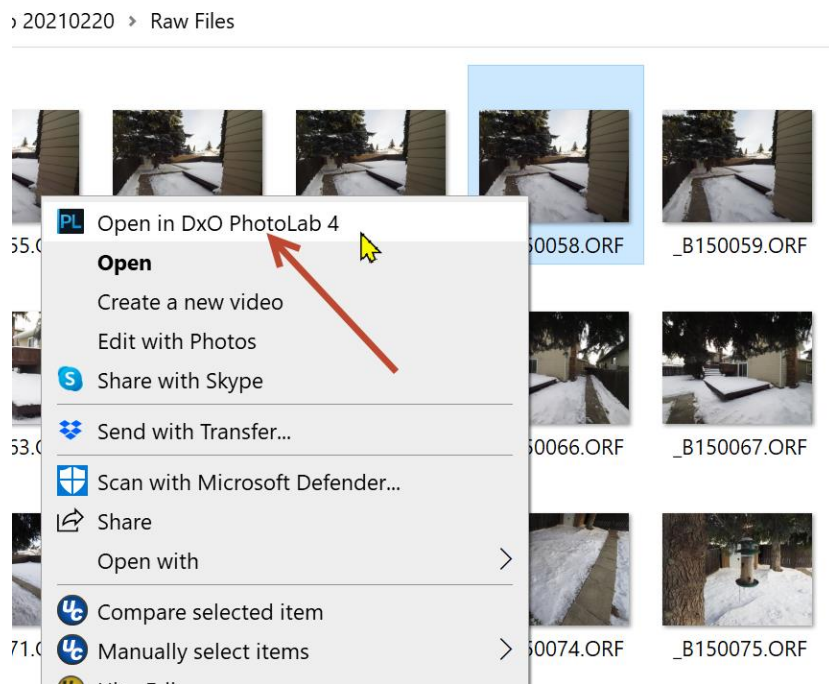
4. Photolab 4 will open in the PhotoLibrary tab with the image you selected highlighted.
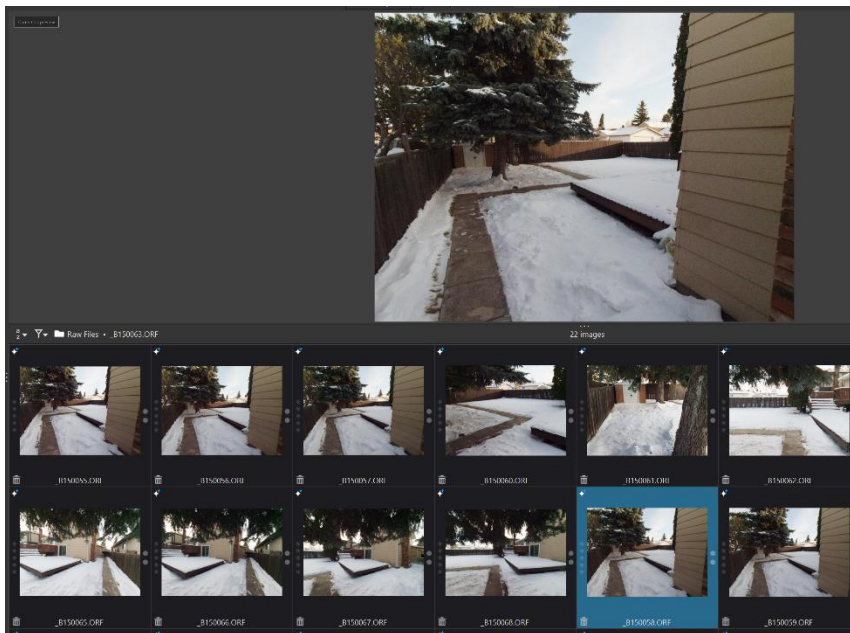
5. Select all of the images in the folder (CTRL-A).
6. Export all of the images using the DNG export preset that you created. This could take a long time.
7. Import the exported DNG files into Lightroom and perform your usual edits. Normally you would turn off Noise Reduction, Lens Corrections, and Sharpening in Lightroom. The noise reduction and lens corrections have already been applied in Photolab. NOTE: you can use Sharpening in Lightroom if you want to have some special effect on the image.
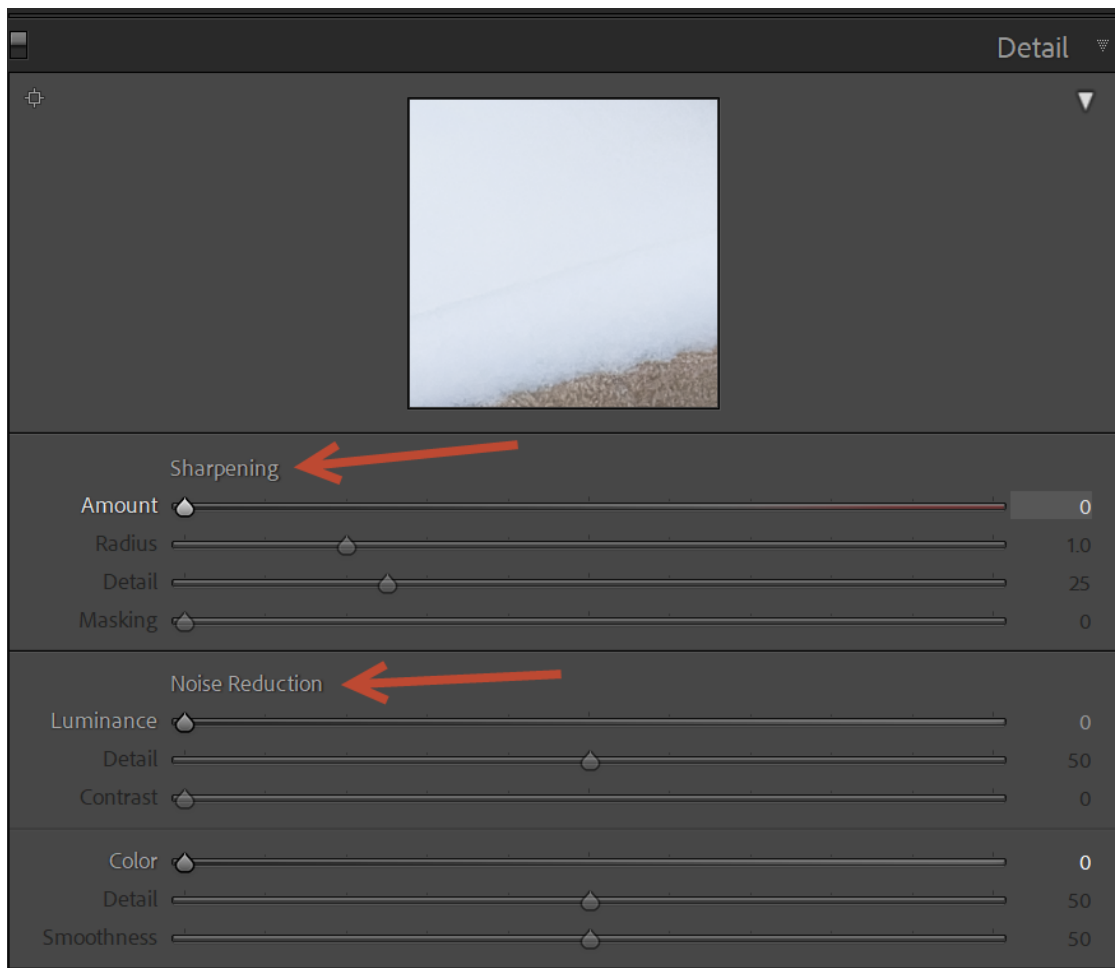
8. Export your files in Lightroom. These are normally jpeg files. Apply your usual output sharpening in Lightroom, such as Screen Standard or whatever you want to use.
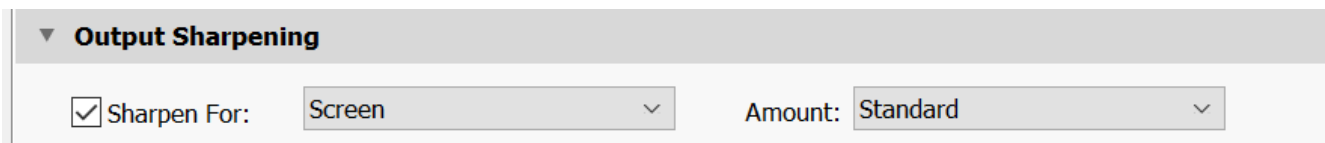
9. If you don't want to export all of the raw images in the folder (refer to step 1 above for the folder) as DNG files for Lightroom, you can assign star ratings (0 to 5) to select the images that you want to export. Before you export the images, select only the images that have the star ratings that you want to use in Lightroom.
    a. NOTE: the star ratings that you assign in Photolab will be available in Lightroom since they are part of the EXIF data in the DNG files. Any keywords that you assign in Photolab will also be available in Lightroom, also as part of the EXIF data.
    b. NOTE: the pick flags are not available in lightroom since they are not part of the EXIF data.

Nik Collection

If you purchase the Nik Collection, you can use all of the products in the collection from within Photolab. The price is $79 USD for the Nik upgrade or $149 USD for your initial version.
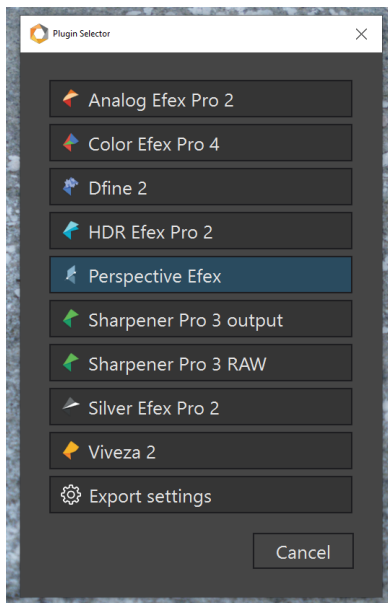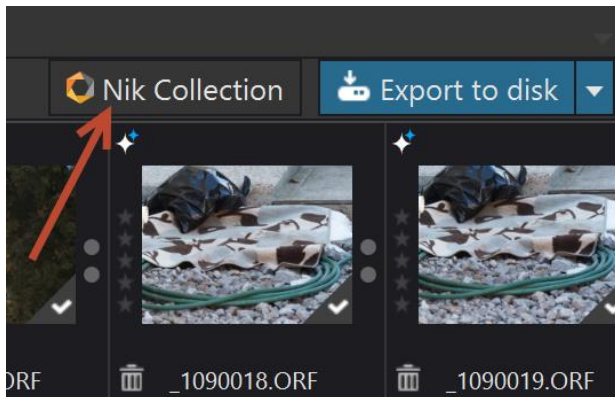
https://nikcollection.dxo.com/

Nik Viewpoint

You can purchase the Viewpoint add-on for $79 USD.

https://www.dxo.com/dxo-viewpoint/

How to select your ColorChecker DCP profile in Photolab.

C:\Users\barry\AppData\Roaming\Adobe\CameraRaw\CameraProfiles\EM1mIII 25600 ISO 20201116.dcp
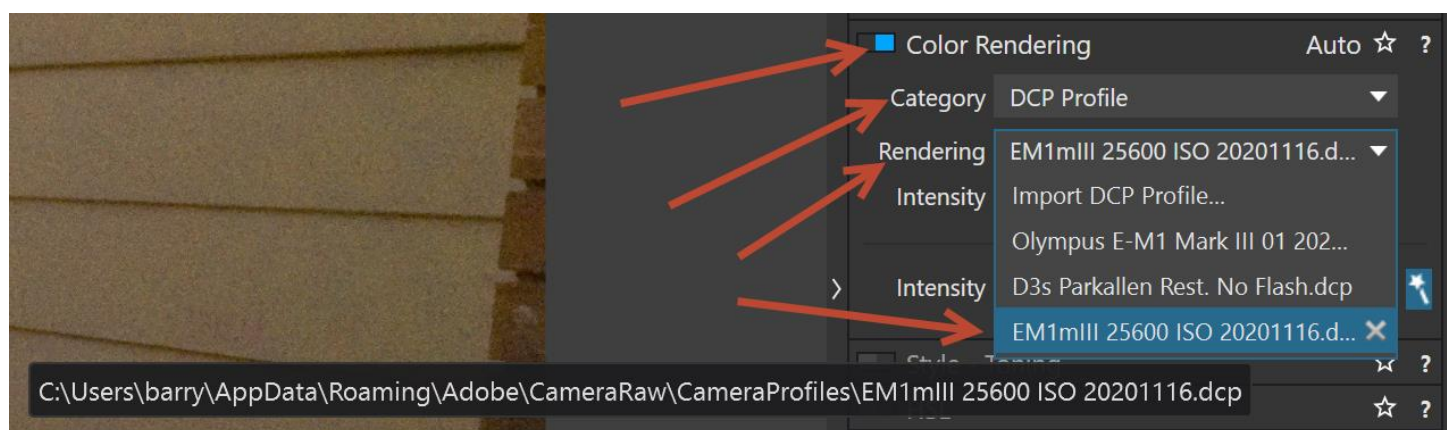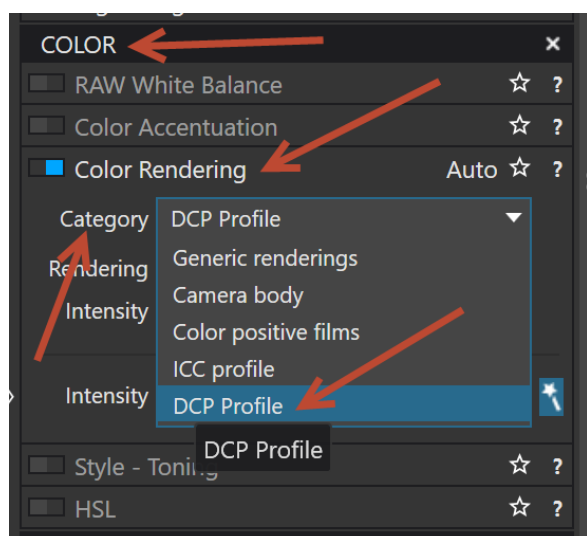
> Barry Headrick > AppData > Roaming > Adobe > CameraRaw > CameraProfiles

New folder

Name	Date	Type
Nikon 1 V2.dcp	2021-01-06 8:35 PM	DCP File
V2 Kitchen 20201212 Flash No Corr.dcp	2020-12-12 2:23 PM	DCP File
V2 Kitchen 20201212 No Flash No Corr.dcp	2020-12-12 2:15 PM	DCP File
V2 Kitchen 20201212 No Flash.dcp	2020-12-12 2:08 PM	DCP File
E-M1 III 2500 20201209.dcp	2020-12-09 4:33 PM	DCP File
E-M1 III 8000 20201209.dcp	2020-12-09 4:28 PM	DCP File
Living Room High ISO Incandescent.dcp	2020-11-22 8:04 PM	DCP File
Parkallen Rest No Flash Nov 20.dcp	2020-11-22 3:15 PM	DCP File
D3s Parkallen Rest. No Flash.dcp	2020-11-22 2:51 PM	DCP File
Olympus E-M1 Mark III Is.dcp	2020-11-16 10:52 PM	DCP File
Olympus E-M1 Mark III 25600 ISO DNG created by DxO....	2020-11-16 10:46 PM	DCP File
Olympus E-M1 Mark III 11 2500 ISO 20201116.dcp	2020-11-16 3:57 PM	DCP File
Olympus E-M1 Mark III 05 10000 ISO 20201116.dcp	2020-11-16 3:52 PM	DCP File
Olympus E-M1 Mark III 04 ISO 12800 20201116.dcp	2020-11-16 3:46 PM	DCP File
Olympus E-M1 Mark III 03 16000 ISO 2020116.dcp	2020-11-16 3:43 PM	DCP File
Olympus E-M1 Mark III 02 20000 ISO 20201116.dcp	2020-11-16 3:34 PM	DCP File
Olympus E-M1 Mark III 01 20201116.dcp	2020-11-16 3:30 PM	DCP File
EM1mIII 25600 ISO 20201116.dcp	2020-11-16 3:11 PM	DCP File

You cannot create a DCP profile with Photolab but you can export a DNG file of your ColorChecker passport image and process it in the stand-alone version of the colorchecker app. See the screen shot below. When you open Lightroom, the new DCP profile will already be there for you to use with your new DNG images from Photolab. If you use the Color Checker plug-in in Lightroom to create your DCP profile, you then have to close and re-open Lightroom before you can use the new DCP profile.

The instructions for the three screen shots on the previous page are as follows. I normally include the instructions with the screen shots but this would make the screenshots smaller or the handout one page longer so the instructions are on this page instead of on the page with the screenshots.

1. Open the Color Rendering tool in the Color palette.
2. Select DCP profile in the Category drop-down-list.
3. If you have not already imported your DCP profile, click on Import DCP Profile in the Rendering drop-down list. This will display a list of all the existing DCP profiles in your CameraProfiles folder on your computer. Select the profile that you want to import. Now this profile will appear in your list of imported DCP profiles.
4. The profiles that you have already imported will appear in the Rendering drop-down list. Select the DCP profile that you want to apply to your image.

I did some experimenting with the DCP profiles. I applied the profile in Photolab and then I opened the DNG file in Lightroom with no DCP profile applied. Then I exported another DNG file without the DCP profile applied, opened it in Lightroom, and applied the DCP profile in Lightroom. Based on my visual inspection on my calibrated 4k monitor, there was no visible difference in colour between the two images. The workflow is faster if you export your DNG files from Photolab without a DCP profile, create the DCP profile in the stand-alone ColorChecker app (see the screen shot below), then open Lightroom and apply this new DNG profile to all of you imported images. Note that Lightroom must be closed when you create the new DCP profile, or you will have to close and re-open Lightroom for the new DCP profile to be available.
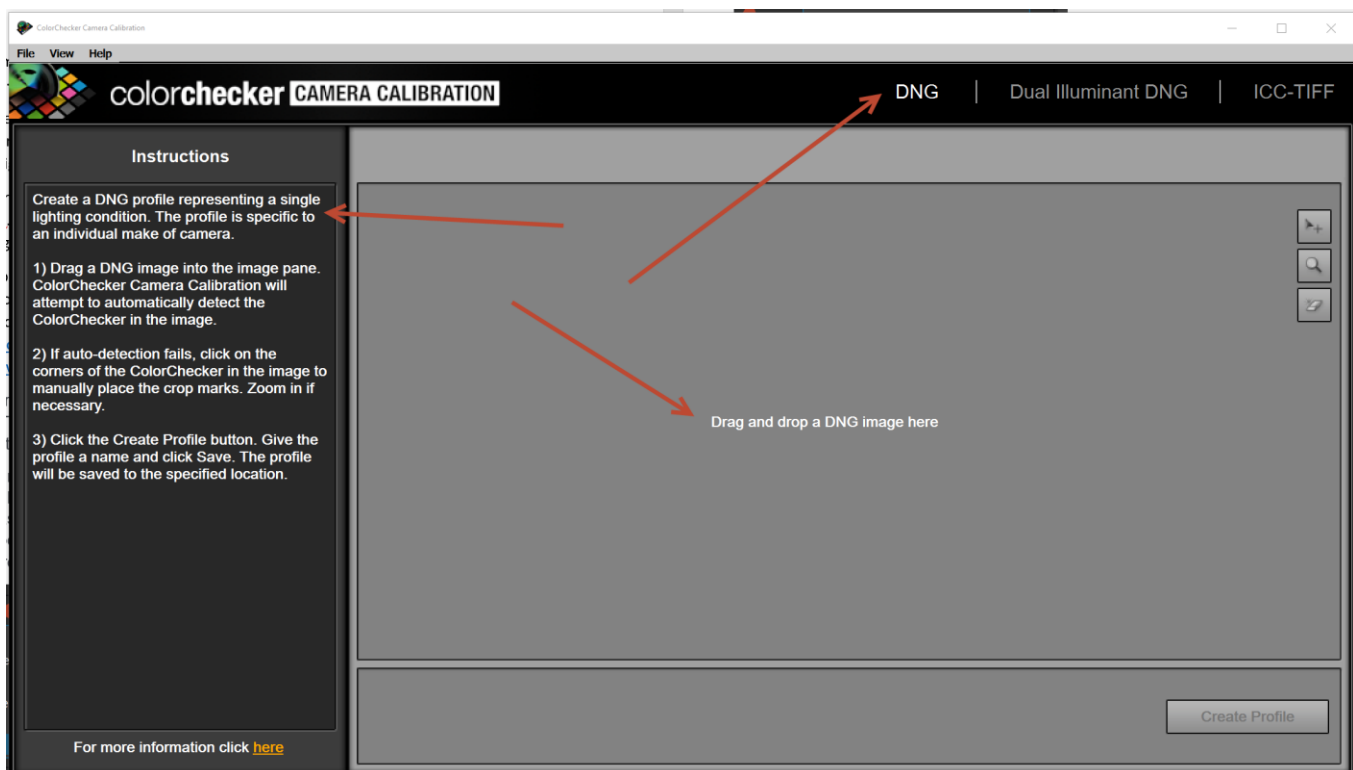
The Lens Sharpness Tool Explained (copied from the DxO User Guide)

DxO PhotoLab's exclusive DxO Lens Sharpness tool is one of its major strengths. Lens sharpness is an optical aberration which results in a point being transformed by the lens into a small blurred circle. (This should not be confused with out-of-focus or motion blur, which DxO PhotoLab does not correct.) DxO Optics Modules have been created by measuring the amount of blur for every point in the image area for each supported camera body and lens combination. By combining the shooting parameters saved in the EXIF metadata (aperture, focal length, etc.) and the information provided by the Optics Module, DxO PhotoLab can apply corrections that are tailored to each pixel in the image. These corrections are not uniform, given that lenses are sharper in the center, which means that the pixels closer to the edges of the image will be subjected to a stronger correction than those near the center.

> The Lens Sharpness palette is visible only for images for which the appropriate DxO Optics Module is loaded. If no module is available, you should use the Edge offset slider in the **Unsharp Mask** palette to manually adjust the sharpness in image corners.

Global: DxO has defined 0 as the default setting for the Global slider, whose range goes from –3 to +3. The negative settings (from – 3 to 0) do not diminish the image sharpness, but result in more subtle corrections; in any case, the corrected image will be at least as sharp as the original. Even set at 0, the sharpness is greater than that of the original. To diminish the sharpness (as with a portrait, for example), set the Global slider to the left, and to increase the sharpness, go to the right. The Lens Sharpness tool is what is known as an "intelligent" correction — one that is able to confine its effects to the noisy parts of the image, or when a photo was taken at high ISO.

> It is important not to increase the sharpness of a shot that has already been sharpened by the camera, as is the case for JPEG images. So if you intend to post-process your images, you should shoot without any in-camera sharpening.

Details: The Details slider is set at 50 by default and is used to enhance the micro-contrast of fine details in the image. This subtle correction can be very worthwhile for use in landscapes, but should be reduced to a minimum for portraits, where a certain degree of sharpness is needed to hide (for example) skin blemishes.

> Unlike the Unsharp Mask tool, enhancing details with the DxO Lens Sharpness tool does not create white edges or halos around the sharpened areas.

Bokeh: The Bokeh slider reduces artifacts in the bokeh (i.e., the out-of-focus area in your photos, mostly in the background) that can appear when using the sharpening tools. However, reducing those artifacts will slightly reduce the sharpness of the in-focus areas of your image.

Lens Sharpness and Unsharp Mask

We recommend that you perform as much of your sharpening as possible using the DxO Lens Sharpness correction tool before using the Unsharp Mask. Of course, for images where the appropriate DxO Optics Module is not installed, you will have to use the Unsharp Mask for all manual sharpening tasks.