

Working with DxO Optics Pro and Adobe® Lightroom™



Content

| | | |
|------|---|----|
| I. | Introduction | 3 |
| II. | DxO Optics Pro overview | 4 |
| III. | Adobe® Lightroom™ overview | 5 |
| IV. | DxO Optics Pro & Adobe® Lightroom™ Workflow | 6 |
| 1. | Scenario 1 | 7 |
| a. | Setting up DxO Optics Pro | 7 |
| b. | Setting up Adobe® Lightroom™ | 7 |
| c. | Processing an image batch | 8 |
| • | Step 1: Open and process images with DxO Optics Pro | 8 |
| • | Step 2: Export images to Adobe® Lightroom™ | 9 |
| 2. | Scenario 2 | 12 |
| a. | Setting up Adobe® Lightroom™ | 12 |
| • | Open the Edit/Preference menu | 12 |
| b. | Setting up DxO Optics Pro | 13 |
| c. | Processing an image batch | 13 |
| • | Step 1: How to send images from Adobe® Lightroom™ to the DxO Optics Pro plug-in? | 13 |
| • | Step 2: Does it make any difference whether you edit RAW or JPEG images? .. | 15 |
| • | Step 3: Image transfer | 19 |
| • | Step 4: Receiving images in DxO Optics Pro | 20 |
| • | Step 5: Sending images back in Lightroom™ | 22 |
| d. | Summary chart of options | 23 |

I. Introduction

Recognizing that Adobe® Lightroom™ is rapidly becoming a popular, general use, image workflow software program for professional and advanced amateur photographers, DxO Labs has recently made significant efforts to set up bridges and links between DxO Optics Pro and Adobe® Lightroom™ .

As a result of these efforts, DxO Optics Pro v4.5 is the first major photographic software application to start building a common workflow with Adobe® Lightroom™ . We've long been pioneers in establishing compatibility with Adobe technologies and this is no exception. We see Adobe Photoshop Lightroom as an important platform for photographers and our goal will be to enrich that platform and provide better value for you – the photographer.

As with all pioneering efforts we know that we are just at the beginning of this adventure. And yes there are still things that will have to be worked on from various angles until we reach a fully integrated experience. We hope you join us on this journey and take the time to provide us your feedback, your questions, your suggestions. That's how we'll all move forward together.

This document refers to DxO Optics Pro v4.5 (Starter, Standard and Elite versions), and to Adobe® Lightroom™ v1.0 or v1.1

At the time of writing this document, version 1.1 of Adobe Lightroom was just released. We will provide extra information on our website Learning Center once we have had time to study in more details and document any changes or modifications significant in the context of the DxO Optics Pro – Adobe Lightroom workflow.

Determining your best workflow scenario depends on many factors, such as the number of images you want to process, whether you will want to make selections from all of your images prior to doing any processing or process all of the images you have, how much time you have available for your post-production work, the speed of your computer system (also time related), and the kinds of results you want for your images.

The following sections of this document are not designed to provide you with all possible answers, but instead give you ideas that will help you tailor a unique, post-production workflow that is right for you.

Digital photography brings a unique opportunity to all modern photographers. With traditional film photography, we were limited to controlling the picture taking process. Unless we had the time, money, equipment, and skills, our post-production abilities were limited to taking our rolls of film to a local developer or lab. There, we could only tell the developer what we wanted and our ability to interact in the image-output process was both time consuming and limited.

But with today's ever improving digital cameras, computers, printers, and software, we now have the opportunity to control the entire photographic process, end-to-end. Never have photographers had such total control over all aspects of the photographic process as they do today.

However, with this control comes a greater degree of complexity. Most of us can easily point-and-shoot and store an image on our camera cards or discs. But, what comes next? Here is where a good post-production workflow can be extremely effective in allowing us to achieve the results we want for our images in the least amount of time.

The sections below will continually strive to help provide you with these answers. Is there one workflow that is better than another? Yes - the workflow that meets your needs.

In some cases, the connection between Adobe® Lightroom™ and DxO Optics Pro may not behave exactly as you would expect – this is due to the fact that in order to provide a tight level of integration between the products we have had to use some Lightroom functions in a way they were not initially designed for. As Adobe Lightroom grows and develops and in particular if an official third-party development interface is provided by Adobe, we will be able to build on these initial foundations. Please make sure you carefully read the instructions associated with each section of this document.

II. DxO Optics Pro overview

DxO Optics Pro is one of the premier photo correction and adjustment programs on the market today.

Unlike most software available to photographers, DxO Optics Pro takes an entirely different view at image correction by proactively addressing the optical problems that exist in all digital cameras and lenses.

DxO Optics Pro provides unique capabilities to automatically correct and enhance images from digital cameras. In particular, DxO Optics Pro relies on extensive measurements and calibration of supported cameras and lenses to be able to provide superior results with no or minimal user intervention.

Automatic correction of distortion is a good example of DxO Optics Pro's capabilities. Thanks to the calibration process, DxO Optics Pro can automatically correct a set of images each exhibiting different distortion problems (taken at various focal lengths or with different lenses for example). There is no need to manually intervene on each image and the software will just as easily correct a very complicated distortion as a simple one.

Additional corrections applied by DxO Optics Pro are lens softness, chromatic aberration, vignetting, volume anamorphosis correction, and keystoneing. DxO Optics Pro can also do many other things. Check out www.dxo.com for a full list of DxO Optics Pro's capabilities.

III. Adobe® Lightroom™ overview

In early January, 2006, Adobe® announced a new software program designed specifically for digital photographers, Adobe® Lightroom™. Lightroom™ is primarily targeted for photographers who have a large number of images to process, or they have complicated image adjustment requirements and need to effectively control their overall post-production processes.

Both Lightroom™ and Photoshop are image manipulation tools. But where Photoshop® is a 'one-stop' application for many imaging enhancement needs, this power comes at a cost. Many people find Photoshop® difficult to learn and effectively use. Enter Lightroom™, which Adobe® has built from the ground up to be the application that binds the key steps of a good post-production workflow together. Not only do you have light table and advanced archival capabilities, but you can call two of your favourite photo editing programs from within Lightroom™ itself. This is the Lightroom functionality that we are exploiting with our first Adobe Lightroom Plug-in.

At DxO Labs, we see Adobe Lightroom as an important "platform application" for photographers. By that we mean that we see Adobe Lightroom as providing many core services and tools to photographers. We also see this platform as fostering a vibrant and dynamic ecosystem of other applications that will provide extra functionality and benefits. That's how we see DxO Optics Pro being able to contribute to the success of photographers who decide to use Adobe Lightroom in their workflow.

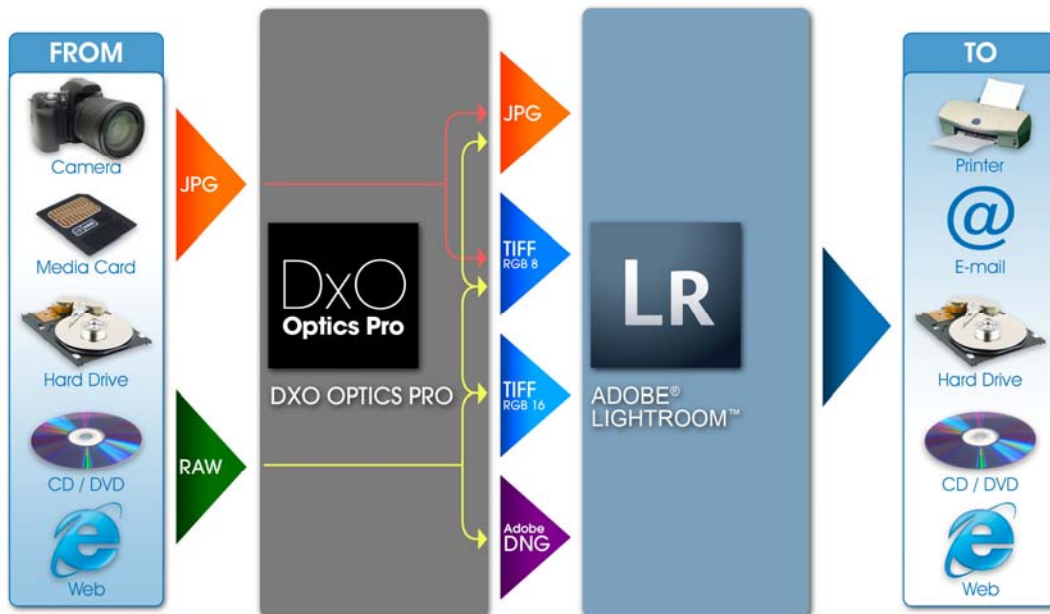
So, it clearly appears that both DxO Optics Pro and Adobe® Lightroom™ are very complementary. Adobe® Lightroom™ providing the ability to better organize and output your images and DxO Optics Pro providing the advanced corrections and adjustments that have made it an industry leader in post-production.

The following sections will explain how these two outstanding programs can work together for your benefit.

IV. DxO Optics Pro & Adobe® Lightroom™ Workflow

Two workflow scenarios will be considered in this document:

1. **Scenario 1:** Images are processed by DxO Optics Pro before being imported into Adobe® Lightroom™.



2. **Scenario 2:** Images are sent to the DxO Optics Pro plug-in from Adobe® Lightroom™, and returned to Adobe® Lightroom™ after DxO Optics Pro processing is completed.



How do you choose between both scenarios?

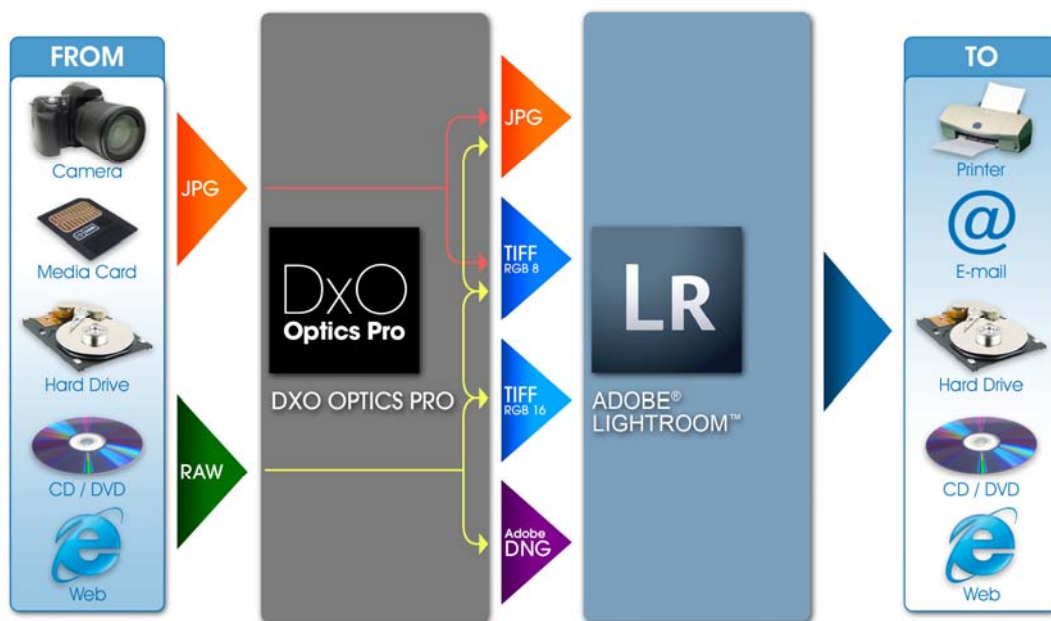
Scenario 1: One good reason to choose scenario 1 is if you want to work with the DNG picture format in Lightroom™. (If you choose scenario 2, you cannot retrieve the DNG format after processing your images in DxO Optics Pro.)

Another good reason is if you intend to batch correct large numbers of images with DxO Optics Pro. This is especially true if you have mixed RAW and JPEG files. (This is primarily due to the current limit of allowable file formats which Adobe® Lightroom™ permits to pass between itself and an external editor.) This scenario is best used when you have large numbers of images to process in a limited amount of time.

Scenario 2: This scenario is best suited for individual or the batch processing of smaller numbers of images. In this scenario, you have the opportunity to give your images greater attention to detail, specifically targeting particular problems or effects to improve each image. This scenario may take a bit more time overall but can give great results.

Now let's describe each solution in detail.

1. Scenario 1



a. Setting up DxO Optics Pro

No specific settings are required to optimally use DxO Optics Pro in this scenario. Use the settings that best work for you.

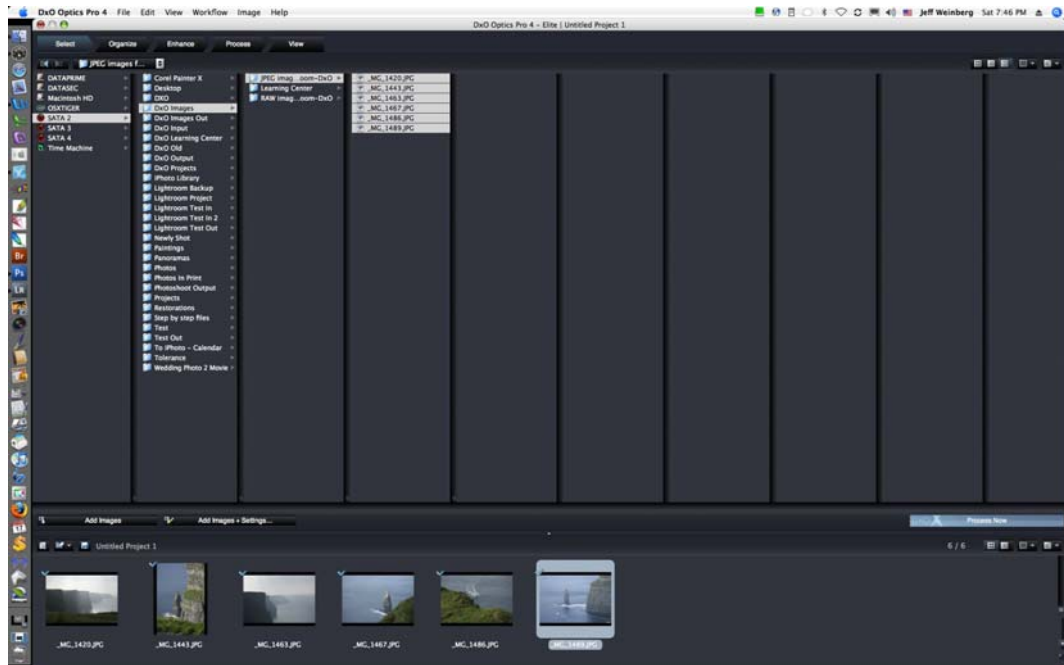
b. Setting up Adobe® Lightroom™

No specific settings are required to optimally use DxO Optics Pro in this scenario. Use the settings that best work for you.

c. Processing an image batch

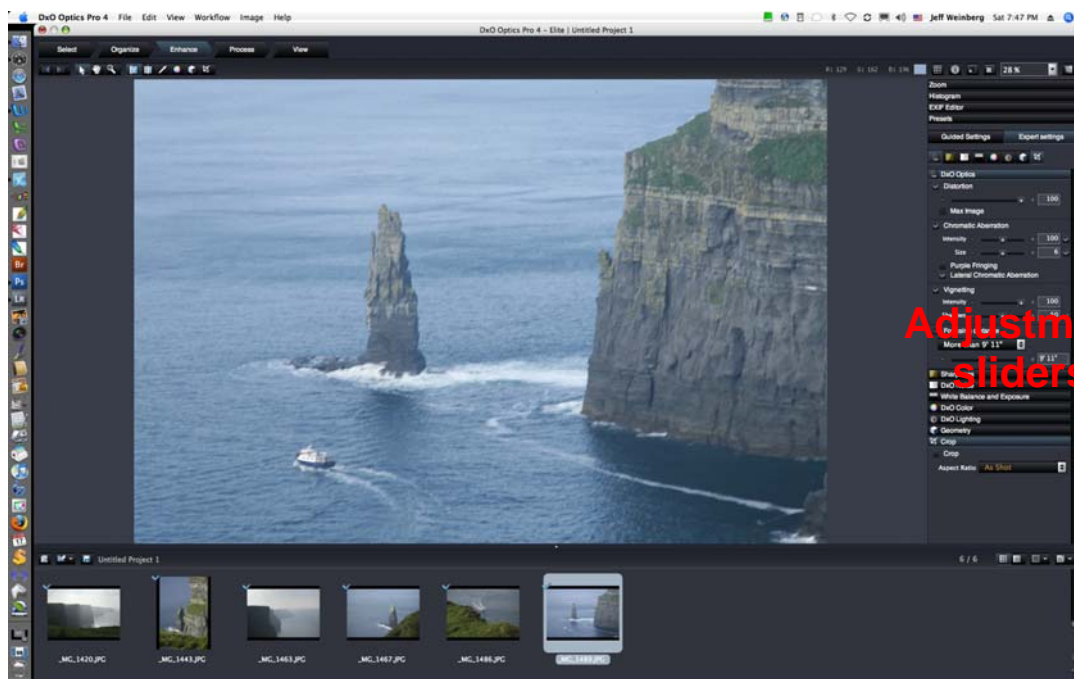
- **Step 1: Open and process images with DxO Optics Pro**

➤ *Open images in DxO Optics Pro*



1. Go to the folder where your images are kept.
2. Choose images and click the 'Add Images' button.
3. Thumbnails will appear in the lower project window.

➤ *Adjust settings in DxO Optics Pro*

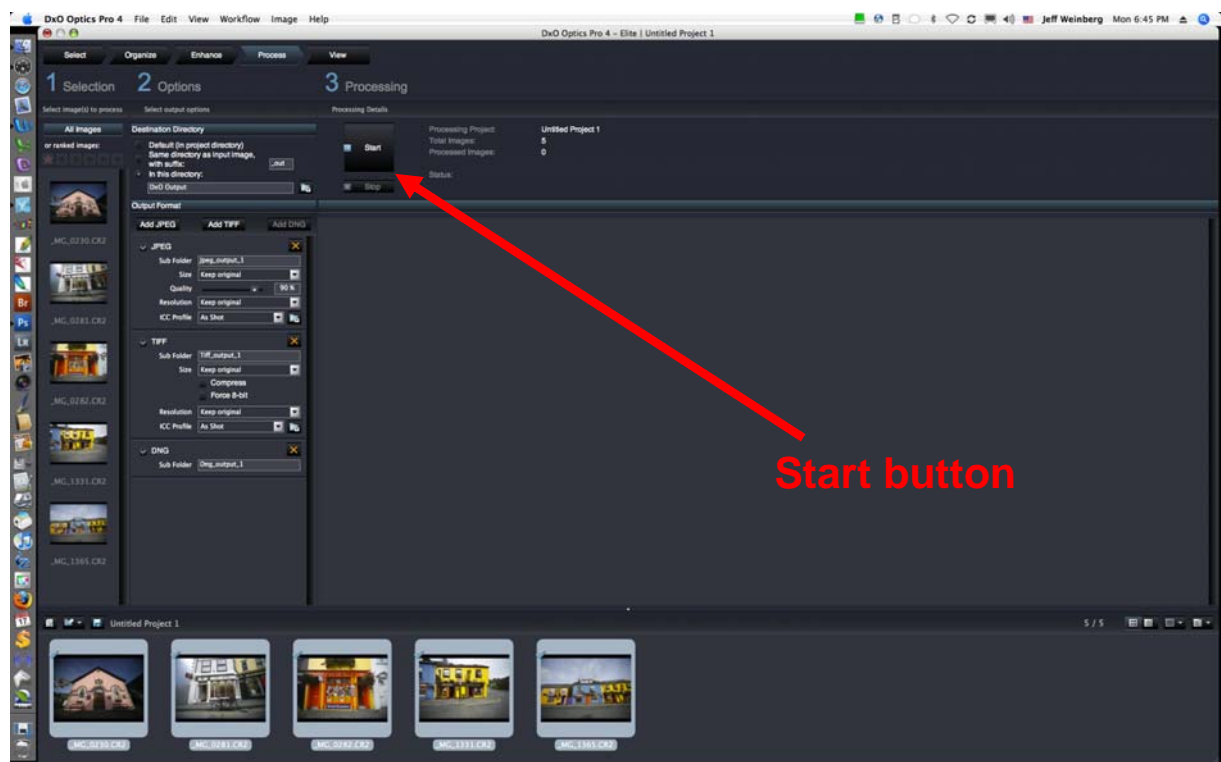


1. Adjustments to DxO Settings can be made either in the Guided or Expert modes on the Enhance tab screen. (Note: You can use Automatic mode to process your images, but you will lose the control offered by Guided and Expert modes.)
2. The key to making your adjustments to DxO settings is in the Corrections Palette, which can be found on the right side of your screen.

Hint: Please refer to the DxO Optics Pro user manual for more information about DxO Optics Pro adjustments.

➤ **Adjust output setting in DxO Optics Pro**

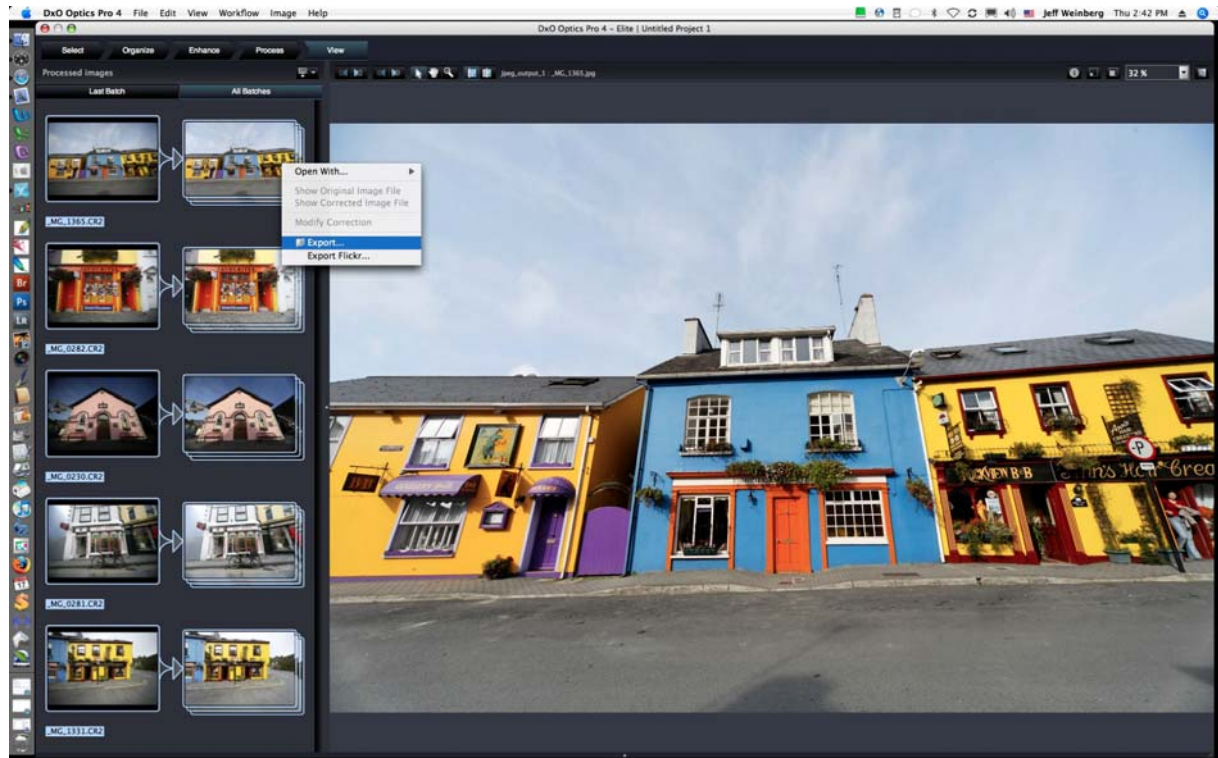
Once adjustments have been made, in the “Process tab” select where you want your corrected images to be saved, and in which format (JPEG, TIFF or DNG). (Hint: Please refer to the DxO Optics Pro user manual for more information about DxO Optics Pro output settings).



Start processing by clicking on the “Start” button.

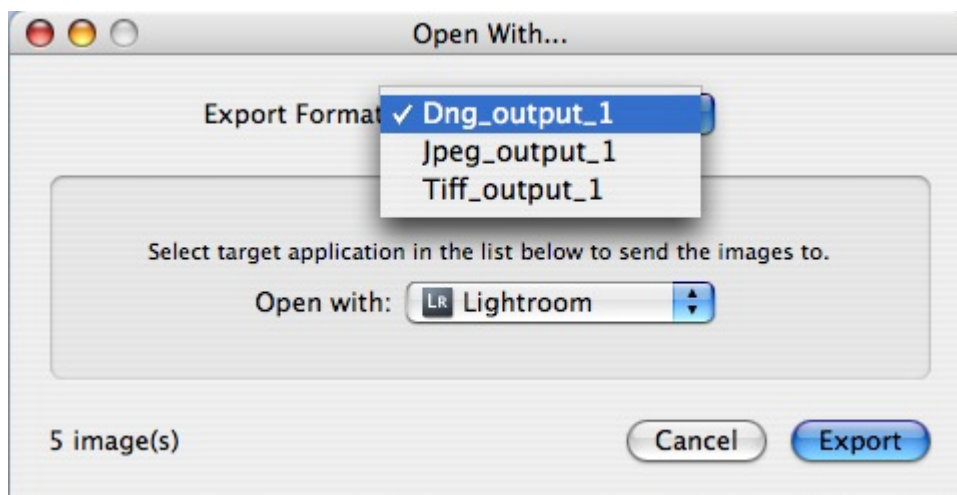
- **Step 2: Export images to Adobe® Lightroom™**

Once processing is complete, your images can be exported to Adobe® Lightroom™: Simply click on the “View” tab and select the images you want sent to Lightroom™ in the left hand panel, right-click (or control –left click on a Macintosh) on them and select “Export...”.



Next, choose an Export format for the images you want to send to Adobe® Lightroom™. This is useful in case you had instructed DxO Optics Pro to create multiple outputs. This will let DxO Optics Pro know which of the format versions you want to send to Lightroom™. Make sure 'Open with:' has Lightroom™ chosen, and click on the 'Export' button.

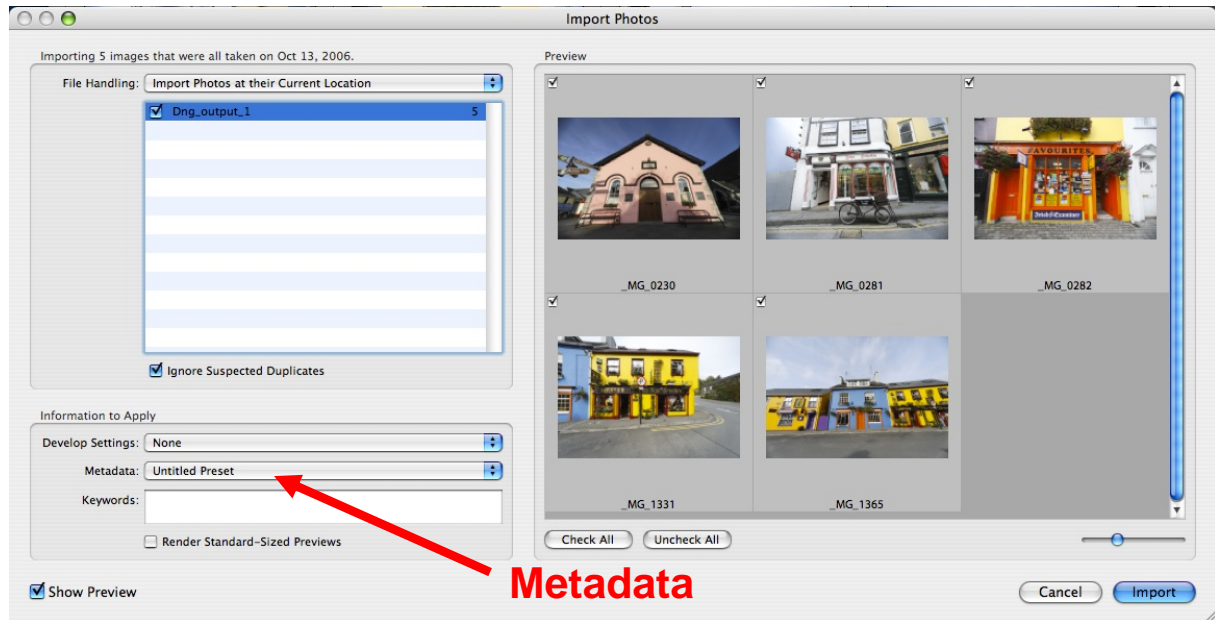
In case you are working on a Windows computer, you will have to first select the software you want to open your images with, by clicking the "Browse..." button and by browsing your hard disk.



Note: If you are reprocessing original images in DxO Optics Pro and the output images from the last processing run are already in the Lightroom™ database, you will need to remove these older DxO Optics Pro pictures from Lightroom™ before clicking on 'Export'. If the old images are left in Lightroom™, you will get an error

message from Lightroom™ after you click on 'Export', and the new images will not be exported.

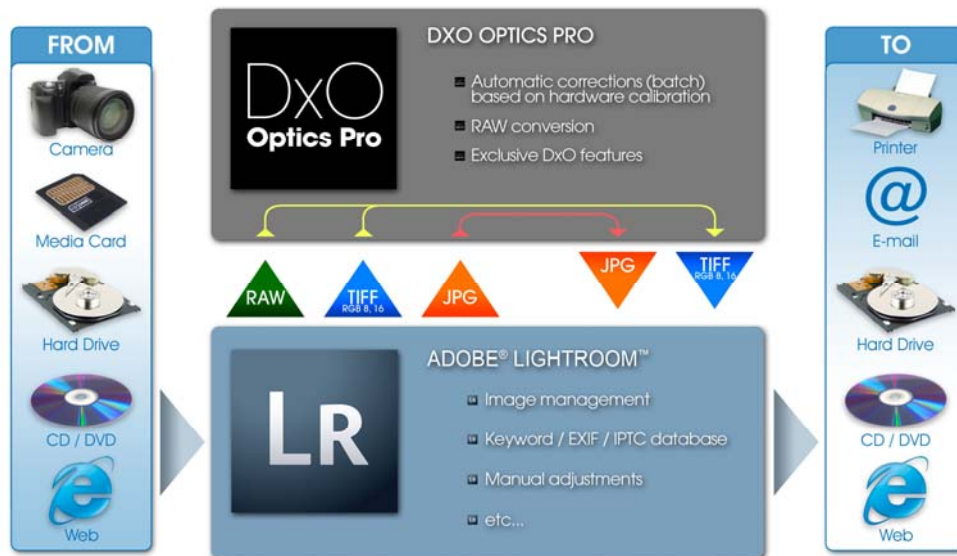
Next, Adobe® Lightroom™ will start and the Lightroom™ 'Import' window will be displayed. Note that the current location of the images is the output folder you chose for DxO Optics Pro processed images.



Set the import settings you want to apply to your images. These settings are normal Lightroom™ settings that would be used for any images imported into the program. Note that if you want to set up import metadata for Lightroom™, you may do so now and have it applied to your imported images.

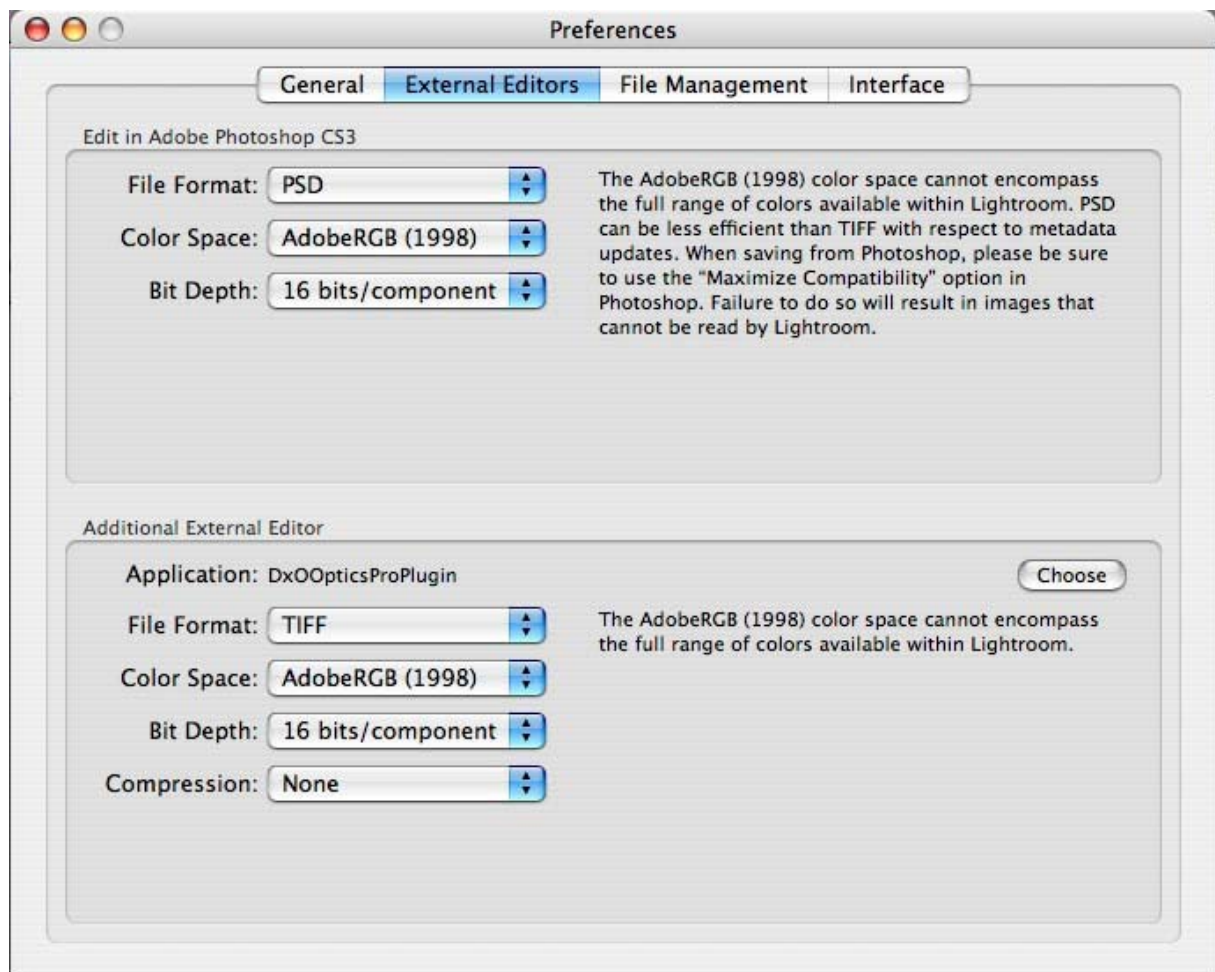
Click on the 'Import' button. Your DxO Optics Pro processed images will be imported into Adobe® Lightroom™ database, and displayed in Adobe® Lightroom™ window. Images can be further processed in Adobe® Lightroom™ if necessary.

2. Scenario 2



a. Setting up Adobe® Lightroom™

- Open the Edit/Preference menu



- Click on the “Choose” button
 1. On a Windows computer, select “DxOOpticsProPlugin.exe” as Additional External Editor. This file can be found in C:\Program Files\DxO Labs\DxO Optics Pro v4
 2. On a Mac computer, select “DxOOpticsProPlugin” as Additional External Editor. This file can be found in the Macintosh HD > Applications folder >
- File format: choose the “TIFF” file format. Note: If you choose “PSD”, images cannot be edited in DxO Optics Pro. (Note: “PSD” is a file format supported by Adobe® Photoshop® and is not supported by DxO Optics Pro.)
- Color space: AdobeRGB is recommended, but other color spaces will also work.
- Choose any of the bit depth options.
- Choose “None” or “LZW” as Compression options (The « ZIP » compression option will not work with DxO Optics Pro).
- In Adobe® Lightroom™ v1.1, a new “Edit External File Naming” section is available underneath the “Additional External Editor” section in the screen capture above. It is of the **greatest IMPORTANCE** that you don’t modify the Adobe® Lightroom™ default renaming scheme which is IMG_0002-Edit.PSD.

In case it has been modified, you should choose the “Filename – Sequence” command in the “Template” combo box.

Other types of renaming schemes may prevent the DxO Optics Pro plug-in from performing the optical and volume anamorphosis corrections.

b. Setting up DxO Optics Pro

No specific settings are required for DxO Optics Pro, though version 4.5 of DxO Optics Pro is required.

c. Processing an image batch

Please make sure that DxO Optics Pro is not already running. If it is, please close it. Otherwise Lightroom™ will be unable to send images to the DxO Optics Pro plug-in.

- **Step 1: How to send images from Adobe® Lightroom™ to the DxO Optics Pro plug-in?**

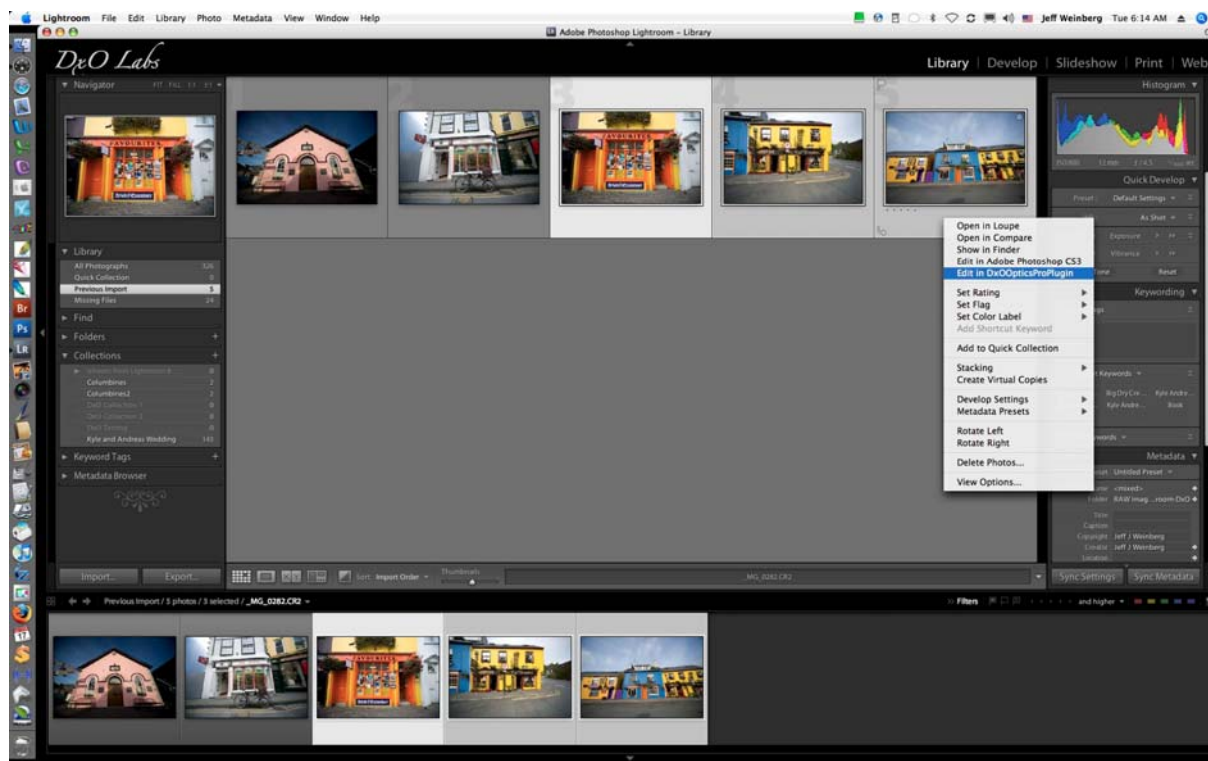
There are two ways to send images from Lightroom™ to DxO Optics Pro plug-in.

- ***Right-click on an image or on a set of images***

On a PC, simply right-click on the image(s) you want to process, and select “Edit with DxOOpticsProPlugin”.

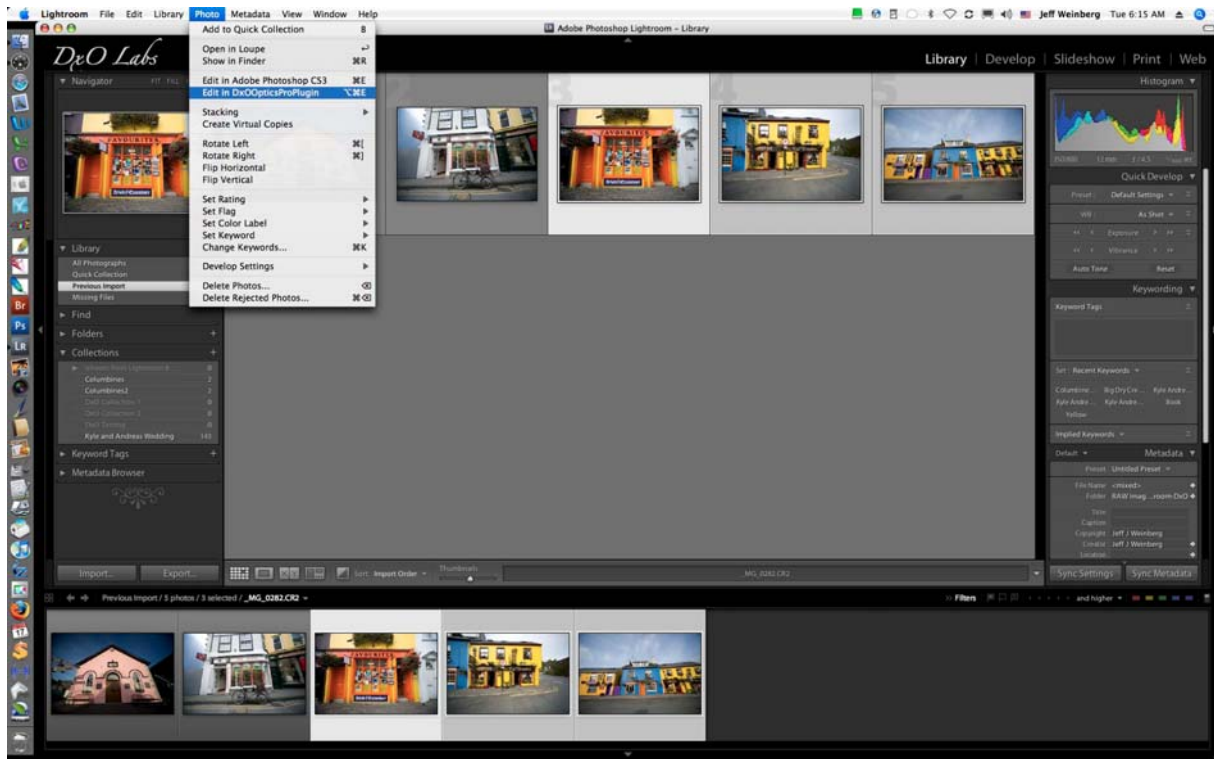
Working with DxO Optics Pro and Adobe® Lightroom™ - revB

On a Mac, there are two ways to get the selection menu. Right-click the image or Control-left click the image, and select “Edit with DxOOpticsProPlugin”. Either way will work.



➤ **Go to the “Photo” menu**

This option requires going up to the “Photo” item on the top menu bar and then clicking on “Edit with DxOOpticsProPlugin”.



- **Step 2: Does it make any difference whether you edit RAW or JPEG images?**

Yes. At this stage, working on RAW images or on JPEG images will make a difference. Here is why.

IMPORTANT: It is highly recommended to edit image in the DxO Optics Pro plug-in (from Lightroom™) before performing any image adjustments in Lightroom™. Performing corrections in Lightroom™ before editing images in the DxO Optics Pro plug-in will result in either only partial corrections in the DxO Optics Pro plug-in (for JPEG images) or ignoring any adjustments made in Lightroom™ (for RAW images). There is however a partial workaround to this situation for RAW images (see below).

In all cases, any keywords or image metadata (star ranking, labelling for example) that were entered into your images in Lightroom™ prior to editing the images in the DxO Optics Pro plug-in will be retrieved when images come back from the DxO Optics Pro plug-in.

➤ **Batch with RAW Images only**

Warning: according to your version of Adobe® Lightroom™ (v1.0 or v1.1), Edit options are displayed in a different order.

As you can see in the image below, the “*Edit Original*” and “*Edit a Copy*” options are greyed out and therefore not available. Only “*Edit a Copy with Lightroom Adjustments*” can be selected.

IMPORTANT: Although this “*Edit a Copy with Lightroom Adjustments*” option mentions that the image will be sent to the DxO Optics Pro plug-in with Lightroom™ Adjustments, this is not the case due to the way the DxO Optics Pro Plug-in has been implemented. It is in fact the original RAW image that will be sent to the DxO Optics Pro plug-in. Any Lightroom™ adjustments you may have made before sending the image to the DxO Optics Pro plug-in will be ignored. The DxO Optics Pro plug-in will return TIFF 16-bit files to Lightroom™.

In case you want to make adjustments in Lightroom™, the recommended workflow is to start from Adobe® Lightroom™, edit your images in the DxO Optics Pro plug-in, and then perform any adjustments you want to make in Lightroom™. Two other workflows are available though:

- you can choose Scenario 1 described at the beginning of this document
- in case you want to go through scenario 2 (described in this section), and you’ve performed adjustments to your images in Adobe® Lightroom™ prior to sending them to the DxO Optics Pro plug-in, you can copy the Adobe® Lightroom™ adjustments settings from the “Lightroom adjusted” images and paste them onto the “DxO Optics Pro corrected” images.

Hint: RAW images edited by the DxO Optics Pro plug-in will always be returned to Lightroom™ as a 16-bit TIFF.

NOTE: Canon 1Ds RAW images (who have the confusing .tif suffix) don’t behave as explained above, but as JPEG images (see below).



You may want to enable the “Stack with original” option to avoid display of different versions of the same image.

Hint: If you are working with RAW images, only option 3 will be available in Lightroom™.

➤ ***Batch with JPEG Images only***

Warning: according to your version of Adobe® Lightroom™ (v1.0 or v1.1), options below are displayed in a different order.

At this stage, you can choose between the following options:

❶ ***Edit Original.*** This means that the original image will be overwritten by the image corrected by the DxO Optics Pro plug-in (i.e. a JPEG file). This is not a recommended procedure if you want to compare your processed images to the original images in Lightroom™’s Library.

❷ ***Edit a Copy.*** Recommended. This means that after the DxO Optics Pro plug-in processing is completed, you will have both the original image, and the DxO Optics Pro corrected image (a JPEG file) in Lightroom™. The advantage of this option is that you will have the opportunity to view the DxO Optics Pro corrected image and the original image side-by-side. This is a very powerful option that can ultimately save you time and effort.

❸ ***Edit a Copy with Lightroom Adjustments.*** The intention here is to send to the DxO Optics Pro plug-in an image that has been modified with Lightroom™. This option is NOT recommended since it will not allow you to benefit from the full set of the DxO Optics Pro plug-in corrections. For example, the optical and volume anamorphosis corrections will not be accessible.

Suggested workflow: First edit your images with the DxO Optics Pro plug-in, by selecting either options ❶ or ❷ above, and then further edit your images with Lightroom™.

Note: In case you had set up Lightroom™ (see “Setting up Adobe® Lightroom™” above) to send 8-bit (or 16-bit) TIFF files, the DxO Optics Pro plug-in will return 8-bit (16 bits) TIFF files.



You may want to enable the “Stack with original” option to avoid display of different versions of the same image.

➤ **Batch with a combination of RAW and JPEG images**

Warning: according to your version of Adobe® Lightroom™ (v1.0 or v1.1), Edit options are displayed in a different order.

Combining RAW and JPEG images is currently highly inadvisable for the following reason.

The “*Edit Original*” and “*Edit a Copy*” options are greyed out and therefore not available. Only “*Edit a Copy with Lightroom Adjustments*” can be selected.

For the subset of images that are in RAW format:

- Although the third option mentions that images will be sent to the DxO Optics Pro plug-in with Lightroom™ Adjustments, this is not the case. It is actually the original RAW image (remember the file will be converted by Lightroom™ to a 16-bit TIFF format file) that will be sent to the DxO Optics Pro plug-in. Any Lightroom™ adjustments you may have made before sending images to the DxO Optics Pro plug-in will be ignored!

For the subset of images that are in JPEG format:

- Lightroom™ does send the image with any previous Lightroom™ modifications to the DxO Optics Pro plug-in. But, the DxO Optics Pro plug-in will only be able to perform a subset of its corrections. For example, the optical and volume anamorphosis corrections will not be accessible.

If you want to get the most out of the DxO Optics Pro plug-in, do not edit both JPEG and RAW images in the same batch. Edit and process them in separate batches (see settings in the sections “Batch with RAW images only” and “Batch with JPEG images only” above).

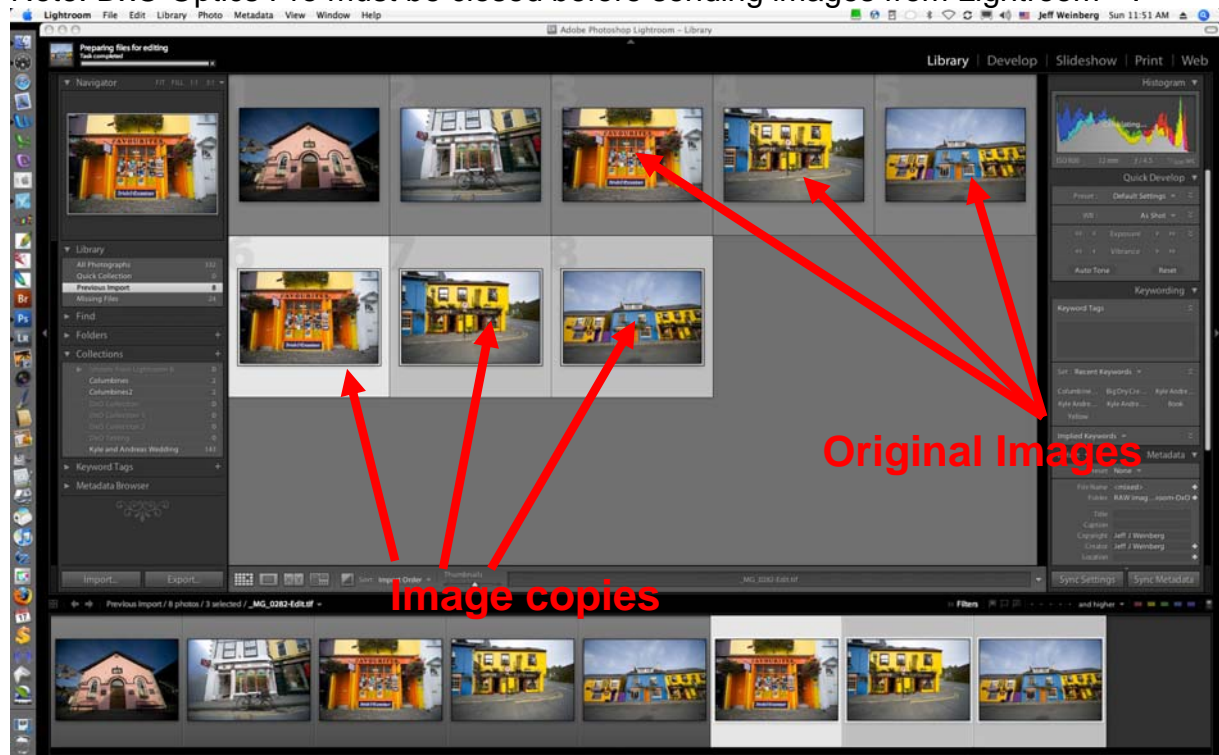


You may want to enable the “Stack with original” option to avoid display of different versions of the same image.

- **Step 3: Image transfer**

In case you selected option 2 or 3, a new image (image copy) appears (see below) and the DxO Optics Pro plug-in is automatically launched.

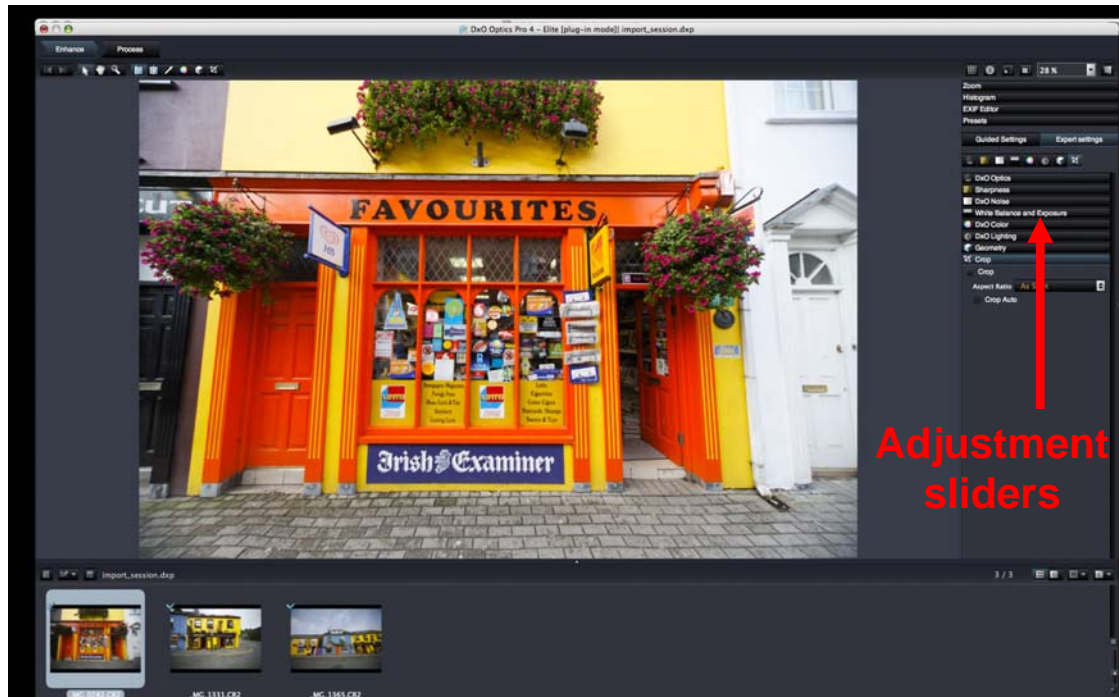
Note: DxO Optics Pro must be closed before sending images from Lightroom™.



Note the duplicate image (highlighted) created by editing the image in an external editor (the DxO Optics Pro plug-in in our case).

- **Step 4: Receiving images in DxO Optics Pro**

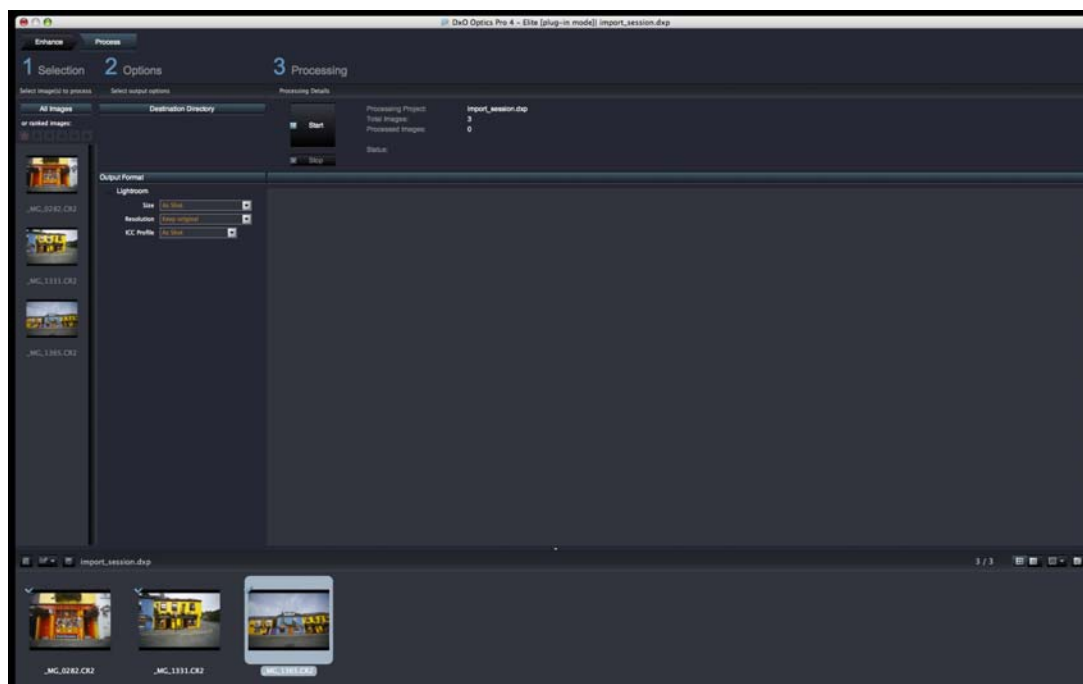
Images are automatically received in the DxO Optics Pro plug-in, in the “Enhance” tab



Adjustments can be performed within the DxO Optics Pro plug-in (refer to the user manual for more information about DxO Optics Pro settings and adjustments).

Note: Since Adobe® Lightroom™ maintain its own EXIF/IPTC database, any information entered within the DxO Optics Pro plug-in in the Author or Copyright fields will be ignored by Adobe® Lightroom™, although this information is actually physically attached to the file.

Once adjustments have been made, processing is started by clicking on the “Process” button in the “Process tab” (output format and output location are automatically set by the DxO Optics Pro plug-in to ensure compatibility with Lightroom™. They cannot be changed).

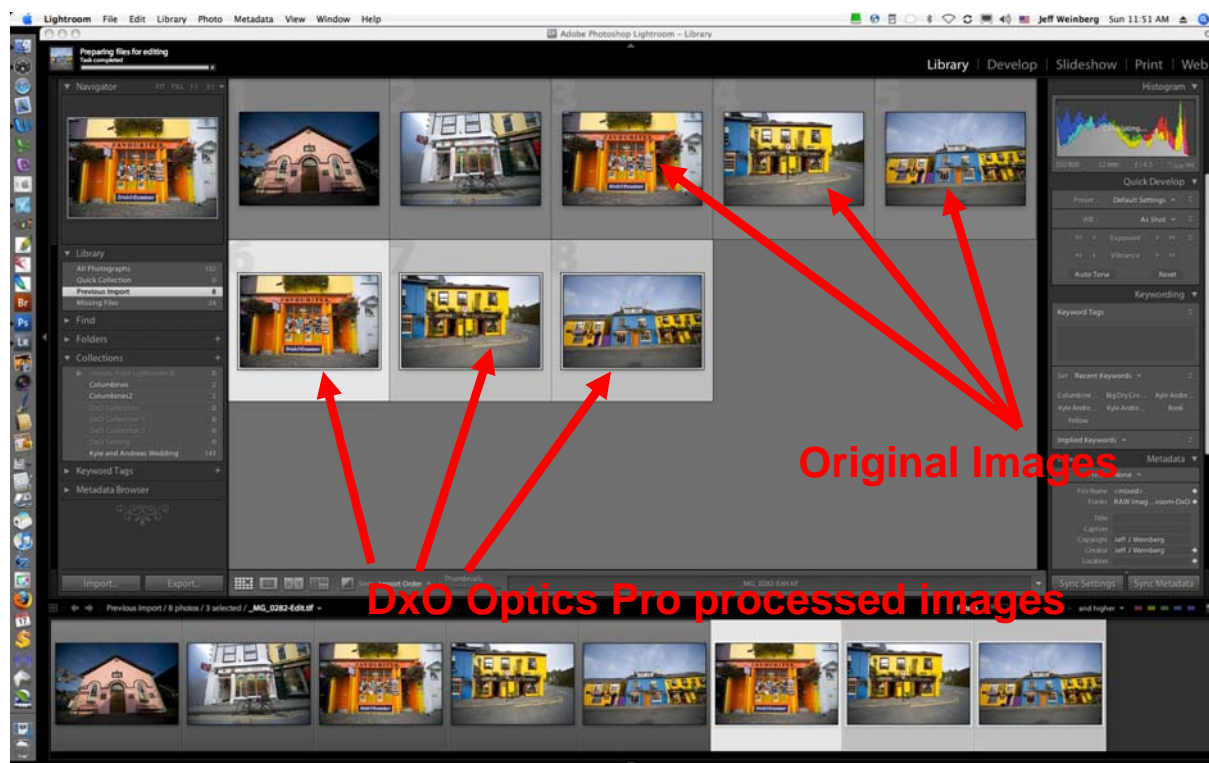


Once images have been processed, the DxO Optics Pro plug-in automatically overwrites images that had been sent by Lightroom™, with the DxO Optics Pro corrected images, and closes down.

Note: The DxO Optics Pro plug-in will return RAW or TIFF images to Lightroom™ as TIFF files and JPEG files as JPEG files. This is important to remember.

- **Step 5: Sending images back in Lightroom™**

The corrected images will appear as an update of the images that had been sent by Adobe® Lightroom™ to the DxO Optics Pro plug-in.



The screen capture above illustrates the case when option ② or ③ had been selected at the “How to send an image from DxO Lightroom™ to the DxO Optics Pro plug-in?” stage. Otherwise (i.e. if option ① had been selected) original images would have been overwritten by the DxO Optics Pro plug-in, resulting in only one image being displayed instead of a pair of images as illustrated above.

In either case, corrected images can now be further processed by Adobe® Lightroom™.

Note: In case images have been cropped in the DxO Optics Pro plug-in or processed with the “MaxImage” option enabled, images coming back from the DxO Optics Pro plug-in into Adobe® Lightroom™ will exhibit a small “!” icon. When clicking on the icon, the user will be provided with three choices:




- “Import settings from disk”
- “Overwrite settings”
- “Do nothing”

In the first choice, DxO Optics Pro corrected images EXIF data will overwrite the Adobe® Lightroom™ database, which ensures data consistency. The drawback here is that any keyword or IPTC/EXIF metadata that may have been entered prior to sending images to the DxO Optics Pro plug-in will be lost in the DxO Optics Pro corrected image. One workaround is to copy and paste keywords from the original image onto the corrected image.

In the second choice, data from the Adobe® Lightroom™ database will overwrite DxO Optics Pro corrected images EXIF data, which could cause significant problems. This option should NEVER be chosen.

In the third choice, the Adobe® Lightroom™ database and the DxO Optics Pro corrected images EXIF data are left unchanged, but inconsistent.

d. Summary chart of options

| Adobe Lightroom settings (see paragraph IV-2-a and IV-2-c-Step2) | | DxO Optics Pro plug-in return formats (as a function of Adobe® Lightroom™ settings) | | | |
|---|--------------|--|---|---|-----------------------|
| Source format | Edit options | RAW files (excepted Canon 1Ds) | Canon 1Ds RAW files | JPEG files | |
| PSD | |  |  |  | |
| TIFF | 8 bits | Edit Original | Not available | TIFF RGB 16 bits | JPEG |
| | | Edit a Copy | Not available | TIFF RGB 16 bits | JPEG |
| | | Edit a Copy with Lightroom Adjustments | TIFF RGB 16 bits * / *** | TIFF RGB 16 bits bits ** | TIF RGB 8 bits ** |
| | 16 bits | Edit Original | Not available | TIFF RGB 16 bits | JPEG |
| | | Edit a Copy | Not available | TIFF RGB 16 bits | JPEG |
| | | Edit a Copy with Lightroom Adjustments | TIFF RGB 16 bits * / *** | TIFF RGB 16 bits bits ** | TIF RGB 16 bits ** |

* any Adobe® Lightroom™ previous corrections will be ignored.

** DxO Optics Pro plug-in limited corrections (optical and volume anamorphosis correction not accessible)

*** In case of inappropriate renaming scheme (see IV-2-a), DxO Optics Pro plug-in limited corrections only (optical and volume anamorphosis correction not accessible)