Post production - Lightroom and RAW image editing

Introduction

What is Adobe Lightroom? and why would a photographer choose to use it?

Lightroom

What is lightroom?

Lightroom is a family of products made by adobe whose purpose is to make importing, collating and and editing raw files from digital cameras easier and more efficient.

Lightroom has a cloud based platform known as **Lightroom CC**, and a desktop app known as **Lightroom Classic CC**. During this course we'll be working with Lightroom Classic CC in a desktop environment. For any references to Lightroom assume Classic CC unless otherwise stated.

Lightroom is not a pixel based, raster image creation and manipulation tool like Photoshop (Affinity Photo, or Gimp). While there some similarities, Lightroom's major advantage is it's ability to make no-destruction adjustments to RAW images and apply those adjustment to multiple images, allowing us to rapidly edit a large number of photo in a much shorter period of time.

Why would I use it?

A photographer would use Lightroom to easily catalog their images either in one large collection or in smaller client or job based collections. Using Lightroom simplifies a lot of the image editing process and in a lot of cases eliminates the need to open photoshop.

Lightroom also has a tethered capture feature meaning images can be captured directly into Lightroom enabling adjustments and develop setting to be applied while being capture.

Script

Hello and Welcome, My name is Chester and I'll be guiding you this series of Lightroom tutorials.

Lightroom is a really powerful adobe product, that we can use to manage and edit collections of native raw files that our cameras produce.

Shooting in RAW will create files that include all of the data captured by you cameras sensor. This will mean you have a greater latitude for exposure and white balance corrections. This extra exposure latitude come from the greater bit-depth raw files have.

A lot of the image you're used to seeing online or from from your phone are going to be 8bit. You can check the bit depth in photoshop by lloking at the file name tab at the top of a open file or looking at image -> mode from the menu bar.

The Interface

When launching Lightroom for the first time you will be presented with a dialogue box stating "**Lightroom room catalog was not found.**". You will have the option to **Choose a Different Catalog** or **Create a Default Catalog**. You can choose the location to store your catalog.

> It is worth remembering that the catalog is a database that contains the information about your images. It is is not the images. Where the images are stored is covered in **Importing**.

Most of Lightroom's interface interface is divided to four main sections.

Nav bar - Top of the interface. this allows quick navigation between Lightroom's modes. In this course we will be focusing on **Library** and **Develop**.

Navigation - The areas on the left. This lets us select the folders we've imported or collections we've made to make their images visible in the centre.

Image viewer - The centre of the interface. In library mode this area can display one or many image depending on our zoom level. This area can also be used for side-by-side comparisons.

Editor - The area on the right. In library mode this area has quick access to basic developing options, key wording and metadata.

Activity

Download the example catalog and try completing following tasks.

Importing and library mode

How to get photos into a catalog and how to sort and display them in the library view.

Importing

Lightroom supports the importing of a wide range of file types. During this course we will mainly be working our camera's RAW format or Digital Negitive format (DNG).

Other formats Lightroom supports:

- TIFF **format**.
- JPEG **format**.
- Photoshop **format** (PSD)
- CMYK **files**. (adjustments and output are performed in the RGB color space)
- PNG **format**.
- Video **files**.

The import widow will often open automatically when a camera or memory card is connected to the computer while Lightroom is running. You can also access the import widow by selecting **Import photos and Video…** from the file menu.

We need to make three decision to complete an import.

Choosing images (Source)

On the left side of the widow we can select the source location of the images we want to import. We can select the media (hard drive, memory card or network drive) and specific folder. By default **Include Subfolders** is ticked which will display all images in all subfolders of the selected location in the centre of the import widow.

By default all images will be ticked marking them for import. We can check and uncheck images using the check box in the top left corner of each image. We can select multiple images and check or uncheck them using one check box. We check or uncheck all available images using the buttons at he bottom of the widow.

How will the Images be add to the catalog

At the top and centre of the import window we can select how we want the images added to the catalog. We are Choosing whether to Copy, Move or Add the images.

Copy - This is the most common and usually the most appropriate choice, especially when importing images from a memory card. This will make new copies of the images files saving them in the location specified leaving the originals in their existing location. This is a good option because it keeps your originals safe.

Copy as DNG - Same as above with the added benefit of converting your proprietary camera raw files into DNG format.

Move - This will move the files from their current location into the location specified. Use this option if you have already copied the image files to the computer you are working, maybe to a folder on the desktop, and just need them added to the catalog and in to the correct folders.

Add - This will leave the files in their current location and add them to the catalog. Use this option if you have previously put the images in an appropriate location and are happy to leave them there.

> It's important to remember that if you move an image from where your Lightroom catalog is expecting to find it, it will appears as missing and you won't be able to edit or export it.

Where the images are going (Destination)

On the right side of the window are the option to define what will be done to the file on input and where, and how (file organisation) they will be stored.

File Handling

Here we have the options that allow us to make an aditional copy of the files, build smart preview and not import suspected copies.

File Renaming

Rename the file based on existing templates or create a custom one.

Apply During Import

Select a develop preset to apply during import, and add metadata and keywords.

Destination

Choose how to organise the images:

By date – A series of folders are created to represent the the date format selected. Forward slashes in the date format indicate an additional subfolder. Useful if you import catalog files periodically. If you have a client you do similar work for regularly.

By original folders – The original file structure is replicated in the new location. Useful if the files have previously been organised.

Into one folder – All images a imported in one folder. Use if the images were shot one one day or their date is irrelevant. If you did a product shoot over two or three days and you don't need the images organised by day or would prefer to organise by product.

>

The images can alway be sorted and organised by date in your library.**Destination** is about how the files are stored.

All about images

The important factors that make up each our images, and how they can be leveraged to to improve the quality of the output.

Colour modes

Bit depth

Resolution

File types

Camera RAW

https://fileinfo.com/

Camera raw files are image files created by digital cameras. They are saved in an uncompressed and unprocessed format that stores the exact data captured by the camera's sensor. Because each type of digital camera has a different sensor, many different types of camera raw formats exist. In order to open a camera raw file, the program must support both the file type and the specific camera model that captured the image.

Common camera raw file extensions include .DNG, .CR2, .NEF, and .ARW.

https://fileinfo.com/filetypes/camera_raw

DNG – Digital Negative

Universal RAW image format for saving digital photos in an uncompressed format; developed by Adobe Systems as a RAW image archival format and is supported by many image viewing and photo editing programs.

https://fileinfo.com/extension/dng

TIFF

A TIFF file is a graphics container that stores raster images. It may contain high-quality graphics that support color depths from 1 to 24-bit and supports both lossy and lossless compression. TIFF files also support multiple layers and pages.

More Information

TIFF files were designed to be a standard image format for saving high-quality color images on multiple computer platforms. They are also commonly seen with the .TIF extension.

> **NOTE:** The TIFF format was originally developed by Aldus, who merged with Adobe Systems in 1994.

JPEG

A JPEG file is an image saved in a compressed graphic format standardized by the Joint Photographic Experts Group (JPEG). It supports up to 24-bit color and is compressed using lossy compression, which may noticeably reduce the image quality if high amounts of compression are used. JPEG files are commonly used for storing digital photos and web graphics.

More Information

A JPEG file also contains metadata that describes the contents of its file, such as the color space, color profile, and image dimension information. Image files saved in the JPEG format are more commonly appended with the .JPG extension than the JPEG extension.

If you come across a JPEG file on your computer you can open it with any program that supports images. There are a large amount of free and commercial image editors available for desktop and mobile platforms. You can also view it in a web browser by dragging and dropping it in the browser window.

PNG

A PNG file is an image file stored in the Portable Network Graphic (PNG) format. It contains a bitmap of indexed colors and uses lossless compression, similar to a .GIF file but without copyright limitations. PNG files are commonly used to store graphics for web images.

More Information

The PNG format was created in response to limitations with the GIF format, primarily to increase color support and to provide an image format without a patent license. Additionally, while GIF images only support fully opaque or fully transparent pixels, PNG images may include an 8-bit transparency channel, which allows the image colors to fade from opaque to transparent.

PNG images cannot be animated like GIF images. However, the related .MNG format can be animated. PNG images do not provide CMYK color support because they are not intended for use with professional graphics. PNG images are now supported by most Web browsers.

> **NOTE:** Mac OS X 10.4 and later saves screenshots as PNG files. Ubuntu Linux also stores print screen screenshots in the PNG format.

Library and workflow

Navigating and organising images in Lightroom.

Library View

A Lightroom catalog is made up of a folder or series of folders that have been imported, and a series of collections of selected images for the imported folders.

Navigation Panels

The Navigation panel allows us to select with groups of imported images we want to display in the image viewer.

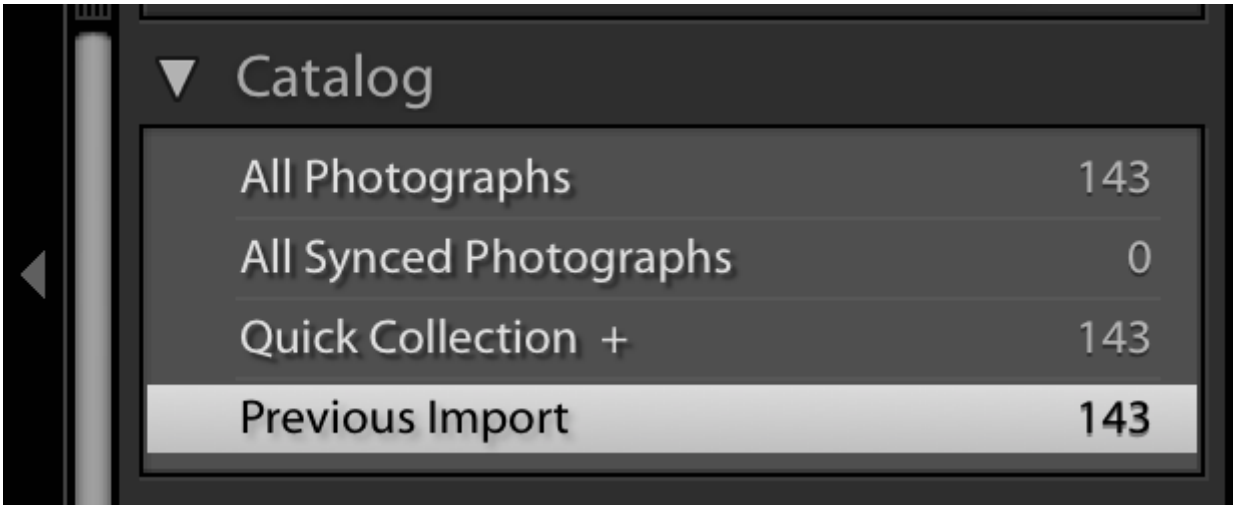
Folders

The folders panel located on the left will indicate the physical disk or drive the images are located and the folder name of each import. Depending on which options you selected during import your folders may represent dates, or another file structure.

Each folder may contain subfolders and will indicate the number of images present in the folder. If you manually add images to the the folders without importing them with Lightroom, they won't show up in till you perform a synchronisation by right clicking on a folder and selecting "**Synchronize Folder…**".

Catalog

The catalog panel sits above the Folders panel and displays information about he number of images in the catalog.



You can select All Photographs, All synced Photographs Quick Collection +, or Previous Import to display the corresponding images.

Quick Collection is a way of quickly identify images you want to work with or add to a collection. Selecting an image in the image viewer and Pressing `b` on the keyboard will add the image to the the quick collection. Pressing `b` again will remove it.

You can clear or save a quick collection by right clicking Quick Collection in the catalog panel.

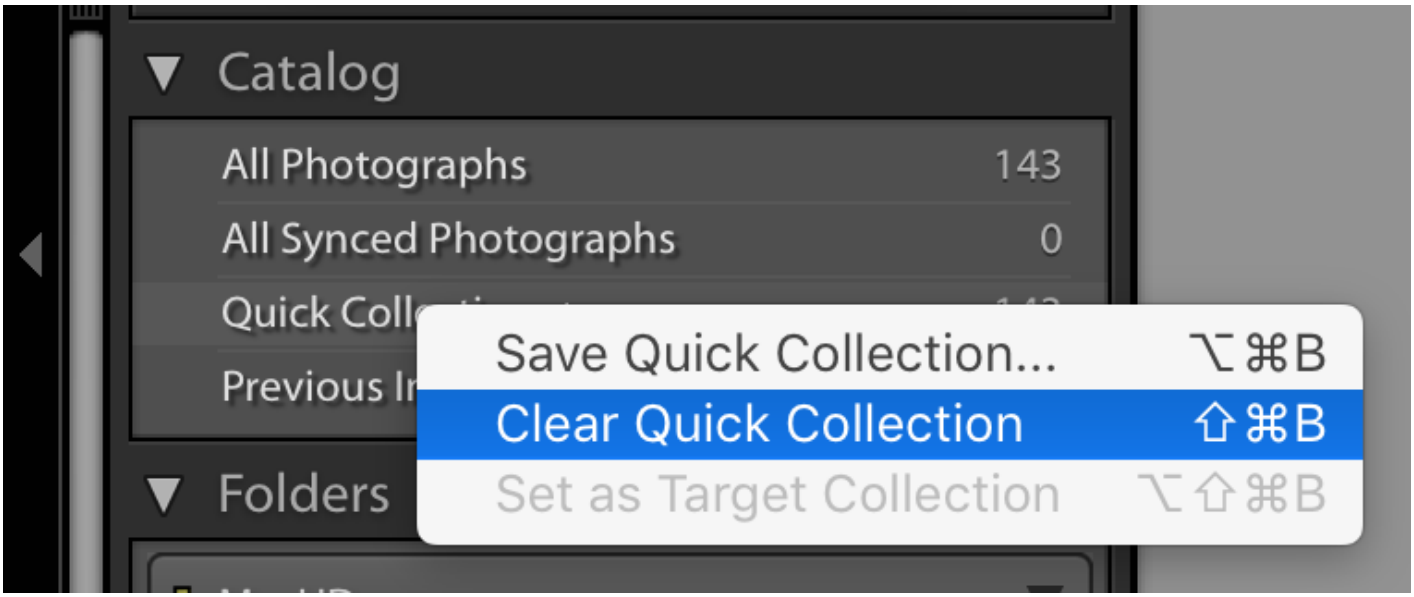


Image Viewer

The image viewer is where we can see all the images from the selected folder/s or collection/s. We can use the the `+` and `-` keys to zoom in and out to display more images or see larger images.

Ratings and Labels

Rating images

Images can be assigned a rating from 1 (★) to 5 (★★★★★) stars. with and image selected pressing a number for 1–5 will assign a corresponding star rating. `0` will remove the rating.

Star ratings are a handy way grouping images based on quality. Assign higher ratings to images you like more and lower rating to images that are less valuable. We can filter the images later using the Attributes to only display our best images.

Labels

Images can also be assigned labels. By default the labels are named and represented by colour. Red, Yellow, Green and Blue can can be assign to an image using the number 6–9. Pressing the number again will remove the label.

Views

At the bottom of the Images Viewer pane are five selectable views.

Grid

Grid is the default view. it displays all images based on the selected folder, and filter that have been applied.

Loupe

You can enter loupe view by clicking the loupe button or by double clicking an image. This view displays a single image and allow you to zoom in to see more detail. You select **FIT**, **FILL**, **1:1** or **1:2** from the top of the navigator pane to to zoom to the corresponding level.

Compare

Compare will display two selected images side by side and allow synchronised navigation. This is very use full when comparing two similar images or a before and after.

Survey

Survey displays all selected images on one screen removing any superfluous interface item. It eliminates the need to scroll to see additional images allows us to quickly compare the images.

Faces

This feature will help identify faces in your catalog and help build collections based on them.

Sorting and filters

We can apply sorting and filter options to the folder selected in Library >> Grid View to control which images will be displayed and in what order.

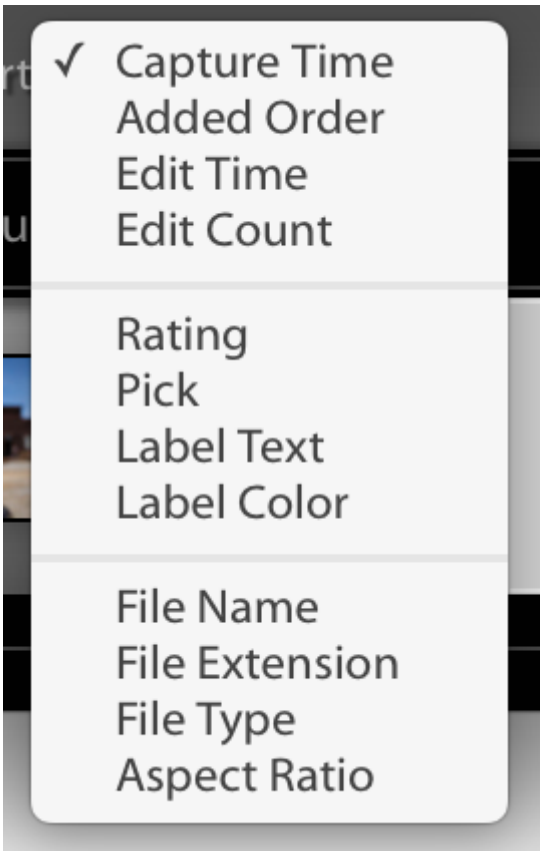
Sorting

Sort order is available from the bottom centre of the image viewer. The default option is usually set to **Capture Time**. This is the time recored by the camera when the images was captured.

> It's really helpful if your cameras date and time are set correctly. especially if using multiple cameras.

Other useful sorting options include

1. **Added Order** – This will display images in the order they were imported.
2. **Edit Time** – Displays most recently edited images first
3. **File Name** – Can be useful when using custom file names during import.
4. **Rating** – Displays images in order of star ratings that have been applied.



Filters

filters are available from the top of the image viewer. The default option is usually set to **None**. This is indicated all images in the selected folder are visible.

Text

Text filters can be applied for **Any Searchable Field** or to a specific field. Fields refers to the the type of text, whether it's a file name, title, keyword or any other field that could be part of the metadata of the image.

You can choose whether your search must Contain Some or All, or Not Contain your query text.

Example

If you have added keywords to some of your images to indicate that they were shot during a particular part of and event. The Ceremony of a wedding. You could do a **Text filter**, against **Keywords** that **contains** "**Ceremony**". This would display only images that have the that keyword applied.

Attribute

Attributes in Lightroom refers to the values we we can apply to the images, Flags, Ratings and Colours.

You can select one or more Flags or Colours to filter.

With Star ratings to can choose whether you to display rating that are Greater than or equal to, Less than or equal to, or equal to the value you select.

Metadata

Metadata is information that is stored about the images of file that have be captured. We can use this data to filter the images to display.

By Default there will be four columns each with a different type of metadata that can be filtered. you can add or remove columns be clicking the contextual menu in the right corn of any of the columns.

Clicking the name of the column will allow you to chance the type of metadata to use for filtering.

The image below shows that all the images were shot with using **1 Camera**, a Canon EOS 700D. **3 Lenses** were used. Selecting 35mm would display the 6 images shot with that lens.

> Filtering by camera and/or lens can be really useful on multi camera shoots, particularly if there is more than one photographer. Because each camera has different qualities that affect the images, you may want to apply the same correction to all images from one camera.

Saving filters

Filters can be saved by clicking the dropdown next to the padlock in the Image viewer.

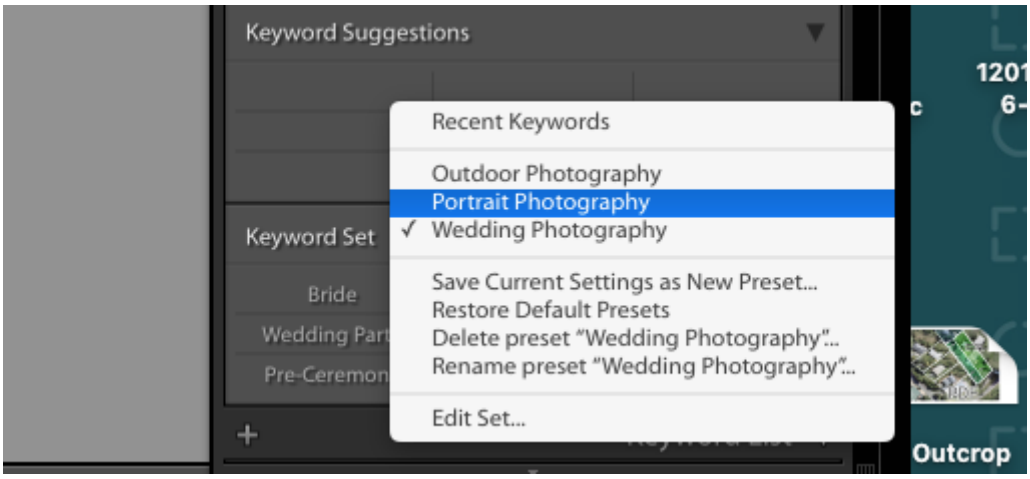
Keywords and Metadata

metadata

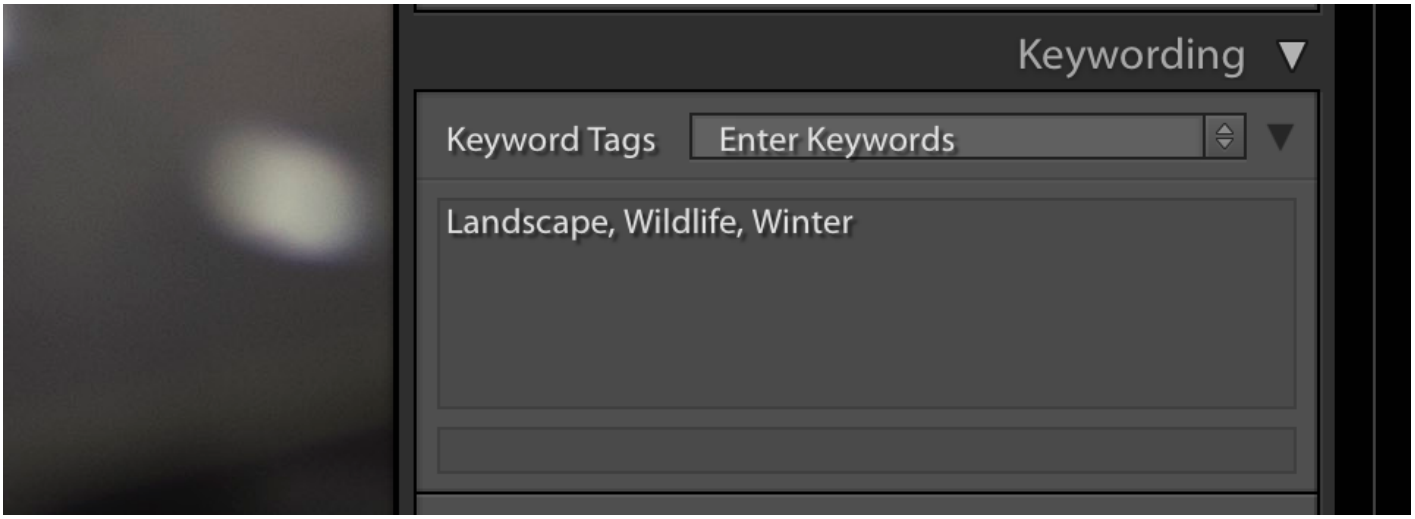
metadata is a set of data that describes and gives information about other data. For digital images this includes the information relating to how the photo was captures, when it was captured, and can include lots of useful stuff like the location, the photographer and the camera and lens combination use.

Keywords

Keywords can be added to an image as additional metadata to aid our ability to search and sort our collections.



Lightroom has a few built in keyword sets that can be used, and the ability to create your own sets.



Keywords appear in the **Keywording** panel in **Library** mode. Each image can have multiple keywords, in a comma separated list.

we can use the **Text** or **Metadata Library Filters** to search for or filter our collections for keywords.

Develop basics

Basic Lightroom develop techniques.

Basic panel

The basic is where a lot of or initial editing will happen. Here we have control over White balance, Tone and Presence.

White Balance

Shooting with your white balance set correctly give you a huge advantage when it come to editing your images, however it is worth remembering that what balance is applied to to your image in camera after it has bee captured. This means we retain the ability to adjust an images whit balance after it has be taken in Lightroom.

The purpose of adjusting the white balance of an image is to compensate for undesirable colour cast that can appear in an image due to the light source.

Color Temperature	**Light Source**
1000-2000 K	Candlelight
2500-3500 K	Tungsten Bulb (household variety)
3000-4000 K	Sunrise/Sunset (clear sky)
4000-5000 K	Fluorescent Lamps
5000-5500 K	Electronic Flash
5000-6500 K	Daylight with Clear Sky (sun overhead)
6500-8000 K	Moderately Overcast Sky
9000-10000 K	Shade or Heavily Overcast Sky

Temperature (Temp)

The table above include temperature ranges for some common sources of light.

Using the Temp slider we can warm or cool an image to make it appear more natural. Images shot outside in daylight can appear to have a blue cast and images shot inside using Tungsten Bulbs

can appear very yellow.

Tint

The tint slider allows us to adjust for casts generated by some artificial light sources. Fluorescent bulbs can give a slight green cast. Moving the slider in a positive direction will compensate more for the green cast by increasing the the amount of magenta.

Eyedropper

The white balance section also includes an eyedropper. clicking the eyedropper will engage it. You can then click an area in you image you know should be white or neutral grey, and Lightroom will figure out the temperature and tint for you.

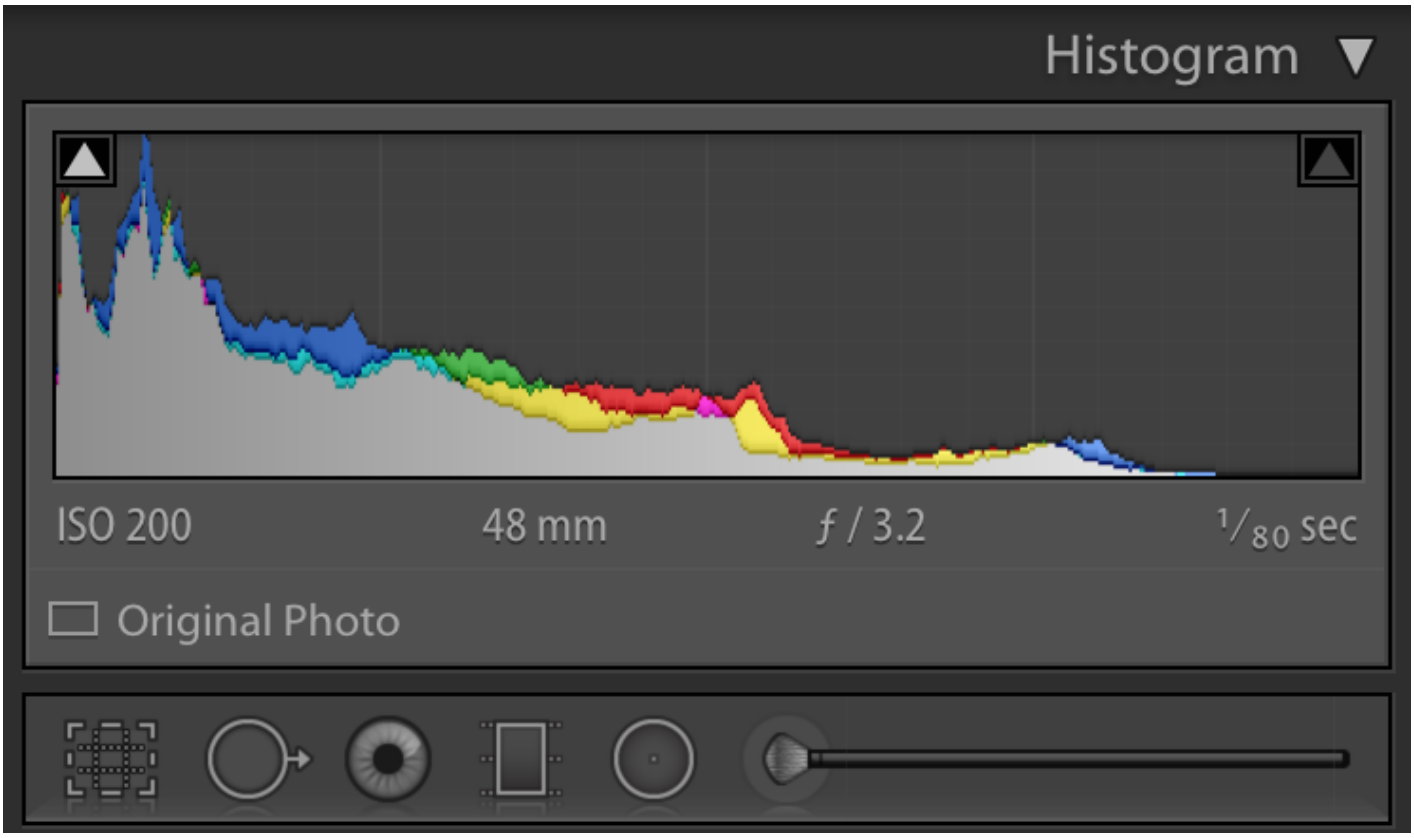
> This only works if you select an area you know to white. if the area you select is not white or neutral, Lightroom will compensate for the colours in the area giving unpredicted results.

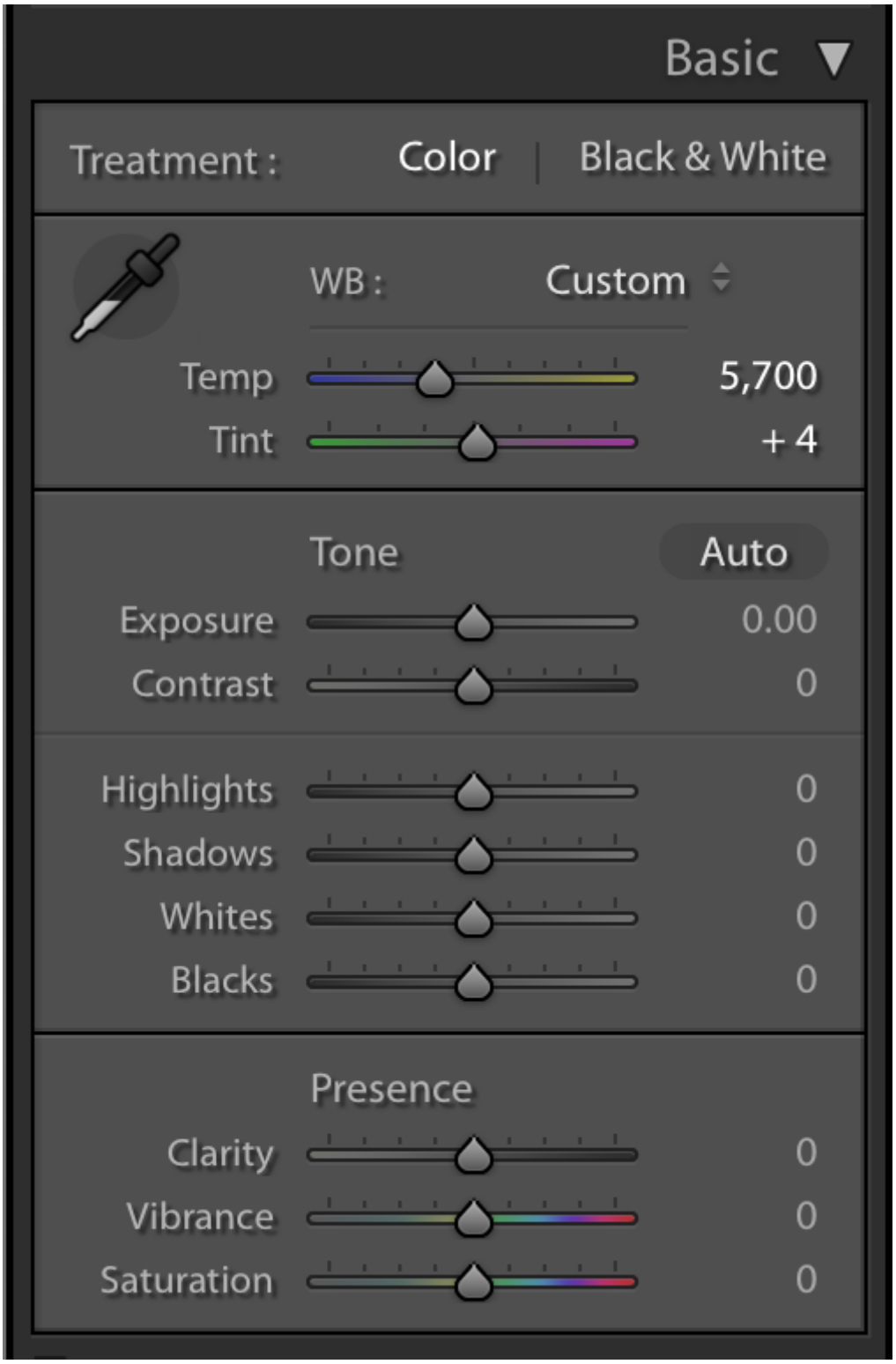
Tone

The tone sliders are where we do most of the correction we would want to do to an image. We have control over **Exposure** for the overall brightness of our images, and **Contrast**, for contrast.

A rule to follow is to edit first using **Shadows** and **Whites**, followed by **Highlights** and **Blacks**, before using **Exposure** and **Contrast**.

These sliders are represented on the histogram and can be manipulated there too.


Histogram
ISO 200
48 mm
ƒ / 3.2
1/80 sec
Original Photo


Basic
Treatment :
Color
Black & White
WB :
Custom
Temp
5,700
Tint
+ 4
Tone
Auto
Exposure
0.00
Contrast
0
Highlights
0
Shadows
0
Whites
0
Blacks
0
Presence
Clarity
0
Vibrance
0
Saturation
0

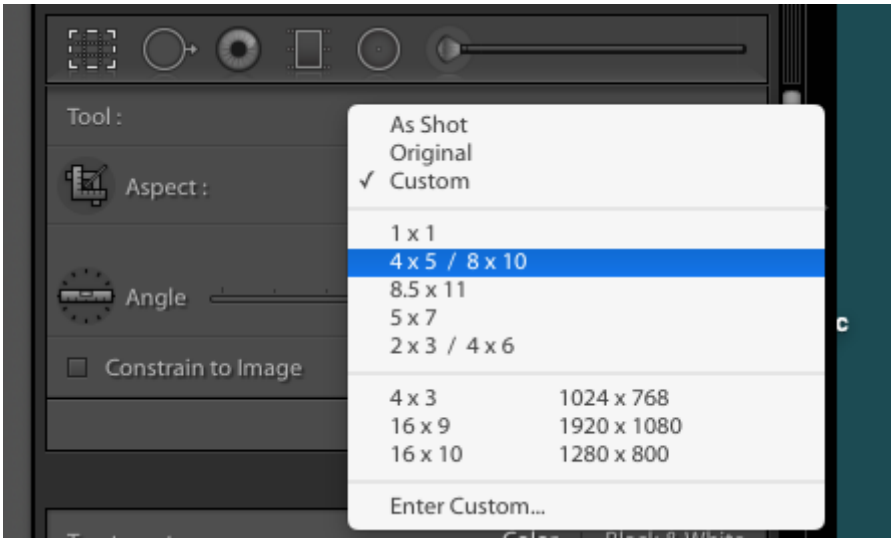
Develop basics

Cropping

Cropping an image can make a significant difference the quality of an image. adjusting the composition to make improve the way your subject is being present, or shifting from landscape to a portrait. Can transform a O.K. photo into something special.

Aspect

The crop tools will allow you crop and rotate you image to any shape or angle. You can select a common aspect ration from the **Aspect** drop down, or enter your ow custom one. The padlock icon will lock or unlock the image from conforming to the select aspect ratio.



Angle

Angle can be adjusted using the slider or by clicking and dragging slightly away from the edge of the cropping bounding box.

When adjusting the angle a finer mesh grid will appear as an overlay making it easier line-up horizontal and vertical line.

overlays

The crop tool includes a few built-in overlays to aid composition. by default the you see a rule of thirds grid. Pressing '**O**' will cycle through **Diagonal**, **Triangle**, **Golden Ratio**, and **Golden Spiral**. Pressing '**Shift + O**' will rotate the overlay.

Presence

Clarity

Clarity help improve definition by boosting contrast in the in mid-tone and highlights. Often without blowing out the bright points. It also maintains detail in the shadows and blacks.

Vibrance

Vibrance boosts colours that are muted while leaving highly saturated colours alone. In a lot of images you'll notice cooler colours (Blues and Greens) becoming more saturated while warmer colours are affected less.

Saturation

Saturation applies to all colours equally. And will make the colours in you image pop.

> It's a good idea to try using **Vibrance** before **Saturation**.

Develop and tools

More advanced develop tools and techniques

Syncronisation

Maintaining consistency between photos within a shoot can be a really important part of a photographers job. Particularly for jobs where you images need to look like part of cohesive set.

For example:

- Realestate
- Weddings
- Portraiture

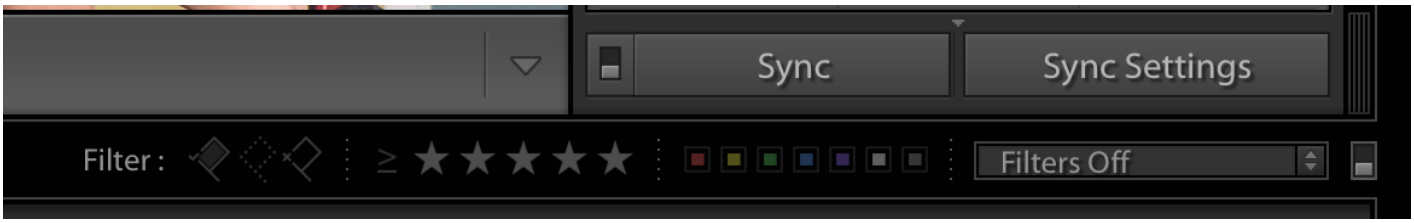
Syncing

When multiple images are selected in Lightroom, only one image will be considered the primary selected image.

It can be identified by it's lighter background in the loupe view or by the fact that it is the image visible in the develop module.

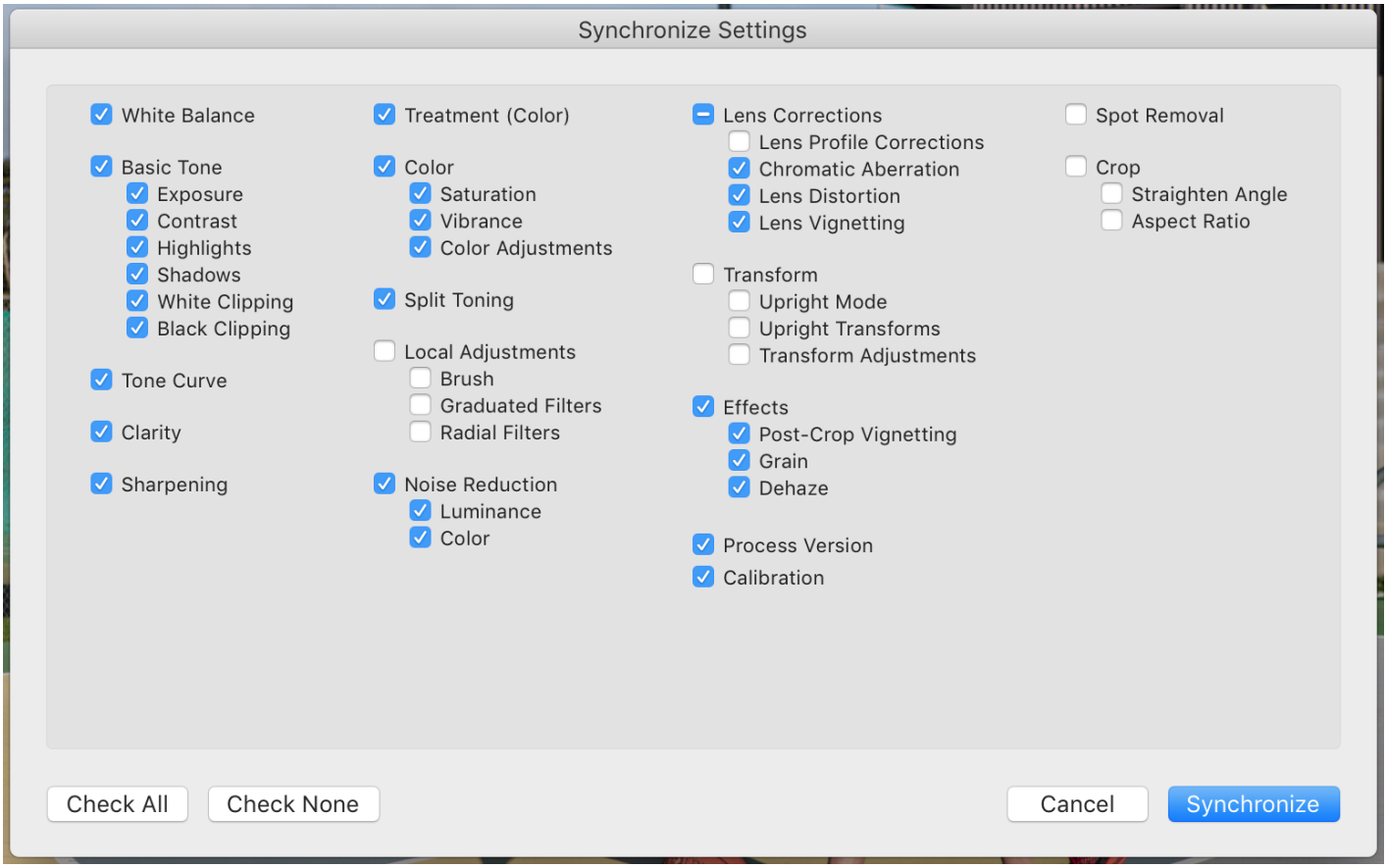
if you have more than one image selected in either the Develop or Library module to have the option to **Sync...** or **Sync Settings**.

> **Sync** in the Library module is for syncing metadata, **Sync Settings** is for syncing develop settings.



By default the synchronize settings will sync all changes that affect the entire images. Local adjustments like the Radial or Graduated Filters or Adjustment Brush with be unchecked.

You can check or uncheck any of the settings to allow them to sync or not.



Clicking **Synchronize** will sync the setting s from the primary selected image with the all other selected images.

Tips

If you images have very different exposure properties – it might be a good idea to uncheck all or some of the basic tone settings during sync.

If the horizon line is in a similar place in a series of image – you can sync a Graduated filter to darken or lighten the sky.

Gradient and radial filters

Adjustment Brush

Spot removal

Lens correction

Transform

Detail

Creative Techniques

Add emphasis and impact to your images.

HSL/Color/B&W

Split Toning

Presets

Exporting external editor and printing

Get the most out of your images by continuing in an external editor like photoshop, and export in the most appropriate format.

External editors

Exporting