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1 Introduction

Quick HDR is a very fast software and batch processor to simulate and apply many popular Film and HDR effect on single digital camera images. And it does all this in near-real time with 128bit color depth precision!

Unlike standard HDR software such our Dynamic Photo HDR where you need multiple image exposures, Quick HDR is build with the purpose of quickly working from a single image source.

Where it comes from?
For last couple of years the "HDR effect" became quite popular as a way of artistic expression but if used carefully, it can be a secret weapon of any image processing toolbox. This is thanks to the secondary effect of HDR processing: it can dramatically change color and contrast in a way that standard processing can't.

If our main goal of HDR processing is an image enhancement and not compressing dynamic range from multiple images into one we can easily argue that we don't need the multiple exposures. We can use the "HDR" as an effect working on the dynamic range that modern cameras produce in a single image. This is the goal of QuickHDR - let's get rid of the multiple exposures, the necessary image aligning, the large HDR data and make the effect an easily and quickly applicable to lot of users pictures.

How?
We carefully adjusted and calibrated our processing algorithms developed over the years to give the users maximum benefits without the common headaches of classic HDR tone-mapping operators. First the speed is hugely enhanced despite the fact that it is an advance image processing - up to the point of it being actually near real-time. This gives great feedback to user because changing values immediately produce results unlike most other software. Secondly, we process each pixel in 128bit color depth (unlike the standard 24 bit) to be sure we don't introduce any unnecessary clipping or rounding errors on our side. This minimize any quality loss or increasing noise.

The features

- Simulate various Film materials - you can effectively create any of the look of famous film stocks (for trademark reasons we don't use the film stock names)
- Simulate many of the popular HDR effect, from very soft "realistic" to completely exaggerated
- Simulate effect of polarization filter
- Work in a picture browser-like fashion for very quick access
- Apply the effect to many images with Batch processing

The benefits
- Unlike normal HDR software the Quick HDR is blazing fast
- Works from a single digital images, no need for multiple exposures
- Immediate feedback
- Easy way to zoom in
- Calibrated so the preview and the final exported image look the same (quite often problem with HDR software)

2   Load Image

First step open some image.
Press Open Files to show the image browser. Navigate to your images
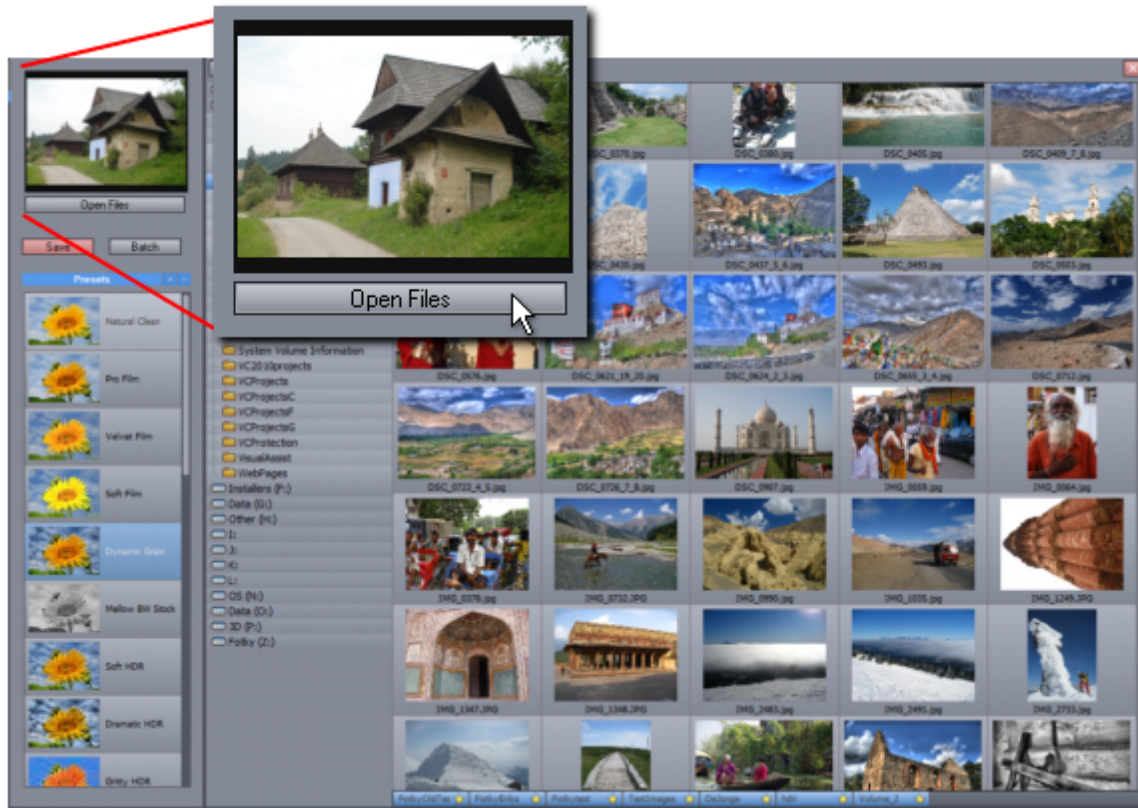
To open image, just double click on it. This will not only open the image for editing (3) but also add thumbnails of the whole folder (4) on the bottom for an easy access.

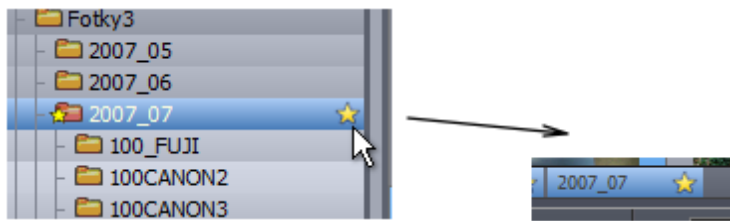Now you can try few presets (2) and see the image changes immediately.

Tips:

If you want to see a larger preview of any image in the browser - right click on it:

Add to Favorites
You may want to add particular folder to Favorite bar which is displayed at the bottom of a browser.

Removing favorites is equally easy, press the yellow star of the item in the favorites bar.

3 Use Presets

Presets will quickly give you idea of various levels of the effect you can obtain and also give you good start.

Add/Remove preset
Use the + and - buttons near the Preset header.

After you enter new name, a thumbnail of currently edited file will be saved in the preset - this is to give you an easy way to visually distinguish your presets. You cannot overwrite the factory presets (but you

can delete them)

4   Settings

The setting is where you can adjust the effect.

There are 4 tone-mapping signature operators

- Natural
  A classic luminance based process that can produce images from natural looking without any obvious signature to more typical HDR "Halo" images
- Natural+
  Like natural but with additional color processing
- Dynamic
  Processing that can give strong HDR signature
- Overdone
  For those who seriously wants the HDR to look very processed
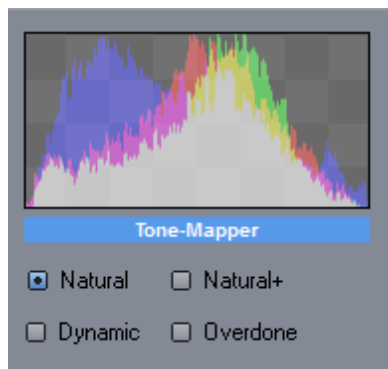
Main Dials
There are 2 or 3 main dials (the Dynamic Range dial appears only in Dynamic tone-mapper)
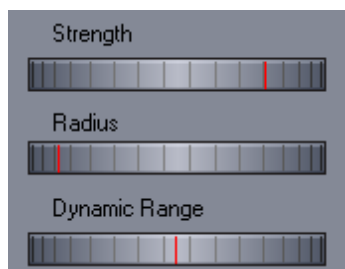
The Strength control the strength of the main tone mapping effect.

The Radius controls the area around each pixel where the tone-mapper is applied. A higher radius adjust each pixel according to many surrounding pixels while smaller radius is more localized to fewer pixels. It has effect on the "look" of the tone-mapper and also effect on halo around objects.

low radius   high radius

For Dynamic settings the Dynamic Range controls the strength of secondary Dynamic expansion which will make more dramatic impact and also emphasize noise.

low dynamic range   high dynamic range

Detailed Settings

The settings bellow the main dials will have different impact on the image

Shadow/Highlight recovery
It will recover the shadows or highlights - so for shadow recovery the shadows will become lighter and for highlight recovery the highlights will become darker

shadow recovery
(shadows gets lighter)

highlights recovery
(highlights gets darker)

Note: You have to be bit more careful with applying any strong recovery as it may introduce clipping. Especially the highlight recovery, if the image is heavily overexposed in some areas like sky may not have enough data and such areas may show a compression artifacts, visible in large white flat areas. See more info at the end of this chapter.

Exposure

Adjust the image exposure, similar to the effect of exposure compensation settings (EV) in your camera. It is about 1.5 EV in each direction

Color

This can be seen as increase/decrease of saturation or vibrancy (it doesn't use the saturation to avoid color clipping, so it is not called that but the effect is similar)
You can also use it to create BW images.

low color   high color

Contrast

Increase contrast

Halo Suppression

This will suppress extensive halos that may appear around objects on flat backgrounds

low halo suppression   high halo suppression

Polarize Filter

A special filter to simulate effect of Polarizer filter on image. in the low to medium settings it deepens the sky, removes haze and make the foreground colors more airy.

no polarizer   low polarizer   high polarizer

In its high settings it can serve as a special effect - for example for BW photos with color slider all the way down where it can even blacken the sky


high polarizer / low color

Tip: Avoiding enhancing compression artifacts
Compression artifacts may appear if we are pushing too much over or under exposed parts of the image (most notably with shadow and highlight recovery as they are rather strong). Such artifacts may appear on flat under-or-overexposed parts.
You may also see a false horizontal and vertical lines in such cases which are artifacts of the display resizing algorithm and are not in the picture (if you zoom in with 1:1, the lines disappear, and they are also not in saved full size image)
In any case recovering highlights or shadows from over or under exposed images is better to be avoided.
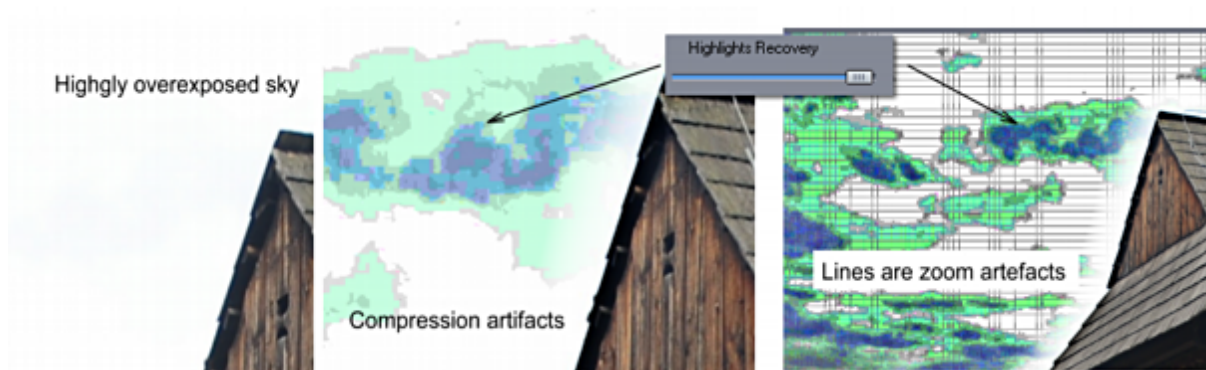
5   Saving

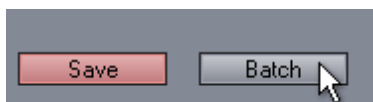When you like the image all you need to do is to save it.

You can choose from various formats: jpg, png, bmp or tiff.

Note: Never overwrite the original images, always save it with different name.

6   Batch Processing

Because our process gives very predictable results we can offer unattended batch processing.

To start Batch, click on the Batch button. If you already have a file loaded then all the folder images will be automatically added to the Batch process.
Batch process will apply the currently used settings to the batch. (So it is good idea to load a file first and adjust the settings, then go to batch)
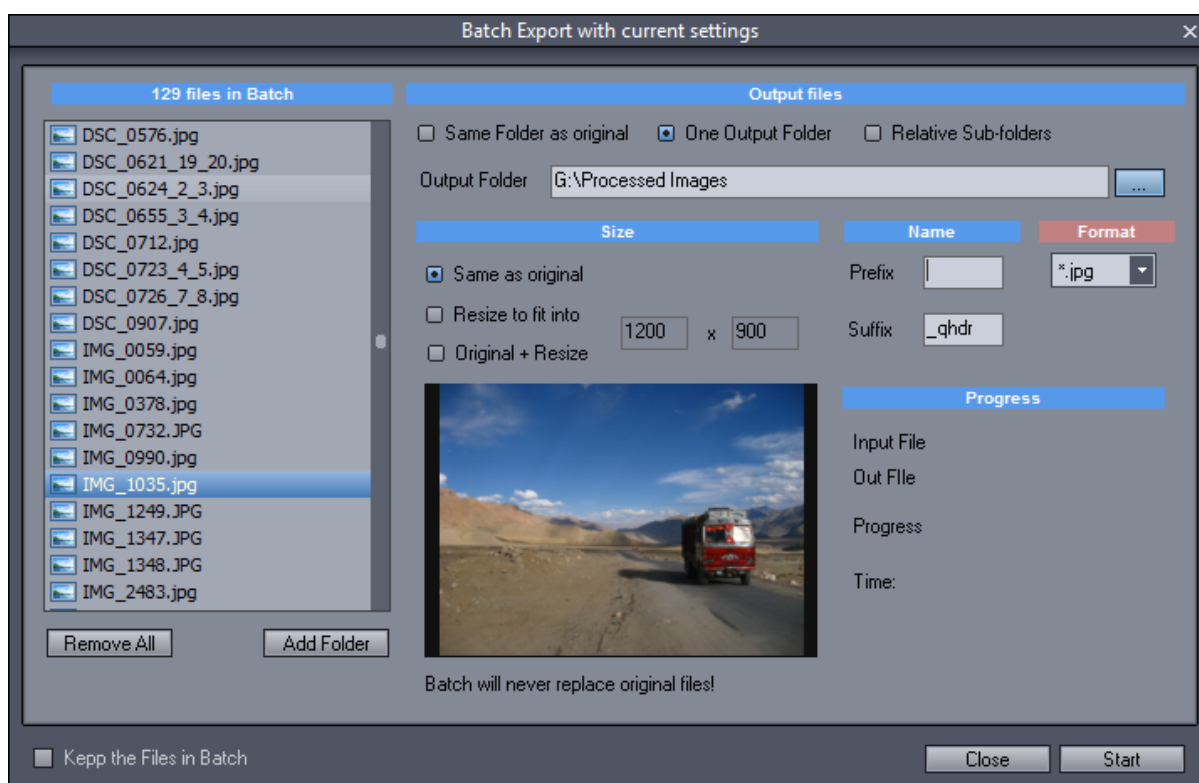
You can add files from other folders to the Files in Batch list.

Output:
Same folder as original
images will be saved in the same folder as original image with the same file name with specified prefix and/or suffix (it never overwrites the original file - even if there is no prefix or suffix, it will create one to makje sure the save name is not the same as input name)

One output folder
All files will be saved in a single folder regardless where they come from. You can browse for folder and/or type folder which will be automatically created.

Relative sub-folder
Files will be saved in a sub folder relative to the original files folder. So if files are in D:\Photos1 and D:\Photos2 and we specify sub folder "Processed\" then the output files will be in D:\Photos1\Processed and D:\Photos2\Processed respectively

Size
We can specify the output file size as either Same as Original or Resized or Both (in case of both a _*small* suffix will be added to the resized set)

Name
We can specify prefix and suffix. If name is *image100.jpg* and suffix is _*qhdr* then the output will be *image100_qhdr.jpg*

Format
It can be jpg, png or tiff.

Keep the files in Batch.
If unchecked then any time you open batch, the files from the currently edited folder (the same files you see on the quick access thumbnails at the bottom) will be added to the batch and any previous files in batch will be removed.
If checked, the files listed in the batch list will be kept even after you close batch window. This way you can repeat different settings on the list again.

Starting and Stopping.
Be patient, the batch is multi-threaded and so stopping may take some time until the currently processed file is safely saved.
Also if input files are raw files the process may take quite a long time.

7 Final Word

We could add lot of other things to the Quick HDR software but our goal was to keep it simple and easy to use. However we are always open to suggestions.