

# Exposure/Image Blending - Create Long Exposure Images Without a 10-stop Filter

## A. Multiple Exposures in Camera

Many cameras are enable take multiple shots and then have the camera combine them all to create one image. Using the multiple exposure mode on several Nikon/Canon cameras allow you to take several shots (depending on your camera model) and either overlay them in camera (with different blending modes) and/or keep the individual images. Other camera systems vary as to what they offer in the way of Multiple Exposures. If you want to try this, research your camera model on line and see what is possible

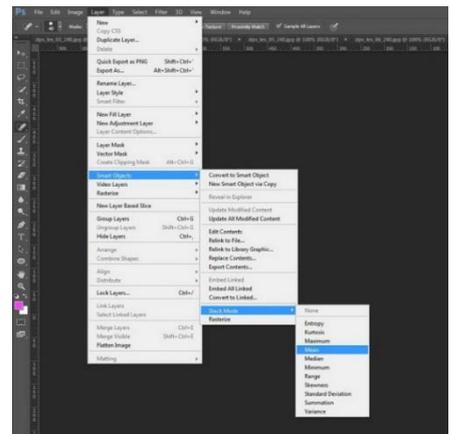
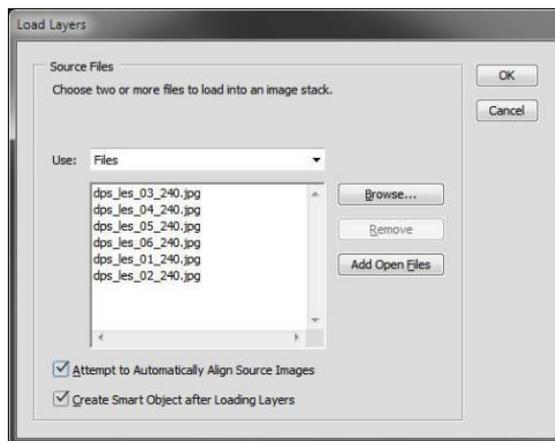
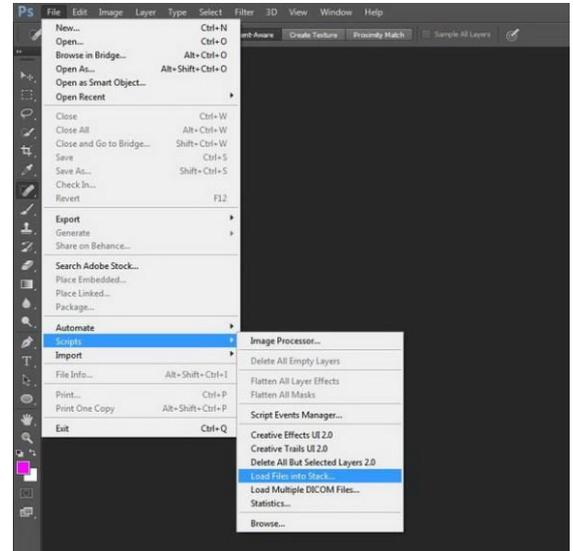
## B. Image Stacking in Photoshop

### 1. First Method Using Script

Files > Scripts > Load Files into Stack

Select the **Single long exposure**, flag the boxes to **Automatic Align Source Images** and **Create Smart Object**.

Once you have a new document with the Smart Object selected, all you have to do is go to menu **Layer > Smart Objects > Stack Mode > Mean**. This will weigh all images embedded into the Smart Object, rendering them as a new image which is similar to what you would have obtained with a single long exposure of a total time equal to the sum of the single exposure.



### 2 Manual stacking

OK Photoshop and Elements. Load layers and align (eg. from Lightroom Open as Layers in Photoshop). Make each layer's opacity equal to 1 divided by its position in the stack: i.e.

- First photo (the one at the bottom) **100%** (1/1)
- Second photo **50%** (1/2)
- Third photo **33%** (1/3)

- Fourth photo **25%** (1/4)
- Fifth photo **20%** (1/5)
- Sixth photo **17%** (1/6)
- Nth photo **1/N**

This process will exactly replicate the first method (the result will be identical to an automatic Stack in Mean mode).

These techniques mean you can work without very dense filters and you also increase the final quality of your file because of the stacking by reducing random digital noise equal to the square root of the total photos used. So for example if you use four photos, you will have in static part of the photo a reduction by half of the total random digital noise. This technique is used in astrophotography or in other fields when increasing the exposure time of a single shot is not suitable.

## **C. Using Two Separate Exposures to Selectively include Long Exposure Effects**

In some cases, a very long exposure will work well for some parts of the image but you need detail in other areas eg. Waves breaking on rocks.

1. Take one long Exposure to Blur Water/clouds and one with a faster shutter speed to show details
2. Drag-and-drop one image onto the other with Shift key held down, this ensures that the two pictures are perfectly aligned.
3. Add Layer Mask
4. Paint the Layer Mask to Reveal parts of the lower image

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