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From LDR input with bracketing to LDR output

This is the case that photographers called HDR: several exposures in input and LDR panorama in output. It's classic for virtual tours but also for landscape photography, etc..

Workflow

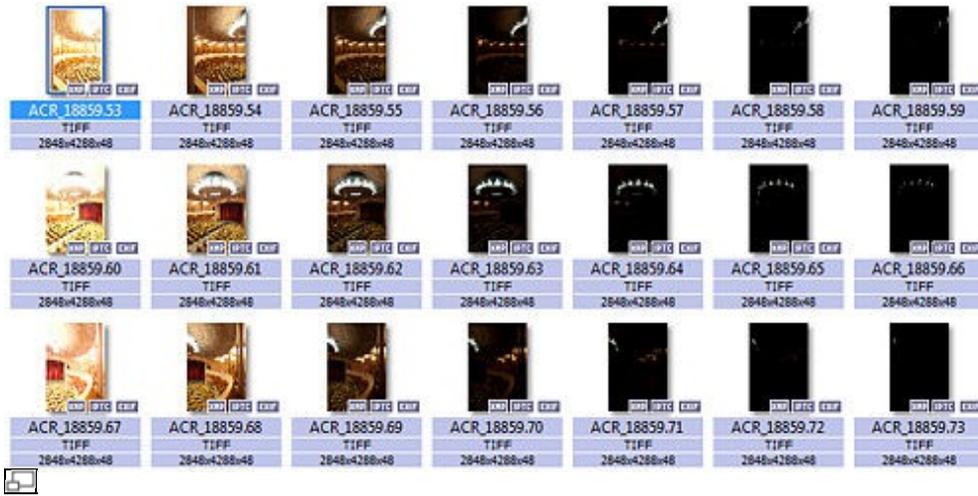
The idea to get through such panorama is first to **group images by layers**, then to use the **color correction by layer** (ie by exposure level) to adjust the exposure between the images within the same layer. The anti-ghost is also active in each layer. Then, the fusion will preserve the best exposed areas from each layer.

Example 1

Source images

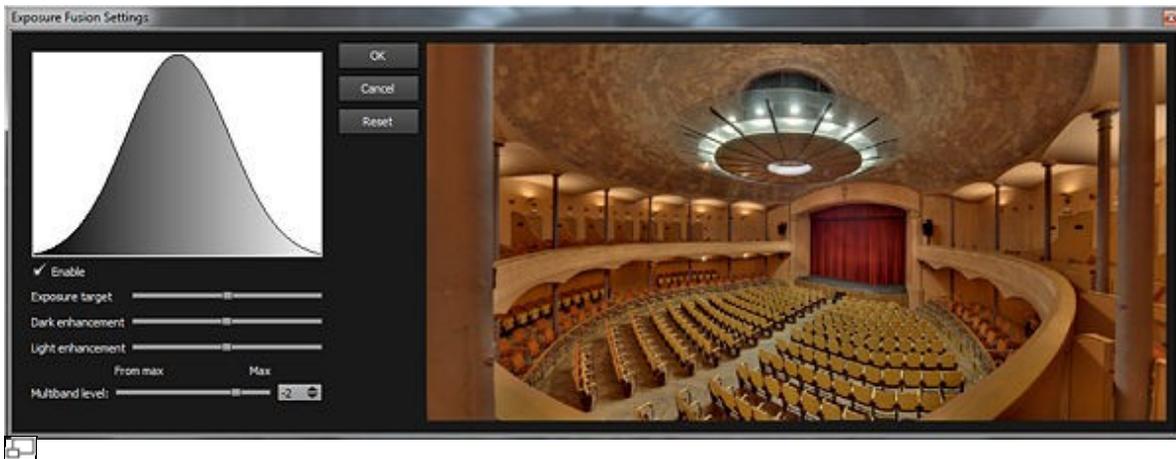
In this first example, we use the test images from the Freeman's book.

LDR / HDR - Workflow case B



Settings

To get a preview of the fusion in the editor, you only need to enable it on the fusion tool window.



The default settings tend to keep overall average brightness

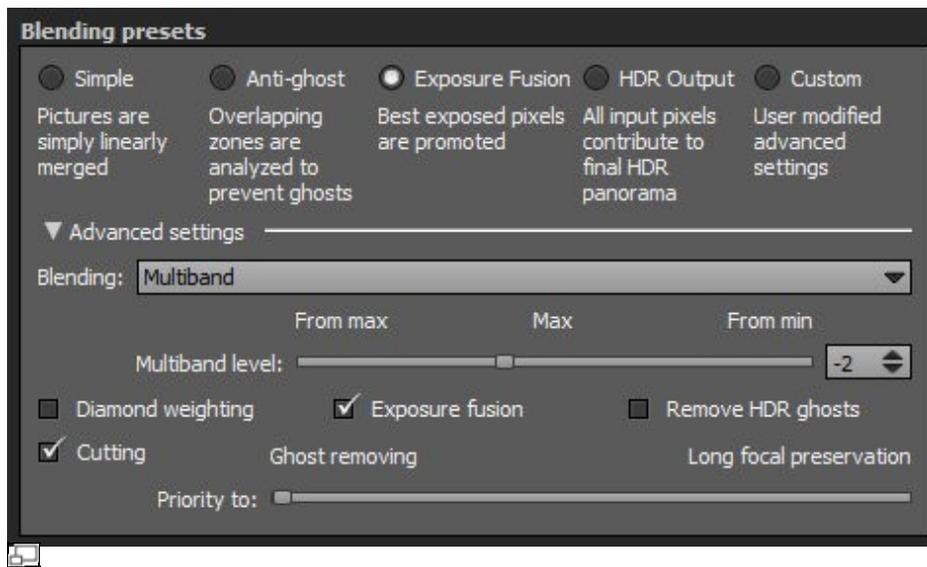


Playing on the settings allows for example to target a higher brightness

In the Render settings, use the **Exposure Fusion** preset.

You should know that if the fusion has not been enabled in the editor but that the **Exposure Fusion** preset is used

on the rendering, the default settings of the fusion are used (targeting an average exposure).

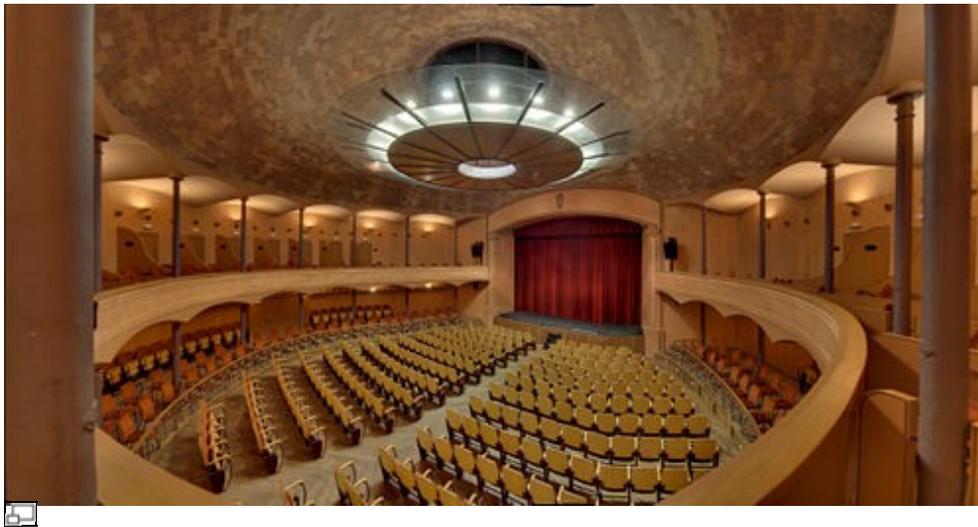


Render

To illustrate the final result we left the default settings even if it was not necessarily the most esthetical choice.

We just note that the final goal is reached:

For the brightest areas of the scene (the lights!) the information used comes from the under-exposed brackets; and for the darkest areas, the information has been taken in the highest exposures.



We can also note that in the fusion's case, it was useless to shoot too many brackets. Very underexposed images did not contribute to the final result. This is not necessarily applicable in the case of an HDR output where the aim is not to choose the pixels from the best exposures but to combine information from different exposures (this is only possible if the dynamic range of the rendering format is really HDR).

Example 2

Source images

This example is similar to the previous case, but more like the bracketed shootings made by the majority of users.

That means less exposure levels (3 levels here) and an automatic reference exposure (brackets levels are not identical).



Settings

The settings are almost similar to the previous case too. But as the brackets don't get the same reference exposure levels, the result of the blending can be locally unbalanced.

To avoid this, we increase the Multiband blending level going from -2 to 0.

On the top, the result using the **Exposure Fusion** preset (by default). At the bottom, the result using the Multiband blending level increased.



Exposure Fusion preset



Multiband blending level increased

Generally, increasing the Multiband blending level allows multiband rebalance the final rendering. However, if the level is too high, the final result can be a bit "flattened". So it needs to increase this level **only if necessary**.

Example 3

Source images

Some scenes don't need to be fully bracketed. In this example, the ambient light is fairly balanced except for the shot of the bay window.

We thus only brackets the shot of the bay window.



Settings

We must check that both bracketed pictures have been added in different layers to avoid the LDR color correction to deal on these images (color correction must be set by layers).

Note : if the main layer is well balanced, it is not necessary to enable the color correction.

Name	Aperture	Speed	Iso	Focal
▶ <input checked="" type="checkbox"/> N_0				
▼ <input checked="" type="checkbox"/> N_1				
<input checked="" type="checkbox"/> (7) DSC_0393.jpg	F13.0	1.6	200	15.02mm
▼ <input checked="" type="checkbox"/> N_2				
<input checked="" type="checkbox"/> (8) DSC_0394.jpg	F13.0	1/2.5	200	15.02mm

You must use the **Exposure Fusion** preset. The fusion will be apply only where different exposure images are located.

Render

The fusion has preserved more matter in over-exposed area of the bay window.



Result using the same exposure images



Result using the bracketed images

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