HDR projects 4 elements

User Manual

Contents

1. Activation

Upon starting *HDR projects 4 elements* for the first time, you will be prompted to activate the program. Proceed as follows:

Install *HDR projects 4 elements* as described by the installation wizard.

Input your serial number. For the box version, this can be found on the accompanying booklet. If you have chosen to download the program, you will have received the serial number by email directly following your purchase.
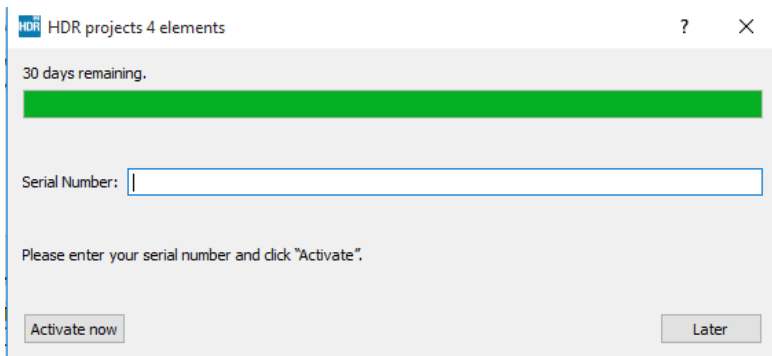
Finally, click on the "Activate" button. The software has now been successfully activated!

Note: *HDR projects 4 elements* can be installed on up to two computers using the same serial number.

A second serial number is not necessary. When installing the program on a second device, simply enter the serial number again and press "Activate".

2. Fascinating High Dynamic Range Photography

Even the most modern digital cameras have a limited dynamic range. Drastic lighting contrasts exhibit this restriction easily, such as with a photo taken indoors looking outside, like in the first example shot. You either have a properly lit interior, where the surrounding park behind the arches are far too bright, or an image with an adequately lit park, but with an interior that is far too dark.

HDR technology, short for *High Dynamic Range*, clears up this problem by generating images with an extremely large dynamic range, unmatchable by monitor displays or prints.

The idea is simple - several images with varying exposure times are assembled into one image. In our example, three shots are fused: an image with a longer exposure time to capture the dark details inside the pavilion, a short exposure shot where the park behind the pavilion is correctly lit, as well as an exposure exactly in the middle.

The combined result is a single image containing all of the light, midtone and shadow detail. *HDR projects 4 elements* does the work for you. The capable program merges the bracketing exposure images and uses tone mapping to establish a photo fit for printing and screen displays.

The combined image contains all of the details of the pavilion and park, properly lit just as we saw the scene with our own eyes.

In the next few pages we will show you how quickly you can create fascinating images with **HDR projects 4 elements** and what you can achieve with its immense range of functions.

An obvious case for **HDR projects 4 elements** - an evening scene with lanterns can only be captured naturally using HDR technology. Otherwise, the dark surroundings would not be capturable with the bright lights. A camera sensor's range of contrast is very limited when compared to that of the human eye.

All of the details are realistically depicted in the fused photo.

Tip: Always capture your bracketing series with different exposure times, not just with different blending values. Merging the images requires an identical depth of focus for all of the individual shots.

3. What's New?

HDR projects 4 elements offers many new features. Here is an overview of some of the most important developments:

✓ New Ultra HDR technology for fusing bracketing series: Ultra HDR processes up to 30 intermediate images between two photos with 64-bit precision. The result speaks for itself, and clearly shows a more detailed picture, especially in difficult situations, for example when shooting directly against the
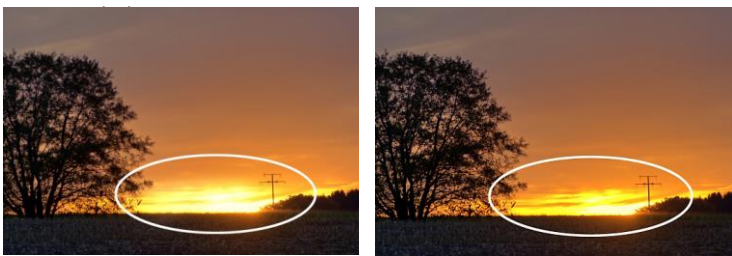
The strength of Ultra HDR can be seen in sensitive situations: the sunlight in the image on the right is significantly more detailed and less overexposed.

This highly precise calculation system can be applied to specific types of motives: daylight, landscape, twilight, architecture, interior, night-time and mixed light.

✓ A history browser shows all edited bracketing and projects, instantly selectable with a single click

✓ The intelligent Optimisation Assistant can now be used for eight finely tuned optimisation variations, from natural to brilliant to low-key

- ✓ Completely newly developed tone mapping category "Colour Fidelity" for extremely natural colour rendering through tone compression. The preset category "Shine" has also been added, which uses glow/shine effects to enhance images

- ✓ 57 new and optimised presets with gallery functions

- ✓ Customise program features - configure saving formats and automatic settings.

- ✓ Image tailoring with 71 format templates and new help tools like the golden spiral, the golden cut and the rule of thirds as guidelines

- ✓ Optimisation of HDR as well as post-processing engines

- ✓ Two-fold speed increase and more

4. HDR Photos Done Quickly

You can obtain a finished HDR image in just 5 clicks with *HDR projects 4 elements*.

1. Load Images

2. HDR Preparation

3. Post-Processing Preset Selection

4. Optimisation Assistant

5. Select Image Detail and Save
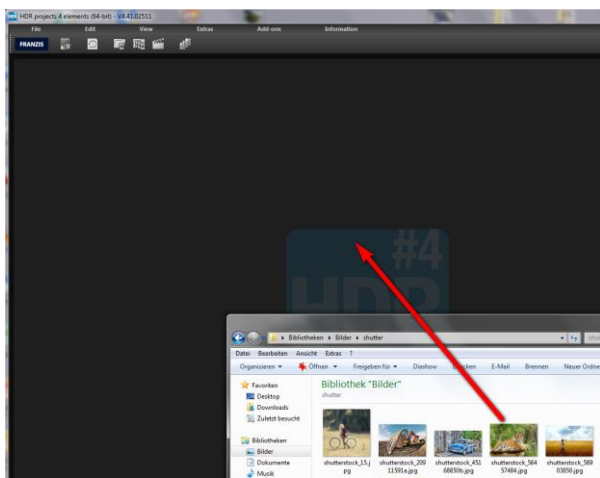
You can simply drag and drop your images or bracketing series onto the start screen

How to get the results you want, and fast - the elaborated presets and looks, individual image adaption and selected drawing allow you to also go the creative route. *HDR projects 4 elements* offers both options.

5. Importing Image Material

To load a single image or a bracketing series, simply drag and drop the images onto the start screen. Alternatively, you can also use the toolbar buttons or drop-down file menu.
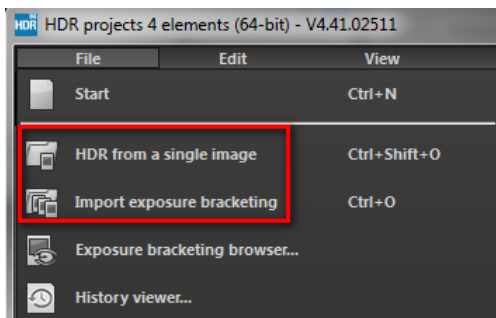

As soon as an image or a bracketing series has been selected or dragged and dropped into the program, start the HDR preparation dialog via « Extras » → « HDR Preparation ».
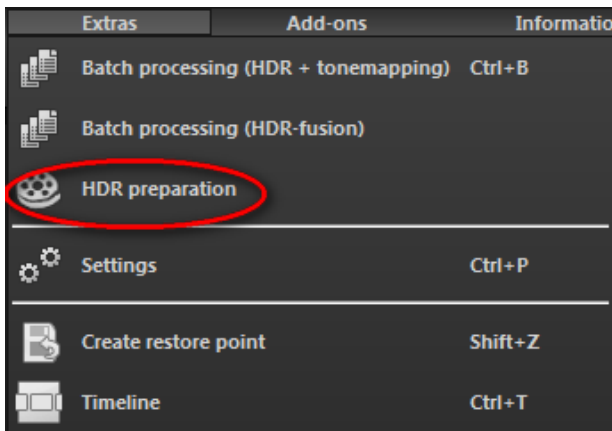
6. HDR Preparation

Here you can precisely configure the program's settings.

For the first steps, please use the standard settings. These default settings can be restored with the arrow at the bottom left. Nothing can be irretrievably adjusted.
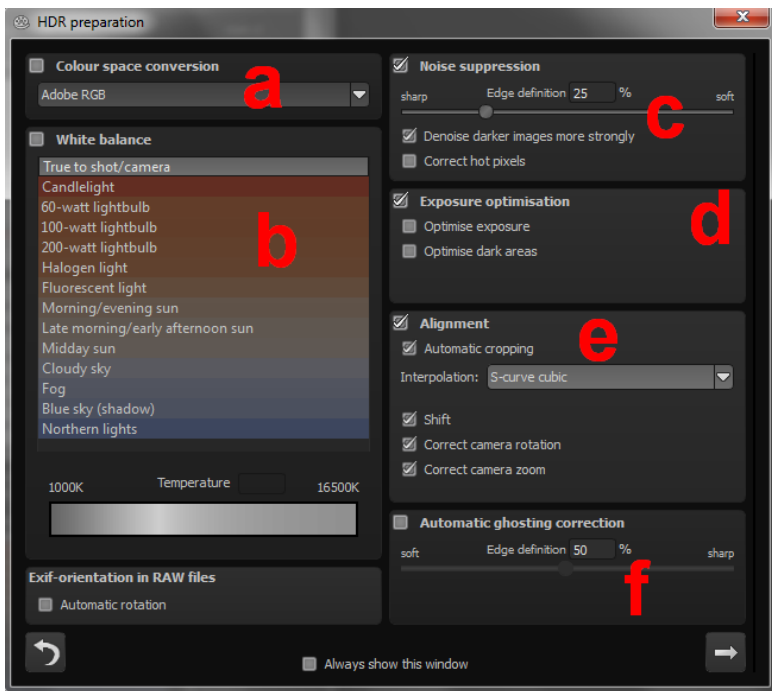
a. Colour space conversion: advanced users can choose a colour space here - for all other users, it is recommended to not make any adjustments, to avoid incorrect colour rendering later.

b. White balance: corrects colour casts that occur with shots taken, for example, in a warmly lit room. To start, leave this setting unchanged.

c. Denoise: these buttons allow you to select the precision of the noise removal, and the slider regulates the degree of the sharpness for the edges. Here dark images can undergo significant noise removal and have hot pixels (light spots caused by the camera's sensor in dark situations) eliminated.

d. Exposure optimisation: can be chosen if an image in a bracketing series is improperly lit and/or blurry, and must therefore be supplemented by the program. With a dark bracketing series, it is recommended to use the "Optimise dark areas" function to remove any colour casts. Light areas and details can also be optimised for bright bracketing series.

e. Alignment: here you can influence how the individual images of the series are congruently positioned on top of one another. The subtlest movement of an object, unintentional zooming or rotating of the camera can be considered. In the majority of cases, the default settings often lead to the preferred result.

f. Automatic ghosting correction: **HDR projects 4 elements** uses a highly precise ghosting removal to filter out subjects and people moving within the bracketing series. Without correction the people or vehicles in the final image would appear half transparent several times and create a complete jumble.

Fusing the images without ghosting removal. People are always on the move in a busy train station! Without correction, ghosting always occurs with multiples exposures.

7. Post-Processing: Presets
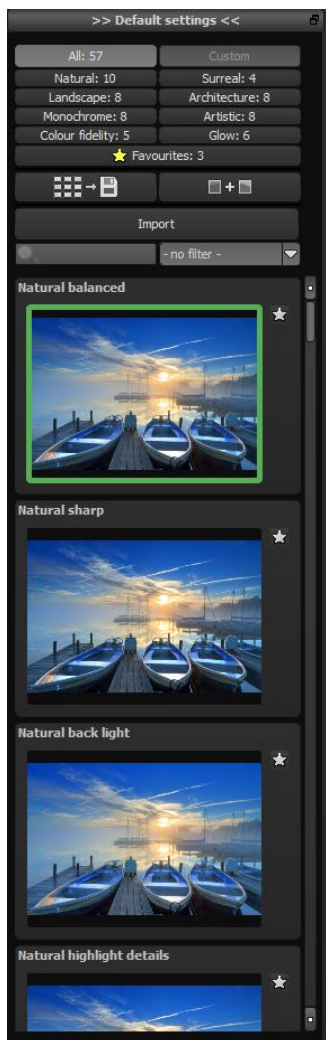
A change from previous versions, we are starting directly with post-processing after uploading the images. Here we can control the picture's tone mapping and edit the results with filters and effects.

Left side of the post-processing screen: the presets show the breakdown of the live preview in categories - "All", "Natural", "Landscape", "Monochrome", "Colour fidelity", "Custom", "Surreal", "Architecture", "Artistic", and "Glow" with the quantity of presets in the appropriate category.

To begin, we've chosen the "Natural balanced" preset. Clicking on the preview image applies the effect to the image in real time, which will then be displayed in the middle of the screen. Discover the wide variety of different looks by clicking on the 57 different presets. You will be amazed by the intriguing styles in the artistic section!

Panel (left side):

>> Default settings <<

All: 57	Custom
Natural: 10	Surreal: 4
Landscape: 8	Architecture: 8
Monochrome: 8	Artistic: 8
Colour fidelity: 5	Glow: 6

★ Favourites: 3

Import

- no filter -

Natural balanced

Natural sharp

Natural back light

Natural highlight details

Image with "Natural balanced" preset

Image after applying the "Artistic Artwork" preset

All 57 **HDR projects 4 elements** presets at a single glance. The "Presets" section can be separated from the rest of the interface by clicking on the "Default settings" bar, which then allows you to adjust the size of the window as you like.

> **Preview Gallery**
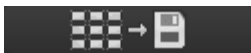
Would you like to see all the previews for the loaded image or series? Click on the "All" category.
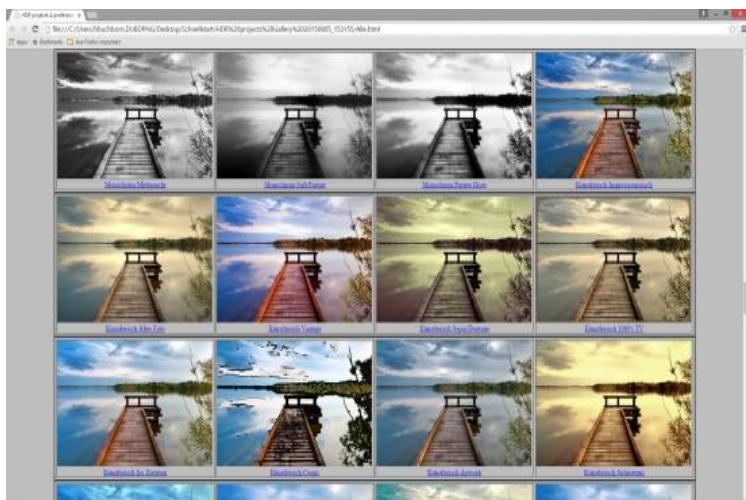
This very practical feature is reminiscent of good old contact sheets. You can create proofs to assess how the image with your favourite presets would look when printed.

➢ **Comparison View**

Do you want a comparison to the HDR image without tone mapping? Simply right click on the middle of the image to see the before/after result. A quick check on the editing process is available at any time. For an extensive overview with selectable areas and luminance display, click on the symbol bar.

➢ **Preview Mode**

When this option is activated, the result image will appear as a small preview size. If this option is deactivated, the picture will appear in its true size. Please note that processing the preview can take longer when this feature is deactivated.

➢ **Real Time Processing**

When activated, all of the changes that you have made to the preset settings will be immediately applied to the image and you will see the outcome of your adjustments directly.

> ➢ **High-Quality Display**

Activate this option to see the preview image in high-resolution. If the preview is set at 100%, there will be no difference. If you zoom in on a section of the photo however, there is a noticeable difference in quality.

> ➢ **Border Pixel Display**

The border pixel display helps to reveal areas that tend towards maximal light and dark values, that is to white and black. Dark border pixels are depicted by blue and light pixels by orange.
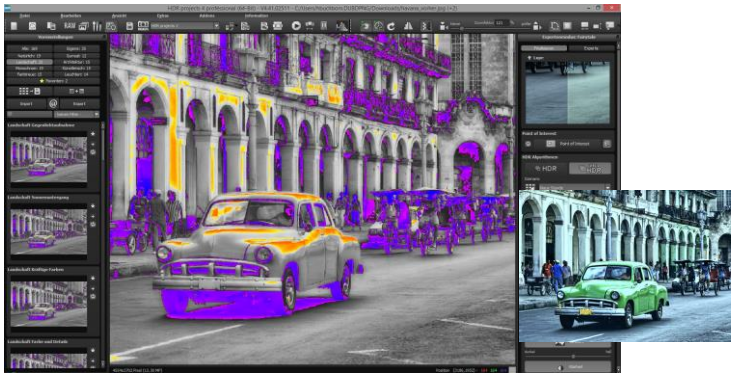
Depiction of border pixels in dark blue and orange tones

If you would want to brighten this image, you have to be careful of the orange border pixels. Light surfaces on the car and the walls should not become too white, in order to avoid losing detail. In technical terms, these patches are called "burned highlights". The border pixel view helps to find these critical image areas.

➢ **Combine Presets**

To merge two looks together use the "Combine default presets" button directly under the categories. These new presets will be saved under "Custom". It's that easy to expand your numerous options and accumulate new ideas!
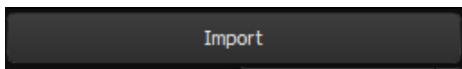
➢ **Name Favourites**

Have you found certain presets that you love and instantly want to have handy? Click on the top right star in the preset window and add the setting to your favourites. By clicking the button, previews all of your favourite presets will be displayed.
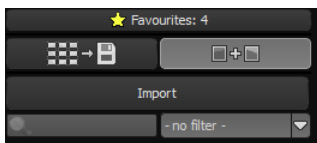
➢ **Import from Presets**

Import

Presets from earlier versions can be easily imported. Do you want to exchange all of your presets with a friend or just secure all of your treasures? Use the practical export function.

➢ **Filter Presets**

Locating presets can be difficult when you have imported presets or created many additional looks. For example, enter "filter" into the search bar and only presets relating to "filter" will be shown.
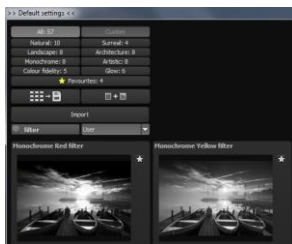
8. Post-Processing: Finalise

```
finalise
```

Now that we have understood the most important part of post-processing, let's go onto fine-tuning, which can be found on the right side of the screen under "Finalise". These features are intended to only to be used to edit pictures further after selecting a preset.

> **HDR and Ultra HDR**   `HDR`   `ultra HDR`

Ultra HDR processes up to 30 intermediate images between two photos with 64-bit precision. The result speaks for itself, and clearly shows a more detailed picture, especially in difficult situations, for example when shooting directly against the light. These settings can be accessed in post-processing at any time. See chapter 3 "What is new?" for examples.

> **HDR Algorithms**

Here a mathematical equation is used to determine the weighting of each individual exposure in a series - pixel for pixel. Every algorithm has a different effect depending on the bracketing and subject. There is no right or wrong here, rather your originality is in command. Test your bracketing series with different algorithms and see how they affect your photos.

Tip: The HDR algorithm "Entropy", in most cases, will yield a finely tuned and detailed result in all tone values.

> **Scenarios**

Additionally, the HDR fusions can be influenced by different scenarios. If you would like to adjust your result to a certain lighting, select one of the following seven scenarios: "Daylight", "Landscape", "Twilight", "Architecture", "Interior", "Night-time" and "Mixed Light". The scenario option has an overview of all of the possibilities that can be directly applied with just one click.

> **Intelligent Colour Space (SCA Processing)**
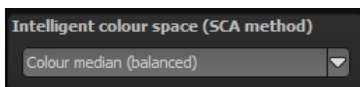
This menu offers you options for optimal colour detail gradation of your tone mapping results. Selecting SCA processing (Smart Colourspace Adaptation) demonstrates differences in the details of more saturated colours.
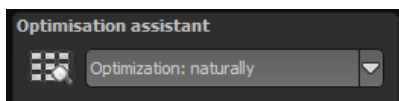
Tip: With "Supersampling" you will get exceptional details and saturated colours!

> **Tone Mapping Light Effect**
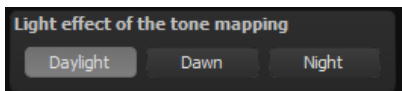
Adjust your image to whichever time of day you prefer. By applying "Night", the image will be brightened, to adjust the light accordingly.
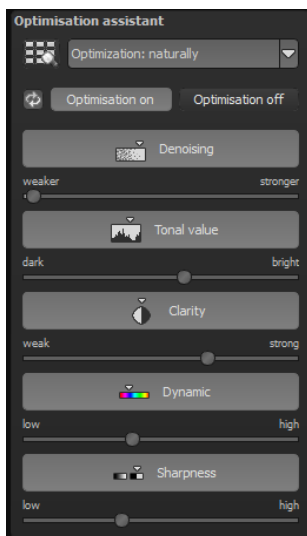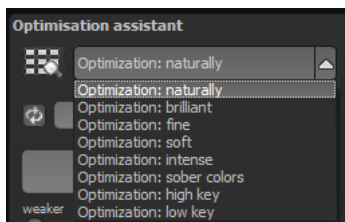
➤ **Optimisation Assistant**

The optimisation assistant is a very efficient tool for fast, fascinating

results. When the preset is activated, denoising, tonal value, clarity, dynamic and sharpness settings can all be adjusted by sliding the control to the left or right. The result can be seen live. The optimisation assistant is intelligent; it remembers the values you entered, and applies the same settings to the next image in the same way, but tuning the result to the new motif.

If you would like to edit without the assistant, you can simply turn it off. If you would like to turn off the values that have been "learned" so far, click

on the

Additionally, the assistant can be given optimising specifications for an entire image style: choose between natural, brilliant, fine, soft, intense, sober colours, high key and low key.

Pro Tip: Remember that the preset specifications and Optimisation Assistant are added together. If you select the "Surreal powerful colours" preset and the "Intense" optimisation, you will get strong, saturated colours and dramatic contrast. Not to worry, you can quickly change back to the "Natural" optimisation and have the familiar look of the "Surreal powerful colours" again. On the other hand, you can compile new creative ideas and jump between intense, unsaturated and high and low key looks lightning fast.

> ### ➢ **Scratch and Sensor Errors**
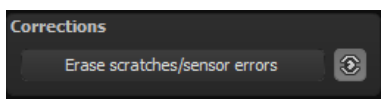
Micro-contrast enhancement used in HDR photography unfortunately shows every unwanted sensor imperfection that every photographer, despite internal camera sensor cleaning, knows and dreads. Don't stress - just eliminate them! With the easy to apply correction function from **HDR projects 4 elements**, it can even be fun.

Pro Tip: This intelligent correction doesn't only remove sensor spots, but other disturbing things too - a deserted beach has never been so easy to produce.

Lightly mark defects in your motif, the program will automatically substitute these areas with other appropriate parts of the image.

Here's how to go about correcting:
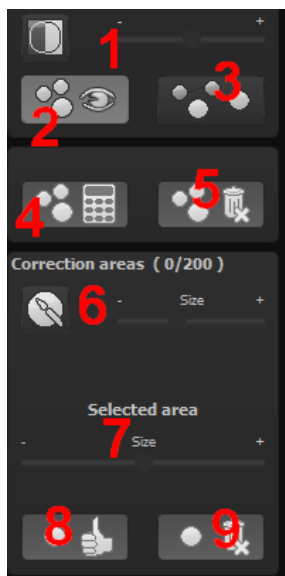
Select the brush tool under **(6)** and click on the point of the image that you would like to correct. A circle will appear beside it that will serve as a source.

Move this circle to a place on the image that can act as a source for the first marking. The selected area will then be improved based on the source.

Prior to this, you can reveal sensor spots, which will appear as a bright patch in the image, with **(1).**

(2) allows you to expose or hide the fixed areas. Even when the corrections are still active, even if they have been blended in. Hiding is solely to enable a before and after comparison.

You can select multiple areas to correct by simply clicking on the brush symbol **(6)** and adding another point.

The button marked **(3)** can blend the targeted corrections in and out, which also controls clarity.

(5) deletes the added corrections.

The section marked **(7)** controls the size of the area that is to be corrected.

You also have the option to automatically search for the best source area for the improvement. Click on the (8) button.

Button **(4)** calculates the appropriate correction spots for all of the points automatically set using **(8).**

All currently selected corrections can be deleted with the **(9)** button.

The sensor spots are circled in red

The sensor spot corrector marks all of the patches and determines a source within the image that can be used as a substitute.

Successful sensor spot correction.

9. HDR Generation and Bracketing Editing

What happens in actual HDR image generation in *HDR projects 4 elements* before post-processing has made the image printable and suitable for display on monitors?

In a bracketing series, every individual image area contains a various number of pixels that are either under or over exposed. Let's assume that every section of the photo is correctly exposed in at least one of the images in the series.

HDR projects 4 elements uses a complex process to correctly filter out all of the accurately lit pixels and assemble them into one complete image. The process is determined by mathematical commands - the algorithms. Various algorithms influence different HDR results, which depend on the final brightness of the series of images.

The software professionally takes over this process for us. We simply have to attend to the result and decide which outcome is most visually pleasing to us and which HDR image we would like to edit further.
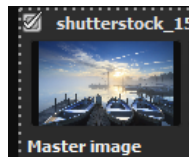
> **HDR Weighting**

From post-processing in *HDR projects 4 elements*, transfer to HDR generation with this button. We see the work area on the left hand side for HDR weighting, and HDR algorithms on the right. Your HDR picture will always be displayed in the middle of the screen while editing. At the moment the image doesn't look all that spectacular, but remember that the monitor cannot yet properly show what was actually calculated.
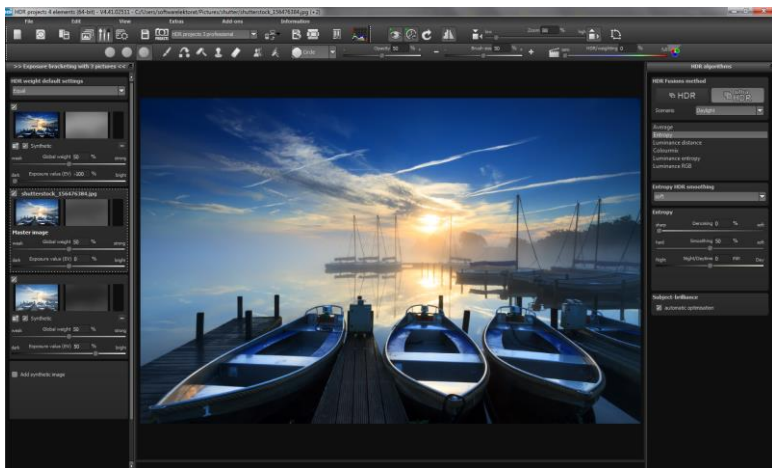
a. The checkbox at the top left allows you to exclude or activate an image from the series for the HDR processing. If you remove a bright picture from the series, the HDR image will be darker in the midtones in certain areas and vice versa.


b. Directly below is the miniature view of the single bracketing exposure. Left click to display the image at full size. Another left click on the mini-picture will return the HDR final image.
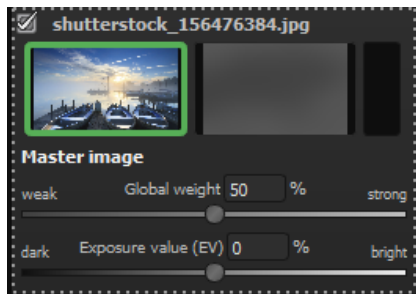
c. To the right of the colour view is the HDR weighting matrix for the particular image of the series. **Bright pixels** indicate that this area will have a significant influence on the resulting HDR image. **Dark pixels** indicate that this shot will have little influence on the final HDR photo.

d. The minus button [-] under the weighting colour removes an

image from the loaded bracketing series. It is only possible to delete exposures that are above or below the master image. The master image itself cannot be removed and has no minus symbol.
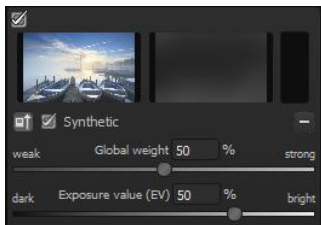
e. The button to the left under the bracketing preview image selects a new master image. You will clearly see a significant difference in the brightness distribution of the HDR fusion.

> **Synthetic Bracketing**

With help from this exceptional technique, gaps in bracketing series can be filled.

Let's suppose, and this is no individual case, that the longest exposure of a series came out somewhat blurry. Click to remove the image from the series and let the system generate a synthetic bright image for you. All of the shots in the series are already sharp.

This technique can also be used for manufacturing an HDR image out of a single picture. Two synthetic exposures will be generated for an uploaded single image, one with reduced exposure time and one with increased exposure time. An additional image will be synthe-

sised when only two bracketing images are uploaded so that there are always at least three photos available in a bracketing series.

Click on ![Add synthetic image] and add another synthetic image to the series. The original image will always be used as the master image. New images will be labelled as "Synthetic".
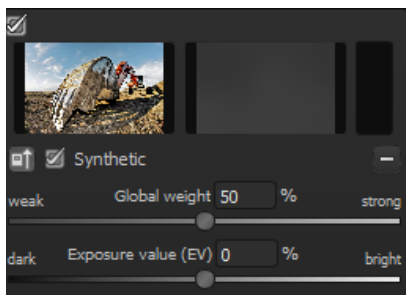
> ➢ **Global weight & Exposure value (EV)**

For every exposure in bracketing series, synthetic or real, there are two controls that are very influential on the HDR process:

- Global weight
- Exposure value (EV)
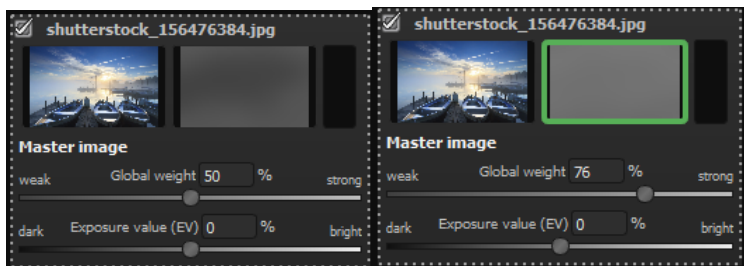
The example shows the master image directly after being loaded. The weighting and exposure controls are in the middle. The window

to the right of the preview shows how the image is represented in the HDR fusion. Sliding the global weight to the right, raising it, increases the proportion of this image in the final HDR fusion. This can also be recognised through a brighter weighting matrix. Here "Bright" does not mean that the image will become brighter, rather that the shot will compose a greater portion of the HDR fusion. The result can become brighter or darker.

The picture will become brighter once you adjust the exposure control underneath towards "Bright". This adjustment can be applied to each image in the bracketing series and therefore have a substantial impact on the HDR fusion.

➢ **Global Weight**

Above the actual bracketing series are the presets for global weight called HDR weight default settings.

You can choose an automatic setting for global weight from four algorithms with these presets:
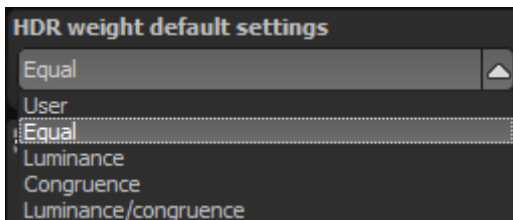
Equal: all of the weight will be set to the middle position, and every exposure of the bracketing will be equally represented

Luminance: sets all global weight to an average brightness (luminance) that corresponds to each respective image in the series

Congruence: sets all global weight to a value corresponding to the average amount the bracketing images cover the master image

Luminance/congruence: sets all global weight to a value corresponding to the average brightness in relationship to the average coverage by the bracketing images

Pro Tip: Choosing a congruence setting can, for some bracketing, lead to less ghost images.

> **HDR Algorithms**

The HDR algorithms can be found together with the setting controls at the right side of the user interface.

HDR algorithms are mathematical procedures that determine the weight of individual images from a bracketing series pixel for pixel. (See HDR Weight) Every algorithm affects the final HDR result differently and, depending on the motif, more or less intensely.
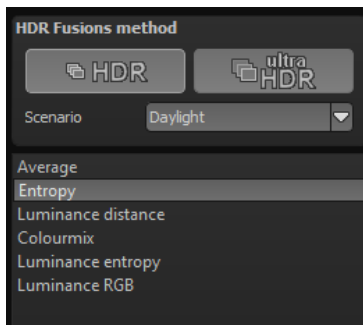
> **HDR/Ultra HDR**

New Ultra HDR technology for fusing bracketing series: Ultra HDR processes up to 30 intermediate images between two photos with 64-bit precision. The result speaks for itself, and clearly shows a more detailed picture, especially in difficult situations, for example when shooting directly against the light. See chapter 3 "What's New?"

for examples. These settings can be accessed in post-processing at any time.
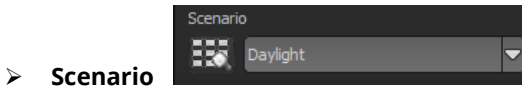
➢ **Scenario**

HDR fusions can also be influenced by different scenarios. If you would like to adjust your result to a certain lighting, select one of the following seven scenarios: "Daylight", "Landscape", "Twilight", "Architecture", "Interior", "Night-time" and "Mixed light". The scenario option has an overview of all of the possibilities that can be directly applied with just one click.

➢ **Overview of HDR Algorithms**

HDR projects 4 elements offers 6 different HDR algorithms to choose from.

Average: The average is the easiest form of HDR generation and uses the bracketing midtones.

Entropy: In information theory, entropy is a measure of the density of information. When applied to an HDR fusion, the appropriate algorithm measures the density of information of each of the bracketing images pixel for pixel and converts this weight into the HDR generation. The result is a very stable process that is set as a standard algorithm for *HDR projects 4 elements*.

Luminance Distance: Luminance distance applies the average brightness distance in the image as the weighting for the HDR fusion. This algorithm is also a universally applicable process that can be used for almost every bracketing series.

Colourmix: The colour mix process applies the colour proportions of the pixels as a weighting measurement. It is particularly suitable for bracketing series with limited brightness differences in certain areas, for example fog, smoke or cloud shots.

Luminance Entropy: The luminance entropy is a combination of the *Luminance Distance* and *Entropy* **processes**.

Luminance RGB: The RGB process combines the *Luminance Distance* and *Colourmix* processes into a new procedure which is best suited to landscape shots.

HDR Smoothing for Selected Algorithms: Just below the selection list for HDR algorithms is a block with controls for fine-tuning colour sharpness: "Entropy HDR smoothing" from sharp to very soft.

Entropy HDR smoothing

soft	▲
custom	
sharp	
normal	
soft	
very soft	
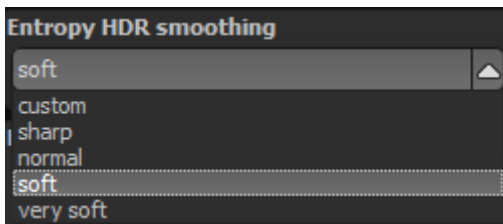
Denoising: Denoising appears directly on the HDR image and the noise removal intensity is also presented as a percent. A value of 0% means that no noise pixel will be removed, and a higher value removes more noise from the HDR image, which would be favoured for sharpening an image.

HDR Smoothing: HDR smoothing directly influences the weighting matrixes that were created by the HDR algorithms. The smoothing intensity is displayed as a percentage, indicating how dependent the

result is on the image resolution. A value of 50% means that weighting matrixes will be smoothed by 50% of the image resolution.

Night/Daytime: The day and night controls match the HDR algorithms to day or night shots. Move the control to the left for night, when your bracketing series is suited to a night image, and to the right for day, when your bracketing series is suited to a photo taken during the day. You can also just as easily switch the setting to quickly change the picture's mood.

For some HDR algorithms there is an additional feature available, in this example the "Luminance Distance":

Halo Adjustment: The halo adjustment deals with a typical HDR generation problem: the formation of halo effect (HDR shadows). The image on the left has a minor defect, there are halos where the roof meets the sky. In the right-hand image, the halos were reduced by 85%, so that the halo effect around the roof has disappeared.
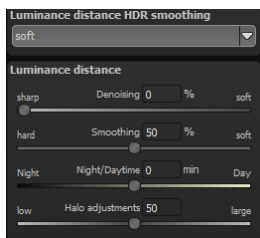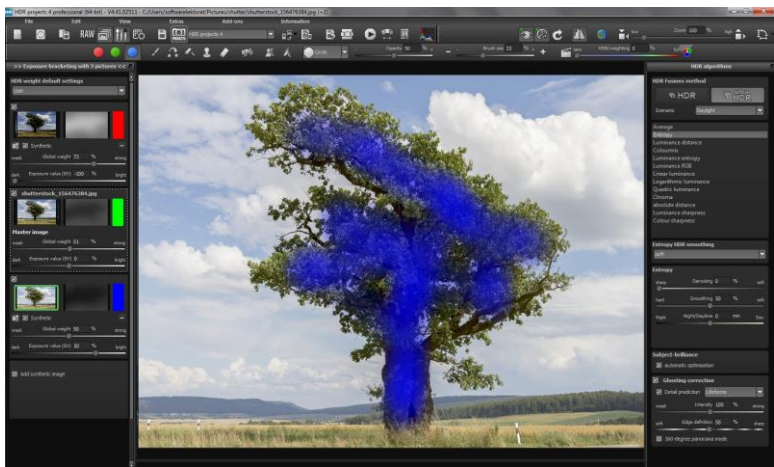

The halo control is available for certain HDR algorithms, here the "Luminance Entropy" algorithm was used.

10. Edit Weighting with HDR Painter

HDR painter is a powerful tool to manually adjust certain areas by editing individual images of a bracketing series.


Exposure Bracketing View (left): The individual images of a series are sorted into red, green and blue. When the bracketing has more than 3 exposures, the master image will be set as green and the next active neighbouring images as red and blue. If you would now like to make changes to the weighting of a particular image, pay attention to the image's colour and choose the respective colour in the paint symbol bar.

To clarify: The brush does not mean that you paint colours goes onto the image, rather that you can adjust the brightness weighting in certain areas of individual images. For example, an HDR result shows a landscape where the exposure is correct everywhere, ex-

cept the tree in the foreground is too dark. Here you can select the brightest image from the series and enhance the brightness of the tree by "painting" on the object. The final fusion is a balanced image with a correctly lit tree in the foreground.

Adjusted Weighting: After drawing, the adjusted weighting can be seen to the right of the individual image. The white drawn strokes mean that you have emphasised the tree in the brightest image and that the tree will be brighter in the HDR result.
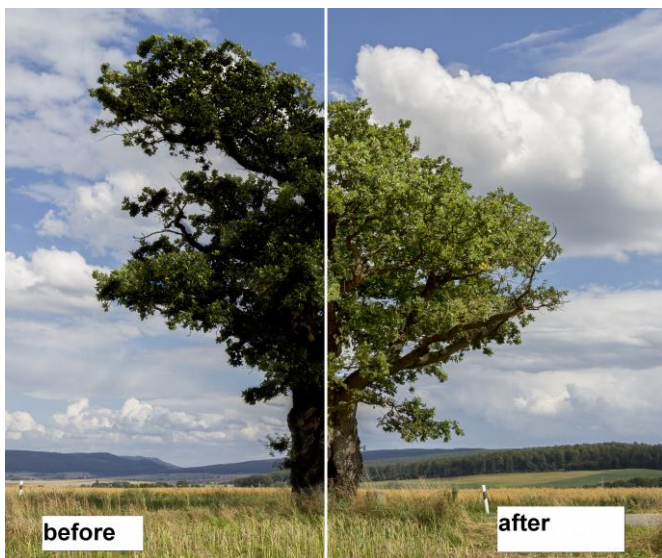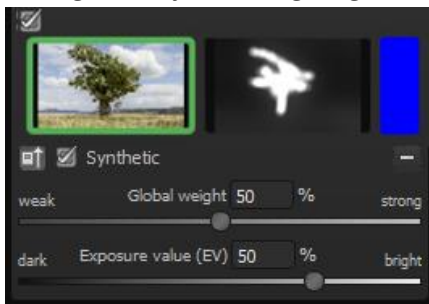
The tree was selectively brightened, without touching the brightness of the sky, clouds or plains. The diffused brush makes the transitions invisible. The result is a properly weighted image with a correctly lit tree in the foreground. The well structured sky remains in the background.

➢ **Important HDR Painter Tools:**

Increase weighting   Draw on the selected area to enhance the weighting of this portion of the image.
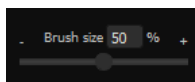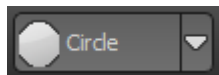
Reduce weighting   Draw on the selected area to reduce the weighting of this portion of the image.

Brush size   Adjust the size of the brush.

Brush size 50 %

Brush form   With numerous new brushes, you will find the right form for your selected area.

Circle

Stamp   The stamping mode not only edits the weighting of the current image, but adjusts the weighting of all of the other exposures accordingly. For example, if you use the paint tool to increase the
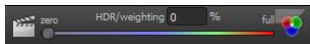
weighting of an area in one image, the weighting of that same section will be reduced in all of the other exposures to amplify the effect.

Blurring

If you want soft transitions between corrected and original areas, trace the blurring function over the borders to soften the transitions.

HDR image/weighting

This function mixes the view between the HDR image and the weighting. This is very effective for maintaining control while drawing.

Delete weighting

Delete the drawn weighting for the active image of the series.

Delete all

Warning: This function deletes all of the drawn weightings and returns to the initial settings.

11. Ghosting Removal with HDR Painter

When we manually adjust parts of images, it naturally has an effect on the program's ghost image correction. Ghosting can occur when capturing a bracketing series of a scene where people or vehicles are in motion and thus captured at a different position in every shot. Without the automatic ghosting removal from *HDR projects 4 elements,* the moving objects would appear at a different position in every image, thus causing a ghost-like effect.

Manually removing ghosting:

The following example illustrates how HDR painter can eliminate the regular problem of people walking through a bracketing series.

Here is the example after being uploaded and without ghost removal:
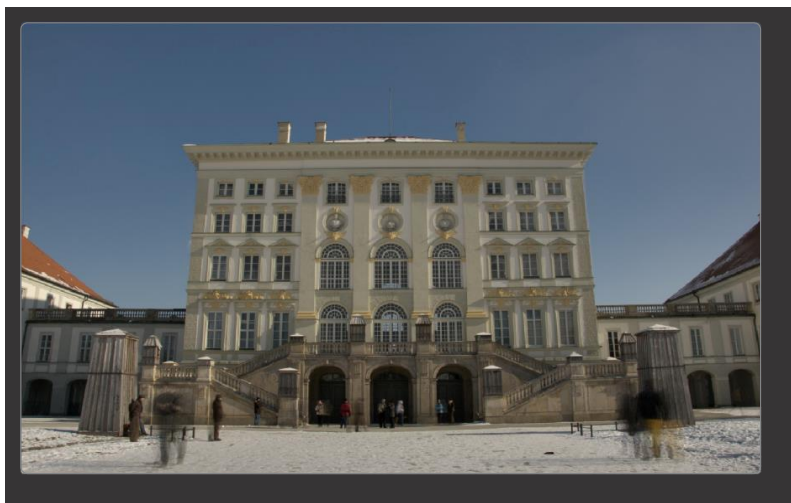
Looking at the image, the people on the left and right are immediately recognisable as ghost images.

Let's remove the ghosting as follows:

1. Find the image in the series displayed on the left, that comes closest to the brightness of the HDR image. This is usually the master image or one above/below.

2. Select the button for the appropriate colour for this photo, and *HDR projects 4 elements* will allocate red to this image and automatically open the HDR drawing mode.
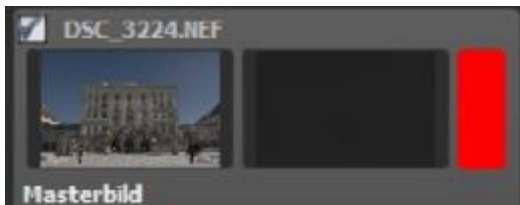
3. Select the "Increase Weighting" function and activate stamping mode.

4. Draw over the people by carefully dabbing with the brush.
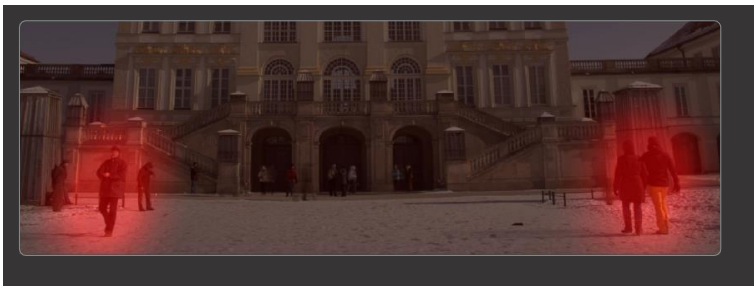
5. Select the "Blurring" button and stamping mode.

6. Carefully trace the edges of the correction with the blurring brush. Done!

Switch to tone mapping and select the "Natural sharp" preset to see the result.
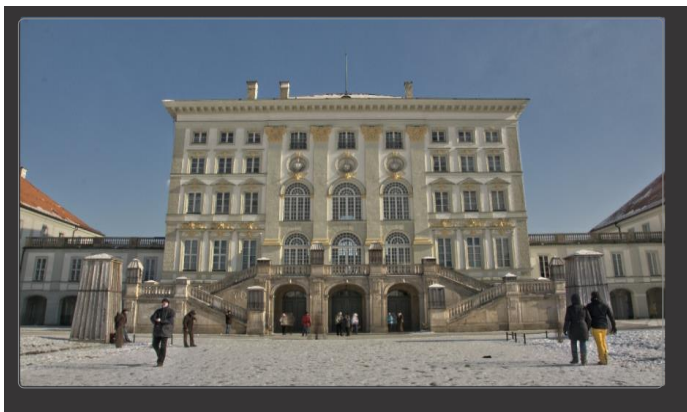
The ghosting has disappeared from the HDR image!

Tip: "Dabbing" the brush is the optimal method for best results.

If you would like the program to automatically remove ghosting or you have simply forgotten to activate the ghosting removal in the

HDR preparation when loading the images, click on this button to start a new evaluation.

Warning! A new evaluation eliminates all manually removed ghosting!

12. Workflow

Edit final image further in an external program

HDR projects 4 elements offers interaction with external programs. That way you can take a successful HDR result to another photo editing program and continue there.

➢ **Open in other *projects* programs**

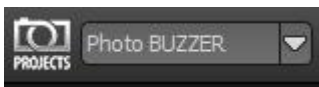Click on the "Projects" symbol in the toolbar to open the image in a different program from the *projects* series. Use the drop-down menu beside the symbol to choose one of the programs that you already have installed on your computer.

➢ **Open in other photo-editing programs**

To directly open the image in another photo editing program, such as Adobe Photoshop, click on the corresponding button in the symbol bar.

If necessary, go through the settings to show the path to the program. Click on "Extras" in the menu and select "Settings" in the drop-down menu:
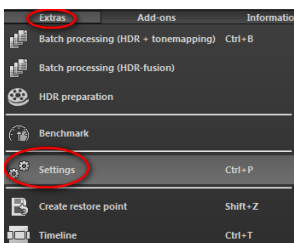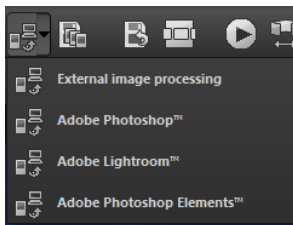
Next, click on the "Export" tab. You can enter the name of a photo editing program here, and save it for later as well.
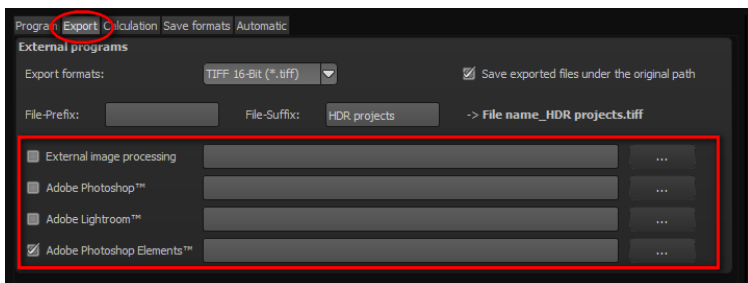
> ➢ **Work with a timeline and restore points**

This option can be found in the symbol bar at the top edge of the screen:

"Create Restore Point" saves an in-between point of the current settings. You can now always return to this stage of your editing. You can save as many editing restore points as you like. The timeline displays the restore points and makes it possible to call up any phase with just a single click:

This function is especially useful when, for example, you are satisfied with an image, yet want to continue trying out different settings and effects. Simply set a restore point and carry on editing your picture. If you want to go back, simply click on your restore point in the time-line.

13. Selecting and Saving Sections of Images

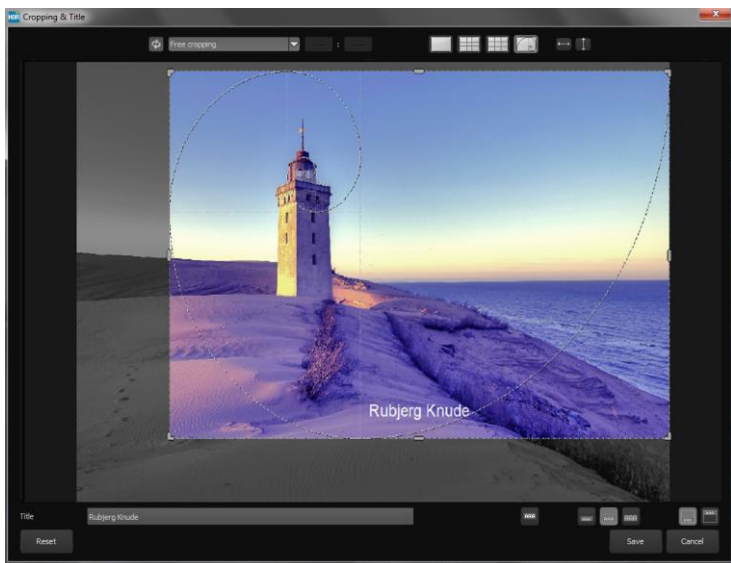To save a final image, click on the button in the toolbar, go through the file menu or use the corresponding keyboard shortcut (Ctrl+S).

> ➢ **Cropping and captions**

As soon as you have initiated to save a file, the cropping and caption window will open.

At the top are several practical aids for perfect image composition and cropping.

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You can set the aspect ratio and activate guidelines like the rule of thirds, the golden section or the golden spiral.

The centre of the window shows your final image. Fix the area to be saved by adjusting the corners and borders of the photo.

At the bottom is an option to enter a caption. You can determine the size, position and background for the text. The size of the text will be automatically coordinated to the final cropping.

You can either crop free-handedly or use one of the 71 provided formats.

Please note: If you choose the cropping, e.g. 13 x 18, the final image will not be saved as 13 x 18 cm, rather as a ratio of 13 to 18.
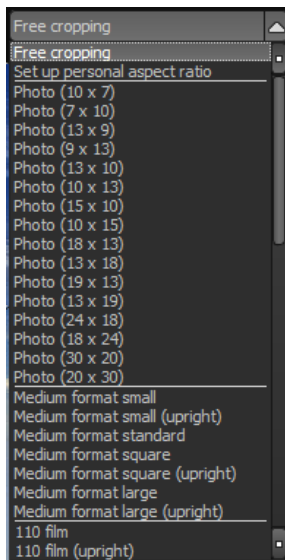
As soon as the image has been cropped

and captioned, confirm the save and the following window will prompt you to select a file format and name your file.

14. Batch Processing

HDR projects 4 elements batch processing allows for automatic processing of multiple bracketing series. The function can be found in the drop-down menu for **"Extras"** in the menu bar.

> ➢ **Batch processing HDR + tone mapping**

First, choose the source folder where the individual images (HDR from one exposure) and/or the bracketing series are located. The files can also be mixed, since the system will automatically recognise and sort the bracketing series vs single shots.

The "Include all subdirectories" checkbox not only searches through all of the selected folders, but also all subfolders and their further subfolders.
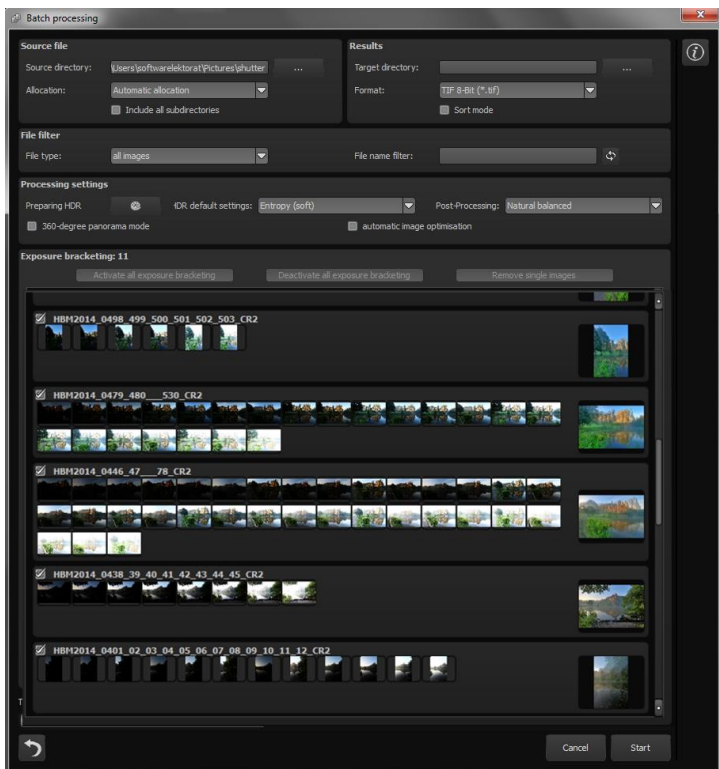
Note: Remember that looking through folders with several subfolders can require a lot of time. That's why selecting "C:\" is not recommended.

> **Allocation and automatic bracketing recognition**

This feature takes on all of the work for you. Now you can choose between different modes:

Automatic allocation: Loads all of the images and based on the images' content, locates those that belong to an exposure bracketing series. The brightness as well as the coverage are compared, which results in very good automatic recognition.

**Individual images**: The "Individual images" option sorts every image into its own bracketing series. This setting is very well suited for editing image sequences, for example, those generated from footage.

2 image to 9 image groupings: Select this option if you have taken HDR films or are certain that the bracketing series in your folder all contain the same number of shots. The file names for the final images will automatically be successive, so that the edited images can be directly used in a video editing program.

Results: Here you can set where the resulting images of the batch processing will be saved. Select the corresponding folder with the "Target directory (. . .)" button or enter the name of the folder directly into the text box.

Format: You can choose from eight different formats to save your resulting images. Besides .jpg and .tif, there are two 8 -bit (LDR) formats and three 16-bit (HDR) formats. JPG images are always the highest quality and TIF files are saved uncompressed and without defects. For further editing, the final images can be saved in PNG format for web editing as well as Open EXR, Portable Floatmap and Radiance RGBE.
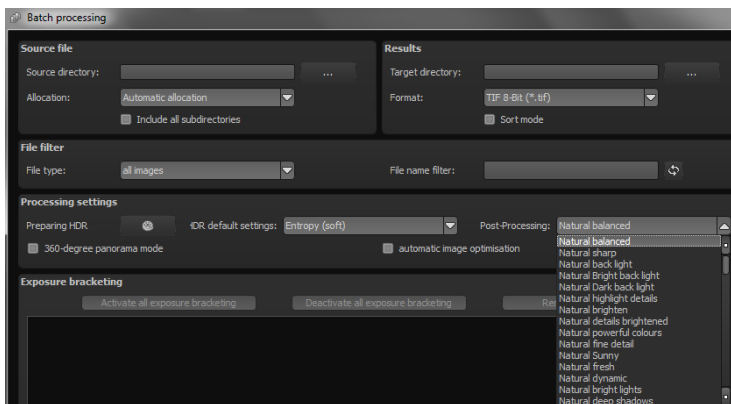
> ➢ **Processing settings**

Select the settings for the HDR preparation and tone mapping here. These apply to all of the bracketing series in the batch processing.

HDR default settings: The HDR default settings offer three to four presets for every HDR algorithm. Simply select your preferred preset from the list.

Post-processing: The presets contain all post-processing/tone mapping presets, including all of the presets from your "Custom" category that you designed yourself. You can also choose a special preset before batch processing and apply it to multiple bracketing series. As soon as the HDR presets and post-processing switch, all of the preview images in the bracketing series will be recomputed, so that you always see a real view of the results.

HDR preparation: Open this dialog to adjust options like colour space, white balance, alignment etc.

Note: Apple computers systematically open this dialog before the batch processing window.

Exposure bracketing view: Here you will find information about the located bracketing exposure series.
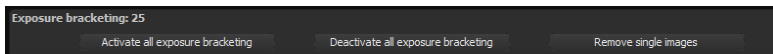
At the top of the display is the number of listed bracketing series. Directly below it are three buttons for global activation and deactivation of series.

Activate all exposure bracketing: Activate all corresponding bracketing series for the calculation. (Standard setting)

Deactivate all exposure bracketing: Deactivates all assigned exposure bracketing for the calculation.

Remove single images: Removes all exposure bracketing for single images from the calculation and display. You can use this option if the program develops a very bright or very dark image incorrectly, or if you have taken photos that should not be processed by HDR.

15. Add-ons

With help from add-ons, you can not only import presets, but entire post-processing modules can be integrated, which can be necessary to create new preset looks.

1. Extract the files from the downloaded zip folder: **Preset-Collection-HDR-projects-Lostplaces.zip**

2. Open your *HDR projects 4* version

3. Click on Menu → Add-ons → Import Add-ons
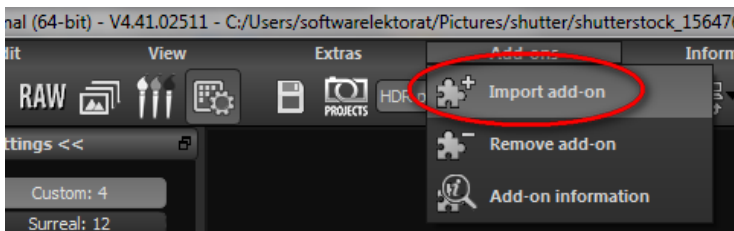
4. Select **HDR projects LostPlaces (18)** in the following dialog window, open it with a double-click and select the **HDR_lostplaces.praddon**. Then click "Open".

5. The add-on will now be imported. A confirmation message will appear:
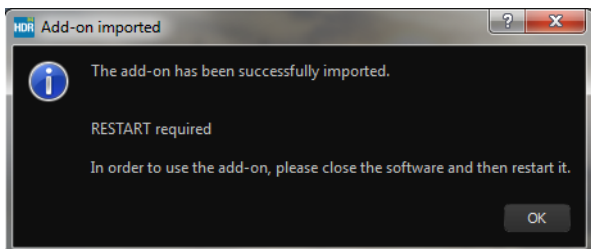
6. Please close and restart the program to be able to use the add-on with all of the other presets.

7. Open **HDR projects 4 elements** and load an image or a bracketing series. Switch to post-processing mode (palate symbol). If you are the owner of **HDR projects 4 elements**, you will automatically be sent to post-processing mode. Select Menu → Add-ons → Add-ons Information, and confirm that your filter package was successfully activated.

8. Filter selection can be found on the left-hand side, directly under the import/export buttons.

Here only the new, recently imported presets are displayed.

9. Click the arrow to open the drop-down menu and select "Lost Places". Now exclusively the new presets will appear on the left display box.
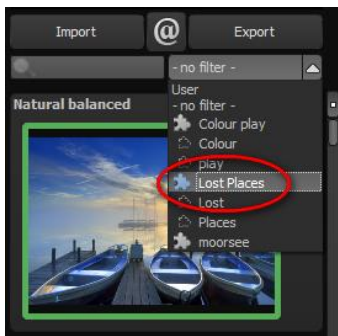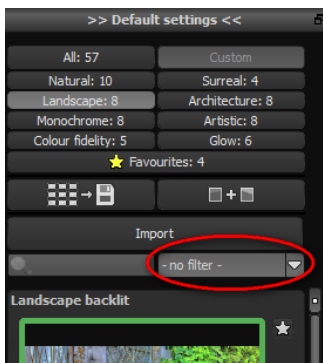
10. If you would prefer to not filter the presets, the new presets can be found in the "Architecture" category. The "Lost Places" presets have "LP" in their names to be easily recognisable.

16. Keyboard Shortcuts

Menu Functions:

Windows	Apple	
Ctrl + N	cmd + N	New project
Ctrl + Shift + O	cmd + Shift + O	Upload single image
Ctrl + O	cmd + O	Upload bracketing exposure series/image series
Ctrl + S	cmd + S	Save result
Ctrl + B	cmd + B	Open batch processing
Shift + Z	Shift + Z	Create restore point
Ctrl + Z	cmd + Z	Return to restore point
Ctrl + T	cmd + T	Show/hide timeline view
F5	F5	Edit exposure bracketing
F6	F6	Edit weightings (HDR painter)
F7	F7	Show post-processing view
Ctrl + E	cmd + E	Show exif information
Ctrl + H	cmd + H	Show/hide histogram
Ctrl + F	cmd + F	Open/close full screen
ESC	ESC	Close full screen
Ctrl + P	cmd + P	Open settings
Shift + F1	Shift + F1	Open window "About"
@	@	Show product homepage
Ctrl + F4	cmd + Q	Close application

Image Functions:

Windows	Apple	
Ctrl + Plus	cmd + Plus	Zoom in
Ctrl + Minus	cmd + Minus	Zoom out
Ctrl + 0	cmd + 0	Zoom to100%
L	L	Set magnified view
Double Click	Double Click	Switch between "Fit" and "1:1" views

Edit weightings (HDR Painter):

Windows	Apple	
1	1	Select red
2	2	Select green
3	3	Select blue
Ctrl + G	cmd + G	Calculate automatic ghosting removal

Scratch/Sensor Spot Removal:

Windows	Apple	
N	N	Add new contour area
C	C	Activate/deactivate contour display
Page Up	Page Up	Select next contour area
Page Down	Page Down	Select previous contour area
Cursor Left	Cursor Left	Move selected area 1 pixel to the left
Shift + Cursor Left	Shift + Cursor Left	Move selected area 5 pixel to the left
Ctrl + Cursor Left	cmd + Cusor-Left	Move selected area 10 pixel to the left
Cursor Right	Cursor Right	Move selected area 1 pixel to the right
Shift + Cursor Right	Shift + Cursor Right	Move selected area 5 pixel to the right
Ctrl + Cursor Right	cmd + Cursor Right	Move selected area 10 pixel to the right
Cursor-Up	Cursor-Up	Move selected area 1 pixel up
Shift + Cursor-Up	Shift + Cursor-Up	Move selected area 5 pixel up

Ctrl + Cursor-Up	cmd + Cursor-Up	Move selected area 10 pixel up
Cursor-Down	Cursor-Down	Move selected area 1 pixel down
Delete	Delete	Delete selected contour area
Plus	Plus	Increase selected contour area
Minus	Minus	Reduce selected contour area
Ctrl + Plus	cmd + Plus	Zoom in
Ctrl + Minus	cmd + Minus	Zoom out

History Viewer:

Windows	**Apple**	
Cursor Left	Cursor Left	Move to the previous image
Cursor Right	Cursor Right	Move to the next image
Page Up	Page Up	Move to the previous page (3 entries)
Page Down	Page Down	Move to the next page (3 entries)
Home	Home	Move to the start of the history
End	End	Move to the end of the history

Photo credit:

Imagery provided by the members of the FRANZIS *projects* team and the programmers.

Special thanks to Mr. Falko Sieker for providing several exposure bracketing series and single images for testing purposes. The majority of the screen shots found in this user manual are results of Mr. Sieker's bracketings.

Hotline/Support

If you have questions regarding the installation, problems or errors of the software, please contact the **FRANZIS customer support team**.

E-Mail: support@franzis.de

Please understand that your questions can only be answered directly by FRANZIS customer support. This is to give us the opportunity to constantly enhance our customer service for you and to make sure that you receive only the most qualified answers to all of your questions as fast as possible.

This is how our customer support works best:

Please have the most important details about your computer and about our product at hand when you call our customer support. These include:

- Name of the product
- Product ISBN (which you can find on the back of the packaging, above the easy to spot barcode).
- Operating system of your computer
- Technical details of your computer including all your peripheral devices

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