

# PURE HDR

## User Manual



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## 1. Fascinating High Dynamic Range Photography

Even the most modern digital cameras have a limited dynamic range. Drastic lighting contrasts easily demonstrate this restriction, like a photo taken indoors looking outside, as in our first example shot. You either have a properly lit interior, where the surrounding park behind the arches is 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, solves this problem by generating images with an extremely large dynamic range, unmatched 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.



***A series of three images, each with a different exposure time, is blended together.***

The combined result is a single image containing all of the light, mid-tone and shadow detail. **PURE HDR** does the work for you. This capable program merges the bracketing exposure images and uses tone mapping to establish a photo suitable for printing and screen displays.

The image must be saved in 32-bit format to keep all of the information. At the moment, this image is not suitable for screens or printing. Send the HDR product back to your photo-editing program to adjust the tone-mapping and make the results visible.

What makes **PURE HDR** so special, is that HDR generation is directly built into your workflow, without having to leave your photo-editing program. **PURE HDR** assembles a flawless 32-bit HDR shot and returns the result directly to the program you started with.

You are not limited to Photoshop and Lightroom, all other programs which support TIFF 32 bit or .hdr/.exr formats are also compatible.



***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 **PURE HDR** and what you can achieve with its immense range of functions.

An obvious case for **PURE HDR** - 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 the individual shots. Depending on the scene, more exposures could be necessary to grasp the complete light information. You are usually on the safe side with five to seven shots. Be mindful to not set the exposure times too far apart, to avoid gaps between the exposures.

## 2. Program Highlights

**PURE HDR** offers numerous fascinating features. Here is an overview of the most important highlights:

- ✓ **Pure HDR in 32-bit** with up to 33 exposures in a series
  
- ✓ **Newly Developed Plug-ins** for Adobe Photoshop® and Lightroom®; 32-bit TIFF or HDR formats can be sent back to the initial program directly
  
- ✓ **Integrated Interface** to connect with other photo-editing programs like Corel Paint Shop Pro X8 or Zoner Photo Studio (program must be able to support 32-bit formats)
  
- ✓ **Ultra HDR Technology** to fuse 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.



***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.

- ✓ **Integrated RAW Module** you can now do RAW processing directly in **PURE HDR**. Numerous tools are waiting for you, such as white balance, colour balance, colour correction with chromatic aberration removal, de-noise/sharpen with special high-quality noise removal techniques, expo-

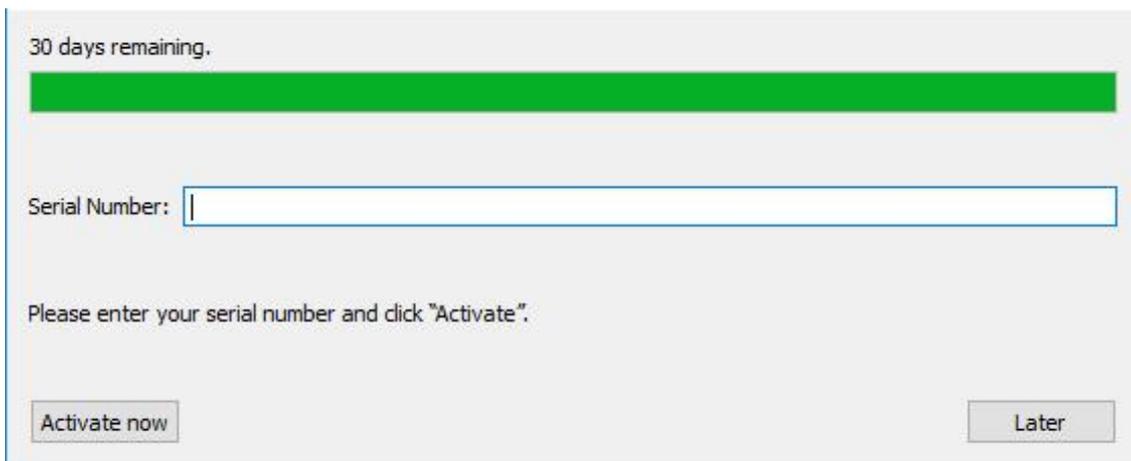
sure and detail adjustments, distortion repair and even black and white correction. **PURE HDR** supports all current RAW formats.

- ✓ **Seven Different HDR Algorithms** with adjustable settings like denoise, HDR smoothing, day/night as well as halo adjustment. Halo adjustment prevents blurred highlights around hard edges and can be very effective with certain HDR algorithms. Highly precise exposure bracketing alignment, even with photos taken without a tripod.
  
- ✓ **Automatic Ghosting Correction** with four different settings for landscape, architecture, lifeforms and sports. Click on “Optimise automatically” and the program will automatically select the best value to enhance detail and remove ghosting. This process can take a moment, since various values are being compared and analysed simultaneously. Even in complicated cases like leaf structures or moving objects, **PURE HDR** leaves you with a perfect result free of ghosting.
  
- ✓ **Contrast Range** Here you can adjust interactive dynamic optimisation. Choose between high, optimal and compressed contrast to change the dynamic compression value, which will be analysed and the best value for the bracketing series will be applied. You can also use the slider to pick an in-between value. There is no right or wrong, it all depends on the loaded bracketing series.

### 3. Activation

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

- Install **PURE HDR** as described by the installation wizard.
- Input your serial number. You will have received the serial number by email directly following your purchase.



The screenshot shows a dialog box for activating PURE HDR. At the top, it says "30 days remaining." Below this is a green progress bar. Underneath the bar is a text input field labeled "Serial Number:". Below the input field, the text reads "Please enter your serial number and click 'Activate'." At the bottom of the dialog, there are two buttons: "Activate now" on the left and "Later" on the right.

Finally, click on the "Activate" button. The software has now been successfully activated!

**Note: PURE HDR 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".

## 4. Start PURE HDR

**PURE HDR** can be used in various ways and started through multiple programs:

1. **PURE HDR** as a Stand-alone App
2. Start **PURE HDR** with Lightroom®
3. Start **PURE HDR** with Adobe Photoshop® (Plug-in)
4. Start **PURE HDR** with Other External Programs

## 5. PURE HDR as a Stand-alone App

In just a few clicks, you can achieve a completed 32-bit HDR image:

- ✓ Upload an image
- ✓ Select an HDR fusion method
- ✓ Correct ghosting as desired
- ✓ Select contrast range
- ✓ Save as 32-bit image – done.

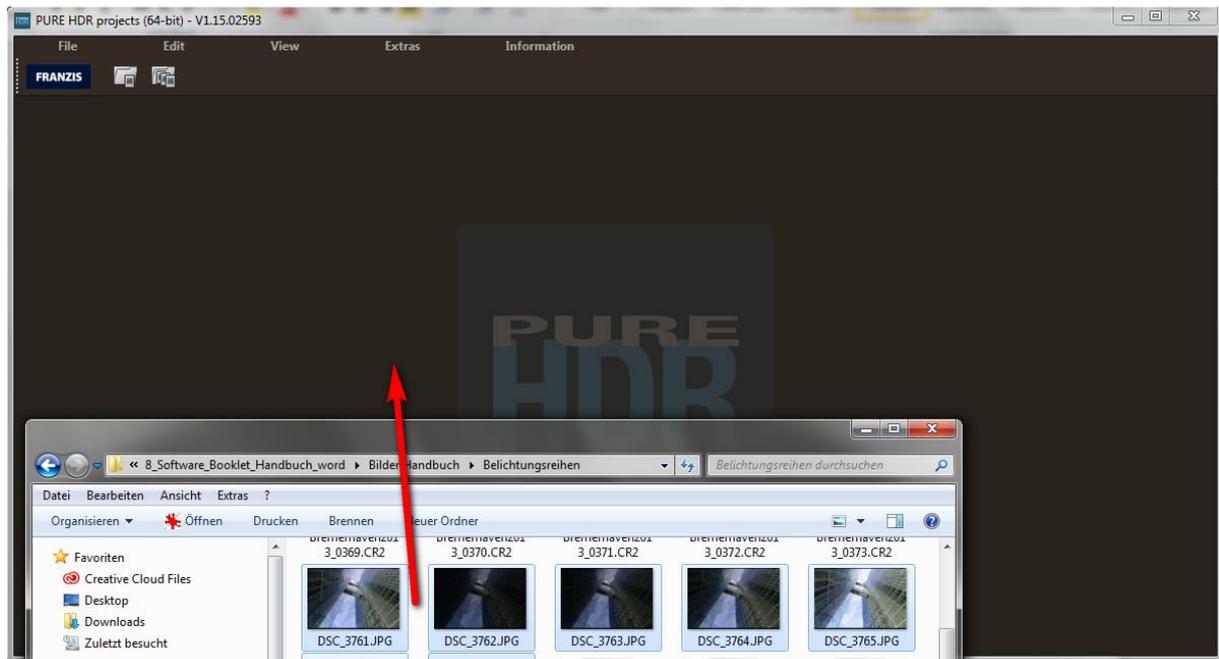
It's that simple. If you want to learn more about what's behind the individual functions and possibilities, continue reading.



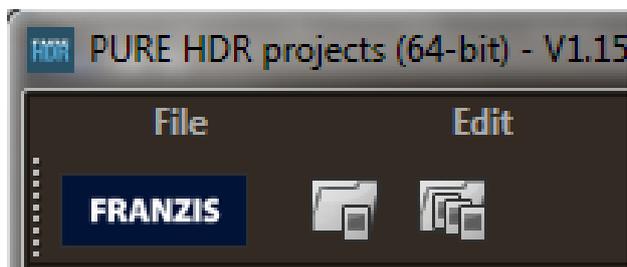
***A 32-bit TIFF saves an image's complete light information, which cannot be saved with individual RAW files.***

### Loading an Exposure Bracketing Series

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.



***You can simply drag&drop your images or bracketing series onto the start screen***

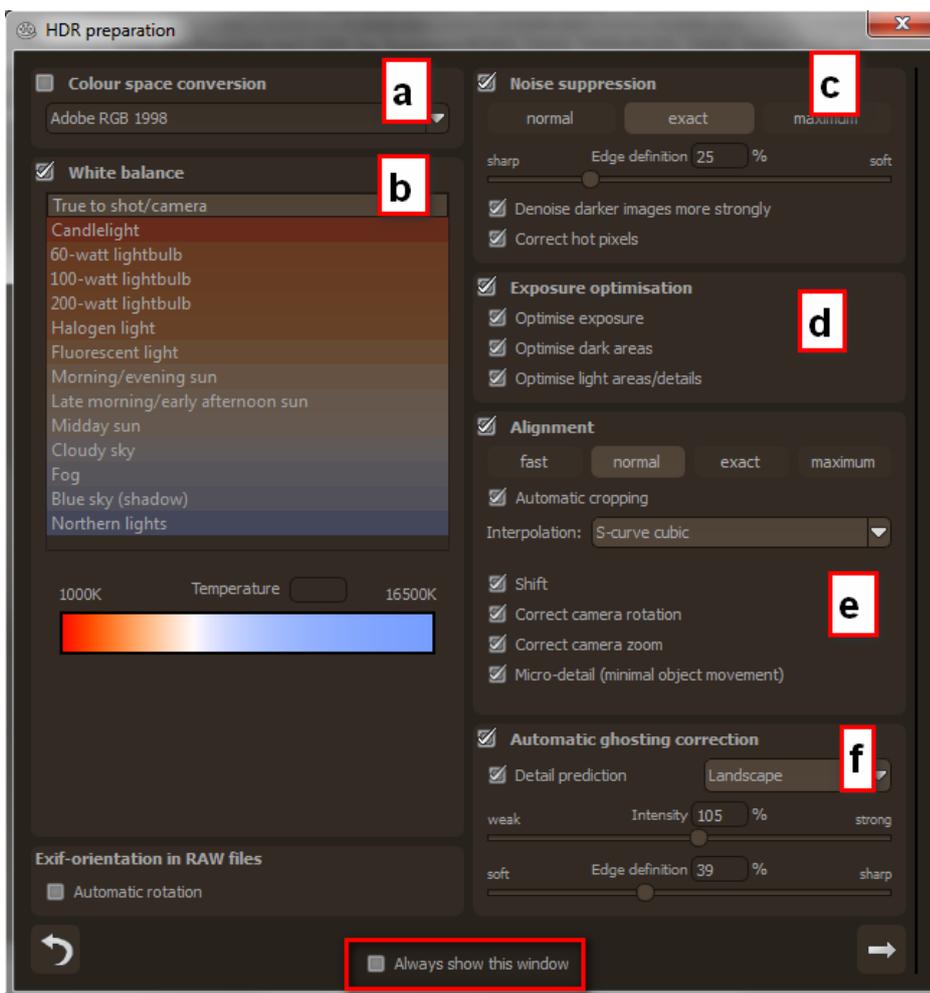


## HDR Preparation

HDR preparation can be located through **Extras/HDR preparation** and is where you can precisely configure the program's settings.

If you would like to review these settings each time you load an exposure series, select "Always show this window".

We recommend the standard settings for the first steps. These default settings can be restored with the arrow at the bottom left, and all changes can always be undone.



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. **Noise suppression:** Select the noise removal precision, and regulate the border sharpness with the slider. Here dark images can undergo significant noise removal and hot pixels (light spots caused by the camera's sensor in dark situations) can be 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 a 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 a satisfying result.

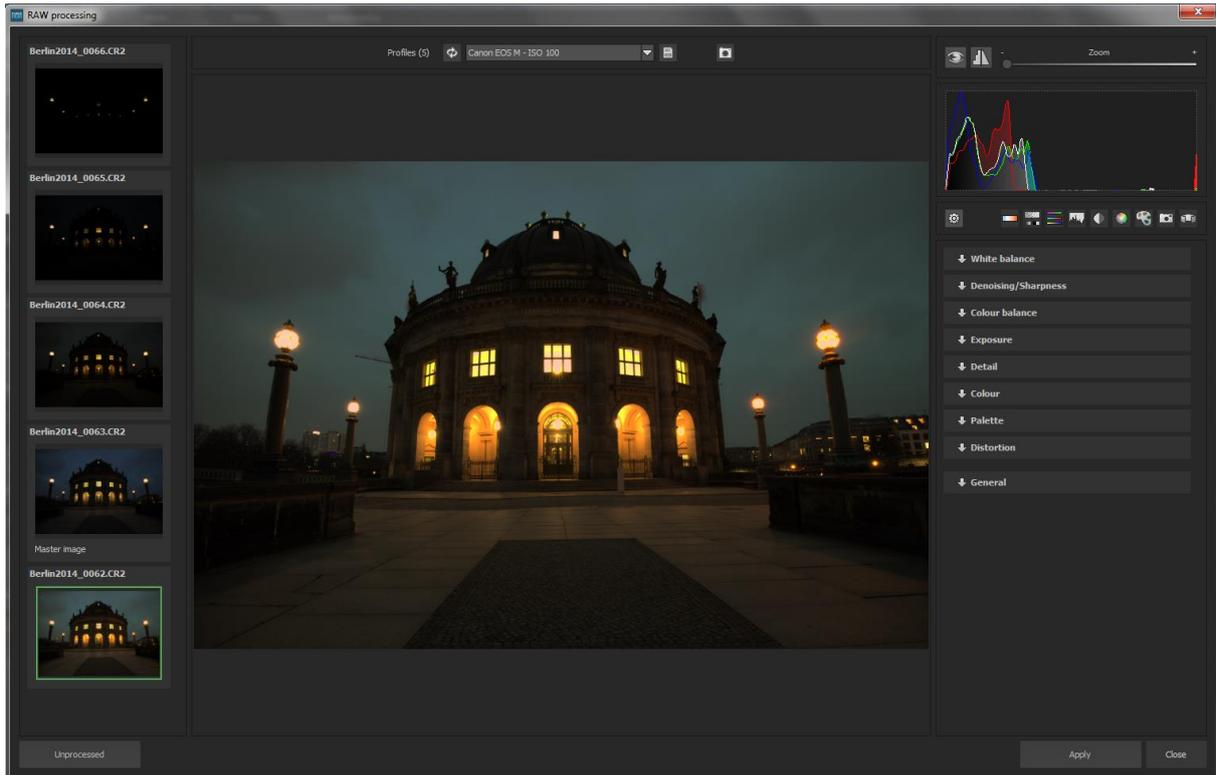
f. **Automatic ghosting correction:** **PURE HDR** uses highly precise ghosting removal to filter out subjects and people moving within a bracketing series. Without correction, the people or vehicles in the final image would appear multiple times and half transparent, creating a complete jumble.

## RAW Processing

RAW

You can upload and edit RAW image data with the integrated RAW mode. Numerous tools are available here, such as denoising/sharpeness, exposure, colour, detail and powerful distortion capabilities.

In RAW mode, all changes are applied to the entire series, and the adjustment only needs to be made once.



An overview of the most important RAW functions:

**White balance:** Here you can regulate the colour temperature. Use the pipette to select a white balancing colour directly from the image.

**Denoising/sharpeness:** This feature regulates the image's noise and sharpness. Control the quality and different types of noise such as colour noise, banding or hot pixels.

**Colour balance/white balance:** Here it's all about colour and black/white correction. Modify the general colour mood and neutralise white and black - the icing on the cake for professional colour correction.

**Exposure:** Influence lights, shadows, contrast and brightness in the final image.

**Detail:** Fine-tune clarity and micro-details with lights, shadows and mid-tones.

**Colour:** These colour settings handle luminosity of lights and shadows. You can even reduce the presence of unwanted chromatic aberrations.

**Palette:** Adjust the saturation of individual colours.

**Distortion:** Take a closer look. These mighty tools can straighten out the horizon, correct camera angles and lens errors. Use “Autofit” to automatically trim any awkward borders.

**General:** Activate the “360° panorama mode” to optimise matching edges of images in a panorama series.

Click on “Apply” to administer any changed settings in RAW mode.

Save your settings as a camera profile to save time in the future. This can be re-set at any time.

## HDR Weighting and Exposure Series

How is an HDR image in **PURE HDR** actually created?

Every area of an image in a bracketing series contains a different numbers of pixels which are over or under exposed. Let’s assume that each area of the motif is correctly exposed on **at least one image** in the series.

**PURE HDR** uses complex calculations to filter out all of the properly exposed pixels and assemble them into a complete image. The type of process is determined by mathematical means known as algorithms. Different algorithms affect HDR results differently, regardless of how bright the initial bracketing series is.

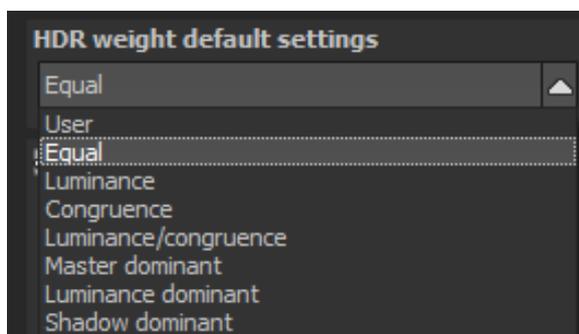
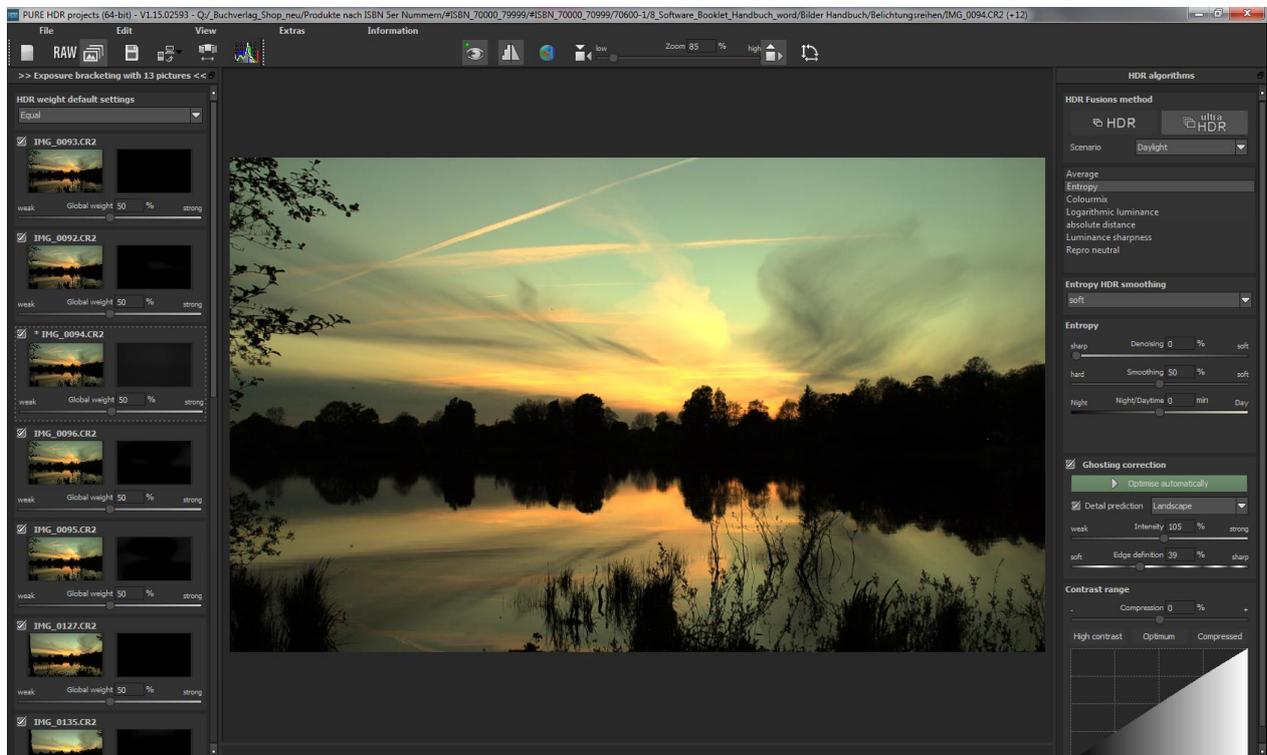
The software professionally takes of these steps for you. All that is left is to decide which result speaks to you most and which HRD compilation you would like to edit further.



## Editing Bracketing Series

After loading an exposure bracketing series, the HDR weight column will appear on the left hand side. Your HDR image which you are currently editing will always be displayed large in the centre of the screen. The image might not seem so spectacular at this stage, but remember that the monitor is not yet able to display what was actually computed.

The following options are available as presets for HDR weight:

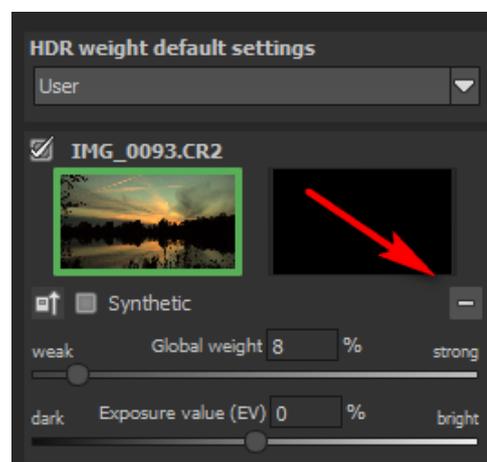


- **Equal:** all weighting will be set to a middle level and every exposure of the series will be represented equally
- **Luminance:** sets all global weight to correspond with the bracketing's average brightness (luminance)
- **Congruence:** sets all global weight to a value which corresponds to the average prominence of an individual exposure in the master image
- **Luminance/Congruence:** sets all global weight to a value corresponding to the relationship between the average brightness and the average prominence
- **Master dominant:** generates an HDR fusion with greater significance attributed to the master image, that is the central shot of the bracketing series
- **Brightness dominant:** brighter images from the bracketing will be more prominent in the HDR fusion
- **Shadow dominant:** darker images are weighted more than brighter ones
  
- **Remove individual exposures from a bracketing series and change the master image**

Click on a photo's preview image to open this window.

 An image can be removed from an exposure series by clicking on the minus button above the weigh controls.

It is only possible to remove images that are above or below the master image. The master image is marked with a star and cannot be removed.



A new master image can be selected with the  button to the bottom left of the preview for the individual images. This change results in a noticeable difference in the brightness distribution.

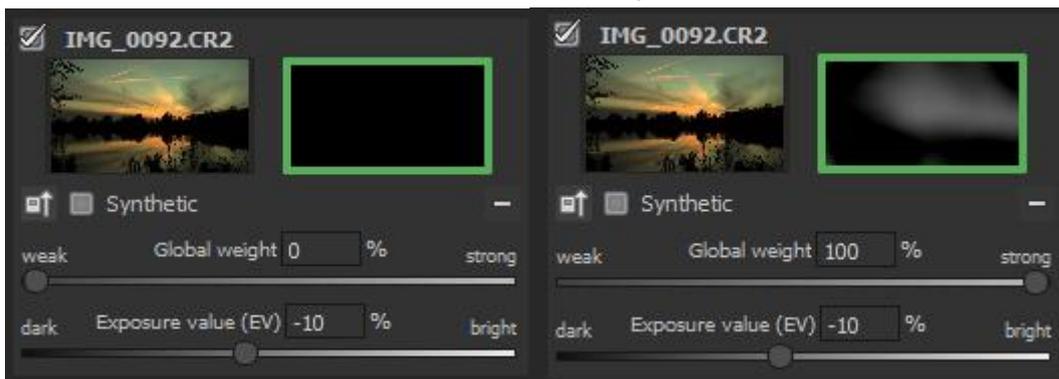
- **Edit global weight and exposure**

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, i.e. raising it, increases the proportion of this image in the final HDR fusion. This change 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 resulting HDR image can become brighter or darker.

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



Give it a try! You can always reset the controls to their initial values. Selecting a different preset for HDR weight, the global weight will shift according to the option for all of the individual images in the series.

## Important Control Functions

### ➤ Preview Mode



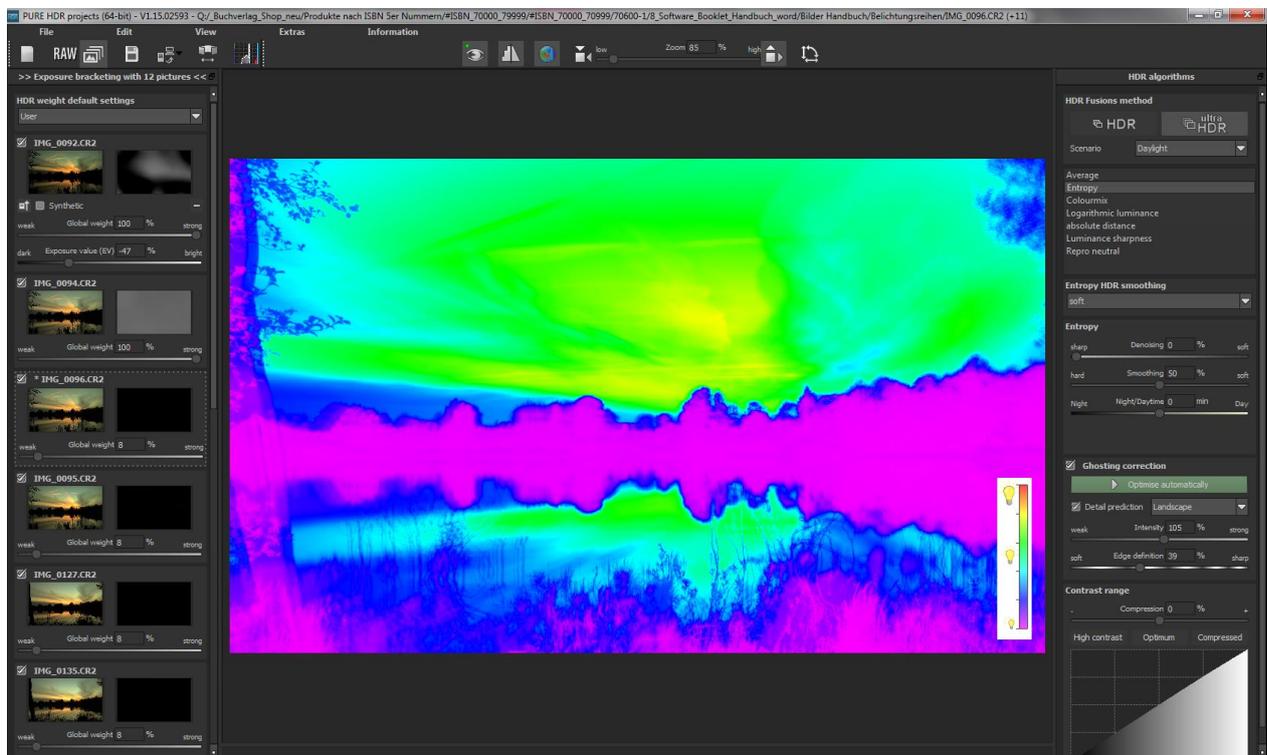
When this option is activated (**green dot at top left**), the fused image will appear as a small preview. If this option is deactivated, the picture will appear in its true size. Please note that processing the preview can take longer when this feature is deactivated.

## ➤ High-Resolution Display

Activate this option to see the preview image at high-resolution. If the preview is set at 100%, there will be no difference. Zooming in will display a difference in quality.

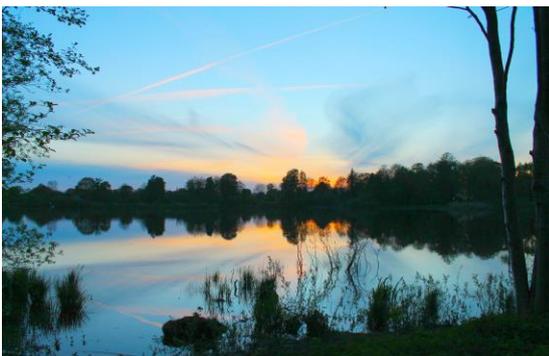
## ➤ Luminance Map (Lightmap)

The luminance map helps to locate areas of an image that tend toward maximum light or dark values, that is, white or black. Dark areas will be depicted as blue and bright areas as orange.



### ***Depiction of luminance differences through dark blue and orange tones***

If you would like to brighten an image, be mindful of the orange tones. Lighter areas in the sky, for example, should not become completely white to avoid losing detail. The light map helps to find these critical sections.



***Clicking on the symbol again will restore the preview image***

## HDR Algorithms

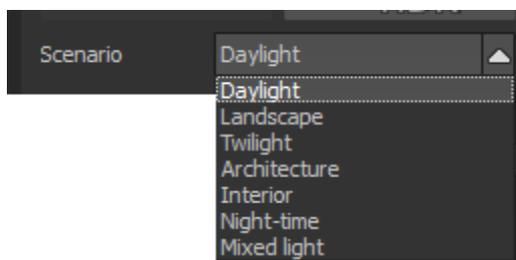
### ➤ HDR/Ultra HDR



**PURE HDR** uses new Ultra HDR technology to fuse bracketing. Ultra HDR processes up to 30 intermediate images between two photos with 64-bit precision. The difference is obvious through clearer detail and drastic results in critical situations, like shooting directly against the light.

### ➤ Scenarios

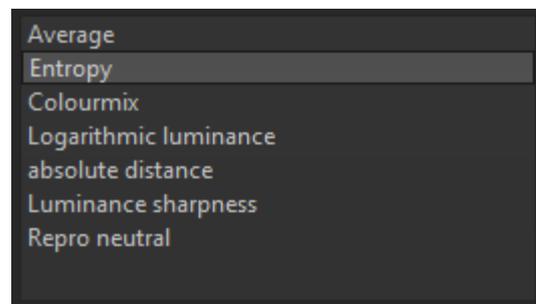
Additionally, HDR fusions can be influenced by different scenarios. If you would like to adjust your result to certain lighting, select one of the following seven



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

Mathematical equations are used to determine the weighting of each individual exposure in a series - pixel for pixel. Every algorithm has a different effect depending on the exposure bracketing and subject. There is no right or wrong - your originality is in command.



Test your bracketing series with different algorithms and see how your photos change.

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

**PURE HDR** offers you seven different HDR algorithms to choose from, all conceptualised for various lighting situations.

**Average:** The average is the easiest form of HDR generation and uses the bracketing mid-tones.

**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. This value is then included in the HDR generation. The result is a very stable process that is set as a standard algorithm for **PURE HDR**.

**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.

**Logarithmical Luminance:** This algorithm works with logarithmic brightness (luminance), which corresponds to the human eye's perception of brightness. This algorithm is thus appropriate for most bracketing series.

**Absolute Distance:** A very powerful HDR fusion technique, which combines two essential features. When **HDR Smoothing** is deactivated, all HDR images are free of halos, and brightness outlines are avoided.

**Luminance Sharpness:** For this algorithm, the luminance sharpness (brightness) is determined for each pixel and converted into a weighting. This process yields the best detail for HDR fusions.

**Repro-Neutral:** This process is best suited to exposure series from scanned images in normal lighting situations.

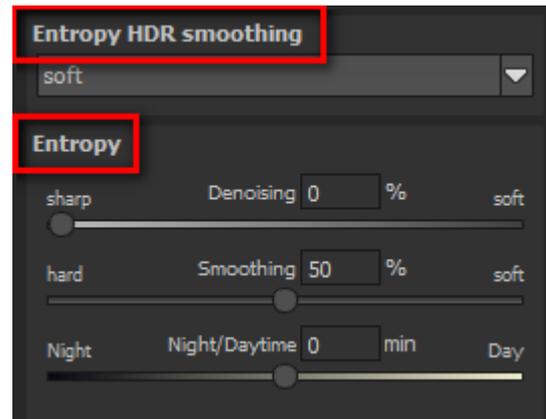
### HDR- Smoothing for Selected Algorithms

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.



**Denoising:** Denoising directly affects an HDR image. The noise removal intensity is presented as a percent. A value of 0% removes no noise pixels, and the higher value the more noise will be removed, which sharpens the image.

**HDR Smoothing:** HDR smoothing directly influences the weighting matrixes created by the HDR algorithms. The smoothing strength is represented as a percent according to the image resolution. A value of 50% means that the weighting matrixes will be smoothed by 50% of the image’s resolution. This smoothing functions through a Gaussian blur.



**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.

## Halo Adjustments

The “Colourmix” and “Logarithmic luminance” algorithms offer another option through HDR smoothing, that is “Halo adjustments”.

Halo adjustment deals with a typical HDR generation problem: the halo effect (HDR shadows). In the image on the left 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 through the “Logarithmic luminance” algorithm was used here***

## Ghosting Correction

Interactive ghosting correction is yours for the taking.

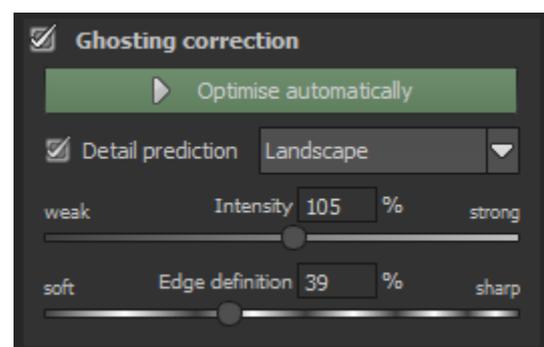
**PURE HDR** uses highly precise ghosting removal to filter out subjects and people moving within a bracketing series. Without correction the people or vehicles in the final image would appear half transparent several times and create a complete jumble.



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

This detailed process requires a special procedure. It attempts to predict movement within the bracketing in order to remove the ghosting more accurately. **PURE HDR** uses intelligent and newly developed settings for life forms, landscape, architecture and sports. The “Lifeforms” corrector is perfect for our train station example.

Activate this function by selecting the “Ghosting correction” option and click on “Optimise automatically”. In just a few steps, the program now automatically calculates the best settings for the intensity of the ghosting correction and the image's sharpness.



Sometimes the system may change the setting from “Landscape” to “Sports”, simply because the analysis results are more prominent. The process leads to an utterly sharp and exact final image without losing detail.

After you have finished with settings, use  the arrow at the bottom right to transform the bracketing into an HDR creation.

## Contrast Range

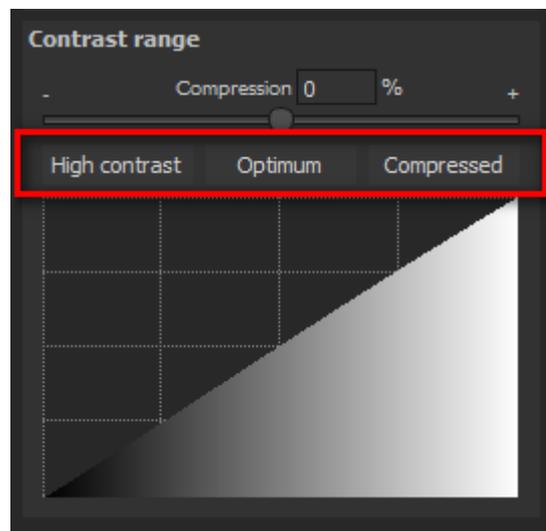
Here you can adjust the interactive dynamic range values.

Choose between high, optimal and compromised contrast to change the dynamic compression value. The choice will be analysed and the best value for the bracketing series will be applied. You can also use the slider to pick an in-between value. There is no right or wrong, it all depends on the loaded bracketing series.

**High contrast:** ideal for exposure series with low contrast

**Compressed:** ideal for exposure series with extreme contrast

**Optimal:** ideal for balanced contrast. The brightness will be levelled and the mid-tones properly set. This point is independently calculated by the system.



## Saving 32-bit HDR Images

You might have asked yourself why the save menu in **PURE HDR** only offers four different file formats and why JPG isn't included. The reason is simple: there are only a few file formats that can save and edit 32-bit files. Only a few file types can handle the full range of a bracketing series assembled in a single HDR image.

Lossless final formats include:

- Radiance RGBE (.hdr)
- Open EXR (.exr)
- Tiff 32-Bit (.tif32)
- Portable Floatmap 32-bit (.pfm)

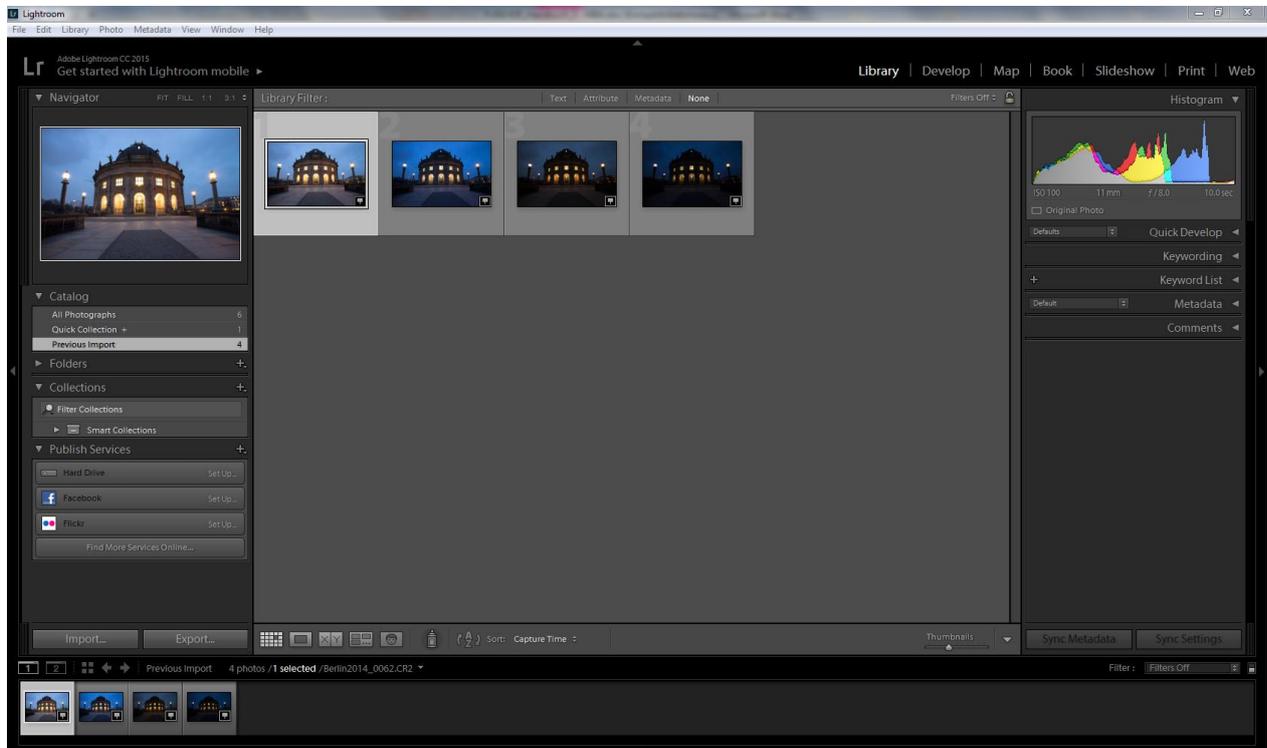
The file type you choose depends on which program you would like to use to further edit your 32-bit HDR image. Here is a quick overview of the photo-editing programs described in this handbook:

<b>Lightroom®:</b>	<b>TIFF 32-bit</b>
<b>Adobe Photoshop®:</b>	<b>TIFF 32-bit, HDR, EXR, PFM</b>
<b>Corel Paintshop Pro X8:</b>	<b>HDR</b>

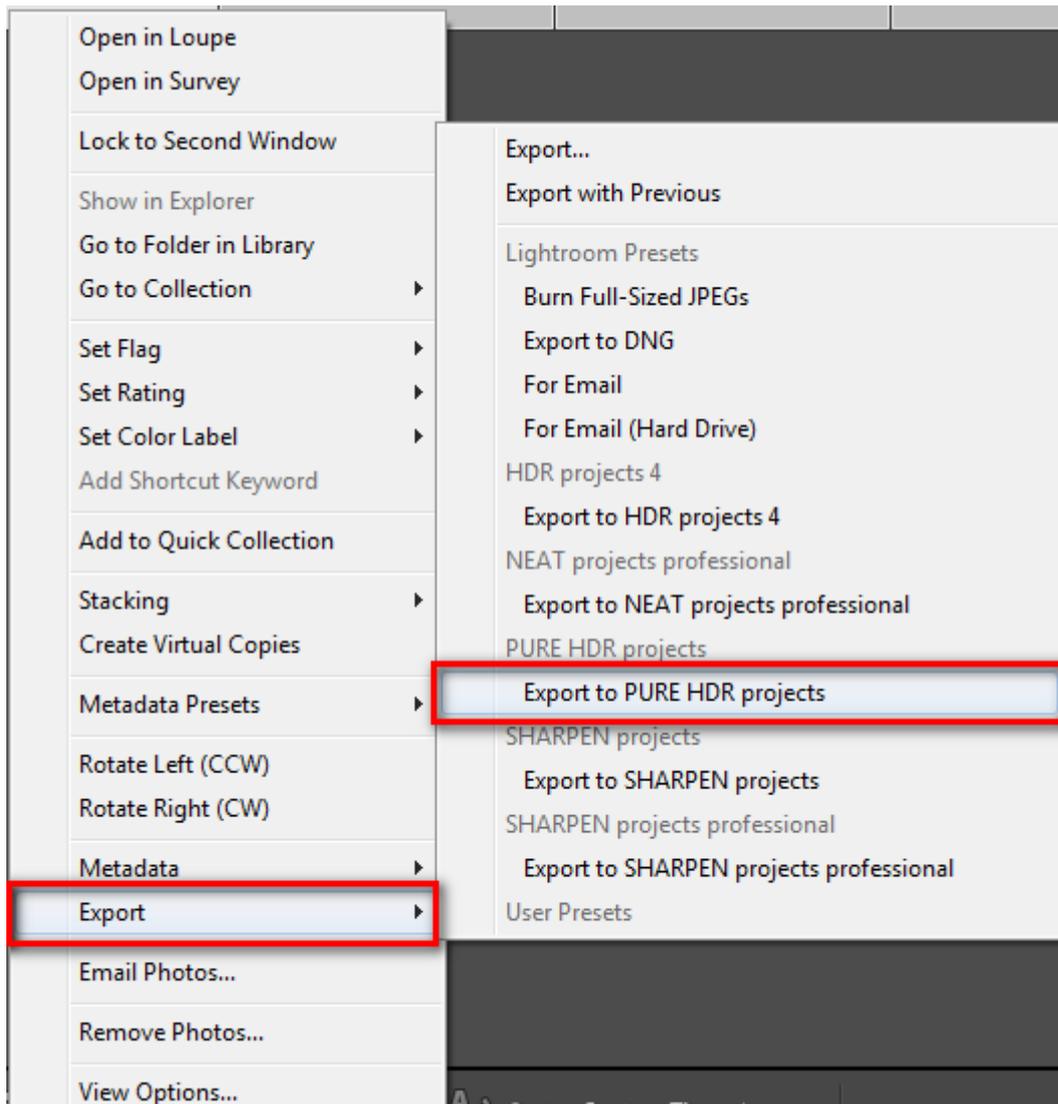
If you are using a different program, we recommend testing which file formats the program supports beforehand.

## 6. Start PURE HDR with Lightroom®

- Import the exposure series that you would like to edit into your Lightroom catalogue as usual.



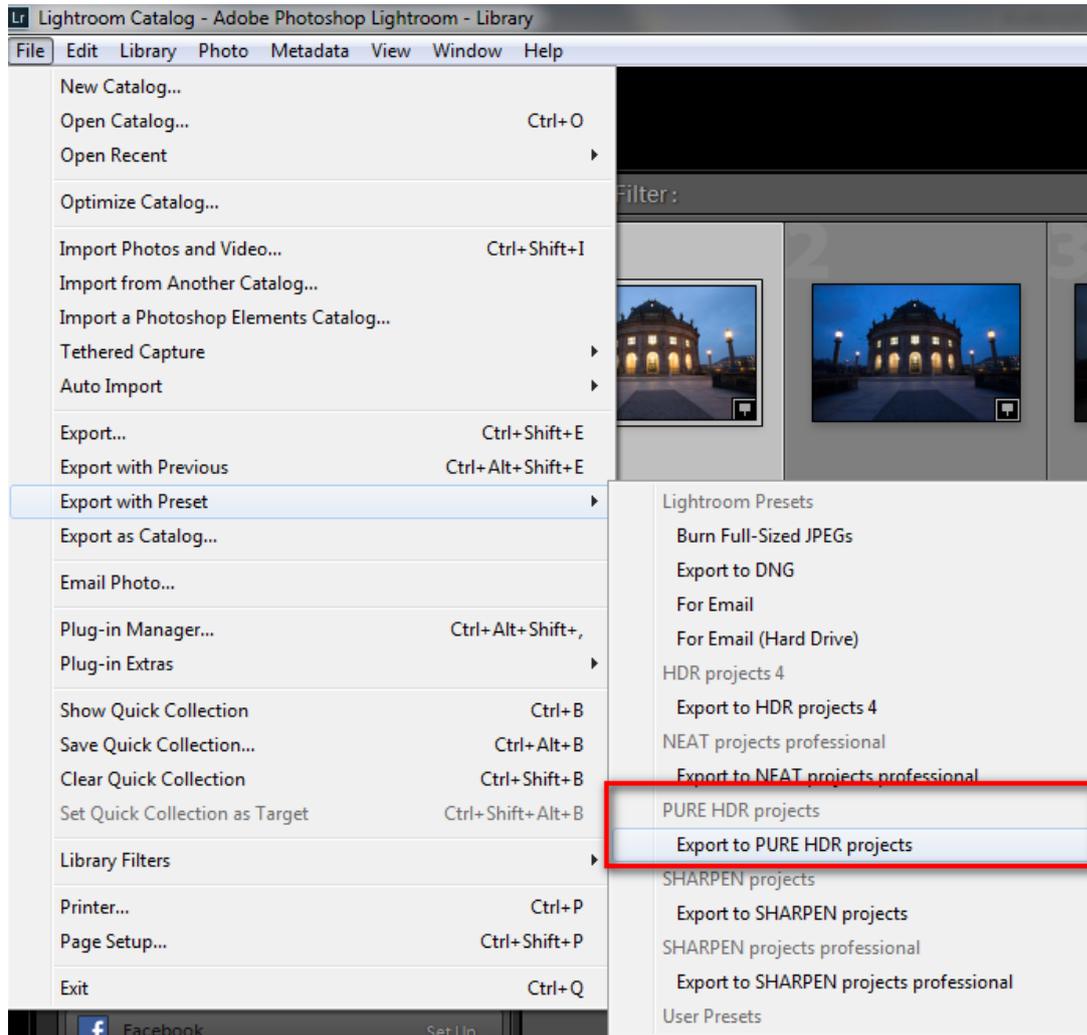
- Mark all of the images that you would like to transform into a 32-bit HDR image (max 33 per page) and send the series to **PURE HDR** as seen here:



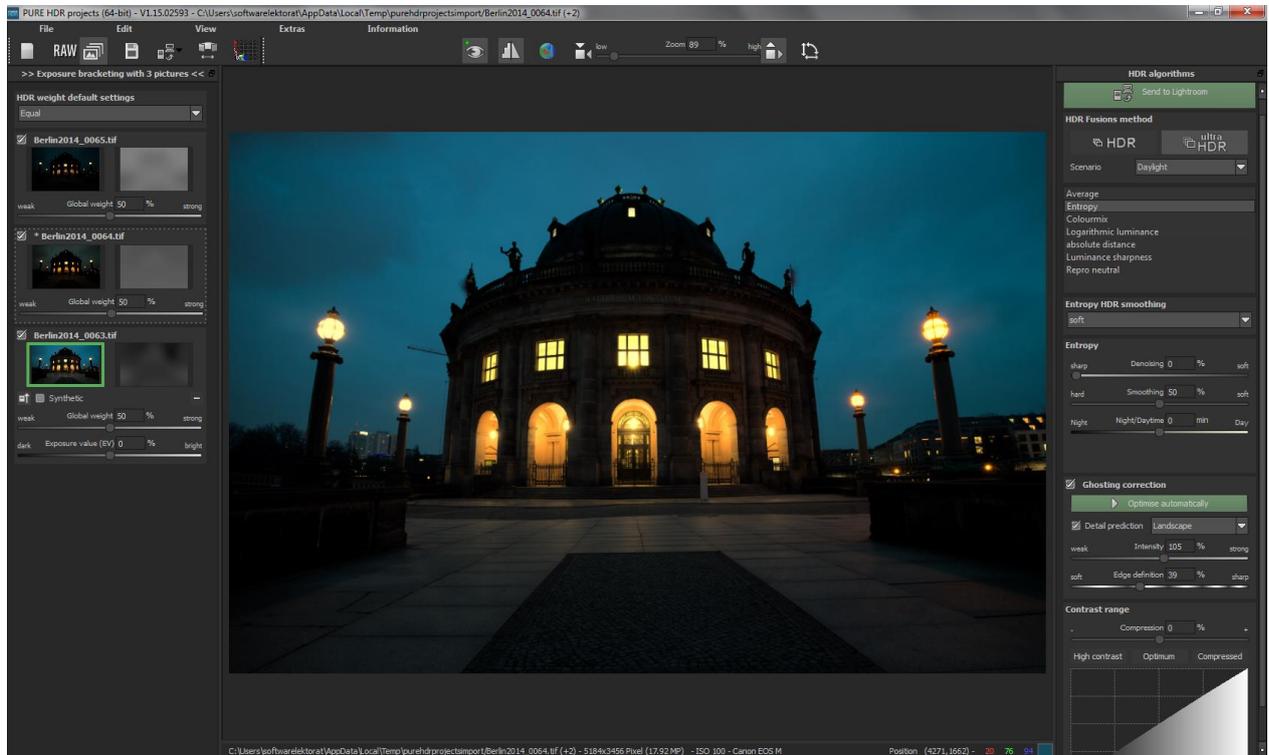
“File/Export with default/Export to **PURE HDR projects**”

**Method 2:** Mark a bracketing series and select “**Export to PURE HDR**”

On a **Mac**, click and hold down the CTRL button to open the context menu.



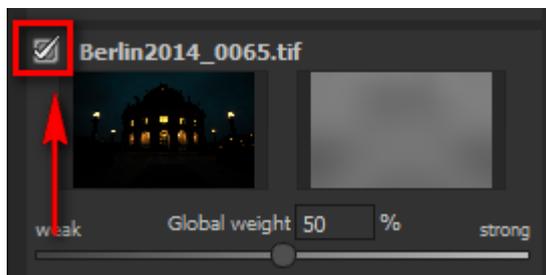
- **PURE HDR** will now open the bracketing series and with any adjustments from Lightroom.



The preview for the calculated HDR image is in the middle of the workspace. Now you can adjust certain settings.

**Left Side:**

- Select or remove images here if they could diminish the quality of the result, for example if the shots contain little detail or are too dark or too bright.

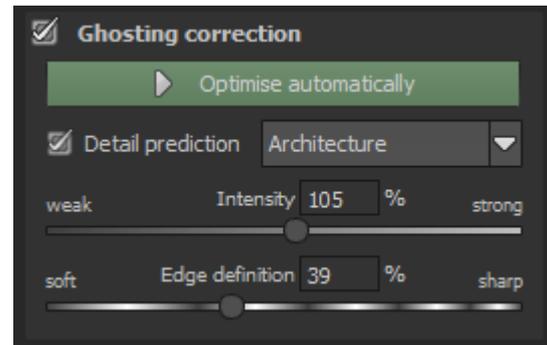


- Here you can also find the option to edit and set the global weight of every individual shot from the series.

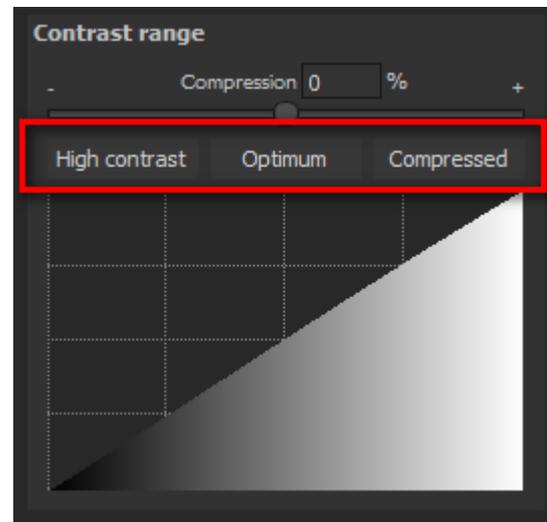
Normally you should not have to make any changes if there are enough images in a series or if the number of bright and dark images is approximately equally. Exposures that are only white or black should be removed.

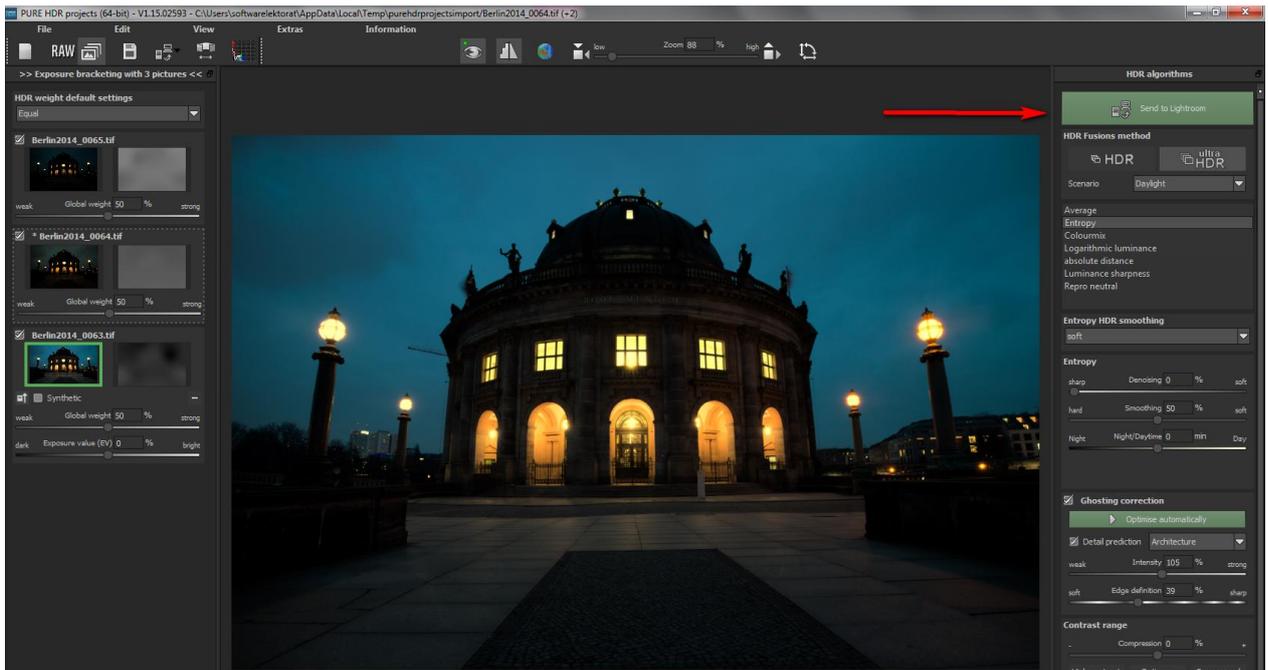
### Right Side:

- Select an HDR algorithm
- Activate ghosting correction if the shot contains moving objects, and regulate the amount of detail in the motif: landscape, architecture, lifeforms or sports. Click on **“Optimise automatically”** and the system will find the best setting for you.



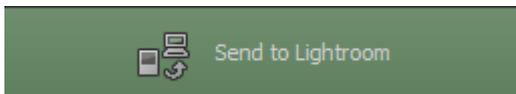
- **Contrast rage:** Choose between high, optimal and compressed contrast to change the dynamic compression value. The choice will be analysed and the best value for the bracketing series will be applied. You can also use the slider to pick an in-between value. There is no right or wrong, it all depends on the loaded bracketing series.
- **High contrast:** ideal for exposure series with low contrast
- **Compressed:** ideal for exposure series with extreme contrast
- **Optimal:** ideal for balanced contrast. The brightness will be levelled and the mid-tones properly set. This point is independently calculated by the system.



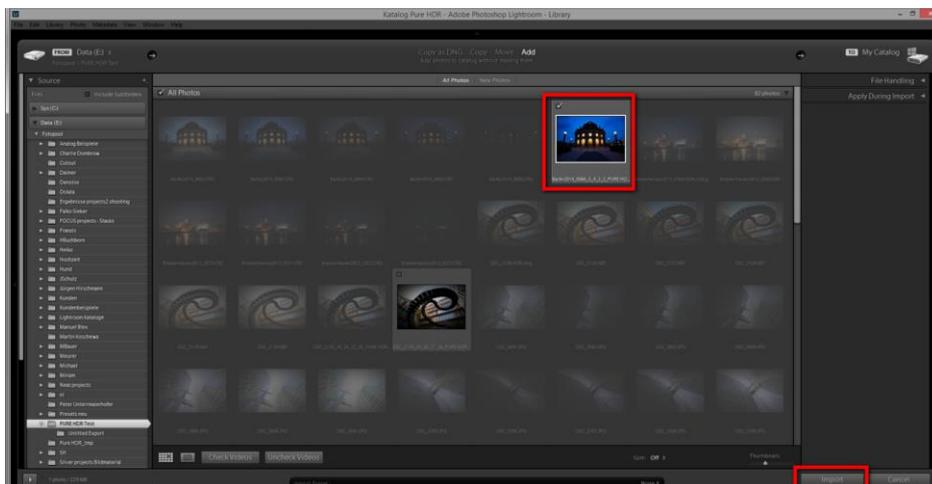


***With a very dark sky and bright lights, this example of the Berlin Bode Museum is a perfect case for the “Compressed” setting.***

- Send the image to Lightroom as a 32-bit HDR once you have made all desired changes and are happy with the preview.

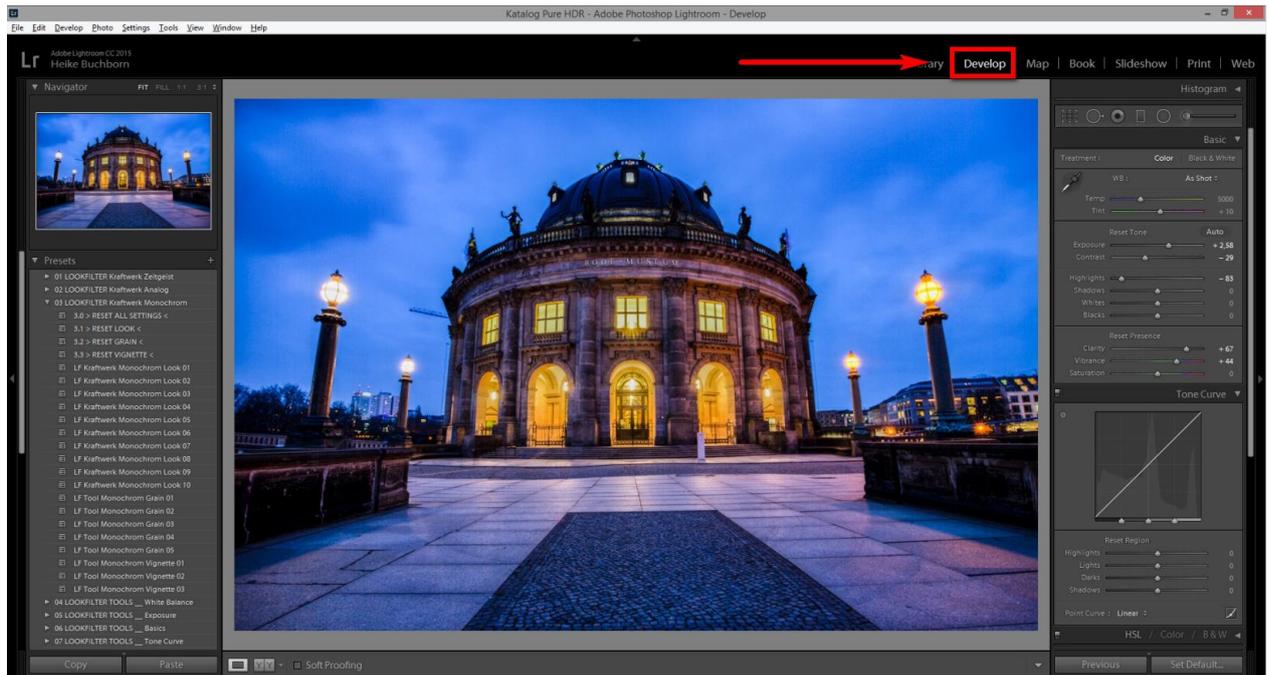


- Lightroom will open in the foreground and the newly generated 32-bit TIFF will be highlighted while all other images in the folder are darkened. Make sure that the image is checked, and click **"Import"**.

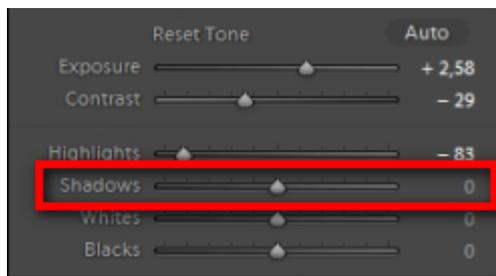


- The image has now been loaded. The intense range of contrast in the image is already striking.

- Now switch to the “Develop” tab in Lightroom®.



All of the tools you could possibly wish for can be found on the right hand side. Pull up the depth and you will be amazed by the detail that appears.



- The 32-bit HDR generated by **PURE HDR** gives you complete control over the deepest tones in dark images and the lightest lights in bright images. This single image now holds all of the exposure information and dynamic range of the complete bracketing series, and that is drastically more than what a single RAW photo has to offer!

### Comparison of Available Exposure Levels JPG, RAW and Tiff32 in Lightroom:

JPG:	-5 to +5
RAW:	-5 to +5
PURE HDR TIFF 32:	-10 to +10!



For this series, we will adjust the colour temperature and sharpen it some. Additionally, in the “Presence” section, we will increase the “Clarity” and reduce the saturation slightly – done!

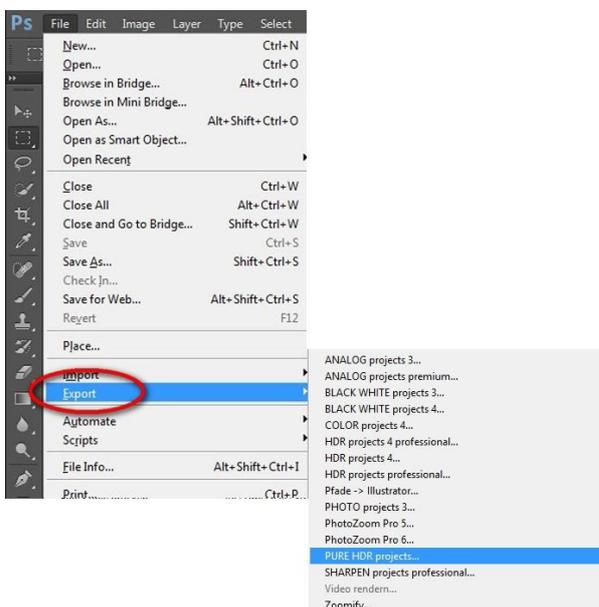


***The final result contains details in all lights and shadows and returns the twilight mood to the Berlin Bode Museum.***

## 7. Start PURE HDR with Adobe Photoshop® (Plug-in)

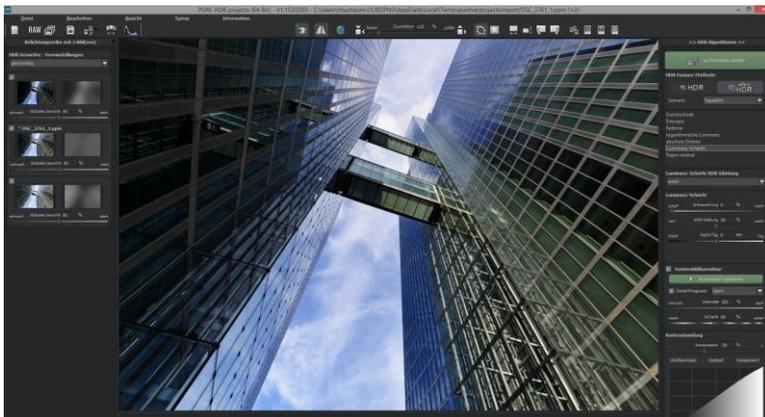
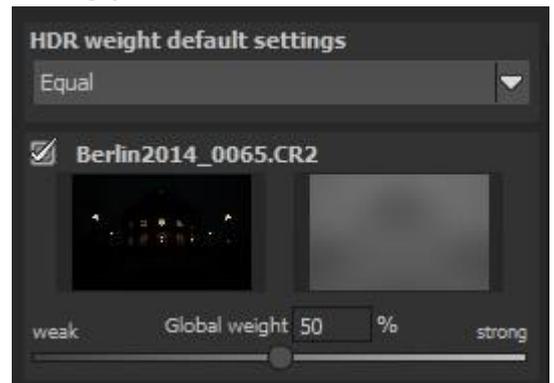
You can also transfer photos from open Adobe Photoshop® to **PURE HDR** and send the 32-bit HDR images directly back to Photoshop. When possible, use a RAW format to take advantage of the maximum available dynamic range.

- Open an image in Photoshop and maybe take care of a few fundamental fixes, such as removing sensor spots.
- Go to “File/Export/PURE HDR projects”



On the right, you will see three images in the bracketing preview. **PURE HDR** has generated two new synthetic exposures to obtain a greater dynamic range.

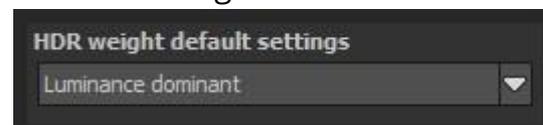
***The middle exposure is the master image which we imported into PURE HDR. The other exposures were added by the program.***



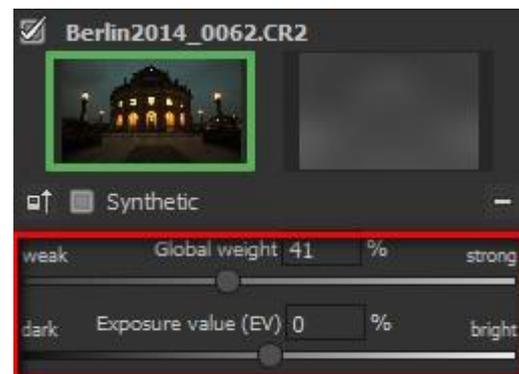
A preview of the computed HDR image will appear in the middle of the screen. Various settings can be found on the left and right hand sides.

**Left Side:**

- HDR weight can be adjusted in the “Edit exposure bracketing” section. You can manually set the global weight of each individual shot and change the exposure. Click on the preview to open the corresponding controls. In this example, we chose **“Luminance dominant”** to brighten the dark left side of the skyscraper.

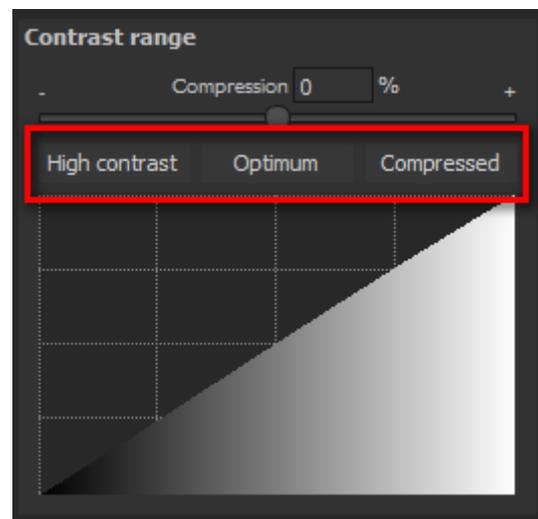
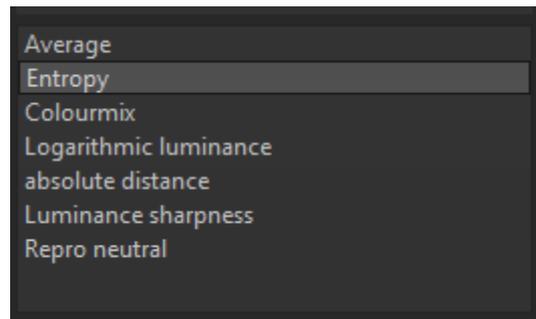


A preview of the HDR image allows you to monitor the final result as you work.



**Right Side:**

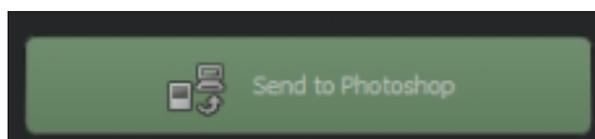
- Select an HDR algorithm
- Set the **contrast rage**. Choose between high, optimal and compressed contrast to change the dynamic compression value. This choice will be analysed and the best value for the bracketing series will be applied. You can also use the slider to pick an in-between value. There is no right or wrong, it all depends on the loaded bracketing series.
- **High contrast:** ideal for exposure series with low contrast
- **Compressed:** ideal for exposure series with extreme contrast
- **Optimal:** ideal for balanced contrast. The brightness will be levelled and the mid-tones properly set. This point is independently calculated by the system.



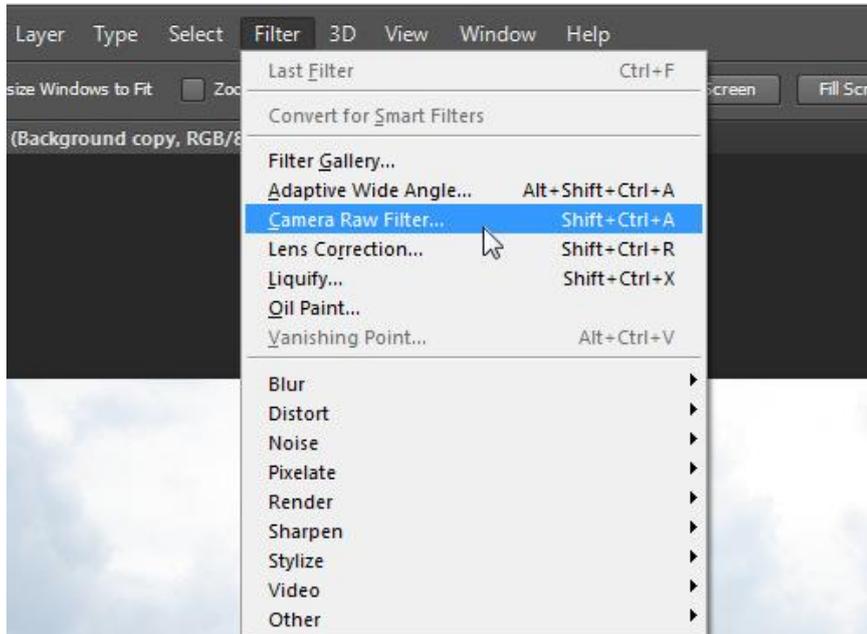
*We selected "Optimal" for this example, to create a balance between the bright sky in the background and the dark portions of the skyscraper.*



- Send the finished HDR image back to Photoshop by clicking:



- The 32-bit HDR image will now open in Photoshop.
- There are now more options available, such as Camera RAW Filter, accessible through **Menu/Filter/Camera RAW Filter**.



- Use the HDR toning tool to access all tone-mapping options.

Go to: Menu/Image/Correction/HDR toning

After applying the filter, your HDR image will be converted to a presentable and printable 8-bit format.

The final product now shows all of the tones in the sky. The left facade has been dramatically brightened, drastically increasing the visible detail.

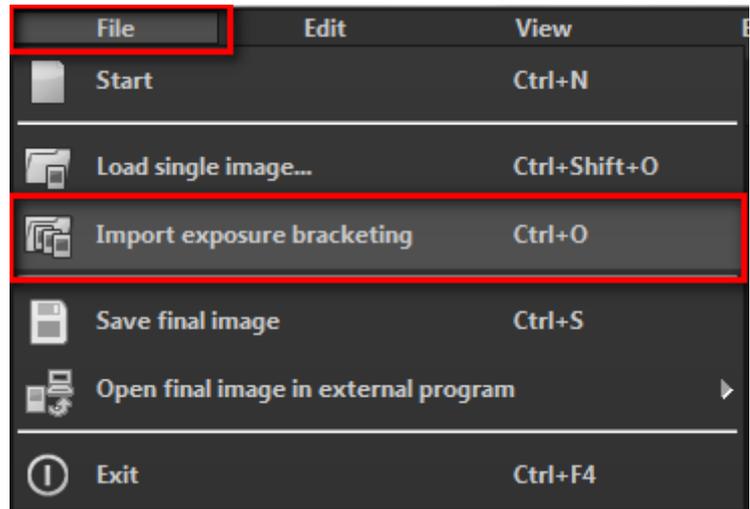


## 8. PURE HDR and Other External Apps

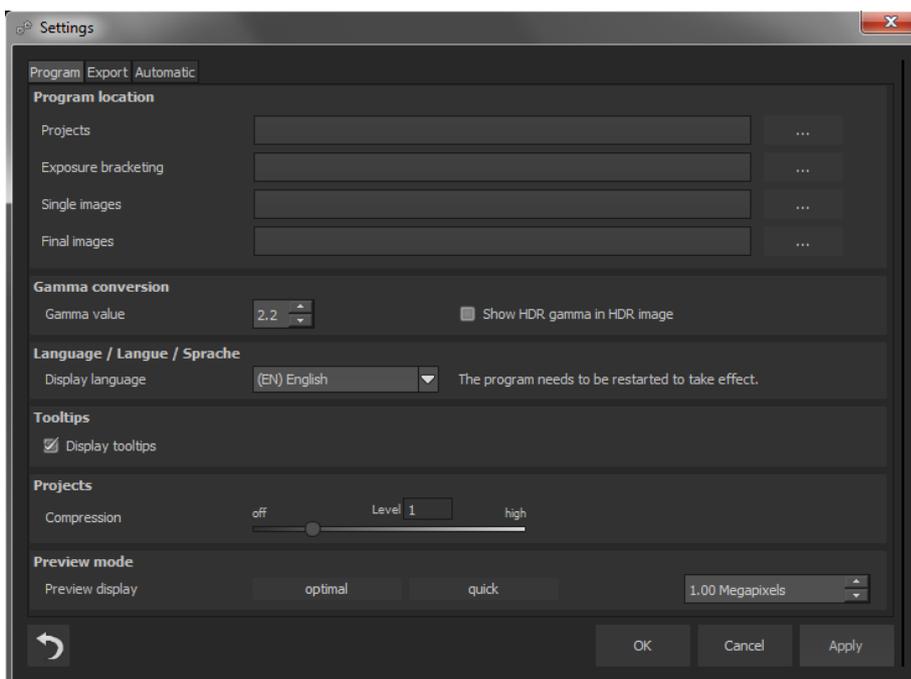
**PURE HDR** can also be used with other programs besides Photoshop® and Lighroom®. The primary requirement is that the program can read and edit 32-bit TIFF files or HDR formats like .hdr or .ext.

For this example, we chose Corel PaintShop Pro 8:

- Start **PURE HDR** as a stand-alone program.
- Load a bracketing series by selecting and then dragging & dropping the images into the program. Alternatively, you can go to **Menu/Import exposure bracketing**.

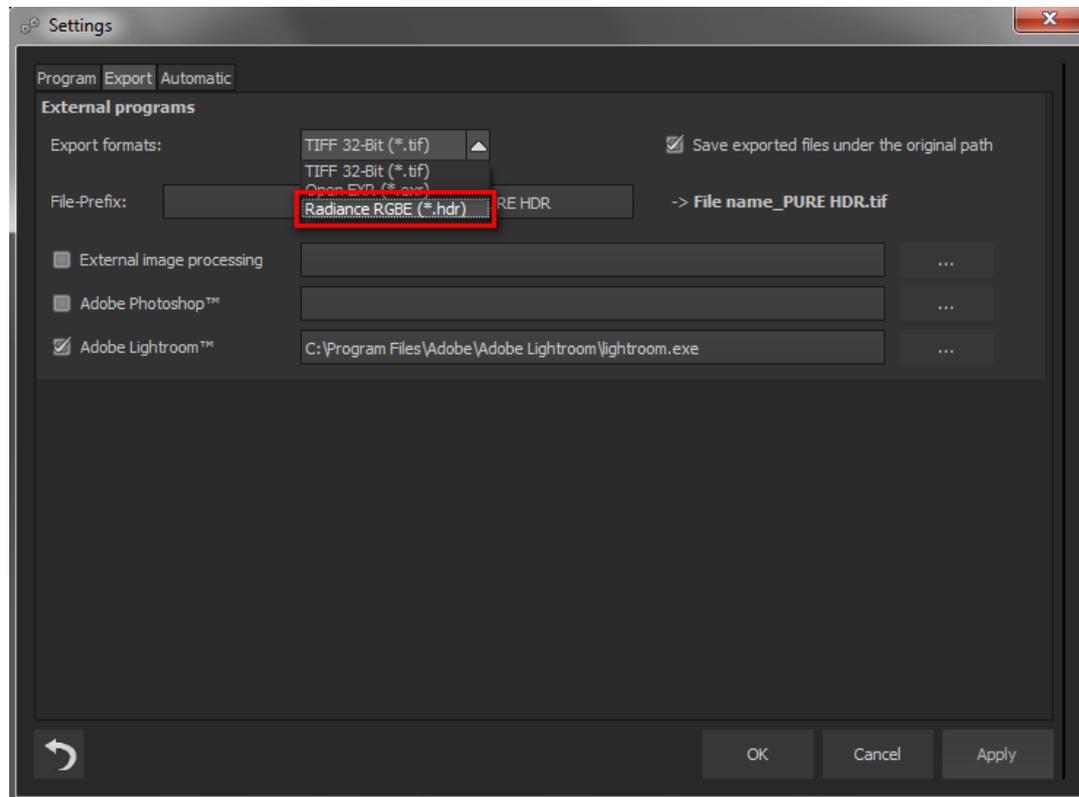


- To assure that the files are transferred in the correct format, we need to have the appropriate settings. In PURE HDR, go to **Menu/Extras/Settings**.



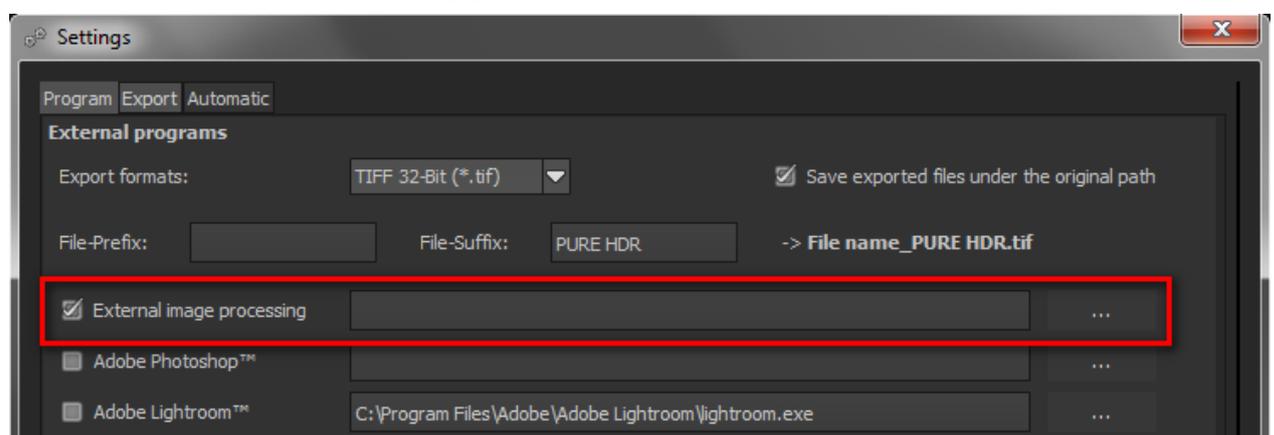
There are three available export formats to choose from, with TIFF 32-bit set as the default.

- It is crucial to select a format that is supported by your photo editing software, otherwise it will not be possible to export or edit files!



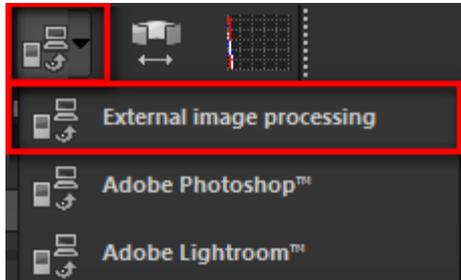
- In our example, Corel PaintShop Pro 8 can read and edit Radiance RGB (\*.hdr), which is why we have chosen it here.
- Set up your external app by clicking on the button with the three dots and selecting the application.

### Windows/MAC OS X → Application in Program Files



- Click on “Apply” and confirm with “OK”. All adjustments have been made. It is only necessary to go through this process once, **PURE HDR** will save your preferences.

Now we can transfer the finished HDR image to PaintShop Pro8.



- Click on “Open final image in external program” and select “External image processing”.
- Confirm with “Yes” if you would like to transfer the file at its full size.



- PaintShop Pro8 will now open the image in an adapted HDR mode. Select your favourite look.



✓

- Select a preset and click on “Edit”. The fine-tuning window will open, and you can add the last finishing touches and save the finished photo in different formats.

### **Photo Credits:**

The images used in this handbook were taken by members of the projects Team from FRANZIS Publishers and the programmers.

We would like to especially thank Mr. Falko Sieker, who provided several bracketing series and individual images for test purposes. Many of the examples found in this manual were made available by him.

## 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](mailto: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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