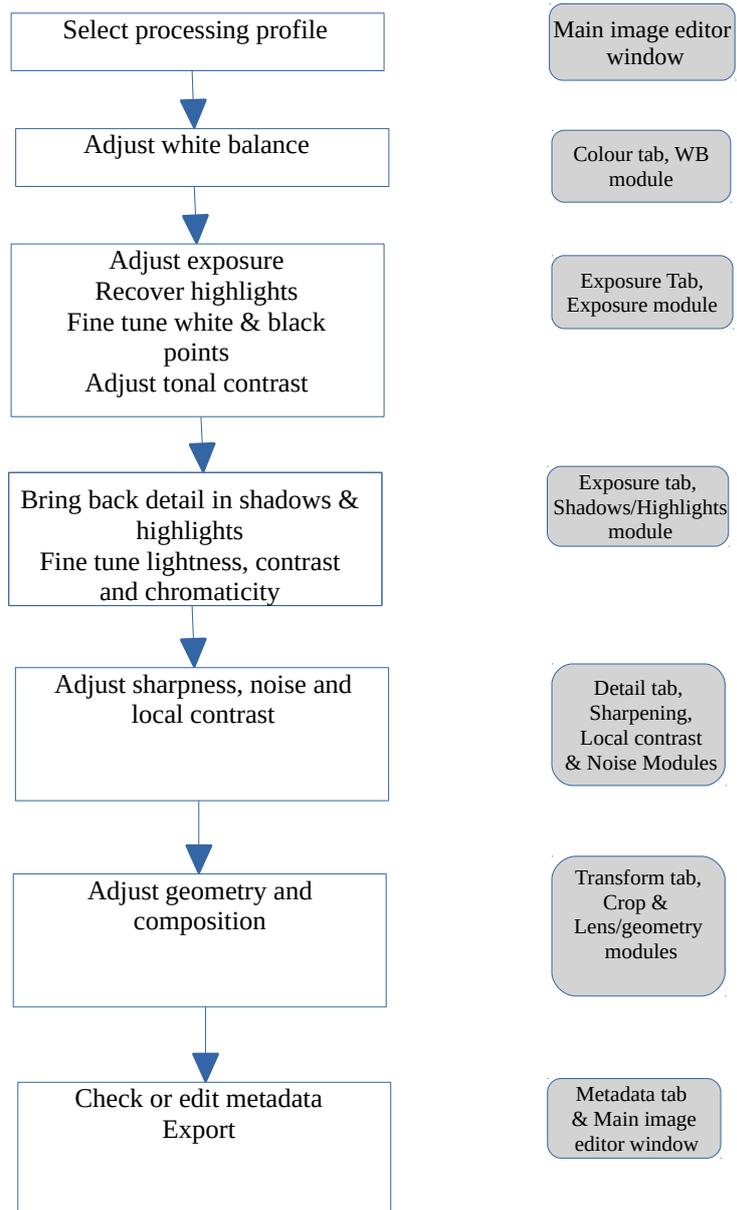


A Basic RawTherapee Workflow (version 26.09.2019)



Note that RawTherapee has its own internal processing sequence so you do not necessarily need to follow the processing steps in the order shown.

A Basic RawTherapee Workflow (based on the Getting Started section of Rawpedia)

Please refer to <http://rawpedia.rawtherapee.com> for a detailed description of the RawTherapee interface and the tools mentioned below.

1. Select a processing profile

When you open a raw image in the Editor window, Rawtherapee should default to the **auto-matched low-ISO processing profile** unless you have changed this in the Preferences dialogue.

The two main aspects of the processing profile that affect image appearance are:

- *An Input Profile (in the Colour Management Module under the Colour Tab) which will be either auto-matched if one exists for your camera or a Camera Standard profile. The profile determines the colour rendering for the image .*
- *An auto-matched tone curve which will try and reproduce the tonal contrast of the jpeg image embedded in the RAW file. The tone curve determines the tonal contrast of the image when you open it.*

(You can find other processing profiles in the drop-down menu under Processing Profiles in the Image Editor main window. Please refer to Rawpedia for details.)

If you don't like the colour rendering of the Input Profiles in RawTherapee, you can use a DCP file as an Input Profile (Custom option in the Colour Management module). These profiles can be found in Adobe's free DNG converter and correspond to your camera's picture styles. If you use these profiles, it is recommended that you uncheck the DCP tone curve option and use the auto-matched tone curve as above.

It is important to understand that curves can introduce hue and saturation shifts so if this is a problem you can mitigate it by using the Perceptual or Luminance modes (this is not possible with the DCP tone curve which is why it is usually better to turn it off and use the auto-matched curve in the Exposure tab instead). The curves may also push the highlights out of range so keep an eye on this.

If the auto-matched curve doesn't provide a satisfactory starting point, it may be better to switch it off and construct your own curve from scratch.

2. Adjust the white balance

Once the image is loaded, start off by right-clicking on the  Color tab and expanding the White Balance tool. RawTherapee will start with the white balance used by your camera. If the 'camera' white balance doesn't look right, try using 'auto' or 'cloudy' etc. You can also adjust white balance by moving the Temperature and Tint sliders, or using the  Spot White-Balance Picker on a colourless (neutral gray) patch. Adjust to taste.

3. Adjust the exposure and recover highlights

Next, turn on the highlight and shadow clipping indicators  at the top of the screen and open the  **Exposure** tab (right click to expand it) .

- The Exposure Compensation slider works in the same way as exposure compensation in the camera. Use the slider to adjust the exposure so that the mid-tones are correctly exposed. If this causes highlight clipping you can attempt recovery using the Highlight Compression slider. You

may need to move back and forth between the two sliders to get the optimum setting. Note that if you increase the HC slider too much, then whites turn grey. For images where the highlights are clipped in the raw file you can activate Highlight Reconstruction (using either the Blend or the Colour Propagation modes) before making the adjustments with the HC slider to try and repair the clipped areas.

4. Set the white & black points

As a general rule, the histogram of a correctly developed image should touch both ends - the black and the white end. This is true for the vast majority of photos, the only exceptions being photos of scenes which lack dynamic range, such as misty scenes.

- If the image is more or less correctly exposed in the camera, the Exposure Compensation slider can also be used to adjust the white clipping point. However if the mid-tone exposure is OK but the whites aren't completely white then it may be best to adjust the whites by pulling in the top right hand corner of the tone curve as mentioned in step 5 below. Using the tone curve rather than the exposure slider to set the white point will have less impact on the mid tones.
- Adjust the black clipping point using the Black slider. For both whites and blacks, keep an eye on the histogram and the highlight/shadow clipping indications as you make these adjustments. The black point can also be set using the tone curve as described in step 5 below. In this case the effect is exactly the same as with the slider.

***Note 1:** If you have used the Auto-matched tone curve option to import the image, avoid clicking on the activation button for this tool after you have started processing as this will reset any black, lightness or contrast adjustments you may have already made in the Exposure module.*

***Note 2:** It is best to avoid using the autolevels function once you have started processing as it also alters the exposure, contrast, lightness and black point in the Exposure module and will override any settings you may have already made. The autolevels settings will also be set to zero if you happen to click on the Auto-matched tone curve button after importing the image.*

5. Add tonal contrast

There are two curves in the Exposure module which allow for very fine control. If you have used the auto-matched curve for import this will show up in the first tone curve position. The second curve can be used for fine adjustments as follows:

- Start by fine tuning the Black and White points (if necessary) by dragging the top right hand point on the curve horizontally to the left and the bottom left hand point horizontally to the right.
Again, keep an eye on the histogram and the highlight/shadow clipping indications as you make these adjustments.
- Fine tune the tonal contrast using the curve. Rawtherapee allows you to choose both the type of curve (Standard, Flexible, Parametric & Control Cage) as well as the curve mode (Standard, Weighted Standard, Film-like, Saturation & Value Blending, Luminance & Perceptual). These may seem bewildering to begin with so it is recommended that you read the relevant section in Rawpedia. However to start with, you can try using the Standard curve type in either Film-like or Perceptual mode. The Film-like curve mode was designed

by Adobe as a part of DNG and is the one used by Adobe Camera Raw and Lightroom. The Perceptual curve mode will keep the original color appearance concerning hue and saturation. If for example you apply an S-curve in this mode, the image will indeed get increased contrast, but the hues will stay the same and the image won't look more or less saturated than the original. The chromaticity slider in step 7 below can be used to increase the colour intensity if required.

6. Bring back detail in the shadows & highlights

Once the tonal contrast has been adjusted, right click on the Shadows & Highlights module and use the Shadows slider to bring back some of the detail in any areas that are too dark. Use the highlights slider to bring back detail in the highlights. Less is more with these adjustments as going too far could introduce noise, artefacts etc. and make the image look unnatural.

7. Fine tune lightness, contrast & chromaticity

Next, right click on the L*a*b* Adjustments module and fine tune the lightness, contrast and chromaticity if necessary using the sliders (these sliders are preferable to using the lightness, contrast and saturation sliders in the Exposure module). Chromaticity will increase colour intensity without making the image look unnatural. There are also a number of other curves available in this very powerful module. For example, try using the CH curve to boost or mute the intensity of individual colours (see Rawpedia for details).

8. Sharpen your image

Switch to the  Detail tab and zoom to 100% using the  button (or by using the "z" keyboard shortcut key), because the effects of the tools in this tab are only visible in the zoomed-to-100% preview (and of course in the saved image). Turn on the sharpening module and leave it at its default values. The objective at this stage is simply to compensate for any inherent softening in the camera lens and sensor (see the manual for output or post-resize sharpening). The "contrast threshold" adjuster in the [Sharpening](#) tool, allows you to sharpen details while preserving the smoothness of uniform, flat areas. The effect of this can be seen using the sharpening contrast mask which is next to the shadow/highlight clipping indicators in the top toolbar (can be activated also by using the "p" keyboard shortcut key).

9. Enable noise reduction

Enable the Noise Reduction tool by clicking on the power button  leaving the settings at their default values for now. RawTherapee has automatically removed color (chrominance) noise. Luminance noise is removed manually, though leave it for now as luminance noise generally lends a pleasing, grainy, film-like look. As a general rule, when using noise reduction use sharpening with care as this can introduce noise. Zoom back out to see the whole image either using the  button or using the "f" keyboard shortcut key.

10. Add Local Contrast

The Local Contrast Module (similar to Clarity in Lightroom & Photoshop) can give the image some extra 'pop' and make it look sharper but be careful about overdoing it. The default setting works well for landscape photos.

11. Adjust the geometry and composition of your image

First make the horizon level, or correct the things which should be vertical such as street lamps or building edges. To easily do this, press the "s" key on your keyboard (the same as clicking the  button), and click-and-drag a line along the horizon or along the edge of a building over the preview. Your image will rotate accordingly and you will automatically be taken into the  Transform tab.

- To crop the photo, press the "c" shortcut key on your keyboard (or use the  button) and click-and-drag a crop over the preview; you will notice that the **Crop** tool becomes automatically enabled. There is no need to "apply" a crop - it takes effect the moment you draw it. You may want to set the Crop "Guide type" to "none" if it's a problem.
- Finally, you want to downscale the photo, because who wants to upload a 10MB JPEG to your social network. Enable the **Resize** tool and leave it at the default settings. Notice that the resizing effect is only applied to the saved image, not to the preview.

12. Save your image

You're all set, let's **save** it straight away. Click the  Save Current Image button, or use the keyboard shortcut Ctrl+s. Save it as a JPG file, quality at "92", subsampling at "balanced". These are good all-round settings. Choose a folder where you want it saved to, and after a few seconds your file will be ready in the folder you selected. If you close RawTherapee, the settings you used will be stored in a [PP3 sidecar file](#) next to the raw file, so that you can re-open the raw photo in the future and retain the tool settings you used.

13. Edit the metadata

You can check or edit the metadata in the  Meta tab at any time. For the changes you make in the Meta tab to take effect in the saved image, make sure "Preferences > Image Processing > Copy Exif/IPTC/XMP unchanged to output file" is unchecked. If it is checked, the changes you make in the Meta tab will be ignored in the saved image.