



LEICA M10-R / LEICA M10-P
LEICA M MONOCHROM

Firmware updates

FIRMWARE

LEICA M10-R: 20.20.47.37

LEICA M10-P: 3.21.3.50

LEICA M MONOCHROM: 3.21.2.50

_NEW: Perspective control

_NEW: Lens profiles

FIRMWARE UPDATES

Leica is continuously working on the further improvement and optimization of your camera. Since many camera functions are entirely controlled by software, some of these improvements and additions to the functional scope can be installed in retrospect. Leica offers firmware updates at irregular intervals, which you can download from our website.

Leica will notify you of any new updates, once you have registered your camera.

Find out which firmware version is currently installed

- ▶ Select **Camera Information** in the main menu
 - The current firmware version is displayed next to the menu item **Camera Firmware**.

More information about registering, firmware updates and how to download them to your camera, as well as any amendments and additions to this manual can be found in the customer area of our website at:

club.leica-camera.com

UPDATING THE CAMERA FIRMWARE

- ▶ Download the latest firmware version
- ▶ Save the download to the memory card
- ▶ Insert the memory card into the camera
- ▶ Switching the camera on
- ▶ Select **Camera Information** in the main menu
- ▶ Select **Camera Firmware**
 - This menu item is available only if a current firmware file is stored on the inserted memory card.
 - A prompt with information about the camera is displayed.
- ▶ Check the version information
- ▶ Select **Yes**
 - The update will start automatically.
 - Once the process has completed successfully, a relevant message will be displayed and the camera will restart.

Notes

- The camera must not be switched off before the update is completed.
- A warning message will appear if the battery is insufficiently charged. Please recharge the battery and then repeat the process described above.

PERSPECTIVE CONTROL

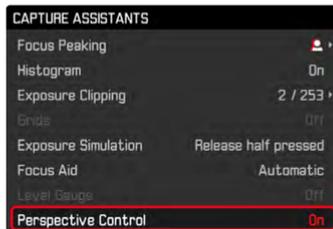
This assist function displays a frame showing the expected cropped section of the image after a correction of the perspective of vertical falling lines. Perspective Control helps to achieve a generally straighter vertical line and straight horizon, which ensures a natural image effect, specifically in architectural images.

The function “Perspective Control” calculates the image section and the required distortion correction based on the actual panning angles of the camera and the lens used. In effect, the camera orientation during recording (determined by internal camera sensors) is the decisive factor and not the lines visible in the image object. The function is therefore unlike automatic perspective control features used for post-editing, which are generally based on the image content.

The functionality depends on the picture format used (JPG or DNG). For JPG format images, the correction occurs directly in the camera and the corrected image is stored. For DNG format images, the relevant information is written to the meta data or the original image. Image correction is done later on using a program like Adobe Photoshop Lightroom® or Adobe Photoshop®.

Factory setting: **Off**

- ▶ Select **Capture Assistants** in the main menu
- ▶ Select **Perspective Control**
- ▶ Select **On/Off**



Notes

- In case of large panning angles, the distortion correction needed for a complete perspective control would be too extreme. That is why this function is automatically skipped or only partially used where angles are too large. In that case, we recommend creating DNG format images and to effect the desired corrections in a post-editing step.
- The focal length of the camera lens must be known to use this function. It is automatically detected when M lenses with 6-bit encoding are used. The lens type must be entered manually when other lenses are used (**Lens Detection**).
- A histogram will not be available for technical reasons, while the function **Perspective Control** is active.

* See p. 6 for more information.

ACTIVE PERSPECTIVE CONTROL



DETECTED PERSPECTIVE IN LIVE VIEW MODE



CORRECTED PERSPECTIVE IN REVIEW MODE



JPG FORMAT IMAGES

For JPG format images, the correction occurs directly in the camera and the only corrected image is stored. Any image content outside the frame will be lost.

DNG FORMAT IMAGES

In DNG format, the entire sensor image is stored unchanged. The data calculated by Perspective Control is written to the meta data of the image. Image correction is done later, using appropriate software like Adobe Photoshop Lightroom® or Adobe Photoshop®*. A corrected preview version of the image (thumbnail) is displayed in Review mode. The same applies for automatic review directly after the image is taken.

However, when opening the file in Adobe Photoshop Lightroom® or Adobe Photoshop®, the original recording will be displayed. Depending on the default settings of the software, the image can also be directly displayed with the corrections from the auxiliary frame.

PERSPECTIVE CONTROL IN ADOBE LIGHTROOM® AND ADOBE PHOTOSHOP®

Perspective Control can be done as part of the post-editing process for DNG format images using e.g. Adobe Photoshop Lightroom® or Adobe Photoshop®. Read the Adobe Online Help for more detailed information about the topic.

ADOBE LIGHTROOM®:

<https://helpx.adobe.com/en/lightroom-classic/help/guided-upright-perspective-correction.html>

ADOBE PHOTOSHOP®:

<https://helpx.adobe.com/en/photoshop/using/perspective-warp.html>

Displaying the auxiliary frame

Select the function “Upright” > “With Auxiliary Lines” to display the cropping frame calculated by the camera. Deactivate that function via “Upright” > “Off” if a correction is not desired.

Automatic display of the corrected version

The relevant presets for handling images in RAW file format must be configured if you want Lightroom or Photoshop Camera RAW to display the images with the results of Perspective Control when a file is opened.

<https://helpx.adobe.com/en/photoshop/kb/acr-raw-defaults.html>

- ▶ Select “Camera Settings” as the RAW default setting