

Operating instructions for using the LM direct adapter for the phototube with interchangeable lens mount cameras



Attach the LM digital adapter to your camera using the bayonet mount. Make sure that the tip of the bayonet thread is exactly on the tip of the camera thread before turning clockwise until it locks into place. If necessary, hold down the button for releasing the camera thread.



If another adapter is installed on the microscope, remove it completely so that only the phototube (36 mm internal diameter) remains.

Before mounting the new camera-adapter unit, loosen the set screw (1) enough to allow the adapter to be easily inserted into the phototube (2).



If the camera is not aligned right, you can loosen the three small screws of the T2 ring to turn it to another position.



Focus adjustments to achieve parfocality can be made with the adapter solution.

Select the lowest magnification of the microscope and place a medium sized flat object (a coin, for example) on the slide. Look through the eyepieces and focus the image.



Turn on the camera. Checking the live image on the camera screen or on the monitor connected to the camera, you can now adjust the tube height to bring the image into focus.

Once you've found the optimal position, tighten the set screw.

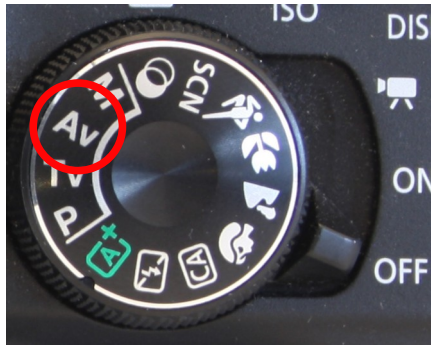


If more adjustment is necessary, the adapter can also be used to adjust the height of the camera to suit the focus of the eyepieces. For this, loosen the three Allen screws at the level of the "LM-Scope" label.



Carefully move the upper part of the adapter up or down while checking the live image on the camera screen. By adjusting the height of the camera, you can fine tune the focus.

Once you've found the optimal position, tighten the Allen screws.



If possible, use the automatic control program. If that is not possible, use the "Aperture Priority (Av/AE)" setting. If these two options do not work, you can also work in "M" (manual) mode. We recommend that you extend the power saving mode of your camera, otherwise the camera will constantly switch itself off.



With some cameras, a shutter release is only possible with the lens being in place. If this is the case with your camera, select the "release without lens" point in the setup menu (wording varies from manufacturer to manufacturer).



Using the viewfinder or the right angle viewfinder, focus the microscope image by means of the microscope focusing mechanism. Digital cameras with Live View and magnifying function (7x/10x/14x) are ideal for precise focusing. A magnification function is advantageous, as the camera display does not have the same resolution as the sensor. Not all camera models have a magnification function. It is also worthwhile using an external HD monitor, which ideally is connected to the camera via an HDMI connection.

Whenever possible, bright microscope illumination, halogen illumination, LED or a flash unit designed for short flash durations is recommended. We recommend setting the

	<p>camera's ISO to a number between 50 and 400. In order to reduce vibrations inside the camera use, depending on your camera model, the mirror lock-up function, Silent Shooting, Live View etc. If needed, you can insert a daylight filter (light blue) into the illumination beam path or use your camera's controls to adjust the white balance</p>
	<p>Blurred images are mostly caused by releasing the shutter manually. This leads to vibrations, which are picked up as motion blurs in the images. To avoid motion blurs, we recommend that you use a remote control release. Otherwise it is also possible to use the digital camera's self-timer function. Using a remote control system is also ideal (controlled from the PC); unfortunately, this is not supported by every camera.</p>

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