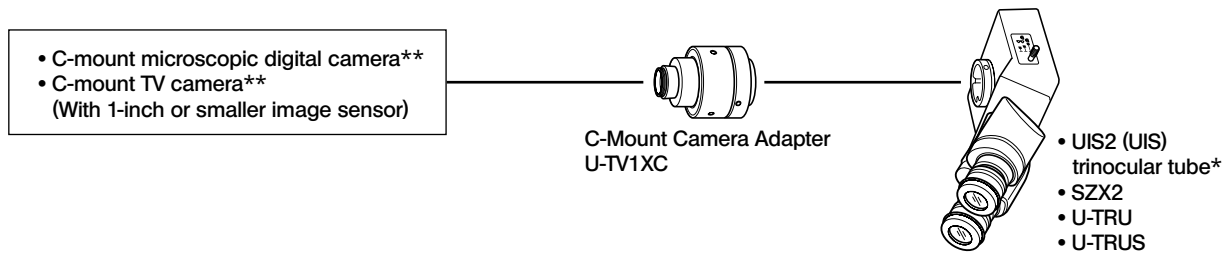


This instruction manual is for C-Mount Camera Adapter model U-TV1XC, which allows a digital camera or TV camera to record microscopic images (1X) directly from a microscope.

Before disposing of this product, be sure to follow the regulations and rules of your local government.

1 System Chart



* A UIS2 (UIS) trinocular observation tube (U-TTR-3, U-TR30-2, U-TR30NIR, U-SWTR-3, etc.) can be used. The MVX10 cannot be combined with this product.

** Camera restrictions

- A camera may be unusable if its C-mount plane is lower than the camera body surface.
- If the camera uses an image sensor larger than specified, the image periphery may become dark or obscured.

2 Assembly

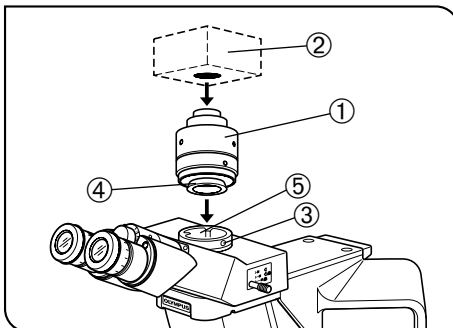


Fig. 1

Attaching on a UIS Trinocular Tube (Fig. 1)

1. Screw the camera adapter ① securely into the C-mount camera ②.
2. Using the Allen screwdriver provided with the microscope, loosen the clamping screw ③ on the UIS2 (UIS) trinocular tube and insert the mount dovetail ④ of the camera adapter into the camera adapter mount ⑤ of the trinocular tube.
3. Tighten the clamping screw ③ firmly.

3 Operation

Adjusting the Microscope

1. Ignite the microscope light source and adjust the microscope modules to make the microscope ready for observation.
2. Select the camera light path of the trinocular tube.

Adjusting the Camera and Monitor

Perform adjustments such as the color adjustments by referring to the instruction manuals for the camera and monitor.

- Ⓢ The center of the eyepiece image may not come on the center of the monitor screen. This phenomenon is due to the mechanism for adjustment of the camera's image sensor and not malfunction.



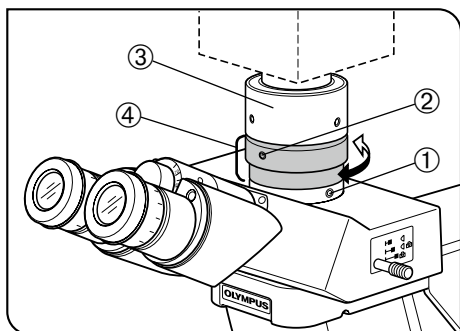


Fig. 2

Adjusting the Parfocality of the Observation Image and Monitor Image (Fig. 2)

Ⓢ The parfocality adjustment makes it unnecessary to correct focusing when the observation image is switched to the monitor image. Use the Allen screwdriver provided with the microscope for this adjustment.

CAUTION

The parfocality adjustment range is ± 1.5 mm. If the adjustment on this adapter is not enough, please also use the focusing function of the camera.

1. Using a high-power objective, look into the eyepieces and bring the specimen in focus.
 2. Switch to a low-power objective, select the camera light path and observe the monitor image.
 3. Loosen the clamping screw ① of the trinocular tube and the clamping screw ② of the camera adapter. Then, while observing the monitor image, hold the top ③ of the camera adapter and turn its bottom ④ to adjust the focus.
- Ⓢ The fixing screw of the camera adapter may not necessarily be located on the front side. If you cannot find the fixing screw of the camera adapter on the front side, please check either sides or the back side of the camera adapter.
4. When the monitor image is focused, tighten the clamping screws ① ② firmly.

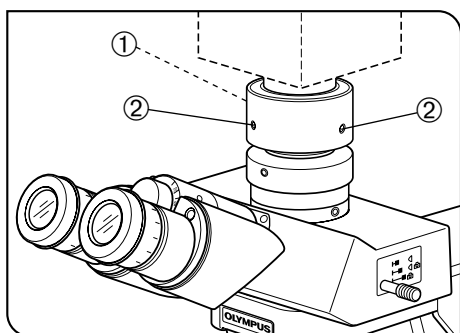


Fig. 3

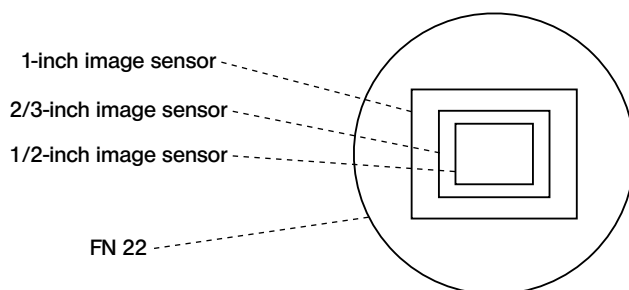
Adjusting the Centering of the Camera Adapter (Fig. 3)

Ⓢ The centering adjustment makes it possible to reduce the deviation of image between two objectives.

1. Using the Allen screwdriver, loosen the screw marked "LOCK" ① until it is projected by 3 or 4 mm from the camera adapter surface.
- Ⓢ Do not loosen the screw too much. Otherwise, it may slip out of the camera adapter.
2. Engage the objective with higher power in the light path and move the stage to bring the target region of the specimen on the center of the monitor image.
 3. Engage the objective with lower power in the light path and perform the following operation to bring the target region on the center of the monitor image.
(Turn each of the two screws marked "CENTERING" ② using the Allen screwdriver so that the target region is brought on the center.)
- Ⓢ To improve the centering accuracy, repeat steps 2 and 3 as required.
4. Tighten the screw marked "LOCK" ① firmly.

4 Image Pickup Areas

Ⓢ The following illustration shows field of view of eyepieces with a FN of 22 and the image pickup areas of the camera adapter depending on the image sensor size.



$$\text{Magnification on the monitor} = \text{Objective power} \times \text{Camera adapter power (1X)} \times \frac{\text{Diagonal size of monitor screen}^*}{\text{Diagonal size of image sensor}^*}$$

* Note that the actual diagonal lengths of the monitor and image sensor may vary slightly depending on manufacturers.

(Reference data for image sensor sizes)

1-inch camera → 16.16 mm. 2/3-inch → 11 mm. 1/2-inch → 8.08 mm. 1/3-inch → 6 mm. 1/4-inch → 4 mm.