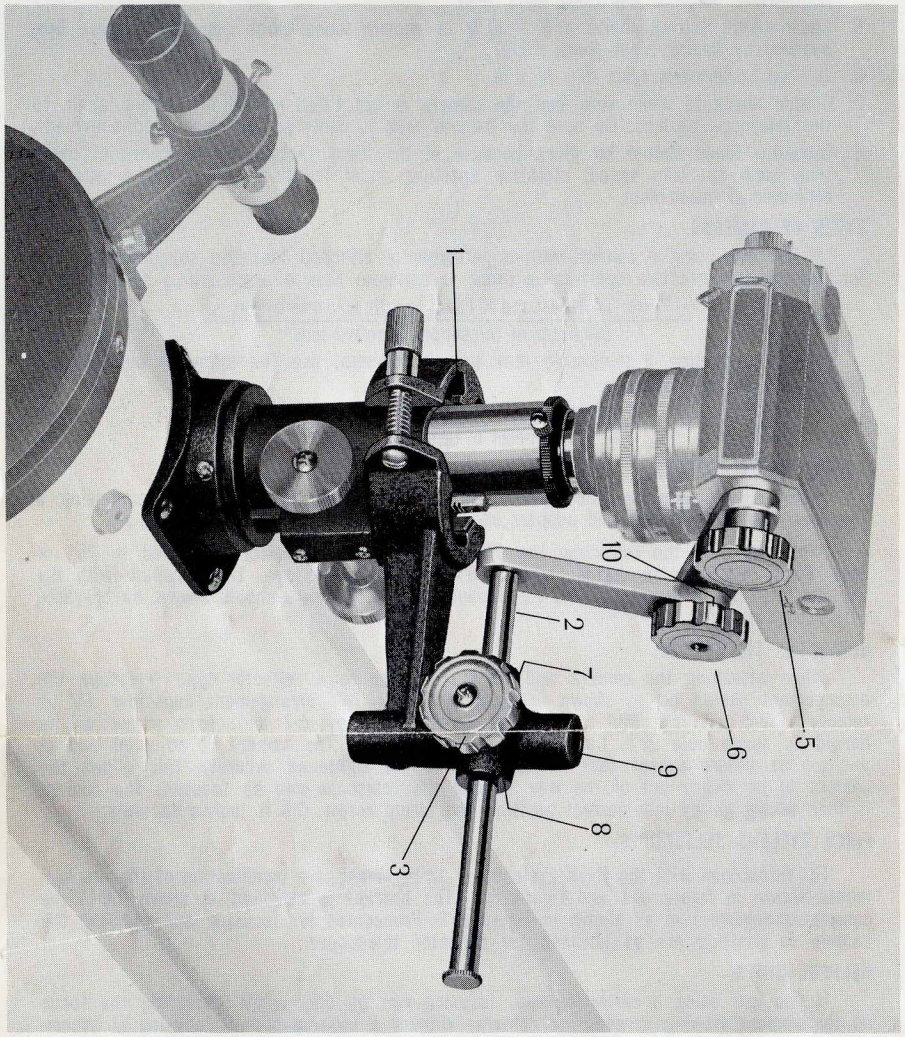


Figure 2

Guarantee

All TASCO instruments bear the TASCO Seal of Approval, which is your guarantee that they are free of any defects in regards to material used, as well as workmanship.

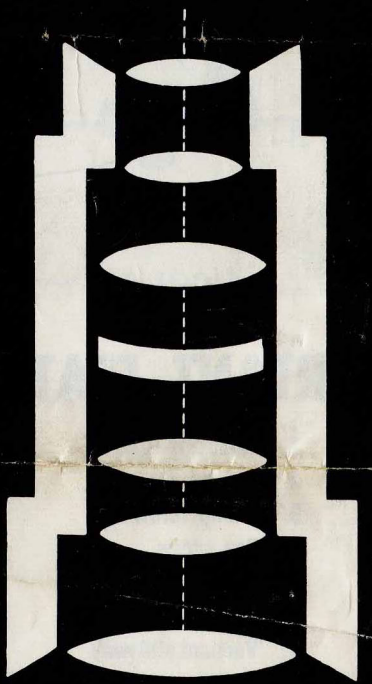
Should any TASCO instrument prove to be defective by reason of material or workmanship, it will be repaired without charge or replaced. When your instrument is not in use, always keep it protected.

Guarantee is always valid, the only exception being if the instrument has been abused, or tampered with in any way.

tasco SALES, INC. MIAMI, FLORIDA

Printed in Japan

CARE AND USE OF YOUR TASCO CAMERA ADAPTER



#1601 TEL-A-DAPTER

CAMERA ADAPTER FOR TELESCOPE

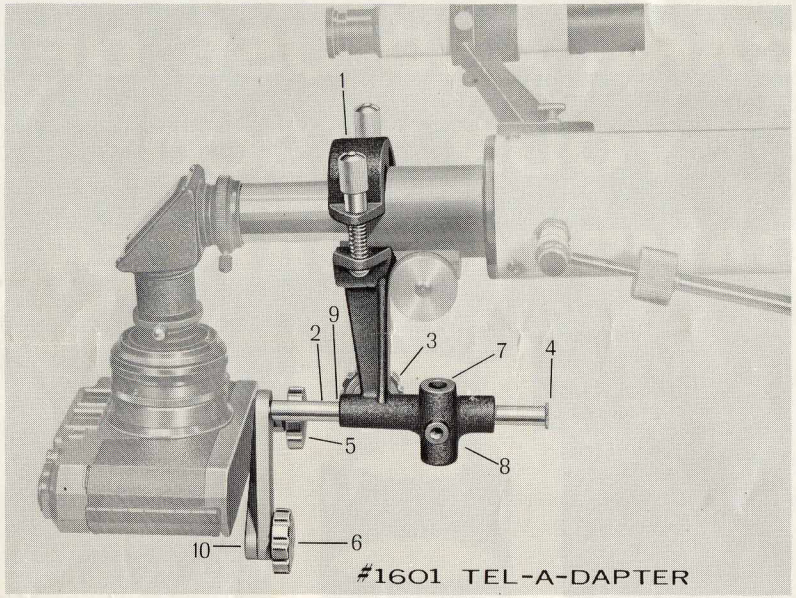


Figure 1

IMPORTANT FEATURES

1. **Mounting Bracket**
2. **Support Rod**
3. **Clamp screw**
4. **Cap screw**
5. **Tripod socket screw**
6. **Clamp screw**
7. **Vertical slideway**
8. **Clamp screw hole**
9. **Horizontal slideway**
10. **Hinge**

HOW TO USE YOUR TASCO CAMERA ADAPTER

Tasco's Tel-A-Dapter is designed to adapt small cameras to telescopes, both refractor and reflector types. Fixed focus, focusing cameras with fixed lenses or interchangeable lenses as well as single lens reflex types may be used.

GENERAL INSTRUCTIONS:

1. Place mounting bracket (part #1) on metal housing of the focus tube.
2. If the telescope is equipped with sliding eyepiece tube bracket #1 may be mounted on this tube.
3. Attach camera to camera bracket using camera tripod socket screw (part #5).
4. Remove capscrew (#4) and slip rod (#2) through slideway (#9 or #7), whichever is appropriate. Replace capscrew (part #4).
5. Allow clamp screws (parts #6 & #3) to remain loose while adjusting camera into position by flexing hinge (part #10).
6. Tighten clampscrew (part #6 & #3).
7. Double check to make sure that the camera is not tilted nor at an oblique angle to the telescope eyelens. Be sure the camera lens is centered to the telescope eyelens.
8. Exposure times cannot be given because of the many factors which govern exposure time such as: film speed, effective aperture, focal length of camera lens and the brilliance of the subject.

TYPES OF CAMERAS:

If you are using a camera with a permanently attached lens the suggested formula for figuring the effective aperture in order to estimate time of exposure is as follows:

$$\frac{\text{Power of Telescope X Focal length of camera lens}}{\text{Diameter of telescope objective lens}}$$

If you are using a removable lens type of camera, use the following equation for arriving at effective aperture:

$$\frac{\text{Focal length of telescope objective}}{\text{Diameter of objective lens}}$$

REFRACTOR TELESCOPES:

When using refractor telescopes with interchangeable eyelenses and employing a diagonal prism the camera and adapter should be arranged as shown in figure #1.

When focusing the telescope the diagonal prism and eyepiece is turned to 45° or less. Focus telescope in regular way so it is sharp to the eye. The diagonal (with the eyelens in place) is then turned to the camera lens. The camera should always be operated with cable release.

REFLECTOR TELESCOPES:

When attaching the camera and camera adapter to a reflector type telescope the arrangement should be as shown in figure #2. For this arrangement capscrew #4 is removed from rod #2. Rod #2 is put through slideway #7 and clamp screw #3 is moved to screw hole #8. Cap screw #4 is replaced. The camera is adjusted and in position as before except that clamp screw is not tightened securely, this allows the camera to be swung out of the way so that the telescope can be focused. The camera is then swung gently into correct position and clamp screw #6 is locked securely.

FIXED EYELENS TELESCOPES:

For telescopes with the fixed eyelens the arrangement is a combination of the arrangements shown in figure #1 and figure #2. The bracket is attached as shown (#1) the camera arrangement is as shown in figure #2. Procedures for focusing and securing the camera in position are as outlined for reflector telescopes.

HELPFUL HINTS:

If you are using a reflex camera, focusing can be done while observing the focus on the camera viewing screen. For cameras without a viewing screen focusing is accomplished as outlined under REFRACTOR TELESCOPES and REFLECTOR TELESCOPES.

If your camera does not have a TIME exposure it probably does have a setting for a bulb (B). The same results can be achieved by using the bulb setting and holding the plunger of the cable release down for the required number of seconds. When a plunger is released the shutter will close.

Make test exposures and keep a simple chart of exposure time used at different magnifications for your different subjects. Note which produced the best picture and use this chart for a guide in future filming.

Fixed focus cameras are automatically set at INFINITY and do not require any change. Cameras having adjustable focusing should be set at INFINITY.

When using telescopes that are not equipped with an equatorial mounting or micro-altitude adjustment rod the weight of the camera and TEL-A-DAPTER may allow the telescope to become unbalanced and impossible to hold in position with the regular clamp screws. A simple sling can be arranged by using soft rope, taking two or three turns around the telescope tube, position somewhere between the objective lens and the yoke. If this counter-balancing weight is too far forward simply release the weight by grasping both strands of the rope in one hand and this will, in turn, loosen the turns of the rope around the tube and the entire arrangement can be moved in the proper direction to balance the weight evenly.