K:43-540-129 | T:71-011-424

**CUSTOMER SERVICE:**
**KMART AU:** 1800 124 125
**KMART NZ:** 0800 945 995
**TARGET AU:** 1300 753 567

# ASTRONOMY TELESCOPE

**CAUTION:** ADULT ASSEMBLY AND SUPERVISION REQUIRED.

**WARNING:** CHOKING HAZARD - SMALL PARTS, NOT SUITABLE FOR CHILDREN UNDER 3 YEARS OLD.

8+ year

STEAM
EDUCATIONAL PRODUCT

# CONTENTS

# LIST OF ACCESSORIES

Optical tube x1

Tripod x1

Finderscope x1

Finderscope bracket x1

Storage tray x1




10 mm eyepiece x1
(high magnification, small field of view)


25 mm eyepiece x1
(low magnification, large field of view)

3x magnification mirror x1

Mobile Holder x1

Screw pack x1


**⚠WARNING:**
DO NOT VIEW THE SUN DIRECTLYWIHT TELESCOPE AS IT CAN CAUSE SERIOUS EYE DAMAGE. DO NOT POINT TELESCOPE AT ORNEAR SUN. DO NOT LOOK THROUGH THE TELESCOPE AS IT IS MOVING.

Please Note This Is A Toy And Not A Professional Telescope, Views Are Limited.

**⚠WARNING:**
POWER STATED IS FOR REFERENCEONLY AND THERE MAY BE A DIFFERENCE IN MAGNIFICATION.

**⚠WARNING:** FOR SAFTY REASONS, REMOVE ALL THE TAGS, LABELSAND PLASTIC FASTENERS BEFORE GIVING THIS TOY TO YOUR CHILD.

CONTENT AND COLORS MAY VARY AS SHOWN.

PLEASE KEEP PACKAGINGFOR FUTURE REFERENCE.

**⚠WARNING:** CHOKING HAZARD - SMALL PARTS, NOT SUITABLE FOR CHILDREN UNDER 3 YEARS OLD.

**⚠ CAUTION:** ADULT ASSEMBLY AND SUPERVISION REQUIRED.

**⚠WARNING:**
KEEP THE TELESCOPE WITH TRIPOD AWAY FROM WALKWAYS, PLAY AREAS OR SLEEPING ENVIRONMENT TO PREVENT TIPPING HAZARDS OR ACCIDENTAL INJURIES.



# PRODUCT FUNCTION DESCRIPTION


1. Eyepiece
2. Zenith mirror
3. Focus Knob
4. Gimbal handle
5. Locking Knob
6. Finderscope
7. Objective lens
8. Horizontal rotate knob
9. Tripod
10. Storage tray
11. Lens barrel fixing knob

# BASIC PARAMETERS

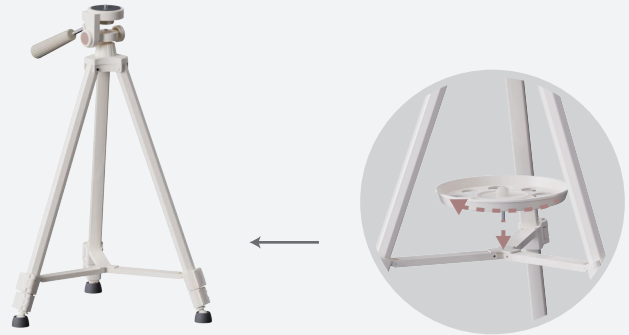
| | |
|---|---|
| **Model:** | SC-70400 |
| **Objective lens diameter:** | 70 mm |
| **Eyepiece 1:** | 25 mm (16x) |
| **Eyepiece 2:** | 10 mm (40x) |
| **Zenith mirror:** | 48 degrees |
| **Tripod:** | aluminum tripod |
| **Optical structure:** | refractive type |
| **Objective lens focal length:** | 400 mm |
| **Finderscope:** | 6x24 finderscope |
| **Magnification mirror:** | 3x magnification mirror |
| **Coating:** | Multilayer coating |

# INSTALLATION STEPS



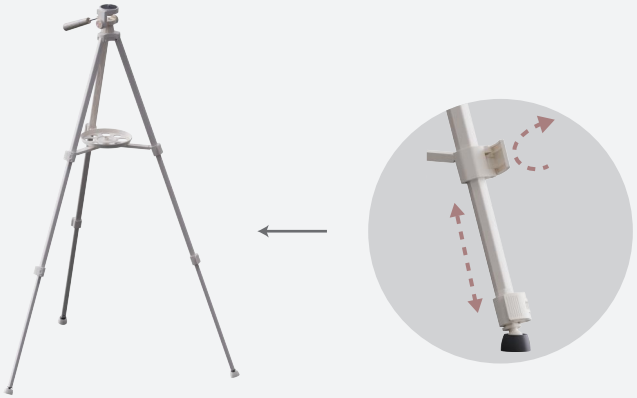
## Install the tripod

1. Stand the tripod upright as shown in the picture until the middle support rod is fully unfolded. Rotate clockwise to install the storage tray.



2. Open the locking knobs on the tripod legs, pullthe legs to desired length, then lock the knobs.

Note: keep all legs at the same length.

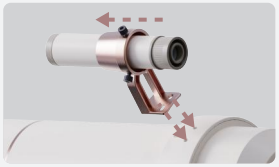





## 1 Installation of optical tube and gimbal handle

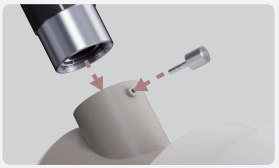
Align the fixing knob of the optical tube through the gimbal and the screw hole at the bottom of the lens tube, and turn the knob counterclockwise until it is tightened.

## 2 Install finderscope



Insert the finderscope into the optical bracket, and then use a 9 mm screw to tighten and connect the finderscope bracket to the lens barrel.

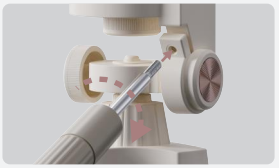
## 3 Install eyepiece



Place the eyepiece in the zenith mirror and tighten it with 6 mm screws. (10 mm eyepiece, 25 mm eyepiece, and 3x magnification mirror can be changed at anytime)

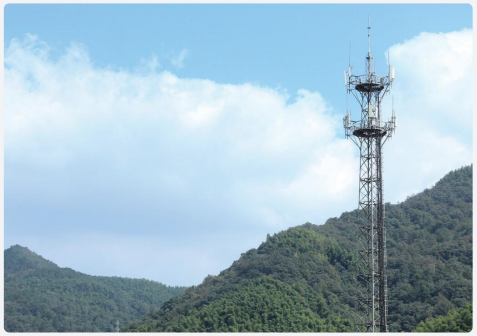
Note: Do not insert or remove the eyepiece when the screws are tightened, as it may cause damage to the appearance of the eyepiece.

## 4 Install gimbal handle

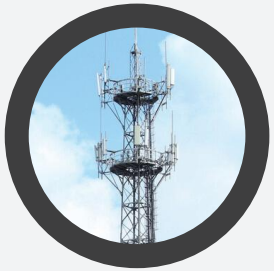


Align the gimbal handle screw with the position shown in the picture and turn to lock it.
The metal end of the gimbal handle is coated with rust proof oil. Do not grip it to avoid dirtying your hands.

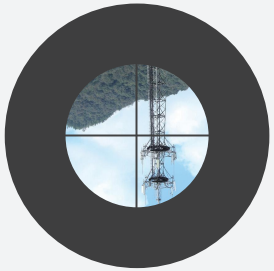
# FINDERSCOPE CALIBRATION



1 Find a clear and easily distinguishable target in the distance, such as the signal tower in the picture;

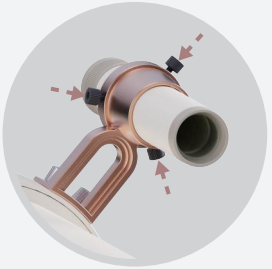


2 Install a 25 mm eyepiece on the zenith mirror, observe through the eyepiece, use the handle to adjust the telescope to find the target, move it to the center of the field of view, and turn the handle to lock the gimbal;

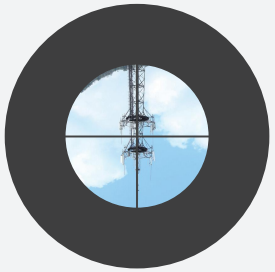


3 Look through the finderscope to find whether the crosshair on the target. (Rotate the end of the finderscope counterclockwise to focus and make the image clear).

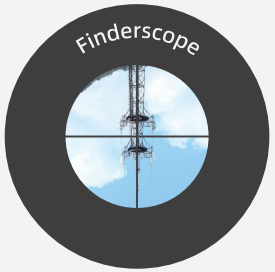




4 Adjust the finderscope screws, look through the finderscope, observe if the eyepiece content matches finderscope, and if not, fine-tune finderscope.



5 Fine-tune until the finderscope crosshair coincides with the target, and coaxial calibration is completed.

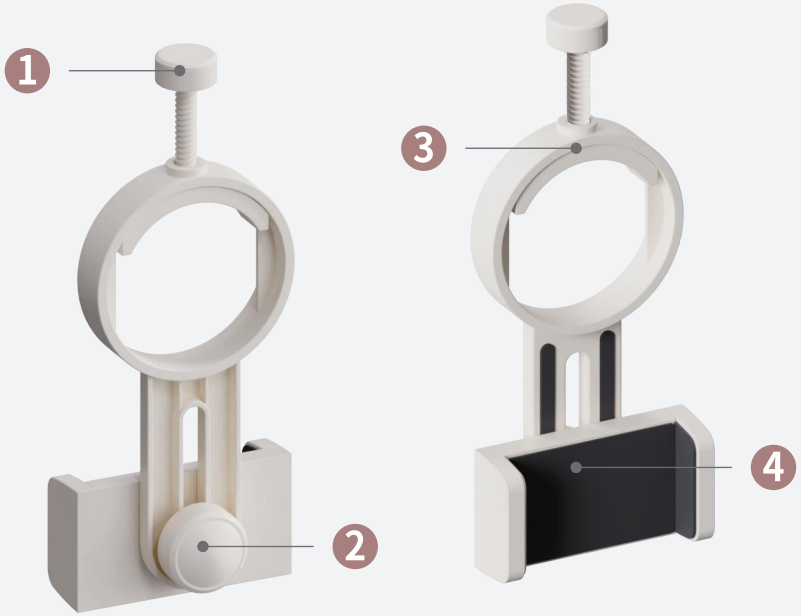



**Finderscope target**


**Eyepiece target, successfully calibrated.**

Skills and Attention:
The calibration of the finderscope is more easier during the day . Choosing a smaller target is better, but it should be easy to find, such as the top of a chimney . The target for adjusting at night can be a bright star, but make sure not to confuse it with the surrounding stars; The crosshair of the finderscope is perpendicular to the primary mirror, making it easier to refer to.

# MOBILE PHONE STAND INSTRUCTIONS




1 Eyepiece fastening knob

2 Phone fastening knob

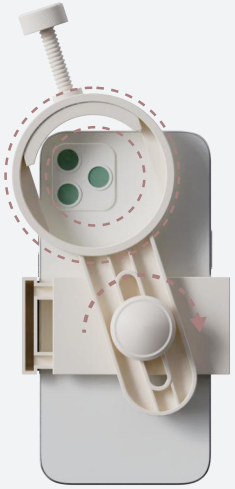
3 Eyepiece clip

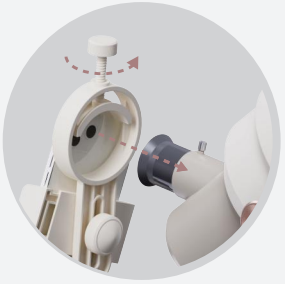
4 Phone clip



1 Open the phone clip and insert the phone to secure it tightly;

2 Move the eyepiece clip of the phone stand to the camera of the phone, align it roughly with the center of the circle, and then tighten the phone fastening knob clockwise to secure it.





3 Place the eyepiece clip of the phone stand on the eyepiece of the telescope and tighten the eyepiece fastening knob counterclockwise. Secure the phone stand to the eyepiece.

4 Fine-tune the position of the phone, until the main camera of the phone is aligned with the eyepiece, and the picture appears in the phone camera. Complete the installation of the phone stand.

(Note: After installing the phone, you need to adjust the focus of the phone to obtain a clear shooting image. You can capture a complete picture without black circles by zooming in on the phone screen.)

The default photo taken is a circle with black borders around it.

Zoom in on the phone to capture the image.

The photo taken is rectangular with no black borders around it.



# HOW TO CONNECT THE MAGNIFYING LENS TO AN EYEPIECE


1 Insert the eyepiece into the magnification glass


2 Tighten the screws on the magnification glass, secure the eyepiece, and then place it at the zenith opening of the astronomical telescope to tighten it.

# USE THE TELESCOPE


1 Adjust the observation angle of the telescope in the vertical direction by controlling the handle: Hold the handle and turn it counterclockwise to release the vertical angle fixation, adjust it up and down to the desired observation angle, and then turn it clockwise to fix the vertical observation angle;

2 Adjust the horizontal observation direction by adjusting the control knob on the left side of the gimbal: Turn it the knob counterclockwise to release the horizontal fixation, hold the handle and turn the mirror tube left/right to adjust to the desired horizontal observation direction, then lock the knob.

3 After the telescope is fixed, you can slowly rotate the focusing wheel until the image is clear.

# WATCH THE MOON



Start observing the moon
Now your telescope can perform some real observations. The moon has approximately one phase cycle per month, from the new moon to the full moon, and then to the remaining moon. You can try observing at different phases. You can observe the moon on any visible night, and the best observation time is between 2 days after the new moon and a few days before the full moon. During this period, you can see most of the moon's details, such as craters, lunar seas, radiation patterns, etc. Please refer to the calendar for specific lunar phase time.

1.On a clear moonlit night, assemble the telescope, insert a 25 mm eyepiece, and secure it in place;

2. Rotate the telescope until you press the crosshair intersection point at the center of the moon through the finderscope; Slowly rotate the focus knob until the image is clear.

3. Observe through a 25 mm eyepiece and carefully turn it the focus knob until the image is clearest.

Congratulations! The observation of the first celestial target has been completed!

By replacing the 25 mm eyepiece with a 10 mm eyepiece, you can achieve a higher magnification and the moon will appear larger.
After replacing the eyepiece, it is necessary to refocus.

You can also observe other celestial targets, such as planets, star clusters, and nebulae, using the above methods; Or city buildings, birds, and other targets.

# PRODUCT PROTECTION AND MAINTENANCE



## If your telescope is used and stored properly, it can provide you with years of reliable service.

1. Please protect the telescope from impact, use it within the limits of moving parts, and do not operate it forcefully.
2. Please protect the astronomical telescope lenses and cover all lens covers when not in use to avoid collisions. (The eyepiece can be stored in a dust cylinder)
3. Please try to store your telescope in a dry and cool place.
4. When storing for a long time, please place the astronomical telescope in a dry place.
5. Please do not place the telescope in a car under the sun or near any heat source, as these may cause damage.
6. Please clean up dust, dirt, or moisture as soon as possible after use, to prevent them from entering the telescope or moving parts and causing unpredictable damage.