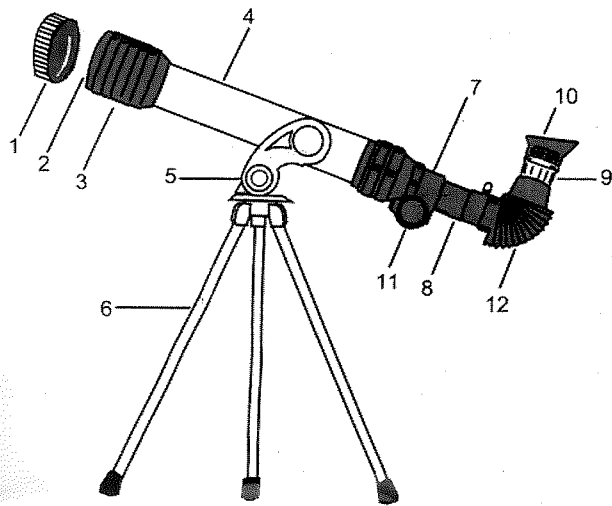


Item no. 32001/ 32002/ 32003
100 Power HD Telescope With Diagonal Mirror and Tripod

Components Of The Telescope



- 1 OBJECTIVE LENS CAP
- 2 OBJECTIVE LENS
- 3 LENS HOOD
- 4 TELESCOPE TUBE
- 5 KNOB BOLT
- 6 TRIPOD LEGS
- 7 FOCUSING TUBE HOLDER
- 8 FOCUSING TUBE
- 9 EYEPIECE
- 10 EYEPIECE CAP
- 11 FOCUSING KNOB
- 12 DIAGONAL MIRROR

Technical Specifications

Objective Diameter	:	30 mm (1.18")
Focal Length	:	400 mm
Eyepieces	:	20 mm, 4 mm
Maximum Magnification	:	100X
Accessories	:	Diagonal Mirror

WARNING ! NOT SUITABLE FOR CHILDREN UNDER 36 MONTHS. CHOKING HAZARD. THIS TELESCOPE SET IS APPROPRIATE FOR CHILDREN OVER 8 YEARS OLD. OTHERWISE, SUPERVISION OF AN ADULT IS REQUIRED.

CAUTION ! DO NOT VIEW SUN THROUGH TELESCOPE AS SERIOUS INJURY TO EYE MAY RESULT.

Read the following information and instructions before use. Follow them and keep them for reference.

How to Care For Your Telescope

Appropriate care of the telescope will allow many years of pleasant viewing enjoyment.

The Objective Lens

The objective lens (2) of telescope has been intensely polished and established to minute tolerances. It must be cleaned with care and as seldom as possible to avoid affecting its precision and performance. An inexperienced person must never take the lenses out of their mount.

Cleaning The Lens

Clean the lens only when it is required. The first step is to remove the dust with a camelhair brush or an ear-type syringe. Set few drops of ether or isopropyl alcohol on a piece of clean cotton that has been washed several times and wipe the lenses very delicately, avoiding a circular motion. In addition, blow any remaining lint or dust off with an ear-type syringe.

Sudden Temperature Changes

If possible, avoid taking the telescope from cold outside air into a warm room. This will make the objective lens to be covered with condensed moisture, which must be removed at once. To do this, place the objective lens at a safe distance from heat source and let it warm slowly until the moisture has vanished.

It is important to note that any stains left on the lenses must be delicately wiped off after the lenses are completely dry.

Helpful Hints For Setting Up the Telescope

Tripod Set-Up

1. Unpack the tripod from the box. Next, stand the tripod up vertically by dragging the leg extension and spread the legs apart fully.
2. Remove the knob bolt (5) from the telescope yoke.
3. Align the holes on the yoke and tripod. Reinstall and tighten the knob bolt.

Putting In Diagonal Mirror & Eyepiece

1. Insert diagonal mirror (12) into focusing tube (8). Secure by tightening the small retaining screw.
2. Insert eyepiece (9) into diagonal mirror (12). Secure by tightening the small retaining screw. Attach the eyepiece cap (10) over the eyepiece (9) if needed.

Observing Astronomical Objects Through Your Telescope

1. Glance through the main telescope's eyepiece (9) for your object. (Note : You may have to alter the angle of the telescope slightly.) The object will most likely seem to be blurry at this stage, but that is normal. You are just trying to get the object in the viewing field of your telescope lens. Once you have accomplished this task, fasten the knob to keep the accuracy of your telescope steady.
2. Now adjust the focusing tube (8) by turning the focusing knob (11) slowly back and forth until the blurred object becomes precise.

3. If you are going to be looking through the telescope for a short period of time, you can insert the eyepiece (9) directly into the focusing tube (8). To be more comfortable when using your telescope for longer periods of time, place the diagonal mirror (12) into the focusing tube and the eyepiece into the diagonal mirror.

How To Use the Telescope

Our telescope offers an extensive selection parts and accessories to further enhance the exploration of worlds beyond. As well, it is a precision optical instrument certain to give many years of enjoyment and entertainment.

Seeing

What you see through a telescope and how accurate you see it is a function of three factors:

- Power / Magnification
- Brightness
- Resolution / Clarity of image

It is a common misunderstanding that the more power you have, the better it is. Indeed, essential functions of a telescope are to magnify the image, or give the effect of being closer to object of observation. However, there are limits to how much power to use effectively. With every increase in magnification, there is a corresponding reduction of brightness and resolution. Too much magnification and the image will become dim and blurry so that the features of the object become vague. For best view of any astronomical body, you must strike a balance between the three viewing qualities.

Furthermore, with every increase in power, there is a decrease in field of view. The field of view is the circle of sky you see as you look through your telescope. The more you increase magnification, the more close that circle becomes. You will also notice that celestial bodies seem to move fast across the field of view even at low powers. That movement is still more recognizable at high powers. High power will provide some dramatic views of lunar or planetary features, but can also be somewhat frustrating until you acquire a certain level of expertise at tracking objects smoothly.

Power Strength : Selecting The Eye Lens

Power means the ability of telescope to increase an image, or appear to bring the image closer to the viewer. Value of magnifying power is distinguished by a number followed by an X (read power). Therefore, If you view an object at 100X, you are seeing it as though you are 100 times closer to that object.

Power is calculated by dividing the focal length of objective lens of your telescope by the focal length of the eye lens you choose. The focal length of the eye lens is usually indicated on the eyepiece itself. For example : 4mm

<p>Example: $\frac{400 \text{ mm (focal length of objective lens)}}{4 \text{ mm (focal length of eyepiece)}} = 100 \text{ X (power)}$</p>
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The longer the focal length of the eyepiece, the less the magnifying power of the telescope. Whereas the shorter the focal length, the greater the power. Therefore, when choosing an eye lens to insert the diagonal prism, you are actually selecting what magnifying power you wish to use for inspection.