



# 40mm ASTRONOMICAL TELESCOPE





#### **COMPONENTS**

Get to know your Telescope and all the functions it has to offer.



#### **USING YOUR TELESCOPE**

- 1. Carefully remove all parts from the box. When you remove your telescope from its box, the diagonal mirror and low-power 20mm eyepiece are already fitted. It is recommended that you start viewing the moon and stars with the 20mm eyepiece because it gives you the widest angle with the brightest and sharpest views.
- 2. Stand the tripod vertically and spread the three legs fully apart.
- **3.** Adjust the angle of the telescope by first releasing the bolt (see right) and wing nut that secures the telescope tube to the tripod bracket. Move the telescope as desired and secure with the bolt and wing nut, being careful not to over-tighten.

**NOTE:** Objects will appear right-side up in your telescope, but reversed, like a reflection in a mirror. This is normal and does not indicate a problem.

**4.** For greater magnification, release the thumbscrew securing the 20mm eyepiece, remove and replace with the 10mm eyepiece.







# MAKE YOUR WORLD BIGGER

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#### **HELPFUL HINTS**

- 1. The best way to use your telescope is outside, because viewing through windows (even if they are open) can be distorted by reflections from the glass or by air currents (differing temperatures) passing through a window.
- 2. Let your telescope adjust to the outside temperature before use. Your telescope will work better if the lenses and the air inside the tube are the same temperature as the outside, so give it up to 30 minutes to equalise.
- 3. Try to find a viewing spot that is away from glaring lights. If you live in a city, your viewing can be reduced by too much lighting, and it's best to use the telescope where it is as dark as possible.
- 4. Try to avoid sudden changes of temperature, as this may cause condensation on your lens (for example, carrying your telescope in from a very cold wintry outside to a very warm house interior). If this occurs, leave the lens cap off, tilt the lens face down and wait till the telescope reaches room temperature before storing it.

#### **DID YOU KNOW?**

The best time to look at the Moon is when it is less than half full, because the dividing line between the dark and light of the Moon (called the terminator) shows the best detail in the craters and mountains.



### **DID YOU KNOW?**

Telescopes have been used for hundreds of years. It was early versions that showed that Earth was not the centre of the universe, as was previously believed.

#### **ABOUT MAGNIFICATION**

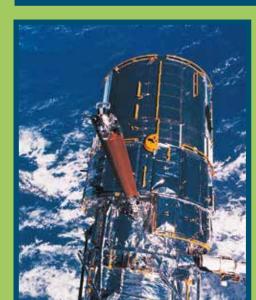
The magnification of a telescope indicates how much an image is enlarged or how big and close it appears to the viewer. The focal length of the eyepiece combined with the focal length of the telescope determine the magnification. To calculate the magnification of your telescope with any particular eyepiece, simply divide the focal length of the telescope (500mm) by the focal length of the eyepiece (indicated in 'mm' on the eyepiece collar).



**Example** 

500mm focal length tube 20mm focal length eyepiece

= 25X magnification



The two eyepieces included provide the following magnification:

10mm eyepiece = 50X 20mm eyepiece = 25X

#### **DID YOU KNOW?**

Modern telescopes like NASA's Hubble Space Telescope provide evidence of billions of galaxies, each containing billions of stars like our Sun.

### TAKING CARE OF YOUR TELESCOPE

The lens and eyepieces in your telescope can get dirty over time, and utmost care must be taken when cleaning them. Here are some tips for keeping your telescope in good working order:

- **1.** Keep the dust caps on when not in use or when transporting the telescope.
- 2. Condensation can occur when the telescope is not in use. If this happens, remove the dust caps and allow the moisture to evaporate naturally. While doing this, keep the telescope pointing downwards to avoid dust accumulating on it. Replace the cap as soon as the condensation has gone.
- **3.** If the lens looks like it is dusty, try blowing away any particles. If your lens requires more cleaning then use a moistened lens tissue or cloth (not included).





## **DID YOU KNOW?**

When looking at the night sky, stars will twinkle but planets, although as bright, will show as a constant light. MAKE YOUR WORLD BIGGER

#### **NOTES**





**WARNING!** Do not view the sun through the telescope as serious injury to the eye may occur. To be used under the direct supervision of an adult.



Please retain the information on this manual for future reference.

Colour, designs and decorations may vary from those shown in the photographs.

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