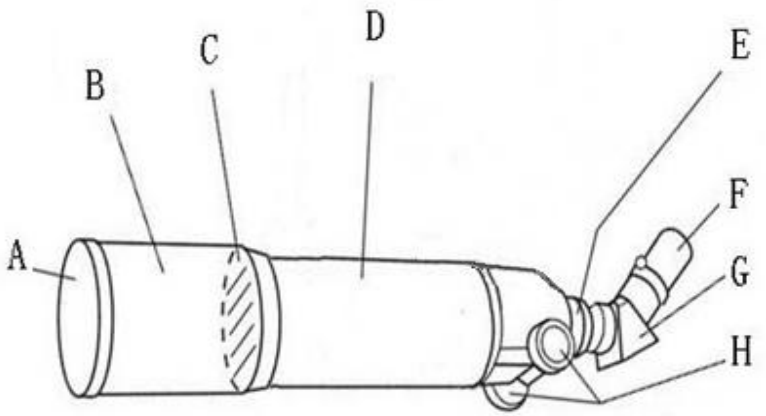
90-500 Manual

Specification:

Focal Length:500mm
Telescope type:Refractor
Focal Ration: F/5.6
Lens Feature:Doublet air spaced achromatic
Dovetail mounting: Include
Objective lens diameter:90mm
Lens Coated:Fully Multi-Coated
Standard 2 inch adapter
A 2 inch to 1.25 inch adapter include
Body Material: High Grade Aluminum



Parts Diagram

A.Front Lens dust Cap
B.Dew Cap /Sunshade
C.Objective Lens
D.Main Optical Tube
E.Focus Tube
F.Eyepiece(**Not include**)
G.Diagonal (**Not include**)
H.Focsing Knob

Note: F and G are optional,sell seperatly

Calculating Magnification (Power)

You can change the magnification of your telescope simply by changing the eyepiece (also called an ocular). To determine the magnification with your telescope, simply divide the focal length of your telescope by the focal length of the eyepiece. In equation format, the formula looks like this:

$$\text{Magnification} = \frac{\text{Focal Length of Telescope (mm)}}{\text{Focal Length of Eyepiece (mm)}}$$

For example, to determine the magnification of the 90-500 telescope with a 25mm eyepiece, divide the focal length of the telescope (500mm) by the focal length of the eyepiece (25mm).500 divided by 25 yields 20 power.

Although the power is variable, each instrument has a limit to the highest useful magnification. The general rule is that 60 power can be used for every inch of aperture. For example, in a 3.5" diameter telescope, such as the 90500, the maximum useful magnification is 210 power. This is derived from multiplying 60 times 3.5".Although this is the maximum useful magnification, most observing is done in the range of 20 to 35 power for every inch of aperture which for the 90500 is 70 to 123 power.

Observing the Moon

In the night sky, the Moon is a prime target for your first look because it is extremely bright and easy to find. Often, it is tempting to look at the Moon when it is full. At this time, the face we see is fully illuminated and its light is overpowering. In addition, little or no contrast can be seen at this time. One of the best times to observe the Moon is during its partial phases (around the time of first or third quarter). Long shadows reveal a wealth of detail on the lunar surface. At low power you can see the entire lunar disk at one time. Change to higher power (magnification) to focus in on a smaller area. Keep in mind that since you are not using a clock drive, the Earth's rotation causes the Moon to drift out of your field of

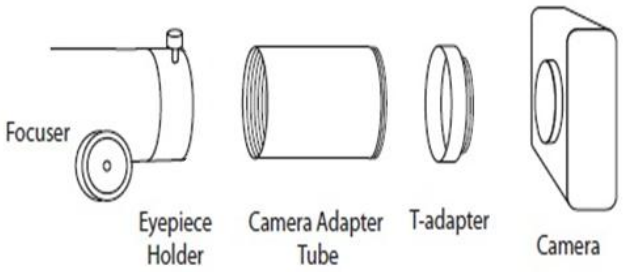
view. This effect is more noticeable at high power. You must manually adjust your tripod to keep the Moon centered. Consult your local newspaper or a current astronomy magazine to find out when the Moon is visible.

Observing the Planets

This same method used to observe the Moon applies to viewing the planets. You can see Venus go through its lunar-like phases. Mars reveals a host of surface detail and one, if not both, of its polar caps. You will be able to see the cloud belts of Jupiter and the great Red Spot (if it is visible at the time you are observing). In addition, you will also be able to see the moons of Jupiter as they orbit this gas giant. Saturn, with its beautiful ring system, is easily visible at moderate power. All you need to know is when and where to look. Most astronomy publications tell where the planets can be found in the sky each month.

Observing Deep Sky Objects

Deep sky objects are simply those objects outside the boundaries of our solar system. They include star clusters, planetary nebulae, diffuse nebulae, double stars, and other galaxies outside our own Milky Way. Because your telescope is not set up for serious astronomical observing, you will need to know where to look in the sky for these objects. The Sky Maps will help you locate the brightest deep sky objects. Once you start observing deep sky objects, there are a few things to remember. First, most deep sky objects have a large angular size. Therefore, low to moderate power is all you need to see them. Second, visually they are too faint to reveal any color that is common to photographs. Instead, they have a black and white appearance. And lastly, because of their low surface brightness, they should be observed from a dark sky location. Light pollution around large urban areas washes out most nebulae making them difficult to see.



PHOTOGRAPHY With DSLR Camera

You need a Camera adapter tube and a DSLR camera mounting ring (different brand DSLR camera with different type) (**Not include**) and a DSLR Camera.Just attaching the DSLR camera as picture shows,this achieve to true focus photography .DSLR cameras should be adjusted to manual mode, and then adjust the focuser control knob to get focus.It is recommended to use the camera shutter release or with inbuilt timer for photography , which can maximum reduce jitter caused by human factors.

CARE AND CLEANING OF THE OPTICS

Occasionally, dust and/or moisture may build up on the lens of your telescope. Special care should be taken when cleaning any optical instrument so as not to damage the optics. If dust has built up on the lens, remove the dust with a camel's hair brush or a can of pressurized air. Spray at an angle to the lens for approximately 2 to 4 seconds. Then use an optical cleaning solution (available at most optical suppliers) and white tissue paper to remove any remaining debris. Strokes should go from the center of the lens to the outer edge. Do not rub in circles. You can use commercially-made lens cleaner or mix your own. A good cleaning solution is isopropyl alcohol mixed with distilled water. The solution should be 60% isopropyl alcohol and 40% distilled water. Or liquid dish soap diluted with water (a couple of drops per one quart of water) can be used. Internal adjustments and cleaning should be done only by the repair department.

Caution: Never look directly at the Sun with your telescope. Permanent and irreversible eye damage may result!