Library Telescope Program

Quick Start Resources:
- How to use the telescope
- Introduction to astronomy
- Educator resources
- Sky Map/Other resources
- More about the program

www.librarytelescope.org/get-started

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The St. Louis Astronomical Society
presents

Library Loaner Telescope Program

Quick Start User's Guide

Loaner Scope's 250 Eyes

Telescopes can be complicated, difficult-to-use instruments. They need not be that way, though. Library patrons now have an opportunity to view the heavens through a telescope with good optics and a basic, easy-to-use design. Without having a great deal of expertise, the patron can obtain clear observations of craters on our Moon, Jupiter and its moons, Saturn and its rings, and the brighter star clusters and nebulae.

This 4.5 inch aperture telescope captures an equivalent amount of light as 250 human eyes. It has a zoom eyepiece, which gives a range of magnifications from 20 power to 60 power, and shows a large field of view spanning from 1º to over 2º. This telescope and zoom eyepiece combination gives the library patron a good introduction to the wonders that await in the night sky.

For observing tips and handouts, visit

www.librarytelescope.org/get-started

The basics of the Library Loaner Telescope Program were originally conceived by the New Hampshire Astronomical Society. The St. Louis Astronomical Society greatly appreciates their efforts in establishing a library telescope program.

The St. Louis Astronomical Society is devoted to the interest and advancement of the science of astronomy among Society members and the public-at-large. The public is invited to attend its monthly meetings and various observing sessions. More information about the St. Louis Astronomical Society can be found at www.slasonline.org

Important words of caution: Please read!

1. Do not insert or drop anything into the optical tube.
2. Do not attempt to clean the optics. If dirty, please contact the librarian.
3. Do not touch the mirrors or the eyepiece lens glass.
4. **Do not look at the sun with this telescope, as it is not designed for safe solar viewing. Severe and permanent eye damage will occur if the sun is observed with this telescope!**

Meet the Loaner Scope!

Unpack the telescope:

1. Carefully unbuckle the telescope from the seat belt.
2. Gently lift out of the seat. Be careful not to bump the zoom eyepiece or the black finder.
3. Place the scope on a table.
4. Slightly loosen the tube clamp, then move and rotate the tube to a comfortable viewing position.

Tube clamp

Scope's basic anatomy

How to focus

- Turn either one of the two knurled wheels on the focuser.
- Each zoom setting of the eyepiece requires a slightly different focus.
- Each person may need a different focus setting.
- If you wear glasses, first try using them when you look into the eyepiece. You may find that you do not need to use them. People with severe astigmatism will generally obtain better views while wearing glasses.

How to zoom

- The zoom eyepiece has a range of focal lengths from 8 to 24 mm. **The larger the focal length, the lower the magnification, and the wider the field of view.**
- Rotate the barrel so that the 24 mm focal length setting aligns with the white triangle.
- Twist the barrel to change magnifications.
- Refocus the eyepiece.
- As the eyepiece zooms to higher magnifications, the field of view decreases.

Zoom barrel

24 mm setting, 19x magnification

Focal Length (mm)	Magnification
24	19x
18	25x
12	38x
8	59x

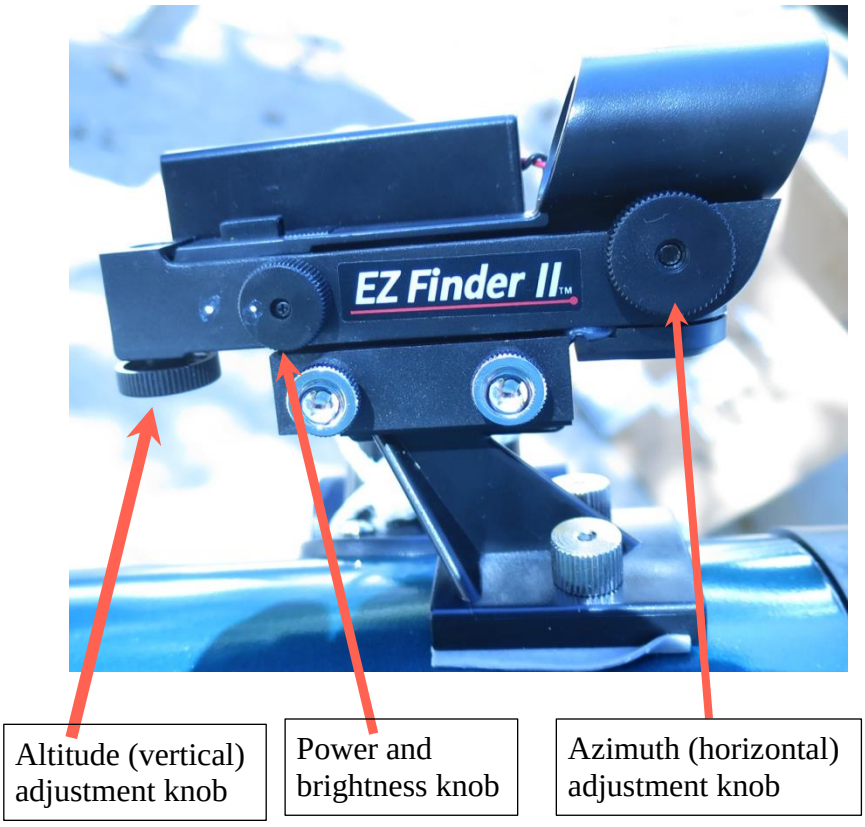
Focusing Knobs

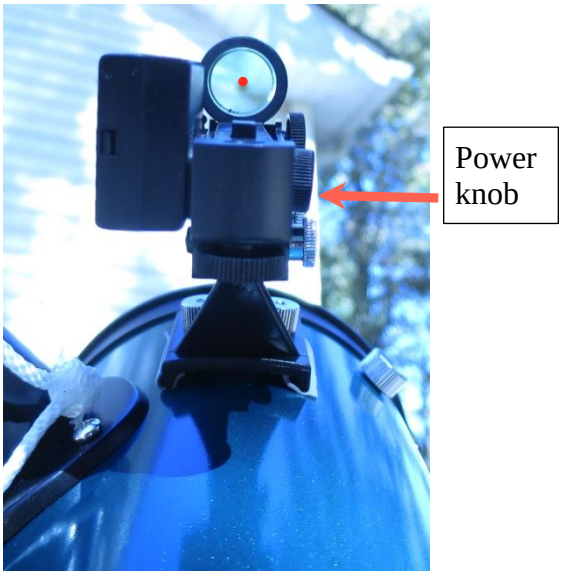
Using the finder

The Red Dot finder points in the same direction as the main telescope tube. Therefore, when the red dot is centered on an object, that object appears in the scope's eyepiece.

How to place the sky object in the eyepiece

1. Rotate the eyepiece so that the 24 mm mark aligns with the arrow on the barrel. This setting has the widest field of view, making it much easier to find an object.
2. Look along the telescope's tube to point the scope in the general direction of an object ON THE GROUND such as a distant streetlight.
3. Turn on the EZ Finder using the power knob and turn the dial until the red dot is visible.
4. Move the scope so that the red dot is centered on the object.
5. The object should be in the eyepiece or right outside of its field of view. IF it is not centered, center the object in the eyepiece FIRST, then use the vertical and horizontal adjustments on the finder to make sure it's in alignment with the telescope. You are then ready to point your telescope at an object in the sky!
6. Use the EZ Finder to point the telescope at the object in the sky you wish to view.
7. If desired, rotate the zoom eyepiece for a higher magnification. Remember, the higher the magnification, the smaller the field of view.





Looking up the EZ finder. Use the power knob to make the dot bright enough to see.

Packing up the Loaner Scope

- Place the eyepiece cap on the eyepiece.
- Place the moon port cover on the end cap
- Place the end cap on the open end of the telescope.
- Turn off the red dot finder.

Transporting the Loaner Scope by car

- Carry the telescope with one hand using the handle and the other grabbing the platform and base together.
- Try not to bump the zoom eyepiece or the tube finder.
- Place the telescope on a car seat so that the zoom eyepiece and the black finder do not bump into the seat back or the seat buckle.

- Buckle the telescope in the seat as you would a person.