



iOptron® Versa™ 108mm

Doublet ED APO Refractor Telescope

## INSTRUCTION MANUAL



**WARNING!**

**NEVER USE A TELESCOPE TO LOOK AT THE SUN WITHOUT A PROPER FILTER!**  
*Looking at or near the Sun will cause instant and irreversible damage to your eye.*  
*Children should always have adult supervision while observing*

Product #6102

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iOptron Corporation | 6E Gill Street | Woburn, MA 01801 | [www.iOptron.com](http://www.iOptron.com)

Welcome to a new world of adventure! Enhanced by the world's most advanced optical design and cutting-edge optical processing, iOptron® Versa™ 108 double air-spaced 108mm Apochromatic doublet refractor offers a versatile platform that delivers exceptional performance for both visual observing and astrophotography. With outstanding color correction and crisp imaging you'll be able to view beautiful images through your eyepiece, CCD camera, or DSLR camera.

These instructions will help you set up and properly use and care for your telescope. Please read them over thoroughly before getting started.

## Getting Started

Your telescope comes fully assembled from the factory. The optics have been installed and collimated, so you should not have to make any adjustments to them. Keep the dust covers on the telescope when it is not in use.

## Mounting the Telescope

The iOptron Versa™ 108 is a perfect mate for the iOptron MiniTower™ series goto altazimuth mount, or the iEQ® goto equatorial mount. You need a dovetail rail (either Vixen or Losmandy-D type one depends on your mount's dovetail saddle) to mount the scope onto an telescope mount.

## Use of Optional Accessories

Your telescope does not come with eyepieces and diagonal so as to offer the greatest flexibility in configuring it to your needs.

The 2" compression ring accessory holder accepts 2" eyepieces, star diagonals, camera adapters, etc. The 1.25" compression ring adapter slips into the 2" holder. This lets you use optional 1.25" accessories (eyepiece, star diagonal, camera adapter, terrestrial image erecting diagonal, DSI-type camera, etc.)

## Selecting an Eyepiece

Always begin viewing with the lowest power eyepiece. (Note: a 20 mm focal length eyepiece has a lower power than a 10 mm one.) A formula can be used to determine the power of each eyepiece: Telescope focal length divided by eyepiece focal length equals magnification.

Ex.  $648\text{mm} \div 20\text{mm} = 32.4\text{X}$  (magnification)

## Focusing Telescope

Point the telescope so the front end is aimed in the general direction of an object you wish to view. When you first look in the eyepiece, the image you see may be fuzzy, or out of focus. If so, gently turn the focus knob with your fingers until the image becomes sharp. Go a little bit beyond sharp focus until the image just starts to blur again. Then reverse the rotation of the knob just to make sure you've hit the exact focus point. You will have to readjust the focus when aiming at subjects of varying distances, or after changing

eyepieces. Turn the fine tuning knob for finer adjustments.

If you have trouble focusing, rotate the focus knob counterclockwise as far as it will go. Now look through the eyepiece while slowly rotating the focus knob clockwise. You should soon see the point at which focus is reached.

Try to practice this during daytime by aiming the main telescope tube at a land-based target at least 200 yards away (e.g. A telephone pole or building).

If you use a finderscope with Versa<sup>TM</sup> 108, you need to align the finderscope with the main telescope tube.

First, look through Main Telescope Tube and establish a well-defined target (see focusing telescope section). Tighten all lock knobs of your mount (Declination, Latitude, Right Ascension, and Horizontal Axes) so that telescope's aim is not disturbed. Then look through the finderscope and adjust the each finderscope adjustment screw until the crosshairs of the finderscope are precisely centered on the same object already centered in Main Telescope Tube's field of view. Now, objects located first with the finderscope will be centered in field of view of the main telescope.

## Aligning Finderscope

## Specifications

Optical Design	Refractor
Clear Aperture	108mm
Focal Length	648mm
Focal Ratio	f/6
Lens Type	2 elements, Air-spaced, ED S-FPL51+S-NBM51 glass
Resolving Power	1.05 arc seconds
Visual Limiting Magnitude	12.5
Dew Shield	Retractable
Focuser	2 ", 360° Rotatable 1:11 Crayford dual speed focuser
Tube Length	535 mm
Tube Weight	10 lbs
Accessories	114mm Tube ring + 1.25" Adapter brass compressing ring
Packaging	High quality aluminum case
Case Dimensions	30" x 8.9" x 9"
Gross Weight	23.1 lbs

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