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## **13mm ETHOS EYEPIECE INSTRUCTIONS**



*Warning: Do not unscrew any sections of the eyepiece, as the lenses may fall out, thereby voiding the warranty.*

### **Tele Vue 13mm ETHOS Specifications:**

Apparent Field: 100°  
Focal length: 13mm  
Effective Field Stop: 22.3mm  
Eye Relief: 15mm (accepts Tele Vue's Dioptix astigmatism corrector)  
Barrel Size: 2" / 1¼"  
Weight: 1.3 lbs.

Thank you for purchasing the Tele Vue 13mm ETHOS, the eyepiece that *Sky and Telescope* magazine, in its October 2007 review called "A stunning optical achievement..." You can see the entire review at [televue.com](http://televue.com), along with many star party evaluations, and an essay by Al Nagler entitled "The Majesty Factor". We hope that, after using ETHOS for awhile, you'll comment on the validity of this concept to explain the level of enthusiasm for ETHOS.

The 13mm ETHOS fits both 2" and 1¼" focusers or diagonals. Typically, in a 2" focuser, you will focus "out" a bit (about 3/8" further than a 26mm Nagler Type 5), and in a 1¼" focuser, you'll focus "in" about ½" inch further than a 25mm Plössl.

Note: the in-travel may prevent focusing in some refractors when using the Tele Vue 60° Everbrite diagonal, which has an unusually long optical path.

Since it is designed as an 1¼" eyepiece, there is NO optical benefit by using a 2" holder. The 2" barrel is included just for convenience, but it is also threaded to accept our EBX-2120 2" extension tube, which allows the use of 48mm filters.

### **For 1¼" holders:**

- 1) Back off the lock screw in the 2" barrel section of the eyepiece so it can be fully inserted into the holder.
- 2) If the holder has a lock screw, rotate the eyepiece so that the screw slips into the slot in the 2" section of the eyepiece barrel. Your holder lock screw clamps to the 1¼" barrel of the eyepiece, while the eyepiece lock screw clamps to the outside of your holder for maximum safety.
- 3) If your holder doesn't have a lock screw, be sure to clamp the eyepiece lock screw onto the outside of the holder. Please note that this eyepiece is heavy, and can fall out of holders with a "slip fit" unless the lock screw is used!

### **For 2" holders:**

- 1) Remove the eyepiece lock screw (Don't lose it!)
- 2) Use the lock screw on your 2" holder, being careful not to let it slip into the slot in the 2" barrel of the eyepiece.

3) The eyepiece will not “bottom” on Tele Vue 2" diagonals. Be careful if using diagonals by other manufacturers.

For Newtonians/Dobsonians, we recommend our Paracorr coma corrector to eliminate the mirror coma in *f*/5.5 or faster scopes. This permits the same kind of full field sharpness routinely seen in Tele Vue’s NP-Series refractors. Use the ETHOS 2" barrel in the Paracorr with the tunable top raised to its maximum.

Note: when using a 1¼" filter in ETHOS, be careful not to accidentally set the Paracorr’s tunable top to its lowest setting, as the bottom of the filter might contact the Paracorr’s upper lens. It’s best to thread a 2" filter onto the front of the Paracorr, or add our EBX-2120 2" extension tube to the 2" barrel of ETHOS.

For higher magnifications with a 100° field, use the suggested Tele Vue Barlows and Powermates; none will vignette the ETHOS. When using ETHOS in 2" Powermates, use its 2" barrel. We have analyzed and tested the following recommended combinations for ETHOS. The mechanical construction of the ETHOS causes a slight magnification variation from the nominal Barlow/Powermate values. Therefore, the Magnification Factor and EFLs given are applicable only to ETHOS:

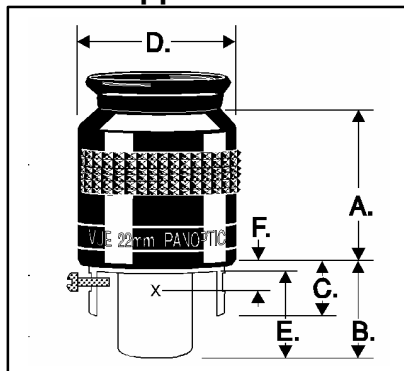
<u>Model</u>	<u>Type</u>	<u>Magnification Factor</u>	<u>EFL (Effective Focal Length)</u>
BWC-2200	2X Big Barlow	1.94X	6.7mm
PMT-2200	2X Powermate 2"	1.98X	6.5mm
BLW-2125	2X Barlow 1¼"	2.17X	5.9mm
BLW-3125	3X Barlow 1¼"	3.25X	4.0mm
PMT-4201	4X Powermate 2"	3.73X	3.5mm
PMT-5126	5X Powermate 1¼"	5.18X	2.5mm

Note: As with the Paracorr, do not use a 1¼" filter when using a 2X Powermate, as it will contact the upper lens in the 2X Powermate. Again, the best solution is to use 2" filters in front of the Powermate.

If you have eyesight astigmatism, you can add Tele Vue’s Dioptix Astigmatism Corrector to ETHOS, instead of using eyeglasses, to get the sharpest view possible (check [dioptix.com](http://dioptix.com) for more details).

We wish you years of *exciting* and *Majestic* deep sky viewing with ETHOS, and we welcome comments on your personal experiences.

**Approximate dimensions of ETHOS:**



- A. Height of barrel above reference surface (4.0")**
- B. Height of 1¼" barrel (1.6")**
- C. Height of 2" barrel (1.1")**
- D. Diameter of black barrel (2.5")**
- E. Depth of 1¼" barrel (1.1")**
- F. Approx. location of field stop (0.27")**