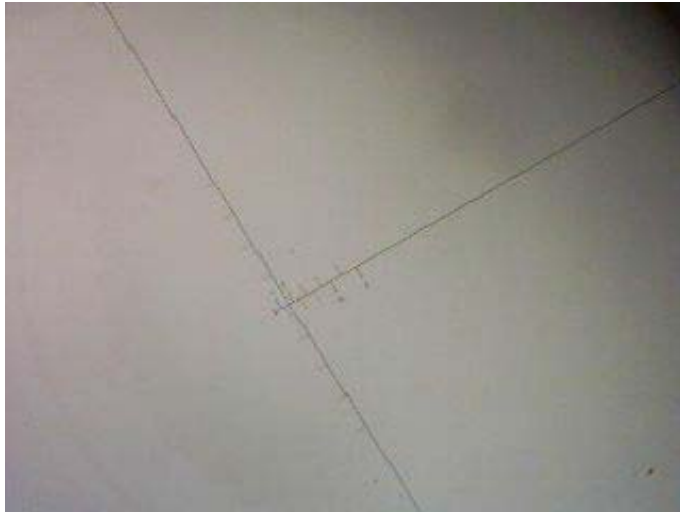


Steinheil 2" Wide-field Eyepiece (35mm/67°) Made in Germany

This review is based on a German review of Mr. Harald Richter: It was extended, translated and formatted by Matthias Bopp.

This eyepiece has a focal length of 35mm and features a wide field of view of 67°. The eye relief is approximately 18mm. Thus the data of this eyepiece are very similar to the Televue 35mm Panoptic. It is multi-coated and was intended to be used in a military application and is brand new. This eyepiece is quite heavy – its weight is approx. 1300 grams (2 7/8 pounds). The 2" adapter is properly machined from aluminium but does not feature a filter thread. It should be blackened as discussed later in this article. The eyepiece does have the possibility for adjustment of the dioptre in a range of 9mm (the range can be even extended by removing a single screw). This eyepiece has a built-in etched crosshair reticule (see picture below) which can be illuminated. The illumination is not included and if someone dislikes the reticule it can be removed as will be shown later.

Some of the sold eyepieces did exhibit little defects with respect to the colour or paint. These defects are only cosmetic and the optics are said to be all in perfect condition. The price when buying from Mr. Richter is Euro 99.- plus 6.- S&H within Germany.



Mr. Richter did a comparison of this eyepiece with the Televue Panoptic (35mm, FOV 68°) using an apochromatic refractor from Brandon 94/660mm (f/7) and these were his observations:

- Transmission and Contrast: the Panoptic seems to be a little bit brighter, with respect to the contrast no difference could be observed.
- Using the refractor with f7, the Steinheil EP is sharper over a wider FOV than the Panoptic: the Steinheil featured an absolutely sharp picture from the center up to 55°, between 55° and the edge of the FOV (67°) it became less sharp. The Panoptic was absolutely sharp up to 50° and became less sharp from 50° to the edge of the FOV (68°).
- The Steinheil EP features an eye-relief of 18mm and the complete FOV could be nicely viewed. Addition from the author: I felt the eye-relief to be good if you press your eye a bit into the rubber cup. However I got used to it quickly. You can remove the eyecup which is nice if you have to wear glasses and thus need longer eye-relief.
- Field-curve of the Steinheil EP is indiscernible whereas it was quite noticeable at the Panoptic EP. Here the Steinheil EP clearly wins.

Comparison table for Steinheil 2" 35/67, Televue Panoptic 35/68 and Zeiss 30/85 wide-field EP

| Eyepiece | Field of View FOV | Eye relief | Transmission | Sharpness | Field-curvature | Weight | Dioptry-adjustable | Details in centre of FOV | Price |
|-----------------|-------------------|----------------------------------|--------------|--|------------------|---------|--------------------|--|-------------------------|
| Zeiss 30/85 | 3,85° | Complete FOV comfortably visible | 4 | 0- 30° good 30-60° ok 60° too much | Very little | 640 gr | Yes | 5 (note the higher magnification than the other EPs) | 512.- EURO (BW – Optik) |
| Panoptic 35/68 | 3,7° | Complete FOV comfortably visible | 5 | 1-50° good 50-68 (good-ok) | Quite noticeable | 760 gr | No | 4 | 429.- EURO (Vehrenberg) |
| Steinheil 35/67 | 3,6° | Complete FOV good visibility | 4 | 1-55°(good) 55-67° (good-ok) | Indiscernible | 1300 gr | Yes | 4 | 99.- EURO (H. Richter) |

Meaning of the numbers (relative scaling): 6 excellent, 5 very good, 4 good, 3 average, 2 not good, 1 not acceptable

The next pictures show the 35mm Steinheil Eyepiece between the Panoptic 35/ 68° and the ZEISS 30mm/85° wide-field eyepieces.



Instructions on how to remove the crosshair reticule of the Steinheil 35mm eyepiece

- 1) First, unscrew the 2 black caps.



- 2) The 2 screws which are now visible should be unscrewed as far as possible.

- 3) Remove all 3 grub screws from the bottom section of the eyepiece.

- 4) Carve into the paint at the border between top and bottom sections of the eyepiece.



- 5) Now you can unscrew the top section from the bottom section. Please mark the spot, where the thread starts for easier reassembly of the eyepiece (to find the small indentation for the grub screws).

6) Now you can see the crosshair reticule located between a metal spring and the 2 adjustment screws.

7) Press the leaf spring aside and remove the reticule. The leaf spring is attached to the inside of the housing and can be removed using a pair of pliers.

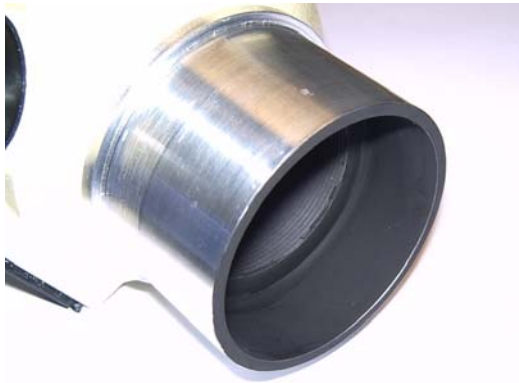


8) Reassemble the top section (use the marking of the thread for alignment). Reinsert the grub screws. Reattach the black caps.

9) If you want to remove the adjustment screws: remove the black caps. Use a pair of tongs and remove the adjustment screws. Close the resulting openings with an appropriate medium..

Blacken the 2" eyepiece adapter using black paint as used for blackboards

The 2" eyepiece adapter is properly machined from aluminium. However, when I received it, the inside was still shining because Mr. Richter wants to leave his customers the opportunity to add a filter thread in the adapter. Below, note two pictures of my eyepiece after painting the inside of the adapter using black paint for blackboards.



I had also the opportunity to use the eyepiece with my N11GPS. Watching the Orion nebula with the N11GPS and this eyepiece was fantastic. It is necessary to press the eye quite tightly to the soft rubber eyecup to get the full FOV. However, once I became used to this, I benefited from the optimum protection against stray light. Finally, I would like to wish you a lot of fun with this nice eyepiece.

Matthias Bopp

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