

## Borg 1.4x Teleconverter [7014]



The Borg 1.4x teleconverter, part number 7014, is designed to extend the focal length of telescopes in the 400 to 1000mm range for both photographic and visual use. Special care has been taken to minimize internal reflections so that it can be used in demanding photographic applications such as catching the diamond ring effect or corona of a total solar eclipse. It is also useful in astronomical photographic applications requiring longer focal length (lunar closeups, planetary nebulae, galaxies, etc.) or terrestrial telephoto applications such as animal photography). The teleconverter may also be used for medium format photography since the large image circle covers most of a medium format frame.

The teleconverter assembly includes 3 sections (right)—the teleconverter lens body assembly, extension tube, and medium format adapter.



The front (objective side) of the adapter is the telescope-coupling side (visible above left) which includes 4 concentric threaded interfaces for maximum flexibility. From outside to inside, these are M60/P0.75 (male), M57/P0.75 (male), M49/P0.75 (male), and M42/P0.75 (female). The M49/P0.75 thread may be used to hold a reversed 49mm filter if the larger diameter interfaces are used for telescope coupling. The M42/P0.75 thread is a T-thread.

On the camera/eyepiece side of the teleconverter, the interfaces are M57/P0.75 (female), and M60/P0.75 (male).

### Focal Length Adjustment

For optimum image quality, the teleconverter must be adjusted for the focal length of the objective. This is accomplished by loosening the setscrew and moving it to the marked focal length positions (400mm to 1000mm). Note that if the setscrew is unscrewed completely, the lens assembly will be released from the tube. If this happens, reinstall it with the smaller diameter side of the lens towards the camera.

### Visual Use Setup

For use with a visual system such as the Borg 125F6.4VI or 100F6.4VI, a setup configuration would appear as follows:

- Visual draw tube [8317]
- Helical focuser M[7835] or T [7427]
- 1.4x Teleconverter [7014]
- 2" eyepiece holder



## 35mm Photography Setup

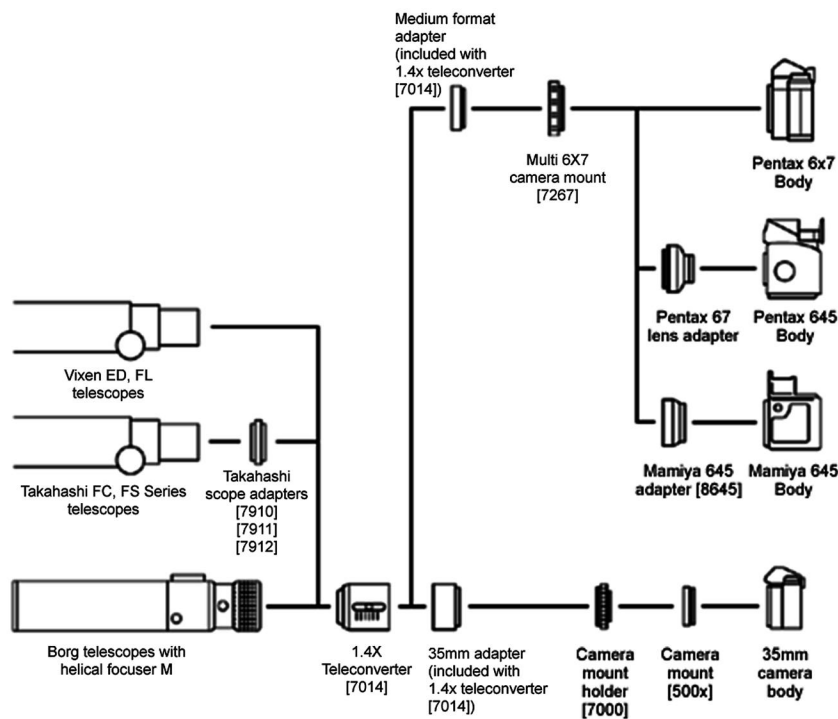
For 35mm photography (80mm series scopes), the configuration using the 1.4x teleconverter would be as follows:

- Helical focuser M [7835]
- 2" eyepiece holder option\*
- 1.4x Teleconverter [7014]
- Camera mount holder M [7000]
- Camera rotation ring\*\* [7350]
- Camera mount [500x]
- 35mm camera body



\* Inserting a 2" eyepiece holder here allows focusing to be achieved without using the draw tube.

\*\* The camera rotation ring [7350] is suggested for ease in composing shots.



Basic photographic setups using the 1.4x teleconverter [7014].

## Medium Format Photographic Setup



For medium format photography, the extension tube should be removed from the teleconverter lens assembly and replaced with the medium format adapter as indicated in the diagram above and the photo at left. The teleconverter may then be used with the 6x7 Multi-adapter [8267] or the Multi 6x7 Camera Mount [7267]. To use these adapters, they must be disassembled as shown in the photo (below, right). Only the camera interface part will be used.

The assembled medium format configurations are shown in the photo below (8267 on the left, 7267 on the right).



Note that the 3 lock screws and rotating ring pieces of the 7267 are not used in this configuration. These may be followed by a directly attached Pentax 6x7 (or Pentax 67 or Pentax 67II) body.

Alternatively, a Pentax 645 body may be attached using the Pentax 645/67 lens adapter (available from Pentax), or a Mamiya 645 body may be attached using the Borg adapter [8645].

## Third-Party Telescope Use

The 1.4x teleconverter may also be used with third-party telescopes. For Vixen ED and FL series scopes, the 1.4x teleconverter attaches directly to the telescope's M60 interface.

For Takahashi FS and FC telescopes, several Borg adapters are available:

- FC50/60 – use [7910]
- FC76/FS78 – use [7911]
- FC100/100N/125N, FS102/128 – use [7912]