

400 GERMAN EQUATORIAL MOUNT WITH QUARTZ MICRO-DRIVE (400QMD)

TIGHT, COMPACT, STRONG SMOOTH, SOLID PERFORMANCE

The two most important considerations in mount design and construction are maximum strength/rigidity for a given size and accuracy of the drive system. Without this basic foundation, all other features of a mount are just superfluous frills. The Astro-Physics 400 Equatorial was engineered to be a compact, firm platform for your high-resolution instrument. Whether your interests are purely visual or include astrophotography, a steady image in the eyepiece or camera viewfinder is extremely important.

The 400 is constructed of the highest quality components to provide you with years of observing pleasure. All parts are precisely machined on our computerized CNC lathe and machining center using solid or thick wall aluminum and stainless steel. Machining tolerances are very high to achieve a tight, solid fit of all components. There are no thin wall, weak, porous die castings as in most other mounts of comparable size. We avoid the use of any carbon steel shafts or plated steel fasteners because they will deteriorate with time. This mount will not rust or bind up and will retain its appearance and function throughout the years.

Both axes respond to fingertip pressure with unparalleled smoothness. Built-in clutches can be disengaged for ultra-smooth sweeping or locked for astrophotography. The worm gears, motors and drive components are enclosed to protect them from dirt and dust. With the 105 Traveler, the 400 mount damps out in one second when mounted on the lightweight aluminum tripod.

Your 400 mount can grow with your skills and interests in astronomy. You can enjoy the visual pursuits of astronomy with the mount as it is, or enhance your ease of locating objects with our optional encoders and JMI digital setting circles. If you plan to take astrophotos, you will be pleased with the solid stability and inherent accurate tracking capability of the drive system. The hand controller contains a plug-in for the Santa Barbara Instrument Group (SBIG) ST-4 or ST-6 Star Tracker/Imaging Systems. Either of these options will allow you to auto-guide astronomical photos and explore CCD imaging. Please refer to the information sheets that describe these options more fully.

When coupled with the options described separately, the 400 German Equatorial mount will be your portable observatory. This handy mount can be lifted easily into your backyard, packed conveniently into your car or carried aboard an airliner for travel to another hemisphere.

FEATURES

- Precision machined aluminum with radiused edges
- Gears and motors are fully enclosed
- Gear in declination axis allows full 360 degree continuous rotation; scope can move through zenith for photography
- 2.5" (6.4cm) hollow right-ascension and declination shafts maximize strength at minimum weight
- Large thrust bearings form ultra-stable thrust surfaces for tremendous rigidity in a small package
- Right-ascension shaft threaded for optional polar scope allows quick, accurate polar alignment in the field
- Removable stainless steel counterweight shaft for compact storage
- Engraved setting circles with Porter Slip Ring Design; polar axis ring is driven; it follows the stars without needing to be reset each time you look at a new object
- Fine altitude and azimuth adjustments for quickly and accurately zeroing in on the pole in the field
- Black anodized finish will retain its lustrous beauty for years

SPECIFICATIONS OF EQUATORIAL HEAD

Worm wheel:	3", 192 teeth fine-pitched bronze wheel
Worm gear:	stainless steel
Latitude range:	0 to 66 degrees
Azimuth adjustment:	approximately 25 degrees
Setting circles:	Porter Slip Ring design
Right ascension:	10 minute increments, pointer engraved both Northern/Southern
Declination:	1 degree increments, pointer
Capacity:	Will accommodate refractors up to 5" reflectors to 6", Cassegrains to 8"
Weight of equatorial head:	21 lbs (9.5 kg)

SPECIFICATIONS OF MOTOR DRIVE SYSTEM

- High-resolution stepper motors in both axes
 - Quartz micro-drive controller
 - PEM - Permanent Error Memory correction
 - Declination backlash control
 - R.A. and declination reversing switches for correct object orientation and movement in eyepiece.
 - Power output to plug in guiding reticle or other accessory
 - Adjustable brightness control for guiding reticle
 - Plug-in for SBIG ST-4, ST-6ST-7 and ST-8 Star Tracker Imaging Systems
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| Dimensions of controller: | 7.25" x 3" x 0.9" |
| Drive rates: | King sidereal, solar, lunar |
| Guiding/slewing rates: | 0.25x, 0.5x, 1x, 8x, 16x |
| Hemisphere: | Northern/Southern switch |
| Power Consumption: | 0.45 amps at normal rates |
| Power requirements: | 12 VDC |
| Suggested power sources: | Portable battery pack, auto battery, power inverter for 110 volts |

AVAILABLE OPTIONS

Please see the accompanying information sheets for descriptions:

- Sturdy, Adjustable Hardwood Tripod with shelf and carrying case
- SBIG ST-4, ST-6, ST-7, ST-8 CCD Star Tracker/Imaging System
- Lightweight Davis & Sanford aluminum adjustable tripod
- Mounting plates: FP4000, DOVE08, DOVE15, DOVELM
- Portable Pier - 6" dia., - heights 48", 54" or 62"
- 12 Amp-hr, 12 Volt Rechargeable Battery Pack
- Stainless Steel Counterweights- 6 lbs., 9 lbs.
- Encoders for Digital Setting Circles
- Polar Axis Scope with Illuminator
- JMI Digital Setting Circles
- Mounting Rings
- Carrying Case

