

Rotating Pier Adapter with Azimuth Bearing (900RPA)

This pier adapter was designed for very accurate and smooth adjustment of the azimuth angle without loosening the lock-down knobs on the base of the mount. The top plate of the adapter rotates through the 900GTO mount's full 15 degrees of azimuth motion. (It does **not** rotate through a full 360 degrees!) This Rotating Pier Adapter is the ideal choice for portable setups as it makes azimuth adjustment so easy. Upgrade your previous model 900 mount (any version) and enjoy the ease of use. Do a setup, followed by a fine polar alignment at a remote site just once, and you will wonder how you ever got along without this pier adapter!

The adapter includes two machined flat plates, four machined aluminum lock knobs with washers, a tall version of the azimuth adjuster block, the center pivot screw and six 5/16-18 x 5/8 button head screws and washers.

Attach to an Astro-Physics pier. Simply fit the Rotating Pier Adapter into your Astro-Physics Portable Pier just like the Standard Pier Adapter (900SPA) and fasten it from the side with the six screws and washers provided. Make sure that the Azimuth Adjuster Block is on the north side.

Attach to a flat surface on your own pier. The Rotating Pier Adapter must fit inside another part and be bolted from the side. It cannot be bolted through the top as you can with the Standard Pier Adapter. For custom installations, we recommend our 900 Flat Surface Adapter (900FSA). The Flat Surface Adapter bolts onto the flat plate on top of your pier or tripod, then the Rotating Pier Adapter slips in (just as it fits into our pier) and you fasten from the side with the six screws and washers provided with the Rotating Pier Adapter. The bolt circle for attaching the 900 Flat Surface Adapter to your pier is 7.230" diameter. The Flat Surface Adapter requires that the top plate of your pier be at least 7 3/4" in diameter.

Using an ATS pier: If you plan to use an ATS pier, the O.D. of the plate will need to be modified by ATS for an additional charge.

How does it work? Like most really good ideas, it is actually quite simple. The bottom plate of the 900 Rotating Pier Adapter is fastened to your pier or tripod – it does not move. The Azimuth Adjuster Block is attached to the bottom plate – it also does not move. The top plate fits snugly into the bottom plate. Because of the tight fit, the smooth bearing surface and the two recessed tension adjustment screws, the top plate will rotate inside the bottom plate with absolutely no play or wiggle. The movement, although velvety smooth, is quite stiff – as it should be. The top plate has a slot through which the Azimuth Adjuster Block protrudes. The slot allows the top plate to be rotated through the 900GTO's full 15 degrees of azimuth adjustment. Your mount is fastened to the top plate and rotates along with the top plate as you screw your mount's Azimuth Adjusters against the Azimuth Adjuster Block. The opposing Azimuth Adjuster Knob then holds the whole thing in place once you are adequately polar aligned.

Note #1: The two recessed screws (3/16 hex), shown by the arrows, adjust the tension between the two plates of the Rotating Pier Adapter. These are preset to an optimal tension and should rarely, if ever, need to be re-adjusted. You **do not** need to tighten or loosen these two screws as part of your normal polar alignment routine.

Note #2: The Rotating Pier Adapter will work best with the Heavy Duty Azimuth Adjuster which is standard on all 900GTO mounts produced after August, 2005 and is available as an upgrade (9AZKIT) to older mounts. See our website for details.



900RPA Rotating Pier Adapter



Step by Step Instructions – 900 Rotating Pier Adapter

1. Line your pier or tripod up so that the adapter can point to the pole. To accomplish this, one of the screw holes for attaching the Pier Adapter must face as close to north or south as possible. With an Astro-Physics Pier, this can be accomplished with one of the legs pointing either straight north or south as you prefer.
2. Securely attach the 900 Rotating Pier Adapter to your pier or tripod using the six 5/16 -18 x 5/8 button head screws and washers.
3. Rotate the top plate so that the Azimuth Adjuster Block is centered in the top plate's adjustment slot.

(You may wish to "eyeball" your pier and adapter to be sure you are pointing as near as you can tell toward the pole. If you are going to need to move the pier, it's much easier to move it now before you've added the weight of the mount to the assembly.)

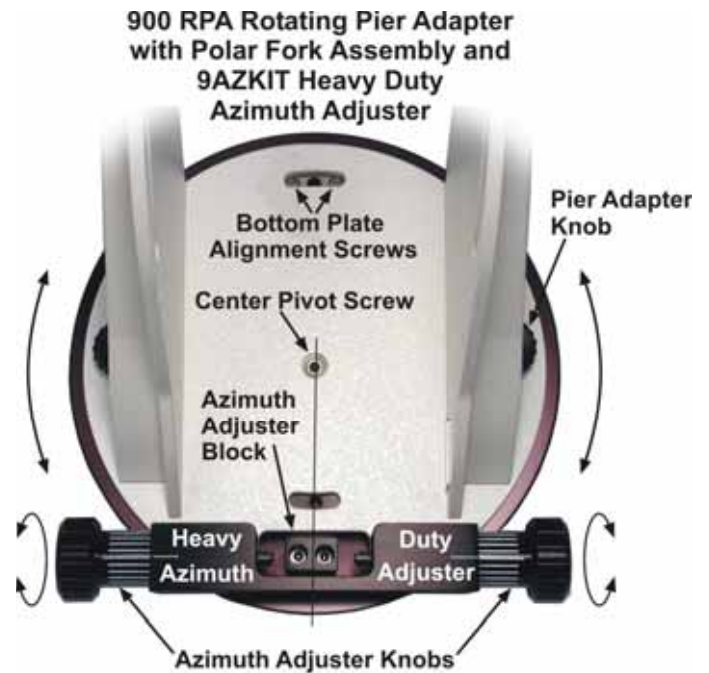
4. Remove the four Pier Adapter Knobs if you haven't already done so.
5. Make sure that the Azimuth Adjuster Knobs of your 900GTO are spread far enough apart to easily fit the Azimuth Adjuster Block between them.

6. Carefully set your R.A. axis onto the Rotating Pier Adapter. Use the adapter's Center Pivot Screw and Bottom Plate Alignment Screws to help line up the mount on the adapter. The alignment screws fit perfectly in the slot for the rear Pier Adapter Knob. The mount should sit flat on the adapter. The mount's Azimuth Adjuster should be centered over the adapter's Azimuth Adjuster Block. The slot in the adapter's flat plate should also still be centered over the Azimuth Adjuster Block

7. Attach the four Pier Adapter Knobs and secure them tightly.
8. Start your favorite polar alignment routine. If you started with everything pretty well centered, you will have about 7 ½ degrees of azimuth adjustment in either direction. As you adjust the azimuth with the mount's Azimuth Adjuster Knobs, the mount and adapter top plate will rotate together.

(Remember to back off the opposite Adjuster Knob to the one you are using to rotate the mount.)

9. When aligned you must snug down the opposite Azimuth Adjuster Knob to the one you were adjusting to polar align. The two opposing Azimuth Adjuster Knobs are what will actually secure the mount's azimuth position when polar aligned. If you leave the adjuster loose, the mount could be knocked out of alignment.



Shown with Polar Axis, Front and Rear Pier Adapter Knobs and Altitude Adjuster Removed

Note how Mount and Pier Adapter Top Plate are Centered Relative to the Azimuth Adjuster Block.

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ASTRO-PHYSICS, INC.

11250 Forest Hills Road
Machesney Park, IL 61115

www.astro-physics.com, tel. (815) 282-1513, fax (815) 282-9847