

Guidelines for Using 6" Trays and the Pier/Tripod Control Box Adapter

These guidelines offer suggestions for getting the most from your pier or tripod. Click on these links if you need information regarding each pier or tripod.

- [6" Eagle Adjustable Folding Pier \(EAGLE6\)](#)
- [Berlebach Planet Tripod \(AWTBER2\)](#)
- [6" Astro-Physics Portable Pier](#) (various heights)

We invite you to refer to the information contained in the tables below to help you decide which arrangement will be most suitable for your particular situation

To aid in understanding the tables, please use the picture at right to identify the appropriate mounting holes for the Pier/Tripod Control Box Adapter.

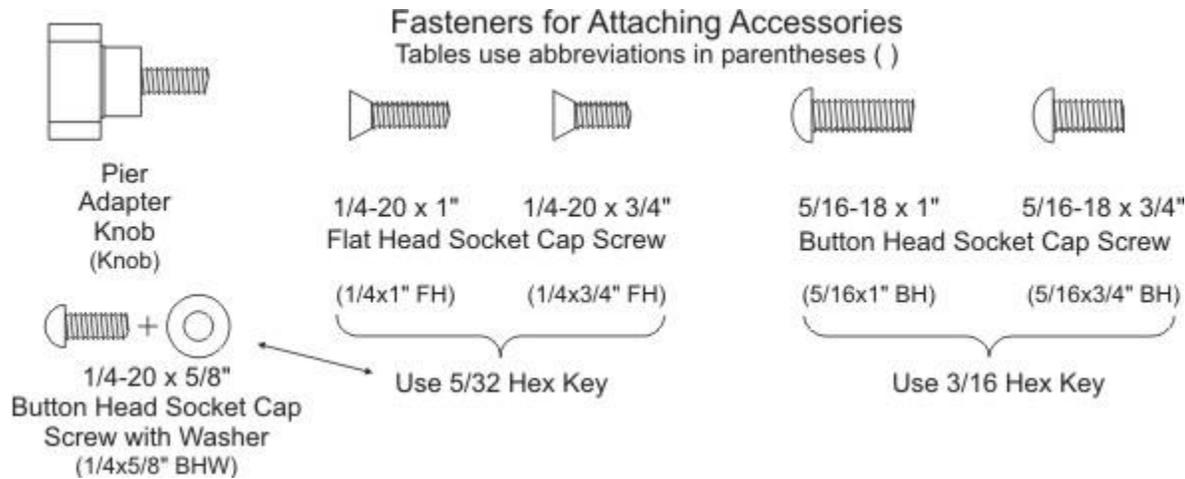
Check out the Astro-Physics [example photographs!](#)

Please note the following:

- **Extension for Pier/Tripod Control Box Adapter (Q6280KIT):** This extension allows the Pier/Tripod Control Box Adapter to be attached to the Berlebach Tripod. The locking levers on the tripod will no longer interfere.
- **Re-designed Tripod Adapter (ADATRI):** The current adapter used for attaching 400, 600E and *Mach1GTO* Mounts to Wood and Aluminum Tripods or to the flat surface of a custom pier (ADATRI) had 6 long slots around the perimeter. This change allows 400 and 600E mounts to be positioned on our tripods with a tripod leg facing the pole as many people prefer. It does not affect the location of the pier knobs in relation to the mount since that is dictated by the base of the mount itself. Choice of leg position may affect your ability to attach accessories - see tables for specifics. If you currently have the 3-hole version, but would prefer the 6-slotted Tripod Adapter, you can upgrade easily.
- **Mount Attachment and Orientation:** The 400 and 600E series mounts attach to the piers and tripods at the north, southwest and southeast, while the *Mach1GTO* attaches at the south, northwest and northeast. This will, of course, affect the possible positioning of accessory components. If using the 6-slotted Tripod Adapter (ADATRI), your decision whether or not to set up with one of the legs pointing at the pole may also affect accessory attachment as noted above.
- **Table Direction Conventions:** In the tables, we simply use north and south to include all three northern and all three southern positions without respect to the particular mount being used.
- **Low Latitude Restrictions:** The ability to attach support bars and trays on the north side of the mount may be limited at lower latitudes due to possible interference from the counterweights or from a slewing telescope. This does not apply to lower positions on the 6" Eagle Adjustable Folding Pier or to the lower position on Bi-Level Support Bars in most cases. Users should also be especially aware of clearance issues with their telescopes if they plan to image past the meridian or use the keypad's Meridian Delay feature.



- Control Box and Cables:** We advise mounting the Control Box Adapter (CBAPT) on the south side to allow more efficient routing of the cables and to keep the cables from getting caught or tangled as the mount slews. This is especially the case with the 400 and 600E mounts. It is less critical with the *Mach1GTO* since the fastening point is not straight north and since cables can be routed through the inside of the mount. In any case, be aware of possible interference from accessories like cameras and motorized focusers that may both "stick out" from the scope's normal profile and may have cables to get caught.



Select the pier or tripod that you plan to use:

- [Berlebach Planet Tripod \(AWTBER2\) and Adjustable Wood Tripod \(AWT000\)](#)
- [6" x 24" Portable Pier \(6X24PP\)](#)
- [6" x 42" Portable Pier \(6X42PP\)](#)
- [6" x 32", 48", 54" or 62" Portable Pier \(6X32PP\), \(6X48PP\), \(6X54PP\), \(6X62PP\)](#)
- [6" Eagle Adjustable Folding Pier \(EAGLE6\)](#)

Berlebach Planet Tripod (AWTBER2) and Adjustable Wood Tripod (AWT000)

In general, these accessories are attached to the adapter at the top of the tripod by replacing one of the pier knobs with a bolt that is provided with the accessory. Tripods sold after May 2007 were equipped with the six-hole [Tripod Adapter \(ADATRI\)](#). Earlier tripods have 3 holes. Please refer to the notes at the top of this page.

Important Note: The Berlebach Tripod requires the use of the [8" Extension for 6" Eagle Pier \(EAGLE6E8\)](#) when using trays.

	Single Level Support Bar (TRAYSB1) and Tray (TRAY06) or (TRAY06H)	Appropriate Fasteners	Control Box Adapter (CBAPT) see hole position reference at top of page	Appropriate Fasteners	Bi-Level Support Bar (TRAYSB)
400, 600E or Mach1 GTO	<p>* One, two or three Single-Level Support Bars and tray(s).</p> <p>* Fasten on any side of the mount. (However, at lower latitudes, the counterweight may interfere with the tray(s) on the north side - especially with 400 mounts.)</p> <p>* If the Control Box Adapter is also used, only one or two support bars with trays can be attached.</p>	1/4x1" FH	<p>* The Berlebach Tripod requires the Q6280KIT, which will extend the CBAPT beyond the locking levers located at the top of the legs.</p> <p>* Attach on south side of the mount so cables can be routed most effectively.</p> <p>* Attach the adapter using the angled tab (4) so that the bracket clears the legs (preferred). This method will work regardless of the tripod's leg orientation.</p> <p>* The bracket can also be mounted from the top hole (1) when the pier knobs are positioned between the legs although it will bind slightly against the leg hardware. This position provides the smallest profile. Hole (1) cannot be used if your mount is positioned with the pier knobs directly above the legs.</p>	1/4x1" FH	N/A

6" x 24" Portable Pier (6X24PP)

	Single or Bi-Level Level Support Bar (TRAYSB1 or TRAYSB) and Tray (TRAY06) or (TRAY06H)	Appropriate Fasteners	Control Box Adapter (CBAPT) see hole position reference at top of page	Appropriate Fasteners
400, 600E or Mach1 GTO	The support bars and accessory trays cannot be used with this pier.	N/A	Can be used with Q6280KIT to extend CBAPT beyond the top bolt.	N/A

6" x 42" Portable Pier (6X42PP)

For the A-P Portable Pier, the accessories generally attach at the top of the pier. In some situations, it will be necessary to substitute one of the pier knobs with a bolt that is provided with the accessory.

	Single Level Support Bar (TRAYSB1) and Tray (TRAY06) or (TRAY06H)	Bi-Level Support Bar (TRAYSB) and Tray (TRAY06) or (TRAY06H)	Control Box Adapter (CBAPT) see hole position reference at top of page	Appropriate Fasteners
400, 600E or Mach1 GTO	<p>* Current piers: The Accessory Trays can be used. It is possible to attach up to 3 support bars (either style) and up to 6 Accessory Trays. Fasten support Bars using nuts and washers on the inside of the pier. The Support Bars can be left in place for transport.</p> <p>* Older piers: Do not have extra holes already drilled for this purpose. Owners can modify their pier to accept support bars and trays by drilling holes a minimum of 8.5" down from the top of the pier so the tray will clear the struts.</p>		<p>* Attach on south side of the mount so cables can be routed most effectively.</p> <p>* Attach the adapter using the angled tab (4) so that the bracket clears the eyebolt below it.</p>	Knob or 1/4x3/4" FH

6" x 32", 48", 54" or 62" Portable Pier (6X32PP), (6X48PP), (6X54PP), (6X62PP)

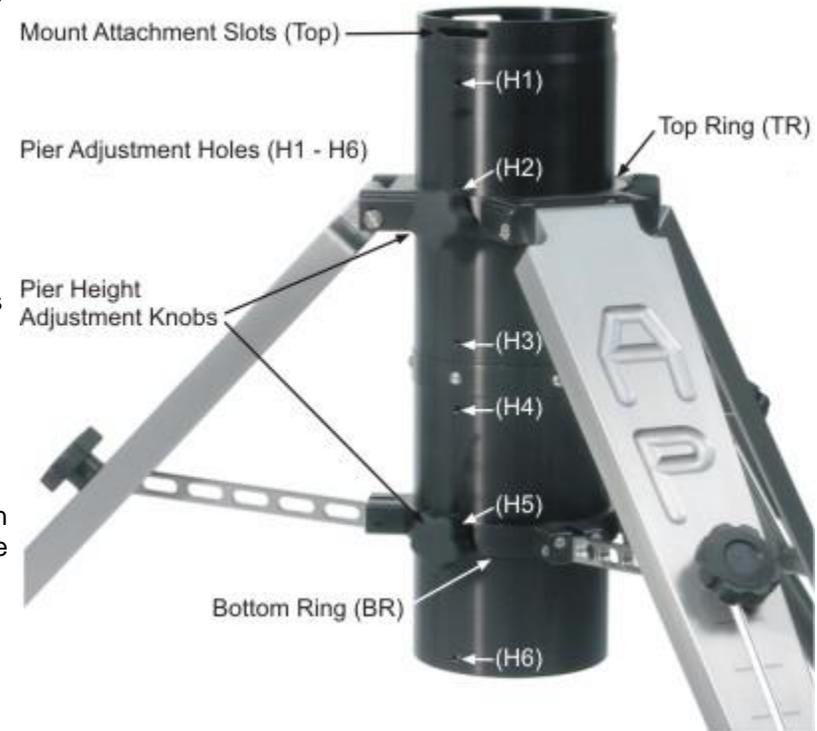
For the A-P Portable Pier, the accessories generally attach at the top of the pier. In some situations, it will be necessary to substitute one of the pier knobs with a bolt that is provided with the accessory.

	Single Level Support Bar (TRAYSB1) and Tray (TRAY06) or (TRAY06H)	Bi-Level Support Bar (TRAYSB) and Tray (TRAY06) or (TRAY06H)	Appropriate Fasteners	Control Box Adapter (CBAPT) see hole position reference at top of page	Appropriate Fasteners
400, 600E or Mach1 GTO	<p>* Will work with all of the above size Portable Piers.</p> <p>* One, two or three Single-Level Support Bars with tray(s).</p> <p>* Fasten on any side of the mount. (However, at lower latitudes, the counterweight may interfere with the tray(s) on the north side - especially with 400 mounts. An additional tray can be added on the north side at the bottom of a Bi-Level Support Bar - see next column over.)</p> <p>* If the Control Box Adapter is also used, only one or two support bars with trays will fit.</p>	<p>* Will work with all of the above size Portable Piers.</p> <p>* One, two or three Bi-Level Support Bars, each with either style of accessory tray</p> <p>* Fasten on any side of the mount. At lower latitudes, only the lower position may be usable on the north side of the mount.</p> <p>* If the Control Box Adapter is also used, then just two of the Bi-Level Support Bars can be attached.</p>	<p>Knob</p> <p>or</p> <p>1/4x3/4" FH</p>	<p>* Attach on south side of the mount so cables can be routed most effectively.</p> <p>* Mount the adapter with the angled tab down by using the top hole (1) for a tight fit to the tripod (preferred method).</p> <p>* The bracket can also be mounted from the angled tab (4) providing a better view of the control box. That configuration, however, does create more of an obstacle.</p>	<p>1/4x3/4" FH</p> <p>or</p> <p>Knob if using angled tab (4)</p>

6" Eagle Adjustable Folding Pier (EAGLE6)

The [6" Eagle Adjustable Folding Pier \(EAGLE6\)](#) will be treated a bit differently than the tripods or Portable Piers outlined above. They all had basically one attachment point for accessories - the top where the mount is also attached. Because of its adjustable nature, the 6" Eagle has a variety of potential mounting points. [See the page of examples!](#) We have no doubt that our clever customers will find more ways to use these accessories than we could possibly outline here! To avoid confusion, please review the following information:

- **Center Column:** The center column of the pier has the three top mount attachment slots and six 5/16-18 tapped pier adjustment holes going down the side of the column between each of the three legs (total of 18). They will be labeled "Top" and H1 ... H6 respectively. (see image at right)
- **Abbreviations:** When referring to the two ring assemblies that hold the adjustable center column via the large pier height adjustment knobs, "TR" will denote the top ring followed by the corresponding column hole number. Likewise, "BR" will denote the bottom ring again followed by the column hole number. For example, in the pier's middle setting, TR (H2) would refer to the attachment point in the top ring at hole #2 in the center column.
- **Transport with Brackets in Place:** In many of the configurations where the attachment point is below the pier adapter, it is possible to simply leave the bracket or support bar attached for folding and transport. Accessory trays will, of course, need to be removed from support bars for travel. [See a picture here.](#)
- **Screw Substitutions:** There will be configurations where a 5/16-18 x 1" button head cap screw will need to be substituted for one of the pier height adjustment knobs. Use this longer fastener when attaching at an adjustment ring to ensure adequate hold.
- **Under-the-Legs Tray Positions:** Some of the configurations for the trays involve positioning them inside the legs. This may somewhat limit the in-travel of the legs for leveling the pier, although not by much if you are adhering to our minimum recommended leg spread specs. (See the [EAGLE6](#) page for details.) These situations will be noted by α in the tables.
- **Differences between 400, 600 and Mach1GTO:** Keep in mind that the 400 and 600E series mounts attach to the pier at the north, southwest and southeast, while the Mach1GTO attaches at the south, northwest and northeast. This is only a critical distinction if you are planning on mounting accessories at the top of the pier (Top), at the top of the 8" Extension, or in the top pier adjustment hole (H1) where possible interference from the mount's counterweights and shaft becomes an issue. A review of any of the above tables will clarify this distinction. Accessories mounted below H1 should not be affected.



- **Extension Servo Cable for Mach1GTO:** If you are using the 6" Eagle with the Mach1GTO, you will need a [24" extension cable \(CABGTO24\)](#) to use the lower Control Box Adapter positions. Attachment locations requiring this adapter are marked with a subscript _A and there is an additional footnote at the bottom of the table. Most users should find one of the higher attachment points to be just fine.

Table Notes:

- The table rows are ordered by selected pier height.
- Click the thumbnails to see a larger image of an example with a full description.
- Notes to the table marked by _A, _B, or _C are below.

Click the thumbnails below to see examples at each setting, or click [here to see the whole page of examples!](#)

	Single Level Support Bar (TRAYSB1) and Tray (TRAY06) or (TRAY06H)	Bi-Level Support Bar (TRAYSB) and Tray (TRAY06) or (TRAY06H)	Appropriate Fasteners	Control Box Adapter (CBAPT) see hole position reference at top of page	Appropriate Fasteners
<p>Lowest 24"-28"</p>  <p>click</p>	<p>Top - no TR (H1) - no H2 _B H3 - no BR (H4) - OK H5 - OK _C H6 - OK _C</p>	<p>Not Applicable</p>	<p>Top N/A TR (H1) N/A H2 5/16x3/4" BH H3 N/A BR (H4) 5/16x1" BH H5 5/16x3/4" BH H6 5/16x3/4" BH</p>	<p>Top - no TR (H1) - use tab (4) H2-center(2) with tab down or tab (4) H3 - use (1) with tab up BR (H4) - use tab (4) _A H5-center(2) with tab down or tab(4) _A H6 - use (1) with tab up _{AC}</p>	<p>N/A 5/16x1" BH 5/16x3/4" BH 5/16x3/4" BH 5/16x1" BH 5/16x3/4" BH 5/16x3/4" BH</p>
<p>Middle 28"-32"</p>  <p>click</p>	<p>Top - OK H1 - OK TR (H2) - no H3 - no H4 - OK BR (H5) - OK H6 - OK _C</p>	<p>Not Applicable</p>	<p>Top 1/4x1" FH H1 5/16x3/4" BH TR (H2) N/A H3 N/A H4 5/16x3/4" BH BR (H5) 5/16x1" BH H6 5/16x3/4" BH</p>	<p>Top - tab (4) H1 - tab (4) TR (H2) - tab (4) H3 - tab (4) _A H4 - tab (4) _A BR (H5) - tab (4) _A H6 - center (2) with tab down _{AC}</p>	<p>1/4x1" FH 5/16x3/4" BH 5/16x1" BH 5/16x3/4" BH 5/16x3/4" BH 5/16x1" BH 5/16x3/4" BH</p>

 <p>Highest 32"-36"</p> <p>click</p>	<p>Top - OK H1 - OK H2 - OK TR (H3) - OK H4 - no H5 - OK BR (H6) - OK</p>	<p>Top - OK N/A N/A N/A N/A N/A N/A</p>	<p>Top 1/4x1" FH H1 5/16x3/4" BH H2 5/16x3/4" BH TR (H3) 5/16x1" BH H4 N/A H5 5/16x3/4" BH BR (H6) 5/16x1" BH</p>	<p>Top - hole (1) / tab down or tab (4) H1 - hole (1) or tab (4) H2-center(2)-tab down or tab(4) TR (H3) - tab (4)^a H4 - tab (4)^a H5-center(2)-tab down or tab(4)^a BR(H6)-tab(4)^{a,c}</p>	<p>1/4x1" FH 5/16x3/4" BH 5/16x3/4" BH 5/16x1" BH 5/16x3/4" BH 5/16x3/4" BH 5/16x1" BH</p>
 <p>8" Extension (EAGLE6E8)</p> <p>click</p>	<p>* One, two or three Single Level Support Bars, each with either style of accessory tray.</p> <p>* Fasten on any side of the mount. (However, at lower latitudes, the counterweight may interfere with the tray(s) on the north side - especially with 400 mounts.)</p> <p>* Additional trays and support bars can always be added below the extension using the guidelines above.</p>	<p>* One, two or three Bi-Level Support Bars, each with one or two of either style of accessory tray.</p> <p>* Replace knob joining pier top to 8" Extension with 1/4x5/8" BHW to keep knob from interfering with bottom of support bar.</p> <p>* Fasten on any side of the mount. (However, at lower latitudes, the counterweight may interfere with the top tray(s) on the north side - especially with 400 mounts.) The bottom tray will be fine.</p>	<p>1/4x1" FH</p> <p>(Replace pier knob(s) on bottom of extension with 1/4x5/8" BHW if using Bi-Level Support Bar)</p>	<p>* Attach on south side of the mount so cables can be routed most effectively.</p> <p>* Mount the adapter with the angled tab down by using the top hole (1) for a tight fit to the 8" Extension (preferred method).</p> <p>* The bracket can also be mounted from the angled tab (4) providing a better view of the control box. That configuration, however, does create more of an obstacle.</p> <p>* Lower attachment points can still be used following the guidelines above. See the note (.) below.</p>	<p>1/4x1" FH</p>

^a The Mach1GTO will require a [24" extension cable \(CABGTO24\)](#) to use these lower positions for mounting the Control Box Adapter.

^b In-travel of legs for leveling will be slightly restricted.

^c Accessory may pose a kicking hazard in such a low position