INSTRUCTION MANUAL

AZ4 Altzimuth Mount



Sky-Watcher®

100412V1

AZ4
Altzimuth Mount Steel



Figure 1a: AZ4 Altazimuth Mount (Steel)

AZ4
Altzimuth Mount

Aluminum

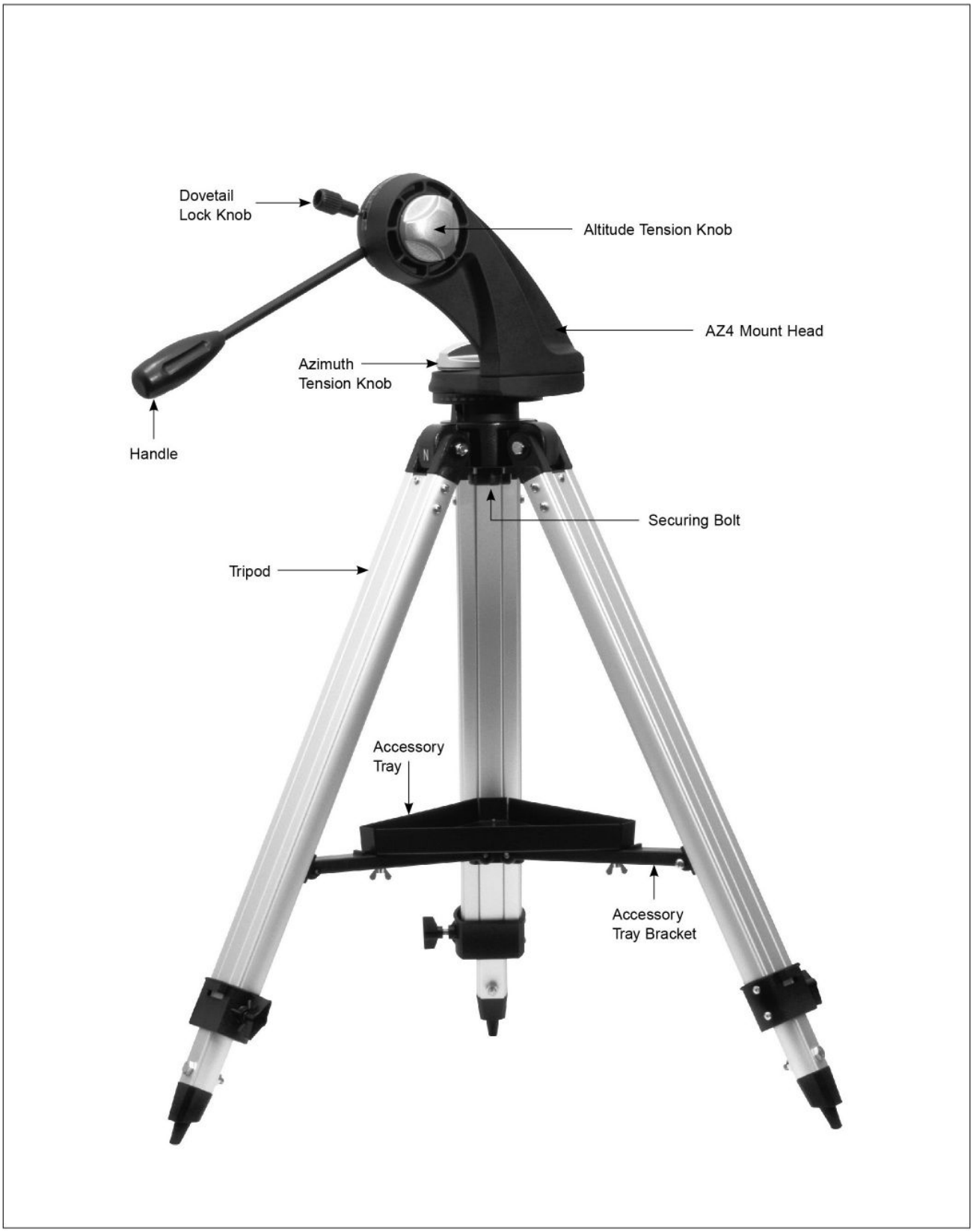


Figure 1b: The AZ4 Altazimuth Mount(Aluminum)

Sky-Watcher®

Thank you for choosing our Sky-Watcher product as part of your sky watching adventure. The AZ4 Alt-azimuth Mount is an excellent observing platform for small telescopes, binoculars, spotting scopes and even cameras. Its simple design allows for easy set up and usage. Teflon bearing surfaces for both axes of motion ensure buttery-smooth movements allowing telescopes to be manipulated with effortless precision. With such a user-friendly design, you will enjoy spending quality time observing and exploring the wondrous day and night skies with the AZ4 mount.

The following instructions will assist you in how to set-up, properly use, and care for your mount. Please make sure to read them over carefully before getting started.

1. Assembly

Please open all the boxes in the shipping container carefully. Make sure to check that all the parts listed in the Parts List are present. In the case that you need to return the mount, you must use the original packaging, so be sure to save the boxes and packaging material.
The mount is mostly pre-assembled at the factory, which makes the initial assembly of the mount an easy task. Simply install the head onto the tripod and attach the accessory tray. Before beginning, you should unpack all of the parts and place them out in your workspace. The bolts should all be tightened firmly to avoid flexing and wobbling, but do not overtighten the bolts or the threads may strip. As you assemble, please refer to Figure 1.

A. AZ4 Mount (Steel)

1. Place the tripod upright and extend the legs out as far as they can go. For now, keep the tripod legs at their fully retracted (shortest) length. After the mount is fully assembled, you can extend the legs to whatever length is suitable for you.

2. The center support shaft is already installed in the tripod, so only the head and accessory tray needs to be secured.

3. Position the base of the AZ4 head onto the base of the tripod. Adjust the AZ4 head so that the post on the base (referencing north) of the tripod lines up with the notch on the AZ4 head.

4. Thread the center support shaft into the AZ4 head until tight. Hold the mount head with one hand while you tighten the lock bolt with the other. Use caution not to cross thread when assembling. This process will secure the AZ4 head to the base of the tripod.

5. Take away the knob and washer from the bottom of the center support shaft. Slide the tripod support tray up from the bottom of the center support shaft until the three tray arms are touching the legs of the tripod. The flat side of the accessory tray should be facing up. Place the knob washer on the center support shaft against the tray, and follow it by threading the securing knob all the way up the center support shaft until it is tight against the tray. The tripod support tray provides added stability for the tripod, and can support up to five 1.25" eyepieces and two 2" eyepieces.

6. Thread the handle into the threaded receptacle of the AZ4 head. The handle will thread in at a slight angle so as to position it at a more comfortable angle for use in the field. To have the handle in a different position, simply remove the Phillips-head screw and thread the handle on the other side of the lock knob that secures the tele scope. The Phillips-head screw can then be used to cover the extra hole.

Your AZ4 mount is now fully assembled and it should look like Figure 1a. Please move ahead to section 3 to read about connecting your telescope to the mount.

B. AZ4 (Aluminum)

1. Stand the tripod upright and spread the legs out as far as they can go. For now, keep the tripod legs at their fully retracted (shortest) length. After the mount is fully assembled, you can extend them to a more desirable length.

2. Attach the accessory tray to the accessory tray bracket using the three wing screws already installed in the tray. Remove the wing screws from the tray and place the tray on top of the accessory tray bracket oriented with the flat surface against the accessory tray bracket. Thread the wing screws from underneath the assembly by first placing the wing screw up through the hole in the bracket and threading into the tray itself. Do not completely tighten the wing screws until all three are in place, as you may need to make minor adjustments to the tray position in order to align all three holes.

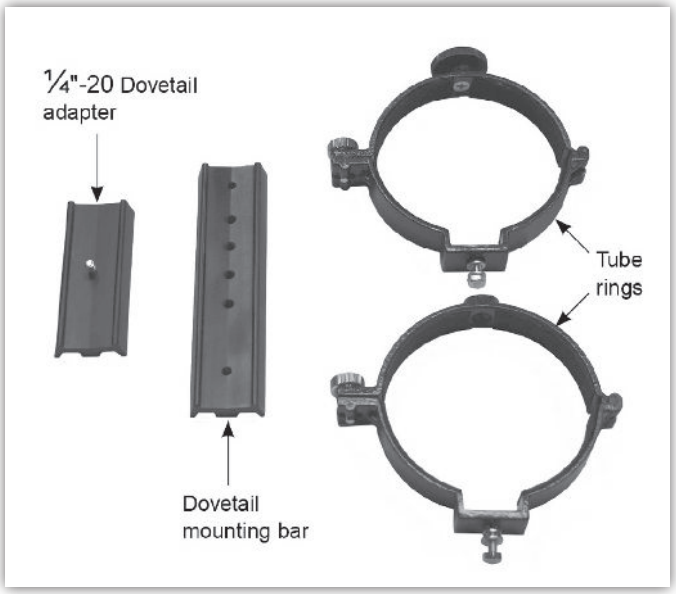
3. Place the base of the AZ4 head into the base of the tripod. Orient the AZ4 head so that the post on the base (referencing north) of the tripod lines up with the notch on the AZ4 head. To secure the mount head to the tripod, there is a captive bolt located on the underside of the leg casting. Use the black knob to insert the post into the threading on the head and turn until tight. Be careful not to cross thread when assembling.

4. Thread the handle into the threaded receptacle of the AZ4 head. The handle will thread in at a slight angle so as to position it at a more comfortable angle for use in the field. To have the handle in a different position, you can remove the Phillips-head screw and thread the handle on the other side of the thumbscrew that secures the telescope. The Phillips-head screw can be used to cover the additional hole.

Your AZ4 mount is now fully assembled, and should resemble Figure 1b. You can now connect your telescope to the mount.

2. Connecting a Telescope

The AZ4 mount was designed to be compatible with telescopes of apertures 6” or less. Telescopes exceeding that size will not be able to point at the horizon (horizontal) or zenith (vertical). For optimal results, the telescope optical tube assembly should weigh no more than around 15 lbs, less for longer optical tubes, as it may not provide sufficient stability otherwise.



A dovetail mounting bar is required to connect your telescope. If your telescope has this bar directly attached to the tube already, then please move on to the next paragraph. For telescopes that do not have a dovetail bar attached or use a ¼”-20 mounting block, you will need a set of tube rings to attach a dovetail bar. These accessories are available through Sky-Watcher Telescopes. Additionally, if your telescope has a ¼”-20 threaded mounting hole, you can use the dovetail “L-bracket” that has been supplied with this mount to fit the dovetail receptacle of the AZ4 and thread into this hole.

It is fairly simple to connect the telescope to the mount once you have a dovetail mounting bar on your telescope tube. First, unthread the knurled black plastic thumbscrew on the AZ4's dovetail holder until the tips are flush with the interior wall of the dovetail holder. Afterwards, insert the telescope's dovetail bar into the mount's dovetail holder and firmly tighten the thumbscrew.

Note: *Should you have a telescope with a dovetail mounting bar attached directly to the tube, or if you are using the 1/4"-20 dovetail adapter, the finderscope may be oriented in an awkward position when connected to the AZ4. Usually, this does not cause any problems in the actual usage other than being a bit awkward. Please visit us at www.SkyWatcher.com for more product information.*

For best up-and-down motion when positioned horizontally, the telescope needs to be balanced front-to-back. To balance the telescope, you can loosen the thumbscrew a little, and move the dovetail bar slightly forward or backward in the dovetail holder. If you are using tube rings, you can move the telescope tube forward or backward in the tube rings. You will have achieved good balance when the telescope does not move up-and-down by itself when the arm's tensioning knob is not very tight.

3. Using the AZ4 Mount

The AZ4 mount features separate clutches on both the altitude (up-and-down) and azimuth (left-to-right) axes and a panning arm, which can be fixed in two separate positions. Thus, the AZ4 is an "alt-azimuth" mount.

If the motions of one or both of the axes are too loose or too tight, the bearing tensioning can be adjusted by tightening or loosening the knobs. These knobs should be adjustable so that even the smallest motions of the mount are very smooth. If the motion on the altitude axis is not smooth no matter how the altitude tensioning knob is adjusted, then the telescope needs to be better balanced front-to-back.

The AZ4 is one of the most ideal mounts for astronomical observing as it can be used to point a telescope at zenith (straight up). When pointing a longer telescope tube, like a refractor, at zenith, lengthening the tripod legs will help with positioning the eyepiece. For heavier telescopes, the tripod legs should be extended in order to give the mount a wider stance, which will help stabilize the mount and reduce the chances of it tipping over.

Tracking Celestial Objects

Due to the rotation of the Earth on its polar axis, celestial objects will appear to move slowly across the sky. When observing an object through your telescope, you will see it drift gradually across the field of view. To keep the object centered in the field, use the handle to move the AZ4 as needed. For these small, precise movements, you may need to re-adjust the axis tensioning knobs. Please note that at higher magnifications, objects will appear to move faster since the field of view is narrower.

4. Care and Maintenance

The AZ4 mount will last a lifetime with just reasonable care. Simply store it in a clean, dry, dust-free place. Although it can be stored in a garage or shed, do not store the mount outdoors.

Very little mechanical maintenance is necessary for this mount. It is constructed of steel and has a black anodized finish that makes it quite resistant to scratches. Should a scratch appear, it will not harm the mount. Any dust, dirt, or moisture should be wiped off the mount with a soft cloth. A household surface cleaning fluid can be used for more extensive cleaning.

When the mount is being transported to an observing location, it is recommended that the handle be removed in order to avoid damage. If you remove the accessory tray, you can also fold the tripod legs together. For even easier portability, the AZ4 mount can be removed entirely from the tripod (simply unthread the knob under the tripod head).

5. Specifications

AZ4 (Steel)		AZ4 (Aluminum)	
Mount:	Altazimuth	Mount:	Altazimuth
Material:	Die-cast aluminum black anodized throughout	Material:	Die-cast aluminum black anodized throughout
Maximum load capacity:	Approximately 15 lbs.	Maximum load capacity:	Approximately 15 lbs.
Maximum tube diameter:	Approximately 7.5” (6” aperture telescope)	Maximum tube diameter:	Approximately 7.5” (6” aperture telescope)
Bearing surfaces:	Teflon	Bearing surfaces:	Teflon
Axis tensioning:	Via molded plastic, triangular-grip knobs	Axis tensioning:	Via molded plastic, triangular-grip knobs
Pointing handle:	Included, foam grip	Pointing handle:	Included, foam grip
Telescope connection:	via dovetail rail	Telescope connection:	via dovetail rail
Tripod:	Stainless steel, includes accessory tray	Tripod:	Aluminum, includes accessory tray
Assembled weight:	18.5 lbs.	Assembled weight:	13 lbs.
Assembled height:	47” (retracted) to 63” (extended)	Assembled height:	41.5” (retracted) to 63” (extended)