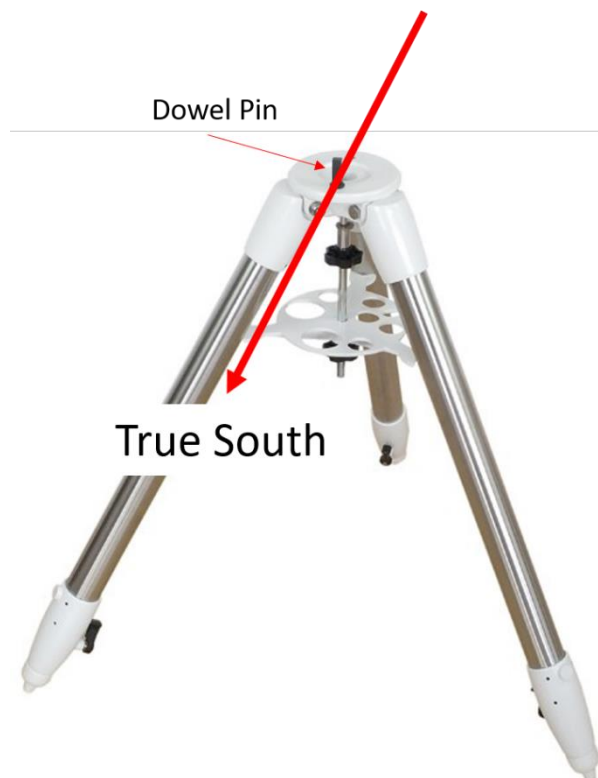


Setup and Star Alignment of the SkyWatcher AZ EQ6 GT Mount – Southern Hemisphere

(Perhaps print this guideline and keep it with your telescope.)

Set the tripod up level, with the center line to the dowel pin aimed as close as possible to True South. A compass app on a phone should be able to indicate True South.



Attach the mount.

Attach and tighten the Primary Locking Shaft to lock the mount to the tripod.

Gently tighten the two azimuth adjustment knobs against the dowel pin.

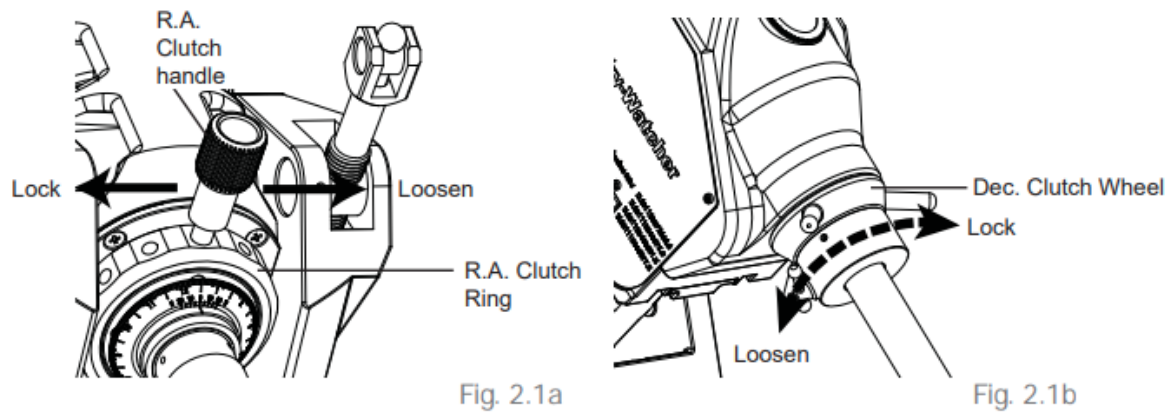
Attach the accessory tray.

Install the counterweight bar. Attach counter weight and tighten. Insert and tighten counterweight bar safety end cap.

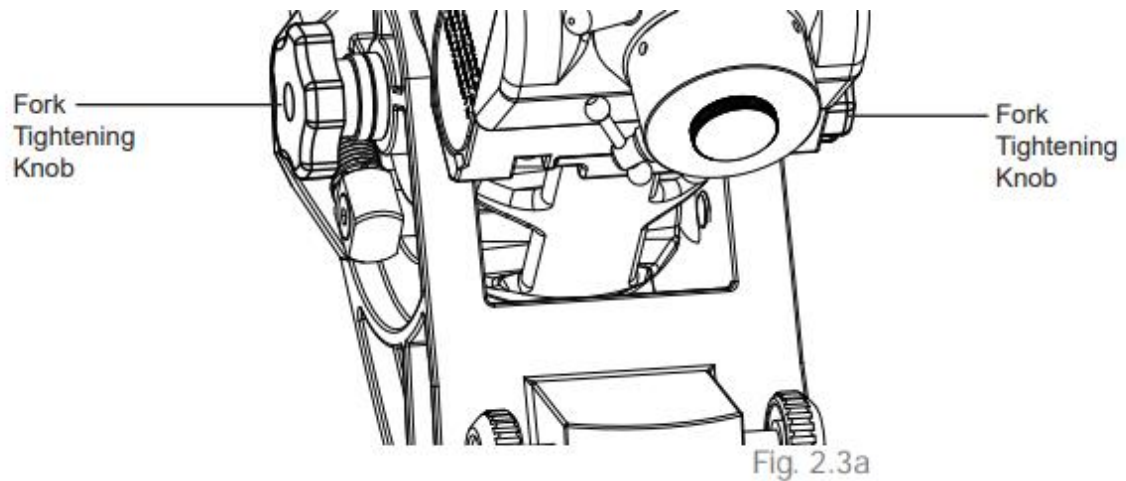
Point counterweight towards the ground and tighten the RA clutch.

Attach the telescope to the saddle and tighten the two knobs.

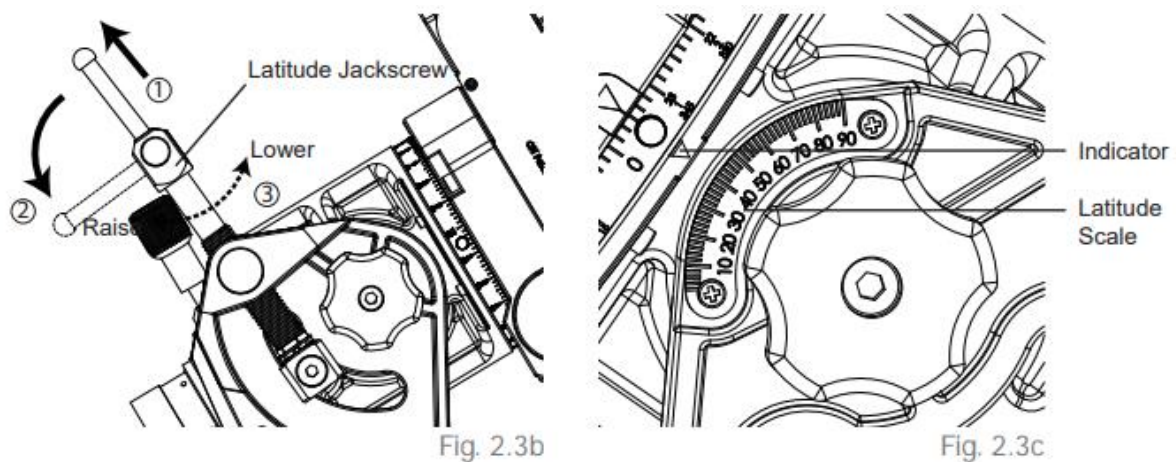
Balance the telescope and counterweight in RA and Dec. See clutch locations below.



Loosen the two Fork Tightening Knobs to allow the adjust the mount RA axis elevation to match the latitude of the setup location.



Adjust the elevation with the Latitude Jackscrew. End the elevation adjustment with an upwards movement of the Latitude Jackscrew. Then retighten the Fork Tightening Knobs.



Attached the finder scope. Insert a wide-angle low power eyepiece into the finder scope.

Insert a wide-angle low power eyepiece into the main telescope. But also have ready another higher power eyepiece, potentially one with cross hairs.

Attach the hand controller.

Attach the battery.

Ensure the finder scope and main telescope are co-aligned. Release the clutches the aim the scopes at a tree top or pole top. Lock the clutches and adjust the screws on the finder scope rings to achieve co-alignment.

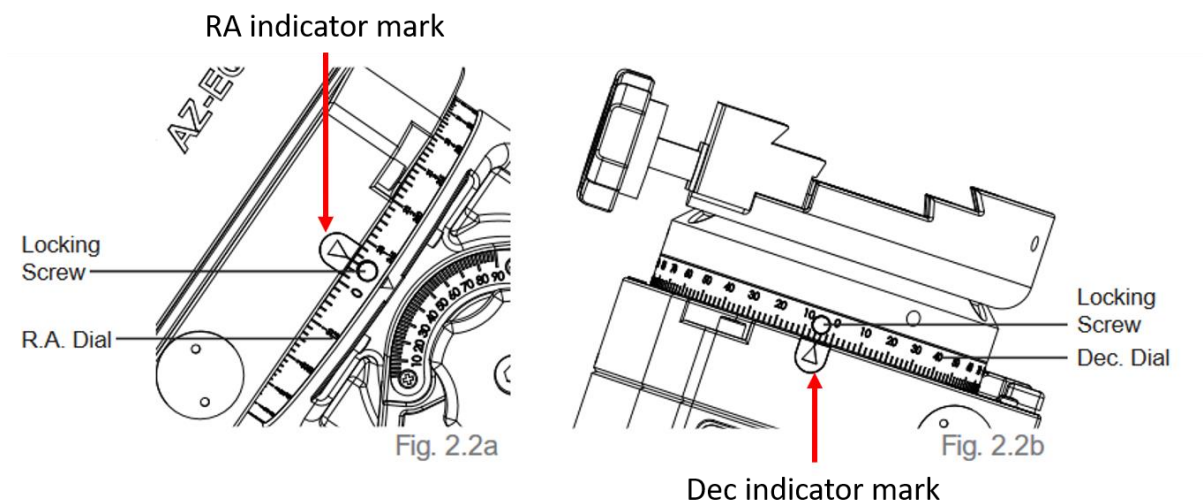
Release the RA Dec clutches.

Place the mount and telescope in the HOME position.

- RA axis pointing towards the South Celestial Pole.
- Counterweight rod is at its lowest position.
- The telescope points towards the South Celestial Pole.
- Re-tighten the RA Dec clutches.

It is very important that the mount and telescope be accurately placed in the Home Position at the time the mount is turned On and the Star Alignment procedure commenced. This creates the first positional reference point for the mount's encoders. Here is a link to a video explaining one method of achieving accurate Home Position: <https://www.youtube.com/watch?v=2PbXjVLUuA>

This Home Position procedure explained in the video only needs to be done once (This assumes you always set your tripod up level on every occasion). Once the RA and Dec dials are properly aligned on the mount, and their thumbscrews tightened, the Home Position can be easily achieved when setting up the mount in future. Just move the mount in RA and Dec until the Indicator Marks align with the position you set in the video procedure. Then clock both clutches.



Turn ON the mount.

The LCD will request Operating Mode. Use the Up/Down scroll keys to select EQ Mode. Press ENTER.

Firmware version will display. Press ENTER to proceed.

Safety warning message will display. Press ENTER to proceed.

LCD will display Enter Location. Use numeric keys to enter longitude and latitude. Use the up/down scroll keys to select East for longitude and South for latitude. Press ENTER to confirm input.

LCD will display Set Time Zone. Brisbane is +10 hours. Press ENTER to confirm input.

LCD will display Date: mm/dd/yyyy. Enter date as mm/dd/yyyy format. Press ENTER to confirm input.

LCD will display Enter Time. Enter current time in 24-hour format, eg, 18:30:00. Press ENTER to confirm input.

LCD will display Daylight Saving. Use up/down scroll keys to select No. Press ENTER to confirm input.

Start Mount Alignment

LCD will display Begin Alignment. Press 1 for Yes.

The LCD display will request a choice of Alignment method. Select 3-Star Alignment. This will help correct for any axis alignment errors in the setup of the scope on the mount and deliver more accurate pointing.

The first two alignment stars need to be on the same side of the meridian, on the West side for example. The third star needs to be on the other side of the meridian, the East side for example.

The first two alignment stars should have a difference in declination of 10° to 30° only.

The third star just needs to be on the other side of the meridian.

You should pre-select suitable alignment stars before leaving home. Use the document "SkyWatcher SynScan Alignment Stars Southern Hemisphere" and a planetarium app to preselect stars that meet the criteria above. Write the names of the stars down. Also create a second backup list of another three stars. Try and choose stars with the brightest magnitudes that meet the criteria.

It is probably also wise to select the third star to have a substantial difference in declination to that of the first two stars. If stars 1 and 2 have dec of say $+30^{\circ}$ and $+05^{\circ}$ the third star might have a more southern sky declination of say -60° this wider separation may help the mount computer to better detect and alignment inaccuracies in the mount and attachment of the telescope.

Align the first star

The LCD will display Choose 1st Star. Use the up/down scroll keys to select your first preselected star. When the name is displayed, press ENTER to confirm input.

The telescope will slew. Use the direction keys to centre the star in the finder scope. Now observe through the wide-angle eyepiece in the main telescope. Centre the star. Swap the eyepiece for the high power eyepiece, preferably with cross hairs. Centre the star. BUT make sure the 12 o'clock key and the 3 o'clock keys are the last direction keys you touch when centering the star on the cross hairs. (If you overshoot, use the 6 and 9 o'clock keys to move the star off centre and then use just the 12 o'clock and 3 o'clock keys to re-centre the star. Press ENTER to confirm input

Align the second star

Same process as for the first star.

Align the third star

Same process, but this time the star is located on the opposite side of the meridian.

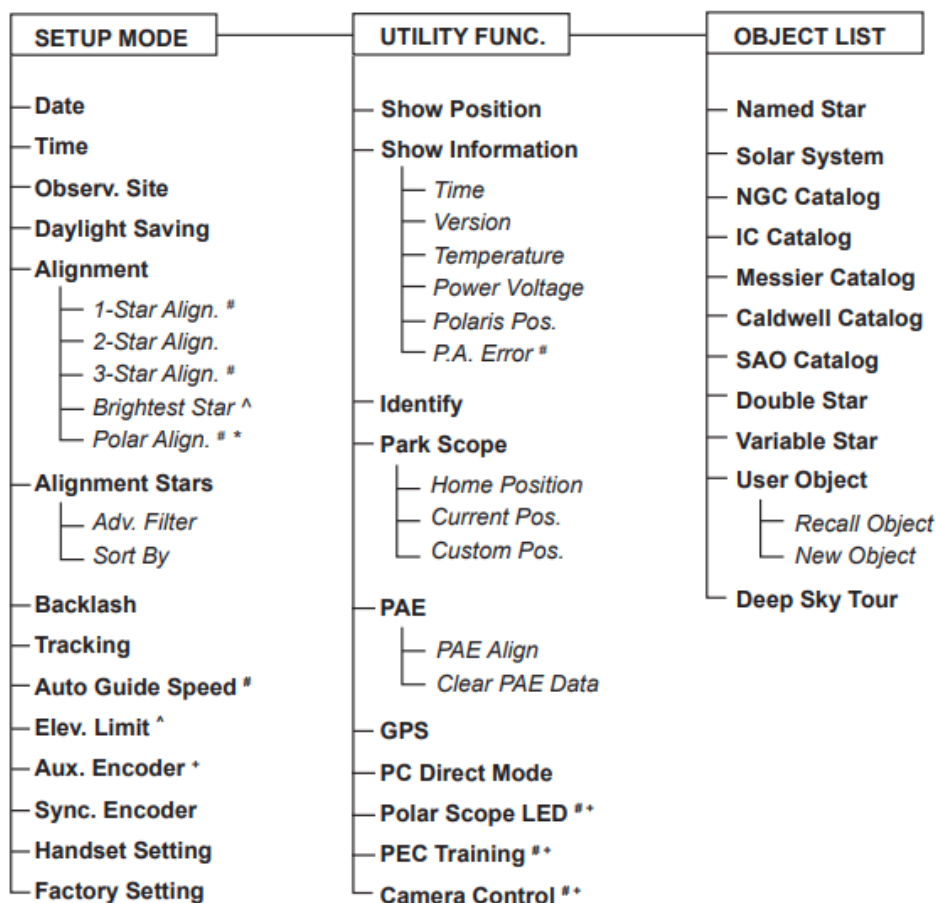
The LCD should hopefully display Alignment Success.

A few seconds later the LCD may display the estimated polar alignment offset for the mount. If the telescope is just to be used for visual astronomy, ignore this message.

PART IV : SYNSCAN MENU TREE

4.1 Menu Structure

The SynScan hand controller uses menu tree to organize its various functions. The following table shows the menu tree:



Note:

Applicable to Equatorial mounts

^ Applicable to Alt-azimuth mounts

* Only available after 2-star or 3-star alignment is performed

+ Applicable only to certain types of mounts and motor controllers.

Here is the list of the short-cut keys and their functions:

- **SETUP:** Access to the "Setup" sub-menu.
- **TOUR:** Access to the "Deep Sky Tour" function.
- **UTILITY:** Access to the "Utility Function" sub-menu.
- **M:** Access to the "Messier Catalog" sub-menu.
- **NGC:** Access to the "NGC Catalog" sub-menu.
- **IC:** Access to the "IC Catalog" sub-menu.
- **PLANET:** Access to "Solar System".
- **OBJECT:** Access to the "Object List" menu and stay at the "Named Star" sub-menu.
- **USER:** Access to the "User Object" sub-menu.
- **ID:** Access to the "Identify" function.

See Page 19 to 23 for how to slew to specific objects in the hand controller database.

Here is a link to a YouTube video (but for the northern hemisphere) for an older EQ5 mount, that covers the setup process reasonably well:

<https://www.youtube.com/watch?v=ArNH7LRWJ9Q>