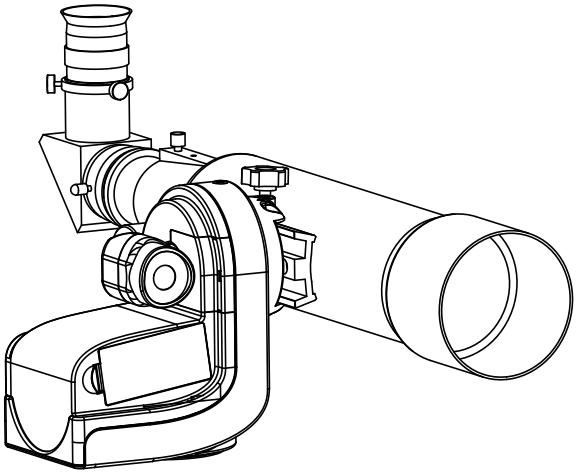
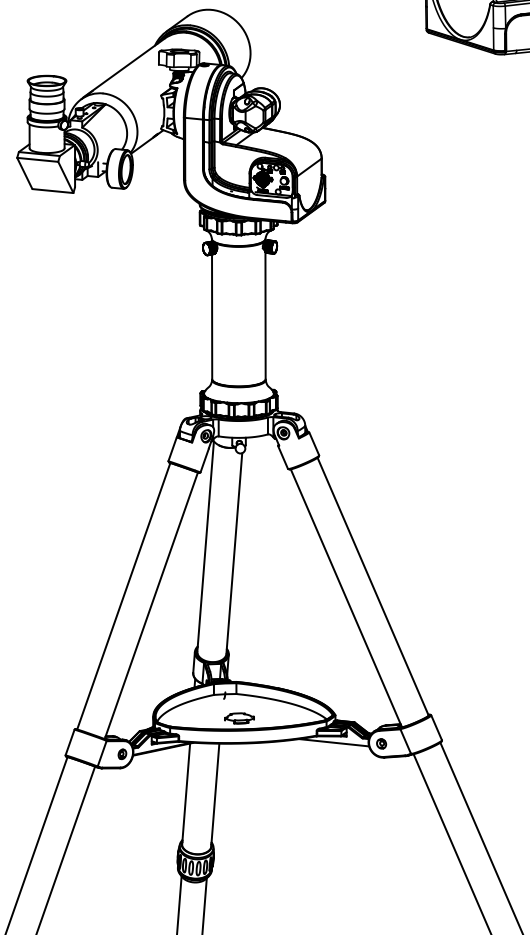
INSTRUCTION MANUAL

SolarQuest

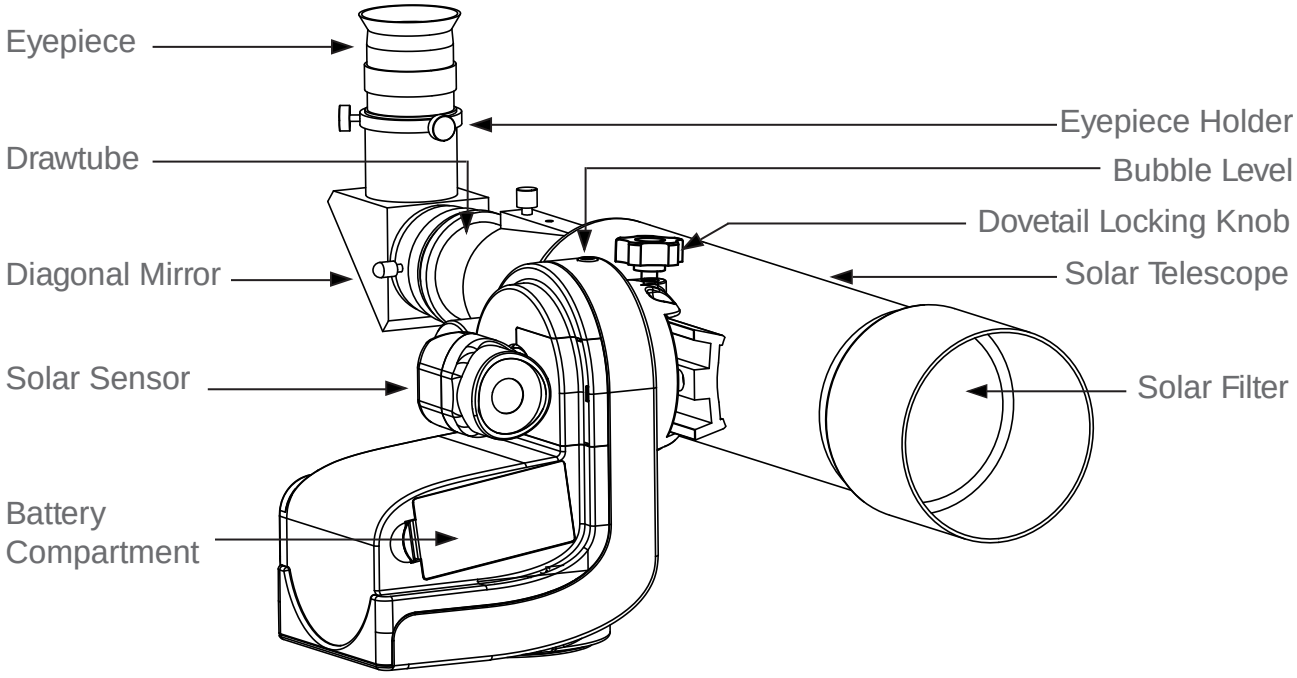


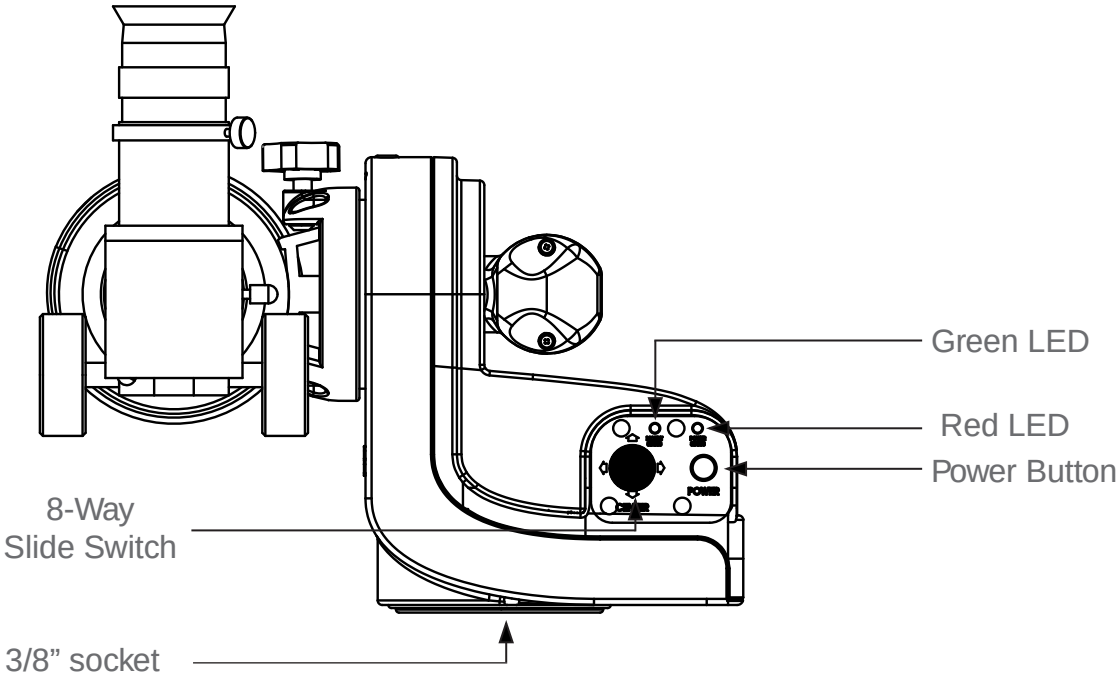


CONTENT

WARNING: THE SOLARQUEST MOUNT IS DESIGNED TO WORK WITH A SOLAR TELESCOPES ONLY. DO NOT POINT OTHER TYPES OF OPTICAL DEVICE AT THE SUN. LOOKING DIRECTLY AT THE SUN WITHOUT A CERTIFIED FILTER WILL CAUSE IMMEDIATE AND IRREVERSIBLE DAMAGE TO THE EYES OR INSTRUMENT.

SolarQuest Diagram





PART I : Setting up the SolarQuest

1.1 Setting Up on a Skywatcher Tripod

1. Fully expand the three legs of the tripod on level ground.
2. Install the accessory tray on the tripod as shown in Fig. 1.1a.
3. Attach the extension pier onto the tripod tightly with the locking bolt on the tripod head.
4. Remove the mounting head on the extension pier by loosen the 3 small locking screws.
5. Attach the SolarQuest mount to the mounting head tightly with the locking knob.
6. Place the mounting head onto the extension pier and fix it with the 3 locking screws.
7. Adjust the lengths of the tripod legs. Extend the legs to the desired height and center the bubble level on top of the SolarQuest mount.

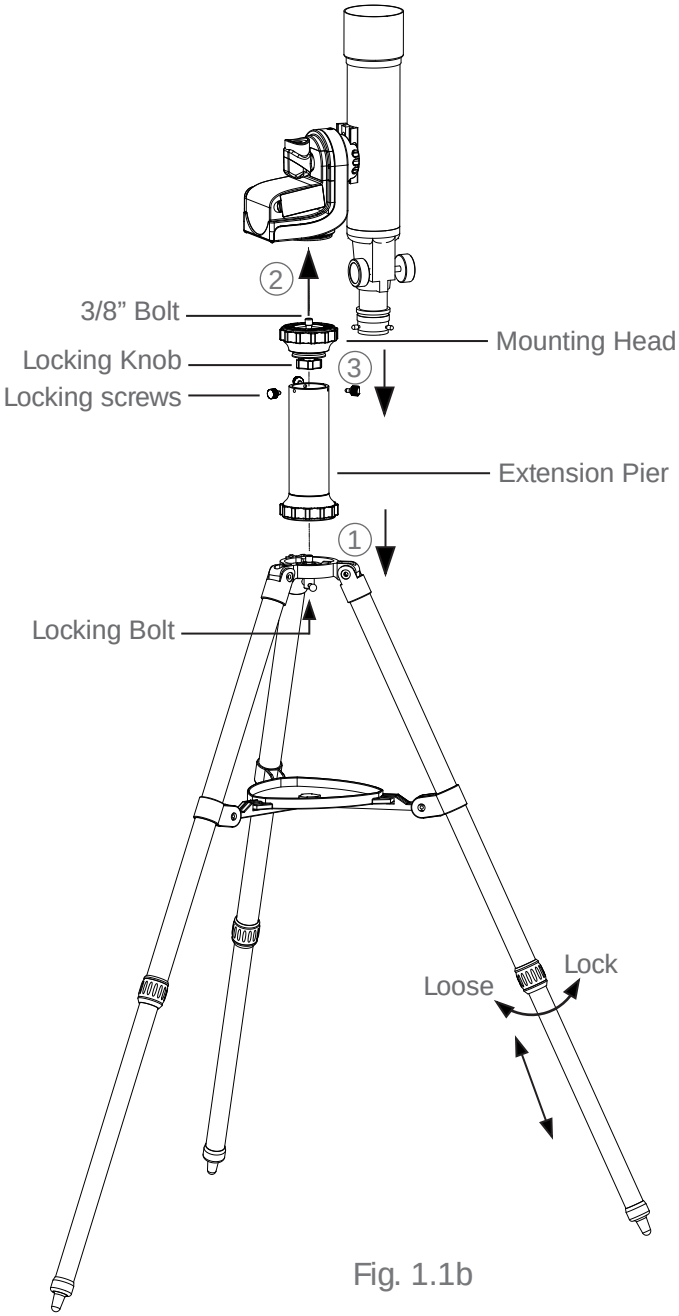


Fig. 1.1b

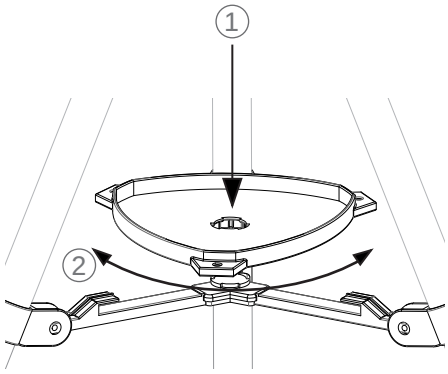


Fig. 1.1a

① Align the accessory tray and push down on it while holding onto the bottom supports
② Rotate the tray to lock it into place.

WARNING: The accessory tray of a Skywatcher tripod ensures that the tripod legs are firmly expanded, which prevents the tripod from accidentally tipping over. When using the SolarQuest mount on a Skywatcher tripod, an accessory tray should always be used to ensure stability.

1.2 Attaching the SolarQuest to a Camera Tripod

1. Fully expand the three legs of the tripod on leveled ground. Make sure that the tripod is stable.
2. Raise the camera tripod's central pole to the height which prevents the solar telescope from hitting the tripod legs when the telesocpe points to zenith.
3. Screw the SolarQuest mount to the 3/8" bolt on the tripod head's mounting plate, tighten **SLIGHTLY**.
   Caution: *Over-tightening the mount may cause damage to the internal mechanical parts.*
4. Most camera tripods' mounting plate comes with 1 to 3 locking screws, firmly tighten the locking screws from underneath the plate to fix the SolarQuest mount onto the mounting plate.
5. Adjust the lengths of the legs to center the bubble level on the mount.

1.3 Installing the Solar Telescope

1. Loosen the dovetail locking knob until nothing is obstructing the groove in the saddle.
2. Slide the dovetail bar on the solar telescope into the dovetail groove of the saddle.
3. Tighten the dovetail locking knob. DO NOT LET GO OF THE SOLAR TELESCOPE UNTIL YOU ARE SURE IT IS FIRMLY ATTACHED TO THE SADDLE
4. Fully insert the diagonal mirror to the drawtube of the solar telescope with the eyepiece holder pointing up straightly, fix it in place with the two locking screws.
5. Insert an eyepiece to the eyepiece holder and fix it in place with the locking screws.

1.4 Installing Batteries

1. Open the battery compartment cover and pull out the battery holder.
2. Make sure the battery cable connects to the holder before inserting batteries to the slots.
3. Insert 8 "AA" size batteries to the battery holder. Refer to the battery marks of each slot while inserting the batteries.
4. Place the battery holder back to the compartment gently and closer the cover.
   Note: *For the safety of your equipment , remove the batteries from SolarQuest if it will not be used for a long time.*

1.5 Test Run

1. Press the power button until the red LED light is on.
2. The solar telescope will be moved to horizontal position automatically in several seconds.
3. Slide the 8-way switch to one direction and then press the power button, the SolarQuest will slew quickly.
4. Slide the 8-way switch alone to one direction to move the SolarQuest slowly for fine centering the Sun in the field of view of an eyepiece.
5. To turn off the power, press and hold the power button for several seconds until the red LED light is off.

Warning: *Always adjust the SolarQuest mount with the internal motor drive and the 8-way switch. Forcing the SolarQuest to rotate manually might cause damages to the internal mechanical parts.*

PART II : Observing the Sun

2.1 Pointing to the Sun Automatically

1. Setup the SolarQuest in an open field under the Sun, as described in the previous chapter.
2. Turn on power. The SolarQuest will level the solar telescope automatically and then takes up to 2 minute to acquire GPS signal before the next movement.
3. The SolarQuest will bring the solar telescope to the altitude angle of the Sun and starts slewing clockwise in azimuth to search for the Sun.
4. The red LED will blink slowly during the search and becomes solid after the SolarQuest mount locates the Sun successfully.
5. Users can now look into the eyepiece. Adjust the focus knob on the solar telescope to obtain a sharp image of the Sun.
6. Use the 8-way slide switch to center the Sun in the FOV of the eyepiece. It is normal to find lags in movement when switching to an opposite direction.

Tips:

- *Before turning on power, point the solar telescope to the left side of the Sun can reduce the searching time.*
- *Use a long focal length eyepiece(20mm) to start the observing.*

2.2 Correcting Auto-Pointing Offset

The Sun might be off-center in the eyepiece after the SolarQuest finishes the auto-pointing routine. After centering the Sun manually in the eyepiece, users can double click the power button to save the corrections. It will be applied to the next auto-pointing routine.

2.3 Environmental Influence

1. Clouds, especially thick or low clouds might reduce the accuracy of auto-pointing. They might also lead to visible drift of the Sun in the eyepiece while the SolarQuest is tracking the Sun.
2. Strong reflected light, which happens to appear within the SolarQuest's searching path, can terminate the auto-pointing routine unexpectedly.

2.4 Factory Reset

A SolarQuest mount and the accompanied Skywatcher solar telescope have been pre-calibrated in the factory. As a result, the auto-pointing will be fully functional straight out of the box. To restore the original calibration data of the package:

1. Push the 8-way slide switch to lower-right position and then press the power button until the red LED starts to flash.
2. Release the slide switch and power button, continue to observer the Sun as described in section 2.1 and 2.2.

2.5 Using a User Owned Solar Telescope

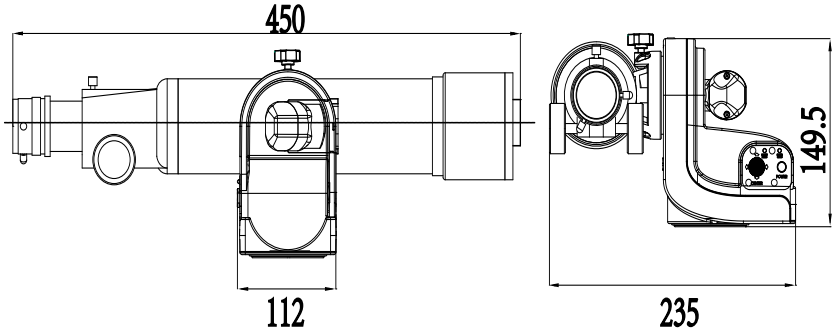
Users can attached their own solar telescopes onto the SolarQuest mount to enjoy its auto-pointing and tracking capability. After installing their own solar telescope and correct the auto-pointing offset as described in 2.2, the user needs to do a one-time calibration if the subsequent auto-pointing is still not satisfactory.

1. Turn off power.
2. Put the 8-way slide switch to upper-left position and then press the power button.
3. Wait until the red LED and green LED start to flash alternately.
4. Let go of the 8-Way slide switch and power button.
5. Wait until the mount stops pointing to the Sun automatically.

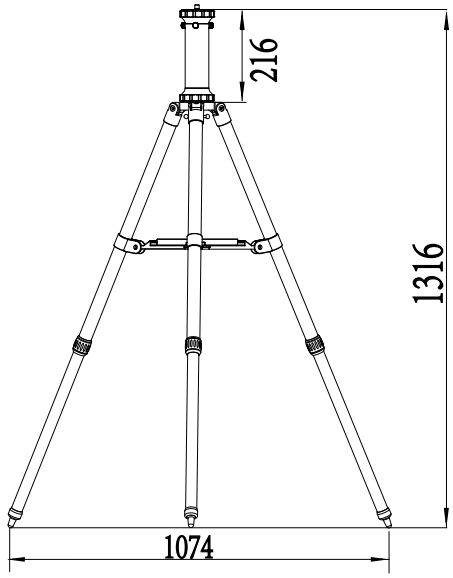
6. Adjust the solar scope's mounting kit to roughly bring the Sun into (or close to) the solar scope's field of view.
7. Use the direction buttons to fine centering the Sun in the solar scope's field or view.
8. Double click the power button to finish the calibration.

APPENDIX I : SPECIFICATIONS

Dimensions:



Mount



Tripod

Specifications:

Product Name	SolarQuest
Mount	1.3 kg
Skywatcher Solar Telescope	1.5 kg
Tripod	1.9 kg
Extension Pier	0.85kg
Power Requirement	8 "AA" Size Batteries

Note: The above specifications may be changed without prior notice. For more information on updates please visit our website.

SolarQuest

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