QHYCCD

POLEMASTER

Polar alignment made so easy yet precise

MANUAL

Enjoy your astrophotography journey without the pains and frustration of crouching down to look through polar scope or realigning as your tripod is kicked by curious souls.

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Installation Guide for PoleMaster Early Bird Version

Step 1: Insert PoleMaster base mount adapter into the front of your mount polar scope. Tighten the screws to hand-tight level to fix the adapter.

Step 2: Attach the PoleMaster onto the base mount adapter with the USB port facing left. Put the three screws on. Take note that the mount is in parked position.

Installation Guide for PoleMaster Retail Version

Step 1: Insert PoleMaster base mount adapter into the front of your mount polar scope. Use a hex screw to tighten the inner screw as shown in the picture.

Step 2: Insert the quick install plate into the mount adapter.

Step 3: Tighten the thumb screws and make sure the quick install plate is secured.

Step 4: Attach and screw the PoleMaster onto the quick install plate with USB port facing left as shown in the picture.

Step 5: Tighten the screws and make sure PoleMaster is secured in place

Focusing PoleMaster

Each PoleMaster's lens is focused manually before shipping from factory. Shall the needs for refocusing arises, e.g., stars are not sufficiently small and tight, please follow the instruction below to focus the lens.

Focusing steps:

1. Point the PoleMaster on bright stars
2. Remove the front protective tube by rotation
3. Use a M2 hex screw to unscrew the set screw (focus locking screw) on the side of the lens barrel
4. Rotate the lens until the star is well focused
5. Retighten the set screw and reinstall the protective tube removed in step 2.

Software User Guide

1. Download PoleMaster driver and application from www.qhyccd.com/cn/PoleMaster.html

2. Setup your equatorial mount and roughly level it (precise leveling via bubble is not necessary). Points towards the north as you normally do during polar alignment process.

3. Set the elevation of the mount with respect to the latitude of your location

4. Launch PoleMaster application and follow the steps shown on screen. As PoleMaster has a huge field of view (15°), Polaris should be readily shown on screen which should the brightest star in the FOV.

5. Follow the software prompt to perform center axis calibration. As the mount was originally in the parked position, after rotating twice and the software found the rotational center, it's advantageous to instruct the mount to return to parked position when the software prompts you for rotation axis verification. This will finalise the rotation axis calibration and also return the mount to its original

position.

In the parked position, the horizontal axis of the PoleMaster aligns with ground level. This position facilitates the rough alignment and fine alignment in the later stages.

6. Follow the instructions shown to perform rough polar alignment. The accuracy achievable in this stage is around a few arcminutes.

7. Follow the instructions to perform fine polar alignment. The maximum alignment accuracy achievable after this stage is 30 arcseconds.

Notice:

1. The current software version has not implemented atmospheric correction and precession of Earth's rotational axis. Current version is suitable for use from November 2015 till June 2016. Recommended to use at areas with latitude higher than 30°N. Support for the above mentioned corrections will be implemented in future software update. Support for southern hemisphere is also under development.

2. Under severe light pollution sky or when transparency is low, PoleMaster will fail to perform plate solving when some faint target stars are invisible.