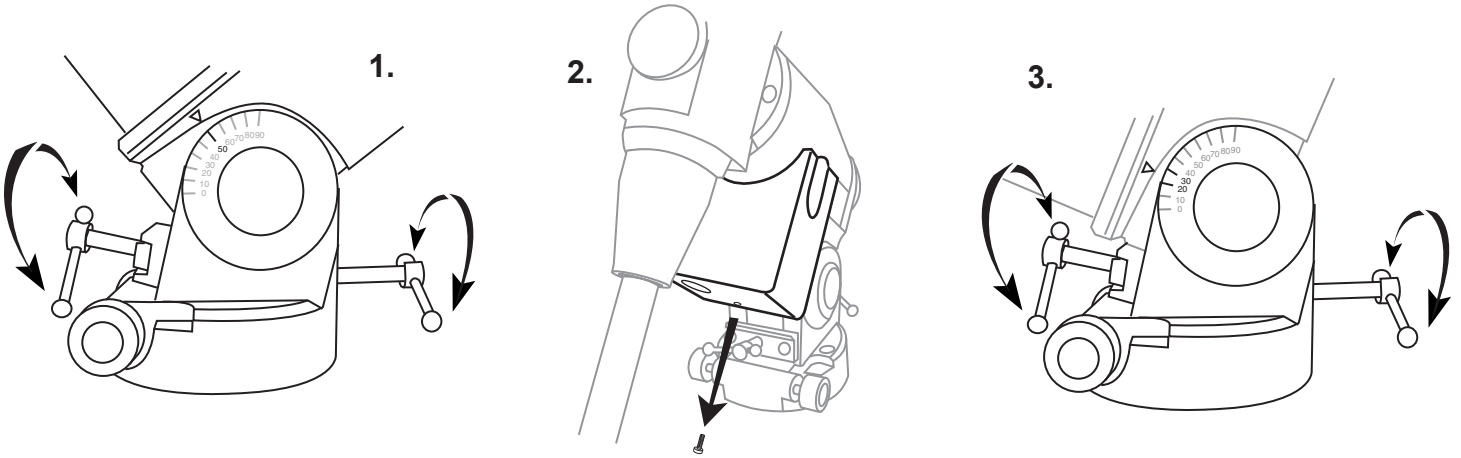
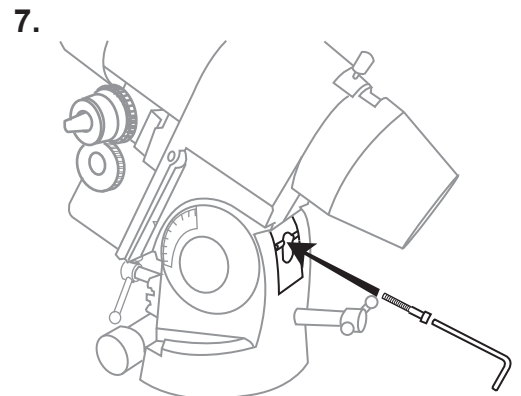
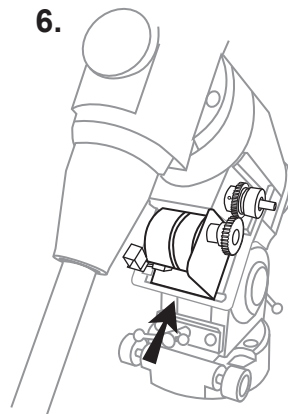
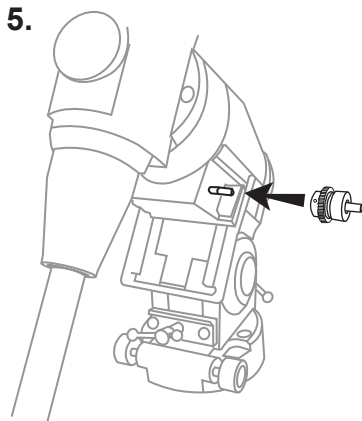
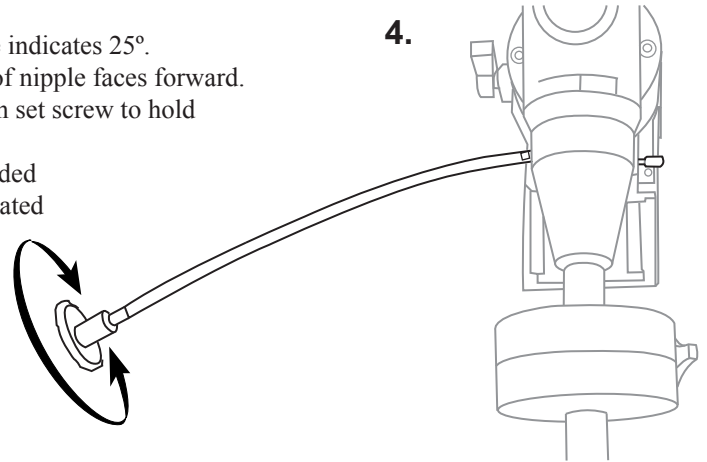


# EQ5 Motor Drive



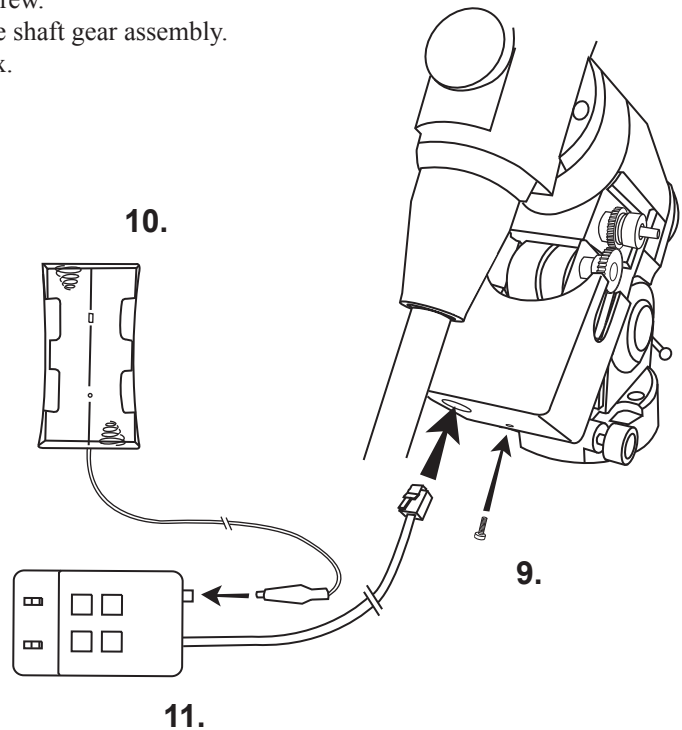
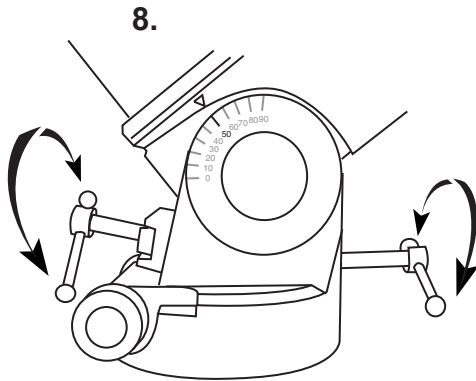
## INSTALLATION

- 1) Turn the altitude adjustment knob until the latitude scale indicates 50°.
- 2) Locate plastic box underneath R.A. axis. Unscrew small phillips screw at bottom to remove box.
- 3) Turn the altitude adjustment knob until the latitude scale indicates 25°.
- 4) Rotate R.A. fine-adjustment cable until the flat surface of nipple faces forward.
- 5) Slide shaft gear onto end of R.A. axis worm gear. Tighten set screw to hold shaft gear in place using the 2mm hex key provided
- 6) Place motor drive into recess. Orient motor so that threaded hole in motor drive mounting plate aligns with the elongated hole near the top of the recess. Ensure gear on motor meshes with the shaft gear assembly.
- 7) Attach 4mm key hex onto long screw and thread through hole and screw into backside of motor mounting plate. Fasten screw to secure motor to equatorial mount.



## INSTALLATION

- 8) Turn the altitude adjustment knob until the latitude scale indicates 50°.
- 9) Replace plastic cover and secure with small phillips screw.  
Remove oval tab from side cover to allow space for the shaft gear assembly.
- 10) Plug DC power cord from battery case into control box.
- 11) Plug cord from control box into RJ-11 jack on motor.



## OPERATION

A motor drive allows tracking of celestial objects. Tracking corrects for rotation of the earth by rotating the telescope at about the speed of an hour hand on a clock. The single axis drive unit is known as a clock drive. For polar-aligned equatorial mounts, the motor drive will correct for earth's rotation. The hand controller can be used as a correction for long exposure photographs. For the motor drive to properly compensate for the earth's rotation, your telescope mount must be polar-aligned and the altitude axis set to your local latitude. Under these conditions, no adjustment of the declination axis should be necessary for astrophotography. You will only need the R.A. motor drive.

When the power is on and all buttons on the control box are depressed, the motor drive will automatically rotate at the correct speed to compensate for the rotation of the earth. Its rotation speed matches the earth's rotation rate for stars to appear stationary in telescope eyepiece.

The shaft gear assembly operates as a friction clutch to allow disengagement of the motor drive. To use the R.A. fine-adjustment cable, loosen the knurled wheel on the shaft gear to disengage motor. Tighten wheel to engage motor again. The R.A. axis locking knob can be loosened for slewing without having to disengage motor gear first.

The on/off switch controls power for the motor drive. The N/S switch changes direction of motor tracking. The "S" setting should be used for observing in the Southern Hemisphere.

The motor drive requires 4 'D' cell batteries (not included) to operate. A set of batteries will allow several nights of observing. The LED light is green under normal operation. The LED begins to flash in the case of imminent battery failure.

The right "2X" button will rotate the telescope forward at twice the tracking speed or approximately  $\frac{1}{2}^\circ$  per minute. The left "2X" button stops all motion and allows stars to drift by at their normal rotation rate of approx.  $\frac{1}{4}^\circ$  per minute. The "8X" buttons allows forward at eight times the tracking rate (approx.  $2^\circ$  per minute) and the reverse button move the telescope backwards at seven times the tracking rate (approx.  $1\frac{3}{4}^\circ$  per minute).

The tracking speed of the R.A. motor is factory set and should not need adjustment. Adjustment of the variable resistor inside the control box should be preformed by an experienced technician.