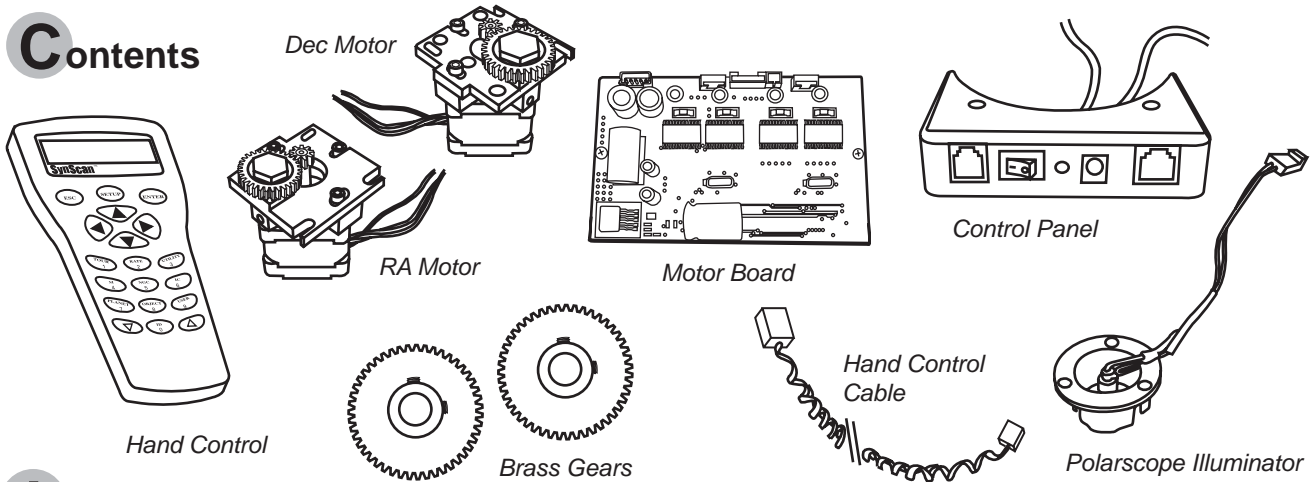


# HEQ5 SynScan UPGRADE KIT INSTALLATION

## Contents



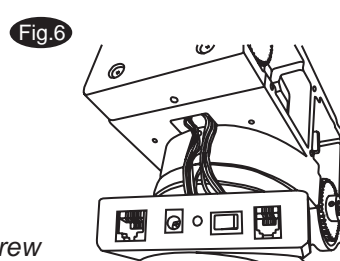
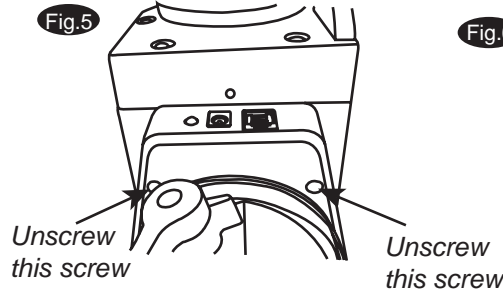
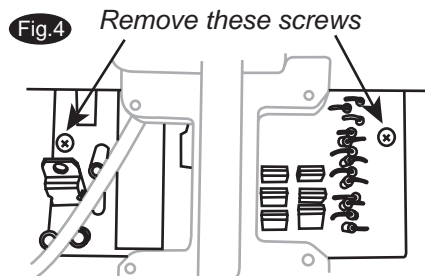
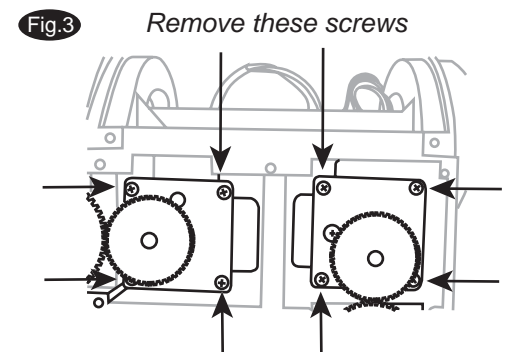
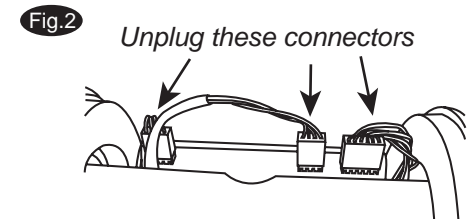
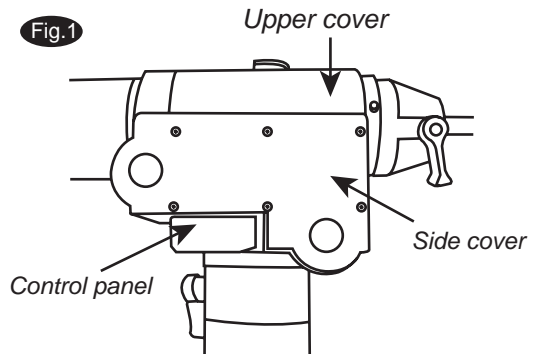
## Installation

### Removing original components

- 1) Rotate the mount in RA axis so that the side with six Philip screws faces up, as shown in Fig.1.
- 2) Remove the six Philip's screws on the side cover and remove the cover. You should be able to find four brass gears inside.
- 3) Unscrew the two screws at the side of the upper cover.
- 4) Rotate the mount in RA axis so that the side with the four gears faces down. Remove the two remaining screws on the side of the upper cover. Remove the upper cover.
- 5) Rotate the mount in RA axis so that the side with the four gears faces up again.
- 6) Unplug the three connectors to the motor board (Fig.2).
- 7) Remove the screws (four for each motor) that lock RA and Dec motors subassembly in place. Remove the RA and Dec motor subassemblies (Fig.3).
- 8) Use the smaller Allen key provided to loosen the two Allen screws on the RA and Dec copper gears. Pull these two gears out with pincers.
- 9) Remove the two screws at the edge of the motor board, and take out the motor board (Fig.4). Keep the screws to mount the new motor board later on.
- 10) Remove the two screws on the control panel to take the panel off. Keep the two screws for mounting the new panel (Fig. 5).

### Installing SynScan components

- 1) Slide the two connectors and wires from the new control panel through the opening as shown in Fig.6. Secure the panel onto the HEQ5 mount with the two original screws; the side with the exposed circuit board should be attached to the HEQ5 mount (Fig.6).



- 2) Insert the polarscope illuminator on the circular opening above the polar scope tube in the center of the HEQ5 mount. (Fig.7)
- 3) Insert the new motor board into the mount; the side with the white connectors should be facing up. Secure the board with the two original plated screws. (Fig 8)
- 4) Place the two new copper gears (they are identical) on the RA and Dec worm shaft; the side with the socket screws should be on the outside. Do not fasten the screws at this point. (Fig. 9)
- 5) Mount the Dec motor assembly (the one with a larger gear) on the left slot and the RA motor assembly on the right slot according as shown in Fig. 10. Slide the wires out between the motor board and the counterweight shaft holder.
- 6) Slide the RA and Dec gears along the worm shafts so that they are at the same level with the gears on the motor assemblies. Secure them on the worm shafts with the two socket screws. Make sure one of the screws is pressed against the flat surface of the worm shaft (Fig.10).
- 7) Slide the RA and Dec motor assemblies so that the gears mesh properly. Secure with three socket screws. Make sure to allow some room between the gears so that they can rotate smoothly. After fastening the screws, turn the gears manually to verify that they can rotate freely.
- 8) Apply some grease (supplied) on the gears.

Fig.7

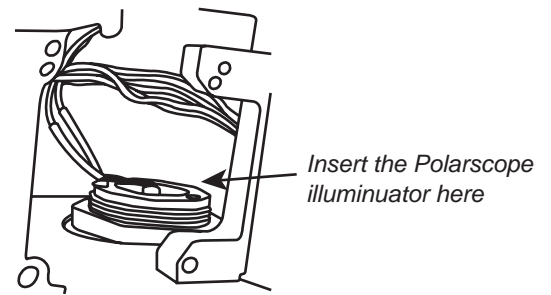


Fig.8

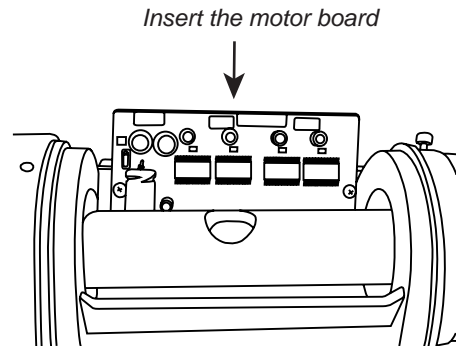
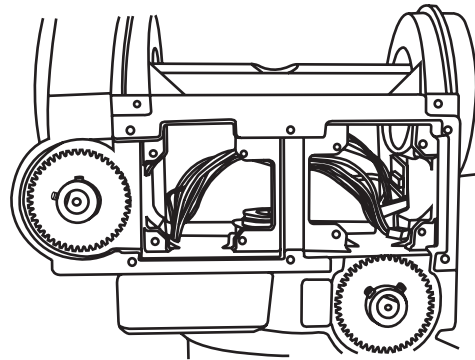


Fig.9



Be careful not to drive the screws too far to prevent damage to the thread.

- 9) Attach all the connectors to the circuit board according to the Fig.11.
- 10) Put the upper cover back on. The arrow mark on the upper cover should point to the Dec setting circle. Use the flat head screws on the side of the side cover.
- 11) Re-mount the side cover. The HEQ5 SynScan upgrade kit installation is finished.

Fig.10

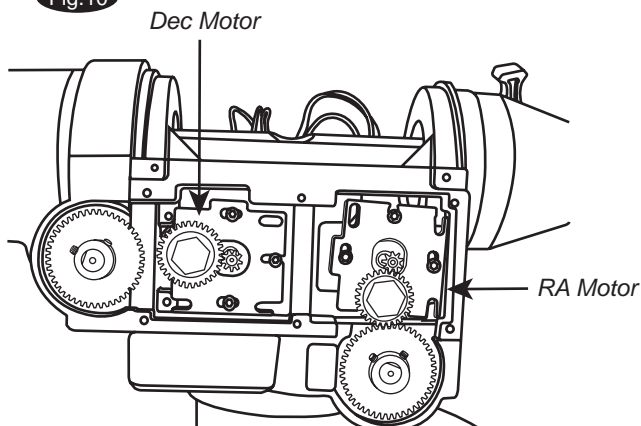


Fig.11

