

## GPS Rollover Bug Solution for iOptron Mount

This instruction is trying to help iOptron customers to solve their GPS rollover bug ([https://en.wikipedia.org/wiki/GPS\\_Week\\_Number\\_Rollover\\_2019](https://en.wikipedia.org/wiki/GPS_Week_Number_Rollover_2019)).

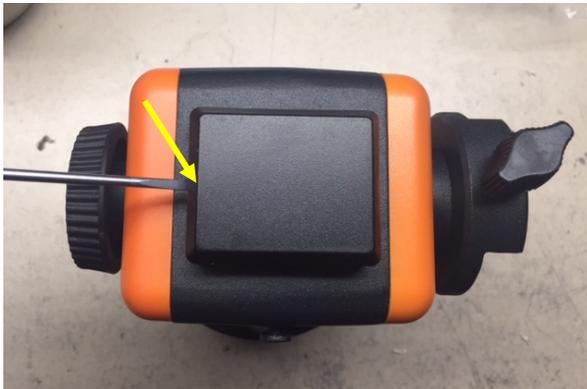
### The solutions are:

1. Cube, CubePro, MiniTower, MiniTower II, MiniTower Pro
  - o Disconnect the GPS module. Enter site and time info manually..
  - o Replace GPS module with discount
2. iEQ45 w/8406 or iEQ45 w/8407 hand controller
  - o Cut the GPS module from the main board. Enter site and time info manually.
  - o Send the main board with GPS to iOptron for replacing with discount
  - o Order a GPS module and replace it yourself (need soldering)
3. Other mounts: contact iOptron.

Replace HC clock battery if it can't keep the time when the mount is turning on. It is a CR1220 3V lithium battery.

### Cube/CubePro GPS Removal/Replacement:

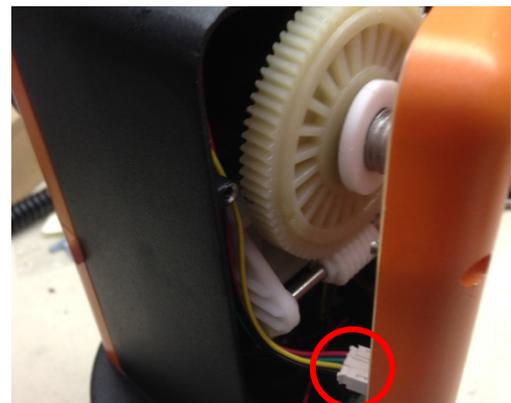
Step 1: Using a small flat tip screw driver to push the side of the GPS cover while pull the cover open. The cover has two small tabs



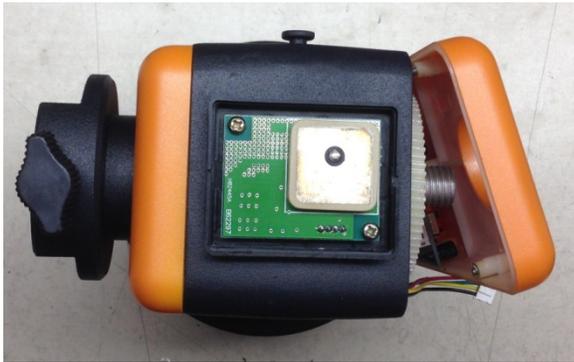
Unscrew the ALT locking knob and remove four screws that hold the front panel in place.



STEP 2: Pull the mount side panel open. Disconnect the GPS cable from the control board.



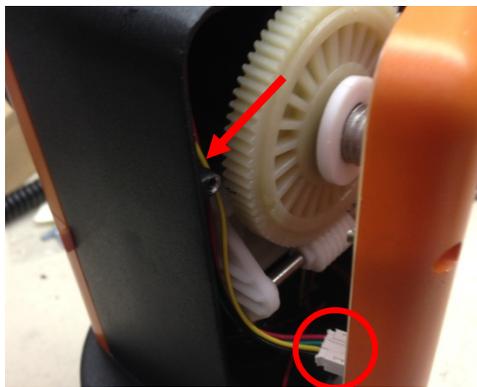
STEP 3. Remove two screws that hold the GPS module in place. Pull the GPS module out of the compartment. Thread the replacement GPS cable through the opening. Secure the GPS module again.



STEP 4. Place the GPS compartment cover on and press it to down to secure it.



STEP 5: Thread the GPS cable behind the ALT worm wheel and plug the end into the GPS socket located on the control board.



STEP 6. Secure the front panel. Plug in the hand controller and turn the mount power on to check the GPS.

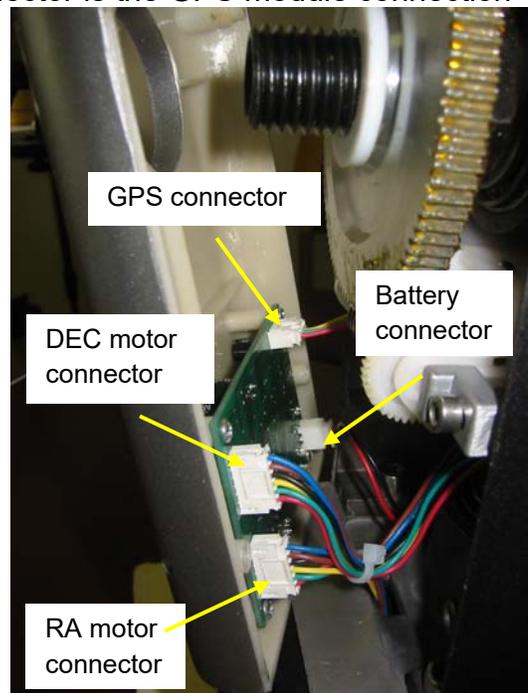
**Note:** if you decide to use the mount without GPS, just open the control panel and disconnect the GPS module cable from the control board.

### MT/MT2/MTP GPS replacement:

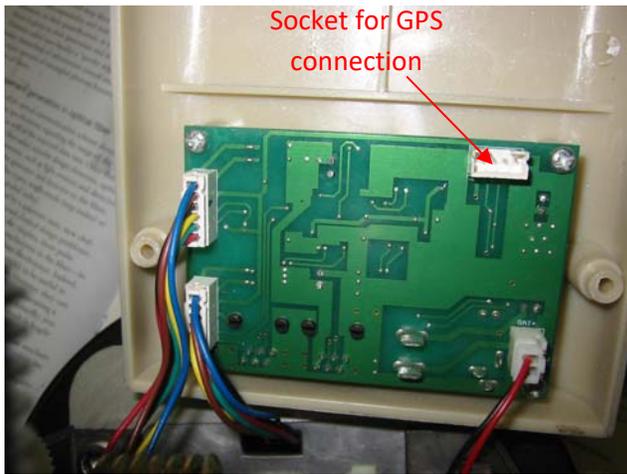
STEP 1: Remove altitude lock (not shown). Unscrew four screws on MiniTower control panel using a 2.5mm hex key.



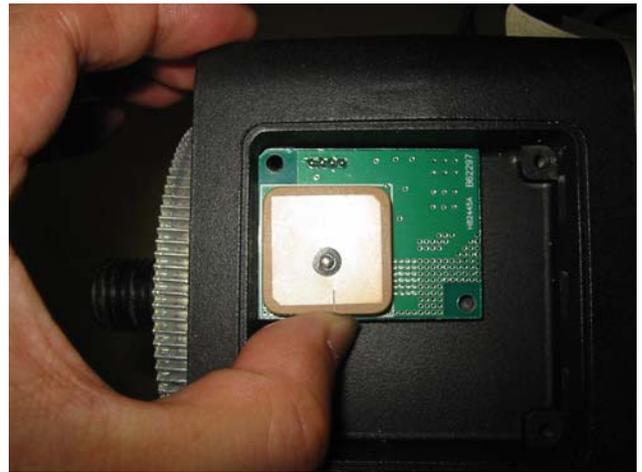
STEP 2: Open the control panel. The top right connector is the GPS module connection



STEP 3: Disconnect the GPS cable from main control board.



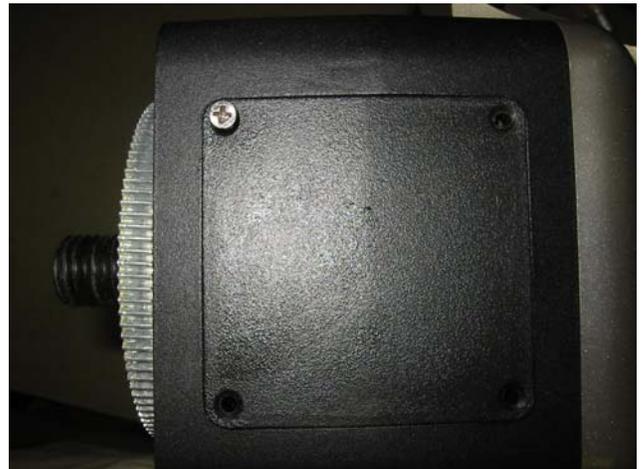
STEP 4: Open the GPS compartment on top of the MiniTower



STEP 7. Put the GPS compartment cover back and secure the screw that goes through the GPS board first. Make sure the central ridge is parallel to the front panel. Secure the remaining three screws (do not over tighten them).



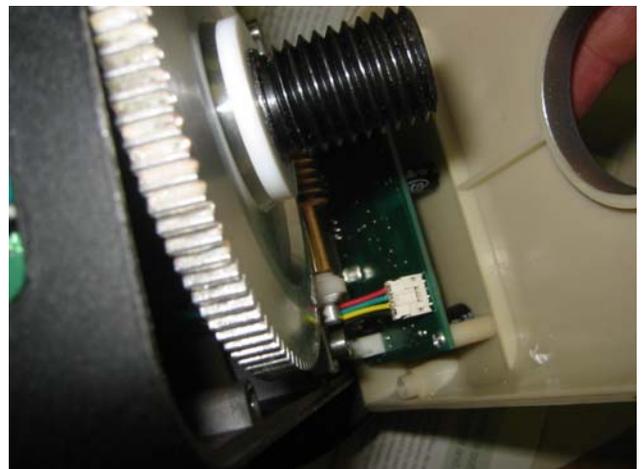
STEP 5. Remove the old GPS module from the mount.



STEP 8. Reconnect the GPS connection to the control board socket. Make sure all other connections are all firmly connected.



STEP 6. Replace a new GPS module. align the hole next to the 4-wire cable socket to the threaded hole inside the GPS compartment.



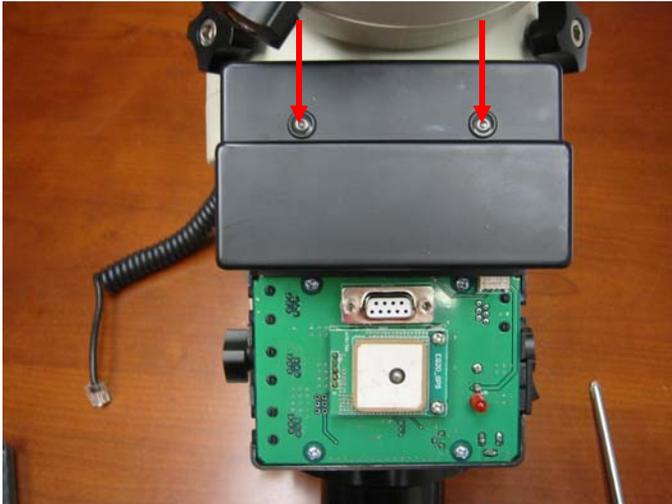
STEP 9. Replace the control panel.

## iEQ45 GPS Replacement

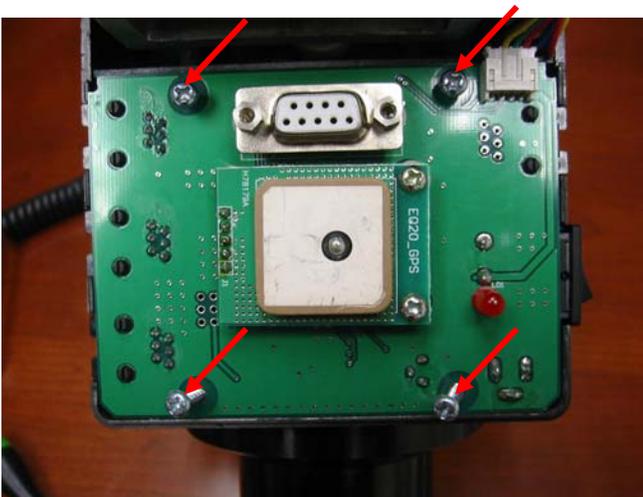
STEP 1. Lift the main board cover.



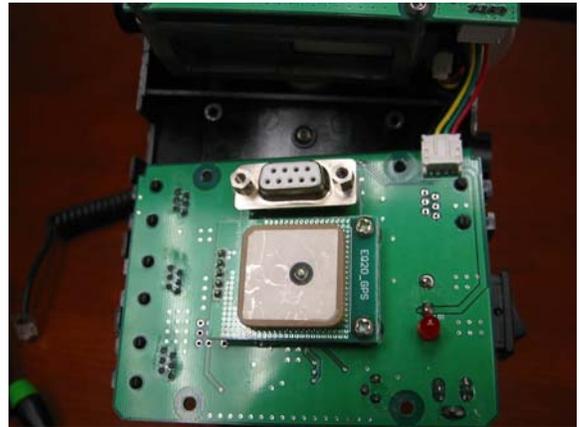
STEP 2. Unscrew two screws on the RA unit cover.



STEP 3. Remove four screws that hold the main control board in main board compartment.

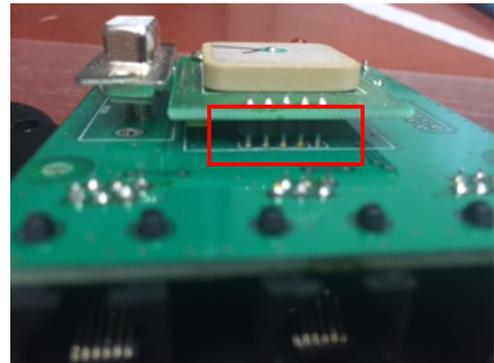


STEP 4. Lift the board and carefully disconnect the cable that is connected to the RA drive board.



You may now contact iOptron to have a RMA# and send the main board to iOptron for GPS replacement.

If you decide to run the mount without GPS, you can use a wire cutter to cut 5 mounting/contacting pins off. Release two GPS screws to remove it.



If you decide to replace the GPS module yourself, you can order from iOptron or your dealer and solder the new GPS module onto the main board.

