



iEQ45 Firmware Release Notes

(October 15, 2011)

IMPORTANT:

Please read this note before performing firmware upgrade.

Don't mix the hand controller firmware with the main board firmware.

Main board firmware upgrading may be hardware/computer dependent. In case a crash occurs during the main board firmware upgrade, please contact iOptron technical support team at support@ioptron.com for recovery instruction.

If your mount has been working up to your expectation, there is no need to do the firmware upgrade.

Hand controller firmware (i8406.iop)

V1.05 Oct. 21, 2010 *Initial release*

V1.10 March 21, 2011, released on 3/25/2011

- Added Meridian Flip function
- Added GOTO speed selection (quiet mode)
- Added Balance Test function

V1.12 August 12, 2011, released on 10/15/2011

- Fixed mount will not stop when centering at low speed
- Fixed bugs for planetarium software control

Main control board firmware

iEQ45_Main_V20110212.bin, released on 3/25/2011

- Added GOTO speed selection (quiet mode)
- Improved mount ST-4 port communication speed (for those who would like to install a TDM encoder)
- Added Balance Test function

iEQ45_Main_V20110830.bin, released on 10/15/2011

- Fixed mount will not stop when centering at low speed
- Fixed bugs for planetarium software control

Note:

For electronic balance test, the R.A. and DEC motor control boards in some units may need to be updated for best performance.

Balance Test

(iEQ45 Instruction Manual V2.1, Section 5.12)

This function provides a visual indication and assistance balancing both the R.A. and DEC axes. Before performing the balance test, make sure the correct latitude is set according to the instructions in Section 2.5, Step 4 of the updated iEQ45 Instruction Manual. Turn the mount on and make sure the telescope is in the Zero Position.

Press the **MENU** button, scroll down to "**Balance Test**", and press **ENTER**. The mount will start to slew and stop at the balance position. A "Testing R.A. Balance" screen will be displayed. Press the **ENTER** key to start the test. After few swings, a test results will be displayed on the hand controller LCD screen:

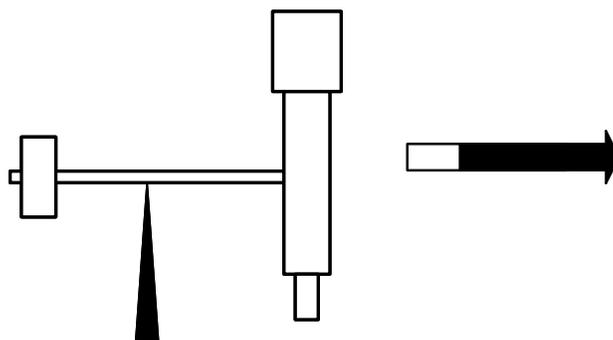


Figure 1. R.A. Balance Test

Follow the arrow indicator to move the CW left or right. The more the arrow is shaded, the more the CW needs to be moved. Press the **ENTER** key to test it again, until the **OK** sign is displayed or $\frac{1}{4}$ or less of the arrow key is shaded.

Press **◀ ▶ ▲ ▼** button on the hand controller to toggle between R.A. and DEC testing. Press **ENTER** to start the DEC balance test. Move the telescope back and forth to balance the OTA around the DEC axis.

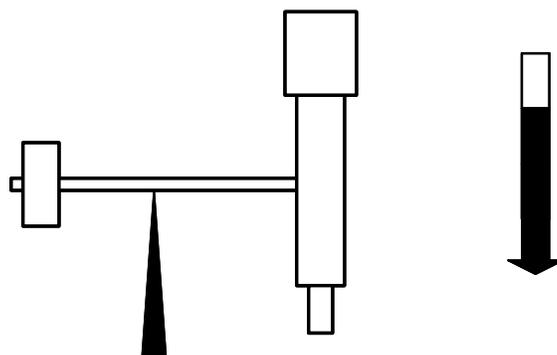


Figure 2. DEC Balance Test

This function is available for 8406 hand controller firmware V1.10 or later. The R.A. and DEC motor control boards in some units may need to be updated for best performance. Contact iOptron for more information.