

Procedure for Updating Motor Controller Firmware for the Orion StarShoot Compact Astro Tracker

1. Requirements

- A PC running Windows OS with a USB port.
- USB Type A to micro-USB cable

2. Preparation

- Download the Motor Controller Firmware Loader (Windows) application from “[Product Manuals & Video](#)” menu for the StarShoot Compact Astro Tracker on www.OrionTelescopes.com. Extract the contents of the compressed file to a folder on your PC, for example, C:\Orion, or to the Desktop.
- Download the latest firmware file (.mcf) for the StarShoot CAT’s motor controller from “[Product Manuals & Video](#)” menu for the StarShoot Compact Astro Tracker on www.OrionTelescopes.com. and save it to the same location.

3. Update Motor Controller

- 1) Connect the Orion StarShoot Compact Astro Tracker (CAT) to your PC with a USB-A to micro-USB cable.
- 2) Turn on the StarShoot CAT.
- 3) Double-click on the MCFirmwareLoader icon to open the Loader.
- 4) Uncheck the box for “Using SynScan Hand Controller’s PC Direct Mode”
- 5) Click the Browse button, then find the Motor Controller Firmware file (.mcf) you want to load. Select it and click Open.
- 6) Now click the Update button. The application will show a percentage number in the window to indicate the updating progress.
- 7) After a few seconds, you should see: “Update complete. Turn off power.” You can now turn off the StarShoot CAT.

NOTE: If you then click the “MC Version” button to confirm that the firmware version you loaded is now installed, you may see the message: “Version information is not available, but MC is ready for updating.” In this case. Close the Firmware Loader window and turn off the StarShoot CAT. Then turn the StarShoot CAT back on and re-open the Firmware Loader. Now when you click on the “MC Version” button, the firmware version that’s installed on the StarShoot CAT should display.

4. Troubleshooting

- If the application prompts that it cannot connect to a motor controller, click the "MC Version" button or the “Update” button again to try connecting one more time.
- If the update fails halfway, close the pop-up window, wait several seconds and press the "Update" button again. If the application prompts that it cannot connect to a motor controller, turn the power off and repeat the above process again until it succeeds.