Celestron NexStar+ Hand Control
TROUBLESHOOTING GUIDE

#93981

This troubleshooting guide can help you resolve problems related to the Celestron NexStar+ Hand Control. Specifically, if you have a “No Response” error, “BOOT LOADER” error, or the hand control reports the improper telescope model, follow the instructions below to see if you can fix the problem on your own.

POSSIBLE PROBLEMS

PROBLEM #1

“No Response” Errors

The hand control displays No Response errors when plugged into the mount, and the mount is powered on.

- If the hand control displays No Response 16 **OR** No Response 17 (only one of these errors and not both), the problem is with the mount, not the hand control. Contact Celestron Technical Support at celestron.com/pages/technical-support for assistance.

- If the hand control displays **BOTH** No Response 16 and No Response 17, the problem could be with either the mount or the hand control.
    - If your mount has an AUX port(s), try plugging the hand control into the AUX port instead of the HC (hand control) port. If the No Response error goes away, there is a problem with your mount’s HC port. You can still use the mount by plugging the hand control into one of the AUX ports.
    - There could be a problem with your power source providing too low voltage or current. Try using a different power source to see if the problem goes away.
    - Updating the hand control firmware with Celestron Firmware Manager may resolve the problem. We’ll explain how in the next section.
- If using the Celestron Focus Motor, and the hand control displays No Response 18, then there is an issue with the focus motor not responding or not being detected by the hand control. If this occurs, try using CFM to update the hand control firmware to see if this resolves the issue. We’ll explain how to do this in the next section.
    - If updating the hand control firmware does not resolve the No Response 18 error, then there may be a problem with the focus motor’s cable or the focus motor itself. In this case, please contact Celestron Technical Support for further assistance.



PROBLEM #2:

Incorrect telescope model shown

The hand control does not display the No Response errors described above, but it does display an incorrect telescope model when plugged into the mount.

- **For EQ mounts,** the hand control displays "NexStar Ready" instead of the model of your EQ mount. If this happens, you will need to change the firmware using Celestron Firmware Manager. We'll explain how in the next section.

- **For AZ mounts,** the hand control displays "Advanced GT" instead of the model of your AZ mount. If this happens, you will need to change the firmware using Celestron Firmware Manager. We'll explain how in the next section.



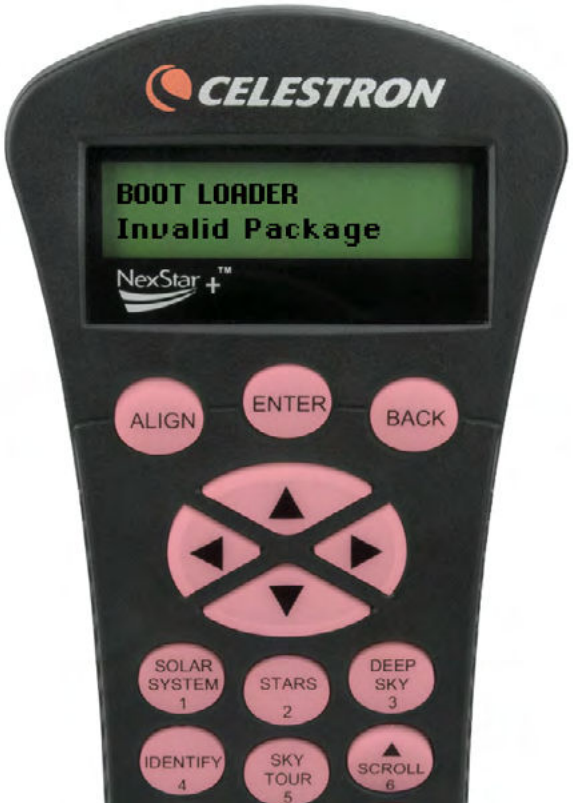
PROBLEM #3:

BOOT LOADER Errors

Whenever the hand control is in the firmware boot loading mode, "BOOT LOADER" will appear on the the top line of the LCD. The line below it will provide additional information, such as "User keypad request," "CFM request," "Pass Through Engine," or "Invalid Package."

If the hand control is trapped in boot loader mode and displaying any other message than, "Invalid Package," you can resolve the issue by power cycling. To do this, power off the mount and disconnect any cables connecting the hand control to a PC.

In the case where BOOT LOADER appears on the first line of the LCD and "Invalid Package" appears on the second line of the LCD, you will need to reprogram the hand control with the Celestron Firmware Manager. We'll explain how to do this in the next section.

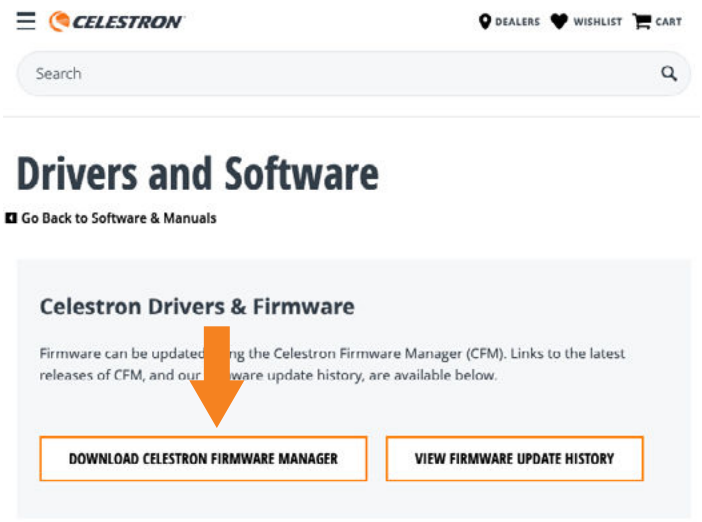


Using Celestron Firmware Manager (CFM)

TO UPDATE THE NEXSTAR+ HAND CONTROL'S FIRMWARE

To update your hand control's firmware, you'll need to use Celestron Firmware Manager (CFM).

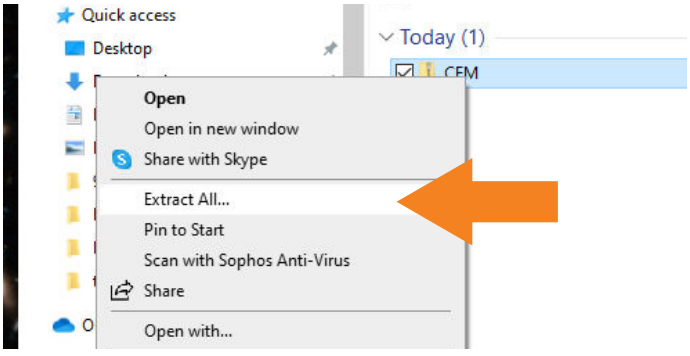
Visit www.celestron.com/pages/drivers-and-software to download CFM.



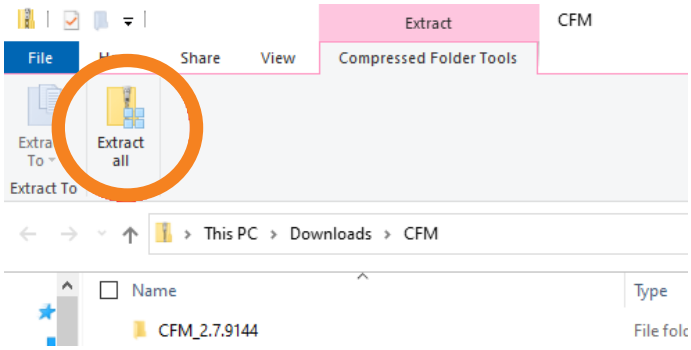
System Requirements:

- Java Runtime Engine (JRE) version 6 (or higher)
- Windows XP or higher
- Mac OS X (10.5) or higher
- Other operating systems should work but are untested

CFM is delivered in a compressed archive (.ZIP) file. CFM will not run from inside a compressed archive. You must extract (unzip) the archive to create an uncompressed folder before running CFM. For convenience, you can create a folder on your Desktop called "CFM" and then extract the files to that folder location. In Windows, right-click on the file and choose Extract. If you double click on the archive, you are not unpacking the archive, just looking inside it.



Alternatively, you can use the "Extract all" from the Compressed Folder Tools menu at the top of the screen.



Next, plug your hand control into your Celestron mount as you usually would and power on the mount. The hand control may report errors as described above. Connect your hand control to your computer.

- For most hand controls, there is a USB port on the bottom of the hand control for computer connection. You will need a USB cable (Type-A to Mini-B, USB 2.0 or greater).

- For older hand controls, there is a 4-pin modular jack on the bottom of the hand control for computer connection. This requires the Celestron #93920 NexStar RS-232 cable, which connects to the hand control and a serial port on your computer. If your computer does not have a serial port, you will need to purchase a USB-to-serial (RS-232) converter, available from many electronics retailers.

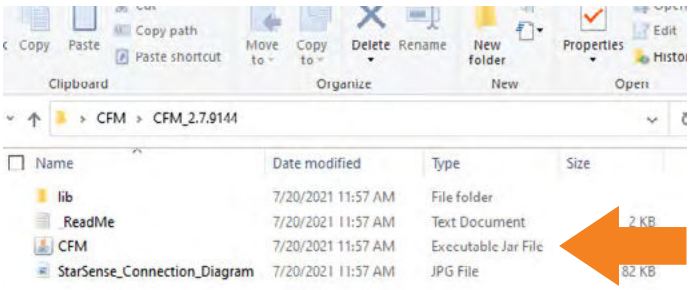
Once connected, the computer should recognize the hand control. If it does not, check your cable connections and try again.

If the hand control is still not recognized, you will need to manually install the required Prolific USB-Serial driver on your computer. In most cases, this driver will be automatically installed, but if using a Mac or an older PC operating system, manual installation may be required. To manually install the driver, click on the appropriate link below, download the .zip archive, extract the files from the .zip, then follow the directions found in the files. Once the driver is installed, the computer should recognize the hand control.

Windows & Mac OS:

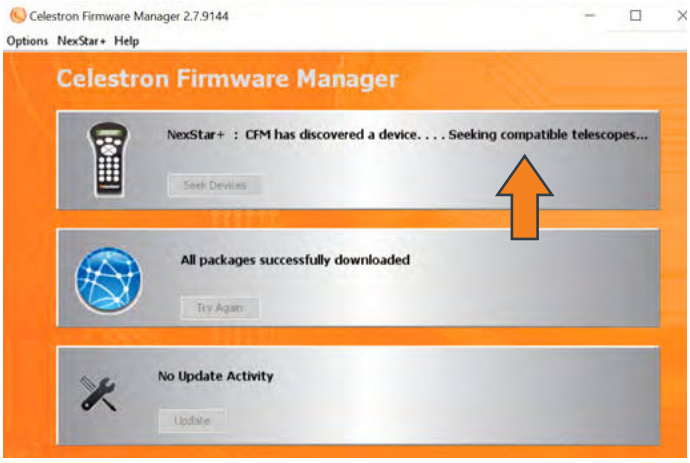
- Go to https://www.prolific.com.tw/US/index.aspx
- For Account and Password, enter GUEST
- Then go to https://www.prolific.com.tw/US/ShowProduct.aspx?pcid=41&showlevel=0041-0041
- The driver downloads are at the bottom of the webpage

Open the folder that contains the extracted CFM files and double click the file called CFM.jar (Windows hides the .jar file extension by default).



If the "Can't Find Main Class" error appears, you are using an outdated version of Java, or you are running from inside the compressed archive. If you don't see anything when you start CFM, or you see the splash screen for just a moment before it quits, you have an outdated version of Java.

CFM will open and automatically seek any devices connected to the computer. Wait a few seconds, and CFM should discover the hand control.



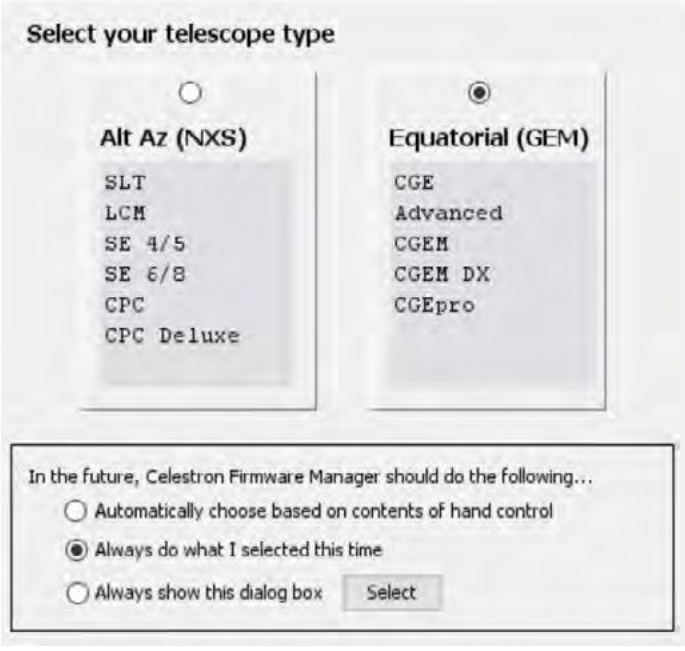


If CFM does not discover the hand control automatically, check your cable connections and press "Seek Devices" in CFM. When CFM finds the hand control, the hand control will display "BOOT LOADER Serial Pass Through OFF."



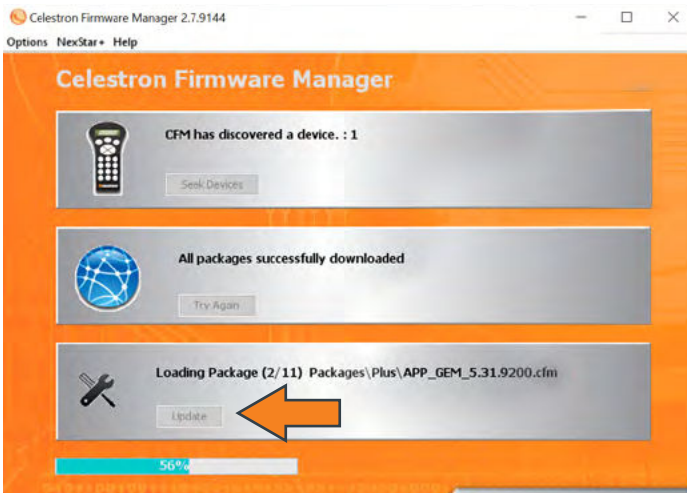
If the incorrect telescope model is displayed on the hand control (Problem #2 above), you can fix this from the NexStar+ menu in the top left of CFM. If the hand control displays No Response 16/17 errors (Problem #1 above), you can skip this step.

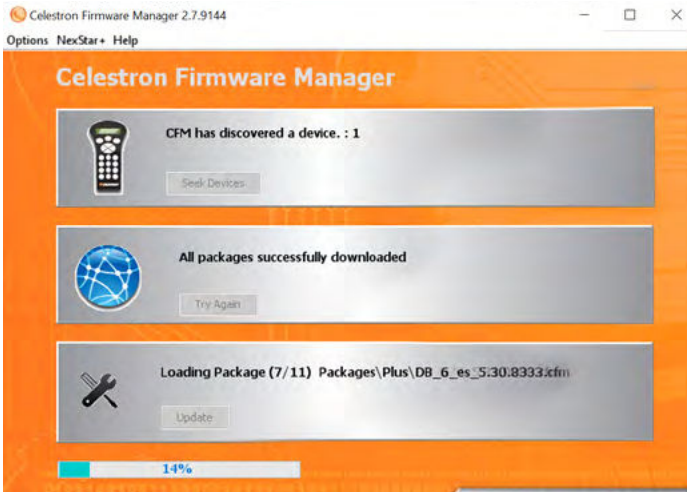
Select "Mount Types" from the menu, and the "Select your telescope type" window appears.



Find your mount and click on the corresponding "Alt Az (NXS)" box or "Equatorial (GEM)" box. Then, click on the "Always do what I selected this time" selection at the bottom of this window. Next, click the Select box at the bottom of the window to confirm your selections, and the window will close.

Now, click the “Update” button to begin updating your hand control.



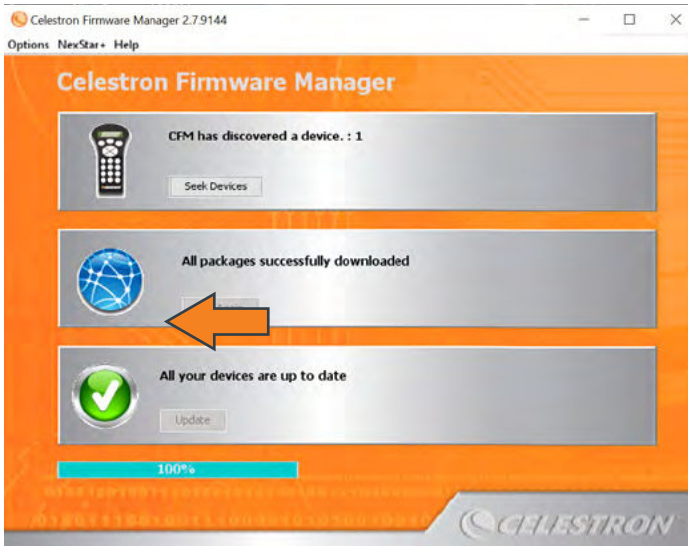


WARNING: Do not disconnect the hand control or power off the computer or mount while the update is in progress!

The hand control will display “BOOT LOADER Serial CFM Request” during the update.



When completed, CFM will report “All your devices are up to date,” and a green circle with a checkmark will appear.



Your hand control is now updated.

NOTE: If there were problems during the firmware update, you would need to go through the process again. To do this, first, disconnect the hand control from the computer. Power cycle the mount and reconnect the hand control to the computer. Then click “Seek Devices” in CFM.

Once your hand control’s firmware has been updated, you can disconnect the computer cable. Ensure the hand control is still connected to the mount, and power cycle the mount to see if the No Response 16/17 error or incorrect model error goes away. If it does, have fun using your telescope! If it does not, please contact Celestron Technical Support at celestron.com/pages/technical-support for further assistance.

CELESTRON

MODEL # 93981

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2835 Columbia Street, Torrance, CA 90503 USA

This product is designed and intended for use by those 14 years of age and older.

Made in China

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