

# How to Connect Stellarium to a Celestron GO TO Mount for Telescope Computer Control

- 1) You need the Serial Cable that comes with the hand controller. You also need a Serial to USB converter if your computer does not have a serial port. If it has a serial port you do not need the converter cable. The Serial Cable can be purchased from Celestron if you do not have one. The Serial to USB converter Cable can be purchased at any electronics store or online. Photos of these cables are shown in Figures 1 and 2 below.



Figure 1: Celestron Serial Cable



Figure 2: Serial to USB Converter

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- 2) Connect the Celestron Serial Cable to the USB to Serial converter as shown in Figure 3. Then plug the USB end of the Converter to your computer. If necessary, follow the instructions for installing the Converter "Driver" software that came with you Serial to Converter Cable.



Figure 3

- 3) Plug the Serial Cable into the bottom of the Hand Controller as shown in Figure 4.



Figure 4

- 4) Now comes the setup for Stellarium.

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- a) Start Stellarium then click on the configuration icon that looks like a wrench on the left side of the Stellarium Window. When you do this you should get a window that looks like Figure 5.

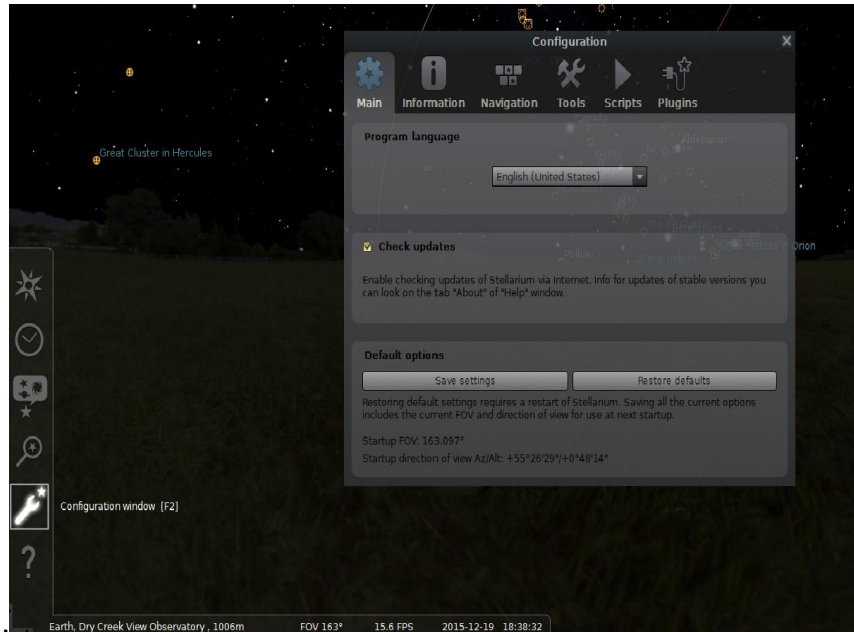


Figure 5

- b) Next, click on the “Plugins” tab at the top right of the “Configuration Window” as shown in Figure 6.

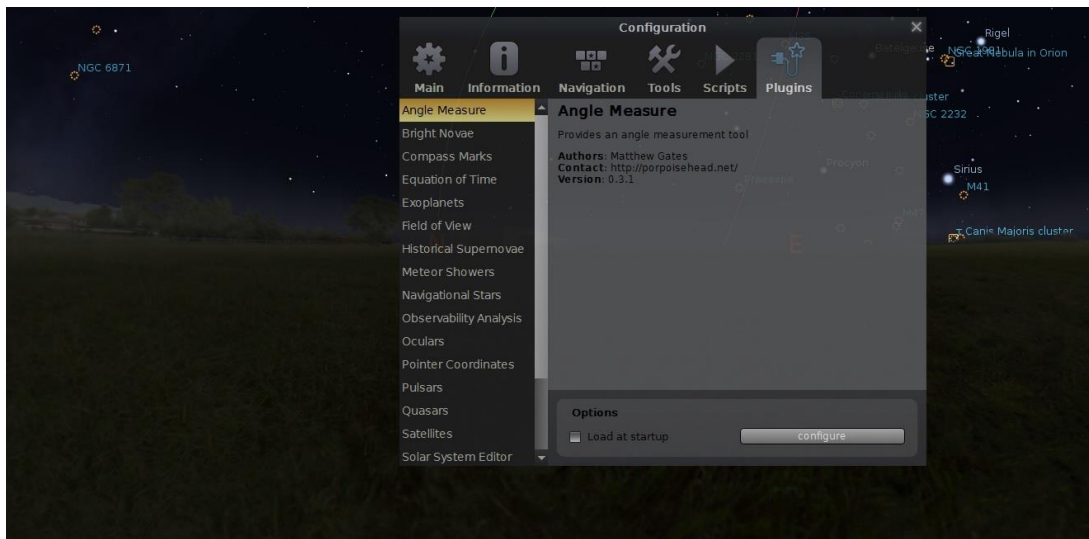


Figure 6

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- c) Scroll to the bottom of the left side of the Plugins screen and select “Telescope Control” as shown in Figure 7. Make sure the “Load at startup” check box is checked then select “Configure”
- d) Figure 7 shows what scopes are controlled when you click on the “Telescopes” tab. As you can see in the figure, My CGE 1400 is “Stopped” and is listed as number 1. You can install many different scopes here, but I only have one showing. To configure a new scope, press the “Add” tab at the bottom center of the screen.

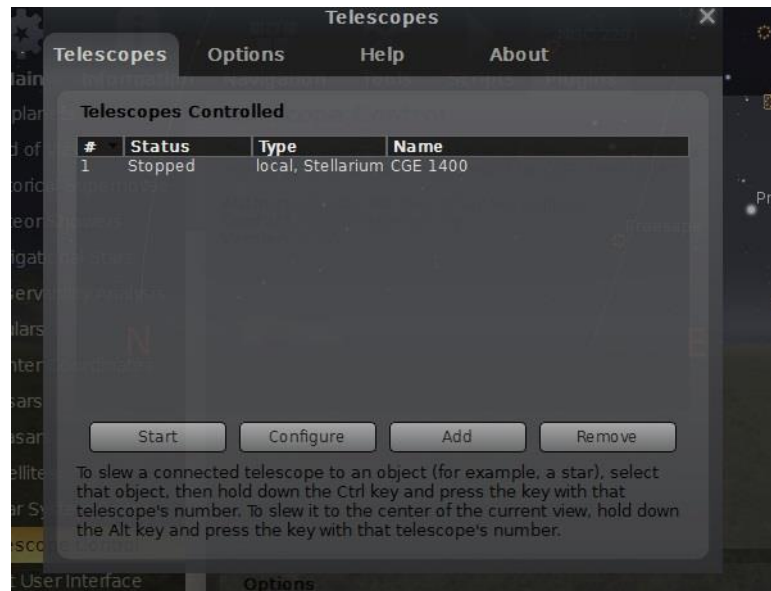


Figure 7

- e) Figures 8, 9, 10 and 11 show the settings of adding a new scope. In Figure 9 make sure the “Radio Button” is selected under the “Telescope controlled by” heading: “Stellarium, directly through a serial port”. Under the “Telescope Properties” you can highlight under the “Name” and name your scope how you want it. By “Connection delay” select 0.50s and select the J2000 (Default) button. Also check the box that says “Start/Connect at Startup”
- f) For Figure 9, I scrolled down to “Device Settings”. Here is where some trial and error comes in. COM1 is default selected. This can be changed by highlighting “COM1” and changing it to “COM2, COM3... etc. This selection needs to match where your Serial to USB adaptor is assigned by your computer. On your Computers “Control Panel” select “Device Manager” and see where your computer assigned your “USB to Serial Com Port”. As you can see in Figure 10, mine was assigned to COM3 therefore I changed my COM port to COM 3 in Stellarium. Make sure under “Device model” “Celestron NexStar (compatible)” is selected.
- g) Scrolling further down in Figure 11 you see “Connection Settings”. The localhost should have a TCP port of 9999 as a setting. I left all items under “User interface settings” blank. Then hit the “OK” tab.

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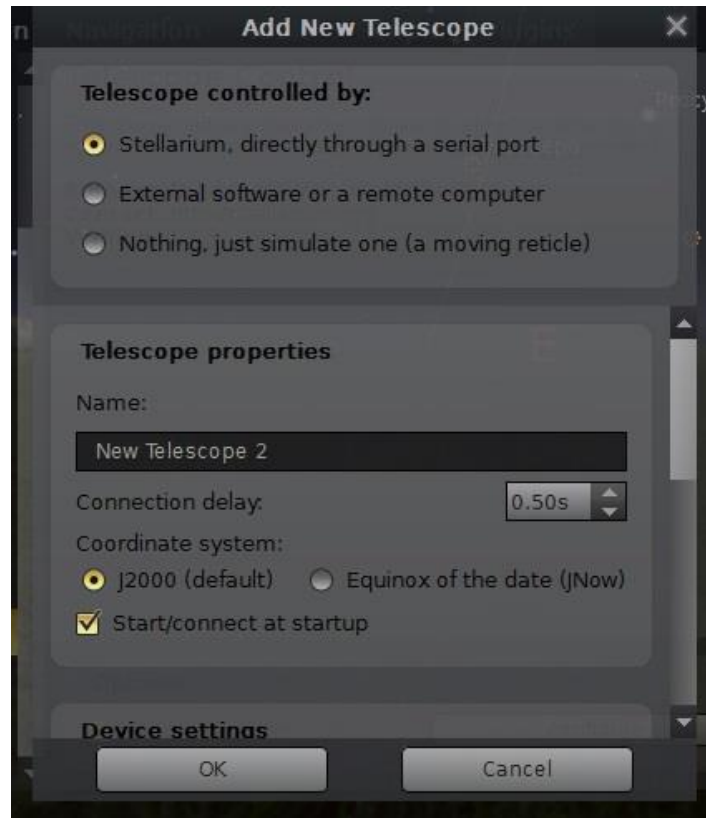


Figure 8

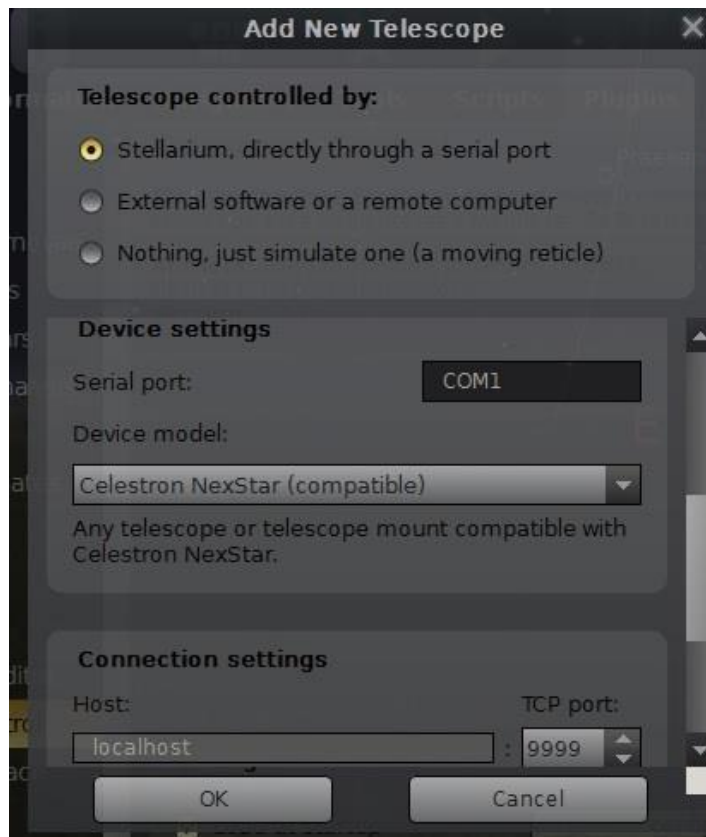


Figure 9

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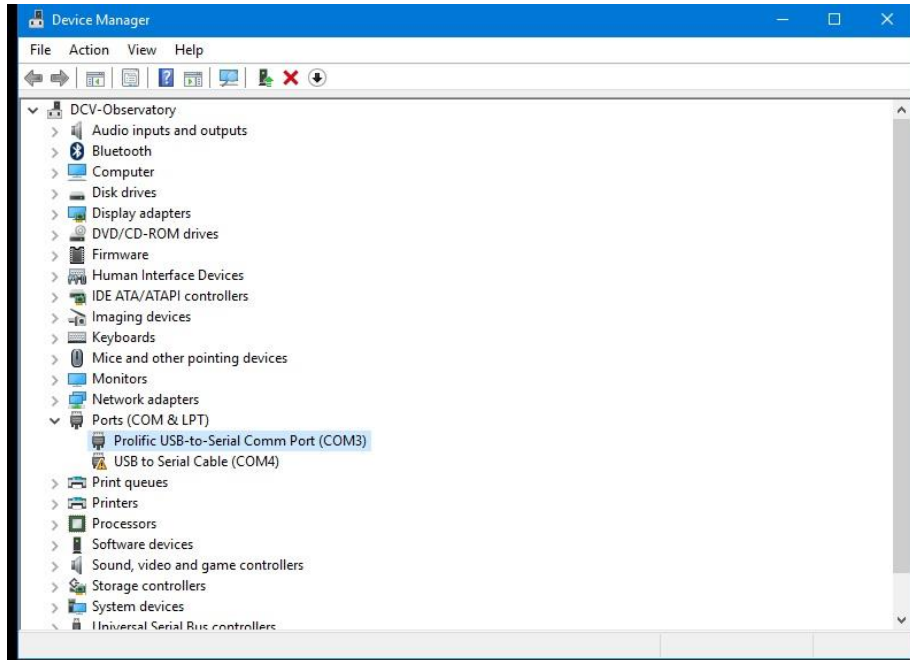


Figure 10

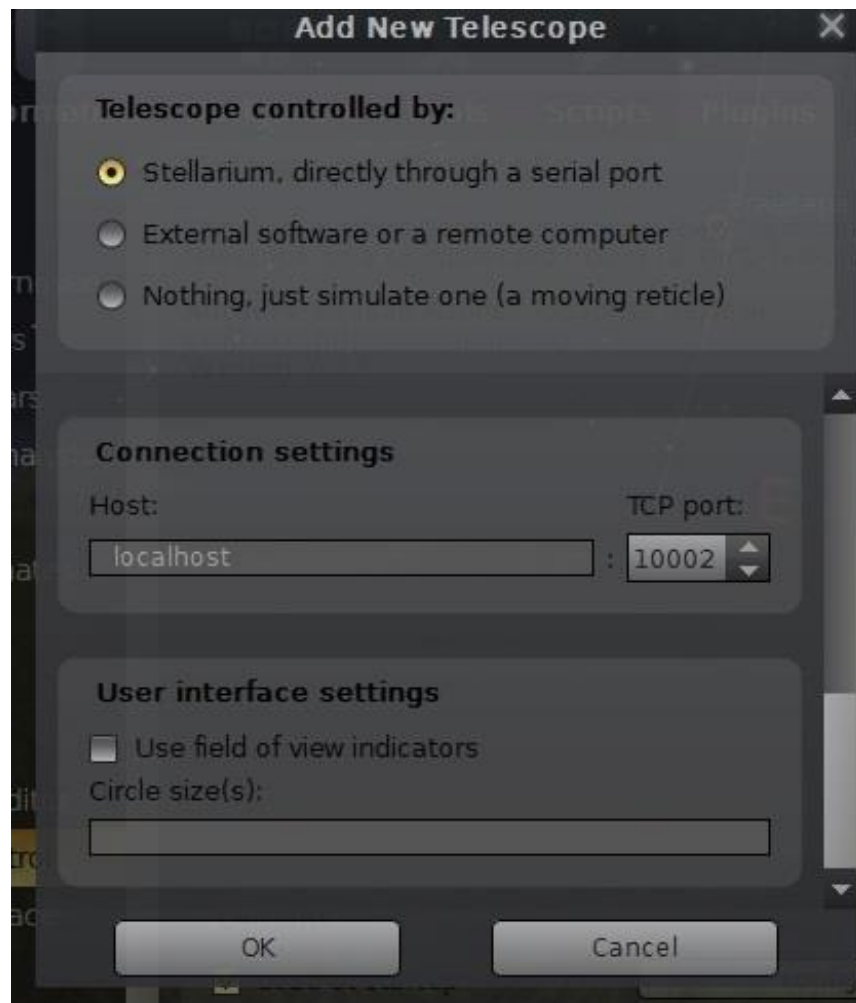


Figure 11

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5) Now comes the Startup of Stellarium.

Turn on your mount and make sure that it is aligned. If it is not aligned, Stellarium will not know where to point the scope. When my mount is ready it says "CGE Ready" as shown in Figure 12.

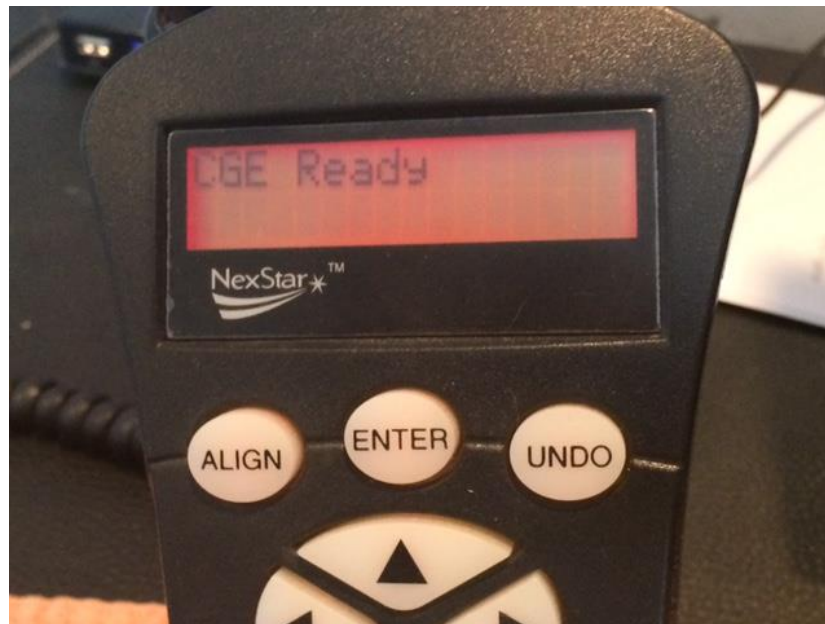


Figure 12

6) Start Stellarium. Follow the steps to get to Figure 7 above. Your scope should be listed. Click on your scope and highlight it, then press Start. You should now have a marker on your Stellarium Screen that shows where your scope is pointing as shown in Figure 13. To control your scope, click on the object you want your scope to go to, then press "Control 1". This assumes you only have 1 scope connected.

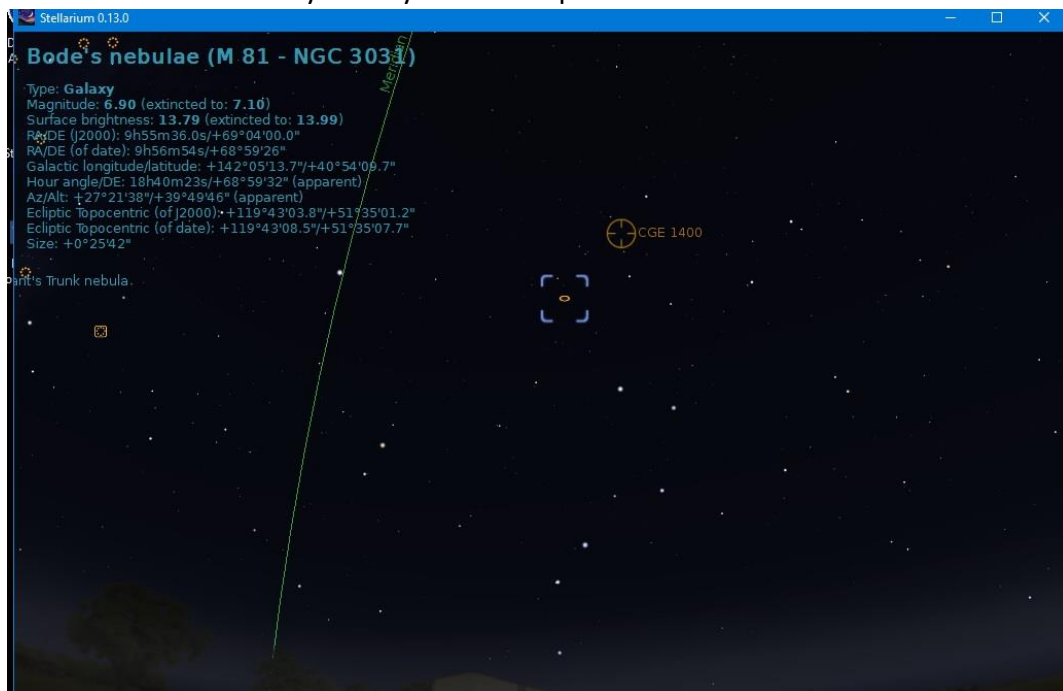


Figure 13