

Setting up Skywatcher EQ6-R Pro with EQMOD

WARNING:

Do not install any cables into your mount until you have all drivers and software installed on your computer as this can cause damage to your mount

Connecting with USB-Serial Cable or USB B Cable:

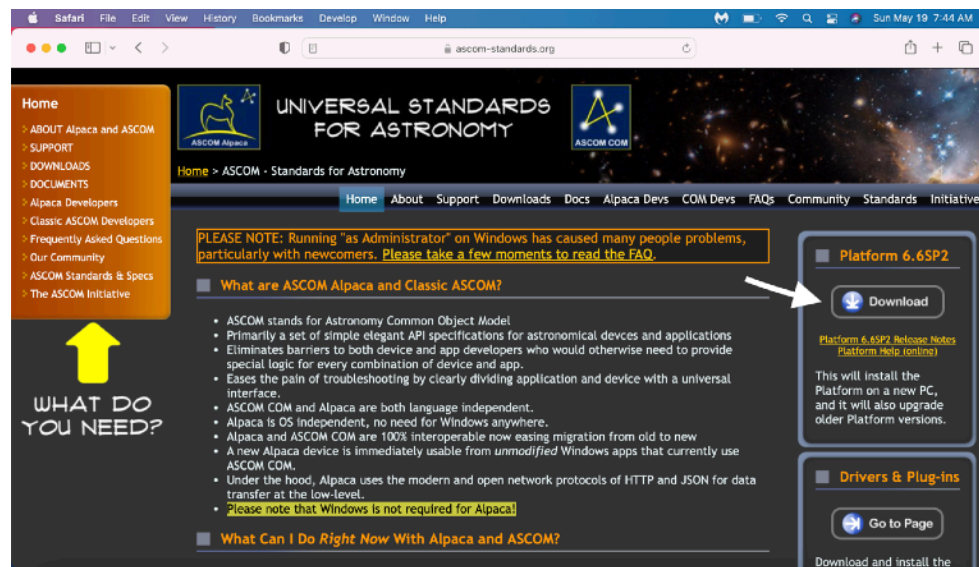


Figure 1

Step 1

Install ASCOM:

If you do not have ASCOM installed already, make sure to install ASCOM.

- Navigate to <https://ascom-standards.org/> and install the latest version of ASCOM by clicking the download button as shown in figure 1.

- Note the version may not reflect what is shown in figure 1 as there may be updated versions since this document has been published.

- Make sure to follow all prompts in order to download ASCOM onto your computer.

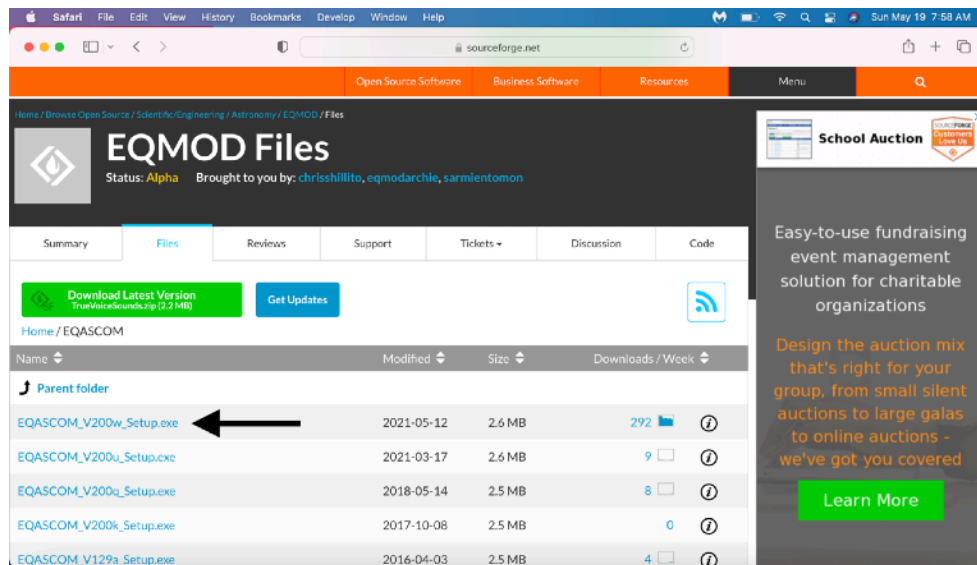


Figure 2

Step 2

Install EQASCOM:

- Navigate to <https://sourceforge.net/projects/eq-mod/files/EQASCOM/> and install EQASCOM by clicking the link shown in figure 2
- Note the version may not reflect what is shown in figure 2 as there may be updated versions since this document has been published.
- Make sure to follow all prompts in order to download ASCOM onto your computer.

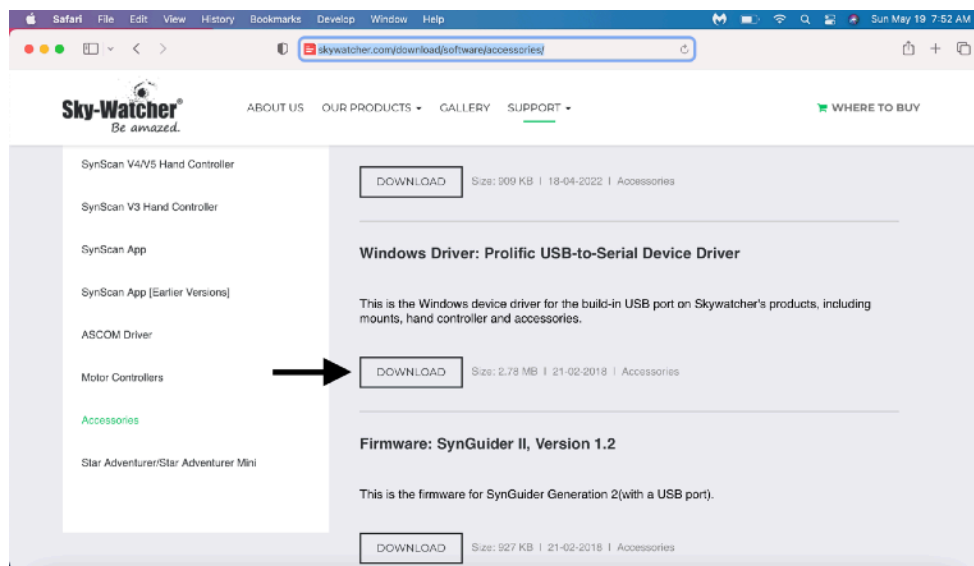


Figure 3

Step 3

Install Skywatcher Prolific Driver:

- Navigate to <http://skywatcher.com/download/software/accessories/> and install the Skywatcher “Windows Driver: Prolific USB-to-Serial Driver” as shown in figure 3.

- Note the version may not reflect what is shown in figure 2 as there may be updated versions since this document has been published.

- Make sure to follow all prompts in order to download ASCOM onto your computer.

If using USB B cable, skip to Step 5. If using USB-Serial, continue to Step 4

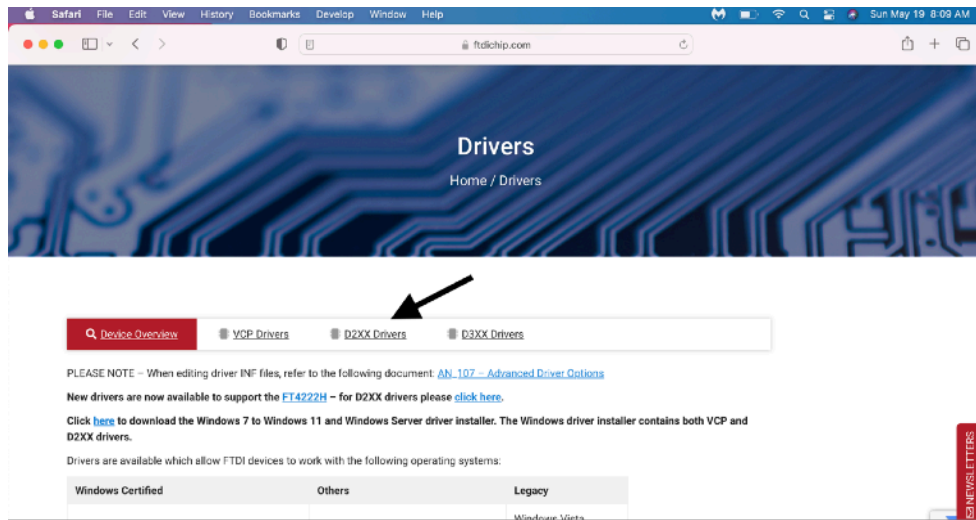


Figure 4

Step 4

Install FTDI Chipped cable driver:

Important Note: Always use the recommended driver and instructions from your cable's manufacturer. This step will be demonstrated using the driver and instructions from the cable's manufacturer that I am currently using.

- For the cable that I am using and this example, navigate to <https://ftdichip.com/drivers/> (or whichever site your USB to Serial cable manufacture recommends) and click on D2XX Drivers as shown in Figure 4.

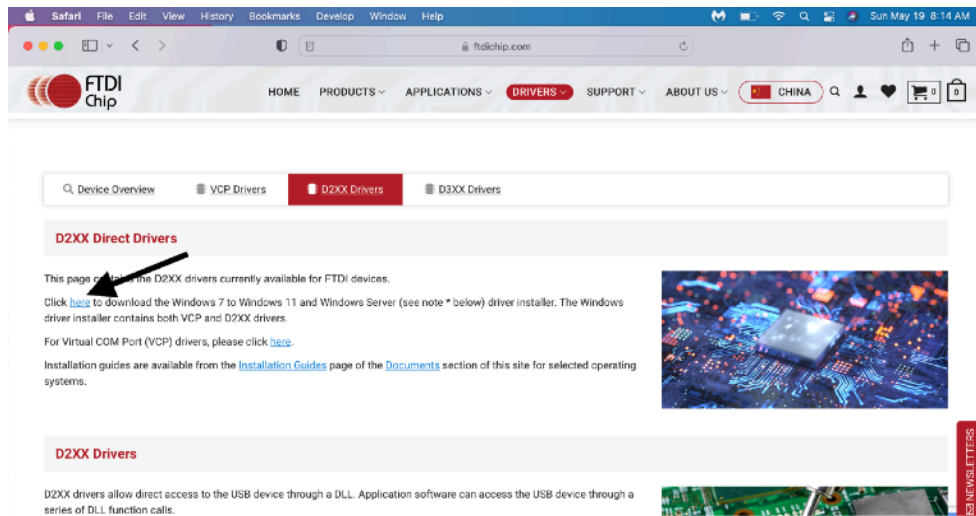


Figure 5

Step 4 continued

- After clicking D2XX Driver link, click “here” as shown in figure 5 to download the FTDI chipped cable driver (Again, make sure to follow your cable manufacturer recommendations with this. This step should only be followed literally if you are using the same cable as me).
- Note the version may not reflect what is shown in figure 2 as there may be updated versions since this document has been published.
- Make sure to follow all prompts in order to download ASCOM onto your computer.

If interested, here are the cables I use:

RJ45 Control Cable Serial to USB

https://www.amazon.com/Washinglee-Control-Skywatcher-Equatorial-Telescope/dp/B07YB17H9B/ref=sr_1_3?

USB A to B

<https://www.highpointscientific.com/apertura-braided-usb-2-0-type-a-to-type-b-cable-2m-6-5ft-for-eq6-r-pro>

Please note I have no control over supplier inventory and these URLs may become inactive at some point. Please report any URL issues to me so I can update the guide.

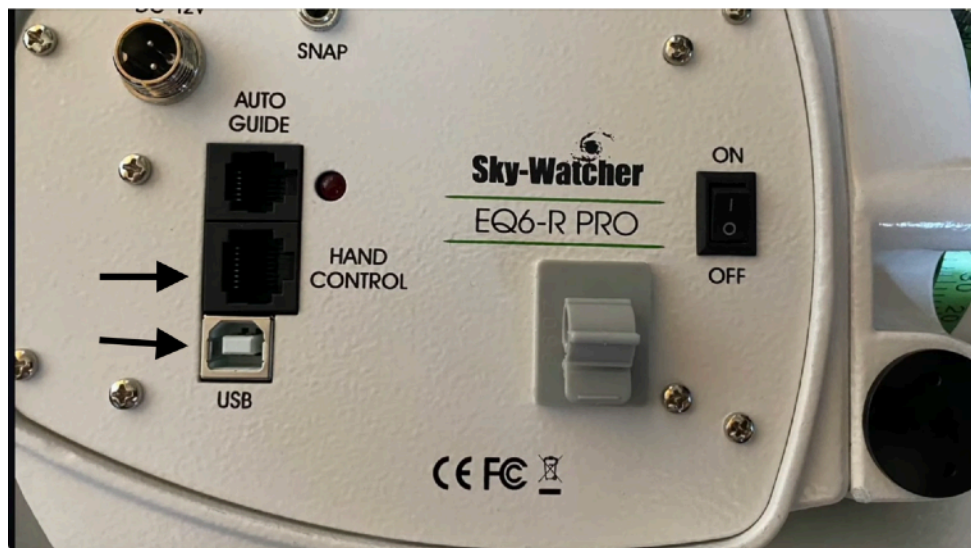


Figure 6

Step 5

Cable up your mount:

- Plug your power supply into your mount using the DC 12v socket
- If you are using a USB to Serial Cable, install the Serial end of the cable into the Hand Control port of the mount as shown in figure 6.
- If you are using a USB B cable, install the USB B end of the cable into the USB port of the mount as shown in figure 6.
- Never force any cables into place as this can damage your mount.
- Your mount should have come with a grey clip as shown in figure 6 under the Skywatcher EQ6-R Pro logo. Take this time to install that clip. It is held on with double sided tape and is designed to hook your cables onto to assist with guiding them during slewing and holding them in place when plugged in.
- Power on your mount.

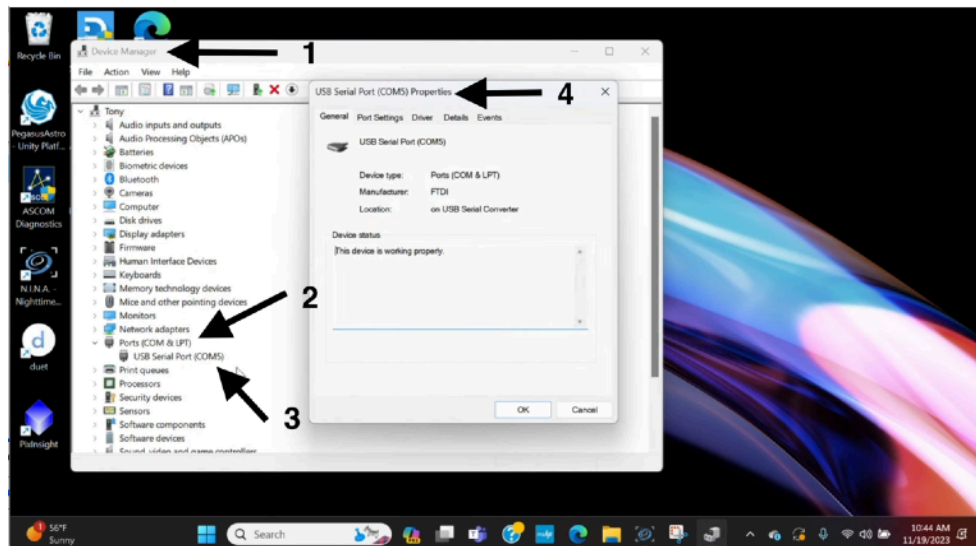


Figure 7

Step 6

Set up the Com Port:

- Navigate to your Windows “Device Manager” as shown by arrow 1 in figure 7.
- Click on “Ports (COM & LPT)” as shown by arrow 2 in figure 7.
- Double click on USB Serial Port as shown by arrow 3 in figure 7 in order to open the window as shown by arrow 4 in figure 7
- Notate the COM port number as shown by arrow 3 in figure 7 as you will need this in a later step. Keep in mind this port number may switch with each use. This is normal behavior.

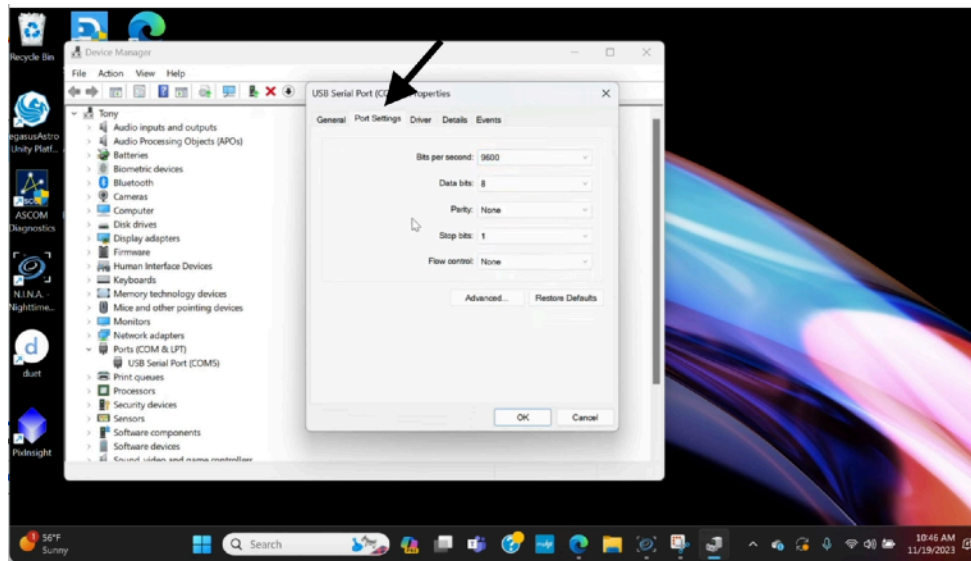


Figure 8

Step 6 Continued:

- Click on “Port Settings” as shown in Figure 8 and set the following parameters:
 - Bits Per Second to 9600 if using USB to Serial or 115200 if using USB B
 - Data Bits 8
 - Parity None
 - Stop Bits 1
 - Flow Control None

Always make it a habit to check your port setting before starting an imaging session. Make sure your EQ6-R Pro mount is the first item plugged into your computer and open Device manager and the port settings box prior to anything else as the COM port can change and cause connection issues as well as your Bits per Second setting can change and this needs to match EQMOD for proper operation

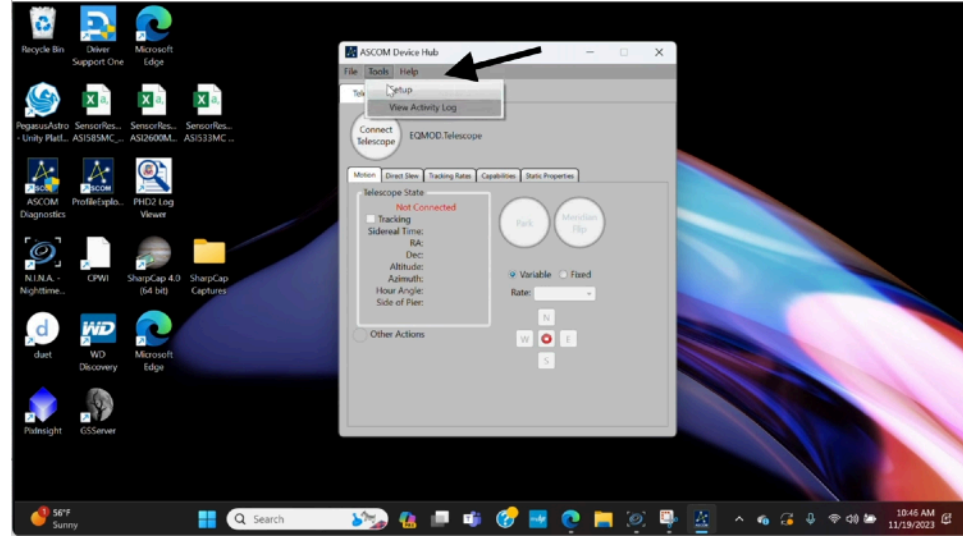


Figure 9

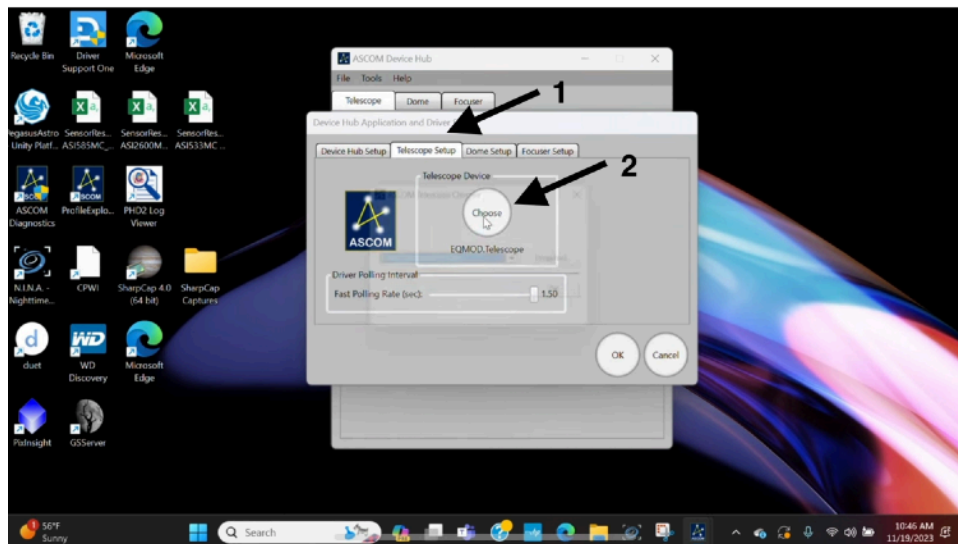


Figure 10

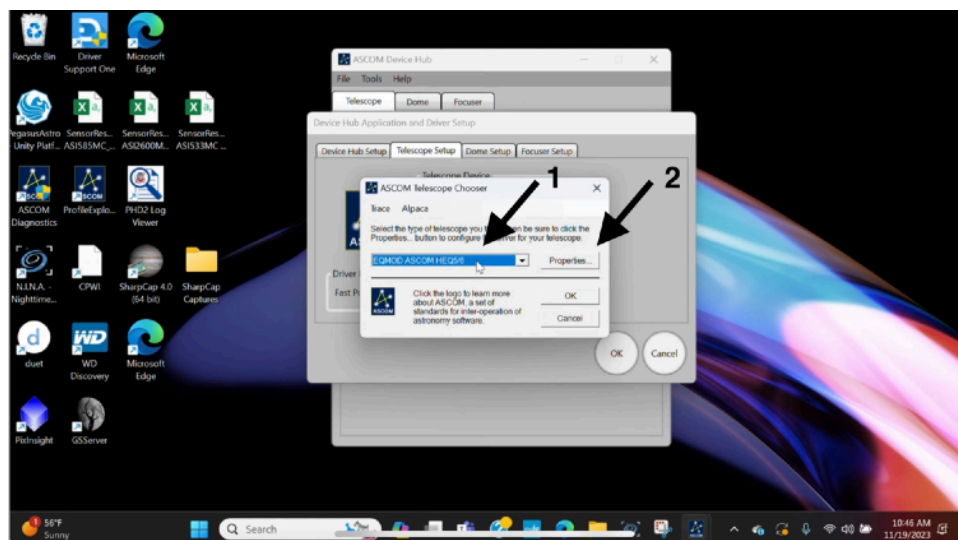


Figure 11

Step 7

Set up EQMOD

- Navigate to ASCOM Device Hub using your Windows search feature in the tool bar.
- Click on Tools and then click Set up as shown in figure 9
- Click on Choose under the Telescope Set up tab as shown in figure 10
- Make sure EQMOD ASCOM HEQ5/6 is selected in the drop down menu as shown by arrow 1 in figure 11
- Click on Properties as shown by arrow 2 in figure 11

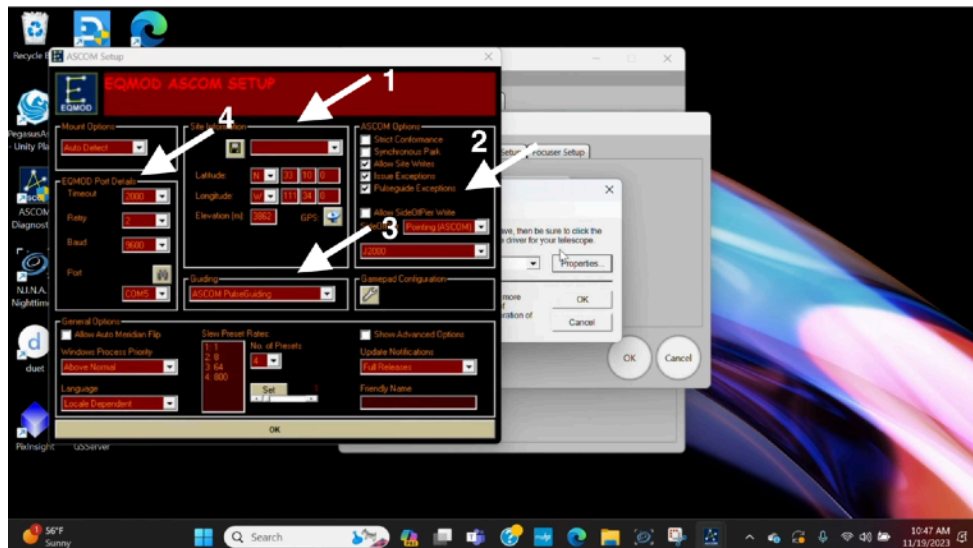


Figure 12

- Make sure to set up your site location as shown by arrow 1 in figure 12.
- This information is important to be accurate as this will affect your mount's go to accuracy as well possible negative affects to plate solving and other performance areas.
- Set "Side of Pier" to Pointing (ASCOM) and select J2000 from the drop down just below "Side of Pier" as shown by arrow 2 in figure 12
- Set "Guiding" to ASCOM Pulse Guiding as shown by arrow 3 i figure 12

Step 7 continued:

- Set the following EQMOD Port Details as shown by arrow 4 in figure 12
 - Timeout 2000
 - Retry 2
 - BAUD 9600 if using USB to Serial or 115200 if using USB B
 - This needs to match what you have your port setting set to in Device Manager
 - Port (Make sure this is set to whichever port your mount has connected to).
 - This is also why it is very important to always check which port your mount has connected to as this can change between sessions.
- Once everything is set, press ok as shown in figures 12, 11 and 10.
 - Make sure to only press ok until you reach the original ASCOM Device Hub screen as shown in figure 9

Step 8

Connect your mount to EQMOD

- Click on Connect Telescope as shown in figure 13 to bring up the EQMOD control panel as shown by arrow 1 in figure 14
- Clicking on the icon as shown by arrow 2 in figure 14 will bring you to the main EQMOD setup menu as shown in figure 15. This is where you can make changes to settings if needed.

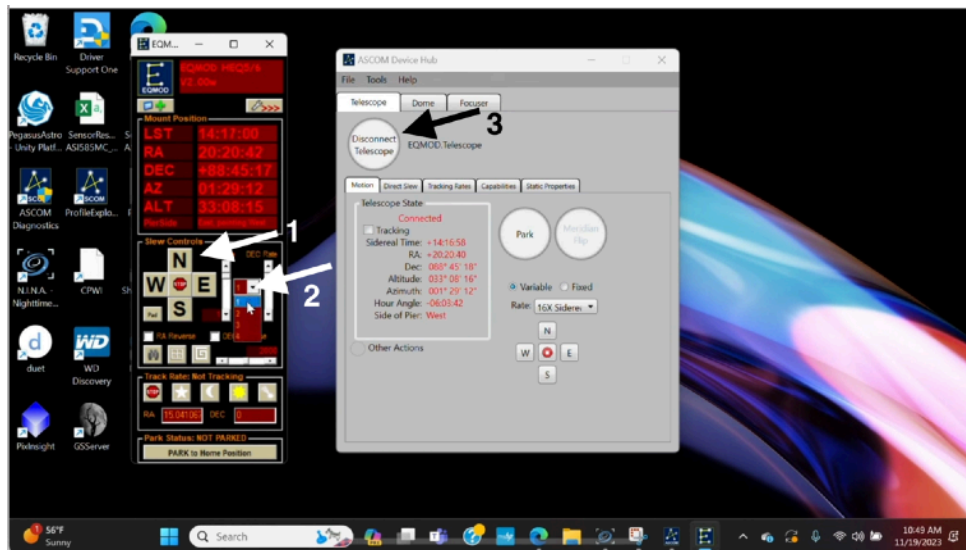


Figure 16

- You can use the directional commands as shown by arrow 1 in figure 16 to manually slew the telescope.
- If you do not hear your mount moving when using the directional commands, make sure to check the slew speed as shown by arrow 2 in figure 16. If the setting is too low, the mount will be moving too slow to hear it. Increasing the number in the dropdown menu shown by arrow 2 in figure 16 will increase the mount's slew rate thus making it slew faster so and be audible.
- Always make sure to click on "Disconnect Telescope" as shown by arrow 3 in figure 16 when you are done using the telescope. NEVER just exit out of EQMOD without clicking on "Disconnect Telescope".