

iEQ45/8406 Mount Computer Control via ASCOM

Oct. 2010, Rev. Apr. 2012, Jan. 2016

An iEQ45 mount with an 8406 hand controller can be controlled by a personal computer (PC) via the RS232 port located on the main control unit. In general, the following hardware and software are needed to perform the job:

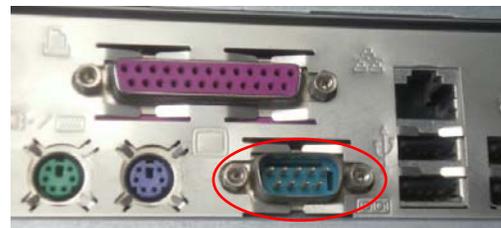
- ASCOM Platform 6 or later version. Download and install it from <http://www.ascom-standards.org>.
- iOptron Telescope ASCOM Drive. Download and install it from <http://www.ioptron.com>, under Support directory.
- Buy/download planetarium software and install it.
- RS232 cable (included)
- USB to RS232 converter and driver. If your computer does not equip a RS232 port (a 9-pin D-shape connector) except the USB port, you need to buy a USB to RS232 converter, from a computer hardware store or on-line.

With an iOptron **StarFi Wi-Fi adapter (#8412)**, an iEQ45/8406 mount can also be controlled by a computer/tablet/SmartPhone wirelessly.

1. Find the serial port (COM port) number from your computer:

In order to enable planetarium software to control the mount, the communication between the PC and the mount has to be established.

The first step is to find if your computer has a serial port (or RS232 port). The following photos show a native (built-in) serial port on a laptop (left) and a desk top (right). It is a 9-pin D-shaped (DB9) connector. The assigned port number usually is COM1.



If your computer only has USB ports, like most late PC or laptops do, you need a USB to COM converter to convert one USB port to a serial port (RS232 port). Here are two examples of USB2COM converters.

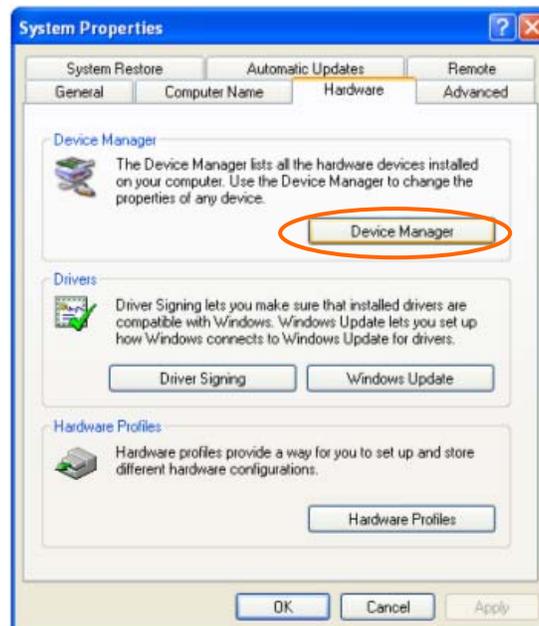


When plug the converter into one of the computer USB port, the computer may ask you to install the VCP (virtual COM port) driver or it may install the VCP driver automatically. Please follow the user manual to finish the installation.

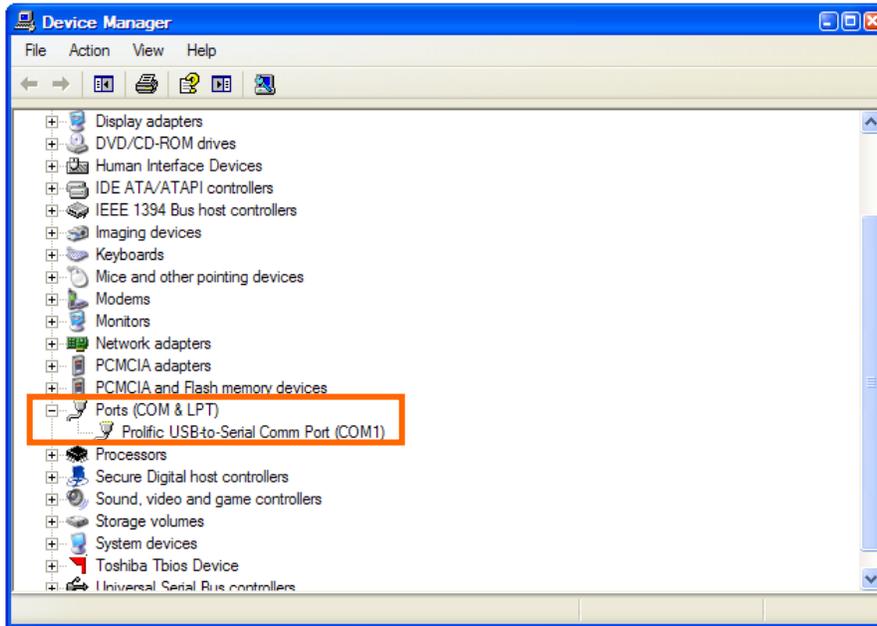
After install the VCP driver that comes with the device, click on **Start** located on the left bottom corner of your compute screen. Move the mouse to **My Computer** and right click on it. Move the mouse down and click on **Properties** (other Windows operation system may from here):



Click on **Hardware** and select **Device Manager**.



Double click on **Ports (COM & LPT)**, find out the COM number and write it down (in the following figure, the USB2COM converter uses a Prolific chipset and the assigned port number is COM1)



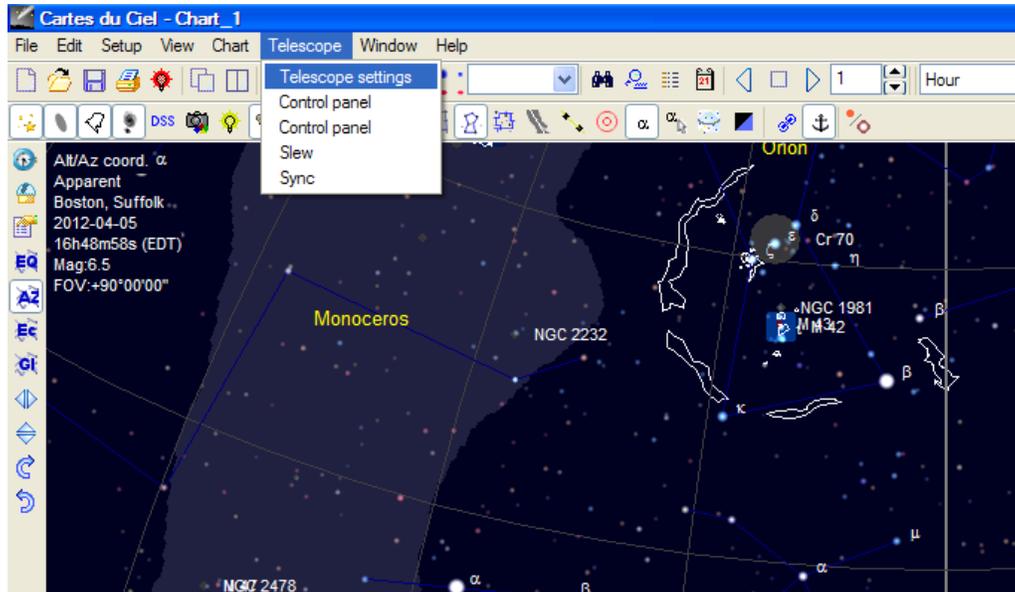
Use the white, long RS232 cable that comes with the mount to connect the mount to the PC. Plug one end of the cable into the RS232 port on the mount main board (left) and the other end of the cable into the serial port of a PC/Laptop or USB to RS232 converter (right).



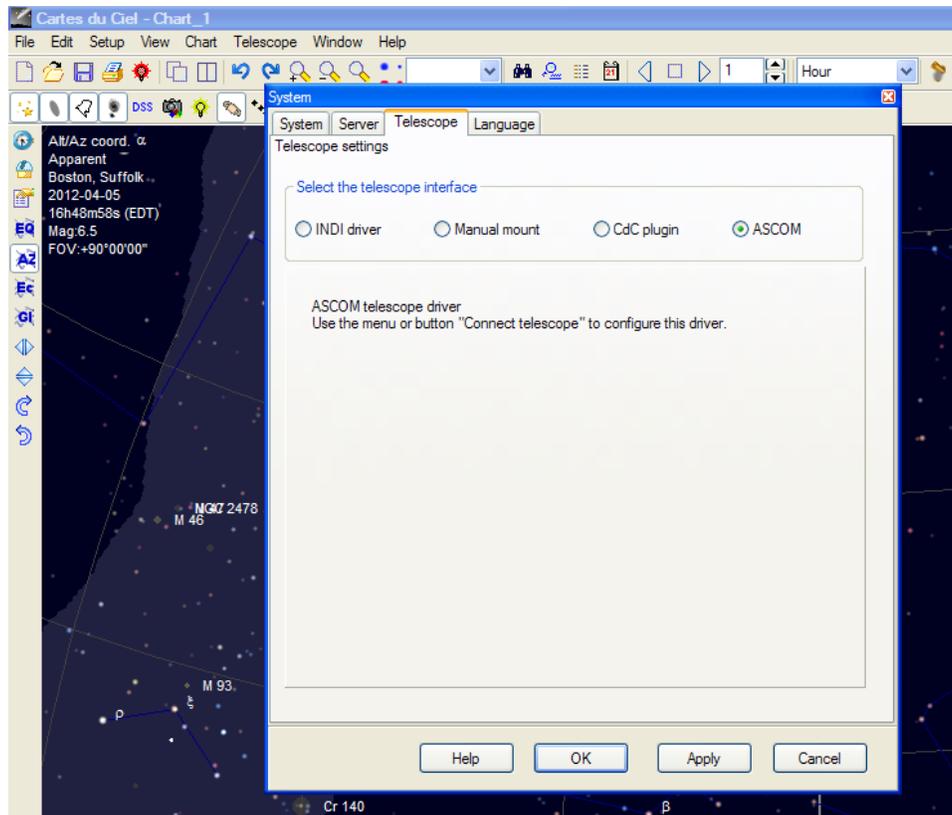
2. Establish the ASCOM connection between the mount and the planetarium software:

As a general instruction, a freeware planetarium software, *Cartes du Ciel*, is used as an example. Please refer to your own software manual for detailed operation.

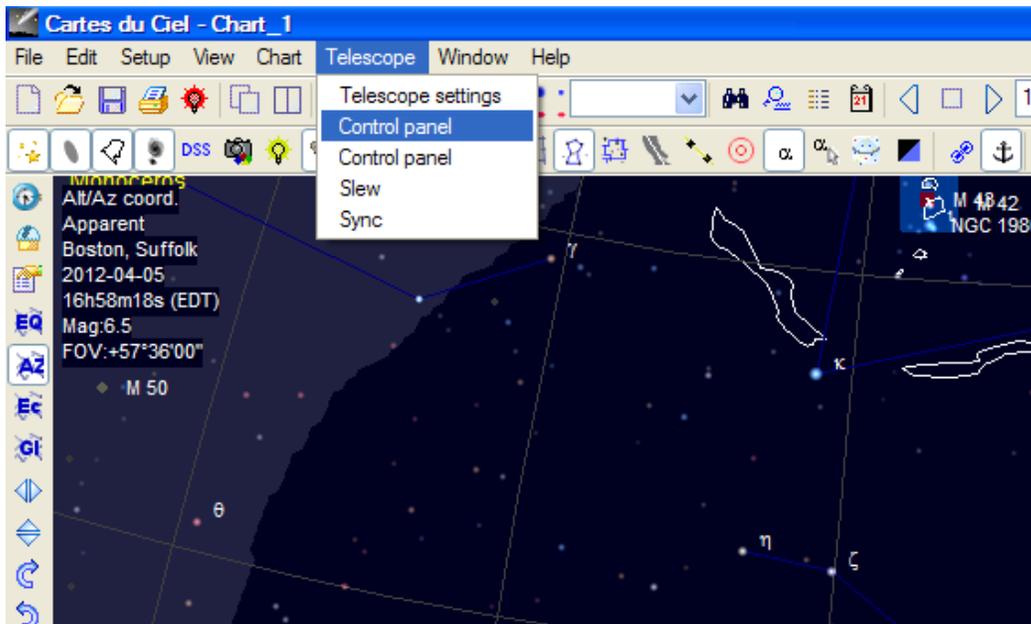
(1) Open *Cartes du Ciel*. Select **Telescope settings** in **Telescope** pull-down manual.



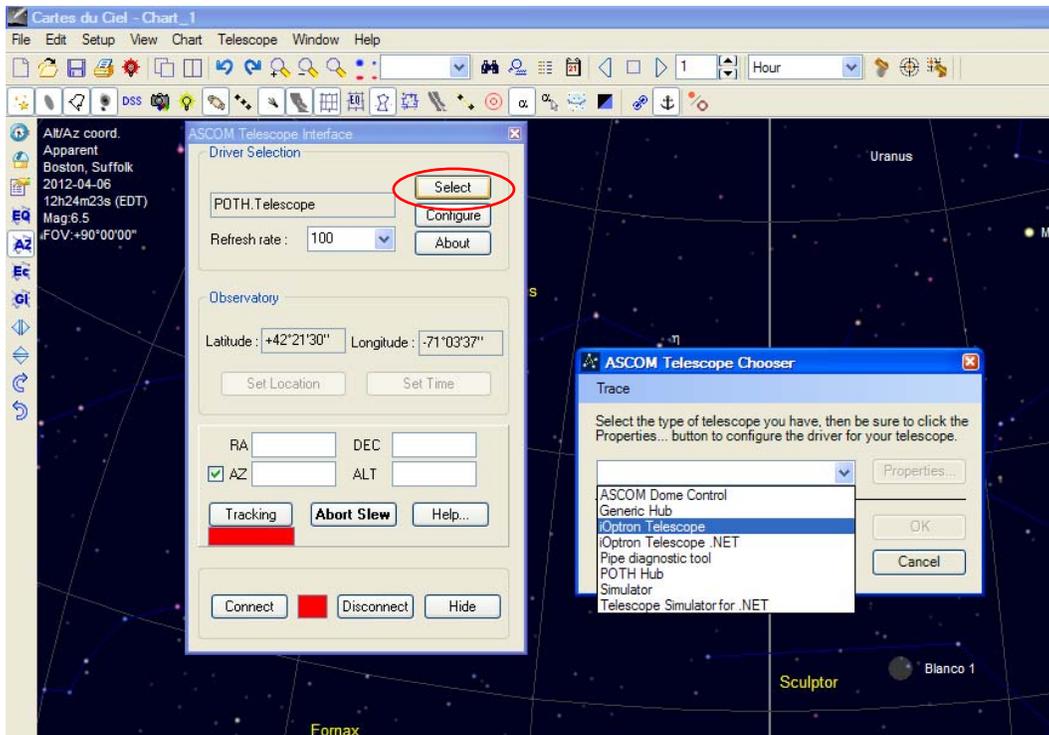
(2) Select **ASCOM** as the telescope interface and click **OK**.



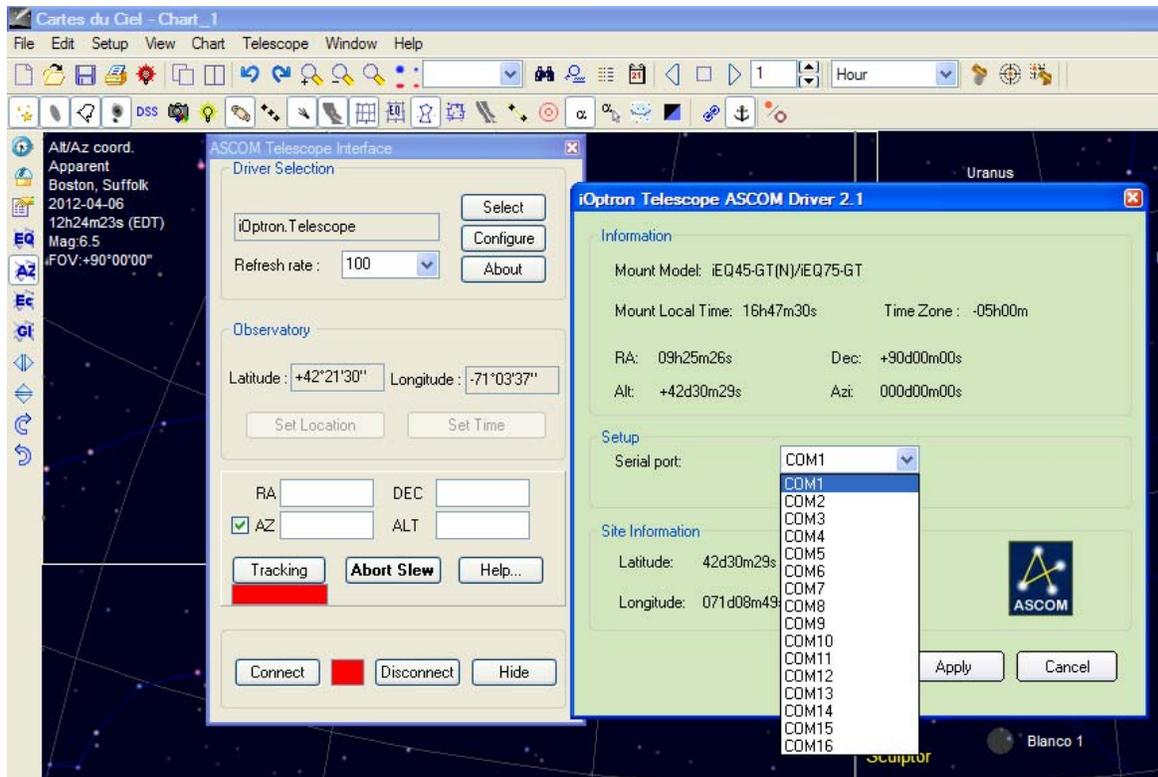
(3) Select **Control panel** in **Telescope** pull-down manual.



(4) Click on **Select** button, an **ASCOM Telescope Chooser** window will pop-up. Click on the pull-down menu to select **iOptron Telescope**, then click **OK**.



- (5) Click on **Configure**. In **iOptron Telescope ASCOM Driver 2.1** pop-up window, select COM1 port from the **Serial Port** pull-down menu. Then click **OK**.



- (6) Click **Connect** button. The **RED** status square will change to **GREEN**. Now you are ready to GOTO and tracking.

