

# Perkin telescope instruction manual

## Precautions:

1. Check weather before using the “Perkin” telescope.
2. Do not open dome if it is raining, snowing, or any precipitation or strong wind.
3. Double check before leaving if the dome is completely closed and all devices were disconnected from the computer.
4. Mind the cables
5. No food or alcohol in the dome.
6. NO WHINING, read the instructions carefully and think. Be patient with the application.

## Overview:

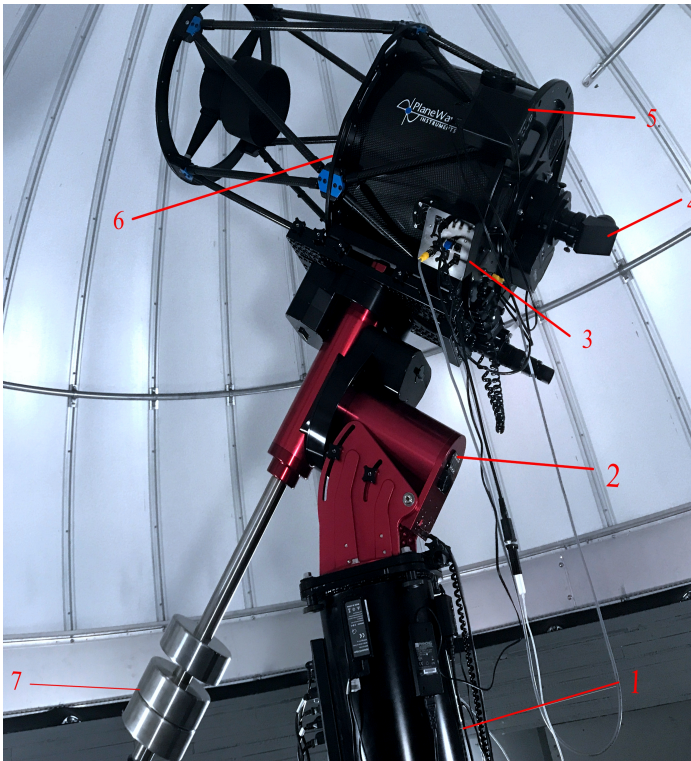


Figure 1



Figure 2

1. Pole	4. Eyepiece/Camera	7. Counter weight
2. Mount	5. Dew heater	8. Finder scope
3. Focuser	6. Mirror cover	9. motor control

## START UP

- Turn off the outside and the main entrance way lights
- Pull the shades down in the classroom
- Close door to the dome
- Open the Dome by turning on Main Power



Figure 3, rotation main power

- Take the cord next to the main power box, plug in the shutter box power.
- Turn on power for shutter
- Turn to Open (short side)

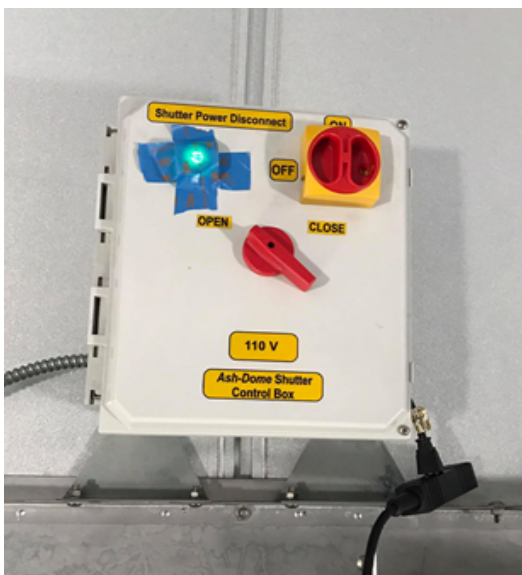


Figure 4, Shutter control

- Wait till the shutter completely open Turn the switch to natural (in the middle)



- Turn off dome shutter and unplug the power cord
- Turn on Dome rotation
- When it finished opening up turn back to Neutral



Figure 5, rotation manual control

- Leave the rotation box power on
- Pull the ladder over + take the mirror cover off, hang the cover on the hook on the side of the dome
- Turn off lights
- Turn on computer in the dome( Telescope1-8300)
- Open the Sky-X app on desktop



Figure 6

- Turn on the telescope by flipping **the small silver switch on the back of the red telescope mount into the up position**
  - Then the telescope should beep and three lights should turn on the mount (purple, red and red light)

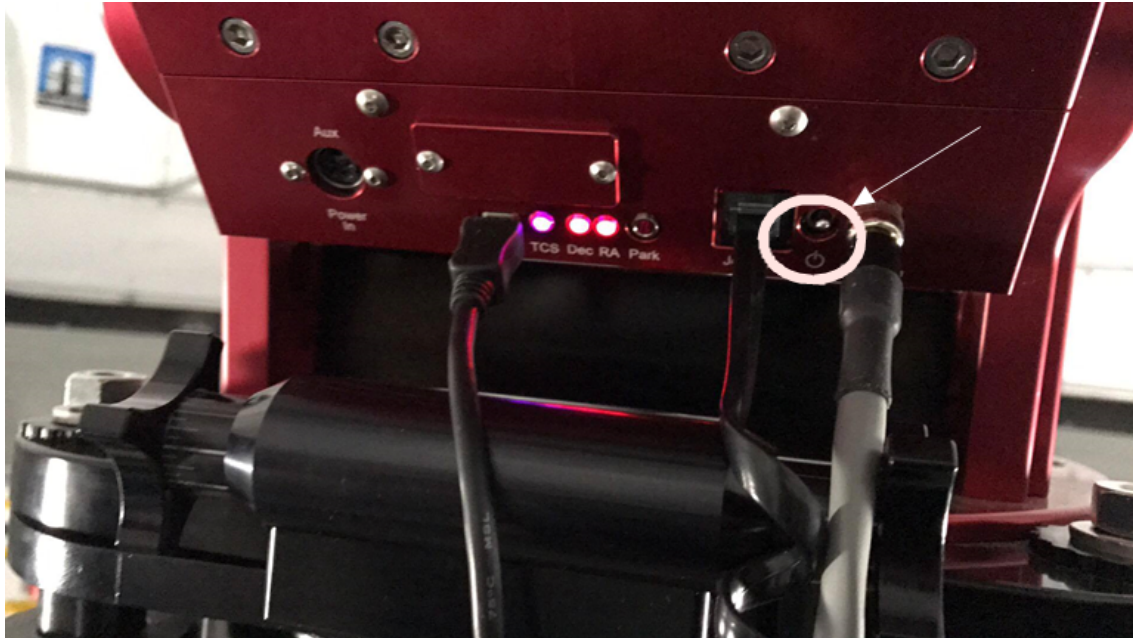


Figure 7, mount

- Turn on the focuser, the black box on the telescope(PlaneWave Electronic focusing Accessories)

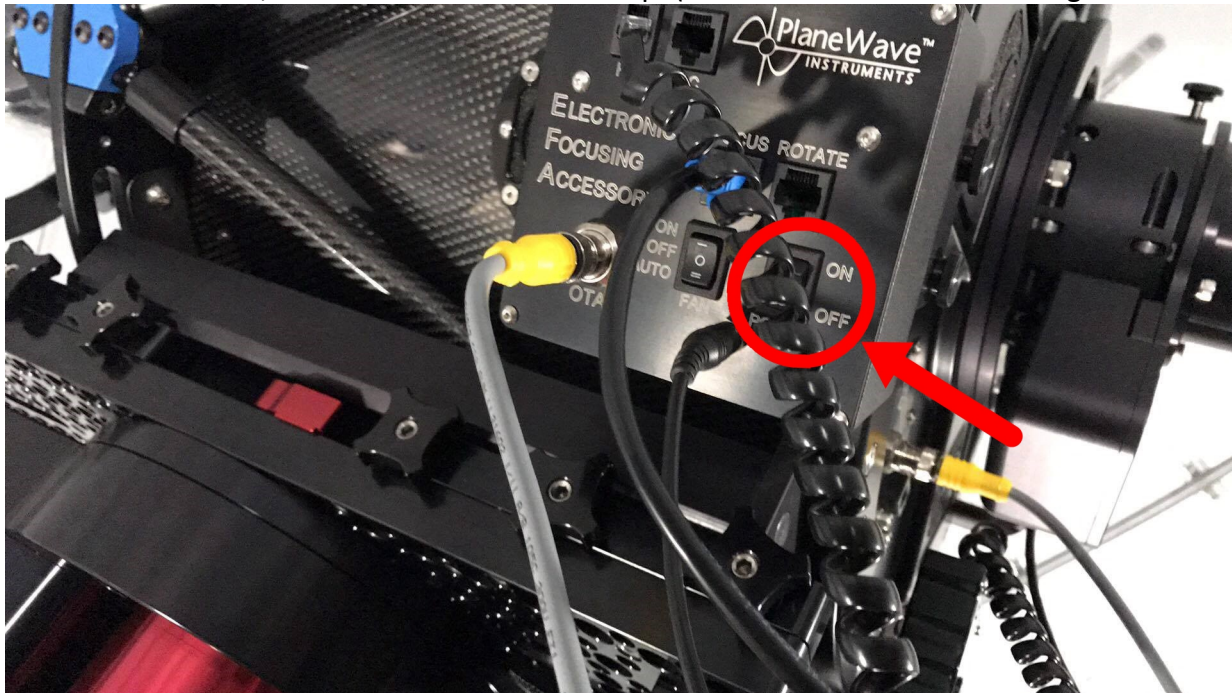


Figure 8, Focuser



- In the Sky-X app
  - Click “Telescope” button on the left side bar
  - Click “start up” under telescope menu (the menu shows on the right of the left side bar)
  - Click Connect Telescope
  - On the pop up, click “yes” to “Do you want to home the telescope?”

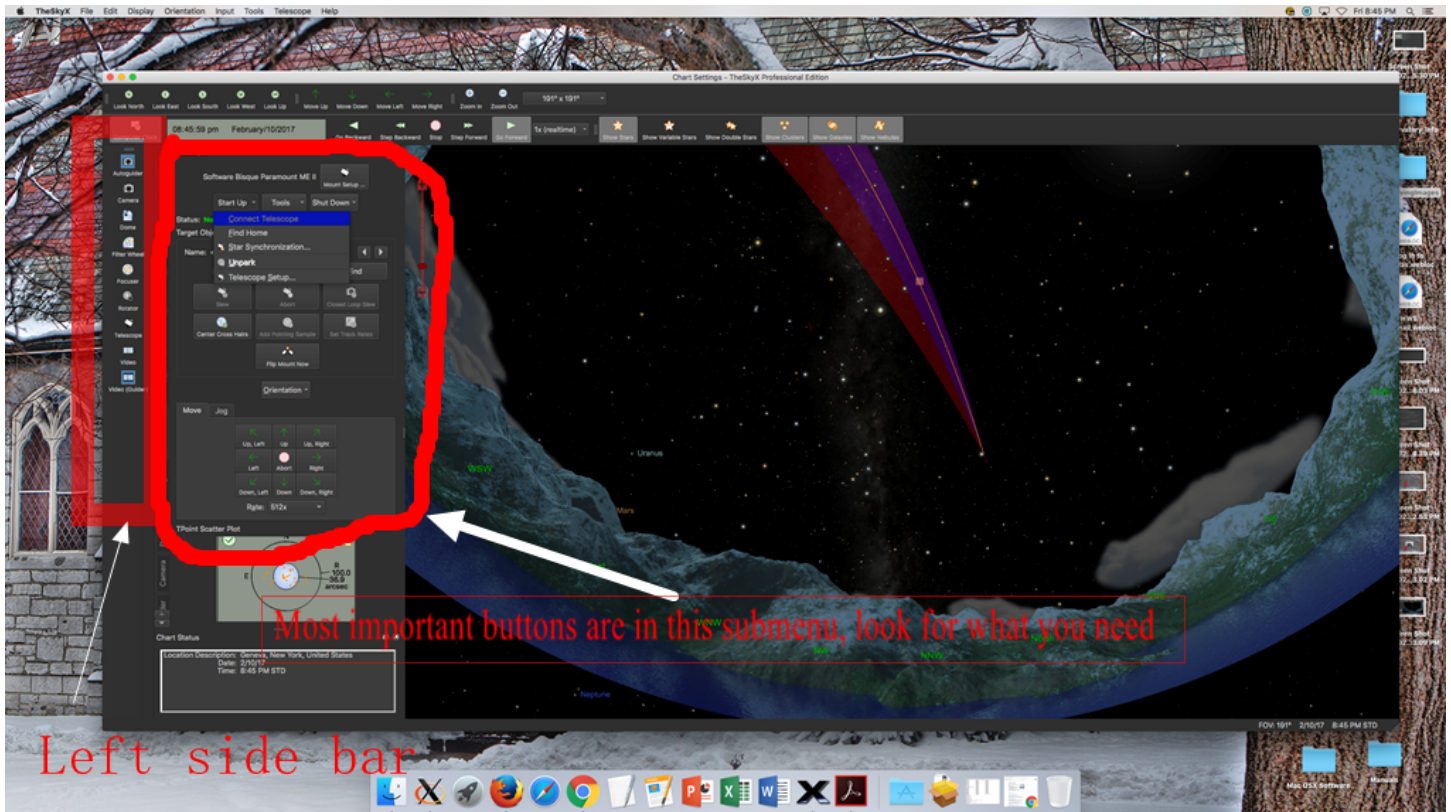


Figure 9, Sky X

- In the Sky X App
  - Connect Camera(Under Camera menu from left side bar)
- Check filter wheel + auto guider are connected(under their own category, similar procedures as connecting the telescope/camera)

Before observing the object, you must check the focus.

To slew to an object, select the “Telescope” tab and put the name of the object into the Find box. A Red circle will appear in the view screen, click the red circle. If the target is visible, click Slew to slew to the target.

Slew to a region with lots of stars that are not too bright: M37 is good for winter/spring to begin with

Select the “Camera” tab. Choose 5s exposure time and click “Photo”. Use the hand tool for focusing until the stars look as small and circular as possible. Take as many photos as needed until you achieve the best focus.

(Clear view of the object observing) Take a picture of the first object and check if the target is in the middle of the picture.

Now, you are ready to observe your object.

Slew to your next object as before.

Select the “camera” tab. Make sure to “Automatically Save” these exposures by clicking the check box on the front of the Camera tab page. To change the location for automatically saving images, click on the “AutoSave” button and change the location of the images.

When you want to take an exposure. Put in the exposure time and click “Photo”.

If you want to change the filter. Click the “Filterwheel” Tab. Use the dropdown menu to choose the filter you would like. Click “Move”(Top to bottom filters are shortest to longest wavelengths)



## **SHUT DOWN:**

Slew the telescope to Park. (Under telescope sub menu on the left, click “shut down”)

Disconnect the Telescope.(option under “shut down” menu as well)

Disconnect the Camera (Camera sub-menu)

Disconnect the auto guider and filter wheel

Put the telescope cover over the telescope mirror

Turn off the telescope itself. (The silver switch used to turn on the telescope pm the back of the mount)

Turn off the focuser box. (Black box, the switch on the right of the box, never turn off the fan switch on the right.)

Slew the dome until it is approximately facing north.

Plug in the shutter power

Close the shutter. Turn off the power to the shutter.

Turn off the main power.

Shut down The Sky X.

Put the computer to Sleep (do not turn it off).

Written by Zhiyi Chen

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