

Explore Scientific Truss Dobsonian – 10” to 16” : Encoders Installation

Specifications:

Altitude Encoder resolution:

10” - **305860** steps per revolution

12” - **380608** steps per revolution

16” - **454600** steps per revolution

Azimuth Encoder resolution: **311296** steps per revolution

Current consumption: 20 mA – altitude encoder, 20 mA – azimuth encoder

Note: Please set the encoder steps to the values corresponding to the model of your telescope:



Do not subject encoder disks to magnetic fields as it may affect the magnetization of the magnetic multi-pole rings.

Please make sure that you have all the parts included in the kit:

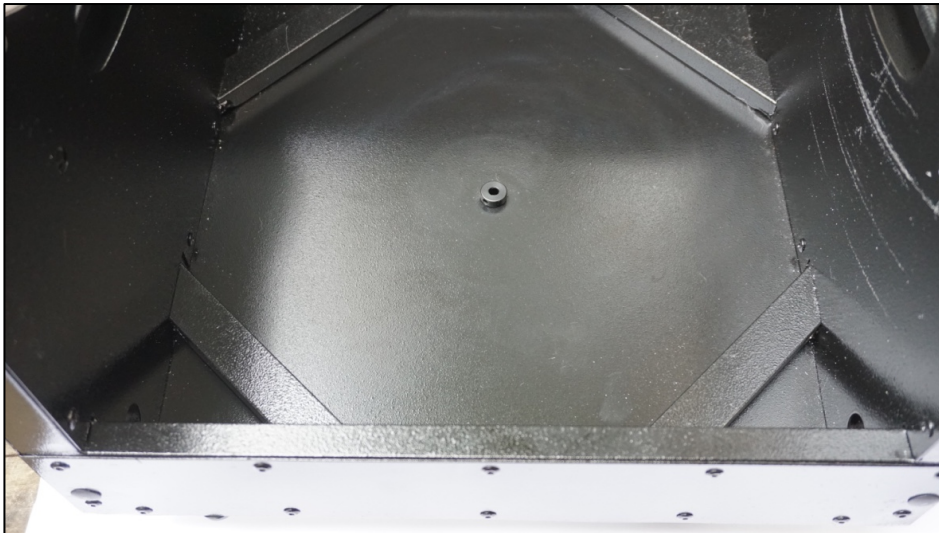


Azimuth encoder installation

You will need the following parts to install the azimuth encoder:



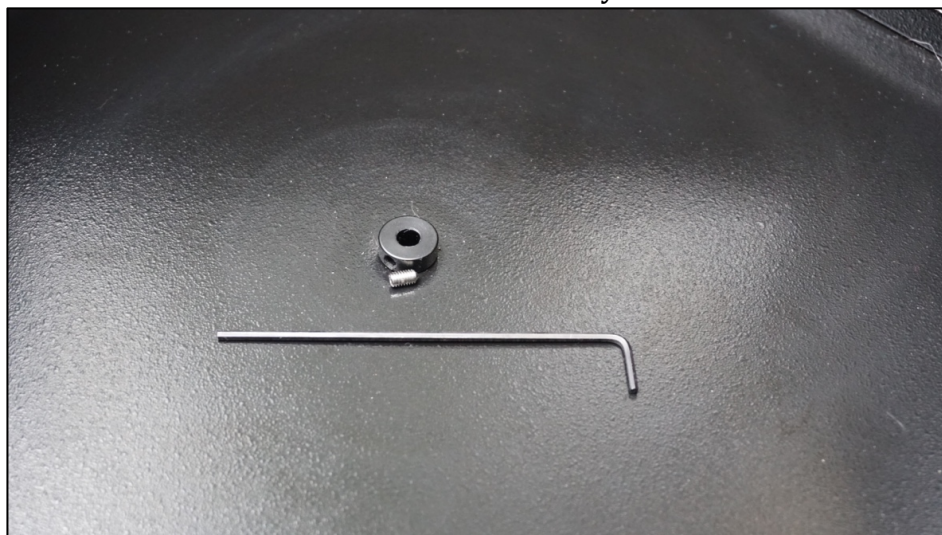
Please remove the mirror box from the rocker box:



Please locate the threaded hole in the pivot bolt:



You will need the set screw and the Allen key:



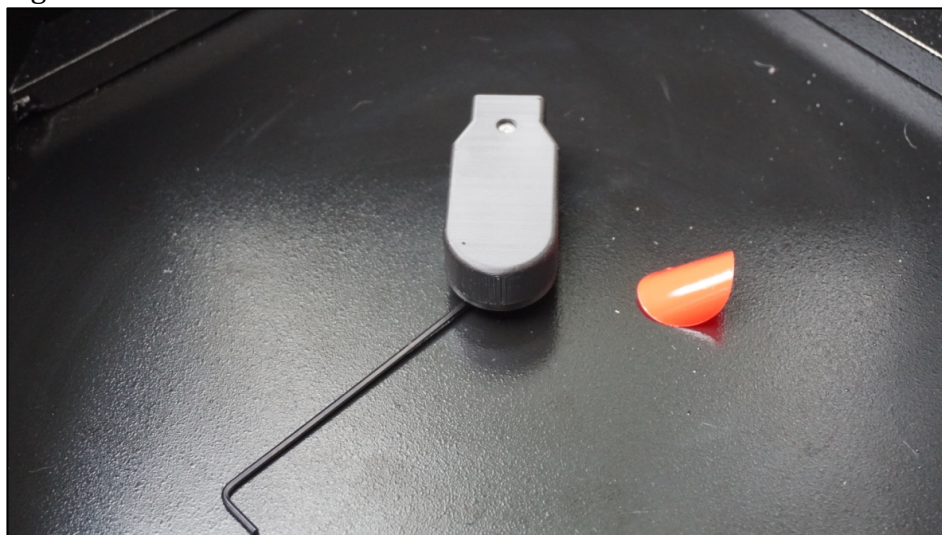
Put the set screw into the threaded hole and make a couple of turns but leave the Allen key in the set screw:



Clean the surface in the back with an alcohol wipe – where the encoder's foot will be glued. Remove the protective film from the encoder's foot:



Tighten the set screw



The azimuth encoder is now installed:



Install the encoder cable:



Altitude encoder installation

You will need the following parts to install the altitude encoder:

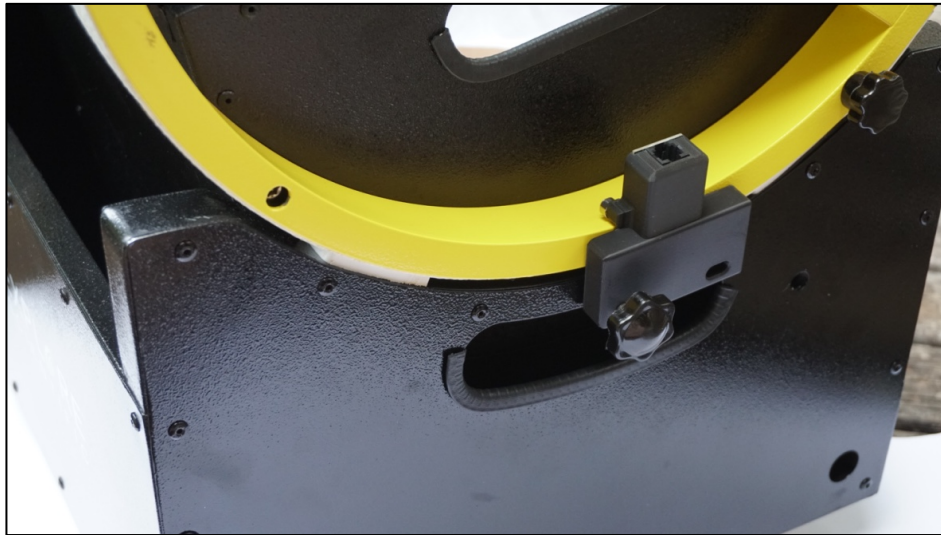


The following instructions show the altitude encoder installation on the left altitude bearing – the same side as where the focuser is. If the focuser on your telescope is located on the right then the altitude encoder needs to be installed on the right altitude bearing – this is the default configuration for Explore Scientific Truss Dobsonians. The installation on the right altitude bearing is identical – just a mirror of the instructions below.

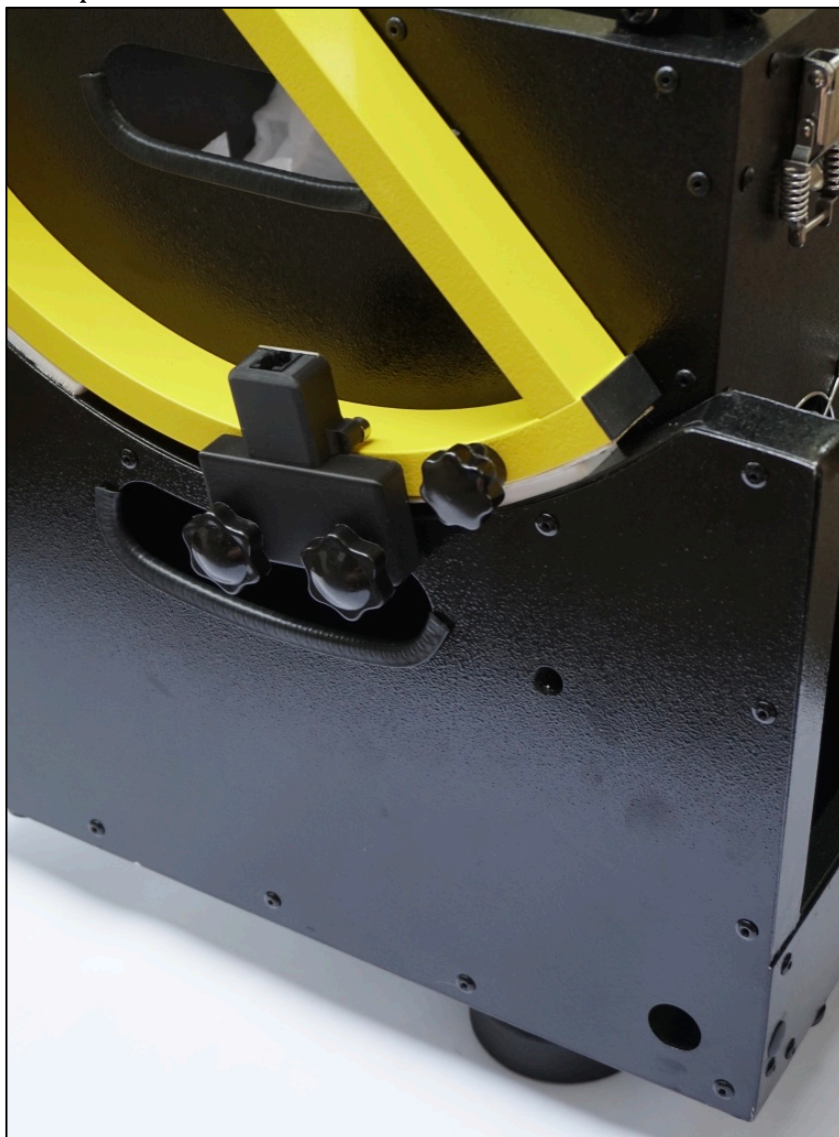
Put the mirror box into the rocker box and clean the internal surface of the altitude bearing (on the same side as where the focuser is) with the alcohol wipe:



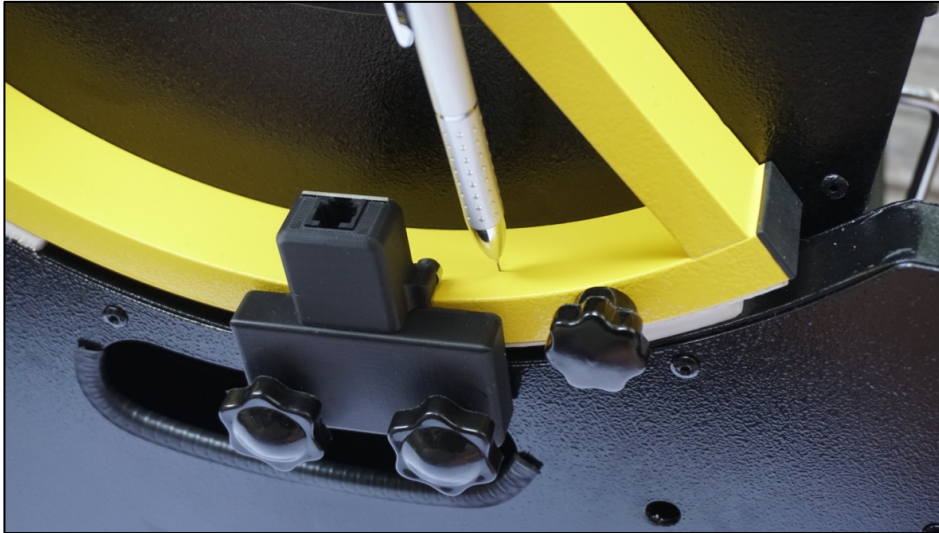
Install the encoder reader starting with the left hole:



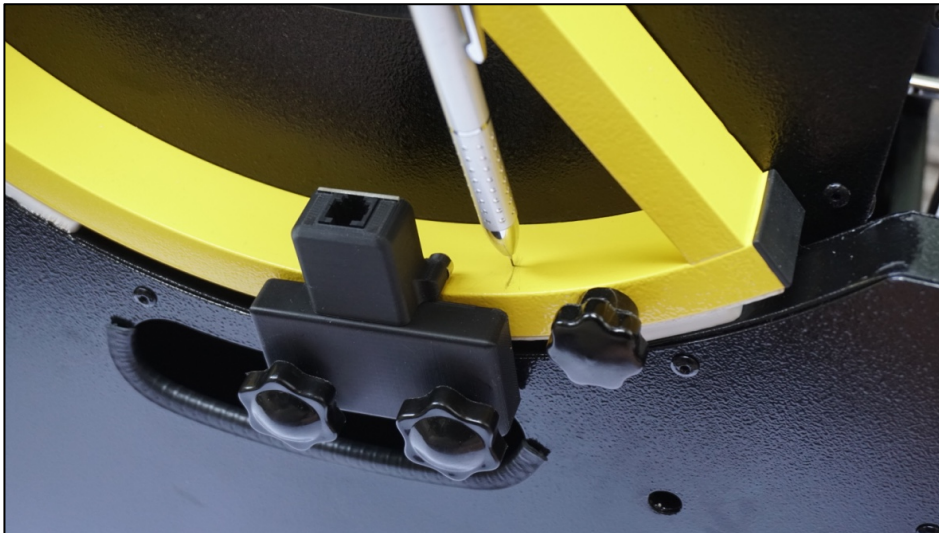
Then put the second knob in



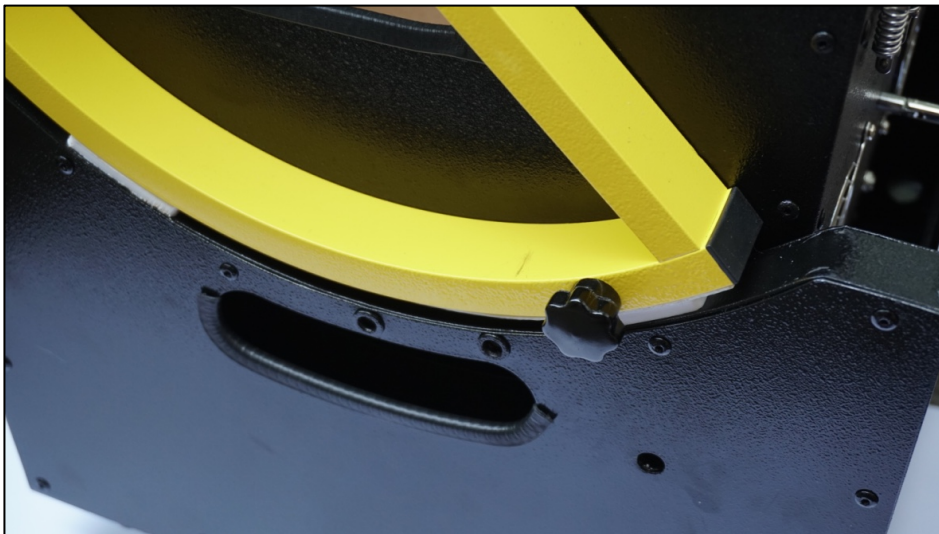
Position the telescope vertically. Now you need to use a pencil to mark the start of the magnetic tape – it should be approximately 10-15mm (~1/2") from the right side of the reader:



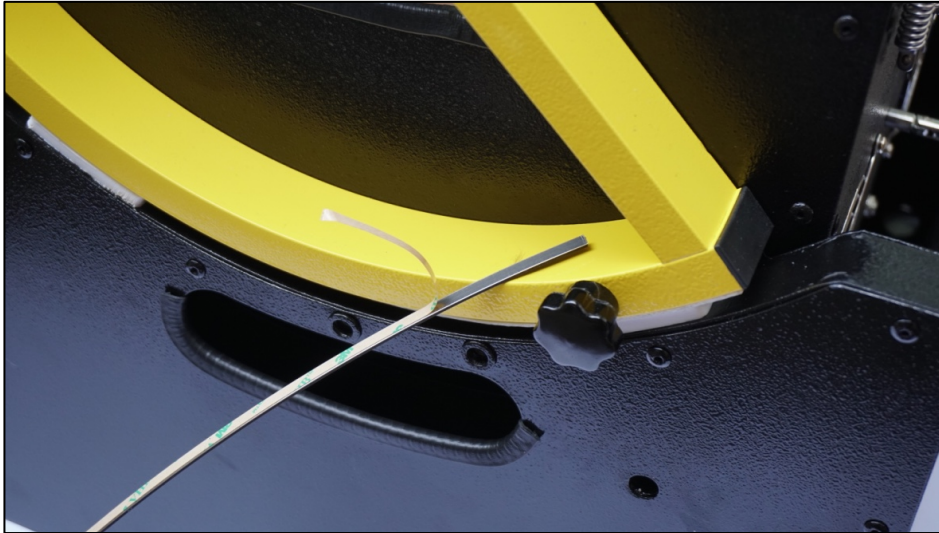
Draw a line with the pencil



Now remove the reader



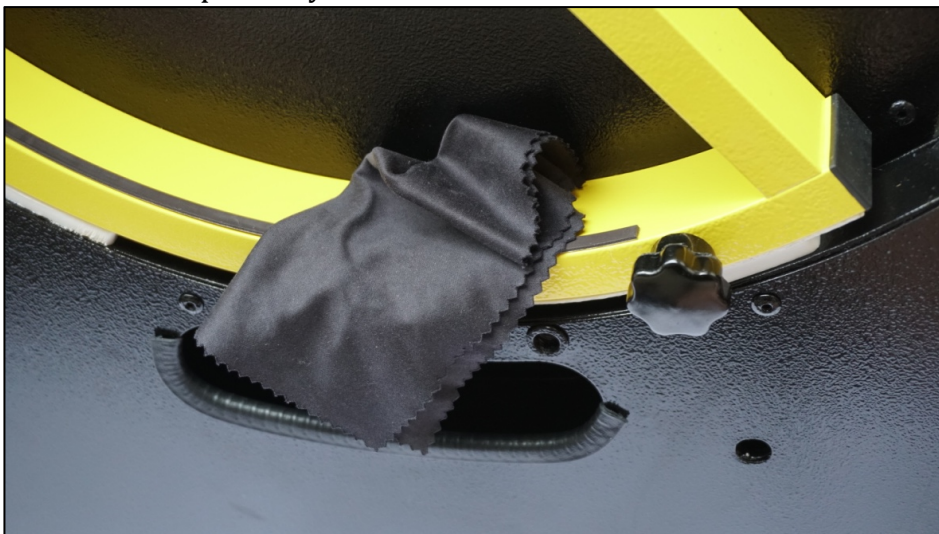
Remove the protective film from the back of the magnetic tape – do not remove it completely, just a few centimeters:



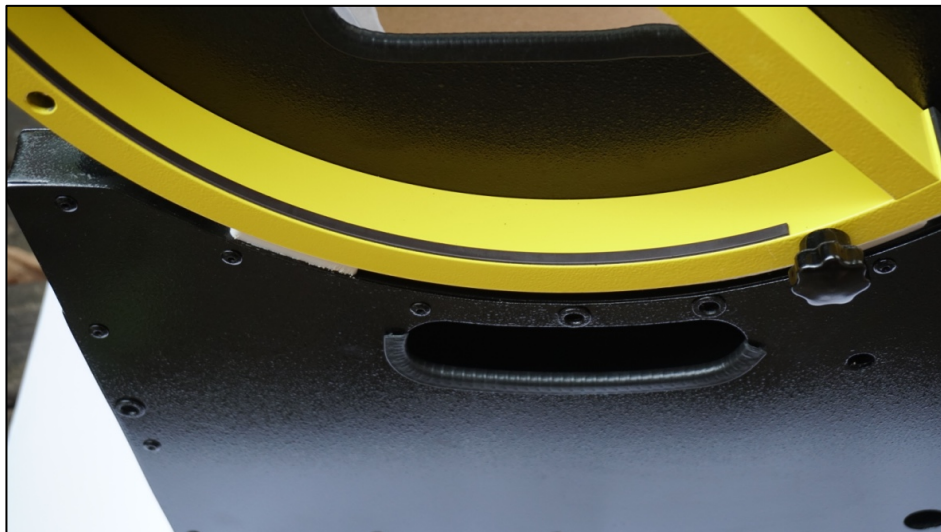
Start gluing the tape along the outer edge of the altitude bearing – make sure it goes precisely along the edge and.



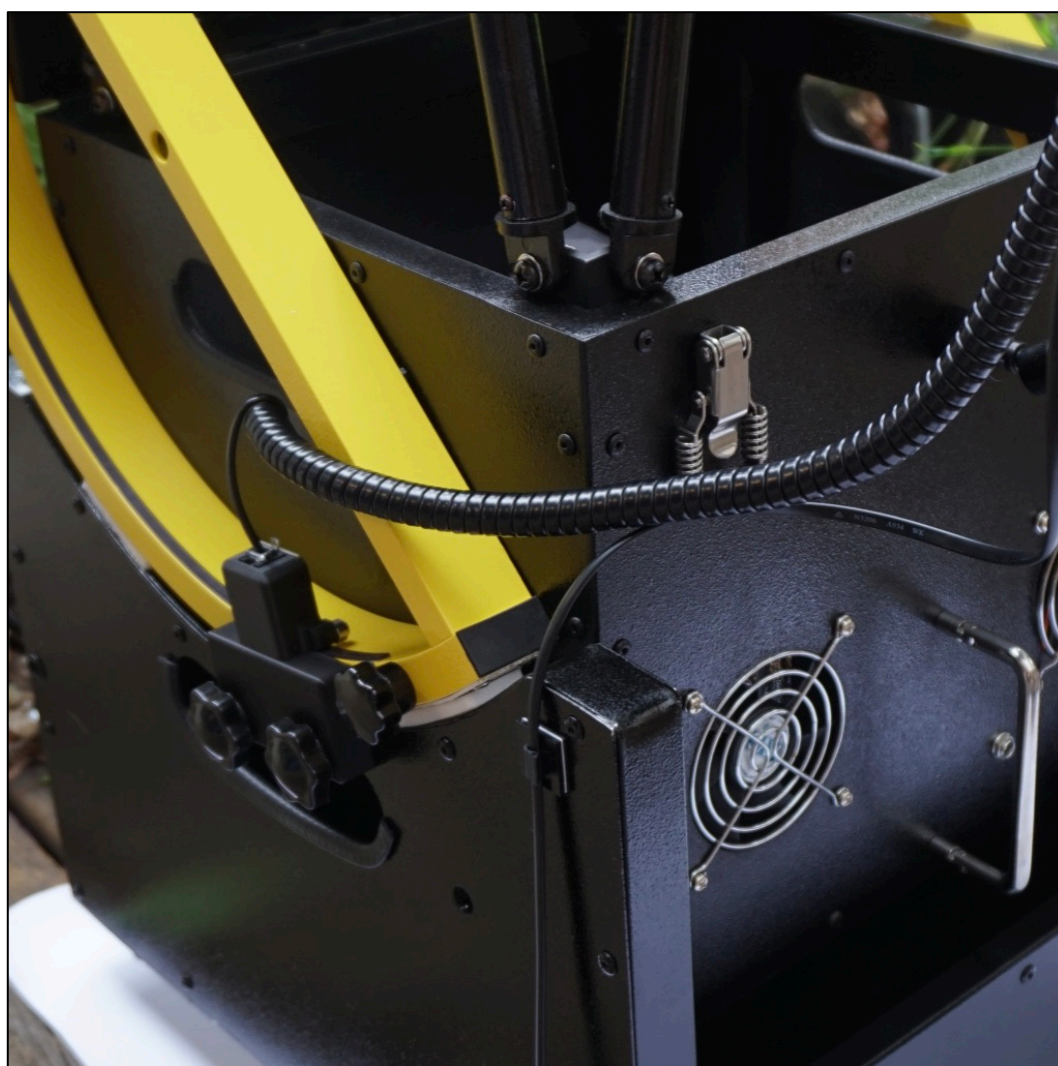
Press on the tape firmly with a soft cloth:



Here is the final result



Now install the altitude encoder reader and try to move the telescope only slightly in altitude. If you notice any friction you need to adjust the position of the reader PCB – it has two screws that need to be loosened to be able to move the PCB up or down. Ideally the distance between the magnetic tape and the bottom of the reader PCB should be between 0.3 and 0.8mm.



FINISHED!

