# SYNTA SKY-WATCHER DOBSONIAN
# AZIMUTH ENCODER INSTALLATION

1) Remove the existing 10mm Azimuth pivot bolt, dome nut and associated top and bottom washers. Store them away as you will not require them. Retain and re-use any nylon sleeve that has an inner diameter of 10mm.

2) Carefully flip the mount over to reveal the base of the ground board and insert the supplied Az encoder bolt, passing it through the ground board and through the base of the rocker box as shown in Fig. 1. Place some masking tape on the base of the ground board beneath the mounting holes of the circular base plate of the bolt. Using the holes in the base plate as a template, 'spot' the wood with a small diameter spot drill or 2mm (5/64") diameter drill bit, drilling approx. 2mm deep, being careful not to crack the white Melamine material. The masking tape can provide some assistance in this regard.

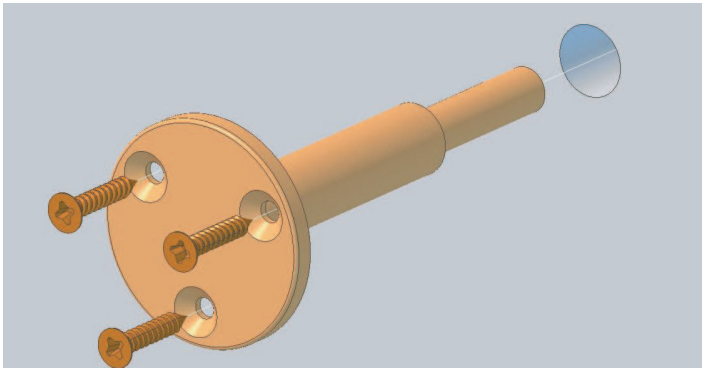

Fig. 1 Azimuth pivot bolt inserted through base of groundboard

3) Carefully remove the masking tape. Fasten circular base plate of bolt to base of rocker using 3 x supplied self-tapping wood screws. Once the base plate of the bolt is fastened, flip the mount over the 'right way' up.

4) Where the end of the bolt now protrudes through the floor of the rocker box, place the supplied 10mm ball thrust bearing over it. The bearing should now be seated on the floor of the rocker as shown in Fig. 2.

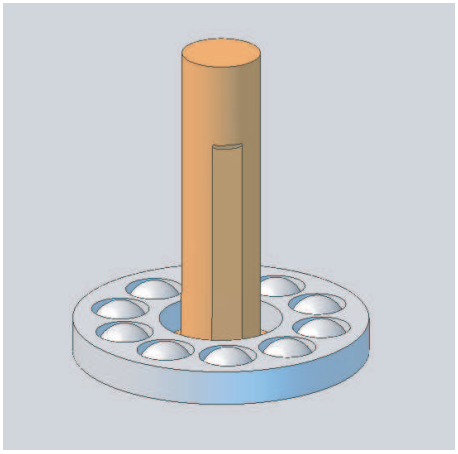

Fig. 2 Ball thrust bearing over bolt

5) Indentify the 'flat' on the Az pivot bolt and fit the supplied large diameter timing pulley onto the bolt so that its set screw can then be fastened onto the flat using the supplied 1/16" hex key.

6) Place the supplied 1/4" washer over the bolt where it protrudes through the top of the large pulley. Fasten the supplied 1/4" hex nut onto the end of the bolt.

7) Install the timing belt around the smaller diameter pulley on the azimuth encoder shaft. Wrap the other end of the timing belt around the larger diameter azimuth pulley. Whilst ensuring the the belt stays engaged in the teeth of both pulleys, move the encoder bracket toward the open end of the rocker box to a position where its cable jack will be easily accessed, as per Fig. 3, ensuring that the belt is snug. Mark a couple of points for the screws that will be used to fasten the bracket. Using the supplied screws and washers, mount the bracket to the inside base of the rocker. A second set of hands can be helpful to hold the bracket in place whilst you fasten the screws. There is no need for the belt to be overly tight, simply snug. The encoder is mounted in a slot in the bracket via a 3/8" hex nut and washer and can be adjusted to tension the belt correctly if need be. The smaller pulley on the encoder can also be adjusted up or down the encoder shaft to match the height of the larger diameter pulley. A hex key is supplied for the set-screws found on the bores of the pulleys.

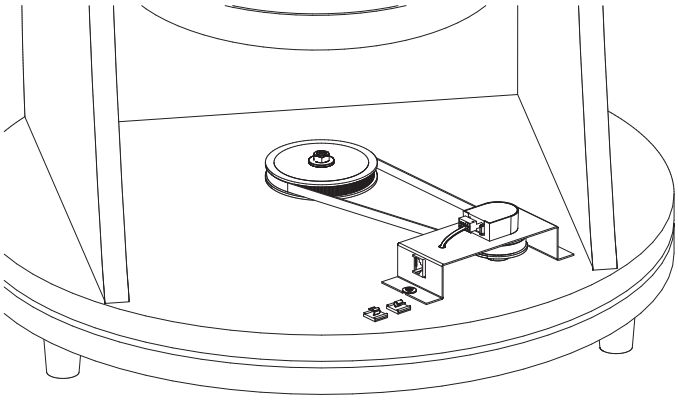

Fig. 3 Timing belt installation

8) Affix two of the supplied self adhesive cable clips at appropriate places near the encoder bracket which will act as strain-reliefs for the encoder cable.

9) After completing both the installation of the azimuth encoder and the altitude encoder (see Altitude Encoder Installation sheet), be sure to perform a Daytime Encoder Test (see Daytime Encoder Test in SETUP MNT ERRORS section of Argo Navis User Manual)

## PARTS LIST -

1. Azimuth pivot bolt
2. Azimuth large pulley
3. 10mm ball thrust bearing
4. 1/4" washer
5. 1/4" hex nut
6. Azimuth encoder with small pulley and bracket
7. Azimuth encoder timing belt
8. 5 x 5g x 16mm self-tapping mounting screws
9. 2 x small washers
10. 1/16" hex key for set screws on pulleys
11. 2 x cable clips