

GUAN SHENG OPTICAL (GSO) 'MODEL B' DOBSONIAN AZIMUTH ENCODER INSTALLATION

1) Remove the existing azimuth tension knob/bolt, being careful to retain any existing washers and ball thrust bearing which you will re-fit (see Fig 1).

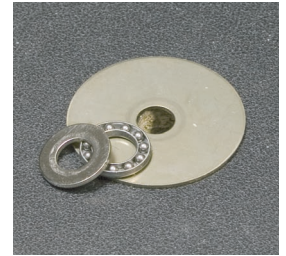


Fig. 1

2) Carefully flip the mount over to reveal the base of the ground board. If your mount has an existing threaded insert through the hole in the center of the ground board, carefully unscrew it and put it aside, as you won't need it again. Insert the supplied Az pulley bolt, passing it through the ground board and through the base of the rocker box. The new bolt was machined with a diameter to normally pass through the hole in the ground board, which is made of particle board. Be careful to avoid damaging the particle board or laminate coating when passing the new bolt through if the fit seems overly tight. Instead, using a short piece of emery paper, sand out the hole to enlarge it just enough, but no more, so that the bolt passes through. If the hole in the base of the rocker box is fitted with an existing metal sleeve/bush, then retain it. The new pivot bolt is designed to pass through it. Fasten circular base plate of bolt, as seen in Fig 2., to base of rocker using 3 x supplied self-tapping wood screws. To make it easier to insert the screws, 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. Once the base plate of the bolt is fastened, flip the mount over the 'right way' up.

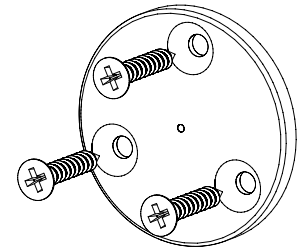


Fig. 2

3) Where the end of the bolt now protrudes through the floor of the rocker box, place any original existing large washer, ball thrust bearing and smaller washer over it.

4) Identify 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.

5) 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.

6) 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 and a few inches away from the inside left side of the rocker, 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. 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 hex nut and washer and can be adjusted to tension the belt correctly if need be as shown in Fig 4. 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.

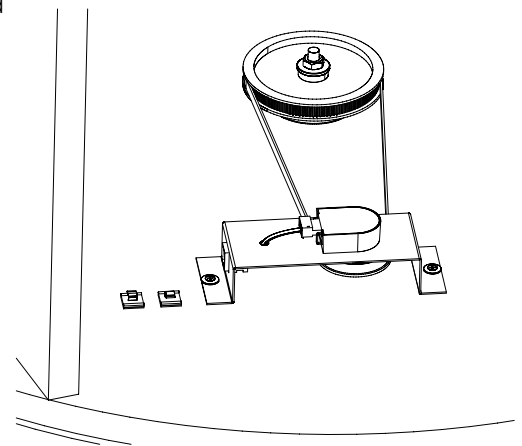


Fig. 3

7) 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.

8) 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 sheet)

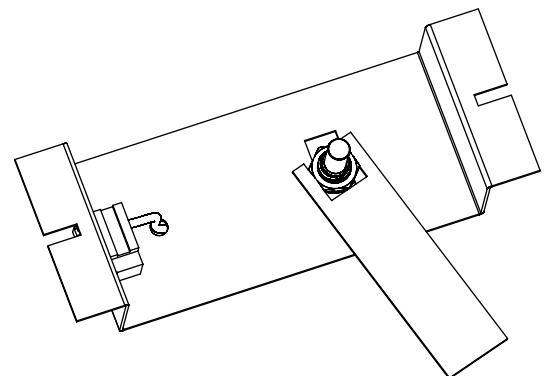


Fig. 4

PARTS LIST -

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