

# GUAN SHENG OPTICAL (GSO) 8"/10"/12" 'ORIGINAL MODEL' DOBSONIAN AZIMUTH ENCODER INSTALLATION

1) Detach Altitude bearing spring and remove optical tube from rocker box as shown in Fig 1. Remove existing Azimuth pivot bolt.

2) Identify supplied Az encoder pivot bolt as shown in Fig 2. Using supplied M2 hex key, screw M4 set screw that is fastened in the side of the bolt all the way in so that it is recessed beneath the threads of the bolt. Remove & retain supplied 1/2" Az encoder pivot bolt hex nut and 1/2" washer.

3) Flip mount over and feed Az encoder pivot bolt through base of ground board as shown in Fig 3. Fasten bolt in place with 3 x supplied self-tapping wood screws.

4) Turn mount normal way up and place 1/2" washer over Az encoder pivot bolt. Then fasten 1/2" hex nut over bolt as shown in Fig 4. Secure nut by tightening M4 set screw in side of nut using M2 hex key. Please note that on some installations, owing to the dimension of the gap between the ground board and rocker box, the washer may need to be excluded in order for the hex nut not to cover the set screw on the Az encoder pivot bolt.

5) Securely fasten Az "tangent arm" bracket to encoder using supplied hex nut and washer.

6) Unscrew M4 set screw on side of bolt to allow the shaft of the encoder to drop into encoder pivot bolt bore. When encoder shaft is in place, secure the M4 set screw.

7) Place mark on inside base of rocker box which corresponds to the mid-point along the slot in the tangent arm bracket. Rotate encoder tangent arm out of the way and carefully drill 9mm (23/64") diameter hole approximately 14mm deep at mark to accommodate supplied brass threaded insert. Carefully thread the self-tapping brass insert into the hole using a wide-bladed flat screw driver, ensuring that the insert feeds in at a perfect right-angle with respect to the base of the rocker. Thread tangent arm slot above brass insert. Thread supplied 5/16" socket head shoulder screw through slot and into insert. Fasten shoulder screw with fingers or with supplied 5/32" hex key. Tangent arm should be free to 'float' and slide on silver colored shoulder of shoulder screw.

8) Fasten two of the supplied self-adhesive cable clips near the end of the tangent arm to act as strain reliefs for the encoder cable.

9) Place optical tube back on rocker and carefully check that it is clear of the optical encoder as it swings above it.

## PARTS LIST -

1. Az pivot bolt with M4 set screw
2. Az pivot bolt nut with M4 set screw
3. Qty 3 x 5g x 16mm wood screws
4. Az pivot bolt 1/2" i.d. washer
5. Az encoder and tangent arm
6. Self-tapping brass insert
7. 5/16" shoulder screw
8. M2 hex key for M3 Az bolt and nut set screws (this key also used in Alt kit)
9. 5/32" hex key for shoulder screw
10. Qty 2 x self-adhesive cable clips

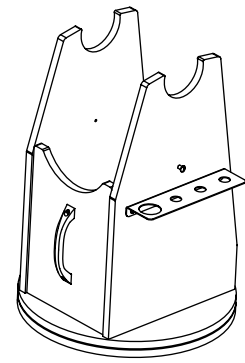


Fig 1. Rocker box and ground board

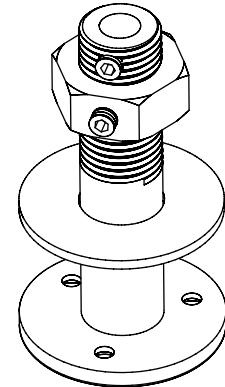


Fig 2. Az Encoder pivot bolt, washer and nut.

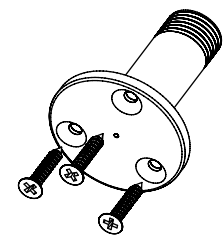


Fig 3. Az encoder pivot bolt as seen from bottom side of ground board.

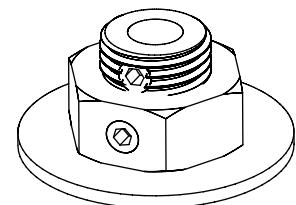


Fig 4. Az encoder pivot bolt as seen from inside of rocker box with washer and nut in place.

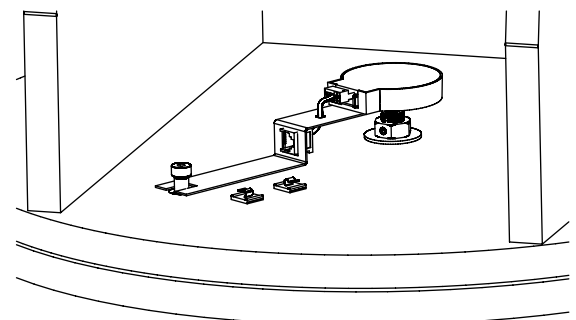


Fig 5. Az encoder installation.