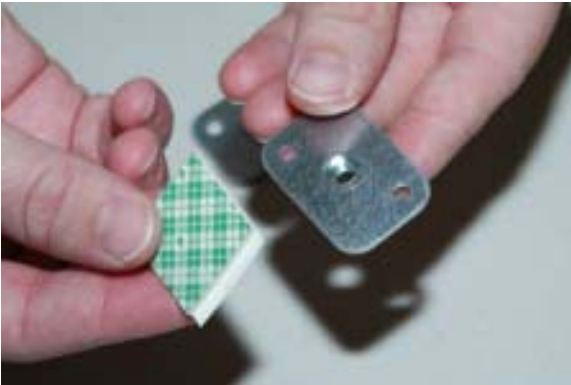


Installation of Optical Encoders Pennywinkle Frame

STOP! Read all the instructions and study the pictures before starting.



Step 1:

Using isopropyl alcohol (rubbing alcohol) and a cotton ball, clean the surface of the encoder plate and the carriage (between the rollers on the lower carriage).

Lower carriage placement: back



Step 2:

Peel the green plaid backing from the double-faced foam tape and affix it to the back of the encoder plate.

If you prefer to affix the hardware to your carriage with screws, you should check first with your frame manufacturer regarding its warranty on the carriages. Drilling holes into your carriage may void the manufacturer's warranty. LiTen Up, Inc. and Quilter's Cruise Control are not responsible for voided warranties on quilt frames.

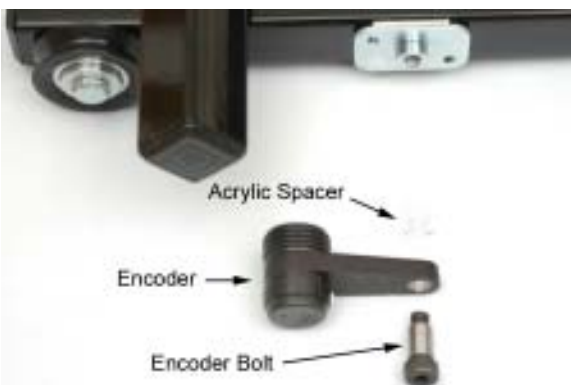
Step 3:

Peel the white backing off the the remaining side of the foam tape and affix the encoder plate to the lower carriage between the 2 wheels on the lefthand side.



Step 4:

Place the encoder bolt through the encoder arm and acrylic spacer and screw into the encoder plate. Tighten finger tight.



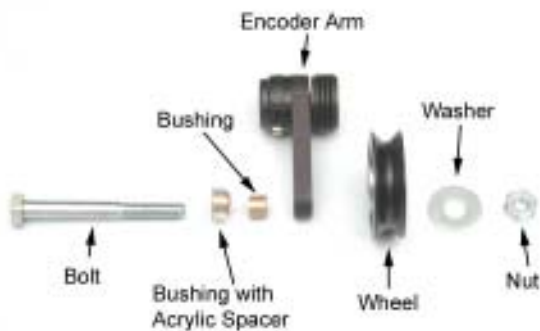


Step 5:

With the orange wire on the bottom, plug the wiring harness into the encoder. Please be sure that the connector firmly seats in the receptacle. Peel the backing from the white plastic strain relief pad and affix it as shown in the picture. Place the wire tie through the holes and secure the wiring harness cable as shown. The encoder arm should be free to move up and down.

Step 6:

Remove the REAR RIGHT wheel from the UPPER carriage by loosening the nut underneath the carriage



Step 7:

Assemble the bolt, bushing with acrylic spacer, bushing, encoder arm and Wheel as shown in the picture to the left.



Step 8:

Place the bolt back through the frame as shown, slide on the washer and screw on the nut. Note that the picture to the left is looking at the upper carriage upside down.



Step 9:

With the carriage rightside up again, place the strain relief pad as shown in the picture. Then place the wire tie through the pad and secure the wiring harness cable as shown. Once completed, the encoder arm should move freely up and down.