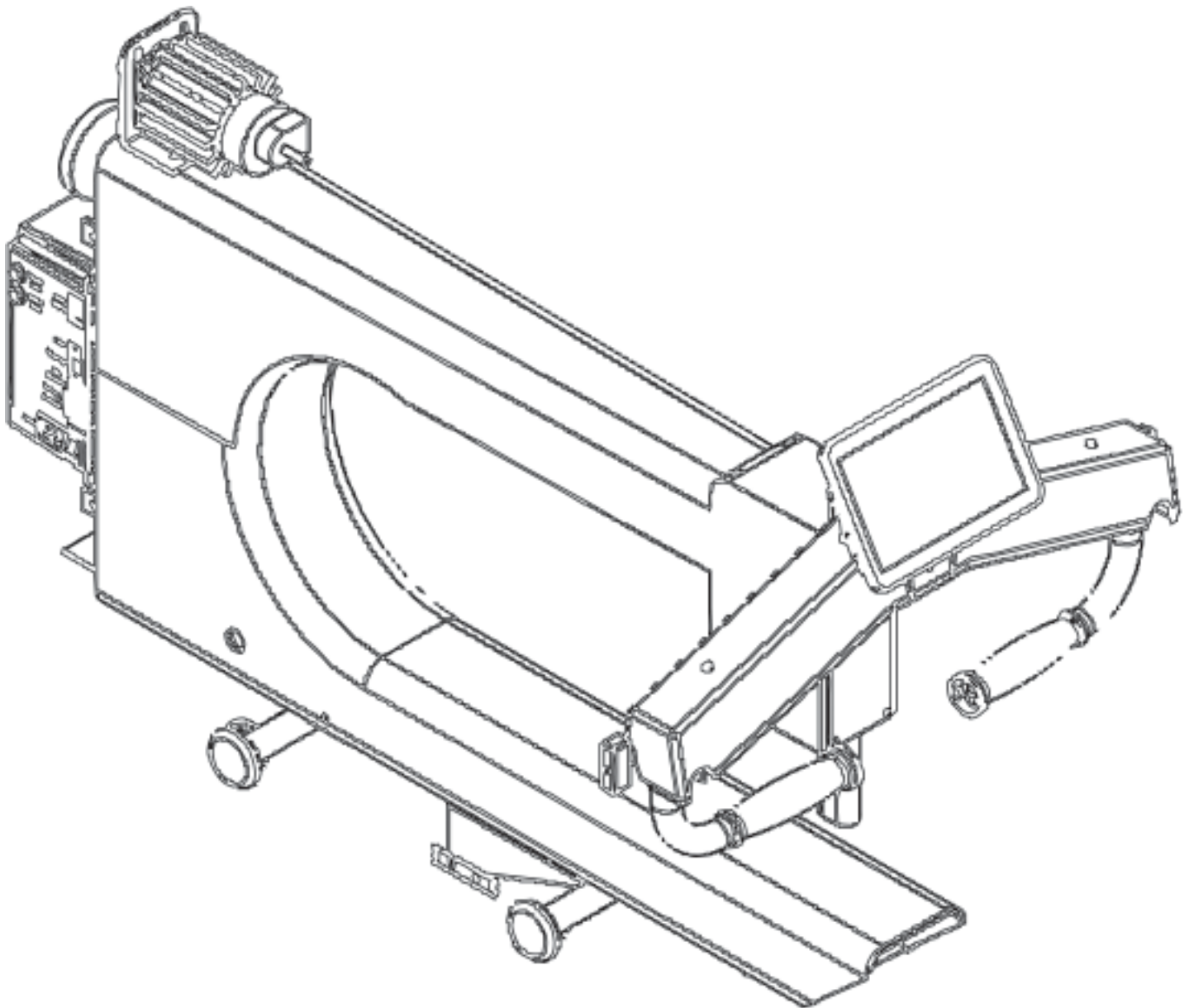


# Quilt EZ *Perfect Stitch*

## Machine Upgrade

### Gammill Assembly Instructions



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# Before You Begin

## Test the Machine

Before installing the upgrade, make sure that the machine is fully operational. Do not remove any electronics until the machine has been tested.

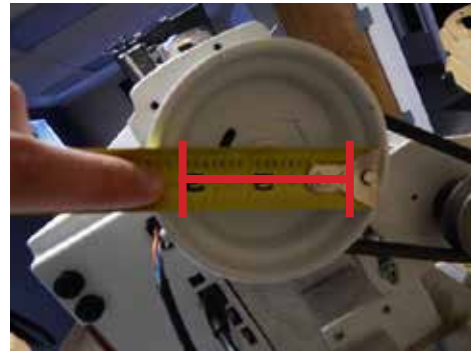
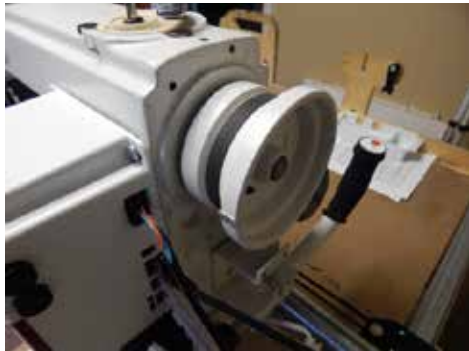
### While upgrading keep in mind

- All cables ran properly and out of the way of any moving parts.
- All cables plugged in securely so they will not come loose from the vibrations of the machine.
- All screws are tight and will not come loose from the vibrations of the machine
- Proper belt tension with approximately 1/4" of play in between

## Determine Pulley Size

To get the correct ratio you will need to make sure that you install the correct size motor pulley.

Measure the machine pulley from end to end. Remember you are measuring the Pulley and not the hand-wheel. For example this pulley has a larger hand-wheel, but the pulley is only 3" in diameter.



Divide that measurement by 1.5  
(e.g.  $3'' / 1.5'' = 2''$ )

The divided number translates to the ratio and corresponding size of pulley to be used in the upgrade. This number is likely to be a fraction, round up or down to the nearest whole number.

Use this rounded number to choose the correct pulley size. The pulley diameter should equal the rounded number.

### **Pulley Sizes**

1”

1 1/2”

2”

3”

# AIDES

## Tools

---

- Power drill
- Safety glasses
- Hammer
- Punch
- #1 Phillips screwdriver
- #2 Phillips screwdriver
- #30 drill bit
- #29 drill bit
- #25 drill bit
- #7 drill bit
- 3/4" drill bit
- 3/8" drill bit
- Tap wrench
- #1 4/20 tap
- #8-32 tap
- #10-24 tap
- Tapping oil

# Perfect Stitch Parts

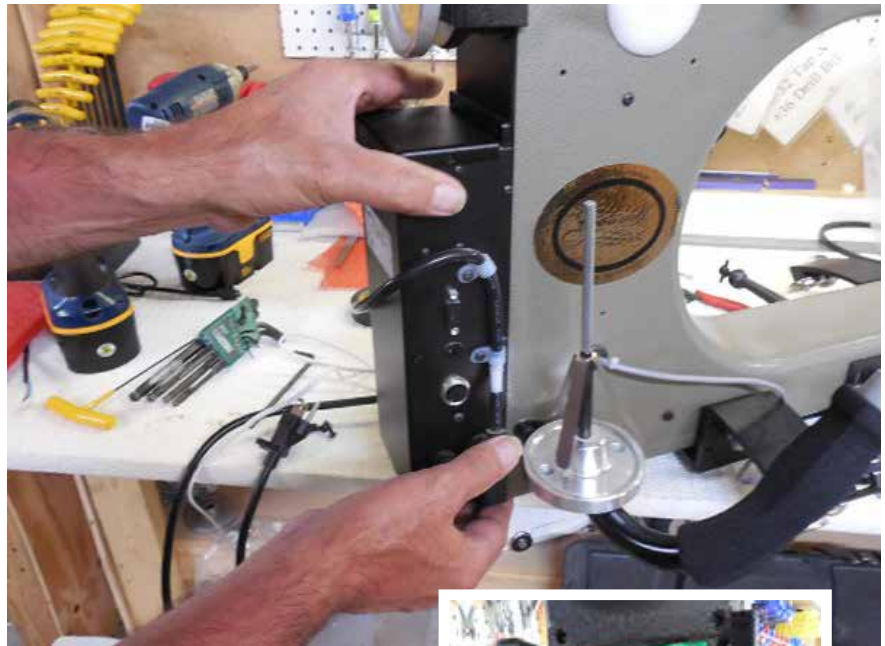
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- (1) Touch screen display either:  
Android 10" [106AA009]  
Android 7" [106AA015A-7]  
Linux 7" [110EA164A-PS]
- (1) Rear display  
[105AW010A-UPGRADE]
- (2) Remote base assembly  
[105AW025A]
- (1) Stylus ( Linux display only)  
[103MA71A]
- (1) USB flash drive (Linux display  
only) [100EZ161A]
- (1) External remote cable  
[105AW006]
- (1) Internal remote cable (Android  
tablet only) [105AW007]
- (1) Continuous remote cable (Linux  
display only) [114EW005B]
- (1) Continuous handlebar cable  
[105AW005B]
- (1) 110V Power cable [AB178]
- (1) Handlebar assembly  
[106MA002B-B]
- (1) 180W Motor [105EW57400-  
AMP]
- (1) Motor Bracket [Q-UNI-MOT-1]
- (1) Motor Belt [2L170]
- (1) Motor pulley 2" [114MA003A]
- (2) Motor heat sink [AB173]
- (1) Index bracket [Q-UNI-PER-BRK-1]
- (1) Index L bracket short [Q-UNI-MAG-2]
- (1) Metal collar[P-UNI-MSC-6]
- (2) Foam tape [P-UNI-MSC-10]
- (1) Upgraded rear handlebar assembly  
[105AW011A]
- (1) Index sensor assembly [Q-E-UNI-PER-  
MAG-1]
- (1) Encoder assembly set- includes 2 encod-  
ers [130AA007A]
- (1) PCB control box [112EW001A]
- (1) Metal back plate [Q-UNI-PB-PBK-1]
- (6) Anchors and zip ties [103MW072A]
- 40" Nylon Wrap
- (25) 8-32 x 1/2" screw
- (6) 10-24 x 1/2" screw
- (6) 10-24 K-lock nut
- (2) 1/4-20 x 1/2" screw
- (4) #4 x 1/4" thread forming screw
- (2) 10-32 x 3/4" socket head screw

# Remove PCB & Motor

## 1 Remove Rear PCB.

Disconnect all of the wiring and remove entirely from rear of machine.



## 2 Remove the back plate from the rear of the machine.



## 3 Remove Rear Motor and motor wires.

Be sure to leave the back plate off as you will be coming back to install the Magnetic Index alongside bringing all your wiring to the back end of the machine.



# Install Handle Bars

## 1 Mark Holes

Align the handle bars so they align flush with the top of the machine head. (The faceplate may need to be removed.)



## 2 Mark two holes with a permanent marker.



**Flush with top of machine head**





**3** Punch the marked holes.



**4** Drill the holes with a 10-24 x 1/2" Bit.



**5** Install the two 10-24 x 1/2" screws.



## Mount 7" Display

**For instructions on installing the 10" display please turn to the next page.**

- 1** Align the remote brackets you were provided with to the holes on your L bracket that is attached to the handlebars.



- 2** Mount the display on the remote bases with the provided hardware.



# Mount 10" Display

- 1** Align the remote brackets you were provided with to the holes on your L bracket that is attached to the handlebars.



- 2** Mount the 10" display bracket onto the remote bases.

Be sure that the screws are being held tight, but not too tight that you won't be able to move the display back and fourth.



**For instructions on how to install the 10" Android please see the "Installing/Troubleshooting Your Android Tablet" guide.**



# Modify Rear Handlebars (Optional)

**1** *Not all Gammill machines have rear handlebars. If your machine does not go to next page.*



Remove the existing Gammill buttons and wires from the rear handlebars

**2** Feed the handlebar wires from the inside of the machine out each handle bar.



**3** Connect the handlebar wire into the port on the PCB button.



**4** Press the buttons into the handlebars.

From the **rear** of the machine blue should be on the outside left, and green should be outside right.

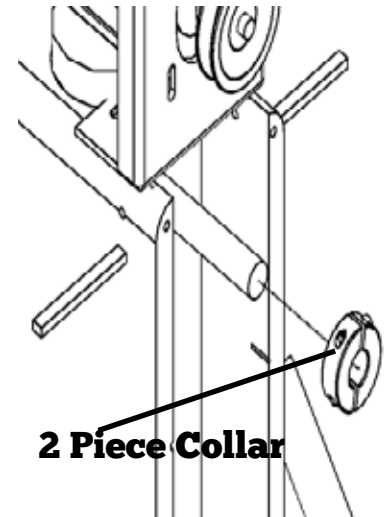


# Install Magnetic Index and Rear Plate

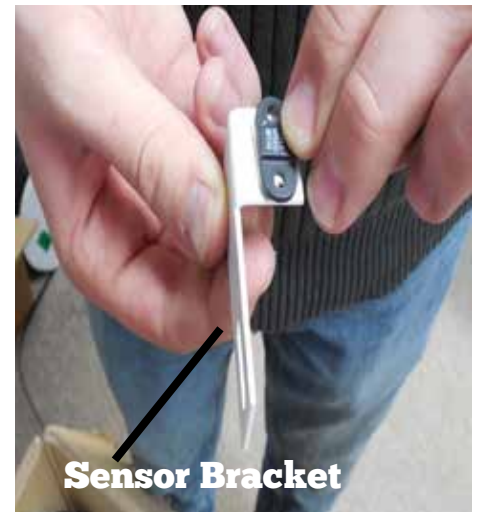
**1** The back plate to your machine should still be removed at this point.

Clamp the two piece collar provided to the shaft coming from the inside of the machine.

Do not tighten at this point.



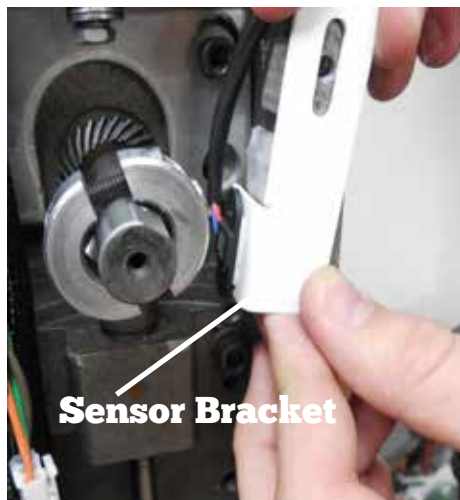
**2** Attach the Index to the Sensor Bracket using the provided double sided slip tape.



**3** Spin the shaft until the needle is in the up position.

Rotate the collar without moving the needle, so that the magnet is facing the index sensor.

Tighten the collar down when the magnet is facing the sensor.



**4** Feed the handlebar wires through the hole on the rear plate.

*Applies only to machines with rear handlebars.*



**5** Attach the backplate with the index bracket pinched between the frame and the bracket.

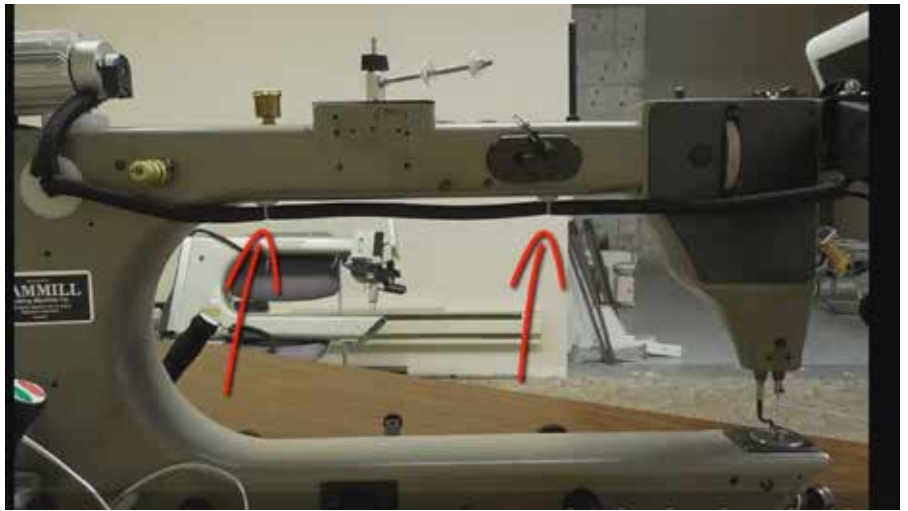
Make sure that the screw goes through the slot on the bracket for added security.



# Install Motor

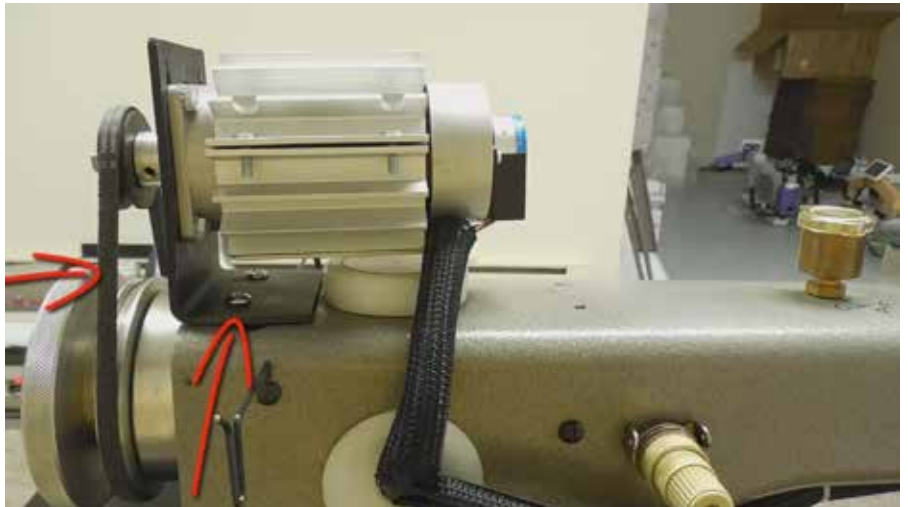
## 1 Nylon sheath

Sheath the wires in the provided nylon and use the zip ties and adhesive zip-tie anchors to affix neatly to machine.



## 2 Install Motor, Belt

Install motor, motor bracket, and motor belt.



3 Ensure that motor wires are sheathed in nylon as well. (You may need to drill a hole in the plastic plug shown at right to run wires properly.)



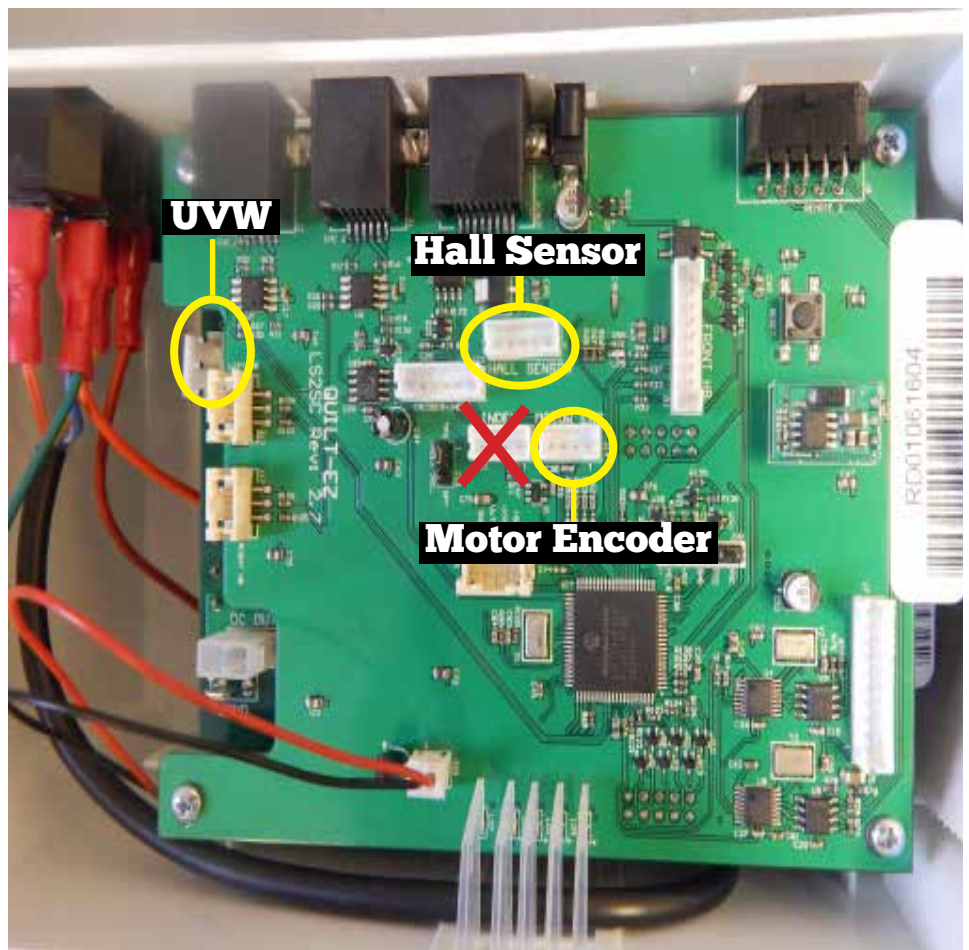
## Connect PCB Box

### 1 Connect Motor Wires

Connect the motor wires as shown at right.

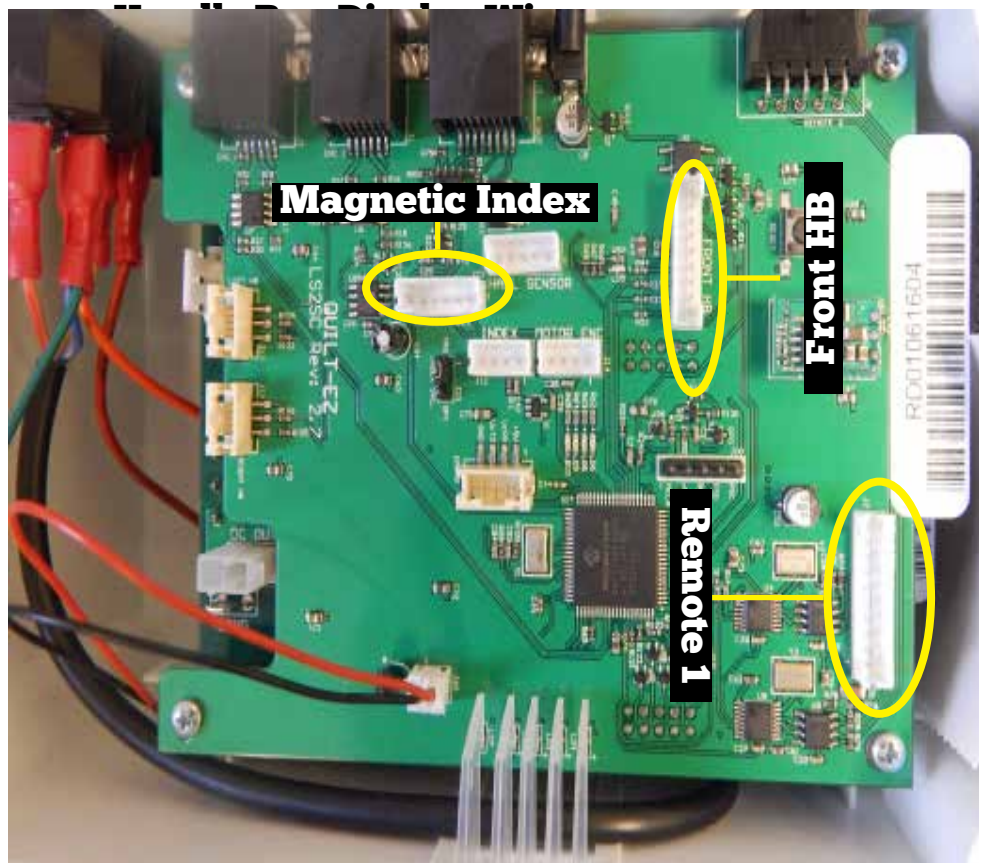
Each of the ports will be labeled. Be sure to plug into the correctly labeled ports on the PCB.

### Motor Wires



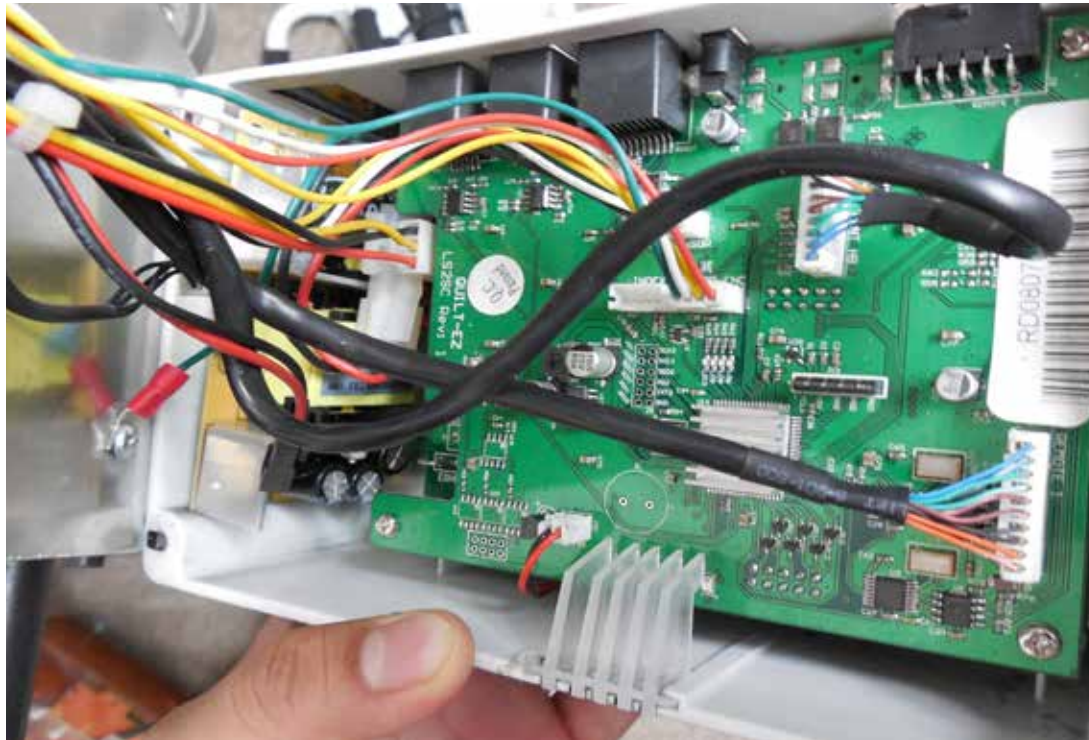
### 2 Connect Index, Handle Bars

Connect the handle bar and display wires as shown at right. Each of the ports will be labeled. Be sure to plug into the correctly labeled ports on the PCB.





## Attach PCB Box



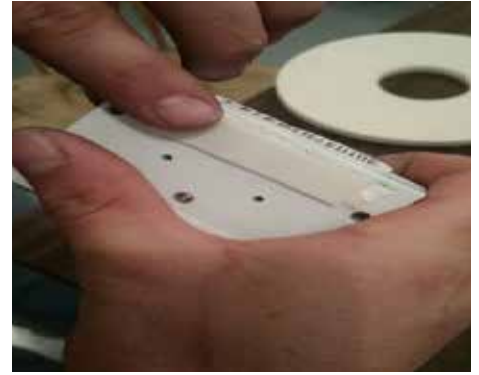
- 3** Attach PCB Box to rear plate using the four 8-32 1/2" screws.

Make sure that no wires lie over the ports as you attach the PCB box or there may be noise interference.

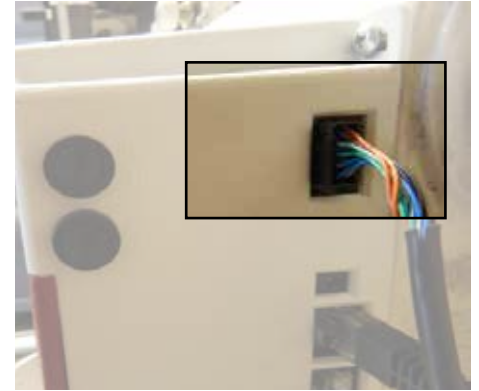


# Attach Rear Display

- 1** Mount the rear display to the top of the PCB control box with the double sided tape.

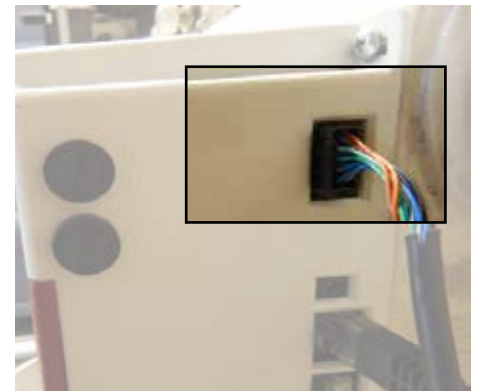
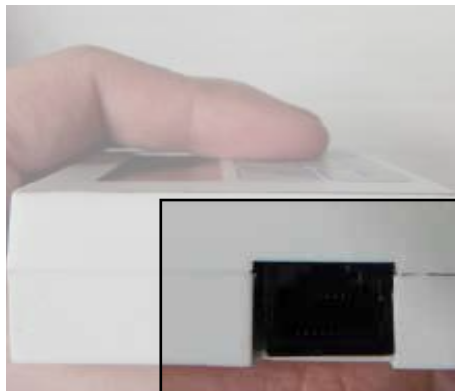


- 2** Plug the other side of the rear handlebar wires into the bottom of the rear display using the respective sides.



- 3** Plug the ethernet end of the rear display cable into the port on the rear display

Plug the other end into the port labeled Rear Display on the PCB control box.



# Quilt EZ



## *Perfect Stitch* Machine Upgrade

### **Still need help?**

Visit [support.quiltez.com](http://support.quiltez.com) for  
tutorial videos and additional  
help documentation