How to Attach Butler Robotics to an ABM Innova

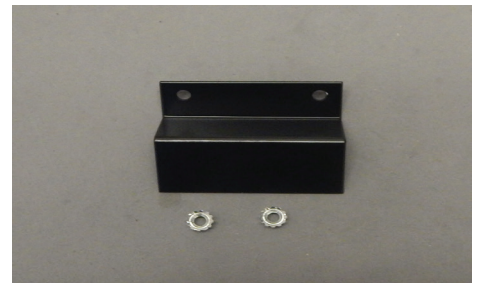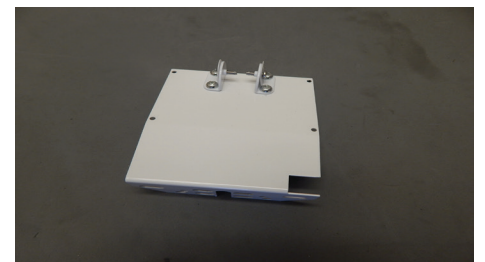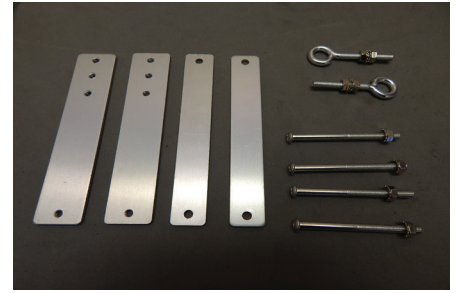| Bag #	Contents	Picture
12	1-White Belt *(15')*	
14	1 - Black Belt *(86")*	
26	10-5" Zip ties 5-10" Zip Ties 10 - Plastic Anchors 2 - Washers *(M5)* 2 - Screws *(M5 x 12mm)*	
28	1 - Motor Pulley Cover 2 - Nuts *(M5 K-Lock)*	
39	1 - Universal Display Bracket 4 - Screws *(M6 x 8mm)* 4 - Nuts *(M6)* 2 - Screws *(8-32 x 0.5)* 2 - Plastic Washers	
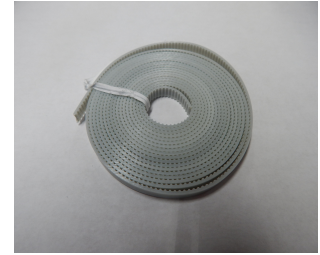
42

4 - Metal Clamps
2 - Eye Bolts *(M5)*
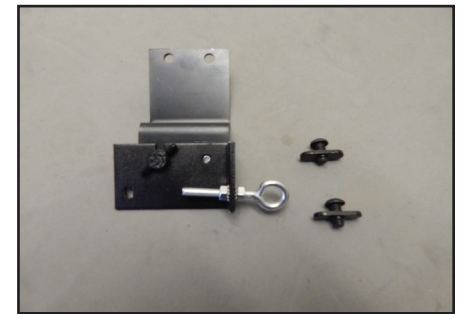4 - Screws *(M5 x 60 mm)*
8 - Nuts *(M5 K-Lock)*

76

1 - Front Motor Box Bracket
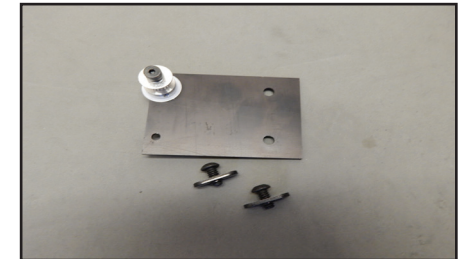2 - T Nuts *(w/ Screws)*
2 - Washers
2 - Screws *(M5-12mm)*
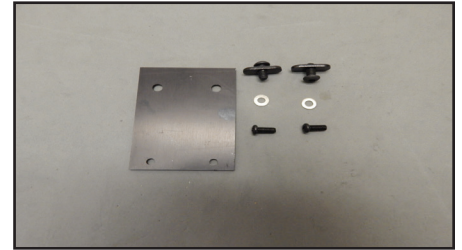
77

1 - Carriage Bracket
2 - T Nuts
1 - Small Screw *(10-24 x 0.25)*
1 - Thumb Screw *(10-24 x 0.5)*
1 - Eye Bolt *(M5)*
2 - Nuts *(M5 K-Lock)*

78

1 - Idler Pulley Bracket
2 - T Nuts
1 - Shoulder Screw
1 - Pulley
1 - Nut *(10-24 K-Lock)*
1 - Plastic Washer

Cables

Vary by machine

How to attach a T-Nut

Frames and machines made from extruded aluminum have channels built into them when they are manufactured.
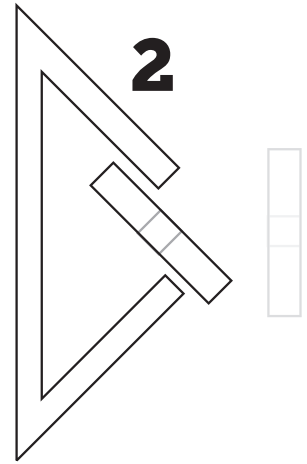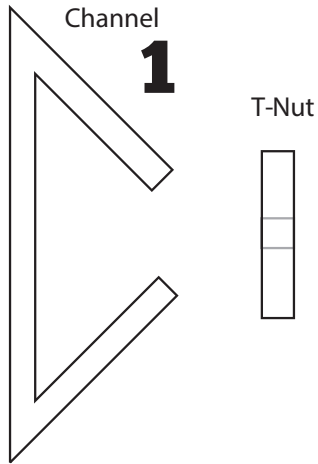
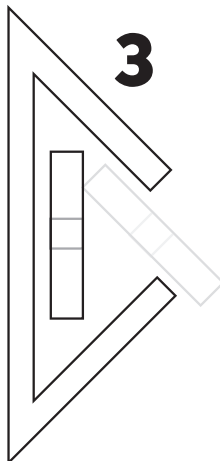We will insert nuts, called T-Nuts, into these channels to attach to the frame.

Channels

Channels

Install T- Nut

Cross-section view

How to attach a T-Nut

Slide one end of the
T-nut into the channel

Channel

1

T-Nut

2

With one end inside,
slide the remaining end
into the channel.

3

4

Screw

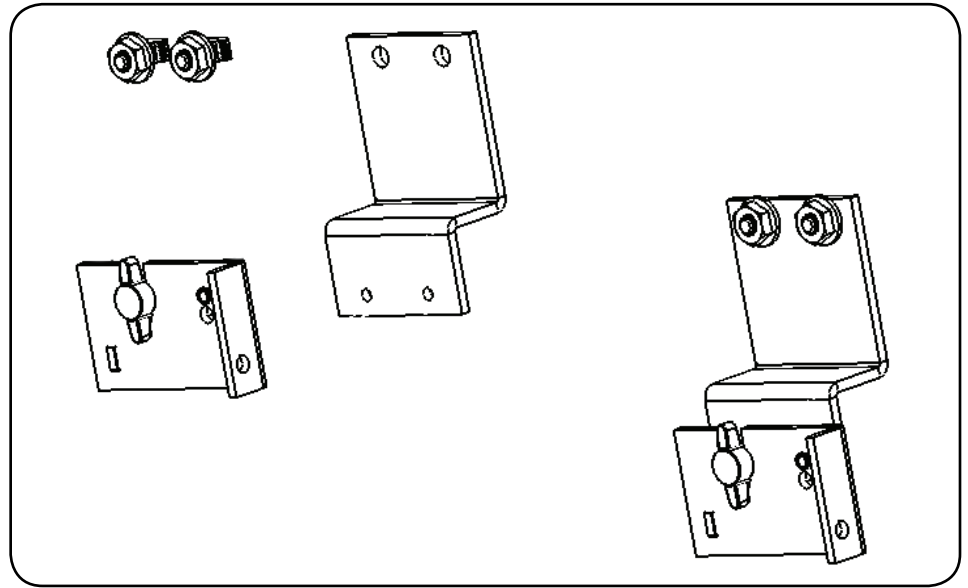Position the screw
above T-nut.

Screw into place.

5
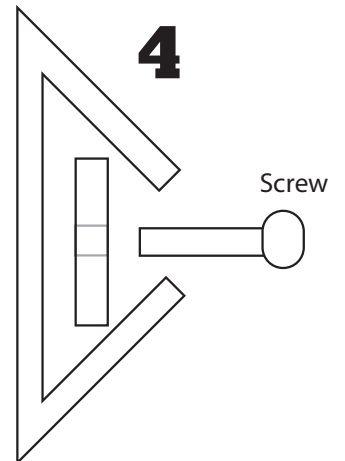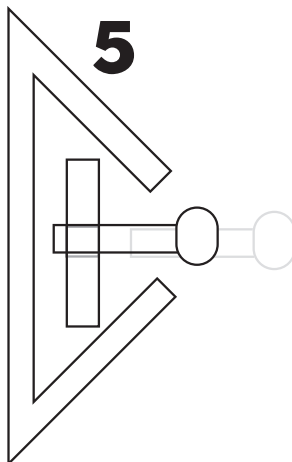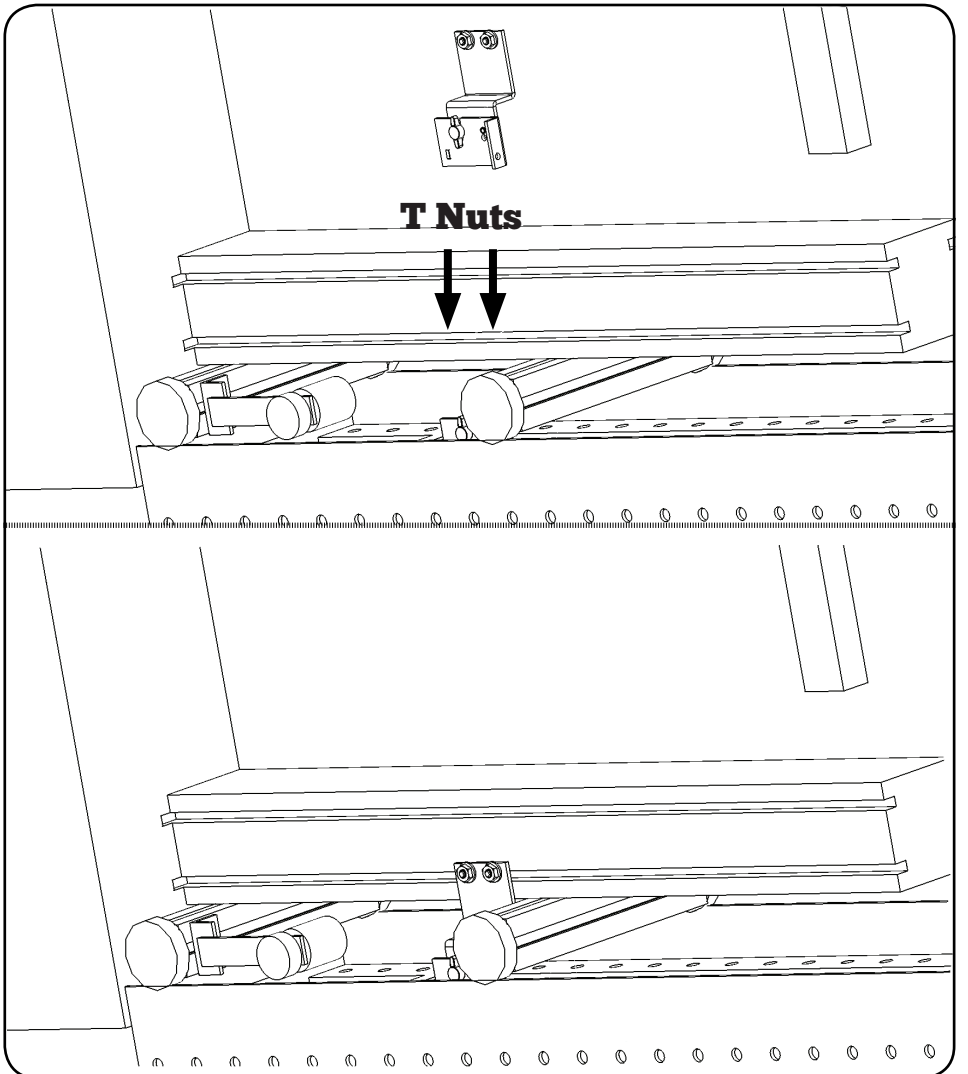
Install T- Nut

Install Belt Bracket

1 Attach two brackets together in not attached already. Insert screws into top two holes.

(Bag #77)

2 Insert a pair of T Nuts into the channel on the side of the machine indicated at right.
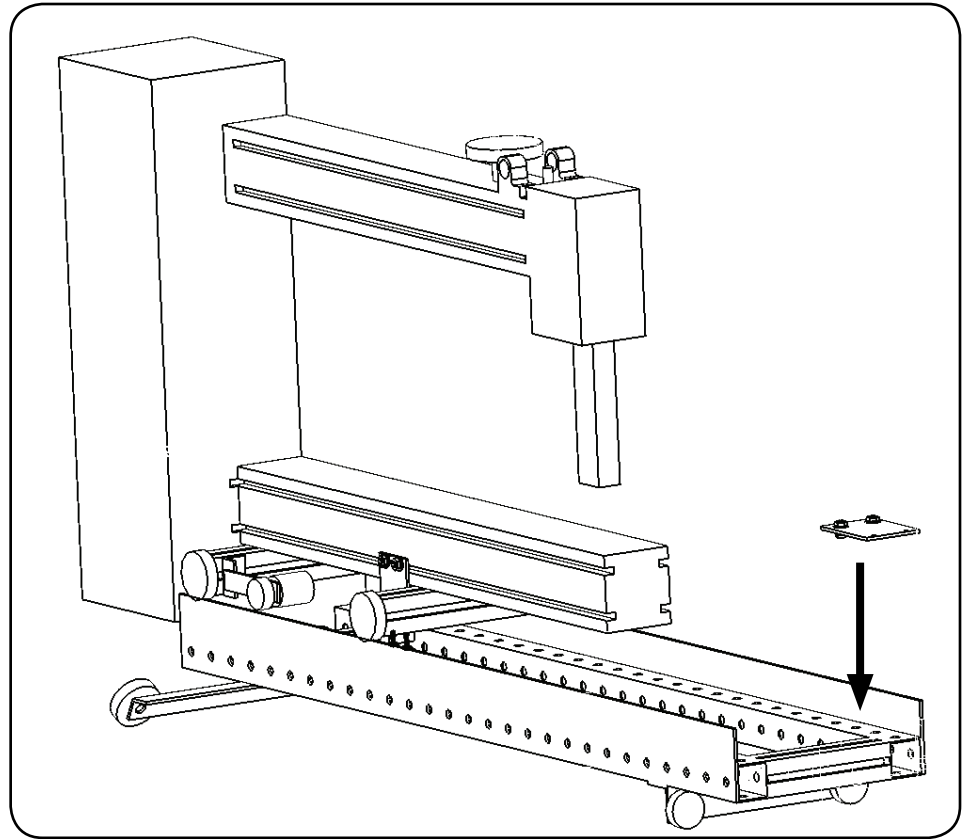
Install screws into T Nuts to secure Bracket.

T Nuts

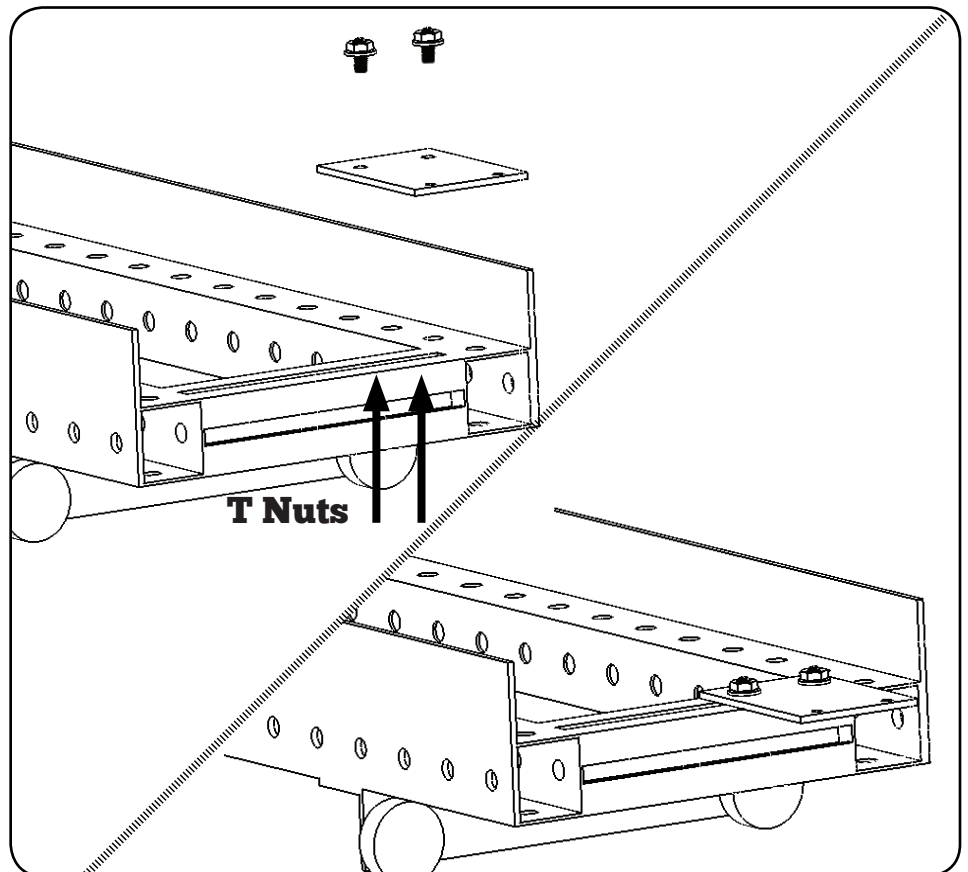# Attach the Front Carriage Bracket

1 Install the bracket on the front of the carriage where indicated at right.
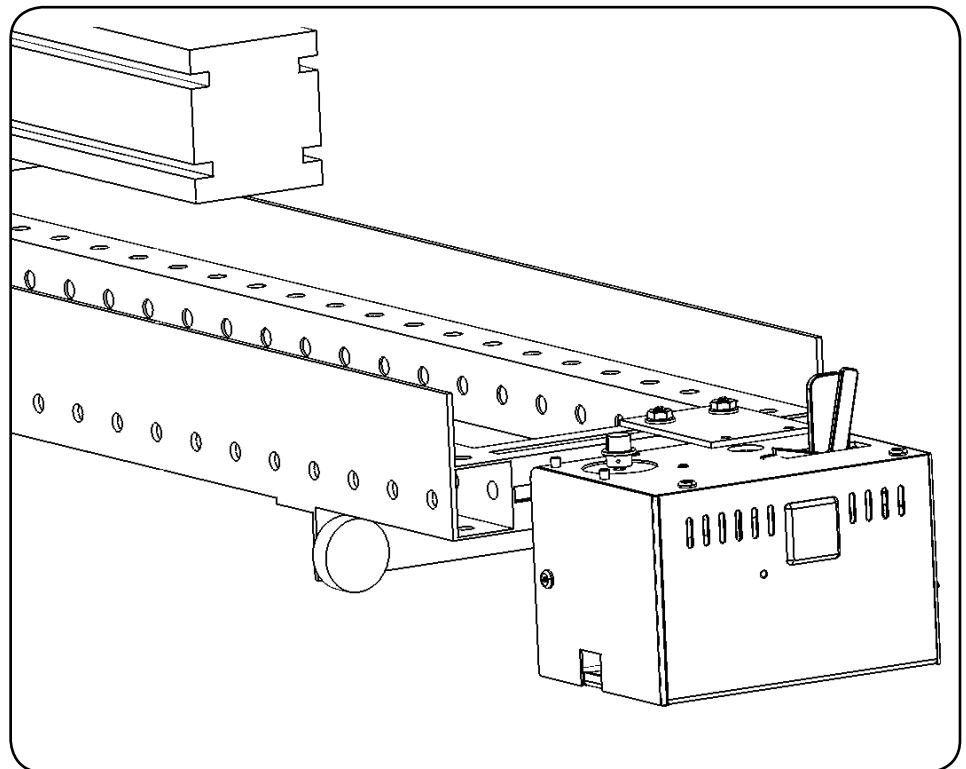
(Bag #76)

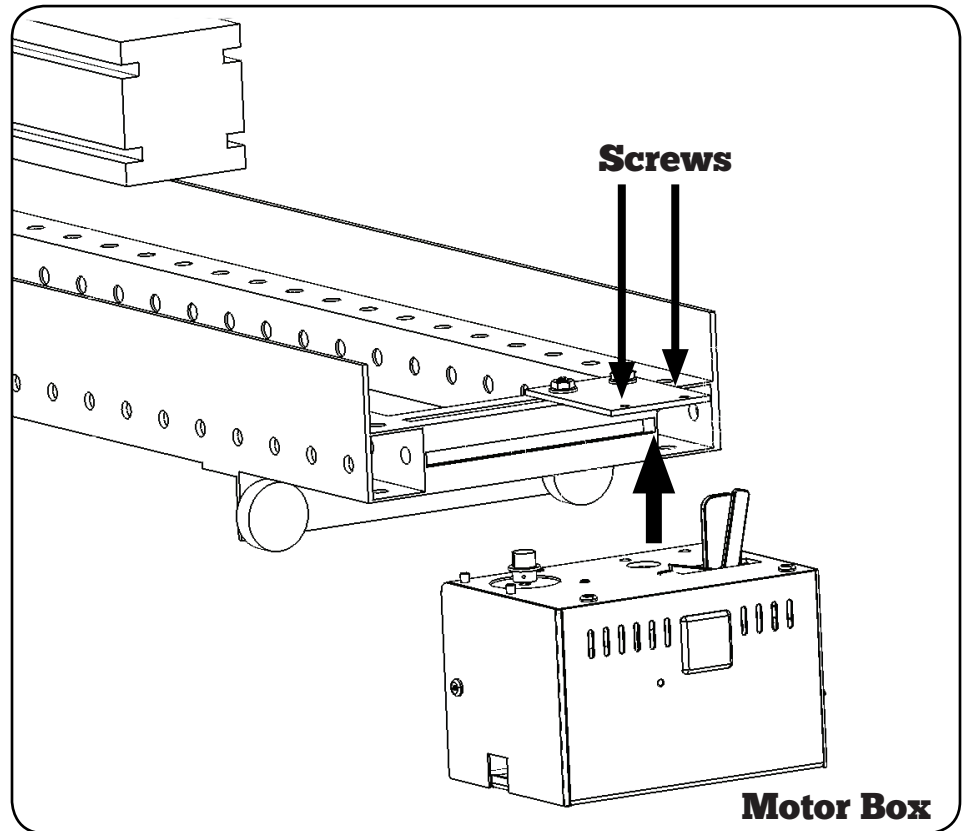**2** Insert a pair of T Nuts into the channel on the side of the machine indicated at right.

Install screws into T Nuts to secure Bracket.

T Nuts

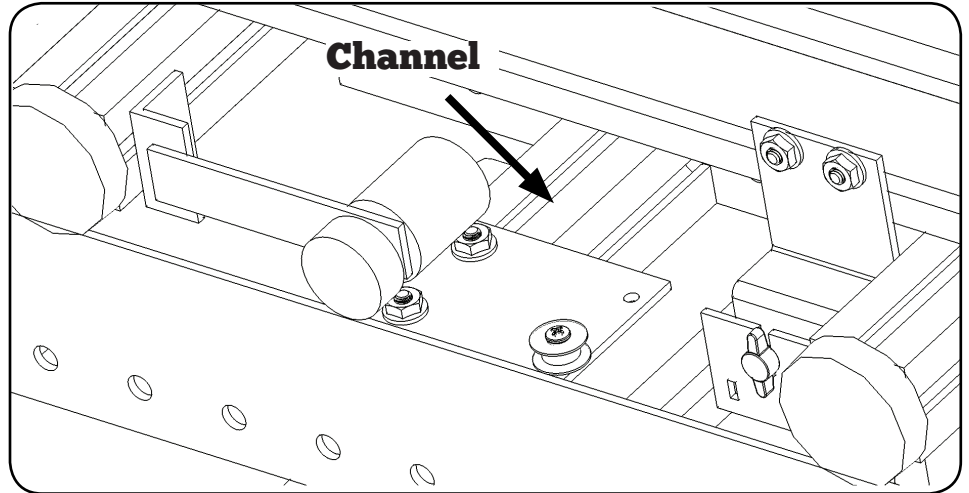# Attach the Motor Box

3 Attach Motor Box to front carriage bracket with the two provided screws.

Screws

Motor Box

Attach Carriage Brackets

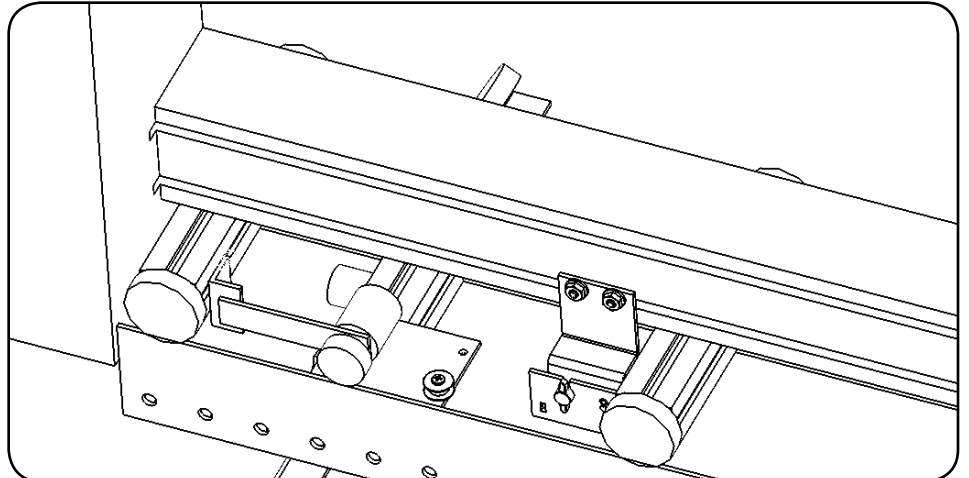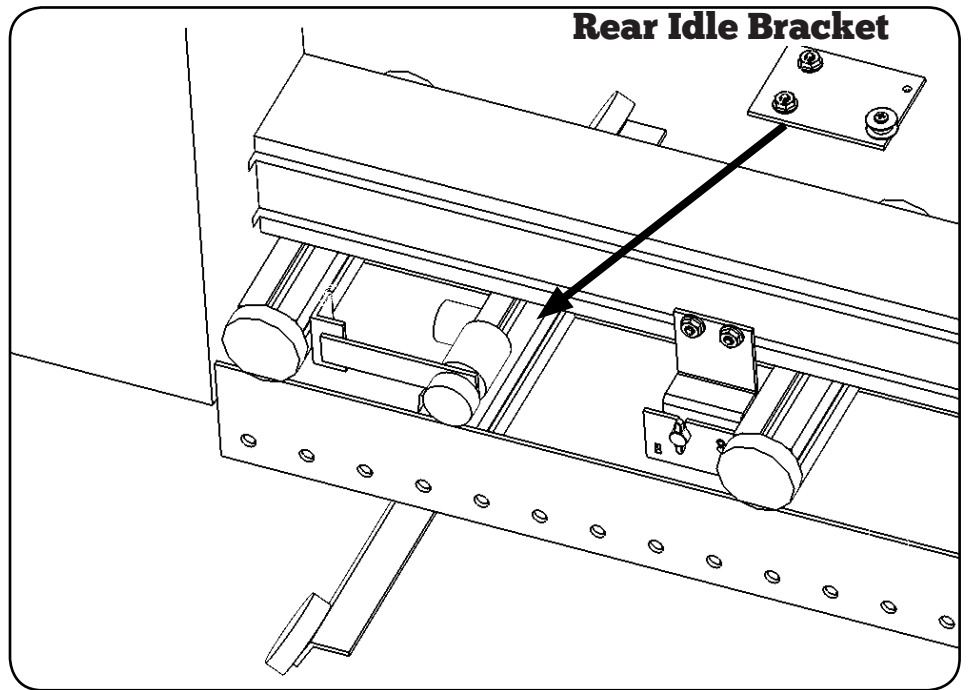# Attach the Rear Idle Bracket

1 Insert a pair of T Nuts into the channel on the side of the machine indicated at right.

(Bag #78)

Channel

Rear Idle Bracket

2 Install Rear Idle Bracket Screws into T Nuts to secure Bracket.

Install Black Belt

1 Using the belt clamps, attach one end of the black belt to the indicated bracket, and wrap the belt around the idle pulley, **teeth-side facing the pulley.**

(Bag #77)

For help using belt clamps refer to appendix a

2 Loop the belt around the Motor box pulley as shown at right, **teeth side facing the pulley.**

Belt Clamps

Black Belt

Rear Idle Pulley

Motor Box Pulley

3 Install eye bolt into bracket.

Using the belt clamps, attach the remaining end of the black belt to the included eye bolt.

The belt should be taut with less than 1/4" of play

Eye Bolt
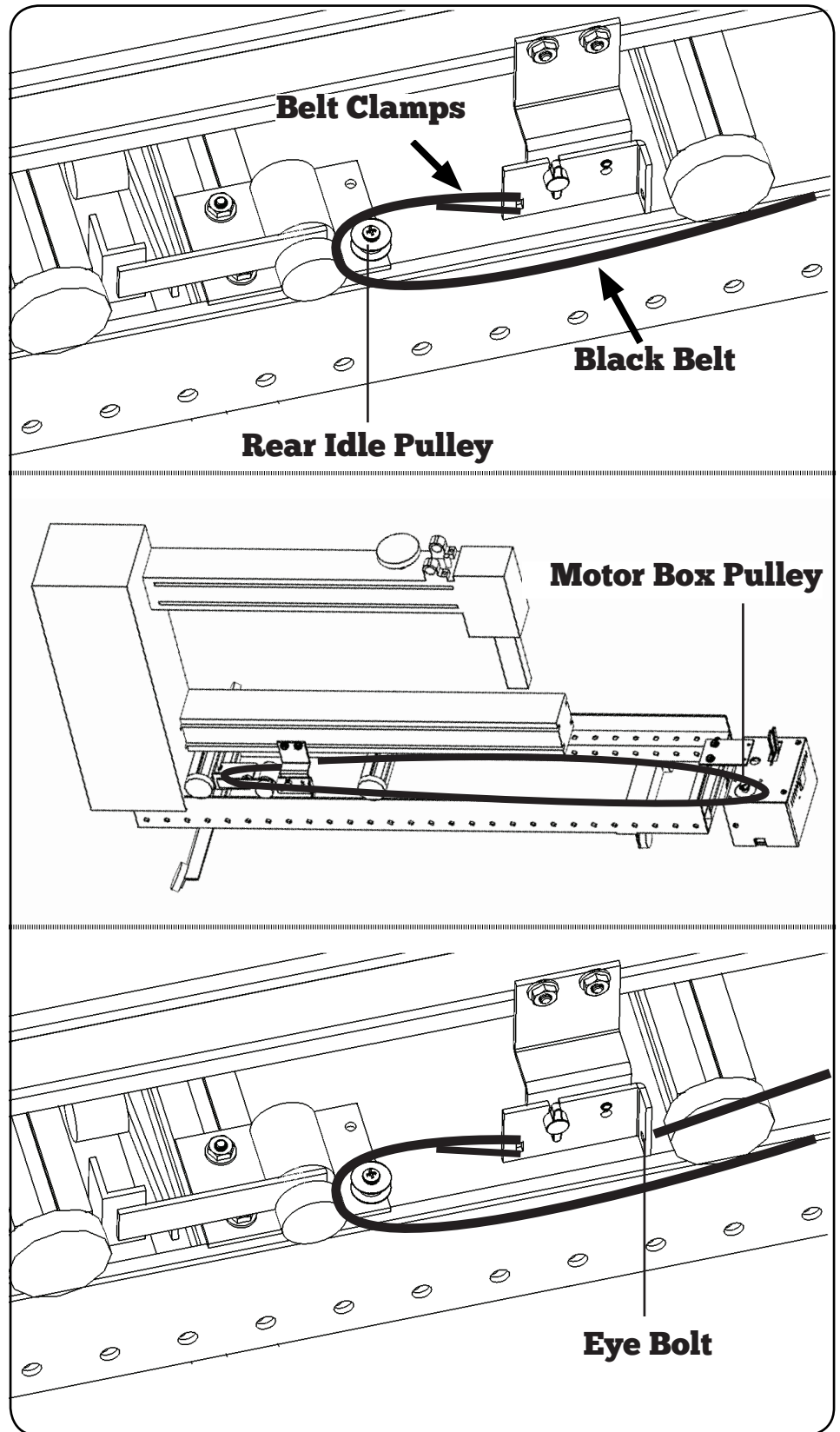
Install White Belt

Install White Belt

1   Attach the frame clamps onto both sides of the frame and secure into place with the provided screws.

Align them roughly level with the side pulley on the black motor box.

(Bag #42)

Inside view   Outside view

Frame depicted may not be the same.

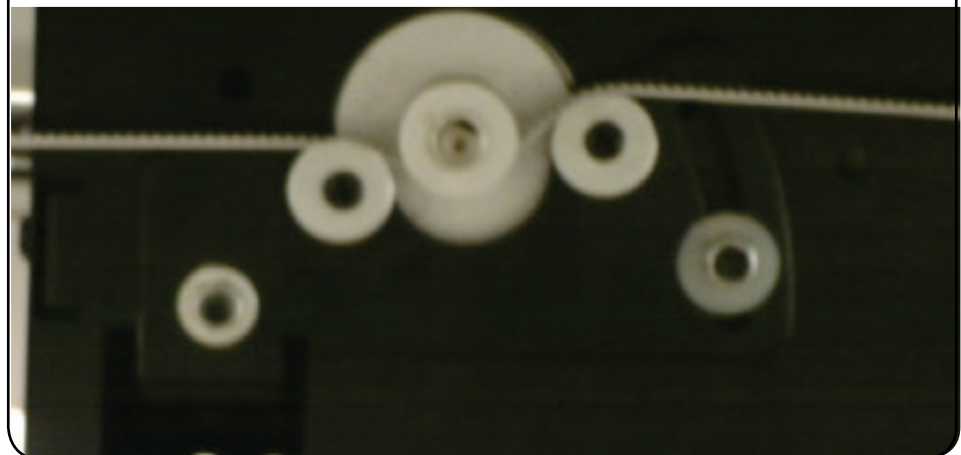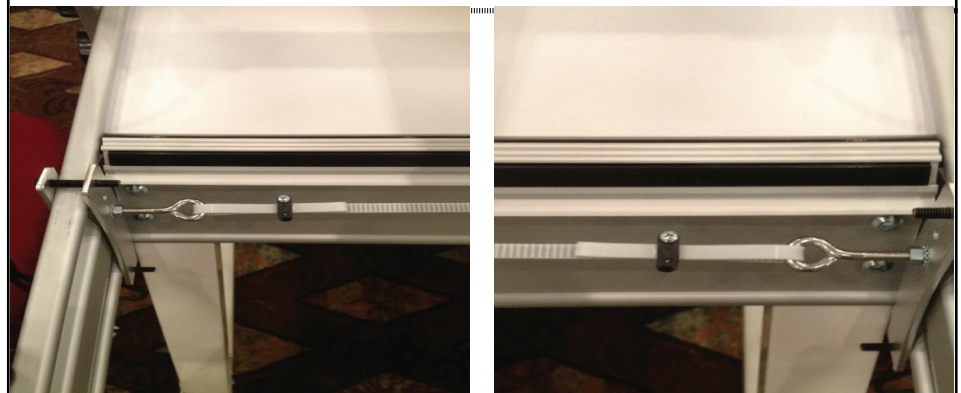**2**   Attach end of white belt to eye bolt with belt clamps.

Install the eyebolt into the frame clamp using the available hole.

Draw the belt through the Motor box pulley and attach the belt to the clamp with the available hole on the opposite side of the frame.

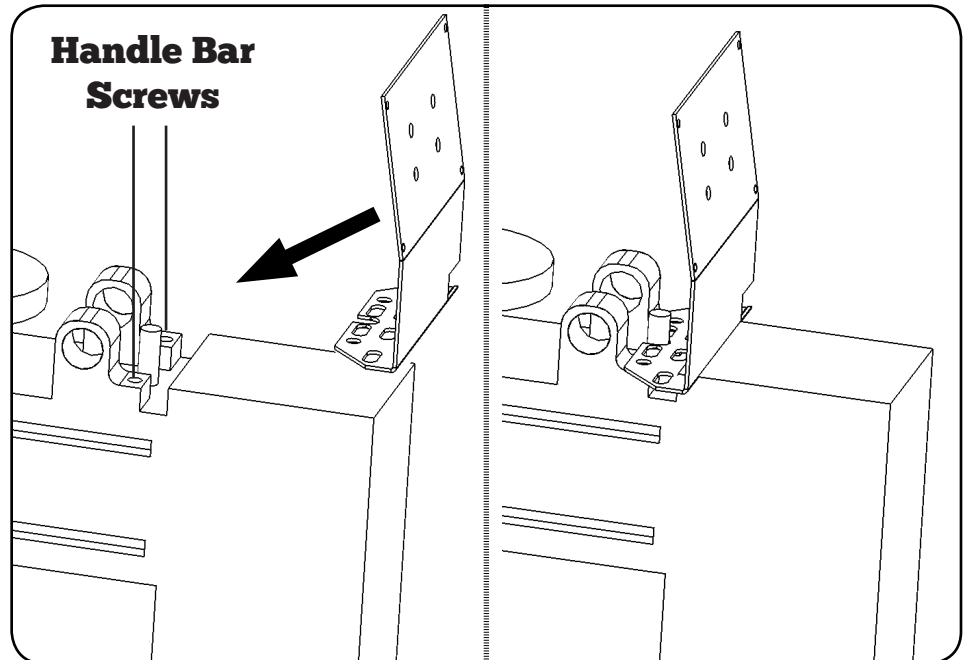Adjust frame clamps as necessary to align white belt with Motor box pulley.
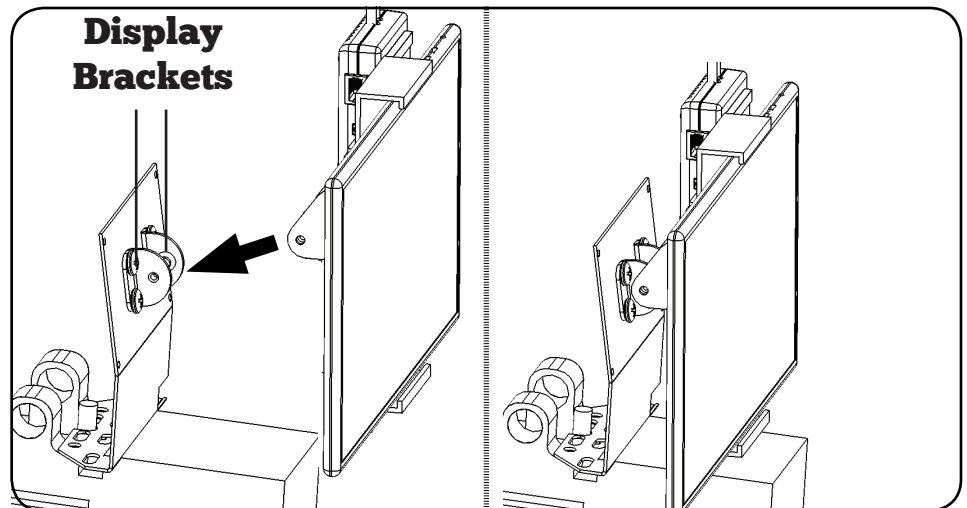
(Bag #12)
(Bag #42)

Install Display

1   Remove top two screws on machine head, position the bracket on the head, then reinstall screws to attach display.

(Bag #56)

Handle Bar Screws
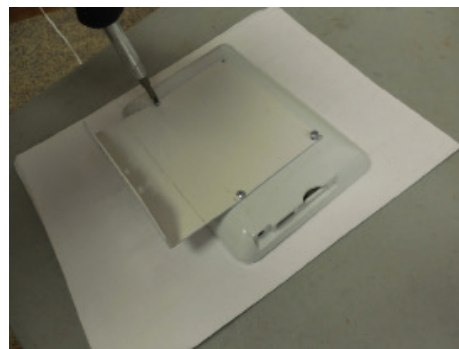

For "Android" Display

Install display brackets, then install display onto display brackets using provided screws.

Display Brackets

For "Linux" Display
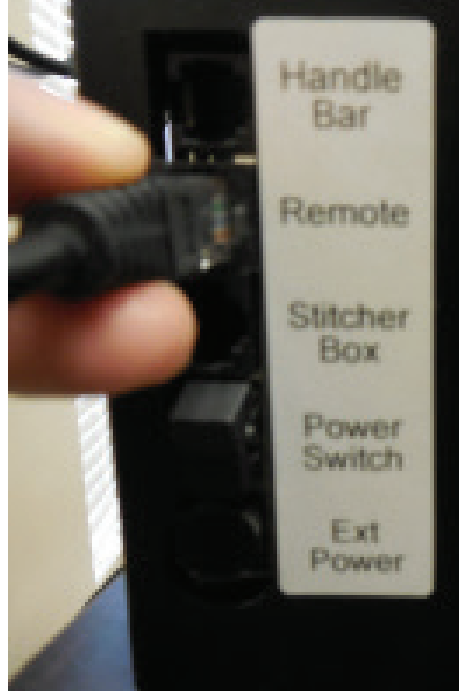
Use included screws to attach to bracket.

Insert SD Card into display (in the side port).

3   Plug the display wire into the remote port.

For Linux dislays, connect the remaining end into the bottom of the display.

For Android Displays, see the **Installing/ Troubleshooting your Android Tablet** document.


Connect Handle Bars

1   Remove the rear cover to expose native electronics.

Locate the handle bar wires Labeled "L1" and "R1."

Remove the handle bar wires from their ports, plug in the included handle bar cable ends into these ports, then reinsert "L1" and "R1" into the handle bar junctions in their respective original ports.
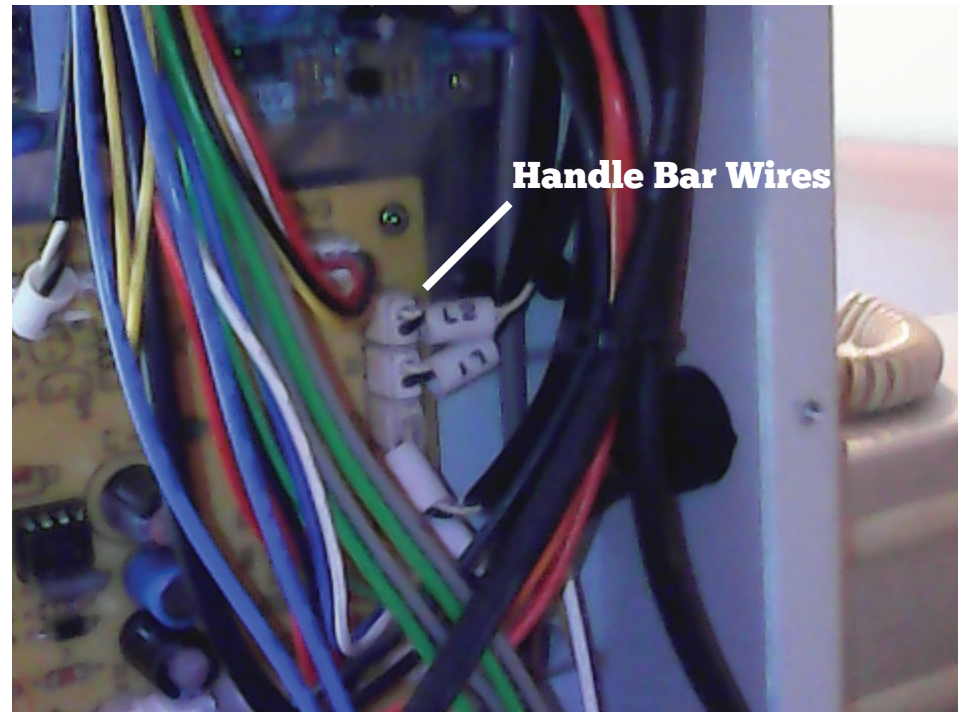
Handle Bar Wires

3 Plug the remaining end of the handle bar wire into the handle bar port.
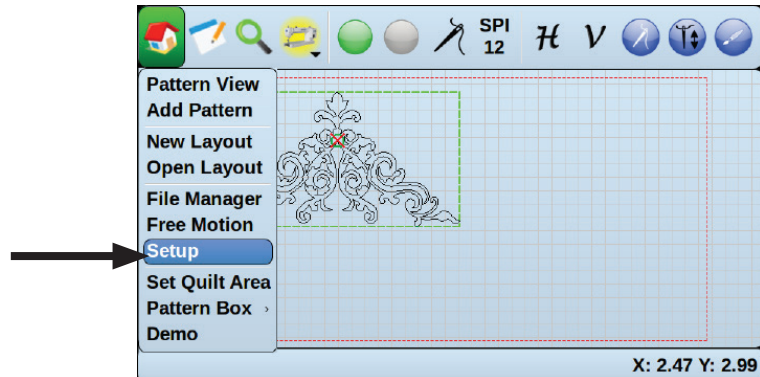
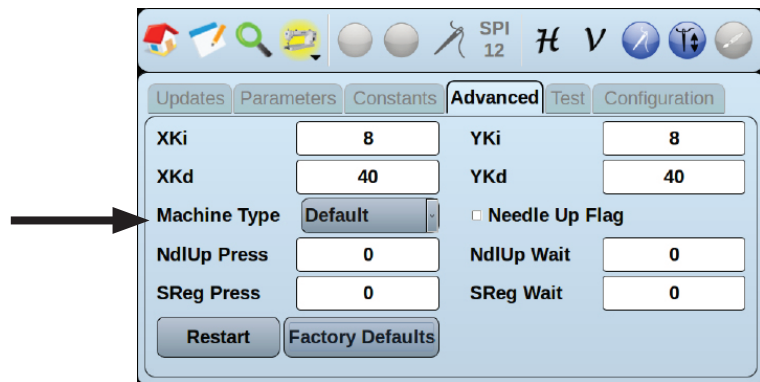**Connect Handle Bars**
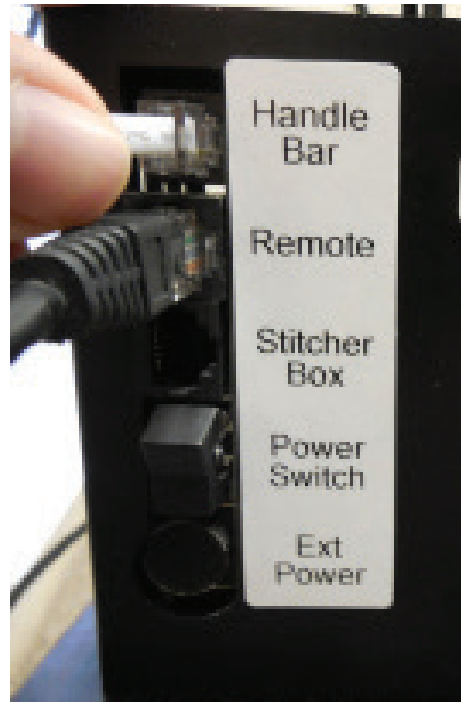
Set Machine Type

If you have a Quilt-EZ Perfect Stitch Regulator, then set your machine type to Default.

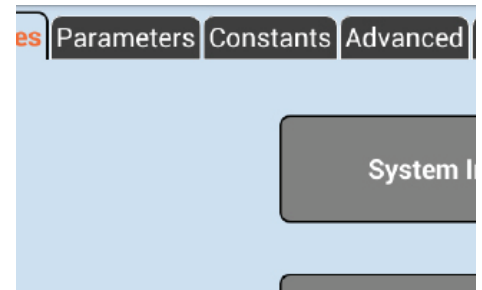**7" Tablet:**

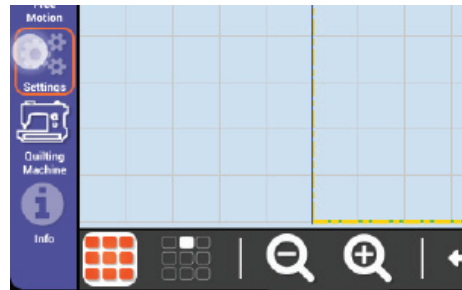**1** Power on the display, go to **Home**> **Setup**

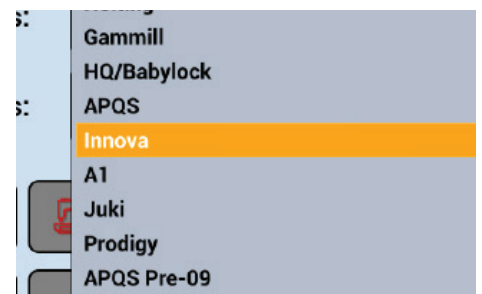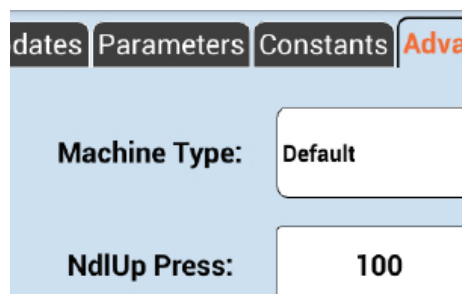**2** Go to the **Advanced** tab and set the machine type to Innova.

10" Android Tablet:

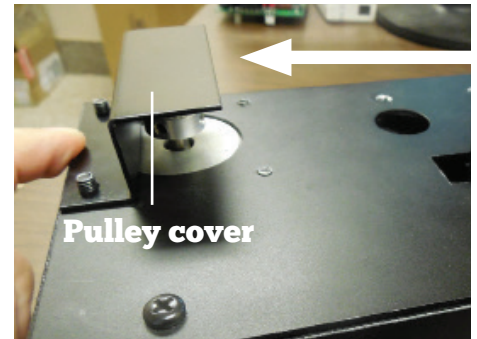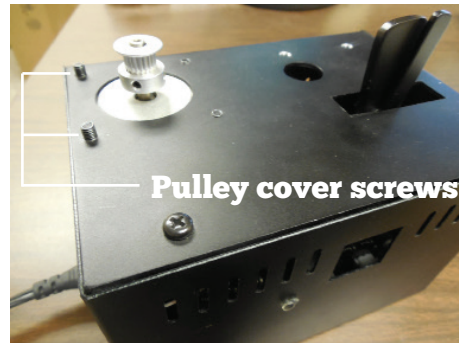**1** Power on the display, go to **Settings** > **Advanced** tab.

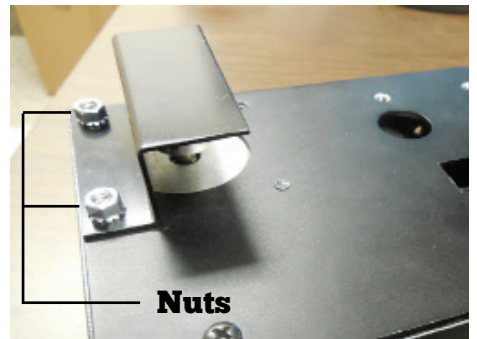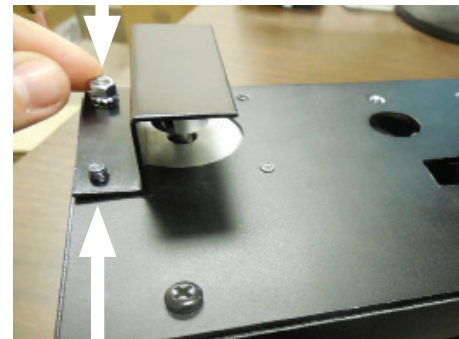**2** Select Machine Type and set the machine type to Innova.

Motor Pulley Cover (Optional)

1 Place cover onto two screws near the top motor box pulley.

Pulley cover screws

Pulley cover

Tighten nuts onto top of screws to secure the Pulley cover.
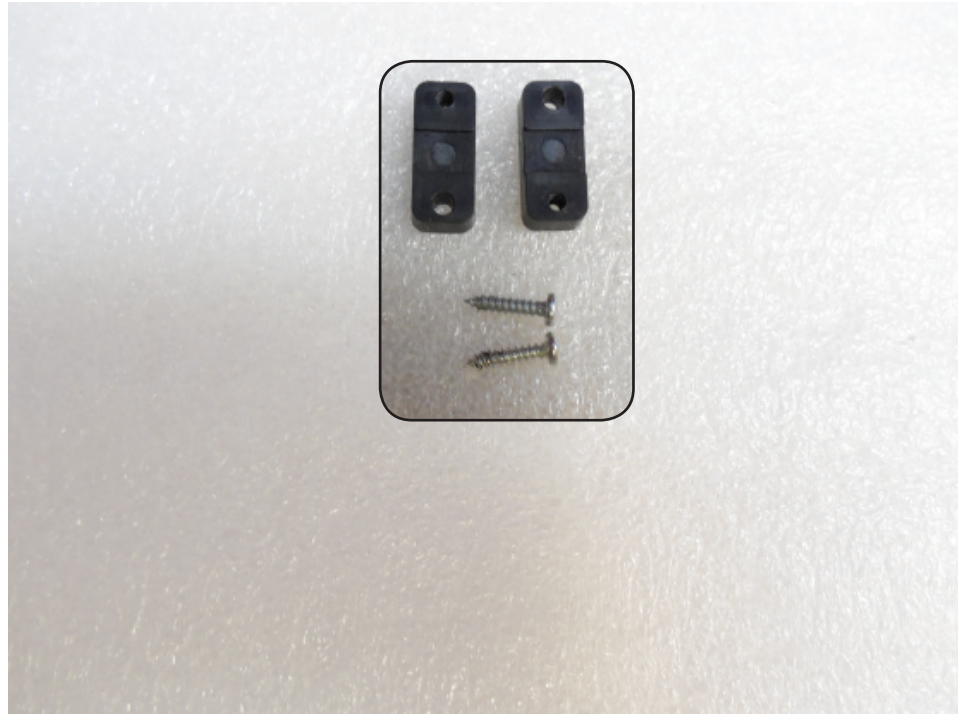
(Refer to **Bag #28**)

Nuts

What is the Pulley Cover for?

The Motor Pulley cover is an extra safety precaution to protect your fingers from getting entangled in the belt.
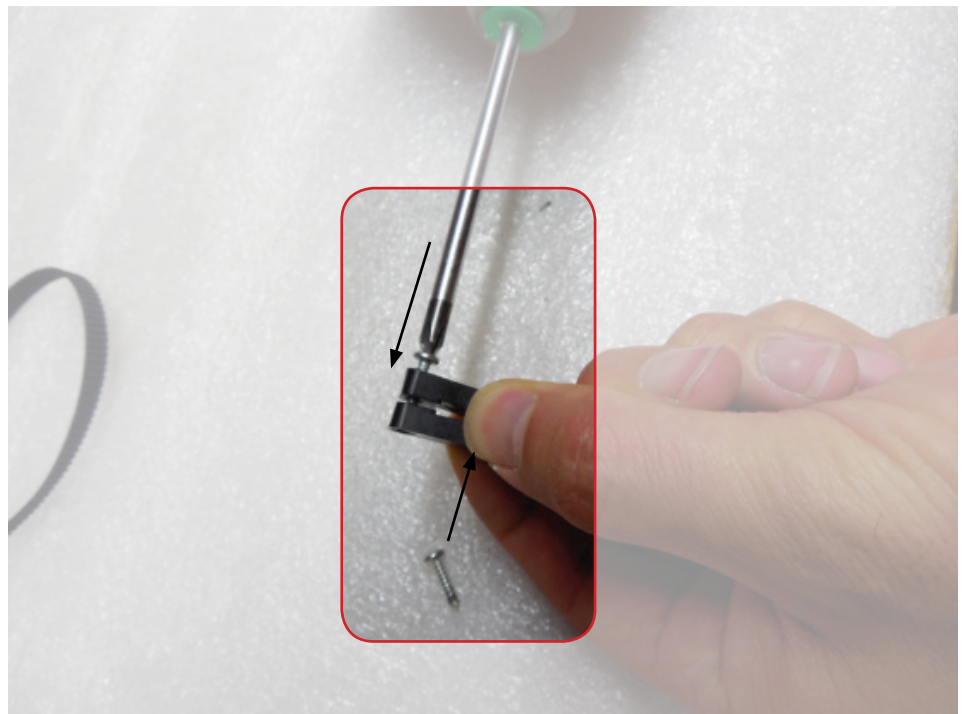
We recommend it is installed after all your belts are installed and connected to the pulleys.
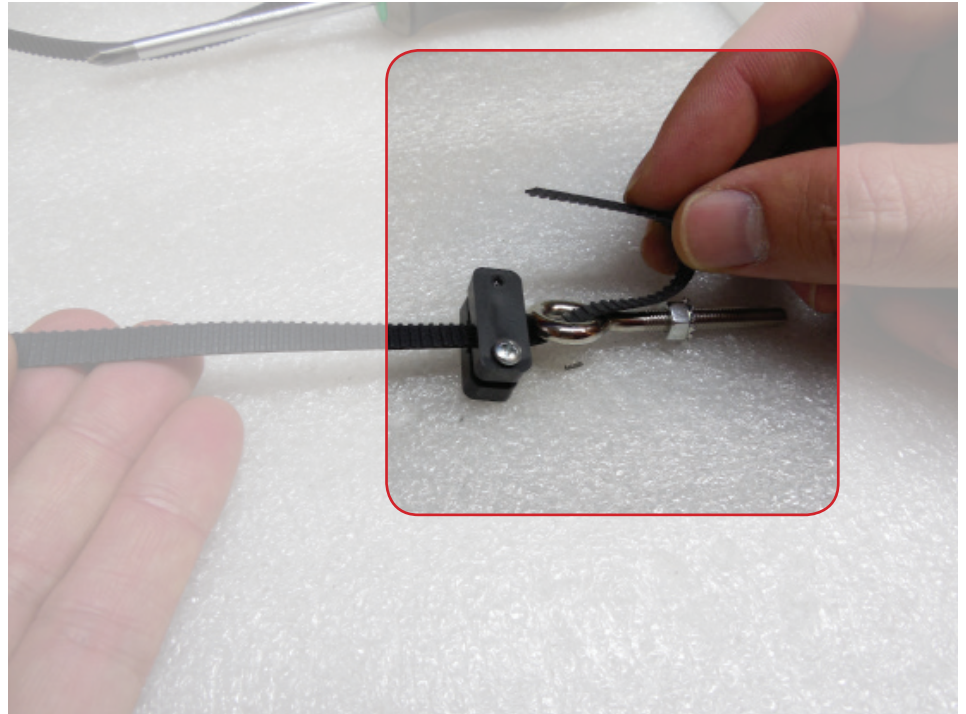
Appendix A - How to use Belt Clamps

A belt clamp consists of two clamps and two screws.

1 Using a Phillips screwdriver, insert each screw on opposite sides of the clamps and tighten halfway.

2 Thread the belt between the clamps, loop it around and reinsert it between the clamps.

3 Align the belt teeth, then finish tightening the clamps.

Appendix B- Additional help

Installing cables

Please refer to the Connecting Robot to Quilt Machine instruction set for help installing cables.
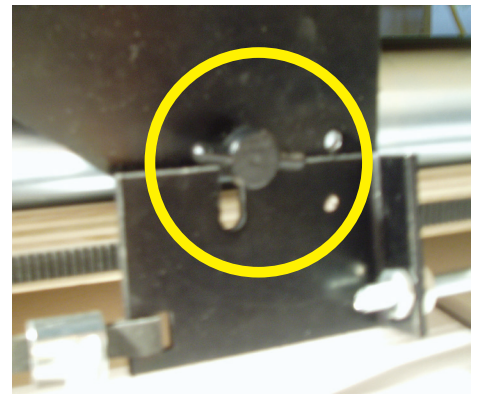
Power on the robotics

Use the power switch located on the side of the motor box with the ports to power the motor box off and on.

Disengage belts for free motion

In order to use free motion with the butler connected the belts will need to be disengaged.

To disengage the x-belt, move the locking lever away from the edge of the motorbox.

To disengage the y-belt, loosen the wingnut on the carriage bracket.

You can now use free motion quilting.

Still need help?

Visit quilt-ez.com to learn how to
contact us and find additional help
material.