

X-1 Installation Instructions



7/24/22

This unit was designed to be installed ONLY on the Lectric XP 2.0 Step-Thru E-Bike. No soldering is required. If you do not feel confident in installing this unit, please hire someone who is qualified. Installation is made at your own risk and we are not responsible if you damage your E-Bike. If you damage your E-Bike while installing this product, it will very likely void your E-Bike warranty.

Technical Support:

Technical support is available through email ONLY. Our email address is markc632@yahoo.com.

Tools Needed:

A Voltmeter or Digital Multimeter (Available at Harbor Freight or Amazon for under \$10.00)

4mm Hex Wrench

#2 Philips Head screw driver

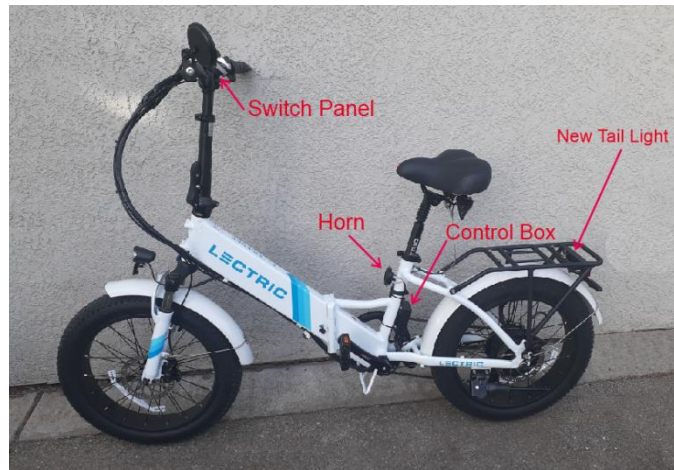
Slotted screw driver

Pliers

Scissors or wire cutters to trim the tie wraps

8mm Combination Wrench

10mm Combination Wrench



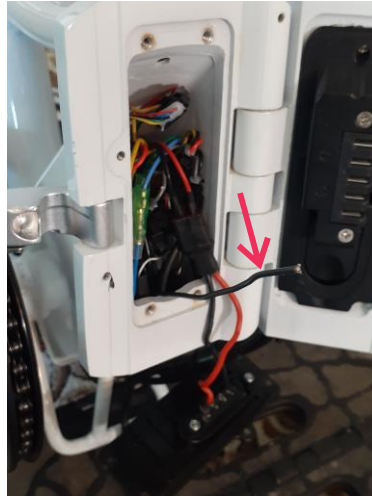
X-1 POWER CABLE

The first step is to install the X-1 POWER CABLE with TEST STRIP attached. After the cable is connected to the E-Bike, voltage test MUST be performed and verified before continuing. Failure to do this could result in damage of the X-1 unit and/or your E-Bike.

1. Remove the key from the E-Bike. Fold the E-Bike so you have access to the E-Bike Battery connector. Remove the 5 screws from the E-Bike POWER CONNECTOR on the "REAR Side" of the E-Bike frame. Pull the connector away from the frame. The E-Bike wiring and Controller should be visible at this point.



2. Straighten the GUIDE WIRE attached to the X-1 POWER CABLE. From the bottom of the E-Bike, feed the stiff GUIDE WIRE into the bottom of the lower cavity as shown below. This is the cavity that the E-Bike controller is located. Gently wiggle the guide wire as you feed it through the cavity until it exits the cavity on the upper side. Try to position the GUIDE WIRE so it is at the bottom on the cavity. Gently pull the guide wire through until the X-1 POWER CABLE wires exit the upper cavity. Remove the GUIDE WIRE by removing the electrical tape that attaches the GUIDE WIRE to the X-1 POWER CABLE.



3. Using a **BLUE Scotchlok** Snap Lock connector(supplied), connect the Black wire from the X-1 POWER CABLE to the Black wire on the E-Bike power connector. Do NOT strip this wire.



View the following Video on Youtube for instructions on how to install the Scotchlok connector.

Video Link to Scotchlok Video:

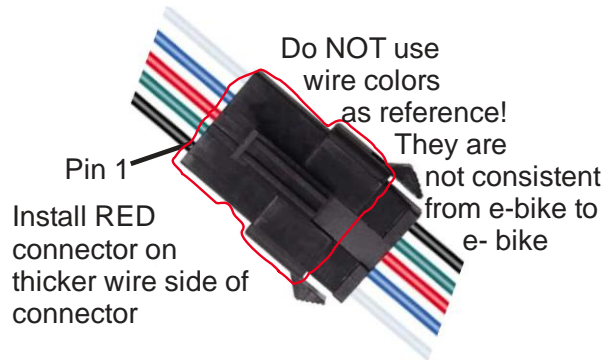
https://www.youtube.com/watch?v=9U0N_BFHyaY

QR Code to view Scotchlok Video



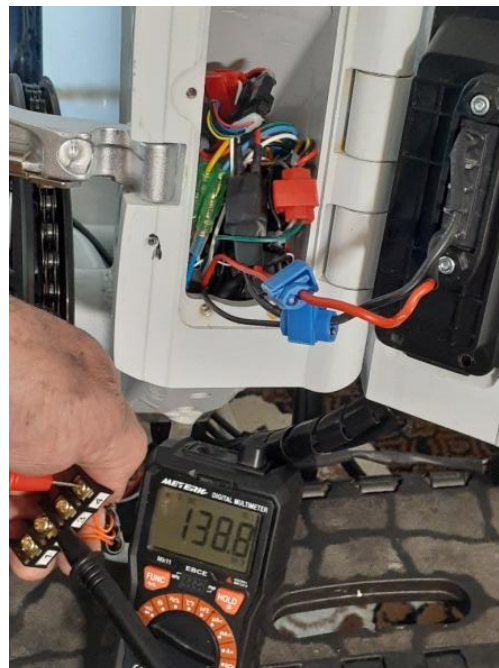
4. Using a **BLUE Scotchlok** Snap Lock connector(supplied), connect the RED wire from the X-1 POWER CABLE to the RED wire on the E-Bike power connector. Do NOT strip this wire.

5. Locate the E-Bike's 5 wire connector group within the cavity. Using a **RED Scotchlok** Snap Lock connector (supplied), connect the WHITE wire from the X-1 POWER CABLE, to the pin 1 wire, on the 5 wire connector. Install on the thicker wire side of this connector. Do NOT use wire color on E-Bike wires, to identify the pin 1 wire because the wire colors on this connector can vary from E-Bike to E-Bike. You must use the diagram below to determine Pin 1.



6. In the lower bike cavity carefully locate a two wire, connector that has two wires colored Black and Gray. There are two sets of these. On the side of the connector with the thicker wires, use a **RED Scotchlok** Snap Lock connector (supplied) to connect to the GREEN wire on the X-1 POWER CABLE to the GRAY wire. Do not strip the GREEN wire.

7. Make sure the E-Bike key is OFF. Physically connect the dangling power connector, from the E-Bike, to the connector on Front portion of the E-Bike. Make sure you have it oriented and aligned correctly.



MANDATORY VOLTAGE TEST

These voltage test MUST be performed and verified before continuing. Failure to do this could result in damage of the X-1 unit and/or your E-Bike.

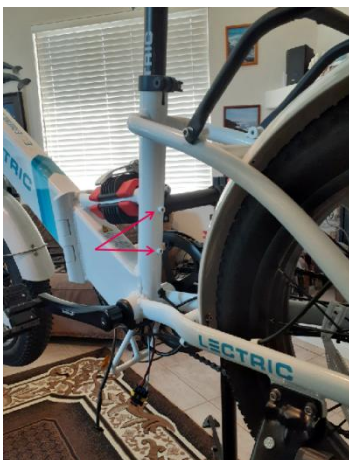
- a- Set your multimeter to read 60VDC.
- b- On the TEST STRIP connected to the lower end of the X-1 POWER CABLE, secure the Negative(Black) lead of your meter to #2 on the TEST STRIP(Grd).
- c- With the E-Bike key ON, the E-Bike Display OFF, and the Positive(Red) meter lead to #1 on the TEST STRIP. The meter should read from 43 to 54.6V DC.(Battery Voltage)
- d- With the E-Bike key ON, the E-Bike Display OFF, and the Positive meter lead to #4 on the TEST STRIP. Voltage should read under 0.6VDC or under 600mVDC. If the voltage reading is in the range of 43v to 54.6v, then the WHITE wire from the X-1 POWER CABLE, must be moved to PIN #5 on the same connector. I had to do this on my first XP 2.0 E-Bike. The wiring on the E-Bikes do not appear to be consistent.
- e- With the E-Bike key ON, the E-Bike Display ON, and the Positive meter lead on #4 on the TEST STRIP, voltage should read from 4.0V to 5.25VDC.
- f- With the E-Bike key ON, the E-Bike Display ON, and both E-Bike Brakes OFF, the Voltage on #3 of the TEST STRIP should be in the range of 4.0V to 5.25VDC.
- g- With the E-Bike key ON, the E-Bike Display ON, and either E-Bike brake ON, #3 on the TEST STRIP should measure under 0.6VDC or less than 600mVDC.

8. When ALL voltage test have passed, turn E-Bike OFF and remove the key. Remove the X-1 TEST STRIP from the X-1 POWER CABLE.

9. Carefully re-pack the wires into the lower cavity and replace the E-Bike POWER CONNECTOR with the 5 screws. If the connector does NOT fit well, try re-arranging the wires in the cavity until it goes on with only a slight amount of pressure on the E-Bike POWER CONECTOR. It might take a few attempts at re-arranging the wires to get the POWER CONNCTOR to fit properly. Be very gentle with these wires. Over tightening the screws on the POWER CONNECTOR will break the POWER CONNECTOR so just tighten till snug.

X-1 CONTROL BOX

1. Using a 4mm Hex wrench, remove the two hex screws and washers on the rear of the vertical portion of the frame that is connected to the E-Bike seat (in front of the rear tire).

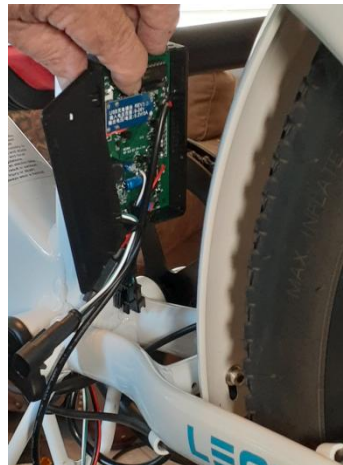


2. Open the LID on the X-1 CONTROL BOX. Do NOT remove the tape from the lid. It has electrical tape on one side of the lid, so it should open up like a door. Use the indents on the top of the CONTROL BOX to pry the TOP off. It should come off by using your finger nails.

3. There are no screws mounting the Circuit Board to the BOX. Carefully remove the Circuit Board with wires, and the plastic insulator from the BOX. Mount the CONTROL BOX, with the wire SLOT on the bottom, to the E-Bike frame using the 4mm hex screws. **DO NOT USE THE WASHERS!** Slightly **SNUG** the screws. **DO NOT OVER TIGHTEN!**



4. **IMPORTANT! Insert the plastic insulator into the BOX.** Now gently re-insert the Circuit Board back into the BOX. Make sure all wires exiting the box are located within the SLOT in the bottom of the BOX and that they do not protrude above the top edge.



5. Close the LID and snap into place.

6. Place the long strip (3 ¼") of Electrical Tape(supplied) on the un-taped side of X-1 CONTROL BOX. Center it and align the tape so that ½ of the tape should be on the side and ½ on the LID of the BOX.

8. Place one of the 2" strips of Electrical Tape on the TOP edge of the X-1 CONTROL BOX Center it and align the tape so that ½ of the tape should be on the BOX and ½ on the LID of the BOX.



9. Place the last 2" strip of electrical tape over the USB Port. This piece is used as a dust cover for the USB port. Start at the top of the box and completely cover the USB port opening. This piece is placed entirely on the side and is removed when USB charging is used.

HORN

Do NOT remove the rubber strips from either the HORN or the HORN Clamp. These are to help protect the E-Bike paint and to help prevent rattling.

1. The horn is mounted to the frame as shown in the picture below. It is mounted using the supplied clamp.



2. Once mounted, connect the two female connectors from the X-1 CONTROL BOX, to the horn. The horn is NON-POLERIZED, so you can connect the red wire to either horn connector.

3. Using the 2 Long black tie wraps, secure the cable to the frame as shown.

Note: If the horn should NOT "BEEP" correctly, try slightly physically bending it forward, away from the frame. Do this while the horn is clamped to the frame.

SWITCH PANEL

Do NOT remove the rubber strip from the SWITCH PANEL Clamp. This is used to help protect the paint and to help prevent slippage.

1. Mount the X-1 SWITCH PANEL to the handle bar as shown below.



2. Starting at the X-1 CONTROL BOX, connect the SWITCH PANEL cable (5 pin) to the X-1 CONTROL BOX using either end of the cable. Route the cable as shown below, and use tie wraps to secure the cable to the E-Bike at least every 8 inches or so.



3. Connect the SWITCH PANEL to the SWITCH PANEL CABLE.

TAIL LIGHT

1. Remove the stock tail light by removing the two nuts on the rear using an 8mm Combination Wrench. Disconnect the tail light barrel connector and put a small piece of electrical tape over the open end of the connector on the E-Bike. Use a tie wrap to secure the connector to the rack frame as shown below.



2. Mount the X-1 TAIL LIGHT assembly to the E-Bike in the same location that the stock unit was mounted using a 10mm Combination Wrench.
3. Starting at the X-1 Control Box, connect the Tail Light cable (4 Pin), and carefully route the cable, using the supplied tie wraps as shown below. You can use either end of the cable at the X-1 Control Box.



4. Connect the Tail Light connector to the Tail light Cable.

TESTING

That's it! The last step is to test all functions of the X-1. See operating instructions for detailed information.

LIMITED ONE YEAR WARRANTY:

This PRODUCT is warranted against defects for a period of one (1) year from the date of the original invoice. Within this period, we will repair it without charge for parts and labor. To obtain warranty service the product must be returned to our location in California, along with a copy of the original invoice, at the customer's sole expense. After the unit has been repaired, we will ship the PRODUCT back via USPS service at our expense, only on units within the Continental United States. If any other form of return shipment is requested, or if the unit is being shipped from outside of the Continental United States, the customer will pay for 100% of the shipping cost. All units require an RMA number before returning. Please email us to obtain an RMA number and shipping information at markc632@yahoo.com.

This Warranty does not apply if in our sole opinion, the PRODUCT has been damaged by lightning or any other Acts of God, or by accident, misuse, neglect, or improper packing, shipping, modification or servicing by other than our company.

EXCEPT AS SPECIFICALLY PROVIDED IN THIS AGREEMENT, THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND IN NO EVENT SHALL Mark Crawford BE LIABLE FOR LOSS OF PROFITS OR BENEFITS, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER SIMILAR DAMAGES ARISING OUT OF ANY BREACH OF THIS WARRANTY OR OTHERWISE.