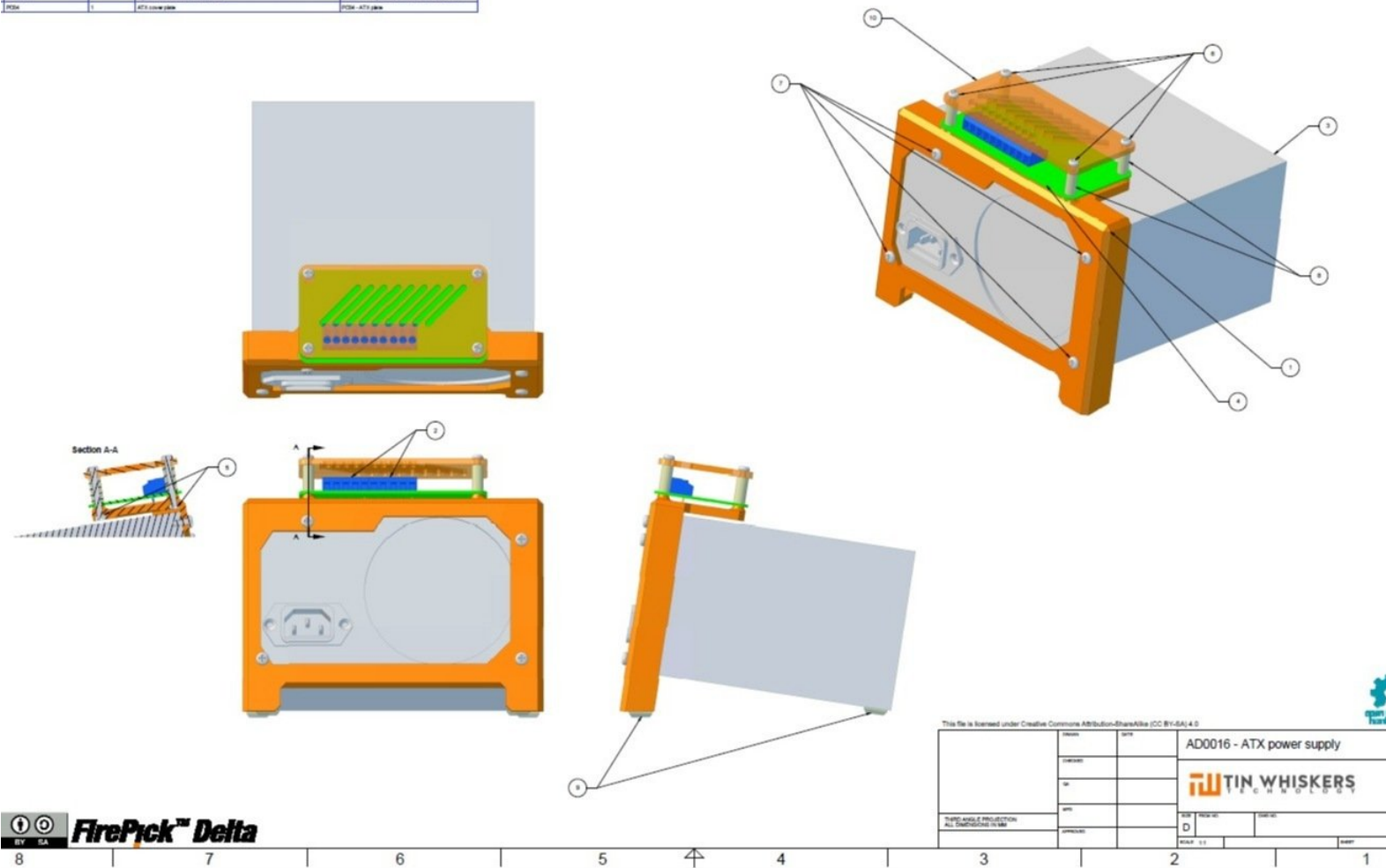# firepickdelta

Assembling the ATX power supply module

This describes using a printed frame to mount to the ATX power supply to provide a convenient means to access the +5V and +12V and to make it look pretty.

Written By: Neil Jansen

This document was generated on 2021-12-21 04:13:26 AM (MST).

© 2021

firepickdelta.dozuki.com/

Page 1 of 10

INTRODUCTION

The ATX power supply is used for supplying the +5V and +12 V for the FirePick Delta electronics. However, the ATX power connector is not very convenient for accessing these voltages. Therefore, a frame was designed which mounts to an ATX power supply that provides a place to mount a break out board that allows easy access to the power lines. By plugging the ATX connector into the back of the break out board, the voltages are now available through simple screw connectors.
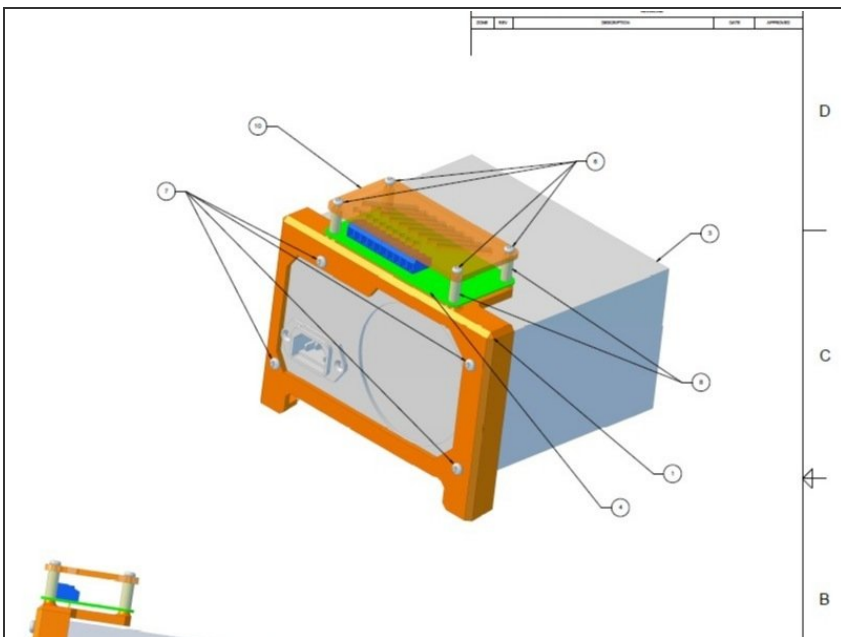
TOOLS:

- Small phillips screw driver (1)

This document was generated on 2021-12-21 04:13:26 AM (MST).
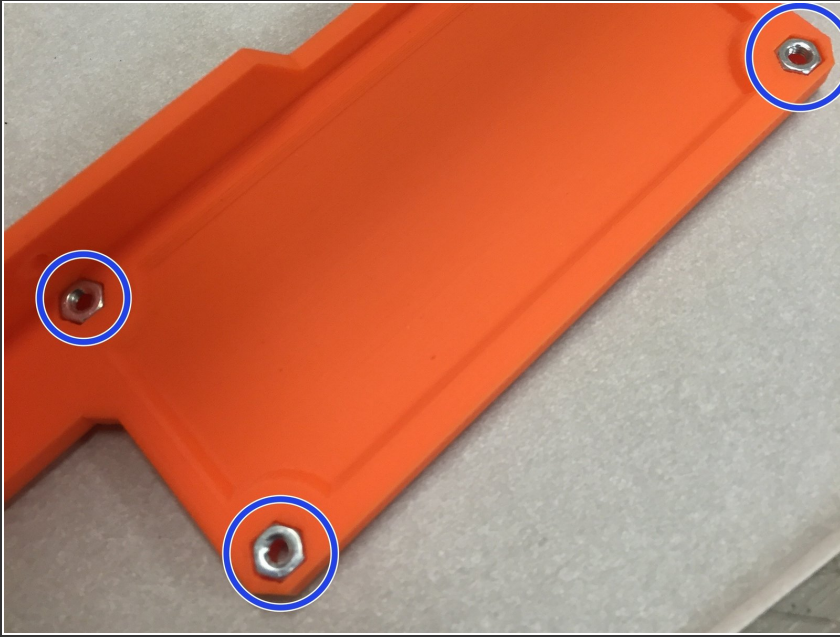
Step 1 — Gather Parts
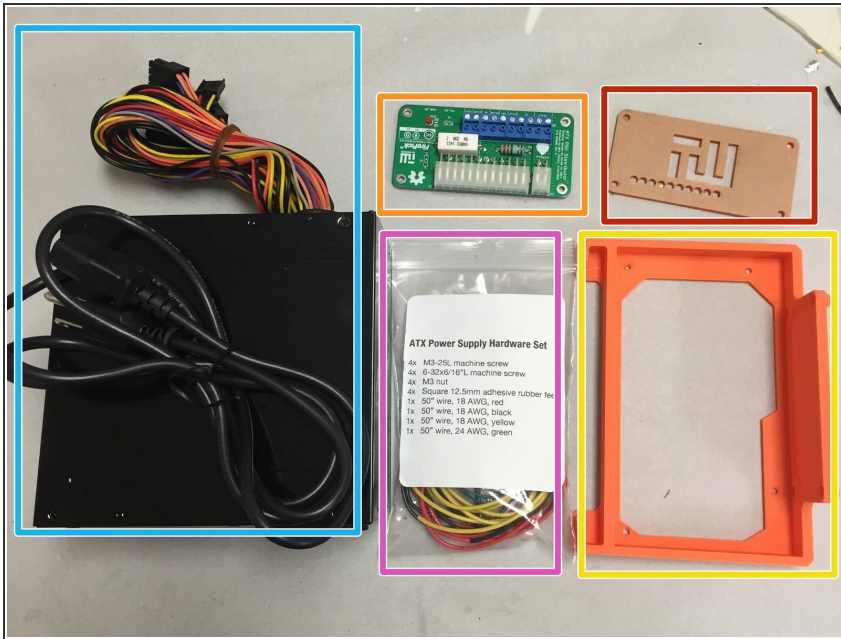
- 4 3X25 mm pan head screws

- 4 6X32 pan head machine screws to attach assembly to power supply

- 4 M3 nuts for 3X25 mm screws above

- 1 PC04 ATX cover plate with TinWhiskers logo on it (orange)

- 1 EPWR01 power supply breakout board

- 1 3D0053 ATX power supply frame. Everythng gets mounted on this.

- 4 4mmID X 14mm long standoffs

- ATX power supply
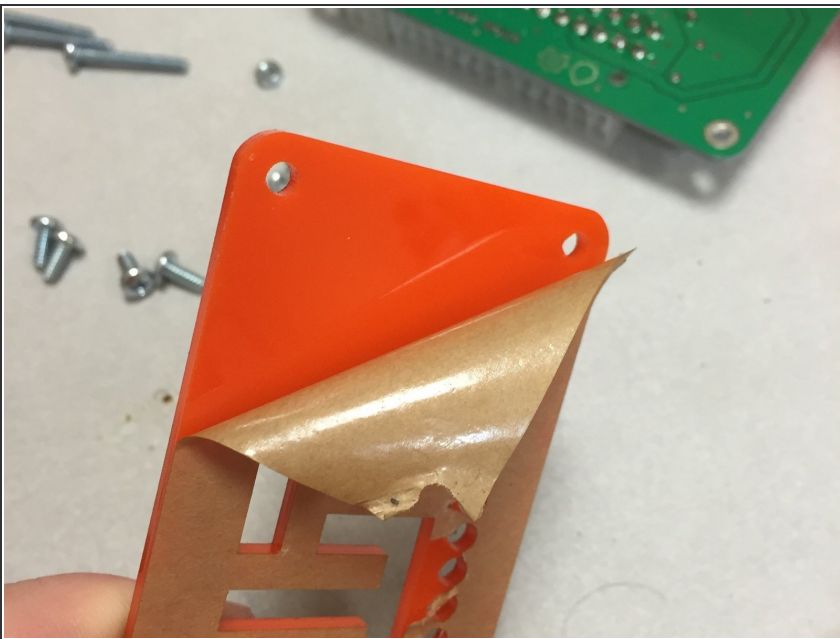
Step 2 — Reference Exploded View Diagram

- PDF link: https://drive.google.com/file/d/0B-U7icB...

This document was generated on 2021-12-21 04:13:26 AM (MST).

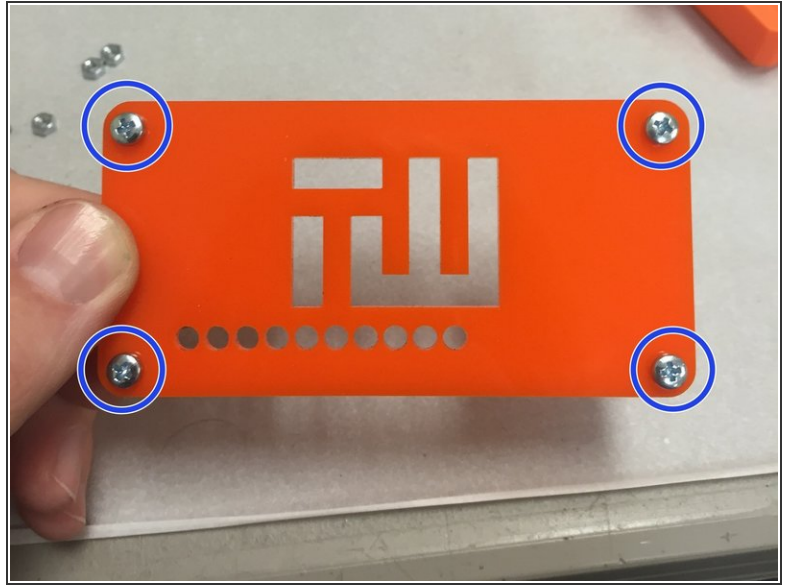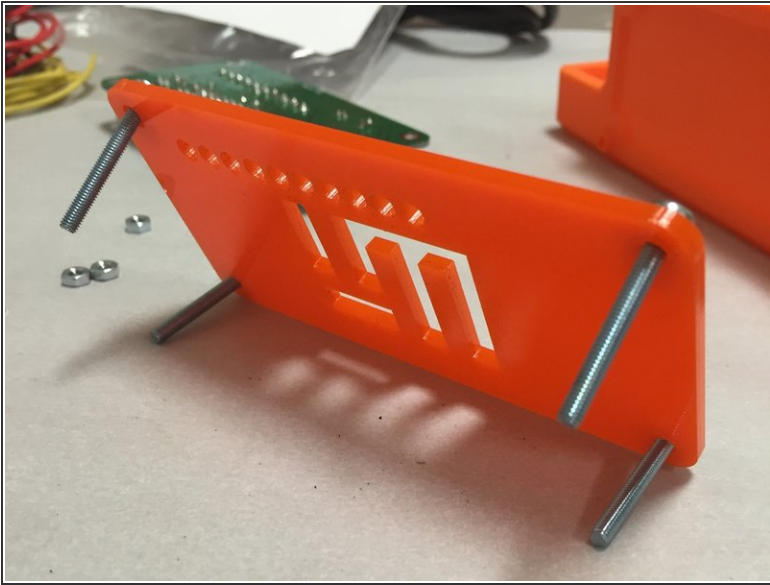## Step 3 — Prepare Frame Prior to Mounting

- Insert the four M3 nuts into the frame nut traps.

- (i) These nuts will receive the 3X25 mm screws that hold the break out board and cover to the frame.
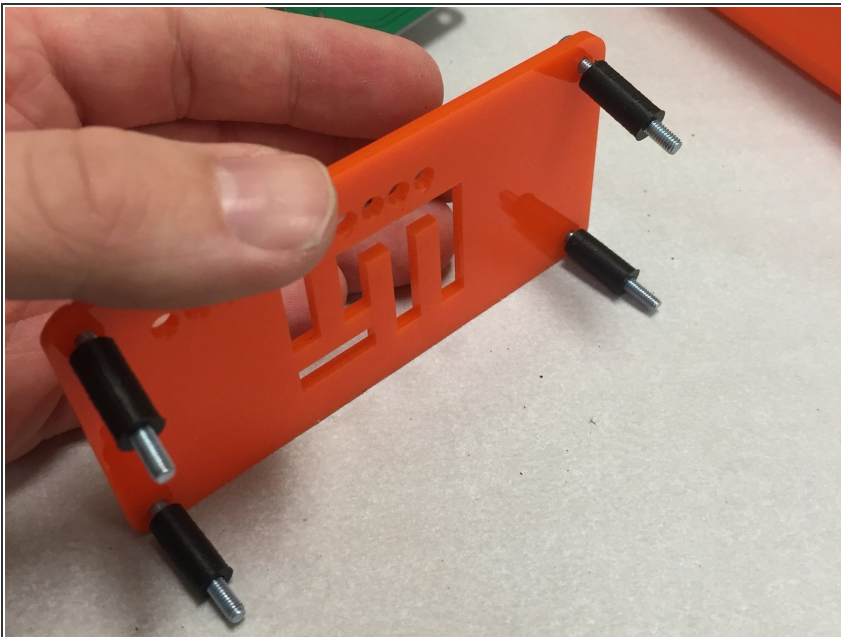
Step 4 — Peel Off Protective Acrylic Cover

- Peel off the acrylic cover from both sides of the PC02 plate.

This document was generated on 2021-12-21 04:13:26 AM (MST).
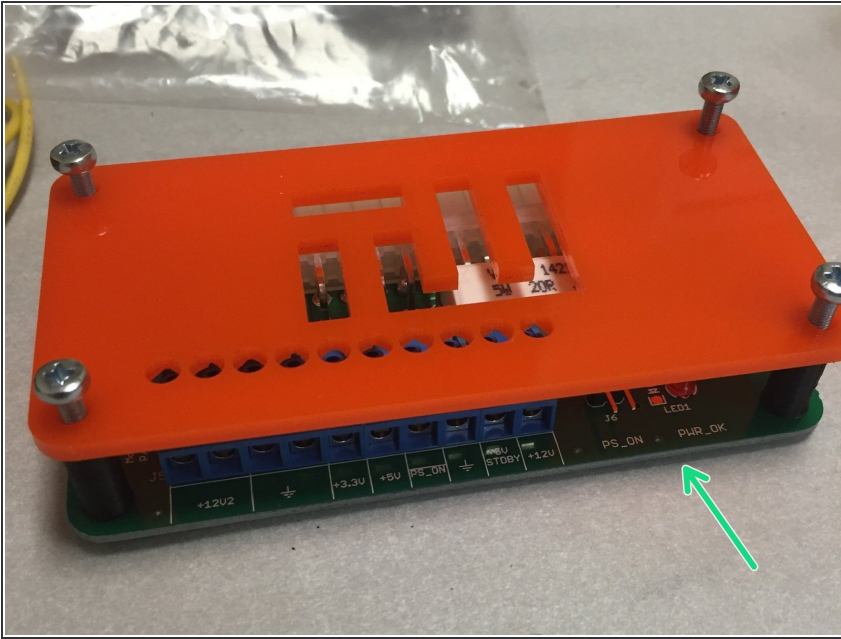
Step 5 — Add M3 Screws

- Put the M3 screws through the acrylic plate, noting the orientation in the pictures to the left.
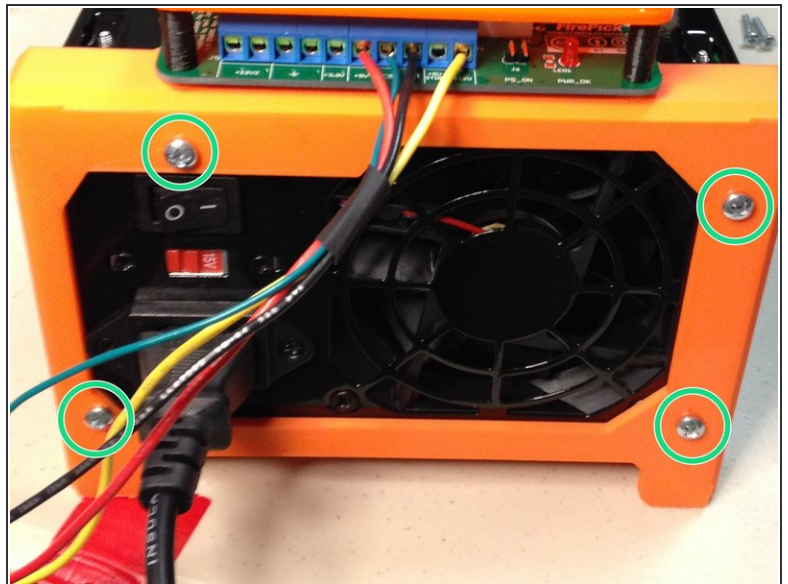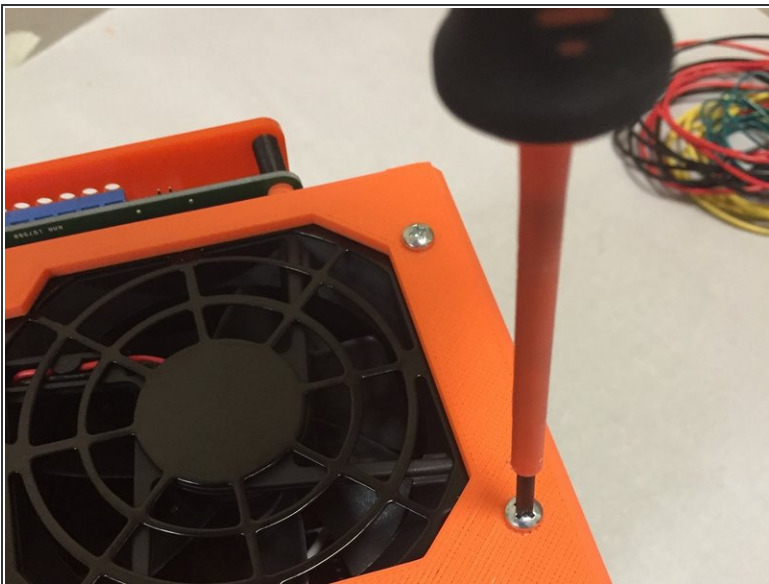
Step 6 — Add Standoffs

- Add 14mm standoffs as shown.

This document was generated on 2021-12-21 04:13:26 AM (MST).

© 2021

firepickdelta.dozuki.com/

Page 5 of 10

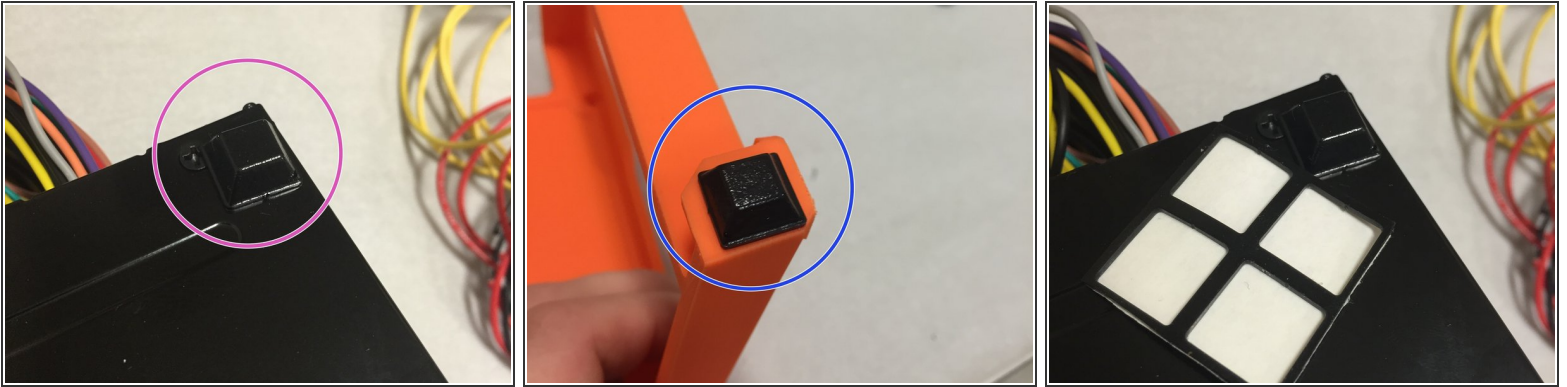## Step 7 — Add EPWR02 Breakout Board, Screw Into Plastic Housing

- Add EPWR02 breakout board as shown. Note orientation.

- Screw this into the plastic frame housing.
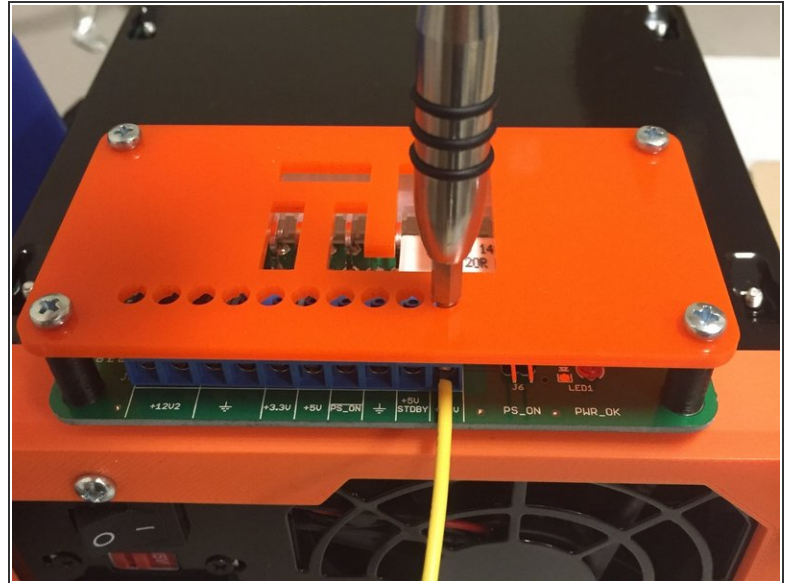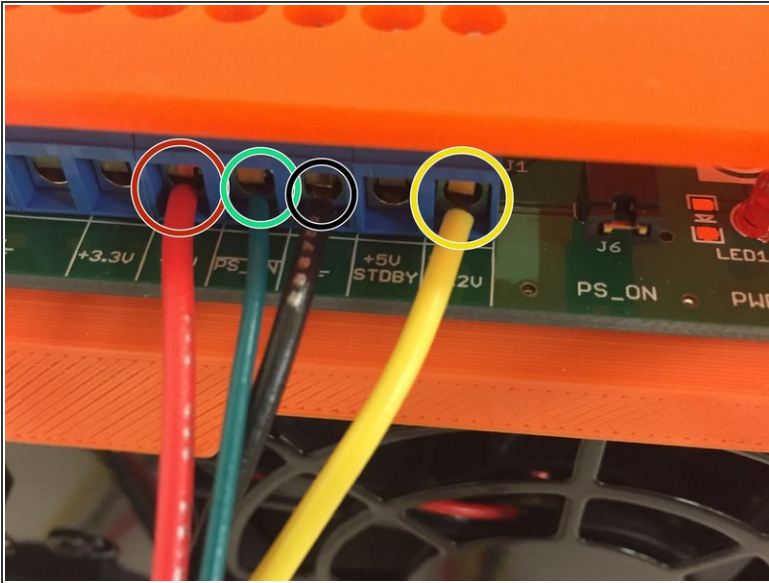
Step 8 — Add frame to power supply

- Attach frame to power supply using 6-32 screws

This document was generated on 2021-12-21 04:13:26 AM (MST).

© 2021 | firepickdelta.dozuki.com/ | Page 6 of 10

Step 9 — Add Rubber Feet

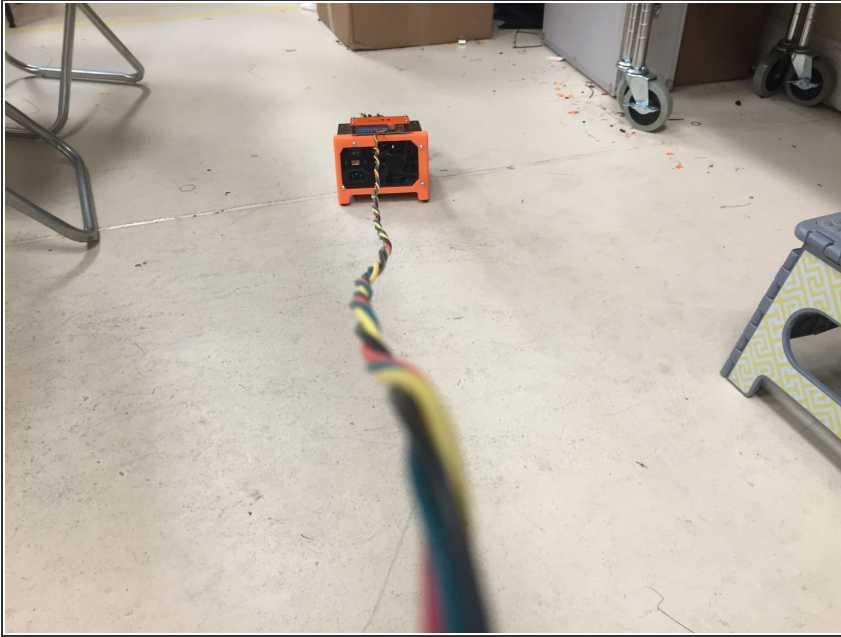- Add rubber feet to the four corners of the power supply as shown.

- Two on the front orange frame

- Two on the rear corners of the power supply

- (i) You may want to rub alcohol onto the area before applying the rubber feet. If there is any grease or dirt, they might not stick for very long.

This document was generated on 2021-12-21 04:13:26 AM (MST).

© 2021

firepickdelta.dozuki.com/

Page 7 of 10

Step 10 — Add Wires

- Add wires to the screw terminals.

- RED: +5V power

- YELLOW: +12V power

- BLACK: Ground

- GREEN: PS_ON

This document was generated on 2021-12-21 04:13:26 AM (MST).

© 2021 | firepickdelta.dozuki.com/ | Page 8 of 10

Step 11 — Twist Wires

- Tightly twist the wires, all the way to the end.

Step 12 — Done! (well, almost)
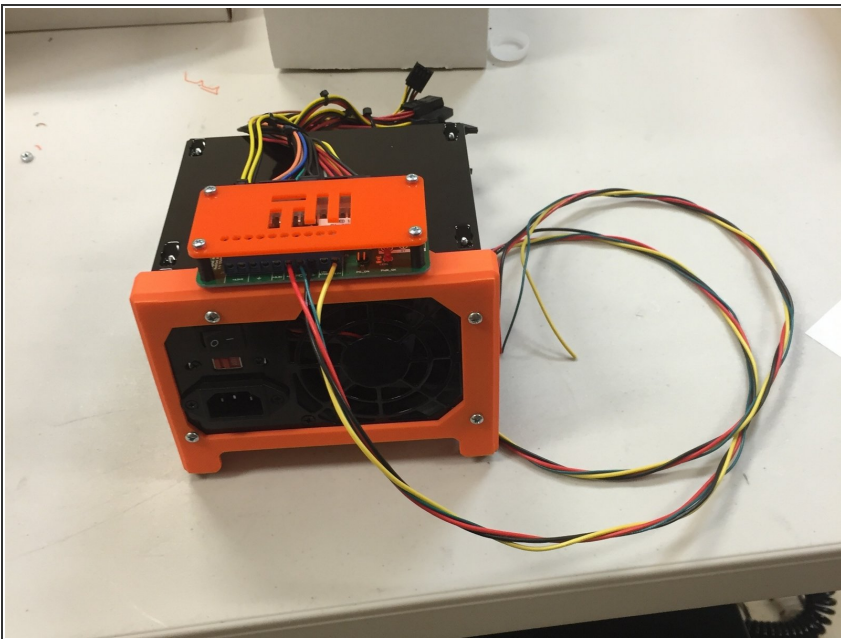
- Set the power supply aside, and work on the other modules. When done, the power supply wiring will

This document was generated on 2021-12-21 04:13:26 AM (MST).

© 2021   firepickdelta.dozuki.com/   Page 9 of 10

connect to the EMC02 motion
controller board.

This document was generated on 2021-12-21 04:13:26 AM (MST).

© 2021

firepickdelta.dozuki.com/

Page 10 of 10