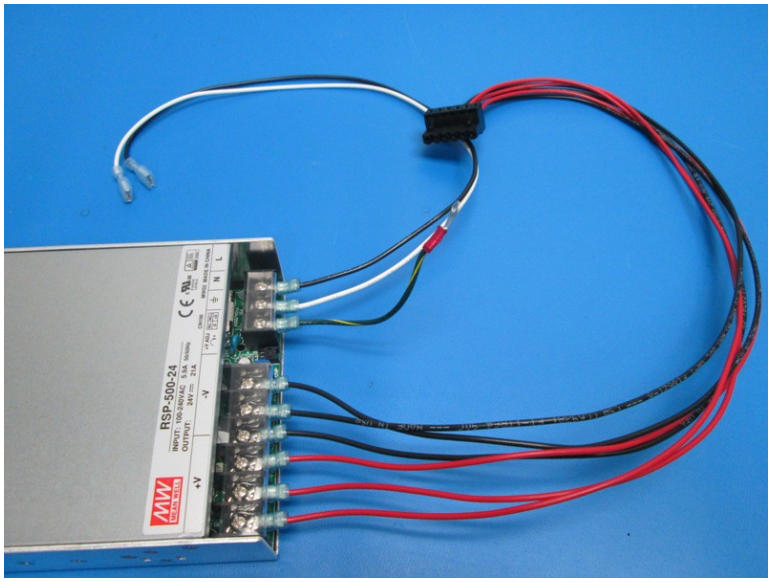
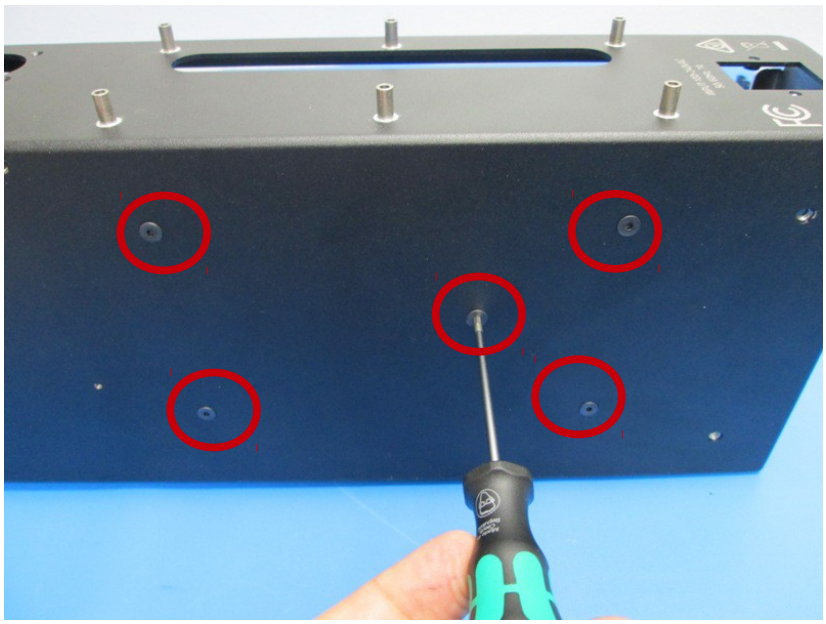
Lulzbot TAZ 6.0 Nutwort Control Box assembly

1) Connect EL-HR0074 CB DC Power Harness (3 Red (+V) and 3 Black (-V) wires) to Power Supply- secure screws to **finger tight+1/4 turn**

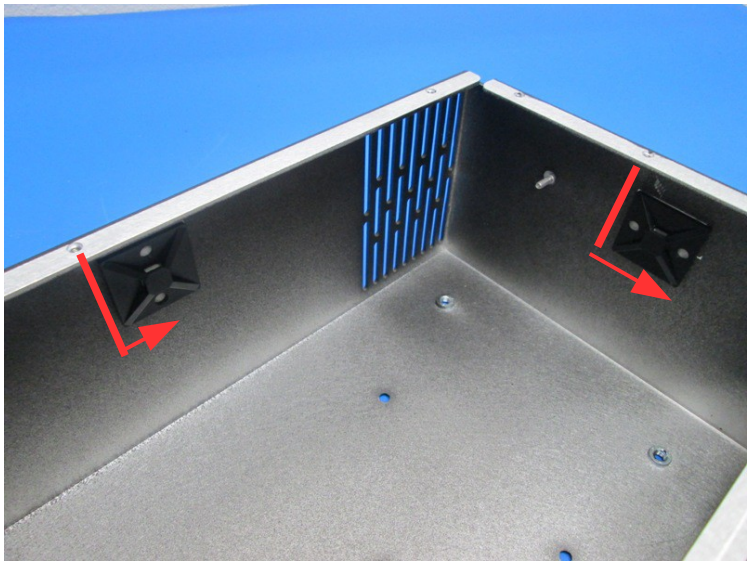
2) Connect EL-HR0077 TAZ6 CB Switch to PS Black to the power supply (N) terminal; Connect EL-HR0076 TAZ6 CB Switch to PS White to the power supply (L) terminal; Connect EL-HR0079 TAZ6 CB Plug to Gnd (Green-Yellow wire) to the power supply (Ground) terminal- secure each screw to **finger tight+1/4 turn, replace clear terminal shield**

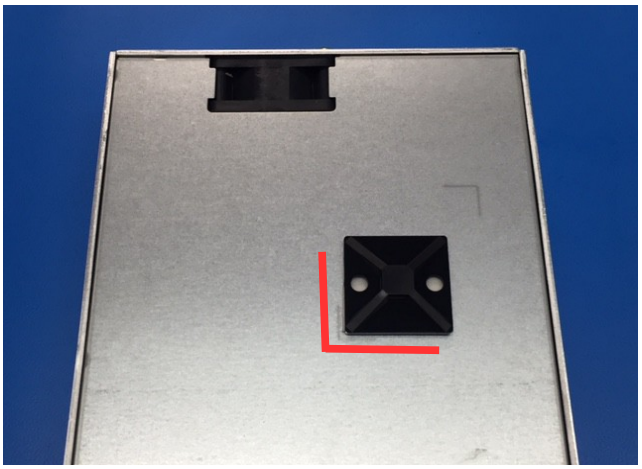


3) Install Power supply- **5x- M4x6 FHS Hand Tight**

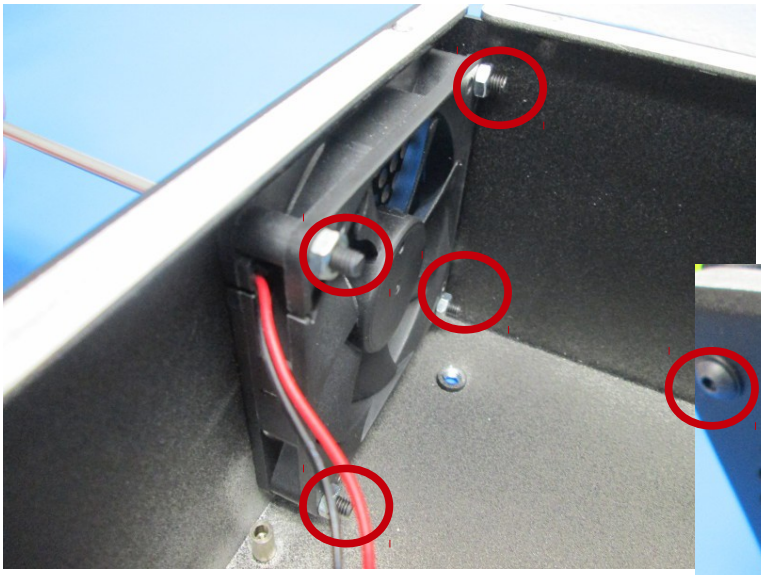


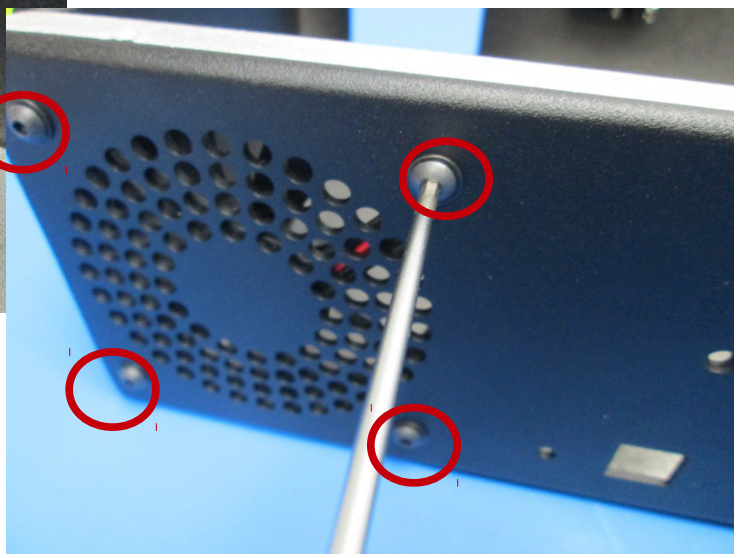
4) Install Tywrap tie downs to the inside of the case:
-Install one tie down to the lower case; approx. 10mm from case lip & offset (toward power module) 5mm from the center case insert
-Install one tie down to the case front 15 mm from case lip & offset (toward case bottom) 5mm from the second insert from the bottom
-Install one tie down to the top of the power supply between; place item closer to the furthest from the fan of two positioning marks imprinted on the power supply metal



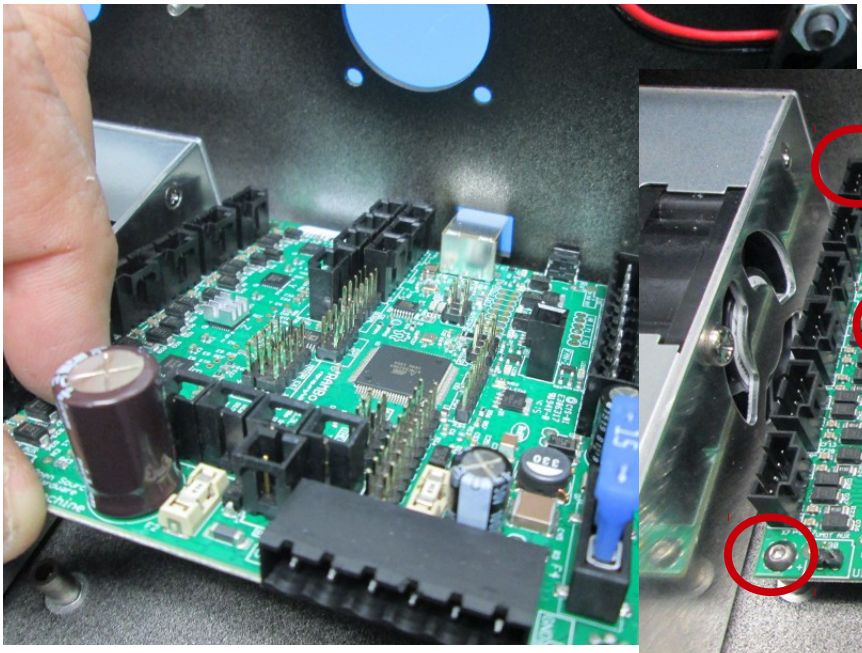


5) Install Fan with fan label oriented toward case, wiring exit away from case top- **4x- M3x20 BHCS, 4x- M3 washer, 4x- M3 nut; tighten to hand tight**

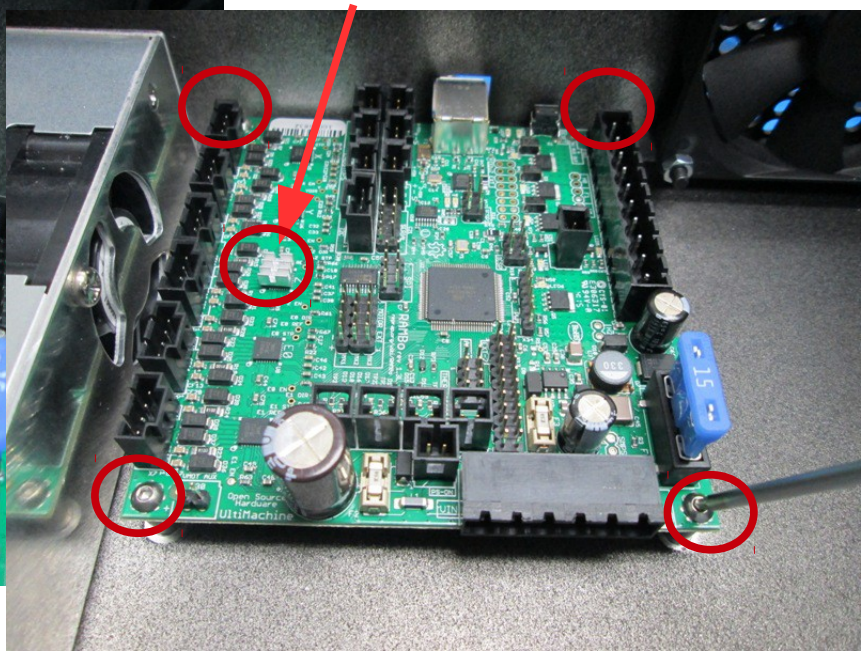




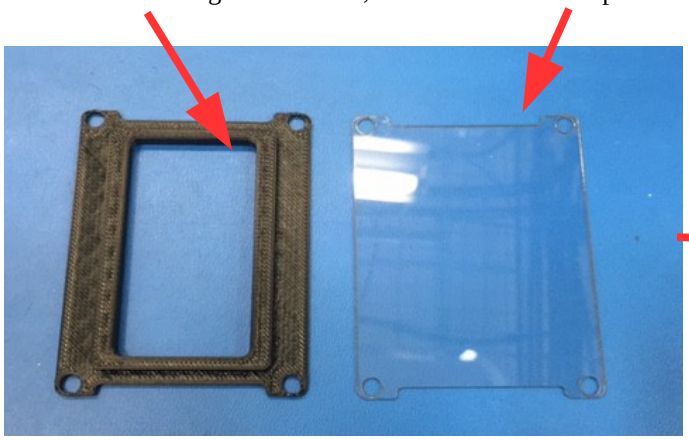
6) Install a heat sink onto the Z Axis Mosfet chip by pressing gently and consistently onto the heatsink for approximately 7 seconds; Align RAMBo with the mounting standoffs located above the power supply, align the RAMBo USB connector with it's opening in the case- Secure RAMBo with **4x- M3x8 SS BHCS; tighten to finger tight**



Z mosfet is the middle of the 5 chips

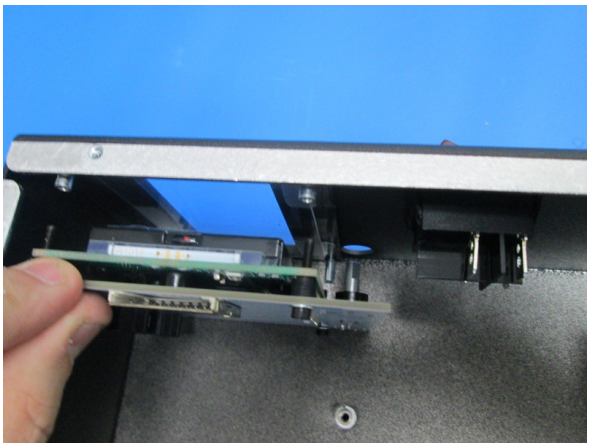


7) Install LCD bezel against the case, then the LCD screen protector against the LCD bezel



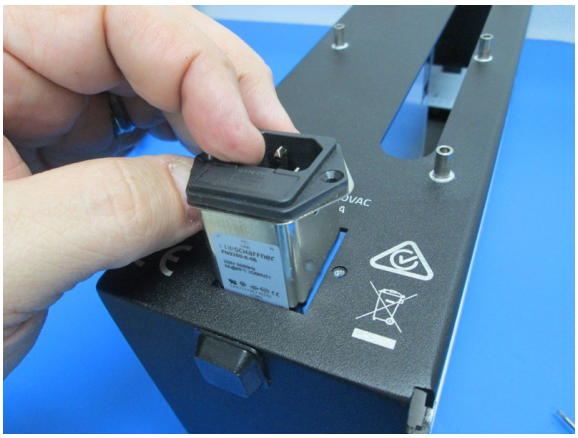
8) Remove LCD screen protector sheet;

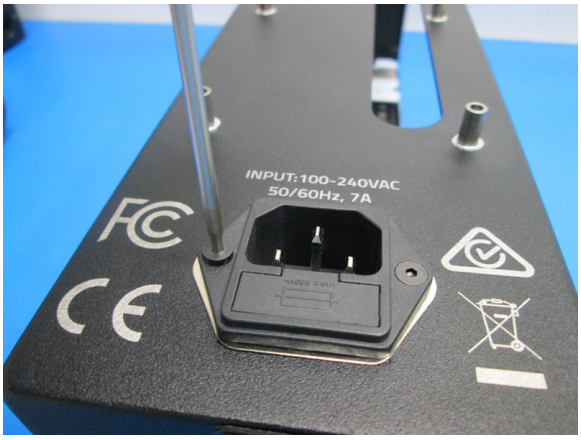
9) Install printed LCD spacers into LCD assembly screw mount hole locations (4x), Install **4x- M2.5x12 SHCS and 4x- M2.5 washer**- Align LCD with mounting standoffs- **install screws to finger tight + necessary turns to ensure the LCD is secured and cannot move**



10) Install Power Switch with “1” orientation toward the “ON” marking on the case

11) Install Power entry module (with two(2) fuses installed), fuse tray oriented toward case bottom- **2x- M3x10 FHS to hand tight + ¼ turn**





Steps 12- 29 MUST BE COMPLETED IN THE DEFINED SEQUENCE FOR UL APPROVALS

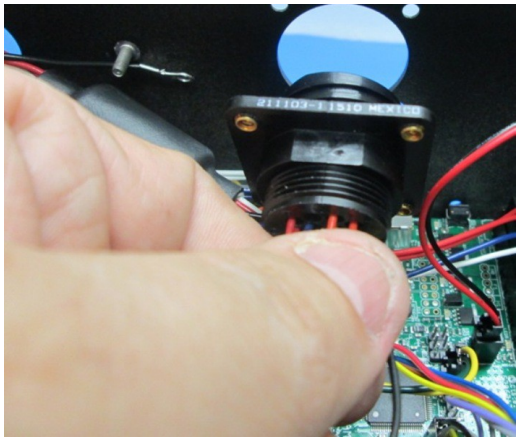
For steps requiring connection to the RAMBo refer to the TAZ 6 Wiring connection document

12) Plug in EL-HR0088 CB Y-Z Harness into RAMBo then pass its 16 position connector through to the interconnect housing transition

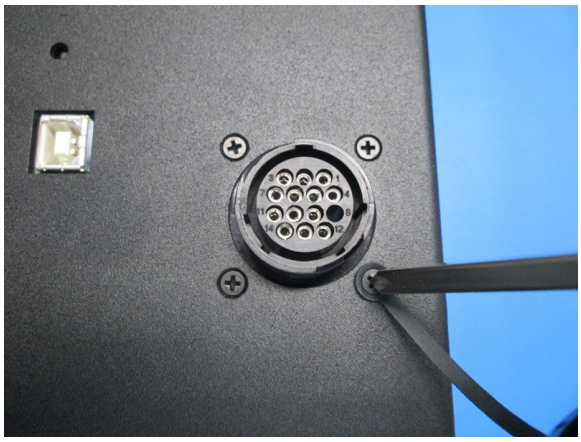
13) Plug in EL-HR0084 CB X Harness into RAMBo then pass its 12 position connector through to the interconnect housing transition

14) Plug in EL-HR0081 CB Bed Harness into RAMBo then pass its 10 position connector through to the interconnect housing transition- a single red wire without connector will remain unconnected until a later step

15) Install the Dual Extruder harness (EL-HR0095) from the inside the case, set the orientation of the connector so socket #5 (empty socket) of the connector is away from the USB connector; secure the connector with **3x- 18-8 FHS Black Oxide; tighten to hand tight;** Connect the cable to the RAMBo



16) Position the EL-MS0144 (Sealing Cap) strap so the strap will double over itself when the cap is installed onto the 16position round connector, secure the sealing cap with **1x- 18-8 FHS Black Oxide;** **tighten to finger tight, the cord should not be able to rotate once tightened**



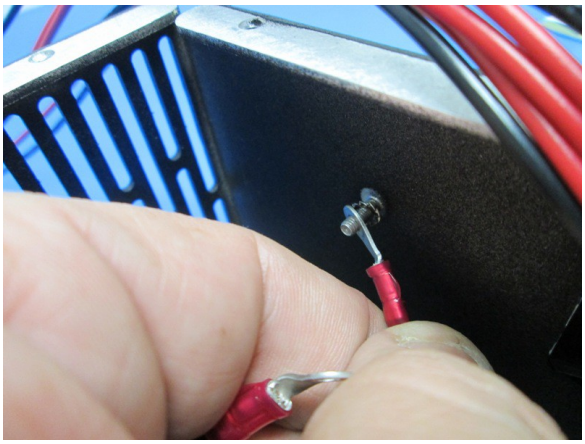
17) Plug in El-HR0087 CB Extruder Harness into RAMBo then pass its 20 position connector through the interconnect housing transition- Connect the single black wire with connector to the single red wire from EL-HR0081, insert red wire into connector position 1 which is marked MX

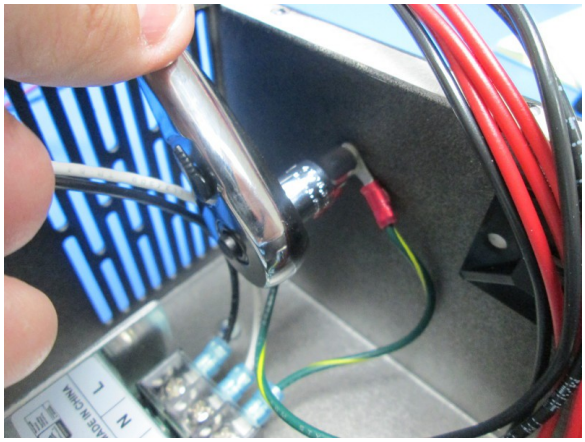
18) Plug in EL-HR0097 CB LCD Harness to the RAMBo and LCD; Connect LCD SP1 to RAMBo EXP2; connect LCD EXT2 to RAMBo EXP1

19) Plug in Case fan to RAMBo FAN2 location

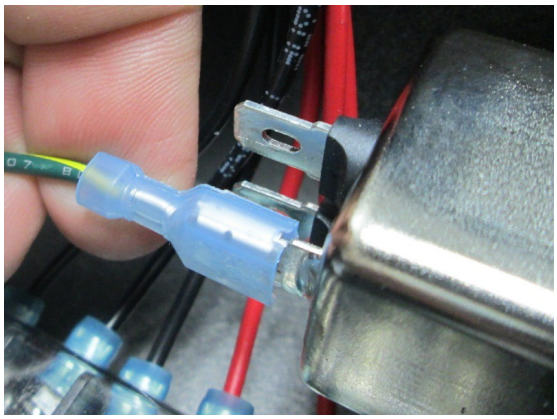
20) Plug in EL-HR0082 CB Bed Power Harness to the RAMBo then pass the 2 position connector through to the interconnect housing transition

21) Install **1x- M3 star washer** on case ground lug near power entry module, install power supply ground wire to ground lug, install power entry module ground wire to ground lug, align ground wires so they route close to the power supply, then install **1x- M3 Nyloc nut;** **tighten until the ring terminals no longer move freely**

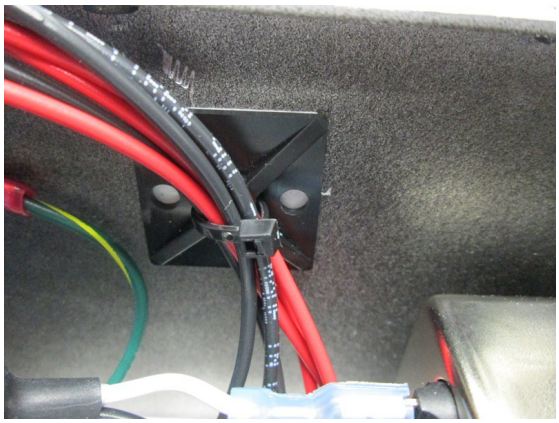




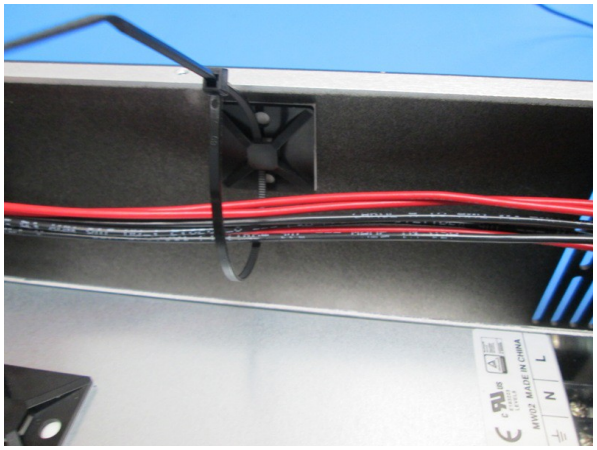
22) Connect EL-HR0078 TAZ6 CB Plug to Gnd (Green-Yellow single wire) with Faston connector to Power Entry ground

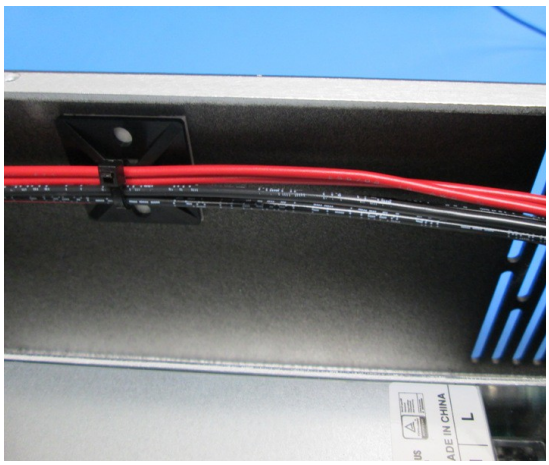


23) Secure EL-HR0074 CB DC Power Harness (Red and Black Power Supply wires (3 each)) with a Ty Wrap to the lower tie down location (note Ty Wrap must cross wire with the securing latch positioned toward the case opening; Wires must have a gradual transition toward the tie down on the side wall



24) Route Red and Black Power Supply wires to second tie down, ensure sufficient service loop and bend radius is maintained (see picture), secure wire with Ty Wrap with the securing latch positioned toward the case opening

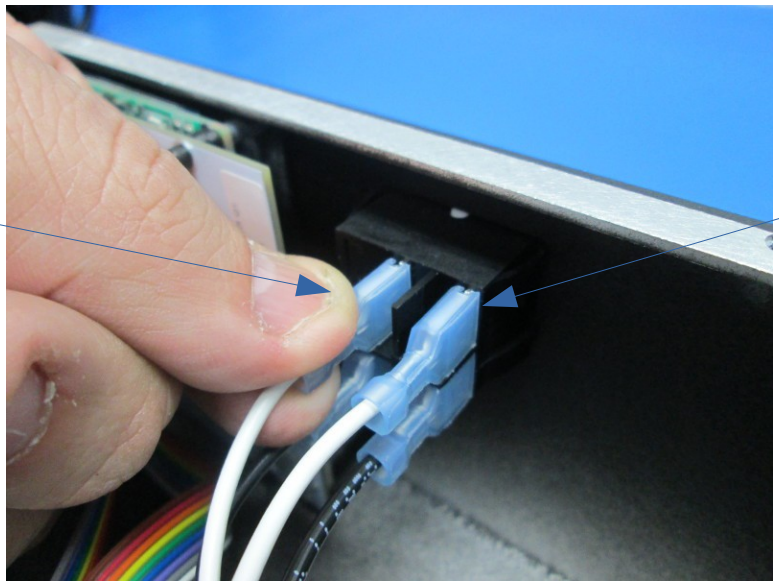




25) Connect EL-HR0074 CB DC Power Harness to RAMBo

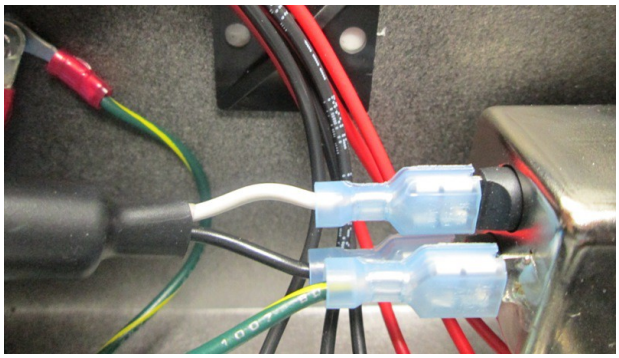
26) Connect EL-HR0077 (TAZ6 CB Switch to PS Black) and EL-HR0076 (TAZ6 CB Switch to PS White) which are already connected to the power supply to power switch **Upper** two connectors; white wire on the right terminal, black wire on the left terminal

Upper

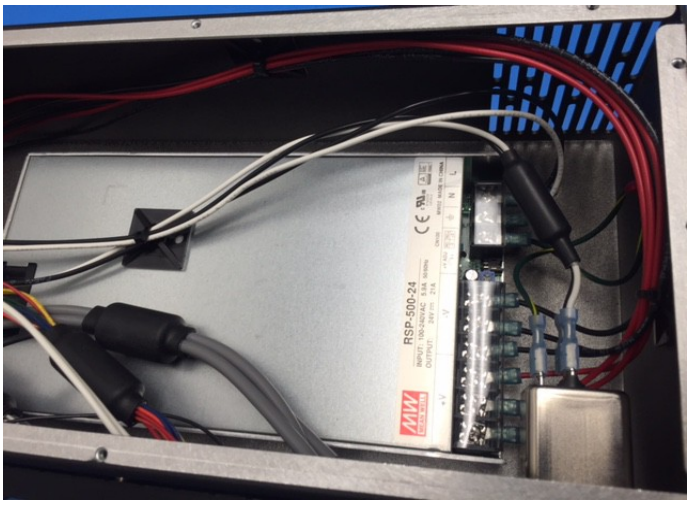


Lower

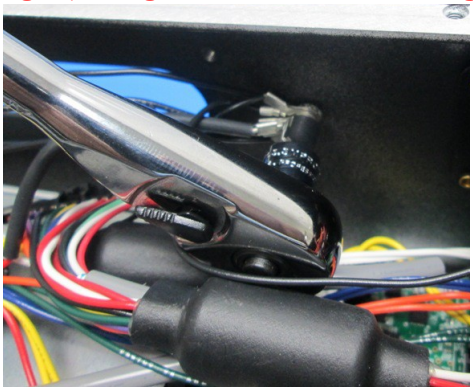
27) Connect EL-HR0080 CB Plug to Switch Harness, with ferrite closest to power entry module, to the power entry module; White wire on the left (upper), Black wire on the right (lower) terminals. Connect the opposite end of the harness to the power switch as noted above (**Lower** two connectors, white wire on the right terminal, black wire on the left terminal)



28) Secure Black and White wires to Tie down, route wires

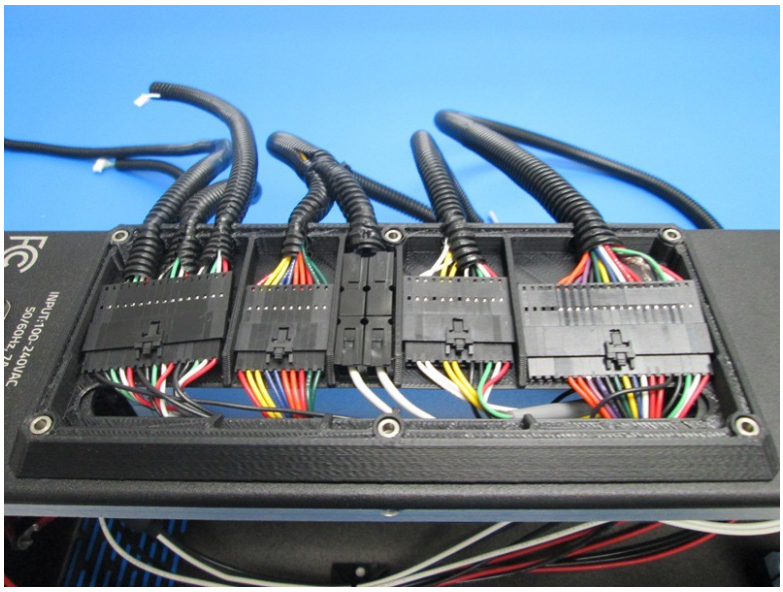


29) Install **1x- M3 star washer** to the case ground lug near the RAMBo, install 7 ground wires from the internal cable harness to the ground lug, secure with **1x- M3 Nyloc nut** **tightened to hand tight (if using a ratchet beware of over-tightening the nut)**



30) Install Interconnect Housing on case exterior, verify slot in interconnect Housing aligns with slot in case

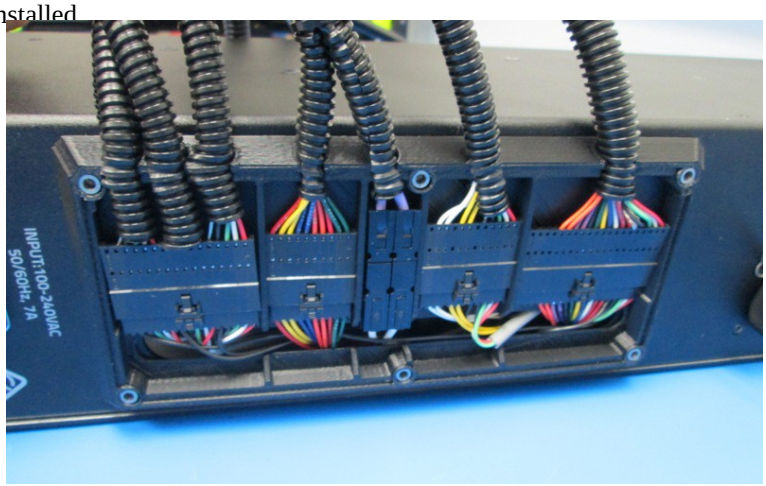
31) Route connectors from each of the internal harnesses into the Interconnect Housing, connectors sizes indicate proper position in the Interconnect Housing



32) Connect external cables to each of the internal connectors

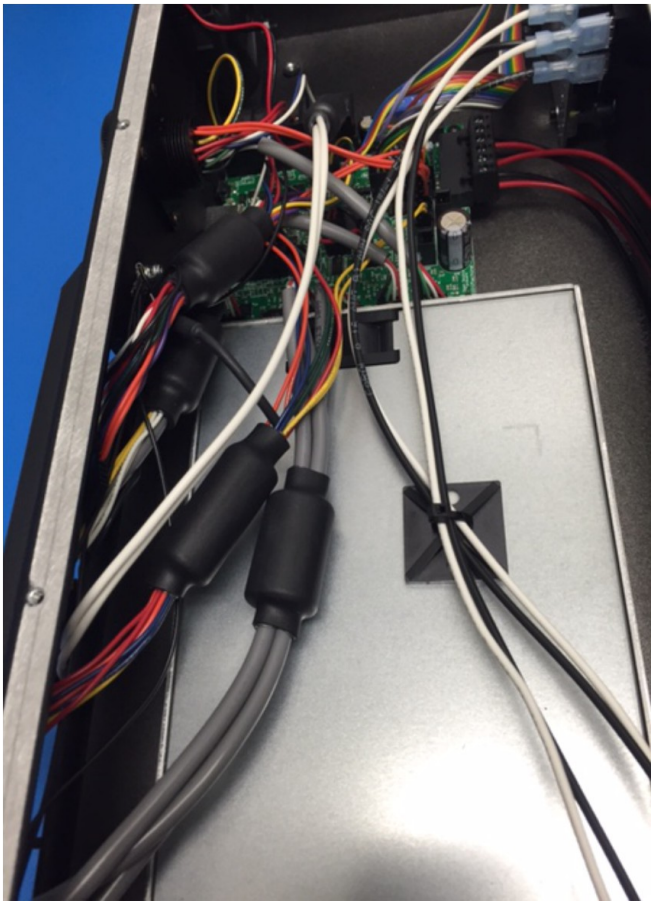
Item	Internal Harness (# of connector positions)	External harness
1	EL-HR0088 CB Y-Z Harness (16)	EL-HR0091 Y-Z Harness (16)
2	EL-HR0084 CB X Harness (12)	EL-HR0075 X Harness (12)
3	EL-HR0087 CB Extruder Harness (20)	EL-HR0092 Extruder Harness (20)
4	EL-HR0081 CB Bed Harness (10)	EL-HR0083 Bed Power Harness (10)
5	EL-HR0082 CB Bed Power Harness (2)	

33) Secure Panduit in Interconnect Housing for 10- 15 mm of Panduit to extend from Interconnect Housing front into the housing; Panduit must be pushed down into the interconnect housing retention slot; wires must be inside the conduit so they are safe from damage when the interconnect cover is installed



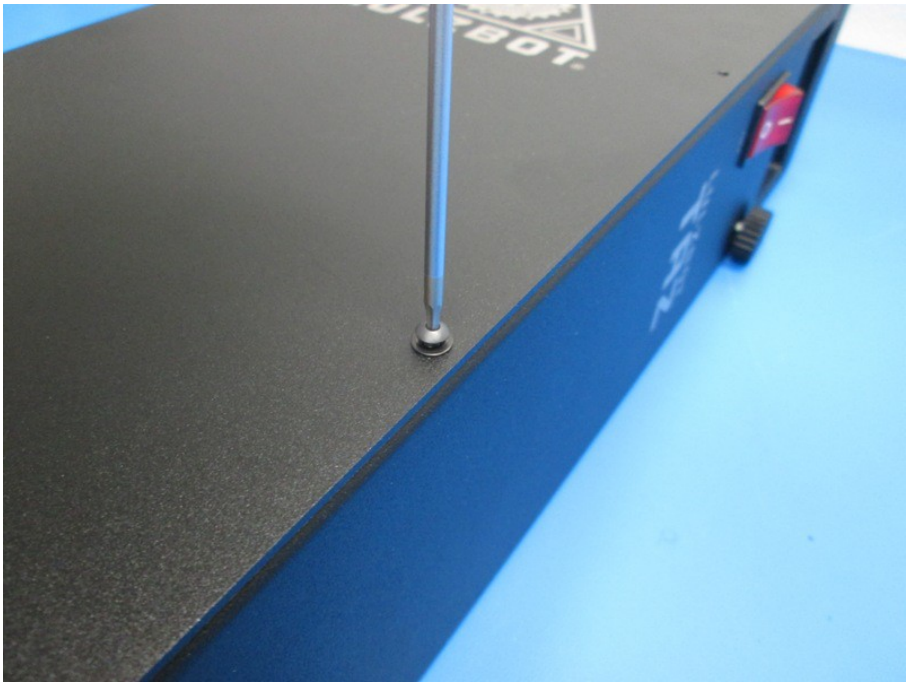
34) Install interconnect housing cover with **6x- M3x12 BHCS and 6x- M3 washer; tighten to hand tight**; ensure the cover is flush to the interconnect housing and the interconnect housing is flush to the case. DO NOT TIGHTEN screws past hand tight to force either the cover or the interconnect housing into place.

35) Inspect wiring layout to ensure all connections are made and wires are laying correctly



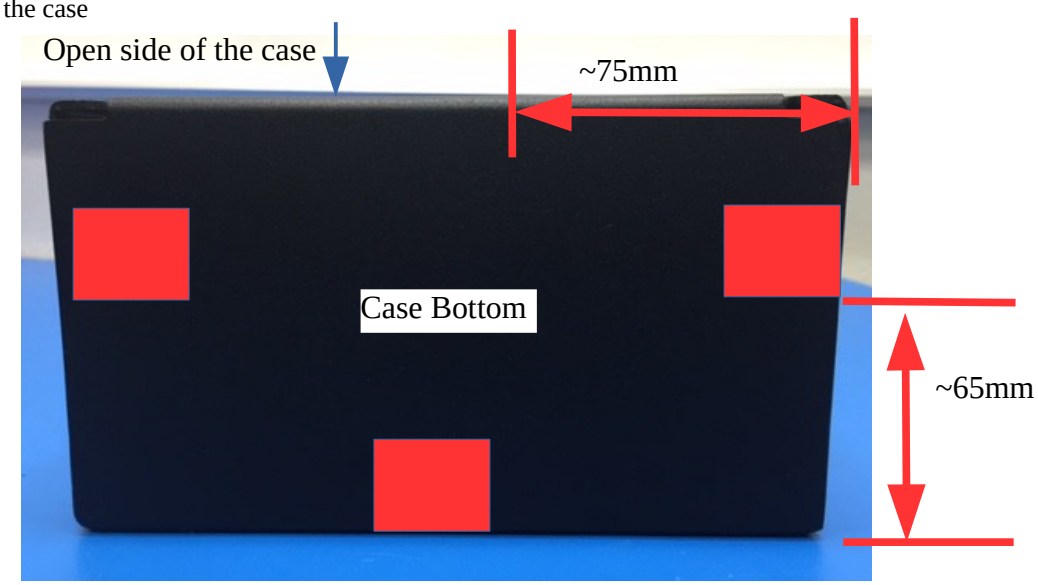
36) Install SD card Bezel into the case cover (entry direction is from the painted side of the cover); install cover onto case with the SD card slot aligned with the SD card reader

37) Secure the case cover with **14x- M3x8 BHCS and 14x- M3 washers; tighten to hand tight**



38) Install Knob

39) Wipe down the bottom of the case with Alcohol; remove three (3) 3/4” square, 1/4” high bumpers from their protective backing apply the bumpers to the case



40) Install LulzBot test firmware; test unit to ensure all motors (6) correctly rotate, all fans (3) correctly rotate, all switches (7) properly operate, and the LCD display properly lights up, makes sounds as the LCD menu is navigated, and the control Knob functions.