

**TOOLS REQUIRED:** small flat head screwdriver no wider than 1/8" or 3mm wide, phillips head screwdriver, 3mm allen wrench, self tapping screws #6 x 1/2", 1/4" hex head driver, electric drill, wire cutters, fine point black sharpie, zip ties

1. Remove power from machine
2. Disconnect the **Blue USB Cable** from **USB 1**.
3. Disconnect the **White or Black USB Cable** from **USB 2**.
4. Disconnect the **Black RS232 Cable** from **COM**, this entire cable will be removed later on.

### **IMPORTANT**

**AS YOU REMOVE THE CONNECTORS LABEL THE CONNECTOR WITH THE NAME OF PLUG WITH THE SHARPIE**

5. Starting from the top left of the Leetro card disconnect 2-pin **POWER** connector.
6. Top right disconnect the 4-pin **LASER** connector.
7. Continuing on the right hand side upper part of the Leetro card disconnect the 4-pin **Z\_AXIS** connector.
8. Below that disconnect the 4-pin **Y\_AXIS** connector.
9. Below that disconnect the 4-pin **X\_AXIS** connector.
10. Continuing on the right hand side lower portion of the Leetro card disconnect the 5-pin **Z\_LIM** connector.
11. Below that disconnect the 5-pin **Y\_LIM** connector.
12. Below that disconnect the 5-pin **X\_LIM** connector.
13. Now that all the connectors are disconnected from the Leetro card, shift them out of the way so that you have access to the 4 screws attaching the Leetro card frame to the machine.

### **NOTE**

These will either be phillips head screws or 3mm allen screws. DO NOT REMOVE THE 4 SMALL SCREWS ATTACHING THE GRAY COVER TO THE FRAME. There could be a **YELLOW GROUND WIRE** secured by one the attaching screws. In this case once the screw has been removed move the wire out of the way, you will be reattaching the wire with the RDC card.

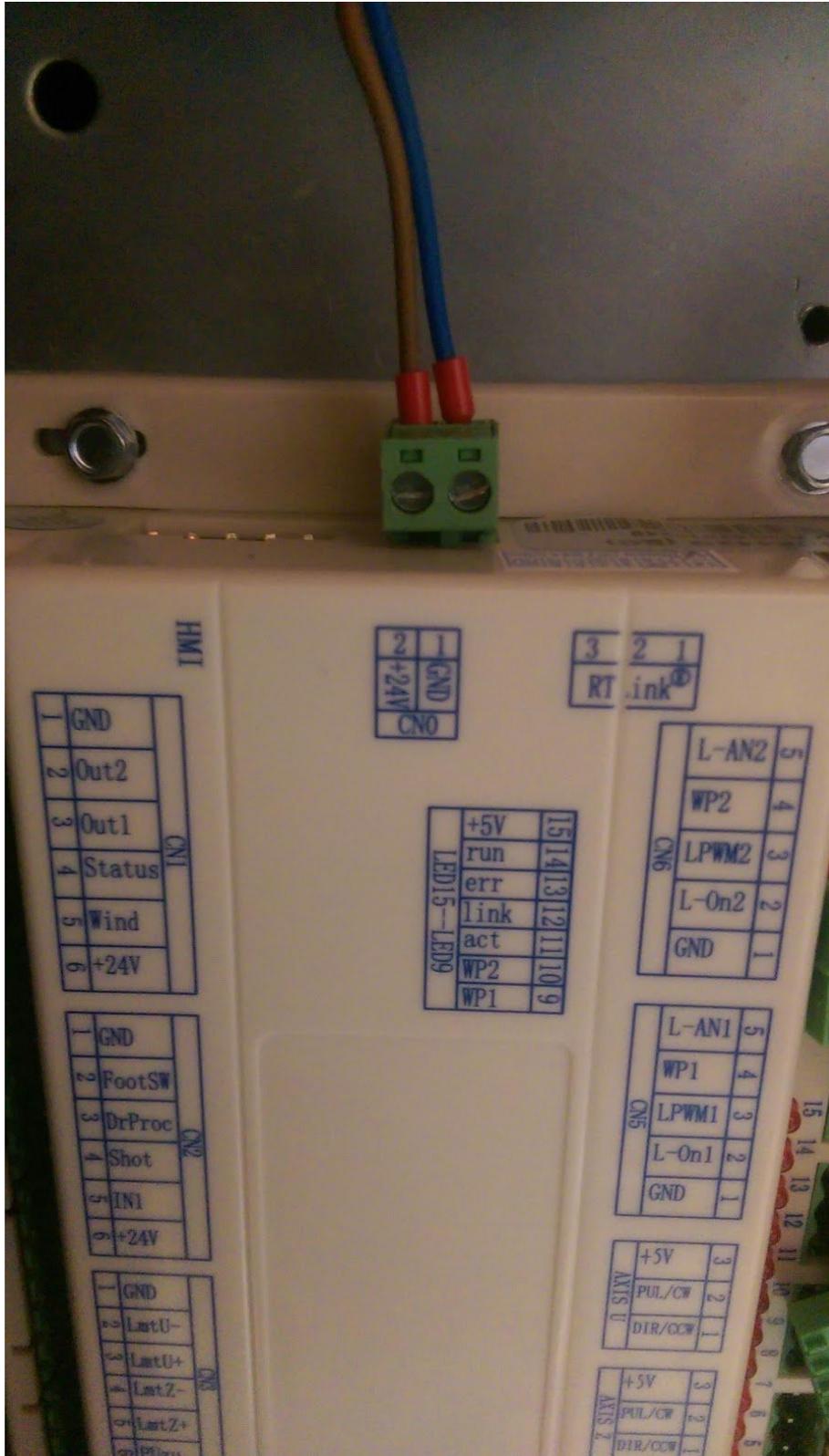
14. With the screws removed the Leetro card can now be removed.
15. At this time remove the **Blue plastic channel covers** so the wiring harness is exposed.
16. At the RDC card the bottom right hand side 3-pin connectors **AXIS Z, AXIS Y, and AXIS X** will be wired to the 4-pin connectors **Z\_AXIS, Y\_AXIS, and X\_AXIS**.
17. At the RDC card the upper right hand side 5-pin connector **CN5** will be wired to the 4-pin connector **LASER**.
18. At the RDC card the top 2-pin connector **CN0** will be wired to the 2-pin connector **POWER**.

19. At the RDC card the bottom left hand 6-pin connector **CN4** will be wired to both 5-pin connectors **Y\_LIM** and **X\_LIM**.
20. At the RDC card the bottom left hand 6-pin connector **CN3** will be wired to 5-pin connector **Z\_LIM**.
21. At the RDC card the bottom connector **PC-USB** will connect to the **Blue USB Cable**.
22. At the RDC card the bottom connector **Udisk** will connect to the **White or Black USB Cable**.
23. The **Black RS232 Cable** can now be removed from the wiring harness by cutting the zip ties and shifting it to the side

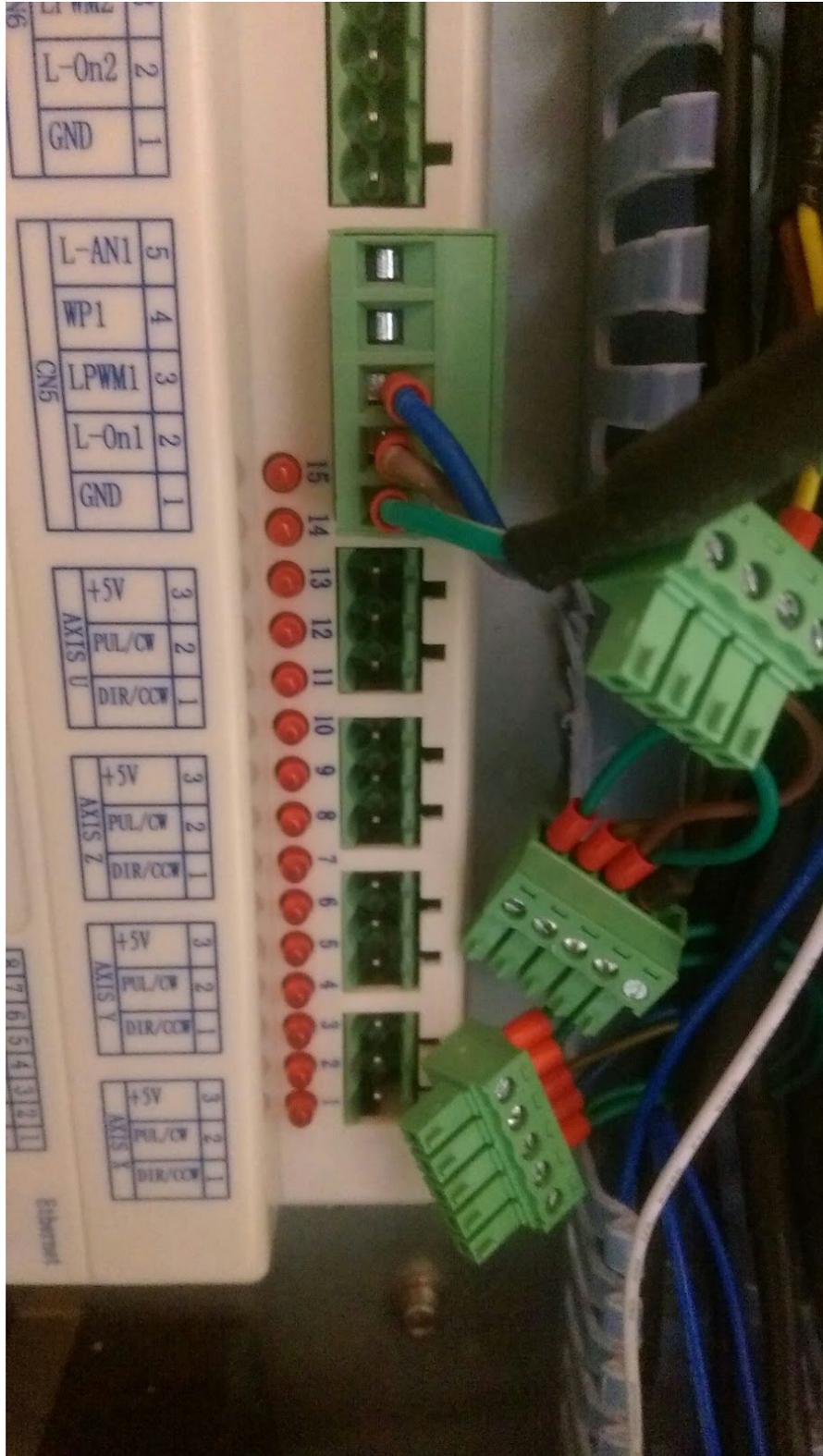
### **MOUNTING THE RDC CARD**

With that information shift the wiring harness connectors around so there will be room to place them in their respective connectors once you've mounted the RDC card. The card will not fit into the existing holes left by the Leetro card so you will use the self tapping screws to mount the RDC card to the machine. You may have to cut zip ties on the wiring harness and reroute wires to extend to their new placement. Also if you have a **YELLOW GROUND WIRE** secure that with one of the screws between the body of the machine and the RDC card.

24. Take the 2-pin **POWER** connector remove the blue and brown wires. Secure them in the 2-pin **CN0** connector.



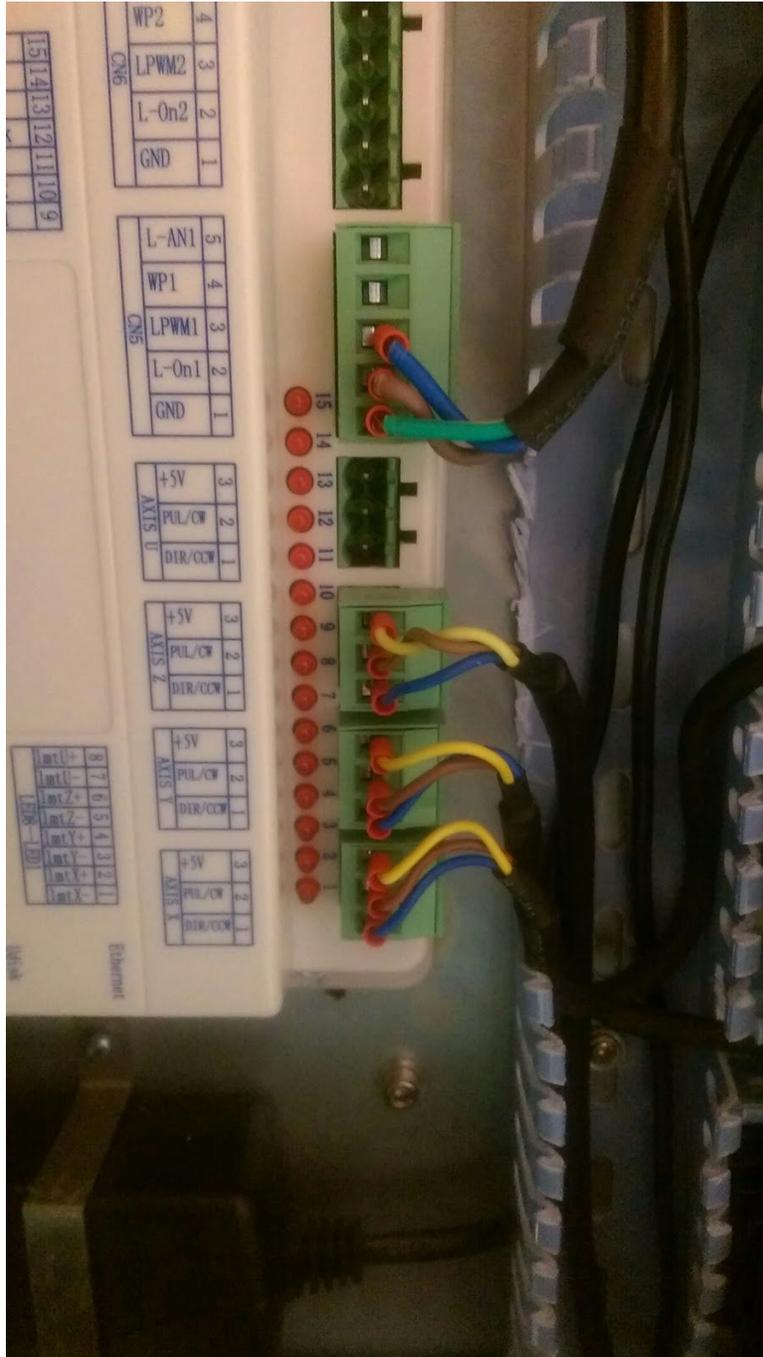
25. Take the 4-pin **LASER** connector remove the blue, brown, and green wires. Secure them in the 5-pin **CN5** connector.



**NOTE**

The next 3 connectors will be wired the same.

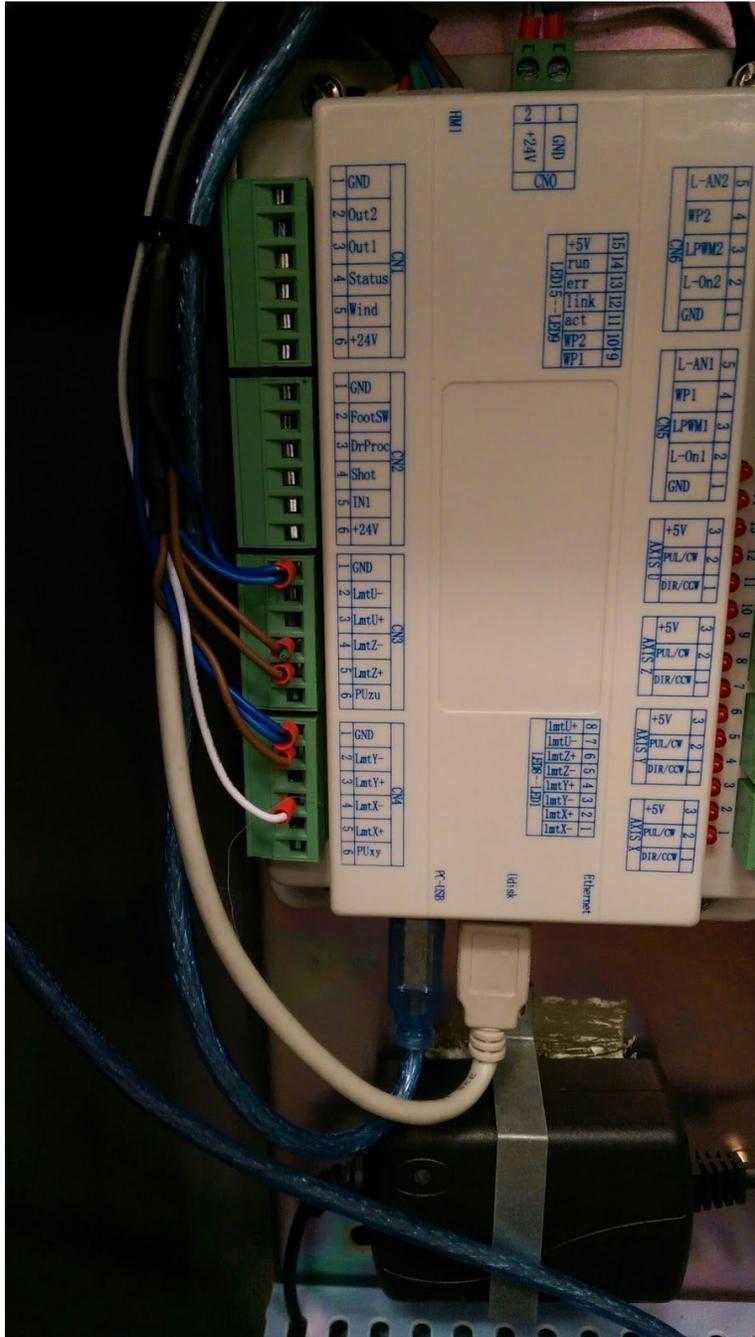
26. Take the 4-pin **Z\_AXIS** connector remove the yellow, brown, and blue wires. Secure them in the 3-pin **AXIS Z** connector.
27. Take the 4-pin **Y\_AXIS** connector remove the yellow, brown, and blue wires. Secure them in the 3-pin **AXIS Y** connector.
28. Take the 4-pin **X\_AXIS** connector remove the yellow, brown, and blue wires. Secure them in the 3-pin **AXIS X** connector



29. Take both 5-pin **X\_LIM** and **Y\_LIM** connectors remove the brown, white and both blue wires. Secure them in the 6-pin **CN4** connector.

**NOTE**

The **GREEN** wires will not be used. Both **BLUE** wires will be inserted into the pin 1 **GND**.



30. Take the 5-pin **Z\_LIM** remove the blue, and both brown wires. One brown wire will require you to cut the green wire from the pin. Secure them in the 6-pin **CN3** connector. The brown wire with the cut off green wire will be inserted into pin 4 **LmtZ-**.
31. Insert the **Blue USB Cable** into **PC-USB**.
32. Insert the **White or Black USB Cable** into **Udisk**.

**NOTE**

The final process is to install the new **LCD Panel and new Com cable**.

33. First open up the worktable lid and right side access panel. From here you will have access to the bottom of the Leetro LCD panel and upper wiring harness.
34. Cut the zip ties attaching the the wiring harness to corner of the machine and loosen the wiring harness.
35. There are 4 retaining clips around the LCD panel base that need to be pushed in while pushing the LCD panel up and out of the machine.
36. Disconnect the existing **Black Com Cable** from the back of LCD panel.

**NOTE**

This cable is the **Black RS232 Com Cable** originally attached to the Leetro card. This will need to be removed by pulling it from the bottom. Be careful not to damage other wires while removing this cable.

37. Take the new 5-pin **Com Black Cable** and run it through where the original **Com Cable** was installed.
38. Connect the lower end of the 5-pin **Com Black Cable** in the top left of the RDC card at connector **HMI**.
39. Connect the upper end of the 5-pin **Com Black Cable** in the back of the RDC LCD panel.
40. Insert the LCD panel assembly into the machine and verify that the 4 retaining clips are engaged.
41. At this time secure the upper wire harness with zip ties. Verify that all wires are secured and will not interfere will laser operation.
42. Now go back to RDC card and secure the wiring harness and reinstall the **Blue plastic channel covers**.

**NOTE**

The machine can now be powered, **BUT** the machine will not be operational. The card will have to have a new config file sent from LaserWorks in order for the machine to be fully operational.

Contact **BOSSLASER** Technical Support to finalize your install.