

## Installing the controller on Larken Servo System 60 and 100

Note: Please read this document completely before attempting to install the controller.

The controller should be installed by a person familiar with electronics and working with electrical connections. Do not attempt this procedure if you are not qualified.

Make sure controller is unplugged and power switch is turned off. Remove the side off the controller with the (4) screws.

Note the (3) mounting holes in the controller. (Circled green)

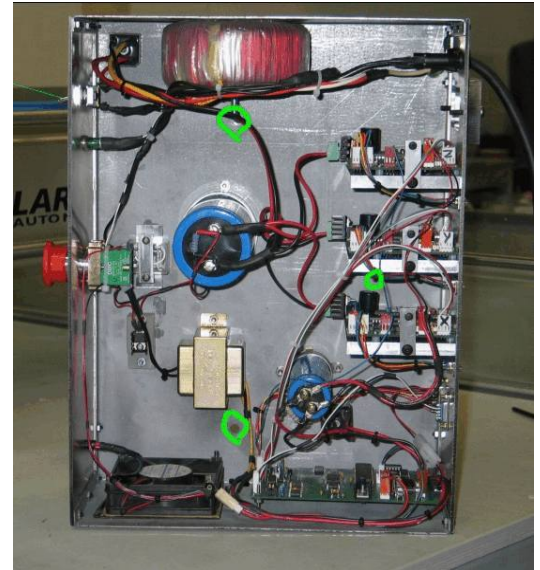
The controller mounts on the side of the front leg of the router using (3) 1/4-20 button head bolts.

Mount the controller using a 5/32 T-handle hex wrench and be careful not to damage any electronic components or wiring..

Install the cover back on the controller.

NOTE: The servo controller and computer should be plugged into the the same surge protected power bar.

The power plug for the router should be plugged into a different wall plug.



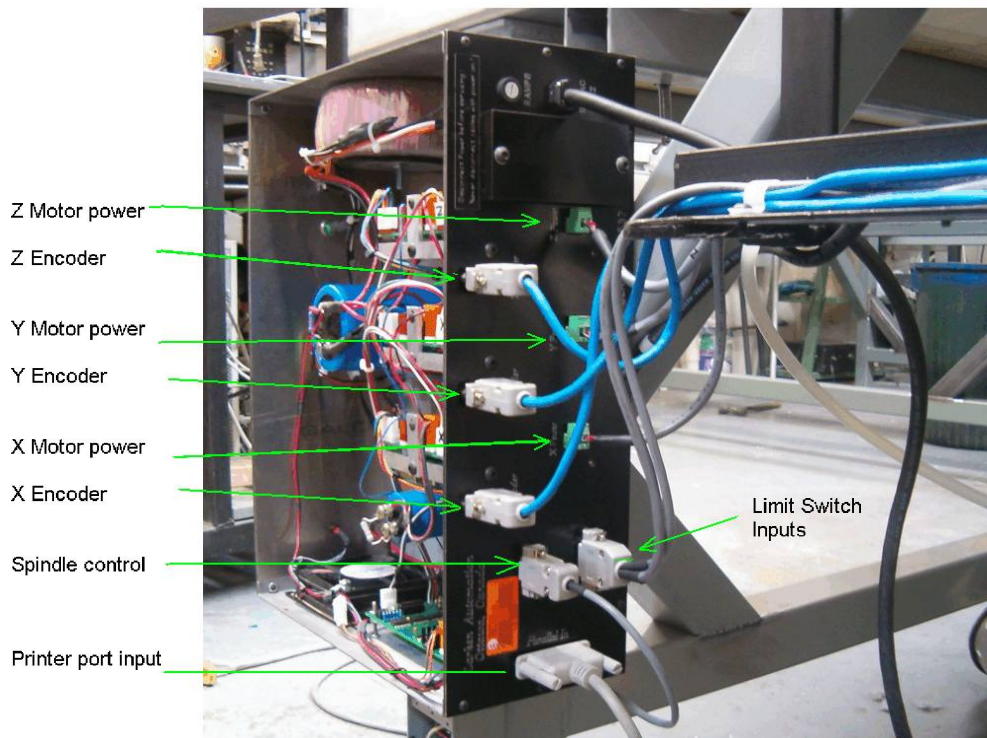
## Connecting the proper cables

**Warning:** *The Servo motors are very powerful and can cause the machine to have very rapid movement of the XY gantry. Keep people clear of moving parts and be ready to turn controller off if a problem occurs.*

Each servo motor has 2 connections. There is a 2 wire motor power connection and a encoder cable with a 9 pin D connector.

**It is VERY IMPORTANT that you DO NOT MIX UP connections between motors or the motors will run uncontrolled at full speed and damage the system or cause a dangerous situation!**

It is best to connect one motor at a time and test the system . Then add the next motor and test, then continue until all motors are connected.



Push gantry and Y axis to the center of the table before testing. Also turn Z axis screw so Z axis is in the middle of its travel.

To test the system, turn the controller on and be ready to turn it off. The machine should not jump. It should just hold the axis (locked in position) If the motor jumps or runs, then there is a problem.. With the computer connected you can run the StarCNC spooler to jog the axis. The LED should be flashing on the front of the controller before loading the software.

Be sure to turn the controller off for 30 seconds before connecting or disconnecting any cables to prevent electronic damage.

Each time you turn on the controller, the StarCNC software needs to be reloaded. If the program was running when the controller was turned off, close the program first before turning on the controller again. If it gets hung up, use CNTL-ALT-DEL keys and end the program.