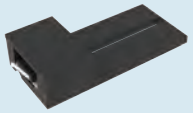
LASER ENGRAVER/CUTTER HIGH EFFICIENCY CONTROLLER.

Expand or build your laser machine with a highly configurable and easy to use Devil1 Laser controller.

Designed to work with engravers from Atomstack to xTool, brand name to DIY.

Limit Switches Installation

Front Y 

Right X 

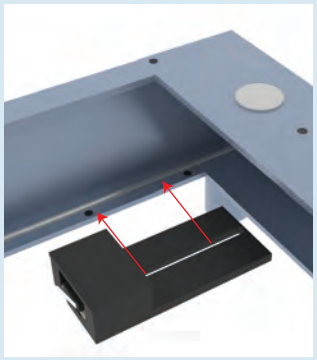
Back Y 

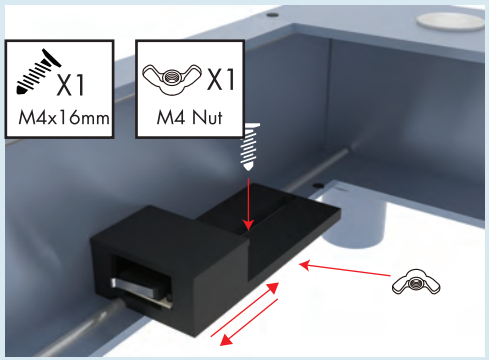
Left X 

IMPORTANT!

Manually move module/gantry to ensure that all four limit switches are triggered, (there will be an audible "click"). Some adjustment to the limit switch arm may be needed. In these instances, press and hold the connected side of the arm and gently bend the free end of the arm outward. Recheck switch triggering and readjust if needed.

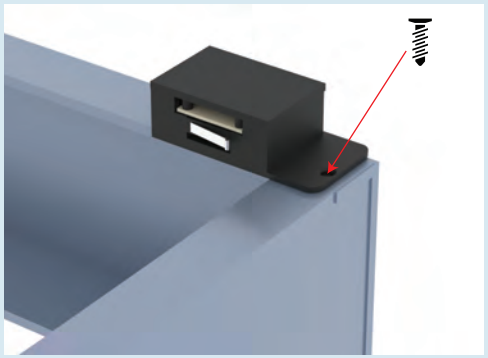
Front Y Limit Switch





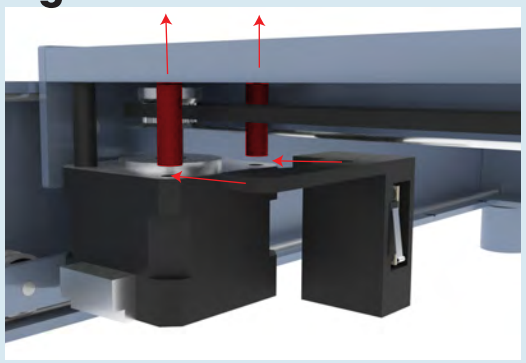
Attach the Y Front Limit Switch to the side of the frame using the screw and wingnut provided. Adjust the positon backward or forward to ensure that your laser module won't hit the front of your machine, then tighten the wingnut to secure in place.
***Different modules are different sizes, so it's best to adjust according to the largest module you have.**

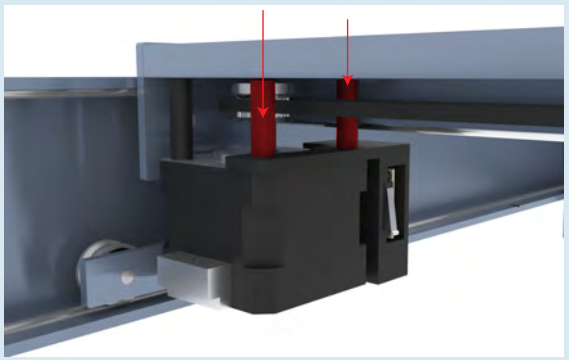
Rear Y Limit Switch



Use the existing machine screw to secure the Rear Y Switch to the frame.

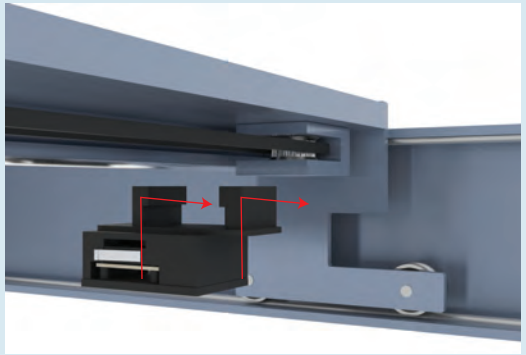
Right X Limit Switch

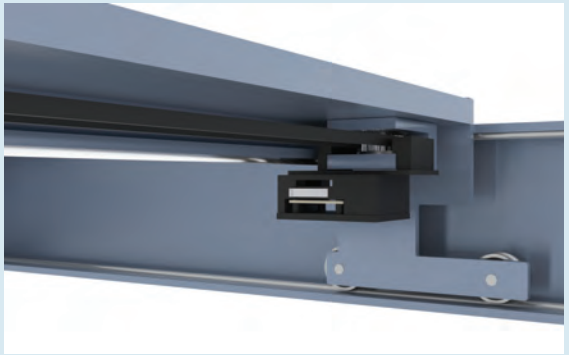




Loosen the X belt. Remove the two screws from the X stepper as shown in the photo number 1, as well as the two spacers.
Using the provided spacers, slide the limit housing under the spacers and replace the two screws.
Retightned X belt.

Left X Limit Switch



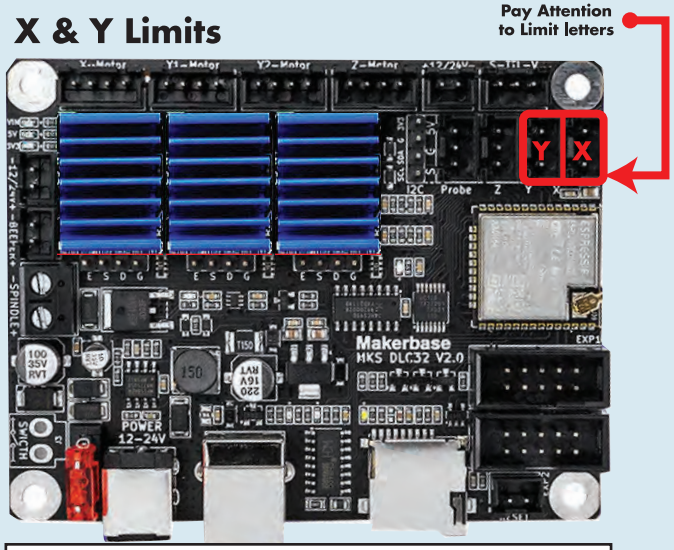


Slide the Left X Limit Switch onto the pulley housing, making sure is all the way to the back.

Wiring Setup Devil1

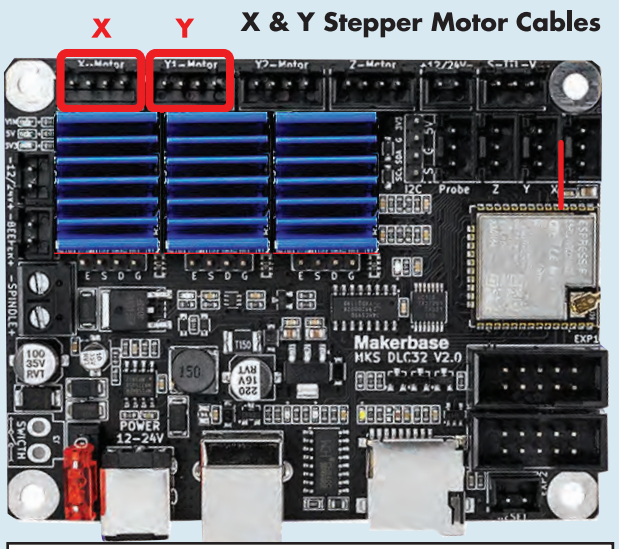
Be sure that power is not connected to the Devil1 control box will connecting/disconnecting wires.
Access to control board is made easier by removing the feet from the box and removing the bottom plate. Be sure to route the cables out through the opening in the side of the housing so that they do not interfere with replacing the bottom plate. When finished replace the bottom plate and feet

X & Y Limits



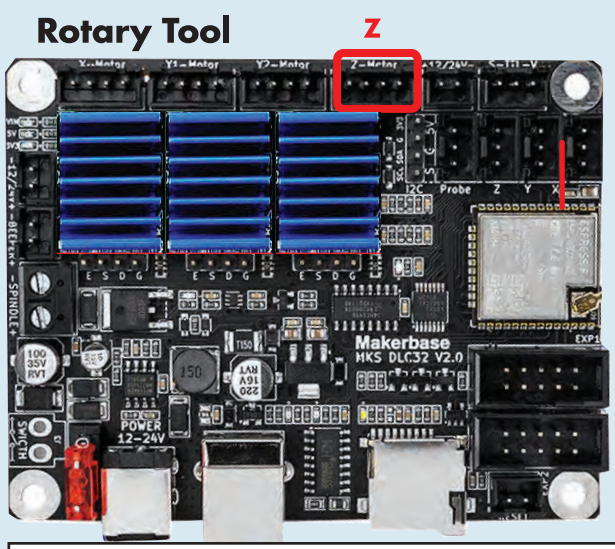
Following the markings on the cables, install cables for the X and Y limit switches. For kits with four limit switches, the connector with two sets of wires connects here. The connectors are keyed and can only be installed one way.

X & Y Stepper Motor Cables



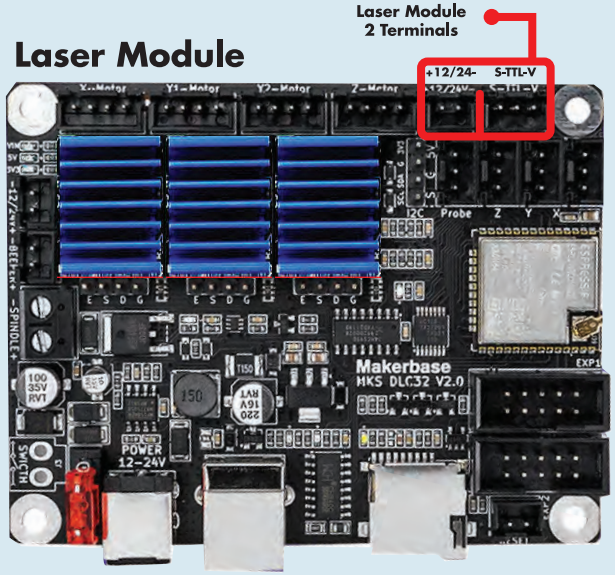
Following the markings on the cables, install cables for the X and Y stepper motors where indicated.
X is the cable for left/right movement, Y is for front/back movement. The connectors are keyed and can only be installed one way.

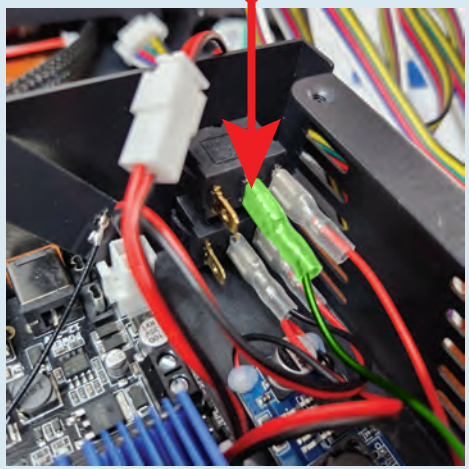
Rotary Tool



Following the markings on the cable, install cable for the rotary extension where indicated. The connector is keyed and can only be installed one way.

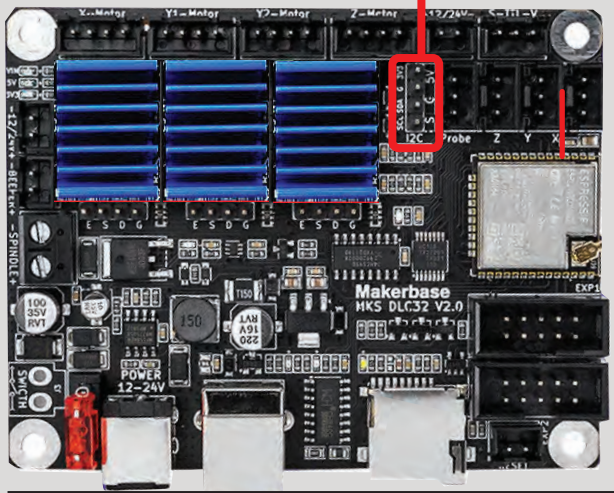
Laser Module





Following the markings on the cable and the number of pins per connector, install the two white connectors from the laser module cable where indicated. The connectors are keyed and can only be installed one way. Attach the third cable on the spade of the switch where indicated.

Assistmate



Install the Assistmate cable on the i2c header pins so that the end with two wires is closest to the rotary port.