USCutter SC Series Motherboard Replacement Guide

Tools needed:

- Philips Screw driver
- Small or Needle nose pliers
- Tape & a Marker

Average time to complete process:

- 20 – 30 mins

This tutorial assumes that previous trouble shooting with a USCutter Technical Support Representative has determined your SC Series motherboard to require replacement. Your cutter should be un-plugged from power throughout this process. There are a variety of issues that would require a motherboard replacement, all of them stemming from hardware failures only. The most common causes for motherboard replacement are:

- Jerky or inconsistent movement of the carriage or feed-rollers when “jogging” or changing the home origin on the cutter.
- Grinding sound when “jogging” the feed-rollers or carriage* or no movement at all
- Unidentifiable characters (gibberish) displayed on the cutter’s LCD screen
- Flashing lights on the menu and/or carriage arm jumping up and down repeatedly

*A grinding sound when you first turn the cutter on likely indicates that the carriage bracket in the back of the machine is not making contact with the green limit switch. This can be the result of the carriage having come off the track and is not a Motherboard failure.
STEP #1: Remove the screws from the base of the unit.

The motherboards in the SC series cutters are located inside and underneath the unit, on the right side.

Roll the cutter on to it's "back".

Remove the perimeter machine screws. The exact number will vary based on the size of your cutter.
STEP #2: Expose the Motherboard

The wires that connect the motherboard to all the other components in the unit come from two different directions, and will be taught. When you lower the base plate, try to “tuck” the plate into the frame of the cutter, so as not to place too much tension or stress on the wires and connecting ports. (See image #3)
**STEP #3: Unplug the connections from the Motherboard.**

There are a total of 8 connections on the Motherboard. Yours should look something similar to the image below.

Before we start to un-plug anything, there are a couple prep-steps we’ll want to take first. Four of the eight connections on the Motherboard are inter-changeable, so it’s recommended that you mark all the wires prior to removing them. See the image below.
Next, you’ll need to break loose the hot glue on the larger connections. The hot glue was meant to prevent the ports from wiggling loose during shipping and it isn’t not critical. Use your small/needle-nose pliers and carefully remove the hot glue from around the ports.

**STEP #4:** Remove the connecting cables/wires from the motherboard.
STEP #5: Remove the defective motherboard from the base-plate

Now that you have the cables and wires disconnected from the motherboard; there are 4 machine screws that will need to be removed. These screws are what hold the Motherboard to the base-plate.

Carefully tip the base plate up and remove the 4 machine screws that secure the Motherboard; two in the metal heat synch on the left two with plastic stand-off on the right. Be mindful not to lose the plastic spacers and nuts when you remove the screws.
STEP #6: Install the new motherboard!

Set the defective motherboard aside and attach the new motherboard to the base-plate. Next, using the labels on the wires as a reference, reconnect the wires and cables to the new Motherboard ensuring they get a solid connection.

Once you have everything reconnected (as pictured below) you can fold the base plate back up to the bottom of the cutter and replace all the base-plate machine screws. And you’re done!