Spark 40 Footswitch Mod

Bill of Materials

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You need this…

1 X  Randall RF4G3 ($50-$70) search on ebay

1 X  Pack of 5 Momentary switches (you only need 4 for this mod)

2 X  Bulkhead RJ45 Coupler

1 X 

Cat Cable 12ft 2 Pack

- General Tools
- Wire Stripper
- Soldering Iron
- Solder
- 3/4” Hole punch
- Dremel tool or metal file
- Tie Wraps

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PHASE 1
THE FOOTSWITCH

PHASE 2
THE CABINET

PHASE 3
THE AMP

PHASE 4
THE TEST

The Footswitch

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Strip all the components from the Randall footswitch. Sand and paint whatever color.. I chose flat black.

Punch 3/4” hole on either side for the panel mount RJ45 connector. You may have to open the hole up a bit with Dremel tool or file. I also used a fitted o-ring so that I could have the outside connector flush with the retaining nut.

Take one of your 3ft or 10ft network cables and cut it in half. One half will be used in the footswitch, the other half will be used in the amp later.

PDF for the dimensions on the panel mount RJ45

The Footswitch

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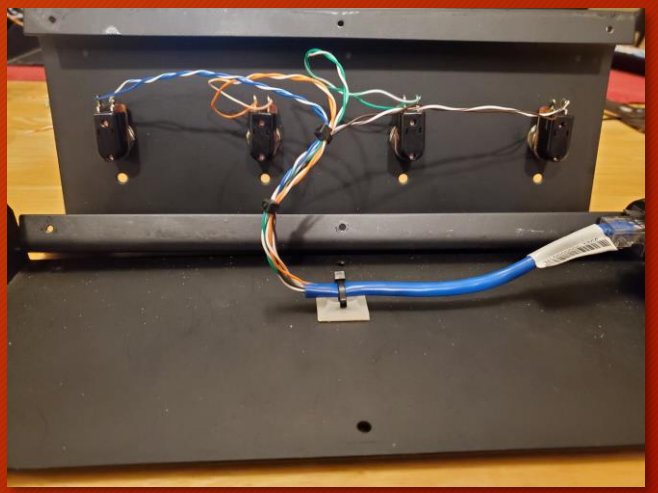
Prep all your momentary foot switches with lock-tight.

Populate your newly painted footswitch with the switches.
It shows the old switches with L



Strip jacket 8”, tin & solder each pair to each switch, install strain relief.
Solder connections:
Blu/bluwht for 1, Org/orgwht for 2, Grn/Grnwht for 3, Brn/Brnwht for 4
Screw the cover and base back together.
The footswitch is done.

The Cabinet

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Remove the right speaker

Choose your location on the back plate and trim the coating just over ¾” so that when you use your paddle bit you don’t tear up the jacket. Remove the back plate and drill the 3/4” hole.

Now use the backplate as your template and trace your cabinet thru-hole on the back of the cabinet. Place back plate aside.

The Cabinet

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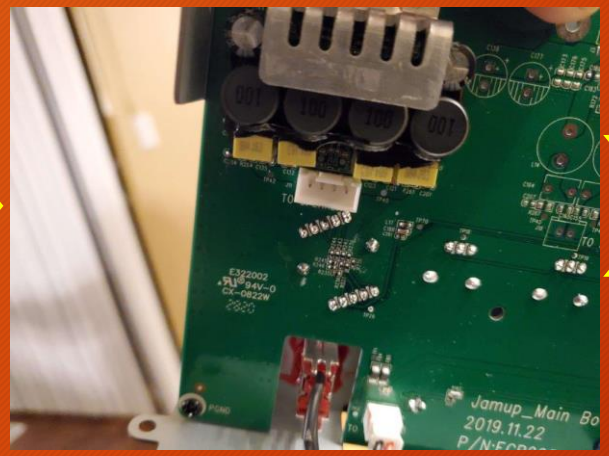
With the backplate removed use a 1-1/2” paddle bit to open the pass-thru hole for the RJ-45 connector



Carefully remove the circuit board. Be mindful of the Bluetooth cable and speaker cable. Unplug the speaker cable to allow you to rotate the board out of the way for the next step.

Just to the left of the speaker cable pass-thru drill a ½” hole into the lower cavity. Make sure the wiring below is out of the way. The new pass-thru is for the internal network cable that will routed and soldered to the circuit board.

The Cabinet

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Connect the other half of the network cable that you cut in half and feed it thru up to the ½ hole to where the circuit board is

With the connector and cable installed, test fit the back panel.

Remove the back panel again and remove the circuit board, disconnect the cable from RJ45 and set the back panel aside.

The Amp

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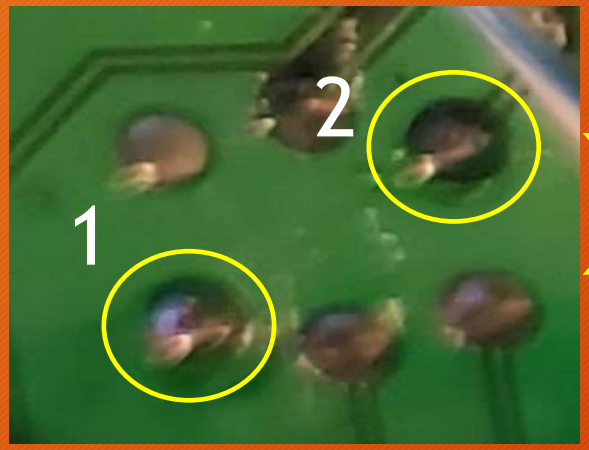
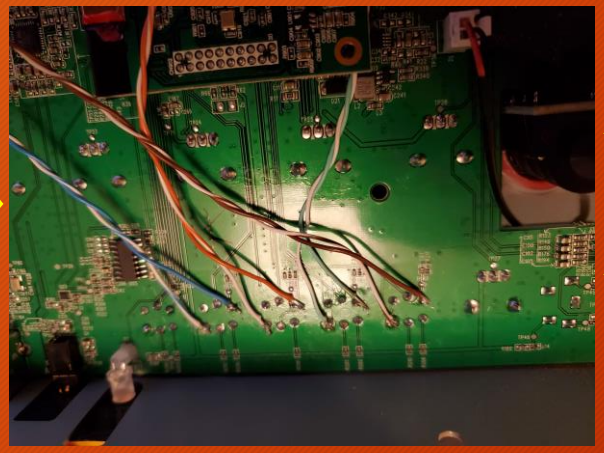


Pin 1 – Color w/white stipe

Pin 2 – Solid Color



Looking down with the back of the amp facing you, carefully position and secure the circuit board. Strip the jacket 8” off the routed network cable and solder the assigned pairs to the appropriate contacts.

The Test

The Test

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To completely test the crcuit , connect pedal with the other 12’ network cable to the rear RJ45 connector. Do not reassemble the amp.

With a Digital Multimeter set to Ohms, put you leads on pins 1 and 2 for each group of contacts, and press each appropriate footswitch, testing all four switches.

To serve as strain-relief, zip tie the pairs, and take 4” piece of electrical tape to cover the contacts.

The Test

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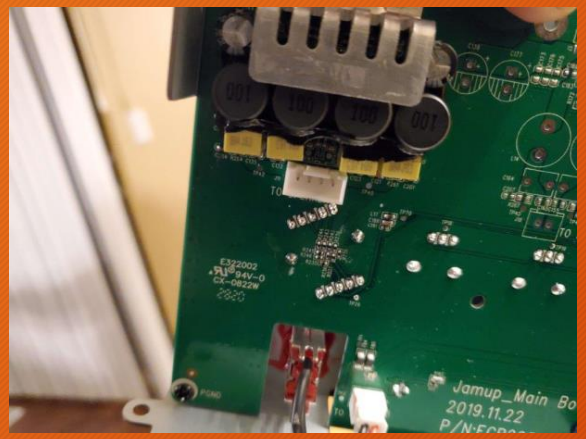

Make sure to connect the speaker connector before you re-install the circuit board.

Re-assemble amp.

Time to rock!
And now you can change presets with your foot! Whoa!

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You’re done!

If you want me do it click here