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Yamaha VSS-200 MIDI Retrofit Guide

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☐ 01-22-2014, 02:07 PM   #:

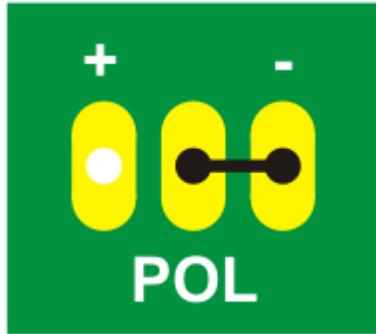**John** ○
Moderator

Join Date: Jan 200(
Posts: 3,007

📄 **Yamaha VSS-200 MIDI Retrofit Guide**

Step #0: Read the UMR2 user manual! You can download it from the UMR2 product page.

Always remove batteries and disconnect any power supply from the host keyboard before wiring activity.

1. (VERY IMPORTANT) Connect Matrix Polarity Jumper

Connect the UMR2 Matrix Polarity Jumper for the "Active Low" setting. You can do this by soldering a small piece of wire as shown.

2. Power and MIDI: Wiring and Test

Connect the UMR2 "DC IN" terminals and MIDI terminals as shown in the diagram. With the host keyboard powered on, test the MIDI signal path by making the following connections:

MIDI Controller MIDI Out -> UMR2 MIDI In
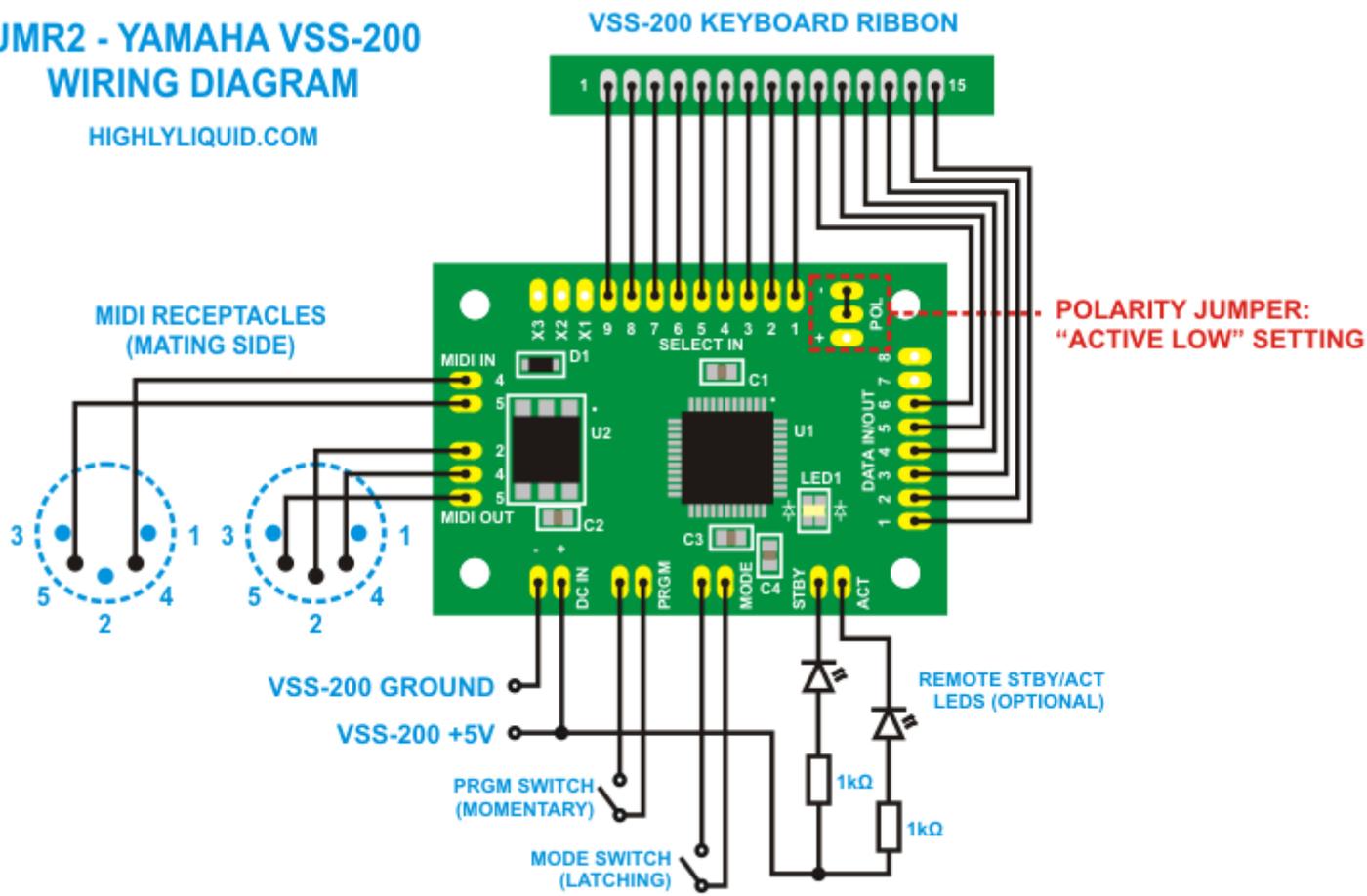UMR2 MIDI Out -> Sound Module MIDI In

Test the UMR2 "software MIDI thru" by attempting to control the sound module with the MIDI controller. This confirms that the MIDI and power wiring are correct.
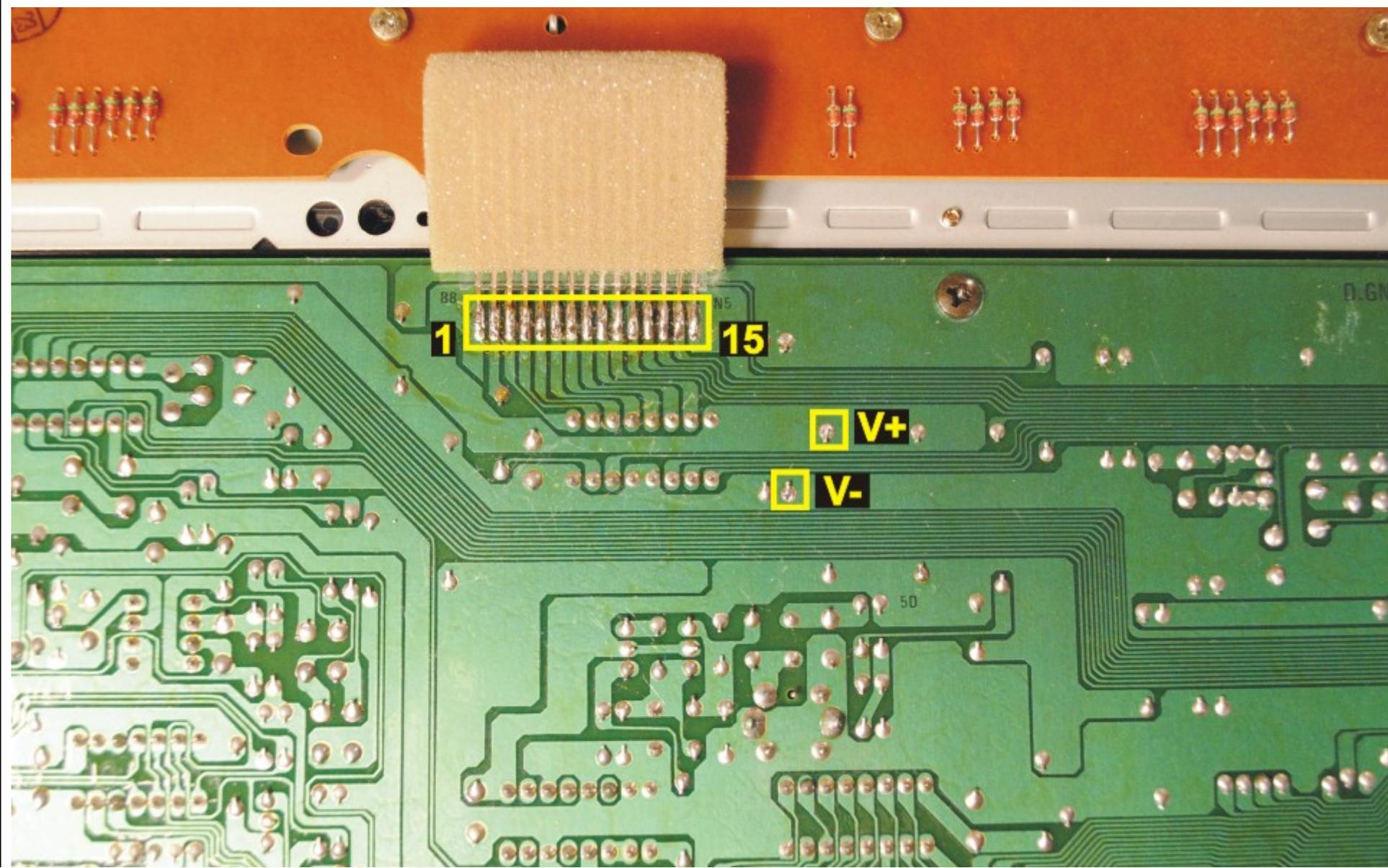
3. Matrix and Switch Wiring

Complete the matrix wiring and PRGM and MODE switch wiring as shown in the diagram.

UMR2 - YAMAHA VSS-200 WIRING DIAGRAM

HIGHLYLIQUID.COM

VSS-200 KEYBOARD RIBBON

MIDI RECEPTACLES (MATING SIDE)

MIDI IN

MIDI OUT

SELECT IN

X3 X2 X1   9 8 7 6 5 4 3 2 1

POL

POLARITY JUMPER: "ACTIVE LOW" SETTING

DATA IN/OUT   8 7 6 5 4 3 2 1

U2   U1   LED1

D1   C1   C2   C3   C4

VSS-200 GROUND

VSS-200 +5V

DC IN   PRGM   MODE   STBY   ACT

PRGM SWITCH (MOMENTARY)

MODE SWITCH (LATCHING)

1kΩ

1kΩ

REMOTE STBY/ACT LEDS (OPTIONAL)

Host power and ribbon locations:

4. UMR2 Setup Procedure

Complete the UMR2 Setup Procedure as described in the UMR2 user manual. This allows the UMR2 to "learn" the keyboard switch matrix configuration of the host, and also sets the MIDI channel and note range.

5. Post Feedback

Post a reply to let us know how this worked for you. 🙂

📄 02-28-2014, 07:02 PM   #**2**

sledge ⦿
Junior Member

Join Date: Apr 2013
Posts: 4

Hi I followed the instructions posted here for installing the UMR2 in my Yamaha VSS-200. I checked the voltage on the VSS-200 pcb and read a little over 5 volts. I had no midi devise handy (I did it at work) so i wire it all up.
Upon powering up, one of the LEDs on the UMR2 lit up. The keyboard worked.
I had read that sometimes a separate power switch for the UMR2 helps so I wired one in.
Also I discovered I had wired the remote LEDs back to front. I remedied this.
At the same time I read the voltage again and oddly, it had gone up to over 6 volts. the voltage continued to creep up so I decided to wire in the resistor and zener. After this the voltage after the zener was around 6 volts. The voltage on the VSS-200 continued to creep up to over 7 volts.
The UMR2 had no LEDs lit now
On powering up the VSS-200 the keyboard was not responding but responded when I powered up the UMR2.
I closed up the case and took it home.
I connected the VSS-200 to the midi out of my Arturia Minibrute, powered all up and nothing.
I checked the wiring over, all is where it should be with no dry joints or solder bridges as far as I can tell.

Any ideas?

Quote

03-10-2014, 03:23 PM

#**3**

John ○
Moderator

Join Date: Jan 2009
Posts: 3,007

Quote:

> Originally Posted by **sledge** ▶
> *Hi I followed the instructions posted here for installing the UMR2 in my Yamaha VSS-200. I checked the voltage on the*
> *VSS-200 pcb and read a little over 5 volts. I had no midi devise handy (I did it at work) so i wire it all up.*
> *Upon powering up, one of the LEDs on the UMR2 lit up. The keyboard worked.*
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> *continued to creep up to over 7 volts.*
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> *On powering up the VSS-200 the keyboard was not responding but responded when I powered up the UMR2.*
> *I closed up the case and took it home.*
> *I connected the VSS-200 to the midi out of my Arturia Minibrute, powered all up and nothing.*
> *I checked the wiring over, all is where it should be with no dry joints or solder bridges as far as I can tell.*
> *Any ideas?*

Hi Sledge, welcome to the forum. Did you perform the setup procedure in the UMR2 user manual?

Quote

☐ 03-11-2014, 12:13 PM   #**4**

sledge ◉
Junior Member

Join Date: Apr 2013
Posts: 4

Hi John

Thanks for your welcome.
I should have said:
I connected the VSS-200 to the midi out of my Arturia Minibrute, powered all up went through the set procedure as per the manual and nothing. no led light, no sound.

I deviated from the recommended steps in as much as I completed all the wiring or the UMR2 before I commenced with the set up procedure.
I did not do the intermediate "software thru" test.

Should I disconnect the polarity matrix jumper and matrix switch wiring and go back to the software thru step?

Cheers

☐ 03-11-2014, 02:16 PM   #**5**

John ◉
Moderator

Join Date: Jan 2009
Posts: 3,007

Quote:

> Originally Posted by **sledge** ⟩
> *Hi John*
>
> *Thanks for your welcome.*
> *I should have said:*
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>
> *I deviated from the recommended steps in as much as I completed all the wiring or the UMR2 before I commenced with the set up procedure.*
> *I did not do the intermediate "software thru" test.*
>
> *Should I disconnect the polarity matrix jumper and matrix switch wiring and go back to the software thru step?*
>
> *Cheers*

It's a good idea to do the MIDI thru test first, since MIDI connectivity is essential to the setup procedure.

What is the voltage across the V+ and V- points on the VSS-200 PCB when it is powered up?

Quote

☐ 03-11-2014, 11:05 PM   #**6**

sledge ○   Join Date: Apr 2013
Junior Member   Posts: 4

Hi John

With the UMR2 all wired in, the voltage between V+ and V- on the VSS-200 pcb settles at 7volts. The voltage after the zener (i.e. on the UMR2 board) is 6volts. This jumps to 6.6volts when the mode switch is closed. The position of the mode switch makes no difference to the voltage on the VSS-200 pcb

After measuring these voltages I disconnected the matrix polarity jumper on the UMR2 board and all the matrix switch connections from the VSS-200 pcb.
I powered up the VSS-200. Now the standby LED is on steady and the ACT LED flickers when a key on the midi connected keyboard is pressed.

The voltage is 7volts on the VSS-200 pcb. On the UMR2 board Vin it is 4.6volts with the mode switch closed and 5volts with it open.

Cheers

[Quote]

📁 03-14-2014, 11:32 PM   #**7**

sledge ⚪
Junior Member

Join Date: Apr 2013
Posts: 4

🗒

Hi John

I soldered number 1 matrix switch wire (farthest to the left in photo above) back onto the VSS-200 pcb and powered up. The UMR2 LEDs were not lit and unresponsive to MIDI input.
I unsoldered number one wire and the UMR2 Standby LED was on steady again and the ACT LED responded to MIDI.
I am not sure where to go from here. i don't want to toast my board.
Do you think the polarity jumper is active high, maybe. I gather most Yamahas are active low.

Cheers

[Quote]

02-26-2015, 06:01 PM

#**8**

Sandrow ○
Junior Member

Join Date: Jan 2014
Posts: 2

Hi there,

Here my experience with UMR-2 on a Yamaha VSS-200.
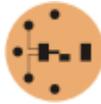
I'll dont post pics here but just the link.

http://www.facebook.com/media/set/?s...1&l=27a00b282f

Hope this will be useful for someone.

Bye! 😁

Quote

02-28-2015, 02:32 PM

#**9**

John ○
Moderator

Join Date: Jan 2009
Posts: 3,007

Quote:

Originally Posted by **Sandrow** ➤
Hi there,

Here my experience with UMR-2 on a Yamaha VSS-200.

I'll dont post pics here but just the link.

http://www.facebook.com/media/set/?s...1&l=27a00b282f

Hope this will be useful for someone.

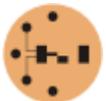*Bye!* 😁

These are great! Thanks for posting!

[Quote]

02-28-2015, 03:10 PM   #10

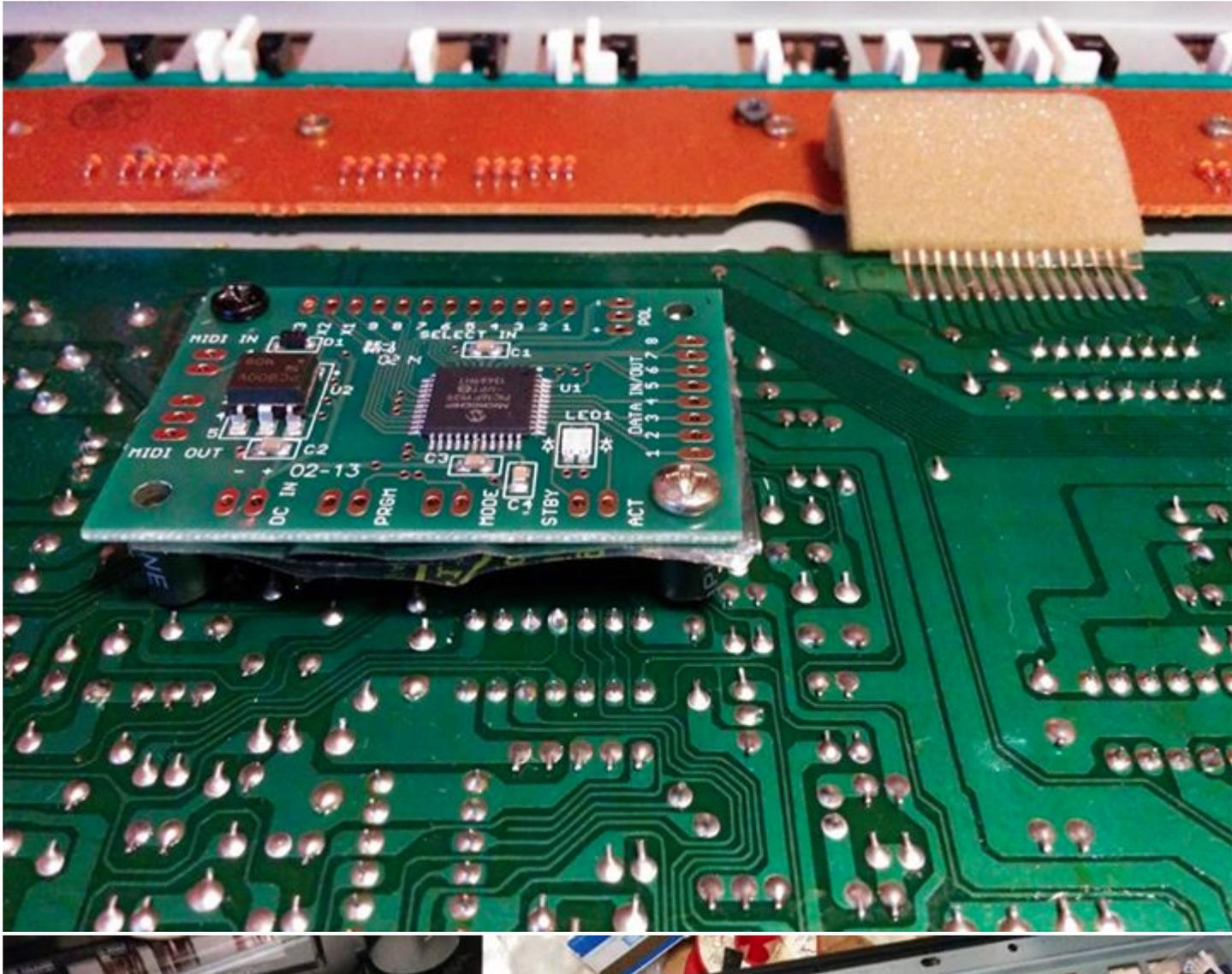John 🔵   Join Date: Jan 2009
Moderator   Posts: 3,007

Sandrow gave permission, so I am going to post some of the images.

Attached Images

Quote

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