MD2600 Scanner Mods

1) LED Mod

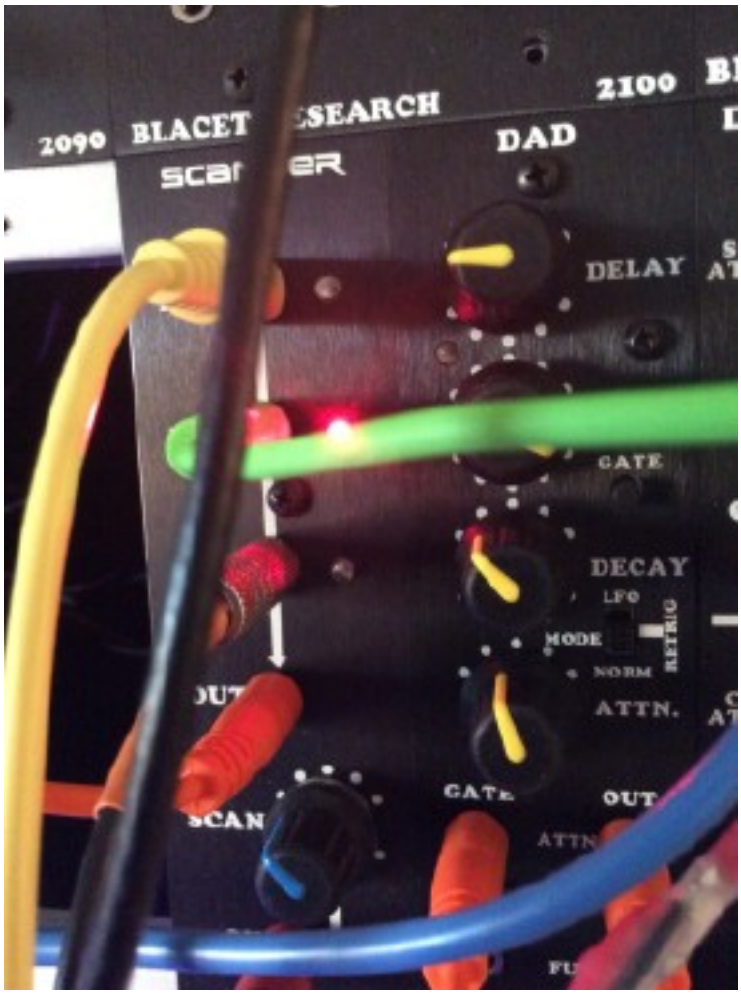
Having three LEDs on the front panel really helps in understanding this module`s operation.

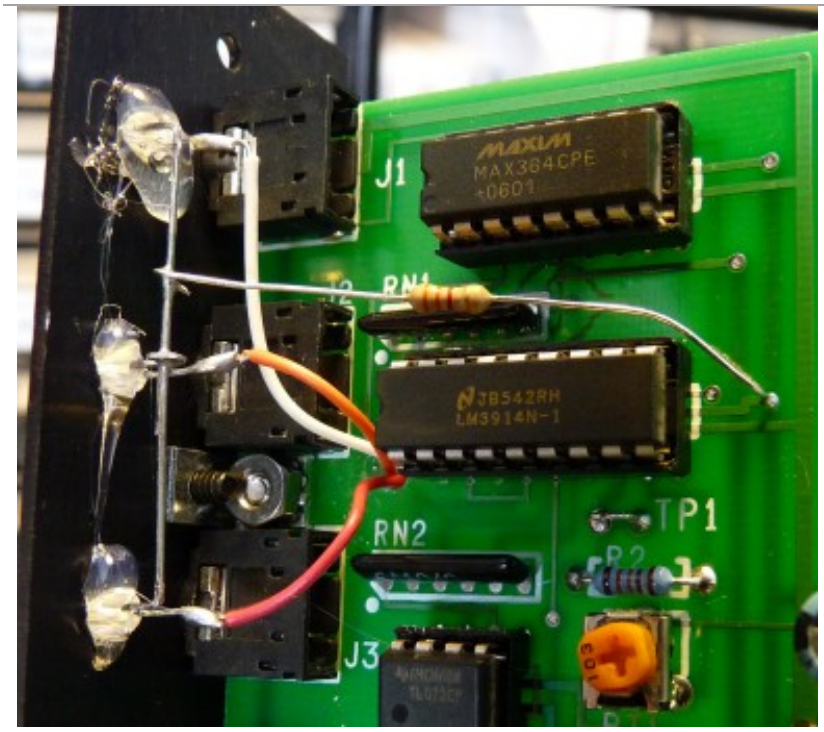
You will need three low current/ultra bight T1 LEDs, a 3.3K resistor and some wire.

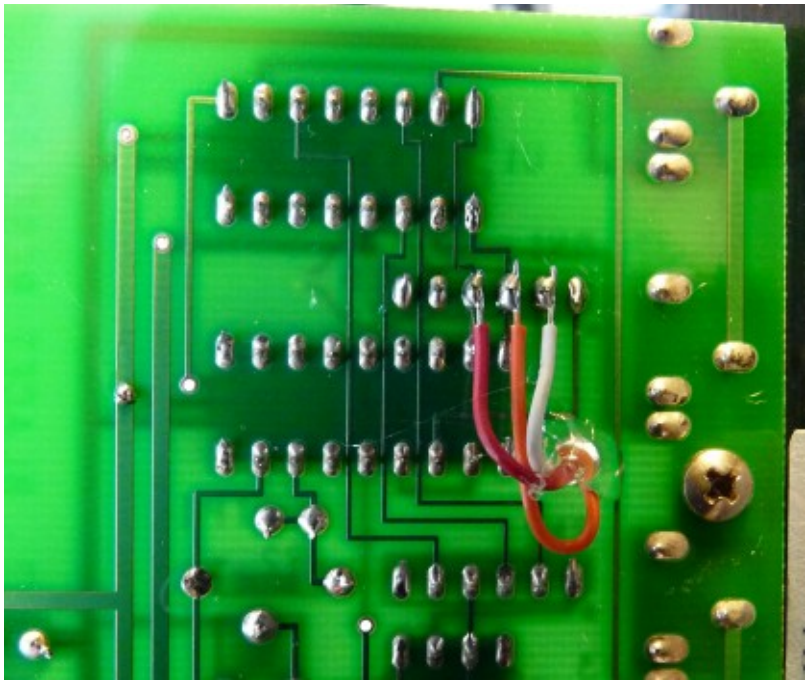
Start by carefully drilling three 1/8" holes in the front panel to the right of the A, B and C jacks.
You can also drill a hole in the PCB to route the LED wires through, for a neater mod.

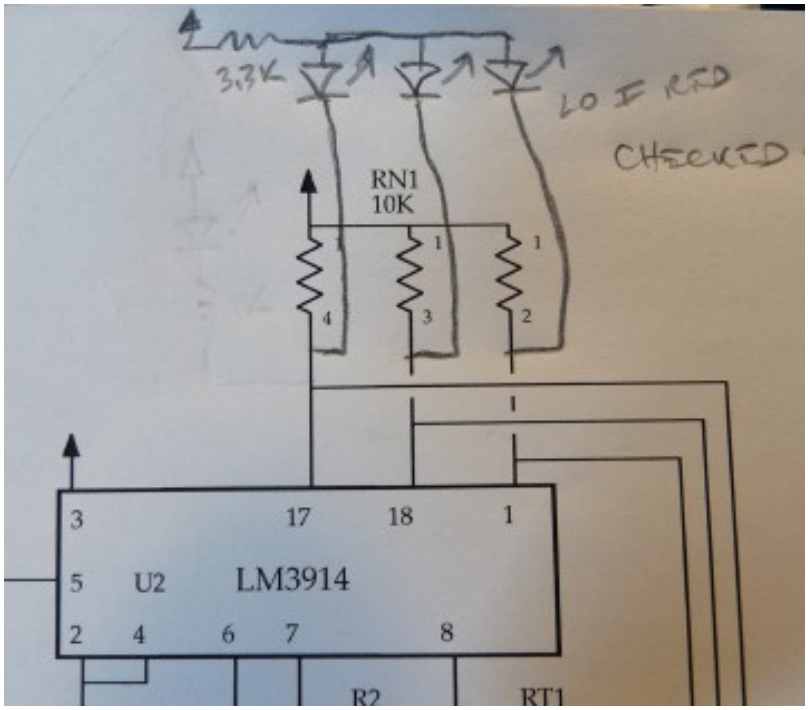
You can use hot melt glue to mount the LEDs.

The LED anodes are commoned and connect to the +15V buss via a 3.K resistor. The three cathode wires are actually soldered to the RN1 pins as these are sturdier than the IC pins.




J1
MAXIM
MAX364CPE
+0601
RN1
JB542RH
LM3914N-1
TP1
RN2
J3





2) A **second mod** greatly reduces the transition noise between two of the steps. On the solder side of the PCB, locate pins 1 and 3 of U2. Take a 10K resistor, bend one lead over, trim the leads pretty short and solder them on to the two pads of U2.

This works because of the different impedance of pin 1 of the bar graph display driver chip. The 100K pull up resistor SIP used allows a transition state at 5V instead of the expected common and +15.

These mods are now included on the modules currently shipping with the second mod done by using a 10K SIP.

3) I was noticing that I kept using an attenuator when patching the scanner. This was to keep the CV from causing the Scanner to go "out of range", ie; no channel "on" at the top end.

The design of the Scanner is basically a CV level activated sequential switch (as opposed to the nearly identical MD2650, which is a clock toggled switch) with a "off-on-on-on-off" response. That last "off" was proving a bit annoying in at least the patches I was using the scanner for.

The fix is to change R7 to 15K and R6 to 39.2K. With the Ref trimmer (RT1) at full CCW (maximum voltage between steps), the scanner will stay on the "C" channel even when the CV is at max. With the Scan knob fully CCW, IN-A will come on at about 2.7V, IN-B at 5.4V and IN-C at 7.8V. You can turn the Scan knob CW to start with IN-A "on" and thus have one channel on throughout the CV

range.

You can still turn RT1 CW and get the original response with an "off" at the end, along with a narrower voltage range between steps.