

The Stoned Marten LPG - ADSR Card for 208 Build notes

The PCB is tight and many pads come close to each other. Solder very neatly with a thin tip to prevent unwanted bridges.

If your beliefs make you prefer to use 5 % carbon resistors instead of the recommended 1 % metal film ones, the LPG ones silkscreened 1 % should be 1 % to match the original schematics however.

To use a VTL5C3/2 dual vactrol, bridge the LED holes of the right spot with a component lead, there's a small stripe silkscreened, and install the vactrol as pictured. Do not use a Xvive VTL5C3/2, their decay tail is too short and no difference can be heard between the comb and LPF modes.



Both the VTL5C3 vactrols or VTL5C3/2 dual vactrol should be selected in order to have a significant difference between the LPG's LPF and comb modes, in LPF mode the sound should be dry, with no or a very short tail, less than 0.5 second. A lower amplitude in VCA mode is normal.

If you don't have a vactrol test rig, you can insert the vactrol's leads into the holes in order to do contact without soldering to do the selection on test and solder only when you're happy with the result.

Aluminum electrolytic caps can be used instead of the tantalum beads, it makes no difference in sound.

Each 'LED' resistor sets the closest LED's brightness, the 470 ohms, 1K and 3.3k values of the BOM should be ok in most cases but feel free to use other value.

The normalized tinijax socket is for the LPG 'signal in', bridge the ground and central tabs so that when no plug is inserted, the input is grounded.

Solder the ground tab of the tinijax sockets together and the output section 'signal in' ground tab to the 'G' pad on the PCB.

Solder the signal cable of the LPG 'signal in' socket to the tab before to mount the panel to the PCB and run it through the PCB hole.

No calibration is needed but with the 'CV resp' trimmer you can adjust the LPG's response to CV in order to best fit your own preference and 208.

If the ADSR doesn't work or stops working at some point, the NE555 is the #1 suspect. Replace it.

The 10 ohms vertical resistors are fuses, if the magic smoke escapes there's a problem on the card such as a short or upside down IC.

Last but not least : read the users manual.



Internal wiring of the card's signal output to the 208's output section

As an option, the LPG output can also be connected directly to 208's output section via the edge connector with a small easy modification of the 208, thanks to the N/C contacts of the card connector (contacts 5 and 6 of each front and rear row, unless are used for another modification)

This doesn't apply to the 208c / Easel Command and likely Buchla USA Easel as my understanding is that unlike other revisions, all the contacts of the card connector are already used on these.

On the Stoned Marten Card, solder a short cable or piece of component lead between the 'output' pad (located above contacts 6 of the card's rear connector) and contact 3 of the 'front' row of the edge connector.

On a 208p or 208r, unplug card 12 to access the R70 and R71 resistors pads on the motherboard.

Solder a shielded cable between either the top pad of R70 or the bottom pad of R71 (dots on the pic) and contact 3 of the front row of the card edge connector. Connect shielding to Q ground on contact 2. The modification should be similar on the BEMI Easel, the resistors are

33k and in series with the channel A and B pot wipers (central terminal), easy to spot them with a continuity test.

The mini slide switch located near the LPG's 'channel C' pot enables or disables the connection to the 208's output section.

Dedicated length CV input via a 208 panel's 'to card' / 'to prog' socket

As an option, a 208 panel's 'to card' / 'to prog' socket can be used to control the length.

Run a cable through the hole (located between the gain and phase switches) from the edge connector's rear 23 (to use the 208 inverter's socket) or front 26 (to use the 208 preamp's socket) to the 'length CV' pad and solder a 56k resistor in the spot, 56k is a suggested value, a lower value will increase the CV action, a higher value will reduce it, feel free to select on test the value which best fits your own preference.



Disclaimer

Although 100% safe with any 208, the 218e and other 200e modules might be damaged if audio signal or bipolar or negative CV is patched to an input.

The inverted ADSR output is negative CV, therefore do not patch this output to a 200e module. I assume no liability for personal injury or damage to equipment or loss of use caused directly or indirectly by the use of the Stoned Marten ADSR - LPG Card.

Feel free to contact me for questions, feedback and support.

Thank you and happy building !

Cheers and beers from Belgium, Constantin

Latest update : August 9th 2023