BINSonomatic EchoSwell Mod

VERSION
1.1

SCOPE

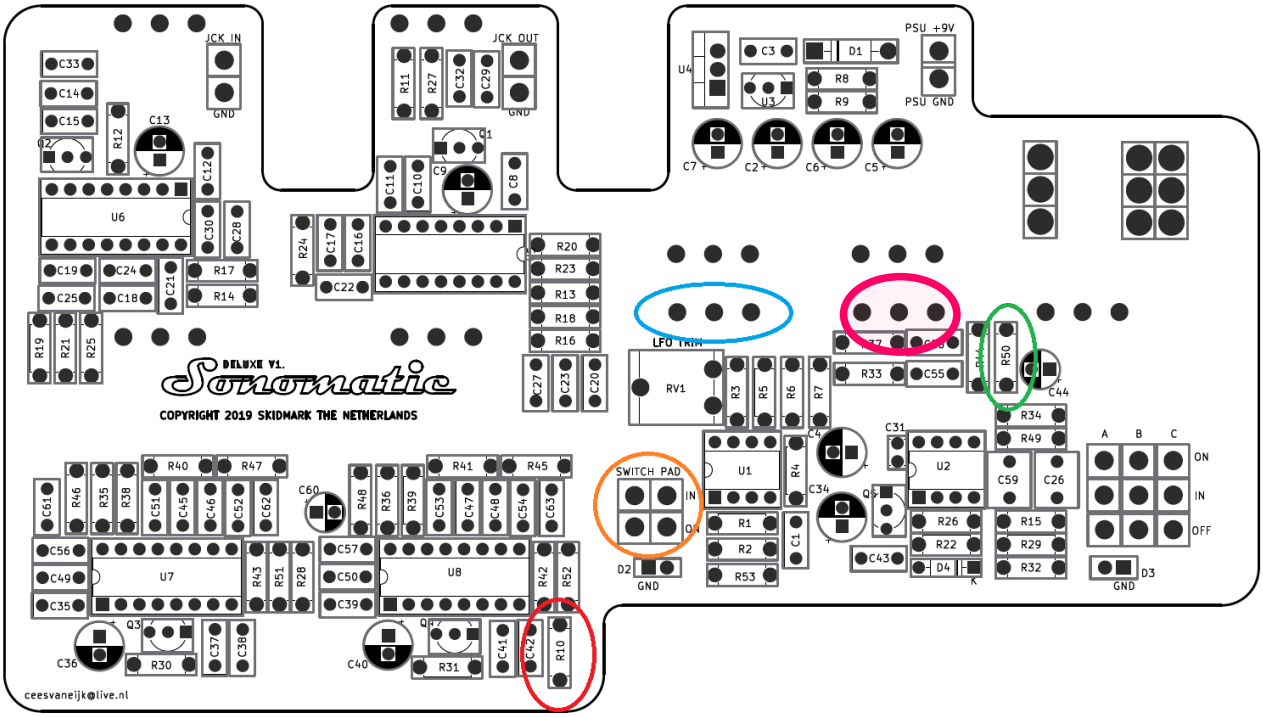
The mod called “BinSonomatic EchoSwell mod” is meant to add SWELL functionality to the Sonomatic delay, to reproduce one of the most characteristic features of the historic Binson Echorec.

The SWELL can be activated via the right footswitch and is notified with the right LED.
The FLUTTER mode, originally activated with the right footswitch, remains always ON and can be stopped setting to 0% the dedicated pot.

BOM

- 1x Standard 12 mm 3PDT Footswitch (you can use the “Tape” footswitch already present);
- 1x 4k7 Metal film 1/4 W 1 % Resistor;
- 1x 470k Metal film 1/4 W 1 % Resistor;
- 1x 1uF Electrolytic Capacitor;
- 1x Strip socket 2pins;
- 8x wires;
- 2x jumpers;
- 1x trimmer 20k.

PCB ANALYSIS



- **R10** impacts the speed of the repetitions. Originally mounts a 1M resistor.
  In this mod, it has been replaced by a 470k resistor, to allow to set the 4th head speed to about 300/310ms.

- **R50** originally connects only the 4th head output to the feedback line ("Echo Swell" pot).
  In this mod, the feedback line can be linked to the sum of the four heads output.

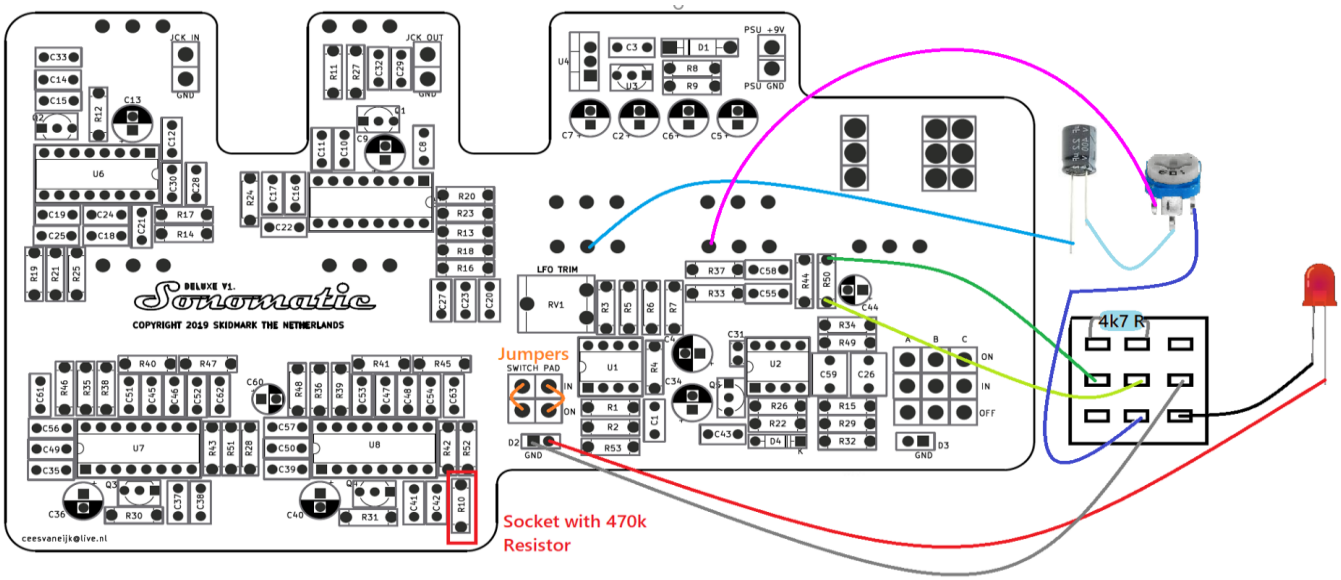
- **SWITCH PAD** originally allows to engage/disengage the FLUTTER pot. With the mod, it has to be jumped to set it always to ON.

- **RV7** pot regulates the output volume.

In this mod, it becomes the source of the feedback signal.

- **RV9** pot regulates the number of repetitions.
  In this mod, is used only its GND pin.

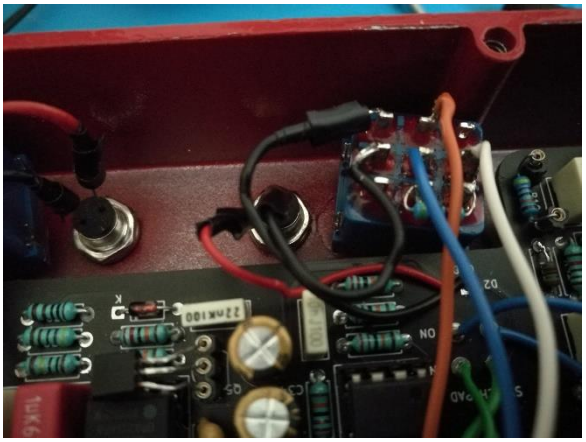
MOD WIRING

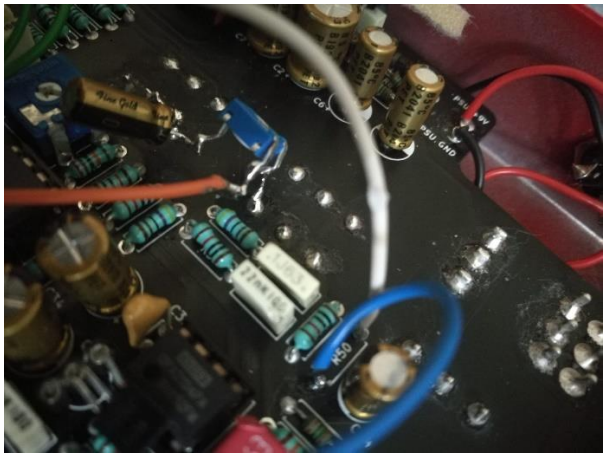


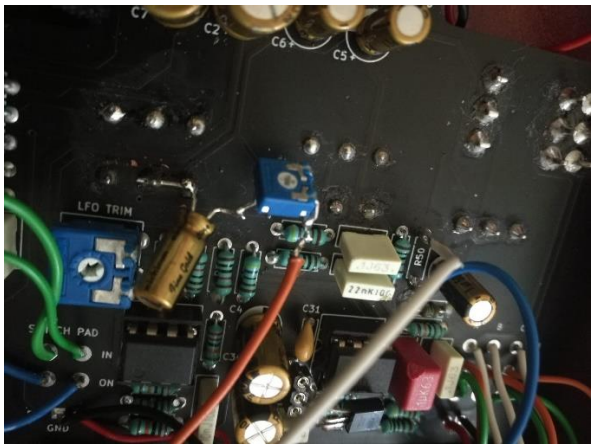
- Add the socket on **R10** and mount the 470k resistor.
- Jump the SWITCH PAD.
- Add the 4k7 Resistor on the 3PDT.
- Remove the R50 from the board. Connect the 3PDT with the R50 input pin and the R50 output pin.
- Connect the RV7 central pin to the 1uF Capacitor positive pin (anode); connect the negative pin (catode) to the pin2 of the trimmer.
- Connect the **pin3 of the trimmer** to the pin1 of RV9 (GND).
- Connect the pin **pin1 of the trimmer** to the 3PDT.
- Connect the ground (originally connected to the led) to the 3PDT.

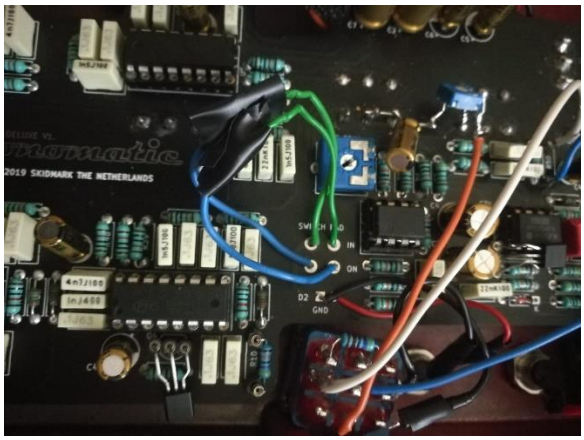
TRIM SETTING

Set the 20k trimmer all anti-clockwise (0%), then turn on pedal with Swell mode active and set the Feedback pot to 90%, Gain pot to 50% and Head2 Volume pot to 100%.
Play a single note on a guitar to trigger the pedal auto-oscillation. Now increase slowly the trimmer until the auto-oscillation is removed.
Just for reference, on my pedal the trimmer is set to 14,25k between pin1 and pin2.






LFO TRIM
IN
ON
GND


2019 SKIDMARK THE NETHERLANDS
IN
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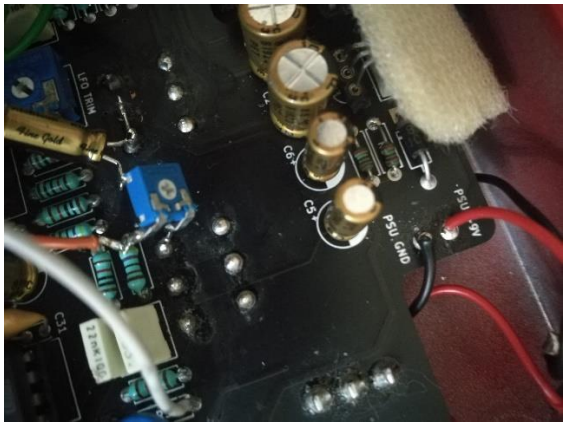
LFO TRIM
PSU GND


EFFECTS
ATTRITION AGES
HEAD 1
HEAD 2
SPEED REPEAT GAIN
HEAD 3
HEAD 4
OFF/ON
ECHOES