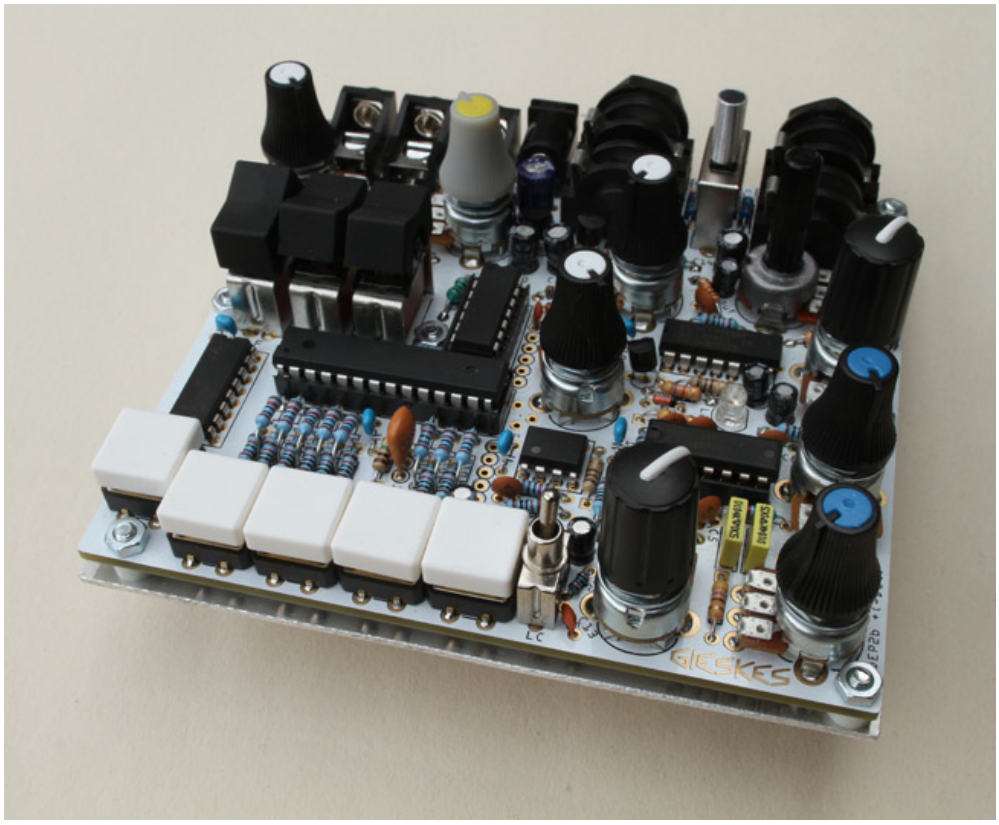
DEP2b Manual v0.2



Overview:

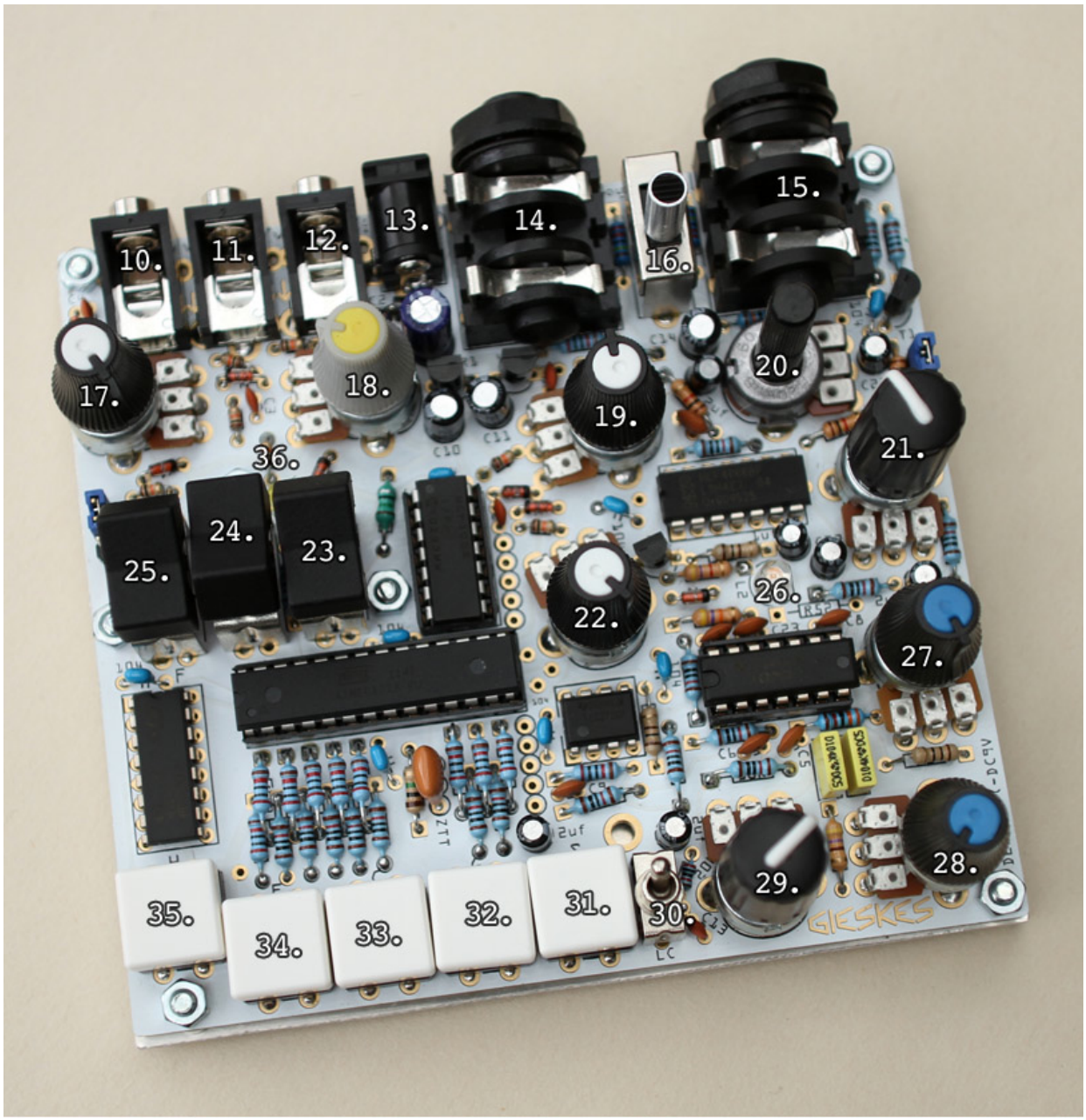
DEP2b stands for digital effect processor, it is a 8BIT and it uses a sample buffer of about 1700 bytes.
in delay mode it works allot like an analog delay. the signal goes from the DAC throe high or low pass filters and then back into the ADC.
In all modes it focuses allot on looping samples on audio threshold, so if the audio that is being send in goes above a set threshold the DEP2b will respond to it. in most cases it will record a sample and loop it, it will always try to playback the sound without cut clicks.

Requirements:

Power: It needs 7.5v to 12v DC power supply, minus in the center, it uses about 40ma at 9v (i use BOSS PSS stabilized power supply).

Audio-in: only audio level signals allowed (so no more then 5V).

CV in puts: It works with 0 to 5v, what is above or below should be cut off. +10v -10v max.



What is where:

10. CV in connected to 17. or 18. via jumper under 17.
11. CV in connected to 19.
12. CV in connected to 22.
13. Power connector
14. Audio output
15. Audio input
16. True bypass switch
17. Audio buffer length
18. Audio input threshold
19. Variable
20. Audio input level
21. Audio output level

22. Sample rate
23. Effect select
24. Effect select
25. Effect select
26. Audio input level display
27. Resonance
28. Lowpass
29. DAC output level
30. passive high-pass filter after DAC
31. Sample rate divide, in combination with 22.
32. forced record
33. Cut audio input signal from going to the output
34. Feedback on or off
35. Hold sample in buffer, like freeze.

Select Effect:

Buttons 23. 24. 25. can be used to select effects.

24. Up and 23. up is sample loop time stretch mode. 19. sets time stretch length.

24. Down and 23. up is pitch shift arpeggio mode. 17. selects pitches. 19. sets pitch sequence playback speed.

24. Up and 23. down is sample loop mode. 19. sets playback sequence position, it plays the whole sample and the next time it plays back the sample it will play it back on the elected position of 19.

24. Down and 23. down is delay mode. 19. is fine tune for buffer length. 18. sets threshold for sample loop, when all the way to the left there will be no sample loop, just delay.

25. Up makes the effect go forward and backward, for instance sample loop will play the sample forward, backward, forward.. and so on.
When the button is down, the effect will only go forward.

Buttons:

35. Hold button stops the buffer from being filled with new samples, meaning it keeps what is in there.

34. Feedback will go on depending on the effect. in delay mode feedback is normally on but when this button is pressed feedback will go off. for all other effects feedback will go on.

33. Cuts the input signal from being mixed in, so you will only hear the sound from the DAC. this button does nothing in delay mode.

32. Forced recording to the buffer, so when you press the button audio will be recorded to the buffer, when there is no sound it will record silence.

31. used in combination with 22. when you hold down the button and turn 22. it will divide the sample rate by 1 to 7. when 22. is all the way to the right and you press this button you will get the highest sample rate.

You can also make a button stay on after you have released it, by doing the following.
Hold down one of the buttons that is not button 35. (like 34. 33. 32. 31.), then press 35. let go of the other button, then let go of 35. Now the button stays on until it has been pressed again.