

Rudiments is a block of normalised utilities

all inputs/outputs are +/-10V capable

there are 4 sections which flow into the next when inputs are unpatched

current draw averages about 80mV on the +12V and -12V rails, and 0mV on the +5V rail

Attenuvert and Offset:

knobs 1 and 2 operate on the voltage input at jack 7

knob 1 attenuverts the signal with 0 amplitude at 12 o'clock, inverted signal to the left and normal signal to the right

knob 2 adds a DC offset to the signal from -10V to +10v with 0V offset at approx noon

the result is output at jack 10, and ch1 LED reflects the result (+/-)

knobs 3 + 4 and jacks 8 + 11 are ch 2

knobs 5 + 6 and jacks 9 + 12 are ch 3

Logic:

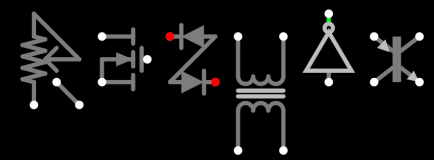
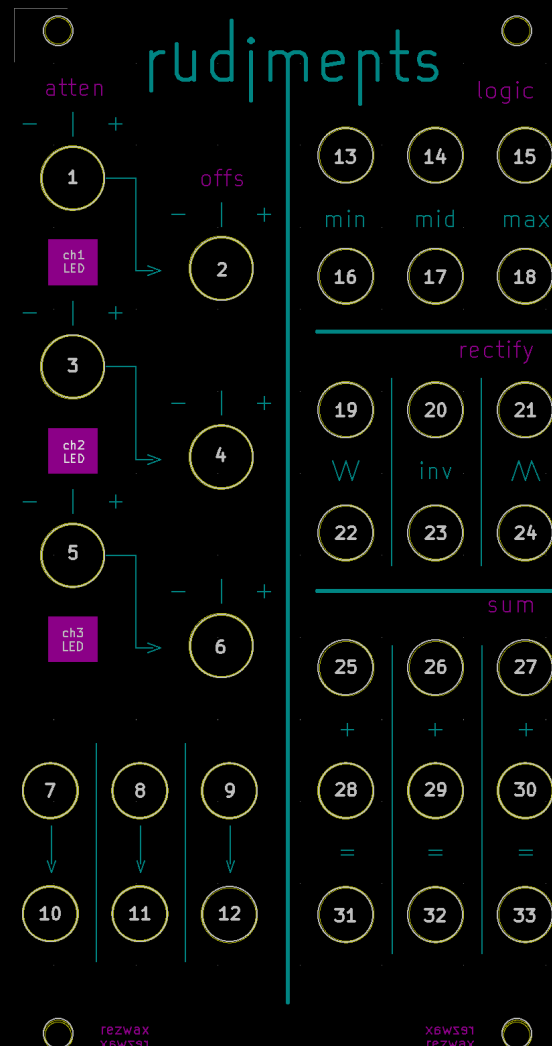
the three input jacks 13 + 14 + 15 are sent into an analog logic computer, order does not matter

when nothing is patched into them they receive copies of jacks 10 + 11 + 12 (ch 1 + 2 + 3 of atten/offs)

the lowest voltage of the three is output in jack 16

the middle voltage is output in jack 17

the highest voltage is output in jack 18



Rectify:

jack 19 is a negative full-wave rectifier input
 the result is output in jack 22
 when unpatched is receives a copy of jack 16 (min)

jack 20 is an inverter
 the result is output in jack 23
 when unpatched is receives a copy of jack 17 (mid)

jack 21 is a positive full-wave rectifier
 the result is output in jack 24
 when unpatched is receives a copy of jack 18 (max)

Sum:

the voltages present at jacks 25 + 28 are summed and output in jack 31

the same is true for 26 + 29 + 32 and for 27 + 30 + 33

when unpatched jack 25 receives a copy of jack 22 (-rectifier)

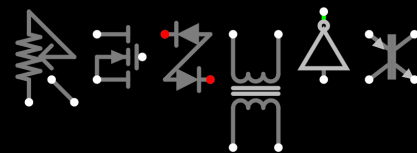
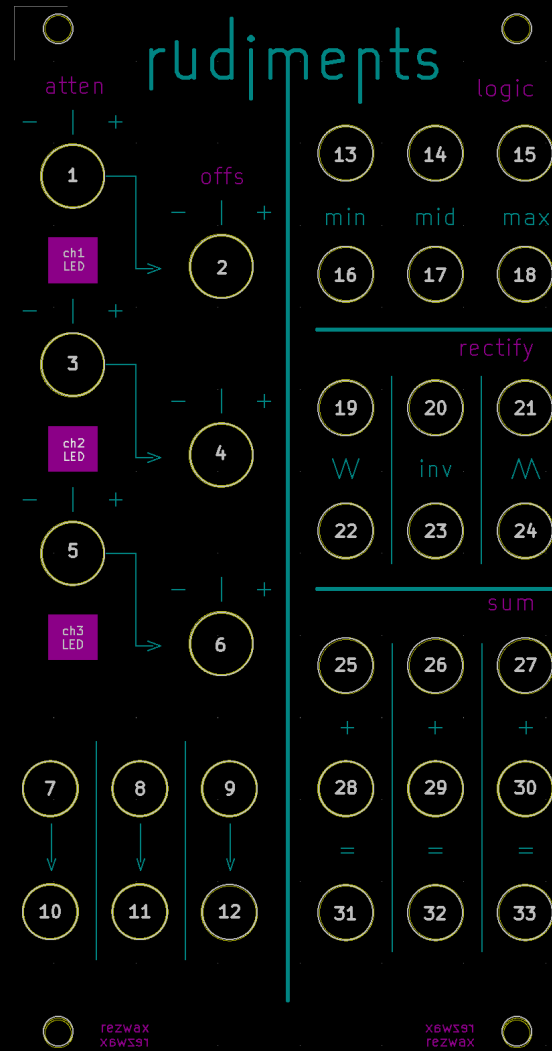
when unpatched jack 26 receives a copy of jack 23 (invert)

when unpatched jack 27 receives a copy of jack 24 (+ rectifier)

when jack 31 is unpatched it sends its output to the summing stage of jack 32

the same is true for jack 32 and jack 33

this allows for 3 channels of 2 input mixing, 2 channels of 4 and 2 input mixing, or one channel of 6 input mixing if only jack 33 is patched as an output



if offset or summing stages result in voltages that should be outside the +/-10V range, they will be clipped at the rail

this release has voltage errors ranging from +/-0.02V to +/-0.1V, making it less suitable for precise CV such as pitch information, but interesting for envelopes and audio

any updates will be backboard swappable