---VOLTAGE RUNNER---

Diodes (mind direction!)
D1/D2/D3/D4/D5/D6/D7/D8   1N4148
D9/D10/D11/D12/D13/D14   BAT43
D15/D16   1N4001
Resistors
R1/R2/R3   3.6K (orange-blue-red)
R4/R5/R6/R7/**R18**   10K (brown-black-orange)
R8/R9/R10/R16   1K (brown-black-red)
R11/R12/R13/R14/R15   22K (red-red-orange)
Capacitors
C1/C2/C4/C6/C7/C10/C11   100nF
C5   330nF
C9   680pF
C12/C13   10uF (mind direction! "–" = square pad)
Voltage regulator (mind direction!)
78L05
Transistors (mind direction!)
Q1/Q2/Q3   BC547
IC sockets (mind direction!)
TL072
Attiny48
Trimmer
1K   multiturn trimmer
Power header (mind direction!)
10 pin   boxed header
LEDs, Potentiometers, jack sockets and switches
<u>Place the components and frontpanel before soldering</u>
8x LEDs (mind direction!)
P1/P2/P3/P4/P5/P6/P7/P8   10K inversed log C
P9/P10   10K lin B
P11/P12   10K lin B D-shaft
jack sockets
switches

Setting up
The trimmer is mostly only used when the Voltage Runner is used in combination with the TTLFO.
The trimmer sets the max readed input voltage and can be set to roughly between 4.7V and 5.3V.
To set the trimmer to your TTLFO, set the TTLFO in the following settings:
shape: Saw up
multiplier: can be anything as long as the clock is slow
shape/distort: 12 o'clock
Set the Voltage Runner with start point 1 and play length 8.
listen to the pulse output while turning the trimmer till the pulses are all in the same timing.