CRICKLEWOOD ELECTRONICS

Rat-in-a-can Distortion

Please make sure all the components are present–see table below:

Designation	Description	Part#	Quantity
R1, R2, R13	1MΩ ¼W carbon resistor (Brown, Black, Green, Gold)	Q1M0	3
R3, R10	1kΩ ¼W carbon resistor (Brown, Black, Red, Gold)	Q1K0	2
R4, R5	47Ω ¼W carbon resistor (Yellow, Purple, Black, Gold)	Q47R	2
R6, R7	100kΩ ¼W carbon resistor (Brown, Black, Yellow, Gold)	Q100K	2
R8	560Ω ¼W carbon resistor (Green, Blue, Brown, Gold)	Q560R	1
R9	4.7kΩ ¼W carbon resistor (Yellow, Purple, Red, Gold)	Q4K7	1
R12	1.5kΩ ¼W carbon resistor (Brown, Green, Red, Gold)	Q1K5	1
R14	10kΩ ¼W carbon resistor (Brown, Black, Orange, Gold)	Q10K	1
C1, C11	22nF boxpoly capacitor	CPB22N	2
C2	1nF boxpoly capacitor	CPB1N0	1
C3	100µF 25V electrolytic capacitor	100H25	1
C4	100nF boxpoly capacitor	CPB100N	1
C5	33pF ceramic disk capacitor	CER33P	1
C6	2.2µF 63V electrolytic capacitor	2U2H63	1
C7, C9	4.7µF 50V electrolytic capacitor	4U7Y50	2
C8	100pF ceramic disk capacitor	CER100P	1
C10	3.3nF boxpoly capacitor	CPB3N3	1
C12	1µF boxpoly capacitor	CPB1U0	1
D1	1N4007 diode	1N4007	1
D2, D3	1N914 silicon signal diode	1N914	2
DISTORTION, VOLUME, TONE	100kΩ logarithmic 9mm vertical potentiometer	SVG100K	3
LED1	5mm LED	R5D	1
Q1	BF245 N-channel JFET	BF245	1
IC1	MLM208G TO-99 op-amp	MLM208G	1
IN Jack	6.3mm stereo chassis socket	SCS	1
OUT Jack	6.3mm mono chassis socket	JCM	1
DC Jack	2.1 x 5.5mm DC chassis socket	ROCR	1
Battery	PP3 hard plastic battery snap	PP3H	1
N/A	PCB	CKRATv2PCB	1
N/A	Footswitch	FT3PDT	1
N/A	Footswitch daughterboard PCB	CKDB	1
N/A	Hookup wire	W14xx	50cm
N/A	6mm LED Spacer	LS6	1

Tools Required:

Soldering iron, 15W or higher

Good quality electronics solder

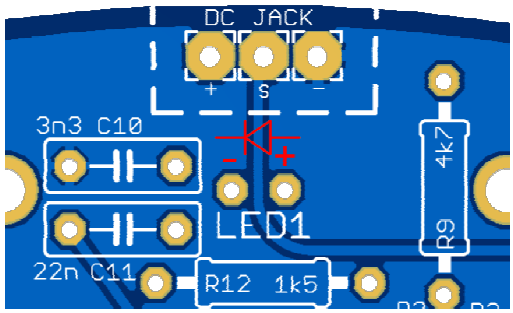
Side cutters

Assembly Instructions

Place and solder the components (excluding the LEDs and the potentiometers) on the main PCB, solder the footswitch on the daughterboard PCB (you can mount it on either side and it will work the same). For ease of assembly, place and solder smaller components first (e.g. resistors first, then diodes, etc.).

Make sure to solder the potentiometers and the LED to the other side of the board to the other components.

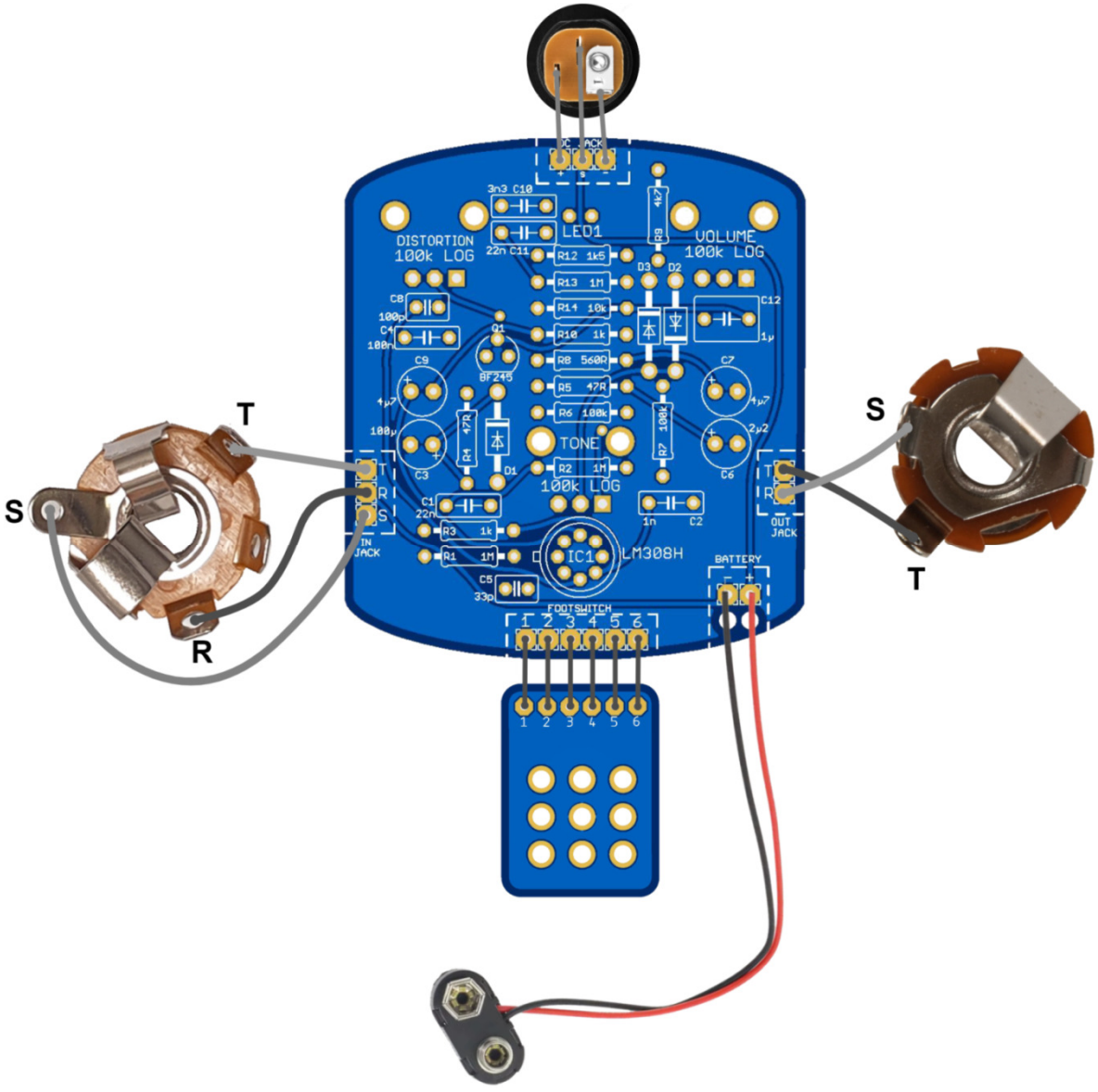
The LED polarity is as shown on the next page:



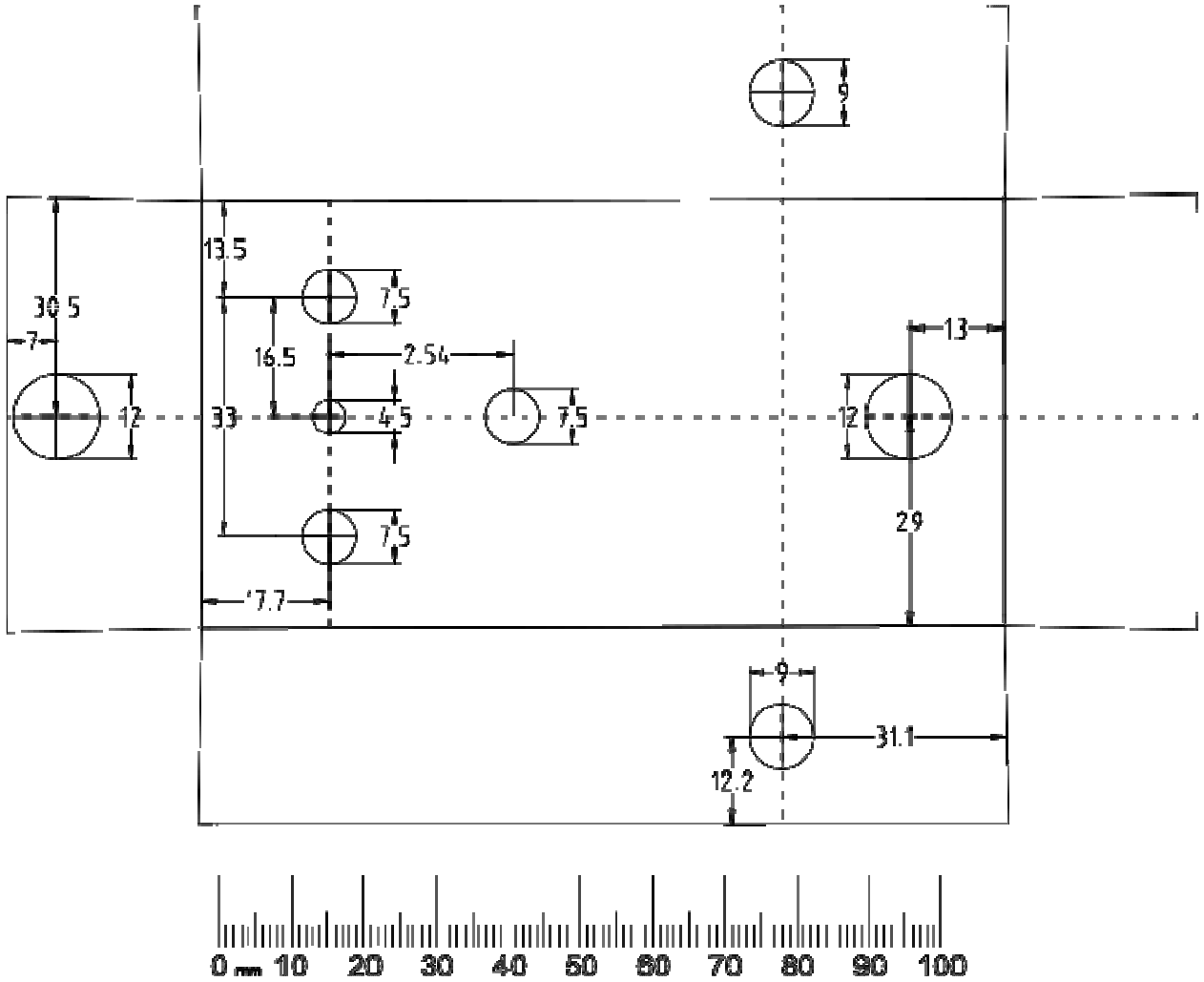
Using a pair of side cutters, snip the excess component leads. Please ensure that all components have been soldered properly and that there are no dry solder joints.

Next, cut the hookup wire to the appropriate lengths for the jack sockets, footswitch daughterboard and DC socket to connect to the PCB. Strip the wires and solder them to the PCB, the jack sockets and daughterboard but not the DC socket yet.

Note: the input socket is stereo, which disconnects the ground of the battery when a jack is unplugged to “turn off” the pedal. If using the optional enclosure, you can now drill it using the template on the last page and mount everything. Solder the wires to the DC socket and ensure everything is connected as shown below:



We hope you enjoyed building the kit. If you have any questions or feedback, do not hesitate email (kits@cricklewoodelectronics.com) or call us on 020 8452 0161.


9
13.5
7.5
30.5
7
16.5
2.54
13
12
33
4.5
7.5
12
7.5
29
7.7
9
31.1
12.2
0 mm 10 20 30 40 50 60 70 80 90 100