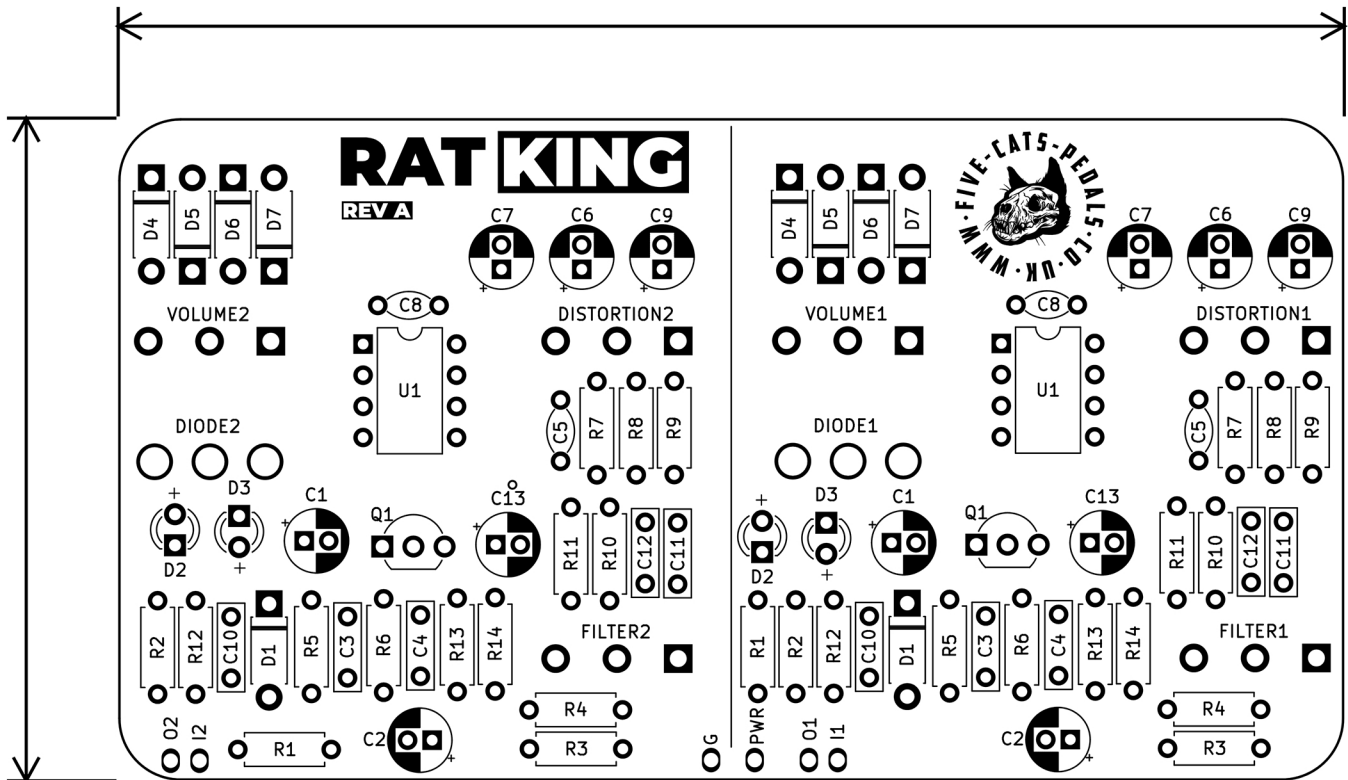




RAT KING

100.022 mm

54.048 mm



COMPONENT COUNT
80

COMPARES TO
**PROCO
RAT X 2**

MINIMUM ENCLOSURE
**HAMMOND
1590BB
590
GORVA**

BOARD DIMENSIONS
**100 X 54
MM**

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You'll notice there are two of each reference on this board...R1 x 2, R2 x 2 etc etc, this is because the board has 2 identical circuits. You can choose which ever RAT variant you want on each side.

Standard RAT

Resistors		
Ref	Value	Footprint
R1	470r	1/4 Watt Resistor
R2	100k	1/4 Watt Resistor
R3	100k	1/4 Watt Resistor
R4	1M	1/4 Watt Resistor
R5	1M	1/4 Watt Resistor
R6	1k	1/4 Watt Resistor
R7	560r	1/4 Watt Resistor
R8	470r	1/4 Watt Resistor
R9	1k	1/4 Watt Resistor
R10	1.5k	1/4 Watt Resistor
R11	1M	1/4 Watt Resistor
R12	omit	1/4 Watt Resistor
R13	10k	1/4 Watt Resistor
R14	omit	1/4 Watt Resistor
Diodes		
Ref	Value	Footprint
D1	1N4001	Standard Diode
D2	3mm RED Led	general:LED_3MM
D3	3mm RED Led	general:LED_3MM
D4	1N914	Standard Diode
D5	1N914	Standard Diode
D6	Your Choice	Standard Diode
D7	Your Choice	Standard Diode
ICs		
Ref	Value	Footprint
U1	LM308	Single Op-Amp - 8pin...full of mojo.
Switches		
Ref	Value	Footprint
DIODE1	ON/OFF/ON	SPDT Toggle

Capacitors		
Ref	Value	Footprint
C1	100µF	Electrolytic Capacitor - Min 16V
C2	1µF	Electrolytic Capacitor - Min 16V
C3	22nF	Box/MLCC Capacitor
C4	1nF	Box/MLCC Capacitor
C5	100pF	Ceramic/MLCC Capacitor
C6	4.7µF	Electrolytic Capacitor - Min 16V
C7	2.2µF	Electrolytic Capacitor - Min 16V
C8	30pF	Ceramic/MLCC Capacitor
C9	4.7µF	Electrolytic Capacitor - Min 16V
C10	10nF	Box/MLCC Capacitor
C11	3.3nF	Box/MLCC Capacitor
C12	22nF	Box/MLCC Capacitor
C13	1µF	Electrolytic Capacitor - Min 16V
Transistors		
Ref	Value	Footprint
Q1	2N5458	Transistor
Potentiometers		
Ref	Value	Footprint
DISTORTION1	A100K	16mm Potentiometer
FILTER1	A100K	16mm Potentiometer
VOLUME1	A100K	16mm Potentiometer

RAT 2

Resistors		
Ref	Value	Footprint
R1	470r	1/4 Watt Resistor
R2	100k	1/4 Watt Resistor
R3	100k	1/4 Watt Resistor
R4	2.2M	1/4 Watt Resistor
R5	2.2M	1/4 Watt Resistor
R6	1k	1/4 Watt Resistor
R7	560r	1/4 Watt Resistor
R8	470r	1/4 Watt Resistor
R9	1k	1/4 Watt Resistor
R10	1.5k	1/4 Watt Resistor
R11	1M	1/4 Watt Resistor
R12	omit	1/4 Watt Resistor
R13	10k	1/4 Watt Resistor
R14	10k	1/4 Watt Resistor
Diodes		
Ref	Value	Footprint
D1	1N4001	Standard Diode
D2	5mm RED Led	general:LED_3MM
D3	5mm RED Led	general:LED_3MM
D4	1N4148	Standard Diode
D5	1N4148	Standard Diode
D6	Your Choice	Standard Diode
D7	Your Choice	Standard Diode
ICs		
Ref	Value	Footprint
U1	OP07	Single Op-Amp - 8pin...less mojo?
Switches		
Ref	Value	Footprint
DIODE1	ON/OFF/ON	SPDT Toggle

Capacitors		
Ref	Value	Footprint
C1	100µF	Electrolytic Capacitor - Min 16V
C2	1µF	Electrolytic Capacitor - Min 16V
C3	22nF	Box/MLCC Capacitor
C4	1nF	Box/MLCC Capacitor
C5	100pF	Ceramic/MLCC Capacitor
C6	4.7µF	Electrolytic Capacitor - Min 16V
C7	2.2µF	Electrolytic Capacitor - Min 16V
C8	30pF	Ceramic/MLCC Capacitor
C9	4.7µF	Electrolytic Capacitor - Min 16V
C10	10nF	Box/MLCC Capacitor
C11	3.3nF	Box/MLCC Capacitor
C12	22nF	Box/MLCC Capacitor
C13	10µF	Electrolytic Capacitor - Min 16V
Transistors		
Ref	Value	Footprint
Q1	2N5458	Transistor
Potentiometers		
Ref	Value	Footprint
DISTORTION1	A100K	16mm Potentiometer
FILTER1	A100K	16mm Potentiometer
VOLUME1	A100K	16mm Potentiometer





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Dirty RAT

Resistors		
Ref	Value	Footprint
R1	470r	1/4 Watt Resistor
R2	100k	1/4 Watt Resistor
R3	100k	1/4 Watt Resistor
R4	2.2M	1/4 Watt Resistor
R5	2.2M	1/4 Watt Resistor
R6	1k	1/4 Watt Resistor
R7	560r	1/4 Watt Resistor
R8	470r	1/4 Watt Resistor
R9	1k	1/4 Watt Resistor
R10	1.5k	1/4 Watt Resistor
R11	1M	1/4 Watt Resistor
R12	omit	1/4 Watt Resistor
R13	10k	1/4 Watt Resistor
R14	10k	1/4 Watt Resistor

Diodes		
Ref	Value	Footprint
D1	1N4001	Standard Diode
D2	3mm RED Led	general:LED_3MM
D3	3mm RED Led	general:LED_3MM
D4	Your Choice	Standard Diode
D5	Your Choice	Standard Diode
D6	Your Choice	Standard Diode
D7	Your Choice	Standard Diode

ICs		
Ref	Value	Footprint
U1	OP07	Single Op-Amp - 8pin...less mojo?

Switches		
Ref	Value	Footprint
DIODE1	ON/OFF/ON	SPDT Toggle

Capacitors		
Ref	Value	Footprint
C1	100µF	Electrolytic Capacitor - Min 16V
C2	1µF	Electrolytic Capacitor - Min 16V
C3	22nF	Box/MLCC Capacitor
C4	1nF	Box/MLCC Capacitor
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C9	4.7µF	Electrolytic Capacitor - Min 16V
C10	10nF	Box/MLCC Capacitor
C11	3.3nF	Box/MLCC Capacitor
C12	22nF	Box/MLCC Capacitor
C13	10µF	Electrolytic Capacitor - Min 16V

Transistors		
Ref	Value	Footprint
Q1	2N5458	Transistor

Potentiometers		
Ref	Value	Footprint
DISTORTION1	A100K	16mm Potentiometer
FILTER1	A100K	16mm Potentiometer
VOLUME1	A100K	16mm Potentiometer

Turbo Rat

Resistors		
Ref	Value	Footprint
R1	47r or 100r	1/4 Watt Resistor
R2	100k	1/4 Watt Resistor
R3	100k	1/4 Watt Resistor
R4	2.2M	1/4 Watt Resistor
R5	2.2M	1/4 Watt Resistor
R6	1k	1/4 Watt Resistor
R7	560r	1/4 Watt Resistor
R8	470r	1/4 Watt Resistor
R9	1k	1/4 Watt Resistor
R10	1.5k	1/4 Watt Resistor
R11	1M	1/4 Watt Resistor
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Ref	Value	Footprint
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D4	1N4148	Standard Diode
D5	1N4148	Standard Diode
D6	Your Choice	Standard Diode
D7	Your Choice	Standard Diode

ICs		
Ref	Value	Footprint
U1	LM308	Single Op-Amp - 8pin...full of mojo.

Switches		
Ref	Value	Footprint
DIODE1	ON/OFF/ON	SPDT Toggle

Capacitors		
Ref	Value	Footprint
C1	100µF	Electrolytic Capacitor - Min 16V
C2	1µF	Electrolytic Capacitor - Min 16V
C3	22nF	Box/MLCC Capacitor
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C9	4.7µF	Electrolytic Capacitor - Min 16V
C10	10nF	Box/MLCC Capacitor
C11	3.3nF	Box/MLCC Capacitor
C12	22nF	Box/MLCC Capacitor
C13	10µF	Electrolytic Capacitor - Min 16V

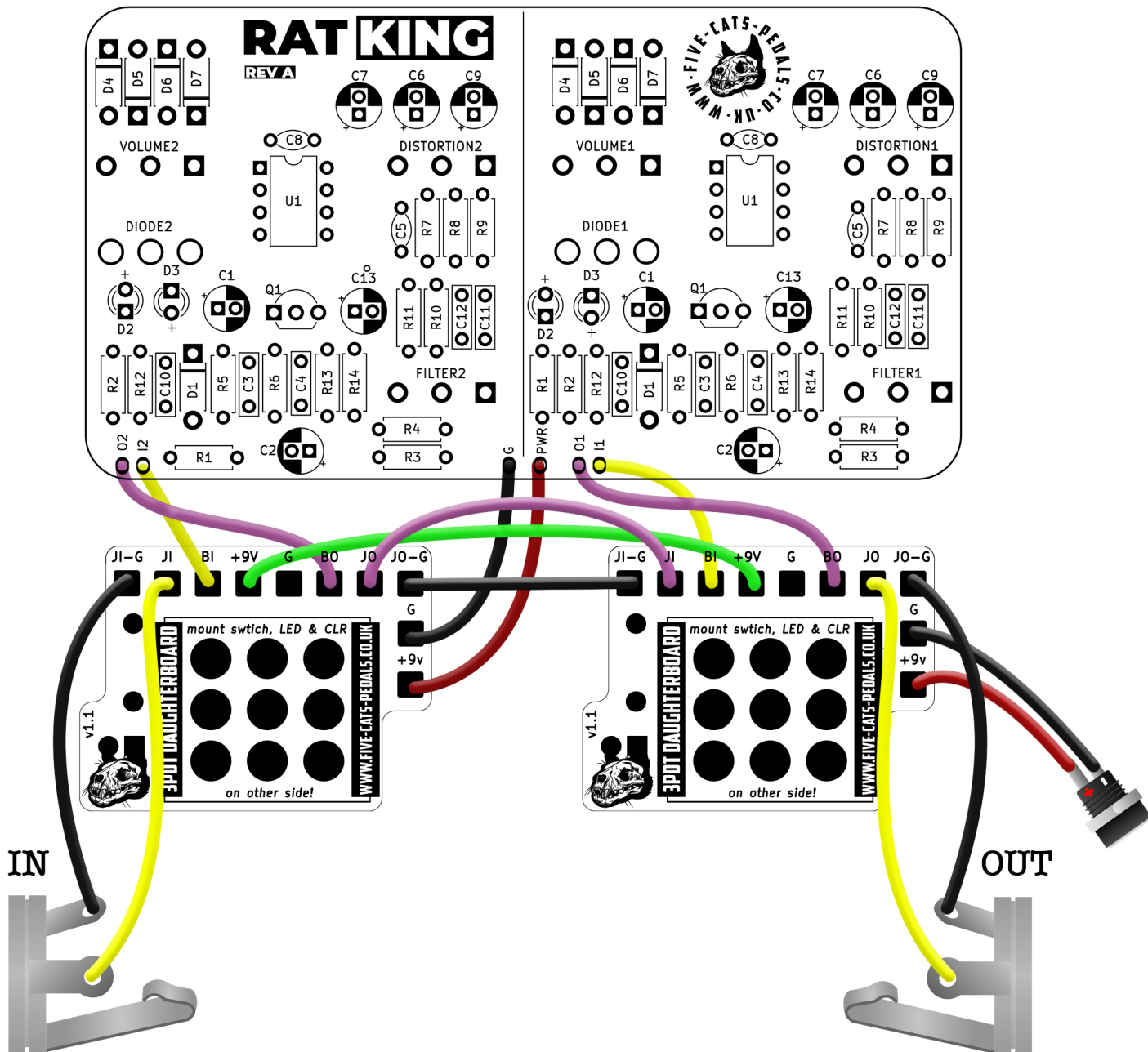
Transistors		
Ref	Value	Footprint
Q1	2N5458	Transistor

Potentiometers		
Ref	Value	Footprint
DISTORTION1	A100K	16mm Potentiometer
FILTER1	A100K	16mm Potentiometer
VOLUME1	A100K	16mm Potentiometer





Wiring diagram - 2 x 3PDT Daughterboards



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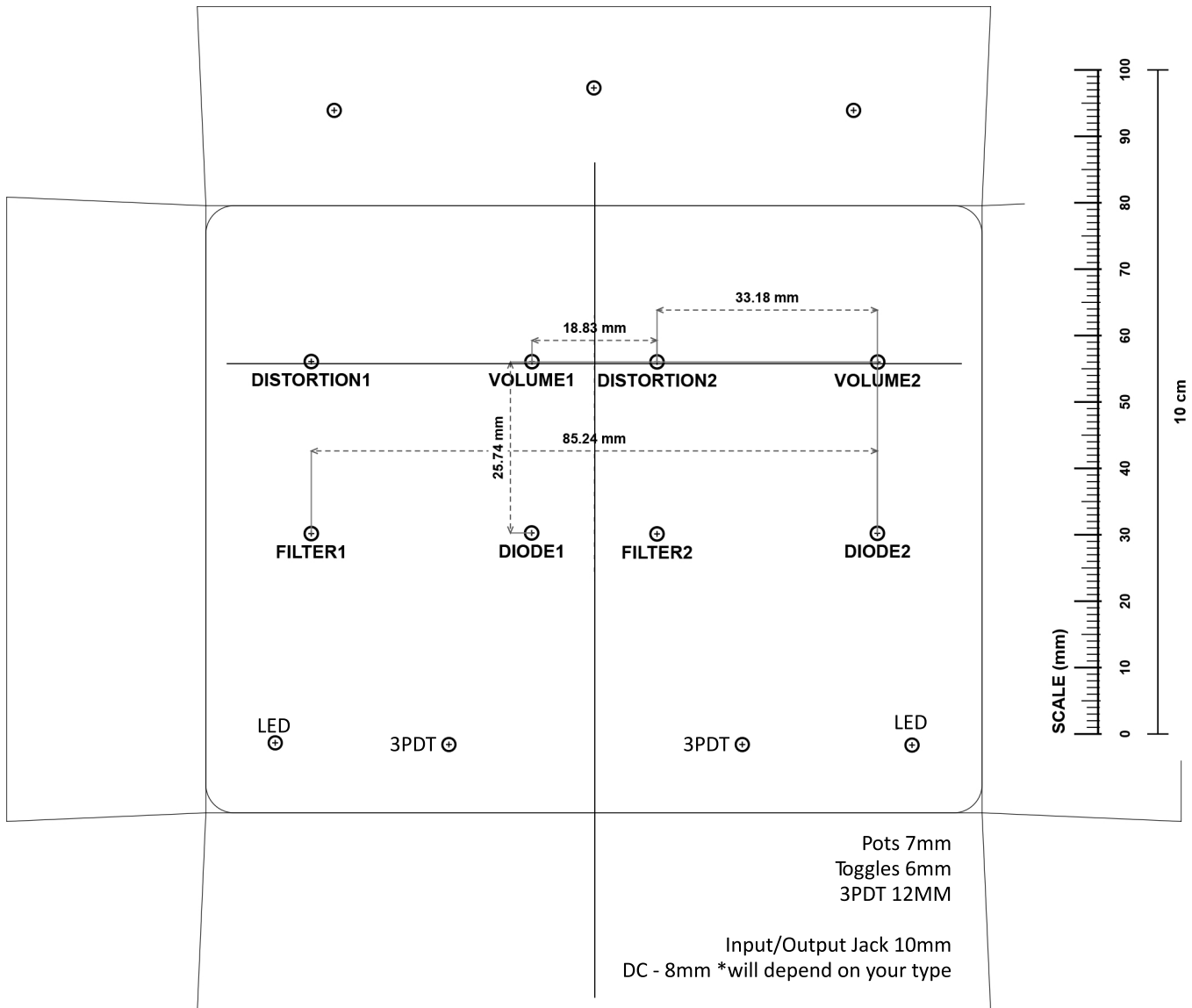


1590BB Top Mount Drill Template

This is just a guide. Use it with caution.

Triple check your measurements.

We won't be held responsible.



DRILL MARKS: 2 mm Ø

DIMENSIONS: mm

Print at 100% / Actual Size

Do not use "Fit to page".



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