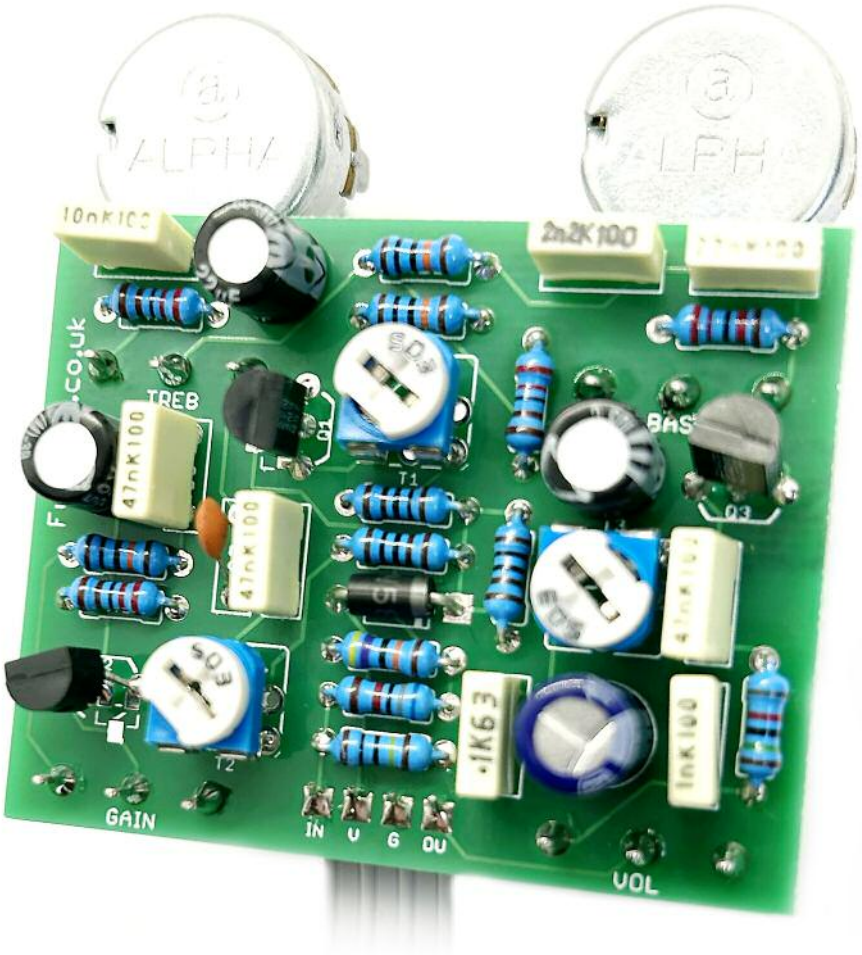
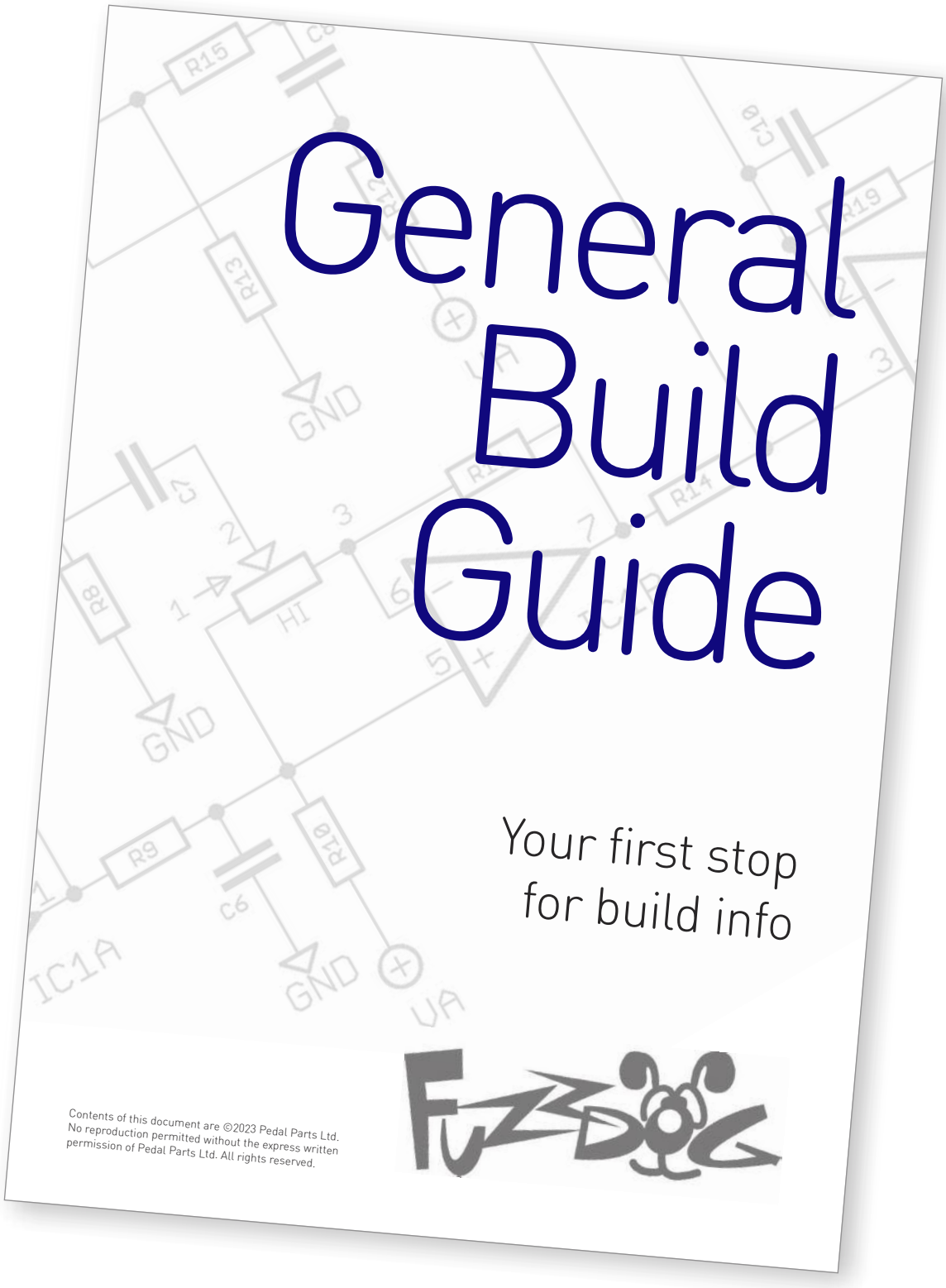


Orange Fettler

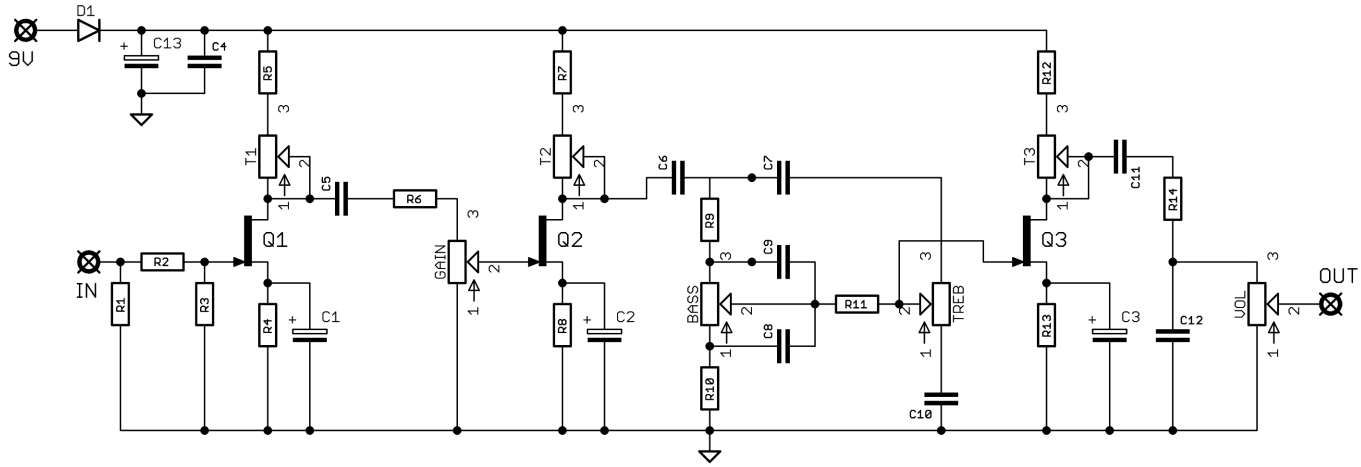
Deliciously doomy tones of 70s Orange OR-120 amps

Before you dig in, ensure you download and read the **General Build Guide**.

It contains all the information you need for a successful outcome.



Schematic + BOM



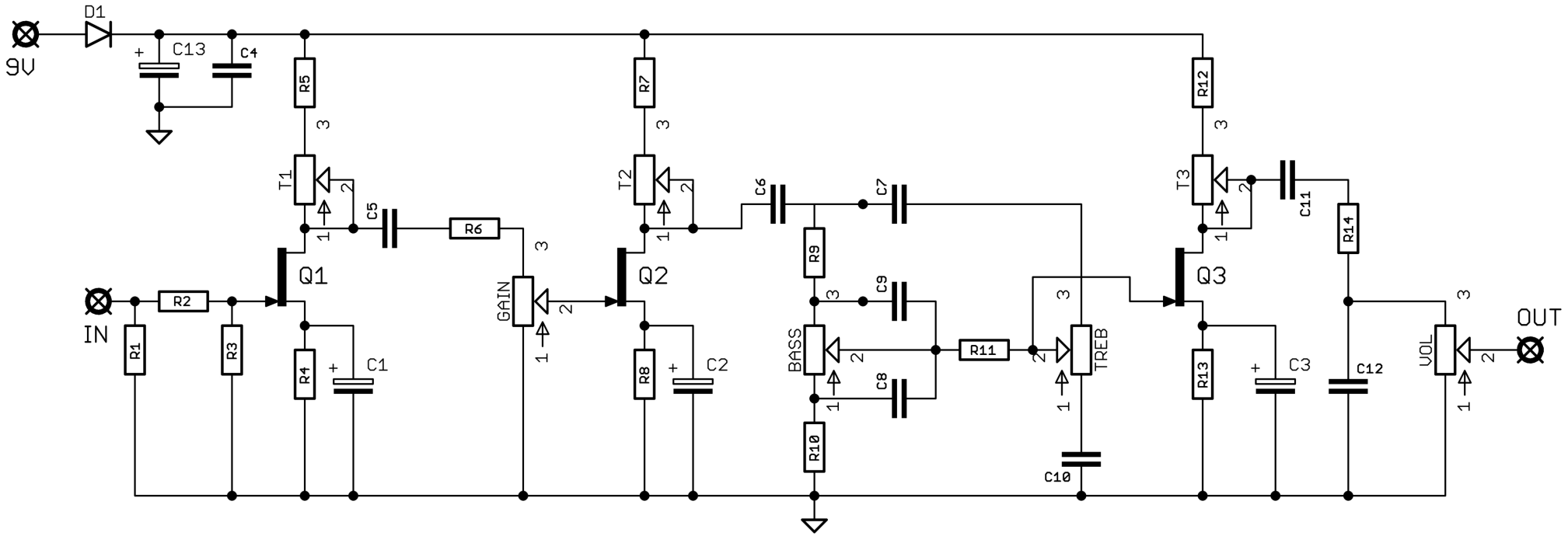
R1	1M
R2	68K
R3	470K
R4	2K2
R5	1K
R6	100K
R7	1K
R8	2K2
R9	100K
R10	22K
R11	100K
R12	1K
R13	2K2
R14	15K

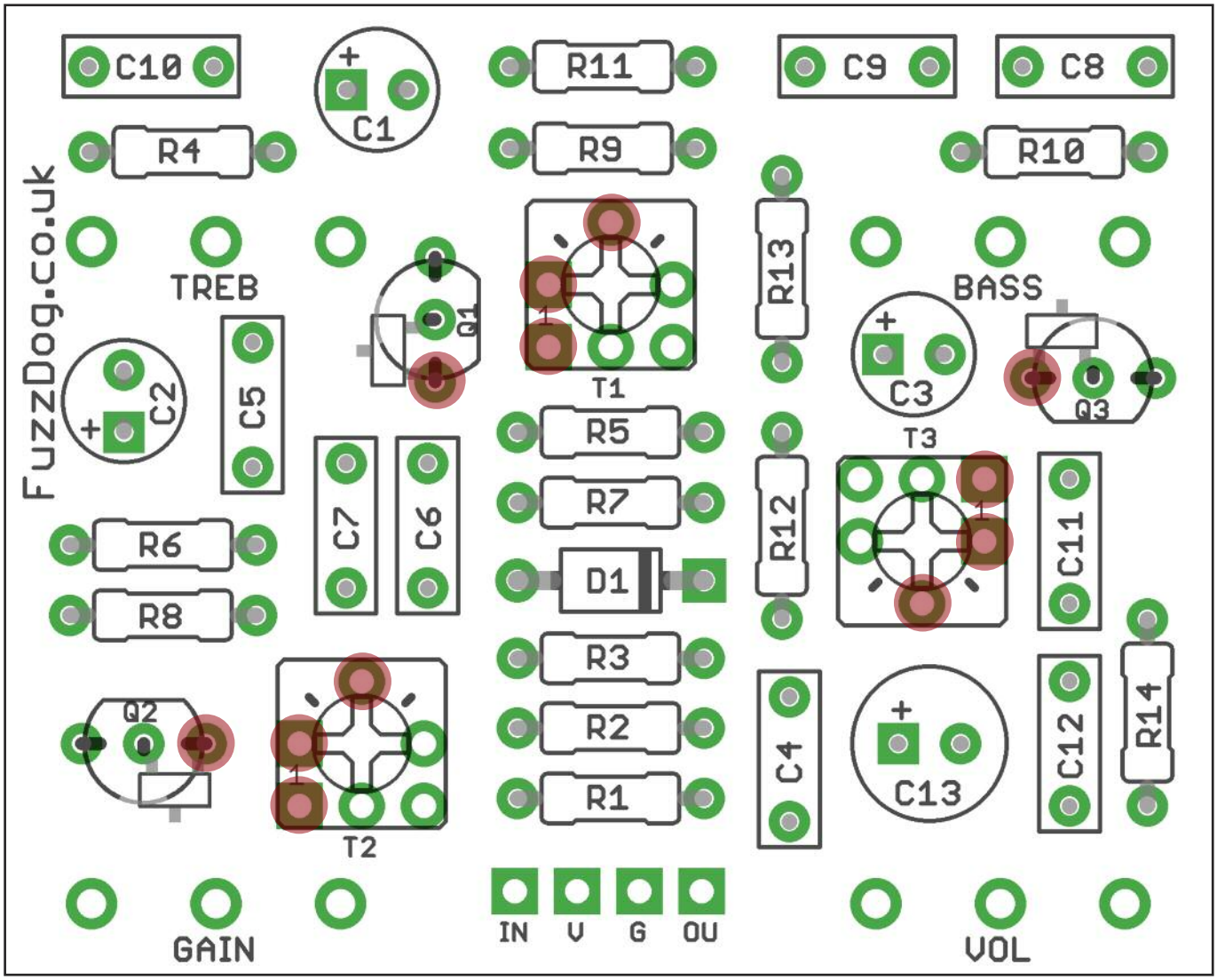
C1	22u elec
C2	22u elec
C3	22u elec
C4	100n
C5	47n
C6	47n
C7	330p
C8	22n
C9	2n2
C10	10n
C11	47n
C12	1n
C13	100u elec

Q1-3	N-Channel FETs* 2N5457 / MMBF5457
D1	1N5817
BASS	1MB
GAIN	1MA
TREB	1MA
VOL	100KA
T1-3	50K trimmers

*Unspecified on the trace of the circuit. Sounds good with 2N5457.

There are pads on the PCB for through-hole or SMT FETs.


9V
D1
C13
C4
R5
T1
C5
R6
GAIN
R7
T2
C6
C7
R9
C9
BASS
C8
R10
R11
TREB
C10
R12
T3
C11
R14
Q1
Q2
Q3
IN
R2
R1
R3
R4
C1
R8
C2
R13
C3
C12
VOL
OUT



Snap the small metal tag off the pots so they can be mounted flush in the box.

You should solder all other board-mounted components before you solder the pots.

BIASING

Measure your supply voltage on the V pad at the bottom of the PCB.

Adjust the trimmer for each FET while measuring the voltage on the pads marked in red above. It can be measured on the trimmer legs or the FET, whichever is easiest to access.

Adjust T1 for Q1, etc.

Aim for around 50% of supply voltage, so 4.5V on a 9V supply.

You can tweak it slightly higher or lower until you get results you're happy with, but half supply or just over is the benchmark.

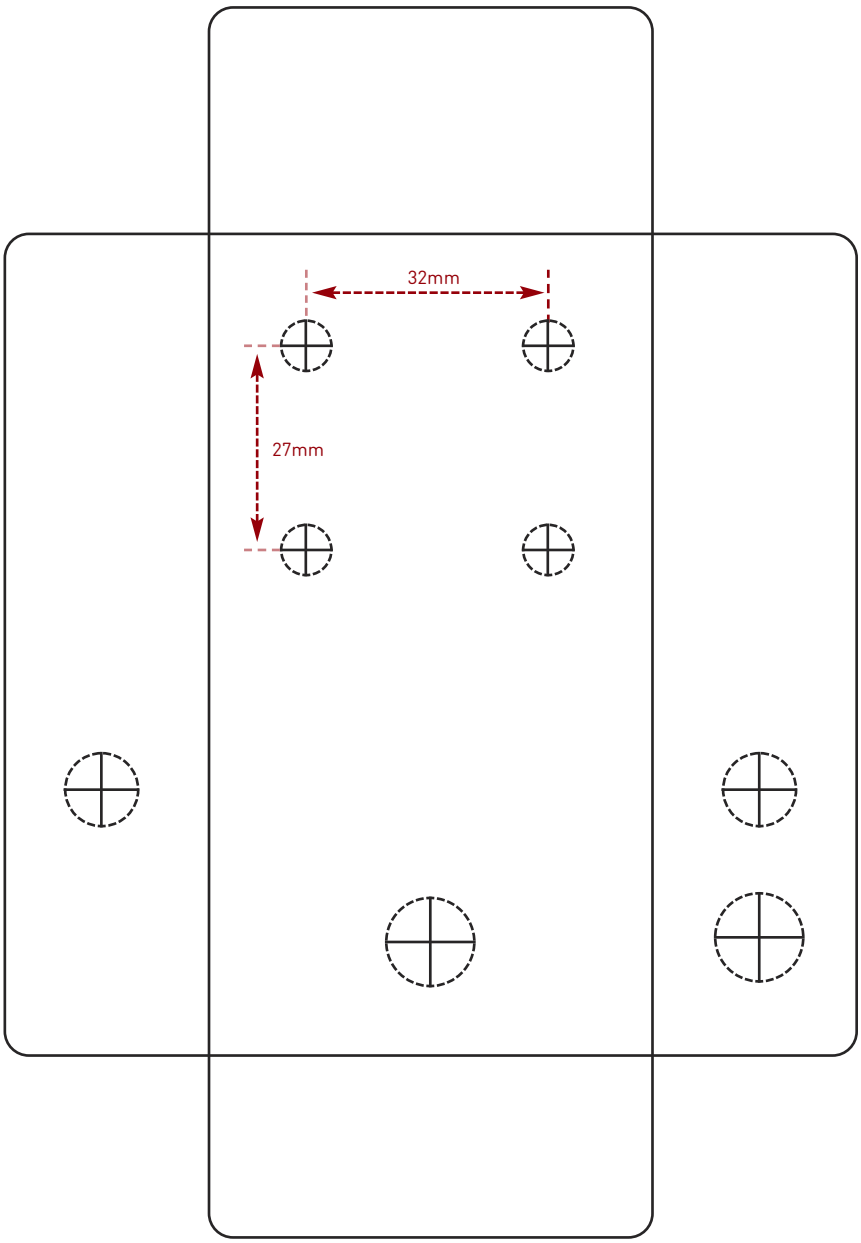
Drilling template

Hammond 1590B - 60 x 111 x 31mm

Drill sizes listed are minimum.
It's a good idea to add 1mm to anything mounted on the PCB that'll poke through the front of the enclosure.

Drill sizes:

Pots	7mm
Jacks	10mm
Footswitch	12mm
DC Socket	12mm
Toggle switches	6mm
Rotary switches	10mm



This template is a rough guide only. You should ensure correct marking of your enclosure before drilling. You use this template at your own risk.
Pedal Parts Ltd can accept no responsibility for incorrect drilling of enclosures.

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