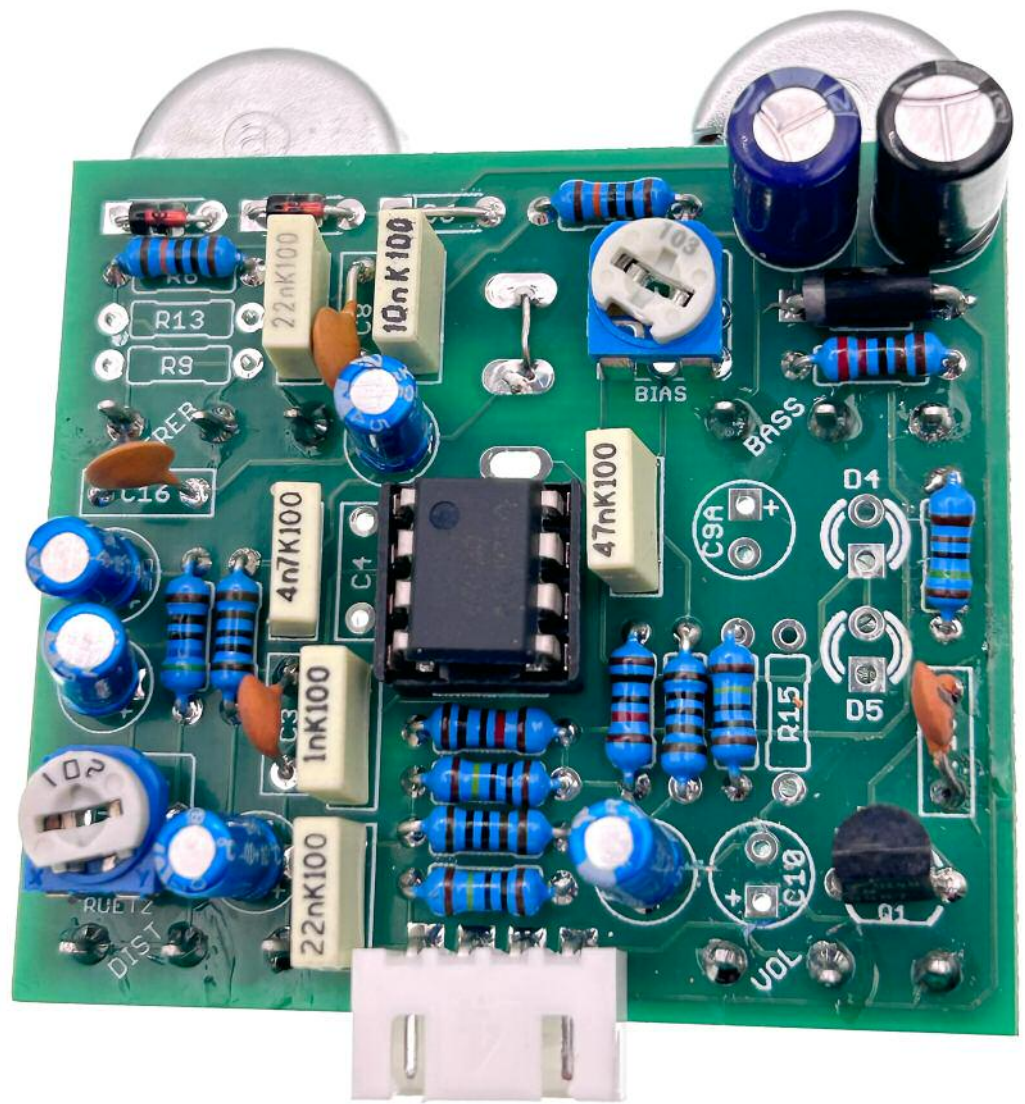




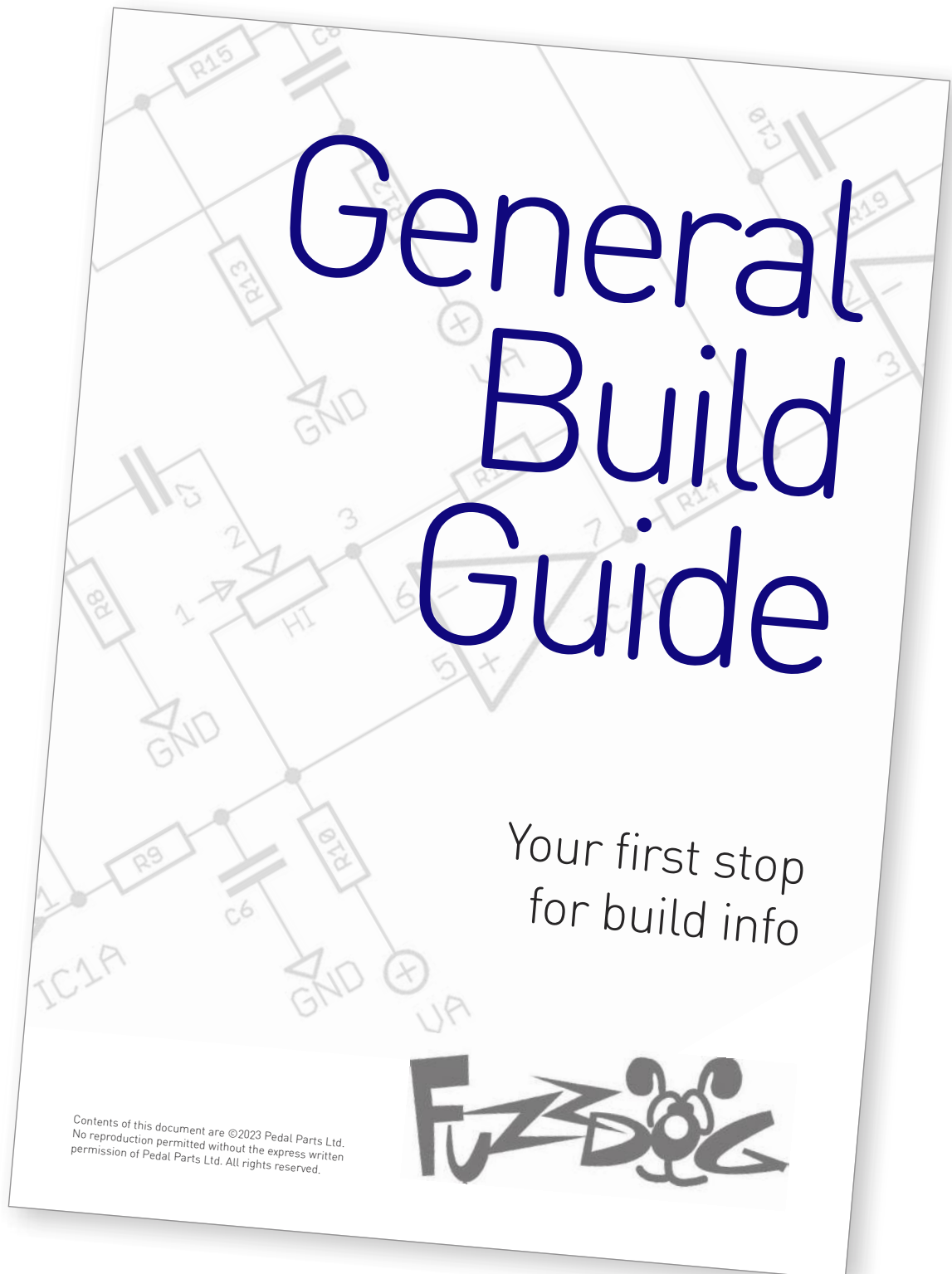
Bax Rat v2

Classic roar (gnaw?) with
super tweakable EQ



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

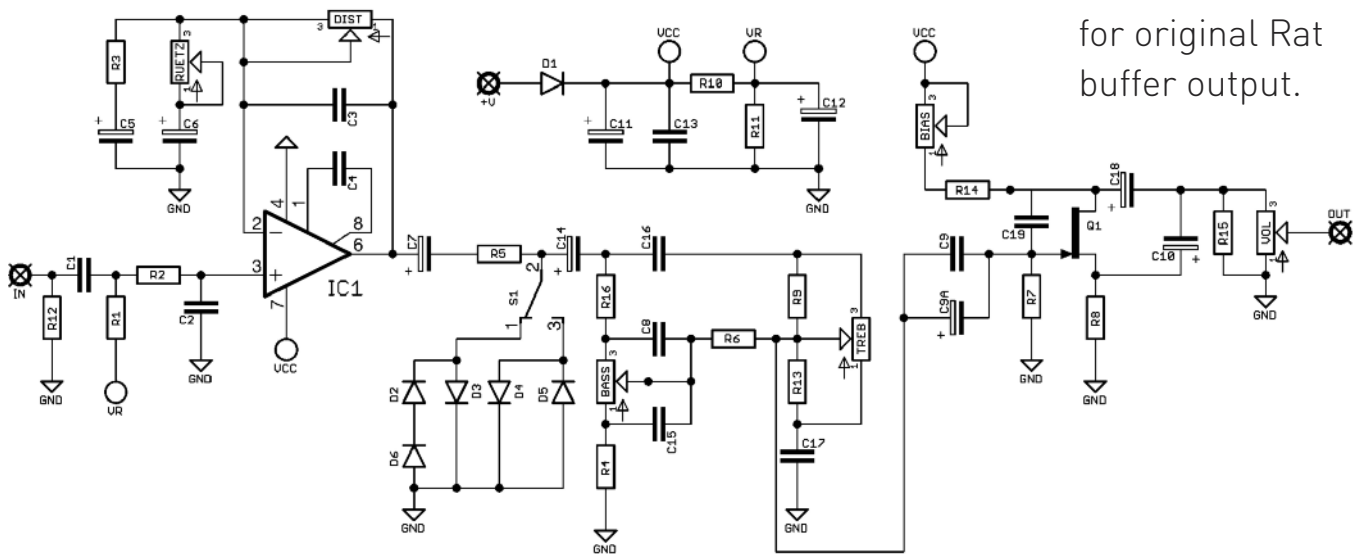
It contains all the information you need for a successful outcome.



Schematic + BOM

Guitar

FET output boost.
See later in doc
for original Rat
buffer output.



R1 1M
R2 1K
R3 560R
R4 2K2
R5 1K
R6 100K
R7 1M
R8 1K5
R9 Empty
R10 10K
R11 10K
R12 1M
R13 Empty
R14 1K
R15 Empty
R16 100K

C1 22n
C2 1n
C3 100p
C4 Empty/33p*
C5 4u7 elec
C6 2u2 elec
C7 4u7 elec
C8 470p
C9 22n
C9A Empty
C10 Empty
C11 100u elec
C12 47u elec
C13 47n
C14 4u7 elec
C15 10n
C16 470p
C17 4n7
C18 1u elec
C19 100p

D1 1N5817
D2-3 1N4148
D4-5 3mm red LEDs*
D6 Jumper*
Q1 2N5457 / J201**
(SMT - MMBF5457 / MMBFJ201)
IC1 LM308N / OP-07
BASS 500KB
TREB 500KB
DIST 100KA
VOL 100KA
RUEZ 1K TRIM or
47R resistor‡

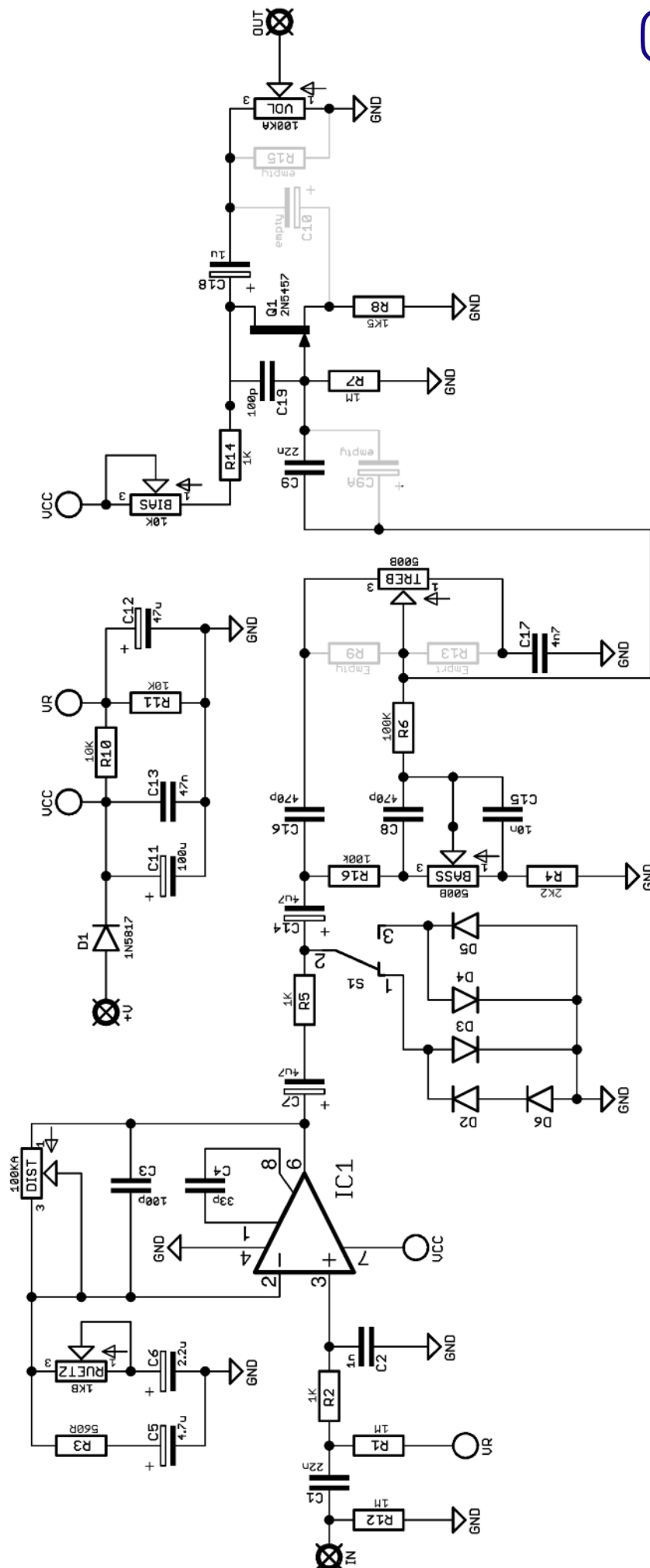
*C4 not required with OP07.

**See later for more details of
the clipping section.

***Either will work fine.
You can also use the SMT
version of either if you're happy
soldering tiny parts.

‡See page 6 for resistor
placement.

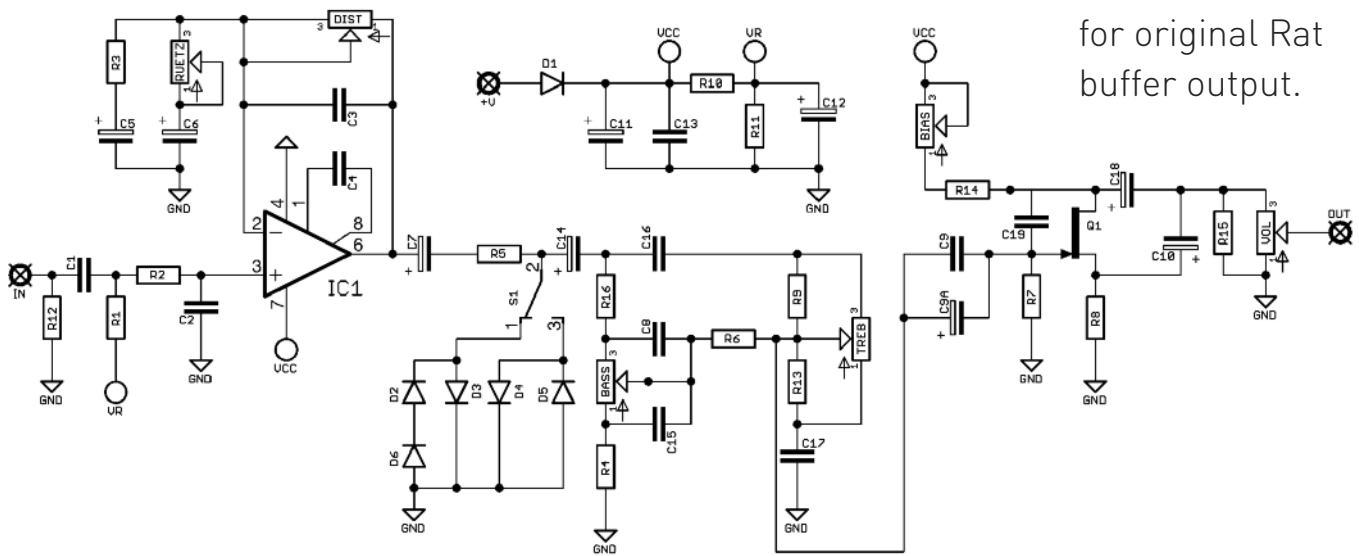
Guitar



Schematic + BOM

Bass/Drop

FET output boost.
See later in doc
for original Rat
buffer output.



R1	1M
R2	1K
R3	560R
R4	1K
R5	1K
R6	10K
R7	1M
R8	1K5
R9	10K
R10	10K
R11	10K
R12	1M
R13	1K
R14	1K
R15	Empty
R16	Jumper

C1	100n
C2	1n
C3	100p
C4	Empty/33p*
C5	4u7 elec
C6	2u2 elec
C7	10 elec
C8	33n
C9	Empty
C9A	10u elec
C10	Empty
C11	100u elec
C12	47u elec
C13	47n
C14	10u elec
C15	330n
C16	15n
C17	150n
C18	10u elec
C19	100p

D1	1N4001
D2-3	1N4148
D4-5	3mm red LEDs**
D6	Jumper**
Q1	2N5457 / J201*** (SMT - MMBF5457 / MMBFJ201)
IC1	LM308N / OP-07
BASS	100KC
TREB	100KC
DIST	100KA
VOL	100KA
RUEZ	1K TRIM or 47R resistor†

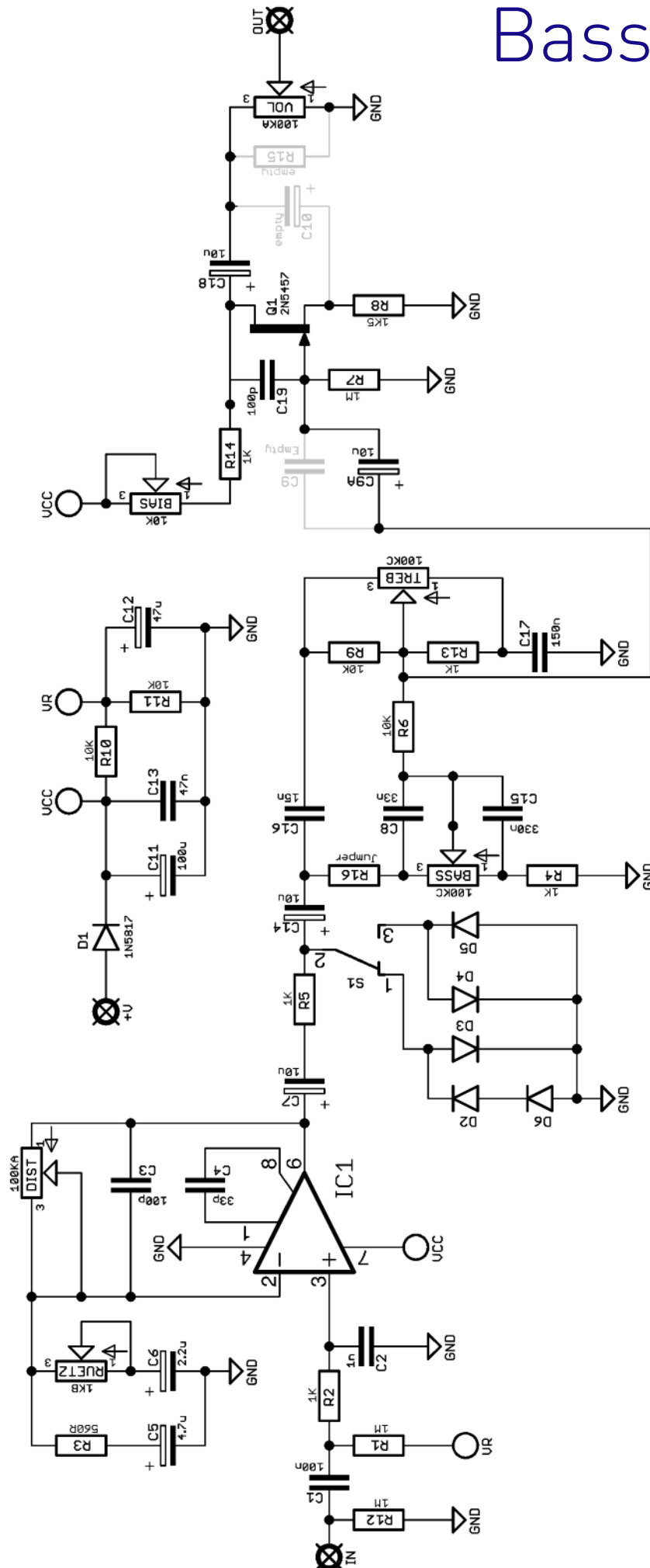
*C4 not required with OP07.

**See later for more details of
the clipping section.

***Either will work fine.
You can also use the SMT
version of either if you're happy
soldering tiny parts.

†See page 6 for resistor
placement.

Bass/Drop



Clipping

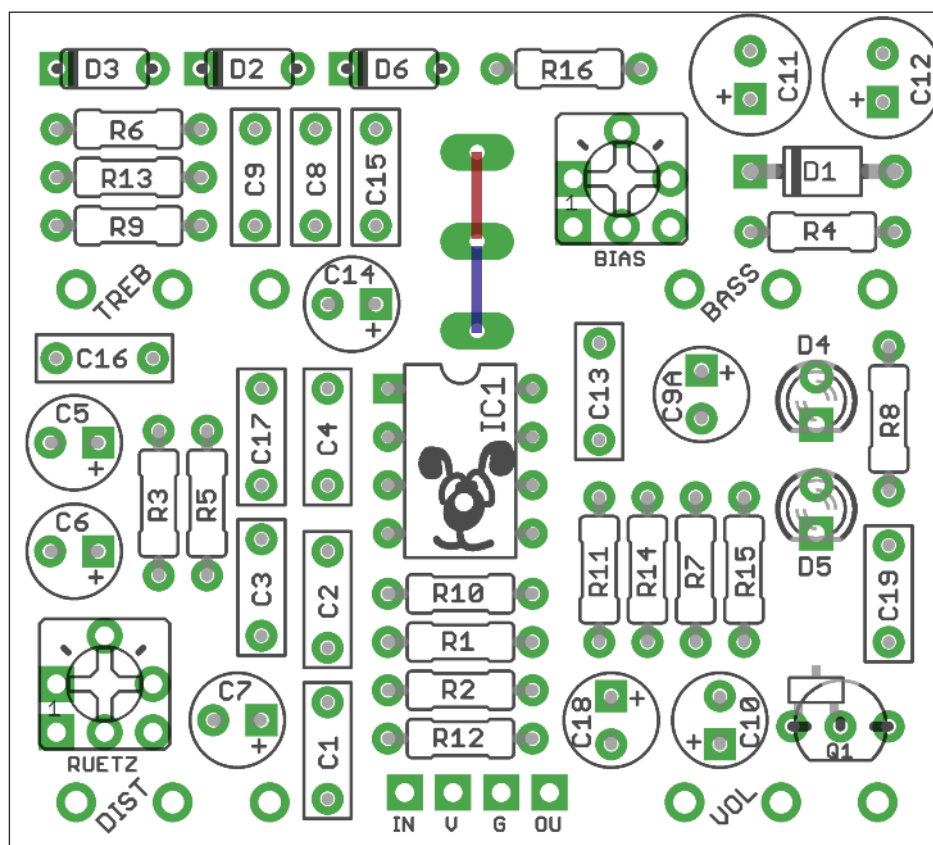
No rules here. Go for typical Rat clipping options or experiment with your own. Here's a starting point using the different Rat models:

Standard	2 x 1N4148
Turbo	2 x 3mm red LEDs
You Dirty	2 x 1N34A germanium

Use either D2-3 or D4-5 for these, depending on which fits better. You'll have to stand germanium diodes in D07 cases on end.

D6 is optional and is in series with D2. Adding a diode here will give you asymmetrical clipping. If you want symmetrical clipping you should jumper D6 when using D2-3.

The toggle switch will engage D2-3 and D6 when down, D4-5 when up. If you're only using one set of diodes you should jumper the switch pads. Red jumper for D2-3 and D6, blue for D4-5



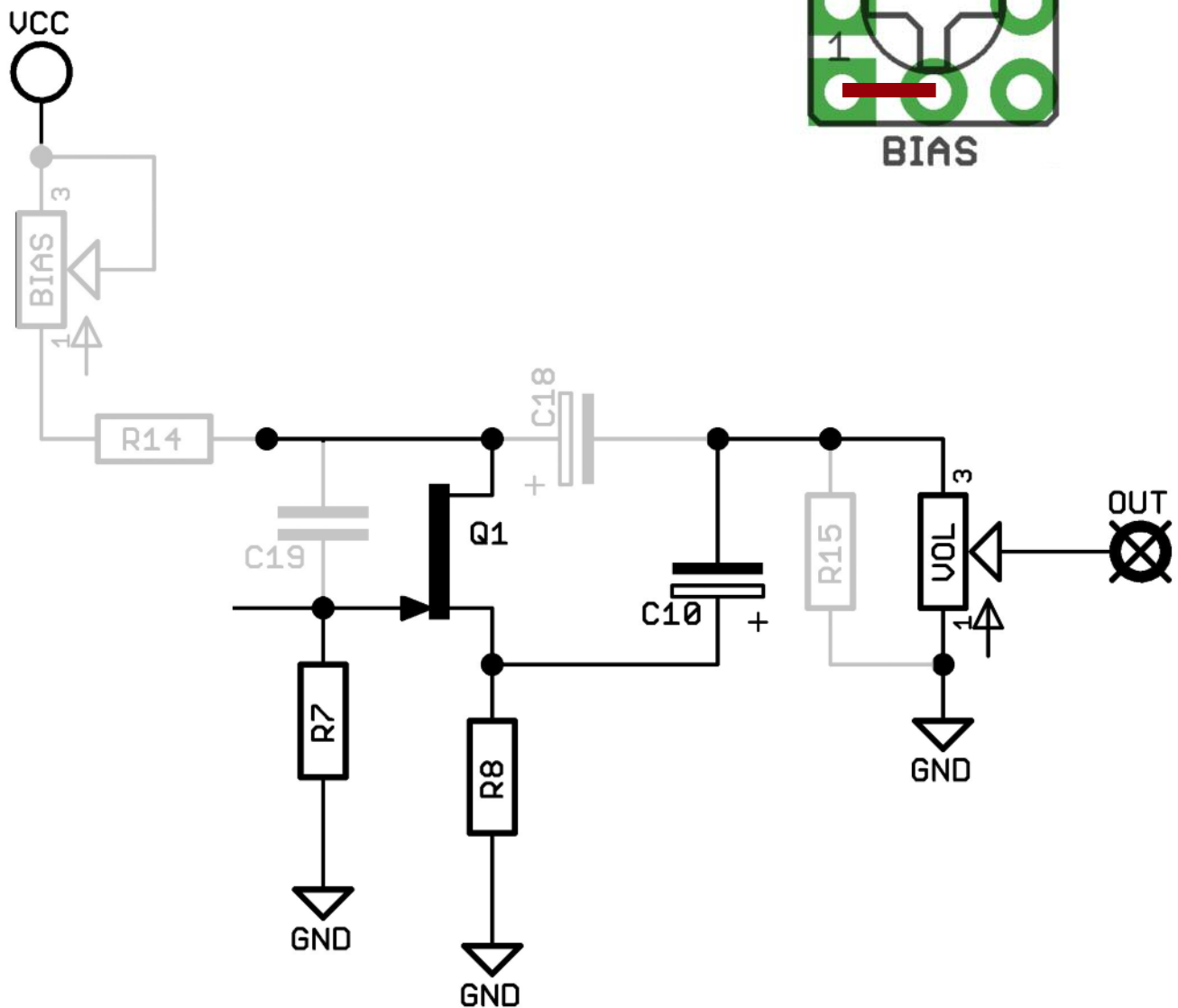
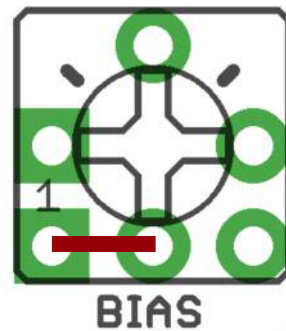
Output buffer

We've included spots for the parts to make the normal Rat output buffer section rather than the boosted output. We'd advise going for the boost, as the standard buffer version will hit unity pretty late in the volume sweep, but if you really want to...

R7 1M
R8 10K
R14 Jumper
R15 Empty

C10 1u guit / 10u bass
C18 Empty
C19 Empty

BIAS Omit -
Jumper as shown



Drilling template

Hammond 1590B

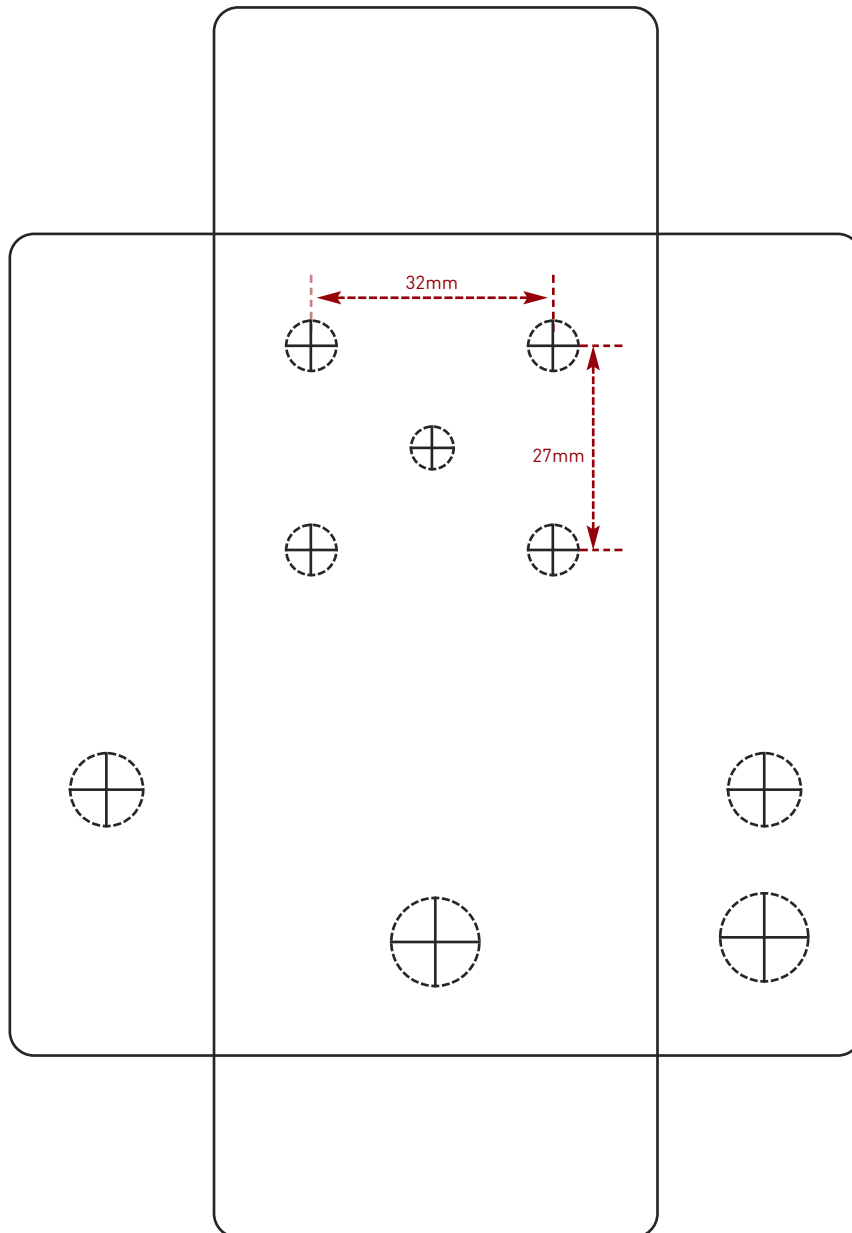
60 x 111 x 31mm

Recommended drill sizes:

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

It's a good idea to drill the pot and toggle switch holes 1mm bigger if you're board-mounting them.

Wiggle room = good!



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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