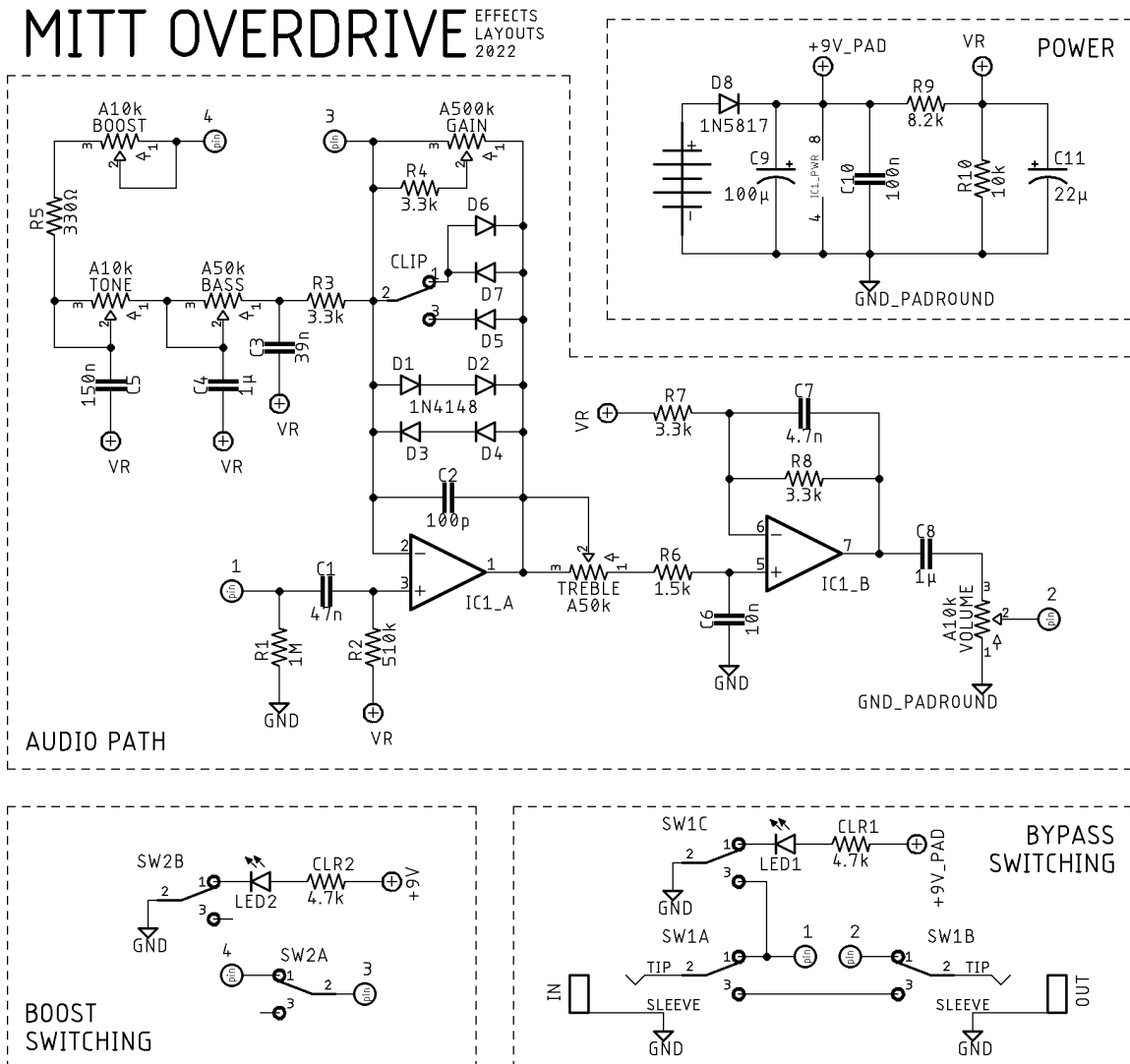




## DESCRIPTION

The MITT OVERDRIVE is a responsive, versatile transparent overdrive, based on the Paul Cochrane Tim, the bigger brother of the Timmy. It differs from the original Timmy with the added boost function, which features its own tone control. Where the MITT differs from the original Tim is the omission of the FX loop. This was between the circuit output and the bypass switch, so functionally the same as putting other effects after the pedal. The only functionality lost is being able to bypass everything in the FX loop with the pedal. The FX loop can still be wired in if desired (instructions for which are below), if the end builder doesn't mind side mounted jacks.

## SCHEMATIC



## BOM

### Resistors

R1	1M
R2	510k
R3	3.3k
R4	3.3k
R5	330Ω
R6	1.5k
R7	3.3k
R8	3.3k
R9	8.2k
R10	10k
CLR1	4.7k
CLR2	4.7k

### Capacitors

C1	47n
C2	100p
C3	39n
C4	1μ
C5	150n
C6	10n
C7	4.7n
C8	1μ
C9	100μ
C10	100n
C11	22μ

### Semiconductors

D1	1N4148
D2	1N4148
D3	1N4148
D4	1N4148
D5	1N4148
D6	1N4148
D7	1N4148
D8	1N5817
IC1	JRC4559
LED1	3 or 5mm LED
LED2	3 or 5mm LED

### Electromechanical

Bass	A50k
Boost	A10k
Clip	SPDT on/off/on
Gain	A500k
Sw1	3PDT footswitch
Sw2	3PDT footswitch
Tone	A10k
Treble	A50k
Volume	A10k

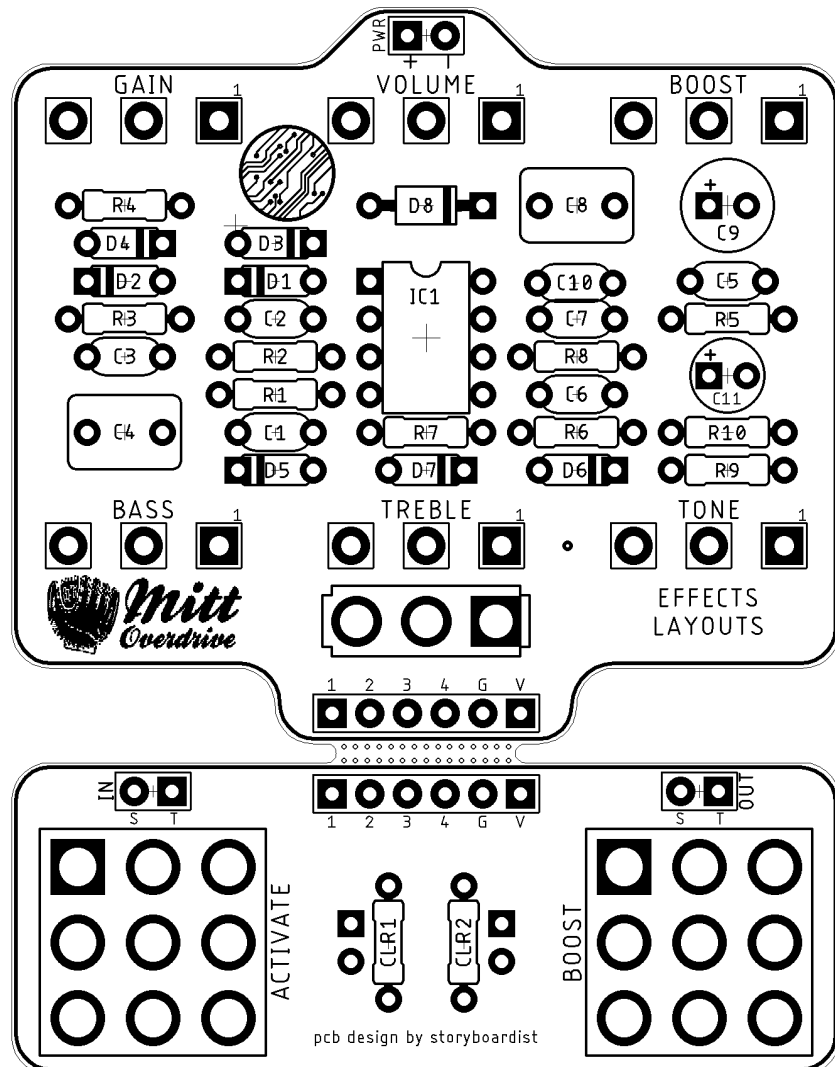
Note: Lots of dual opamps are suitable subs for IC1, but the JRC4558, OPA2134, NE5532 are where I'd start.

## SHOPPING LIST

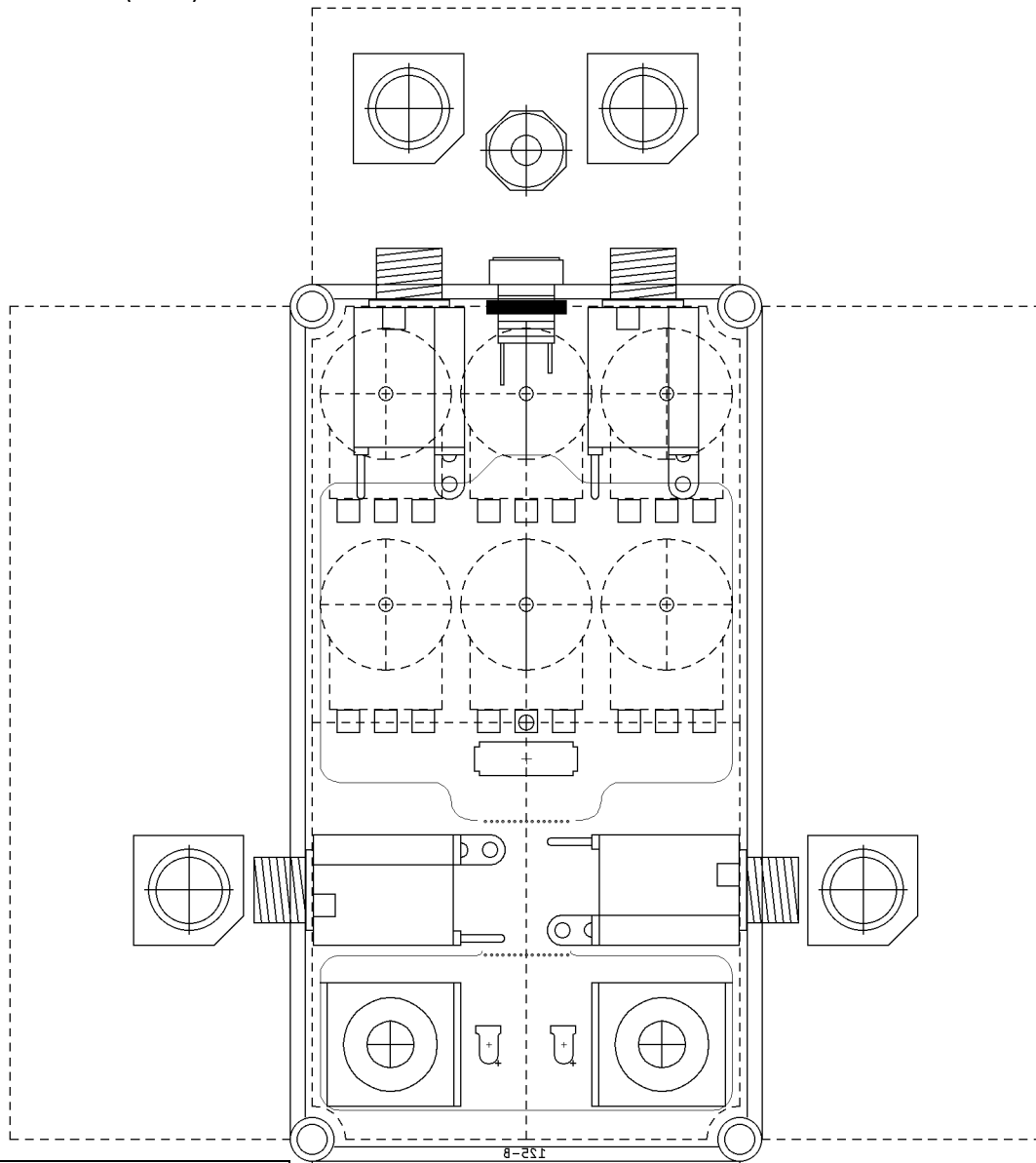
Part	Type (suggested)	Quantity
330Ω	¼ watt metal or carbon film	1
1.5k	¼ watt metal or carbon film	1
3.3k	¼ watt metal or carbon film	4
4.7k	¼ watt metal or carbon film	2
8.2k	¼ watt metal or carbon film	1
10k	¼ watt metal or carbon film	1
510k	¼ watt metal or carbon film	1
1M	¼ watt metal or carbon film	1
100p	Ceramic	1
4.7n	Film	1
10n	Film	1
39n	Film	1

47n	Film	1
100n	Ceramic	1
150n	Film	1
1μ	Film	2
22μ	Electrolytic (25v+)	1
100μ	Electrolytic (25v+)	1
1N4148	Silicon switching diode	7
1N5817	Schottky rectifier diode	1
JRC4559	Dual opamp	1
LED	3 or 5mm	2
3PDT	Footswitch	2
A10k	16mm right angle PC mount	3
A50k	16mm right angle PC mount	2
A500k	16mm right angle PC mount	1
SPDT	On/off/on toggle	1

LAYOUT



## DRILL TEMPLATE (125B)



Extra jacks shown if end builder wants to include the FX Loop. To wire in FX Loop, connect pad 2 of the main PCB to the send jack, and pad 2 of the footswitch PCB to return jack. FX Loop jacks should be switched jacks with the TS lugs wired together.



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