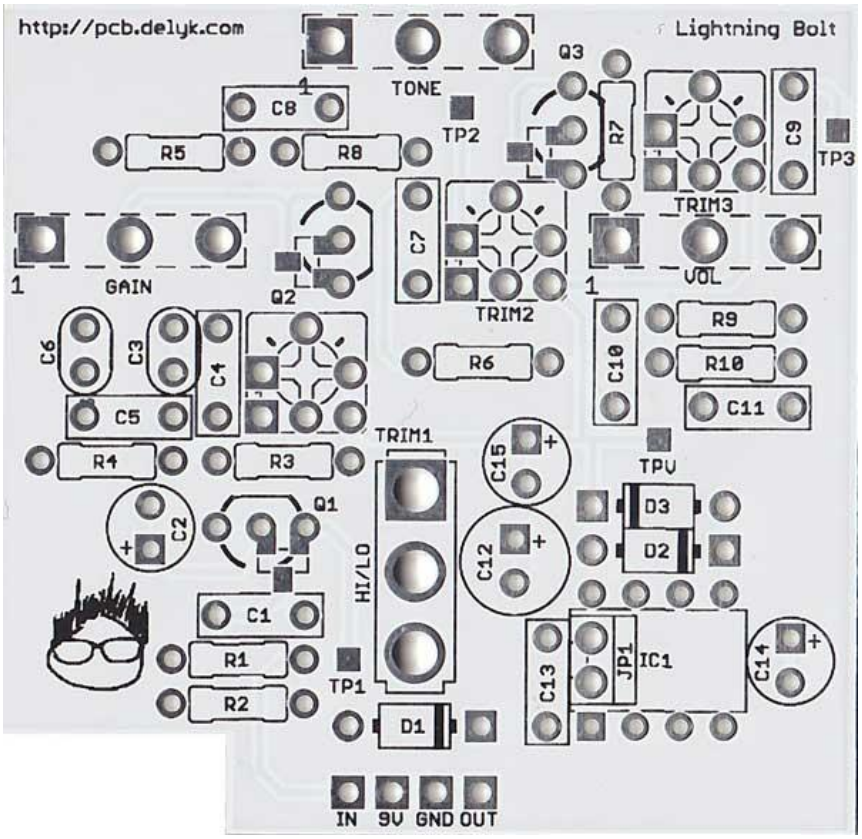


Lightning Bolt

Build Document

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Introduction

Based on a certain bolt of Supro abilities, this overdrive is a nice boost to downright dirty.

Bill of Materials

Resistors

P/N	Value	Notes
R1	1M	
R2	1M	
R3	1k5	
R4	470k	
R5	2k7	
R6	120k	
R7	470k	
R8	220R	
R9	12k	
R10	12k	

Diodes

P/N	Value	Notes
D1	1N400x	Polarity protection.
D2	1N5817	
D3	1N5817	

Capacitors

P/N	Value	Type	Notes
C1	22n	Film Box	
C2	33u	Electro	
C3	470p	Ceramic	
C4	4n7	Film Box	
C5	4n7	Film Box	
C6	470p	Ceramic	
C7	10n	Film Box	
C8	4n7	Film Box	
C9	10n	Film Box	
C10	3n3	Film Box	
C11	3n3	Film Box	
C12	100u	Electro	At least 25V
C13	100n	Film Box	
C14	10u	Electro	At least 50V
C15	10u	Electro	At least 50V

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Integrated Circuits

P/N	Value	Notes
IC1	MAX1044/ICL7660S/LT1054	If using a 1044/7660S, jump JP1.

Transistors

P/N	Value	Notes
Q1	J201	SMD Capable
Q2	J201	SMD Capable
Q3	2N5457	SMD Capable

Potentiometers

P/N	Value	Notes
GAIN	A500k	
TONE	A500k	
VOL	A100k	
TRIM1	100k	I prefer the Bourns style trim pots these days. You may even consider using multi-turn to make dialing in the voltage easier.
TRIM2	100k	
TRIM3	50k	

Switches

P/N	Value	Notes
HI/LO	SPDT	

Other Parts

Qty	Value	Notes
3	8-pin socket	1 for IC1, and the other two can be used for the transistors.

Build Notes

To bias, measure the voltage at TPV. Then adjust TRIM1 – TRIM3 to set TP1 – TP3 (respectively) to approximately 50% of the voltage at TPV.

Schematic

Images

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