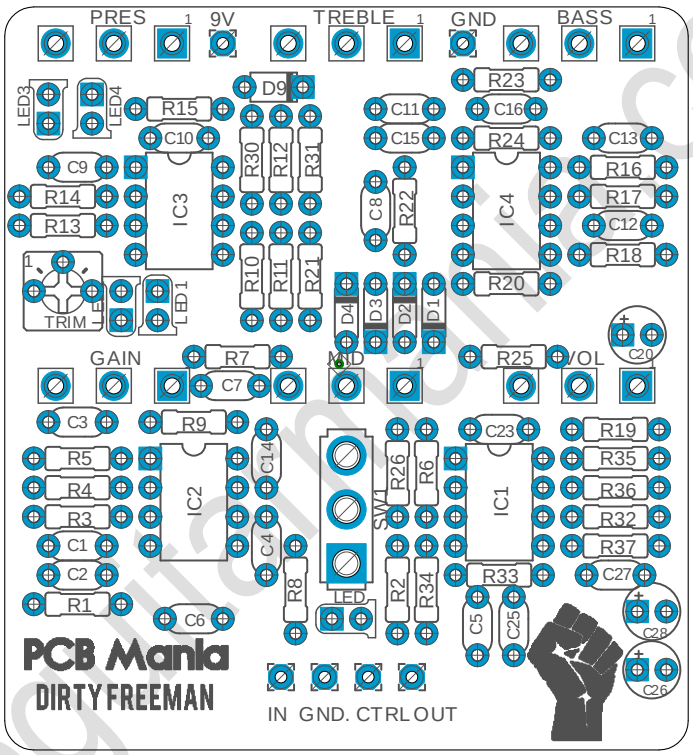
Dirty Freeman

Based on Friedman's Dirty Shirley

Overdrive - Distortion

By PCB Guitar mania Mania

Project link



The Dirty Freeman overdrive pedal crams all the British-style grit, supple touch sensitivity, and tonal flexibility of its namesake all-tube amplifier head into a pedalboard-friendly enclosure. It includes a tight switch to reign in your amp's low end when being pushed.

- This board has been designed for on-board pots and switches, and keeps your project tidy without long cables around.
- Works using four TL072.
- Internal Trimpot to set the max amount of gain at taste.
- Fits on a 125B enclosure with top mounted jacks.

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BOM

Resistors		Capacitors	
R1	1m	C1	22n
R2	330k	C2	47p
R3	10k	C3	10n
R4	22k	C4	1n
R5	39k	C5	100n
R6	22k	C6	47p
R7	10k	C7	47n
R8	22k	C8	120p
R9	22k	C9	220p
R10	22k	C10	10n
R11	22k	C11	4n7
R12	220k	C12	22n
R13	27k	C13	220n
R14	10k	C14	2n2
R15	2k2	C15	10n
R16	33k	C16	220n
R17	33k	C20	100u electrolytic
R18	2k2	C23	100n
R19	470k	C25	100n
R20	2k2	C26	22u electrolytic
R21	22k	C27	100n
R22	2k2	C28	22u electrolytic
R23	100k		
R24	3k3	**Diodes**	
R25	18k	D1	1n4148
R26	3k9	D2	1n4148
R30	10r	D3	1n4148
R31	10k	D4	1n4148
R32	20k	D9	1n5817
R33	22k	LED	LED 3mm
R34	2k2	LED1	LED 3mm
R35	20k	LED2	LED 3mm
R36	22k	LED3	LED 3mm
R37	2k2	LED4	LED 3mm
Pots		**Ics**	
GAIN	1m A	IC1	TL072
TREBLE	100k B	IC2	TL072
VOL	50k A	IC3	TL072
BASS	100k C	IC4	TL072
MID	100k C		

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PRES	10k C	**Switches**	
TRIM	100k	SW1	SPDT

Shopping list

Resistors			**Capacitors**		
1	100k	R23	3	10n	C3, C10, C15
9	22k	R4, R6, R8, R9, R10, R21, R33, R36, R11	1	1n	C4
1	330k	R2	4	100n	C5, C23, C25, C27
2	33k	R16, R17	1	2n2	C14
1	39k	R5	2	220n	C13, C16
1	3k3	R24	1	220p	C9
1	3k9	R26	2	22n	C1, C12
1	470k	R19	1	120p	C8
1	27k	R13	1	47n	C7
6	2k2	R15, R18, R20, R22, R34, R37	2	47p	C2, C6
2	20k	R32, R35	1	4n7	C11
1	220k	R12	1	100u electrolytic	C20
1	18k	R25	2	22u electrolytic	C26, C28
1	1m	R1			
4	10k	R3, R7, R14, R31	Pots		
1	10r	R30	1	100k	TRIM
			1	50k A	VOL
Diodes			1	100k B	TREBLE
5	Red Led	LED, LED1, LED2, LED3, LED4	2	100k C	BASS, MID
4	1n4148	D1, D2, D3, D4	1	1m A	GAIN
1	1n5817	D9	1	10k C	PRES
Ics					
4	TL072	IC1, IC2, IC3, IC4			

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General Building notes

To populate the PCB it's recommended to follow this order.

1. Resistors & diodes
2. IC Sockets (set up the proper IC at last)
3. Capacitors, starting with the smaller ones and the ceramic ones.
4. Electrolytic capacitors (always check the polarity)
5. Transistors
6. Wires
7. Potentiometers
8. Off board wiring

Drilling the enclosure

This Project has been planned to fit into a 125B enclosure type.

Check the Attached "Drilling templates" to drill the box properly. The files are on Scale 1:1, ready to print in a A4 page.

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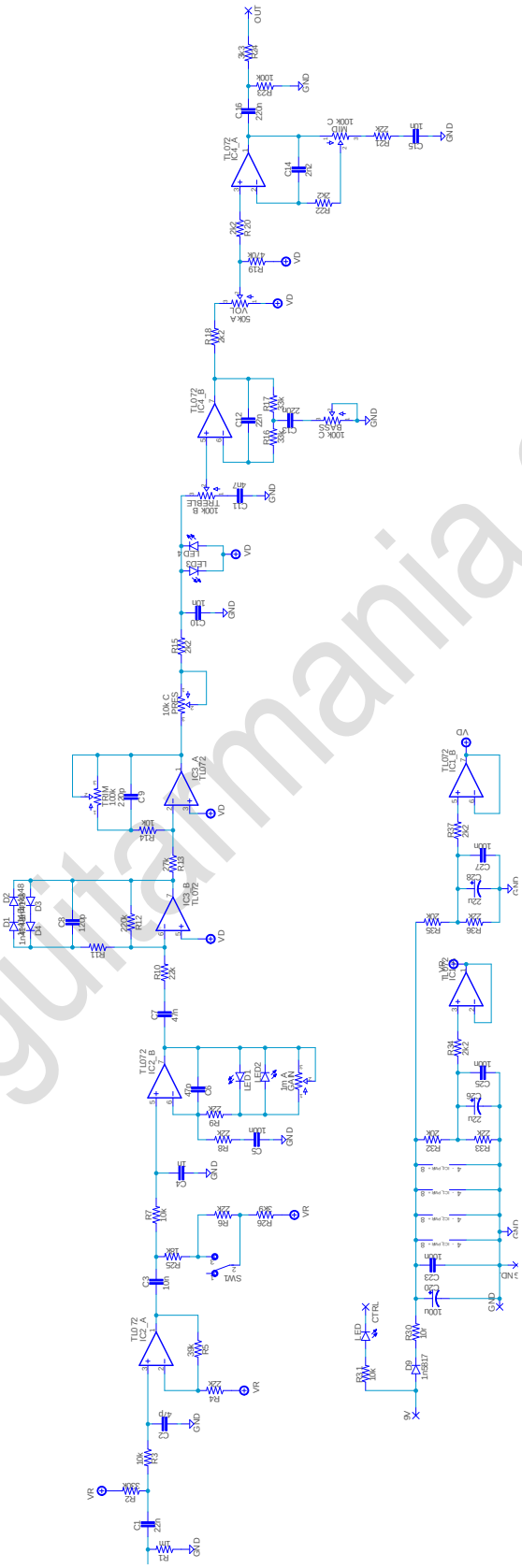
Schematic



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