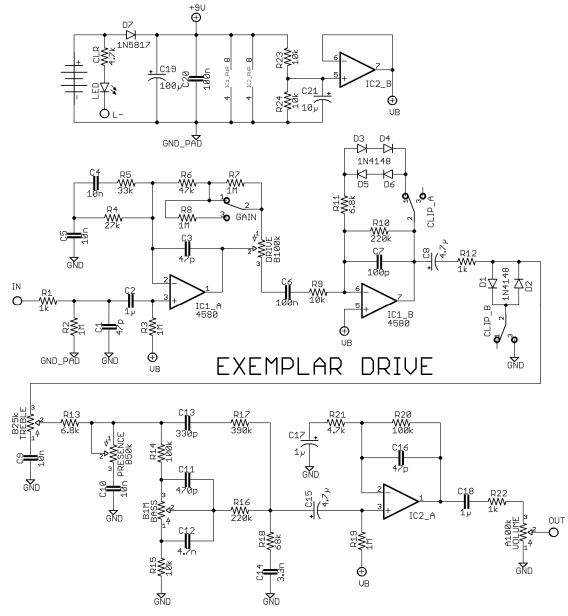
EXEMPLAR DRIVE

DESCRIPTION

The EXEMPLAR DRIVE is a clone of the Wampler Pantheon. This is a modified Marshall Bluesbreaker, but unlike other variations. One toggle changes the amount of resistance in the feedback loop of the first opamp stage, and the other switches between soft clipping in the 2nd opamp stage, and hard clipping after the 2nd opamp stage, or neither. In the tone section the treble control is the standard Bluesbreaker tone control, and the presence control is borrowed from the Analogman King of Tone. The bass control is part of a Baxendall tone stack with the treble control fixed. This is all followed by an opamp-based gain recovery stage. The only modification I've made to the circuit is using the unused opamp of IC2 as a buffer for the voltage reference.

SCHEMATIC



BILL OF MATERIALS

Resistors

Resistors	1	
R1	1k	
R2	1M	
R3	1M	
R4	27k	
R5	33k	
R6	47k	
R7	1M	
R8	1M	
R9	10k	
R10	220k	
R11	6.8k	
R12	1k	
R13	6.8k	
R14	100k	
R15	10k	
R16	220k	
R17	390k	
R18	68k	
R19	1M	
R20	100k	
R21	4.7k	
R22	1k	
R23	10k	
R24	10k	
CLR	4.7k	

Capacitors

C1	47p	
C2	1μ	
C3	47p	
C4	10n	
C5	10n	
C6	100n	
C7	100p	
C8	4.7μ	
C9	10n	
C10	10n	
C11	470p	
C12	4.7n	

C13	330p	
C14	3.3n	
C15	4.7μ	
C16	47p	
C17	1μ	
C18	1μ	
C19	100μ	
C20	100n	
C21	10μ	

Semiconductors

D1	1N4148
D2	1N4148
D3	1N4148
D4	1N4148
D5	1N4148
D6	1N4148
D7	1N5817
IC1	JRC4580
IC2	JRC4580
LED	3/5mm LED

Electromechanical

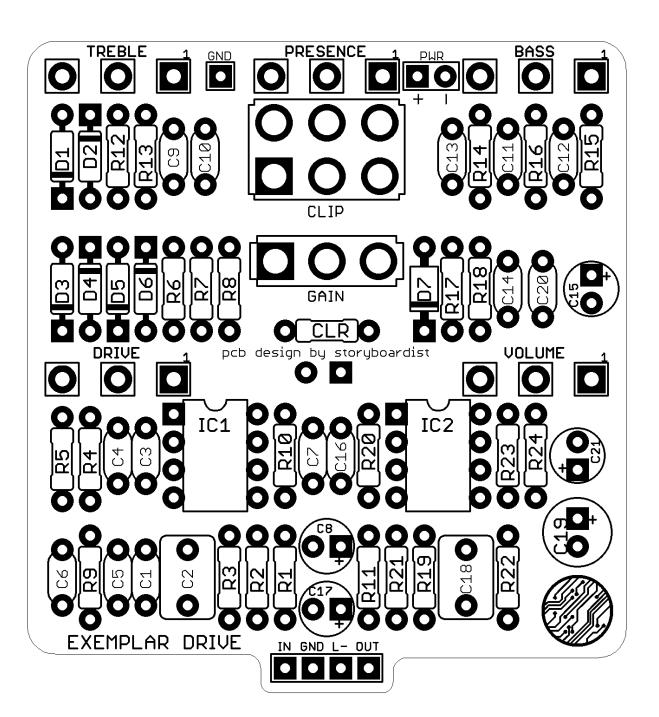
Bass	B1M	
Clip	DPDT on/off/on	
Drive	B100k	
Gain	SPDT on/off/on	
Presence	B50k	
Treble	B25k	
Volume	A100k	

Notes

Other dual opamps can be used (TL072, JRC4558, NE5532, etc.), so adjust to taste. The clipping switch could be replaced by a DPDT on/on/on if you'd rather the middle position of the toggle be bot sets of clipping diodes in the circuit. Similarly, a DPDT on/on can be used for just soft or hard clipping.

SHOPPING LIST

Value	Type (suggested)	Quantity
1k	¼ watt metal or carbon film	3
4.7k	¼ watt metal or carbon film	2
6.8k	¼ watt metal or carbon film	2
10k	¼ watt metal or carbon film	4
27k	1/4 watt metal or carbon film	1
33k	¼ watt metal or carbon film	1
47k	¼ watt metal or carbon film	1
68k	¼ watt metal or carbon film	1
100k	¼ watt metal or carbon film	2
220k	¼ watt metal or carbon film	2
390k	¼ watt metal or carbon film	1
1M	1/4 watt metal or carbon film	5
47p	Ceramic (63v or higher)	3
100p	Ceramic (63v or higher)	1
330p	Ceramic (63v or higher)	1
470p	Ceramic (63v or higher)	1
3.3n	Film (63v or higher)	1
4.7n	Film (63v or higher)	1
10n	Film (63v or higher)	4
100n	Film (63v or higher)	2
1μ	Film (63v or higher)	2
1μ	Electrolytic (35v or higher)	1
4.7μ	Electrolytic (35v or higher)	2
10μ	Electrolytic (35v or higher)	1
100μ	Electrolytic (35v or higher)	1
1N4148		6
1N5817		1
LED	3/5mm	1
JRC4580	Dual opamp	2
SPDT on/off/on	Toggle switch	1
DPDT on/off/on	Toggle switch	1
A100k (audio/log)	16mm right angle PC mount	1
B25k (linear)	16mm right angle PC mount	1
B50k (linear)	16mm right angle PC mount	1
B100k (linear)	16mm right angle PC mount	1
B1M (linear)	16mm right angle PC mount	1



DRILL TEMPLATE (125B)

