

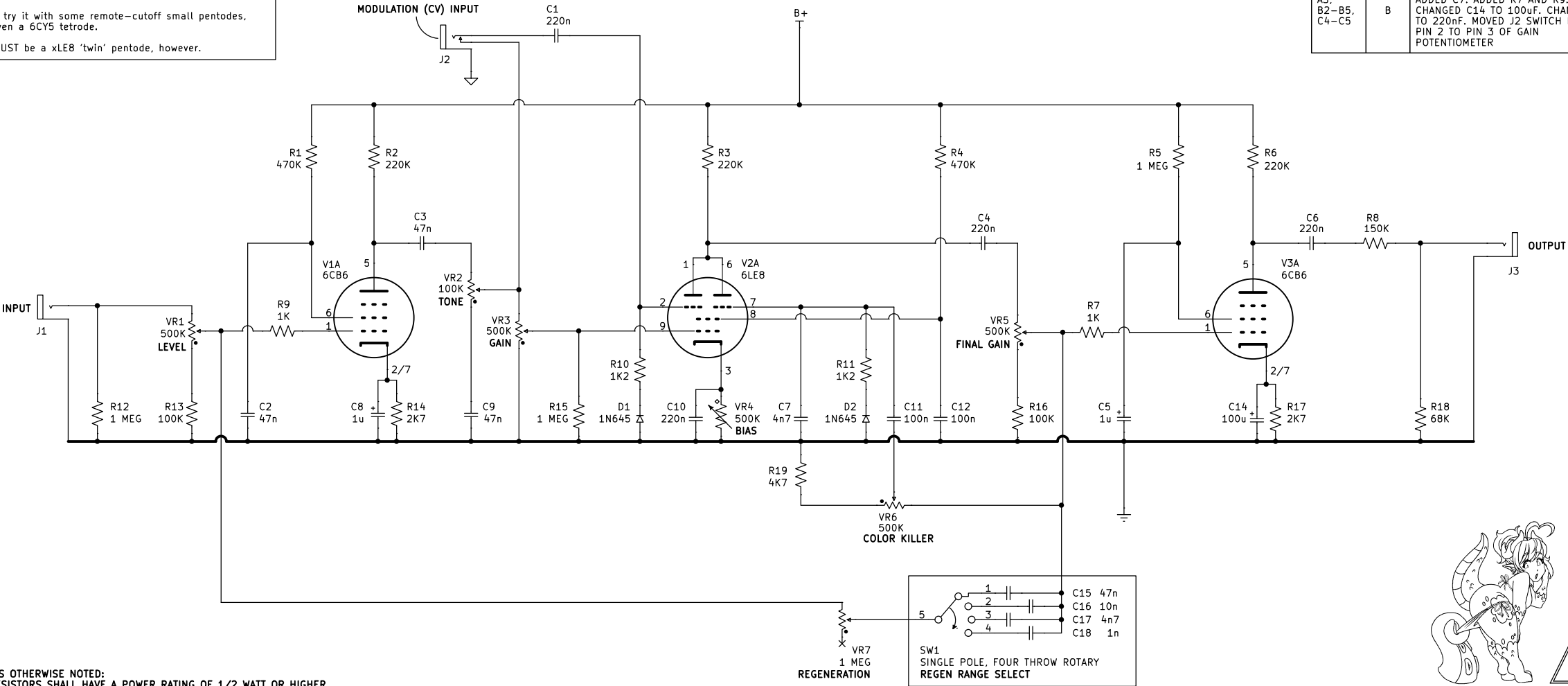
V1 and V3 can also be almost any 7BD, 7CM or 7BK-base, 6 volt filament, sharp cutoff small pentode. 6AU6 or 6BZ6 will give a more mellow distortion with less spontaneous self-oscillation. 6AK5/5654 or 6X1Π(6J1P) will scream and howl. I specifically chose 6CB6 because they're fucking awesome.

Hell, try it with some remote-cutoff small pentodes, or even a 6CY5 tetrode.

V2 MUST be a xLE8 'twin' pentode, however.

EQUIPMENT BUILT FROM DIAGRAM AND OPERATIONALLY VERIFIED 31 AUGUST 2025
REVERIFICATION INCLUDING REV B CHANGES 3 SEPTEMBER 2025

REVISIONS			
ZONE	REV	DESCRIPTION	DATE
	A	ORIGINAL ISSUE.	2025AUG31
A3, B2-B5, C4-C5	B	ADDED S1 (REGENERATION FREQUENCY RANGE SWITCH); ADDED C16-C18. ADDED C7. ADDED R7 AND R9. CHANGED C14 TO 100uF. CHANGED C1 TO 220nF. MOVED J2 SWITCH FROM PIN 2 TO PIN 3 OF GAIN POTENTIOMETER	2025SEPT03



UNLESS OTHERWISE NOTED:
ALL RESISTORS SHALL HAVE A POWER RATING OF 1/2 WATT OR HIGHER.
ALL RESISTOR TOLERANCES SHALL BE 10% OR LESS.

ALL CAPACITORS SHALL HAVE A VOLTAGE RATING OF 63V OR HIGHER.
ALL CAPACITOR TOLERANCES SHALL BE 20% OR LESS.

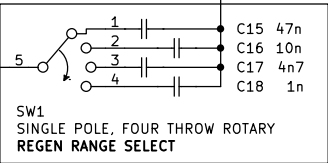
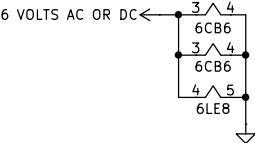
FILAMENTS MUST HAVE A DIRECT SHARED CONNECTION TO DC GROUND.

WHEN USING MAINS A/C, A SAFETY GROUND MUST BE INSTALLED IN ACCORDANCE WITH LOCAL LAWS AND REGULATIONS.

6CB6 (most small-signal pentodes, but verify against datasheets) filaments will pull about 300mA.

The 6LE8 filament is a HUNGRY motherfucker and will pull about 750mA. Double that from a cold start for a few seconds before it warms up.

You are more than welcome to use the 10LE8 or 15LE8 instead for lower filament current draw, but you will have to adjust your filament supply accordingly.



DISCLAIMER:

PROVIDED WITH NO GUARANTEES, WARRANTIES, OR SUPPORT FROM EITHER TOW OR DISASTER ELECTRIC.

Readers are permitted to construct these circuits for their own personal use only. This circuitry is intended for the more advanced builder. Because high voltages are used, a shock hazard exists. We do not recommend that the novice DIY musician try to construct this equipment. Some experience with tube electronics is highly recommended.

CIRCUIT DESIGN AND DRAWING BY TOW AT DISASTER ELECTRIC.
<https://www.disasterelectric.com>



THE TOWER VACUUM-TUBE PREAMP AND DEMODULATOR.

Size: USLegal | Date: 2025-09-01

Rev: B

KiCad E.D.A. 9.0.4

Id: 1/1