M-B-R-K-M-K-I-I

DUAL RECTIFIER ROADKING REBUILD

MARTIN BOHRAU, CH-8143 STALLIKON

VERSION 0.2 DRAFT MITTWOCH, 29. OKTOBER 2008

CHANGE LOG:

20081028 Review of schemes (parts, values, numbering)
- Power Supply, Preamp, FX+REV, PowerAmp, Switch Matrix 1

Currently ongoing:
- switching matrix (how it works and looking for alternatives)

VARIANCES:

Spongy Feature	open
Cab Selection	this feature will not be realized
External Trigger	not needed, will not be realized
Power Line	power line filter, fused and switched
HT fuse	each tap is fused in front of rectifier

ISSUES / TO BE DECIDED:

Mains Transformer	TAD RK replacement PT
Output Transformer	Mercury Magnet RK OT
OT Reverb	open
Choke	10 or 15H ?
Chassis	some 70cm x 30cm, U-profile, 1.5mm-2mm Alu black (powdered paint)
Faces	engraving directly on black painted chassis
Headshell available)	TT or self made (no standard headshell
Prototyping Switch Matrix	I'm going to implement and test the switch matrix circuitry first. I do expect some difficulties and it's better to have the switching engine up and running rather than bug-fixing this part of the circuitry at the end, when all parts and boards are mounted.

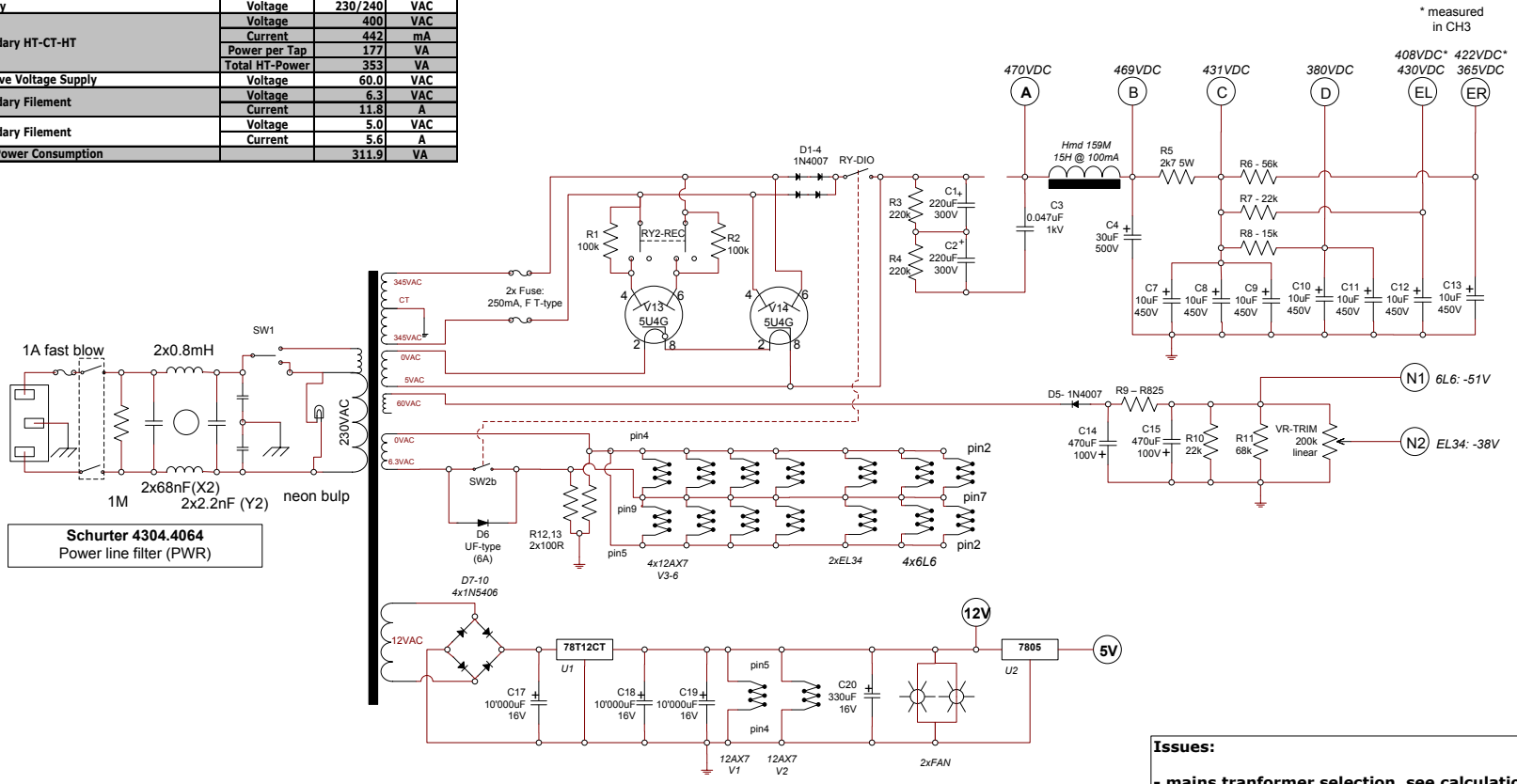
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POWER SUPPLY

Mains Transformer Specification

Winding	Property	Size	Unit
Primary	Voltage	230/240	VAC
Secundary HT-CT-HT	Voltage	400	VAC
	Current	442	mA
	Power per Tap	177	VA
	Total HT-Power	353	VA
Negative Voltage Supply	Voltage	60.0	VAC
Secundary Filement	Voltage	6.3	VAC
	Current	11.8	A
Secundary Filement	Voltage	5.0	VAC
	Current	5.6	A
Total Power Consumption		311.9	VA



Issues:

- mains tranformer selection, see calculations for specs
- relais RY2-REC selection: switching current >400mA, switching voltage 350VAC
- choke: 10H or 15H ?

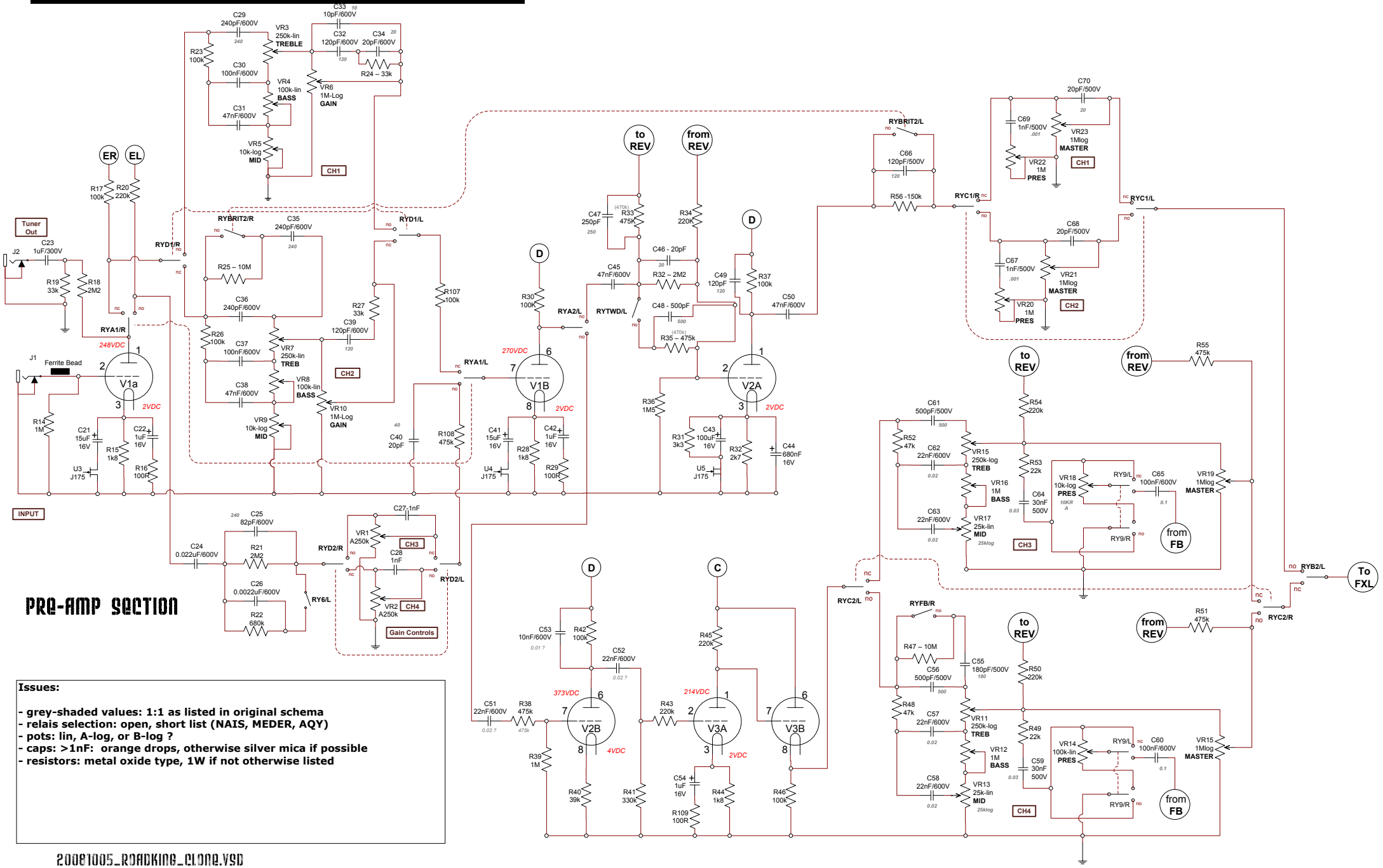
Variances:
- power line. Filtered w/ DPST switch, mains fuse
- HT fused in front of rectifier
- filament lowered in standby mode

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Issues:

- grey-shaded values: 1:1 as listed in original schema
- relais selection: open, short list (NAIS, MEDER, AQY)
- pots: lin, A-log, or B-log ?
- caps: >1nF: orange drops, otherwise silver mica if possible
- resistors: metal oxide type, 1W if not otherwise listed

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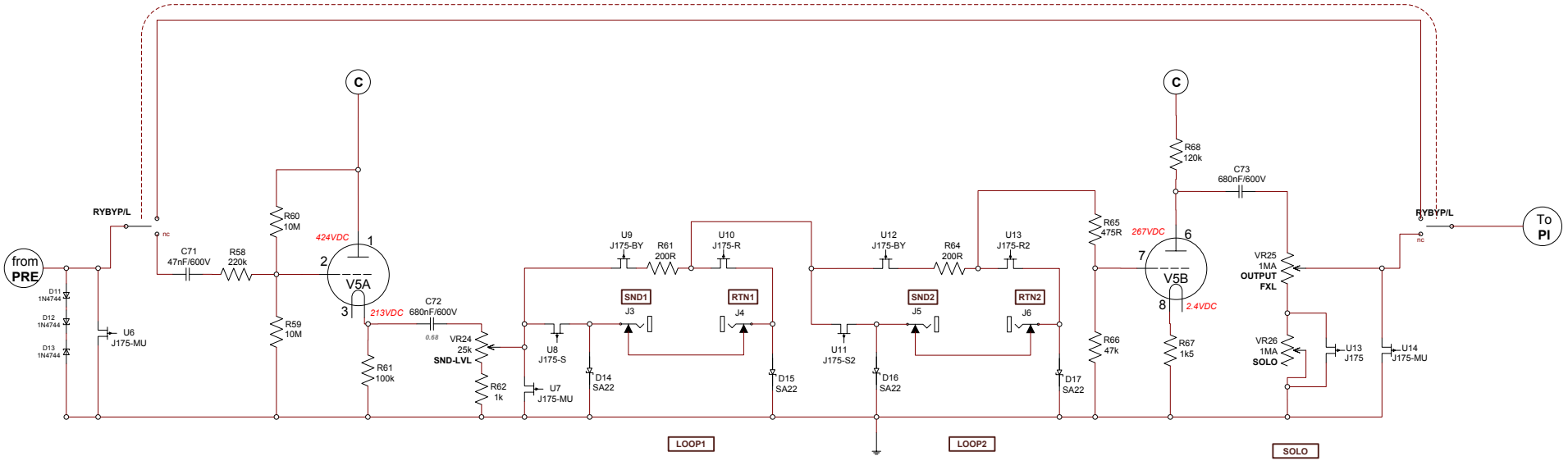
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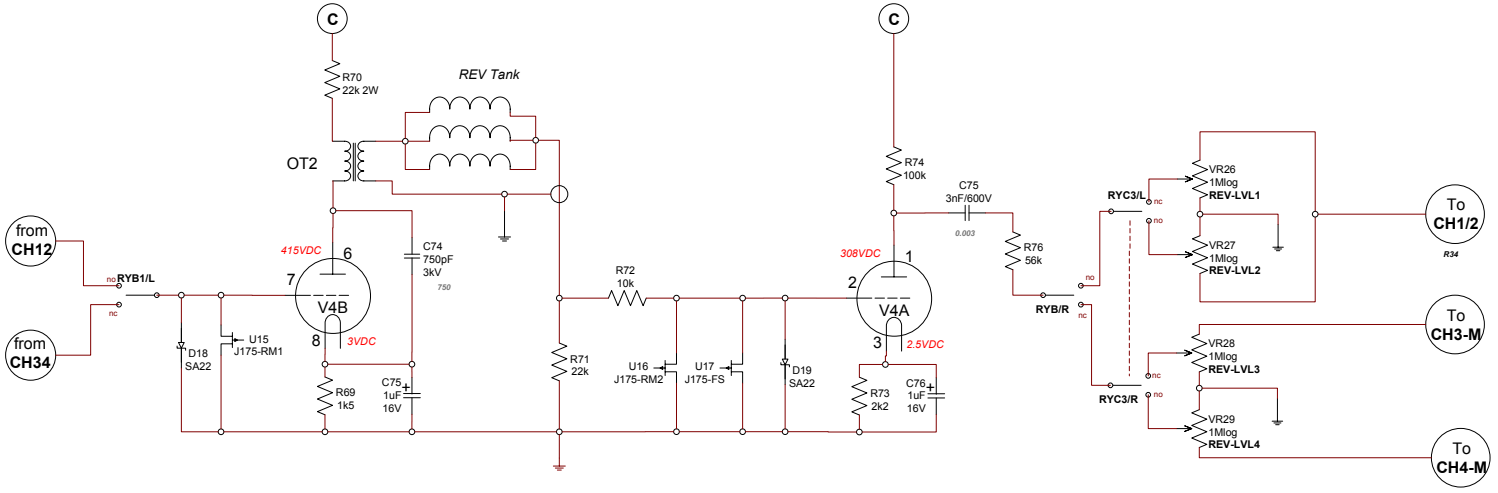
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FX-LOOP + REVERB





Issues:

- OT2: which one to take?
- REV Tank to be selected

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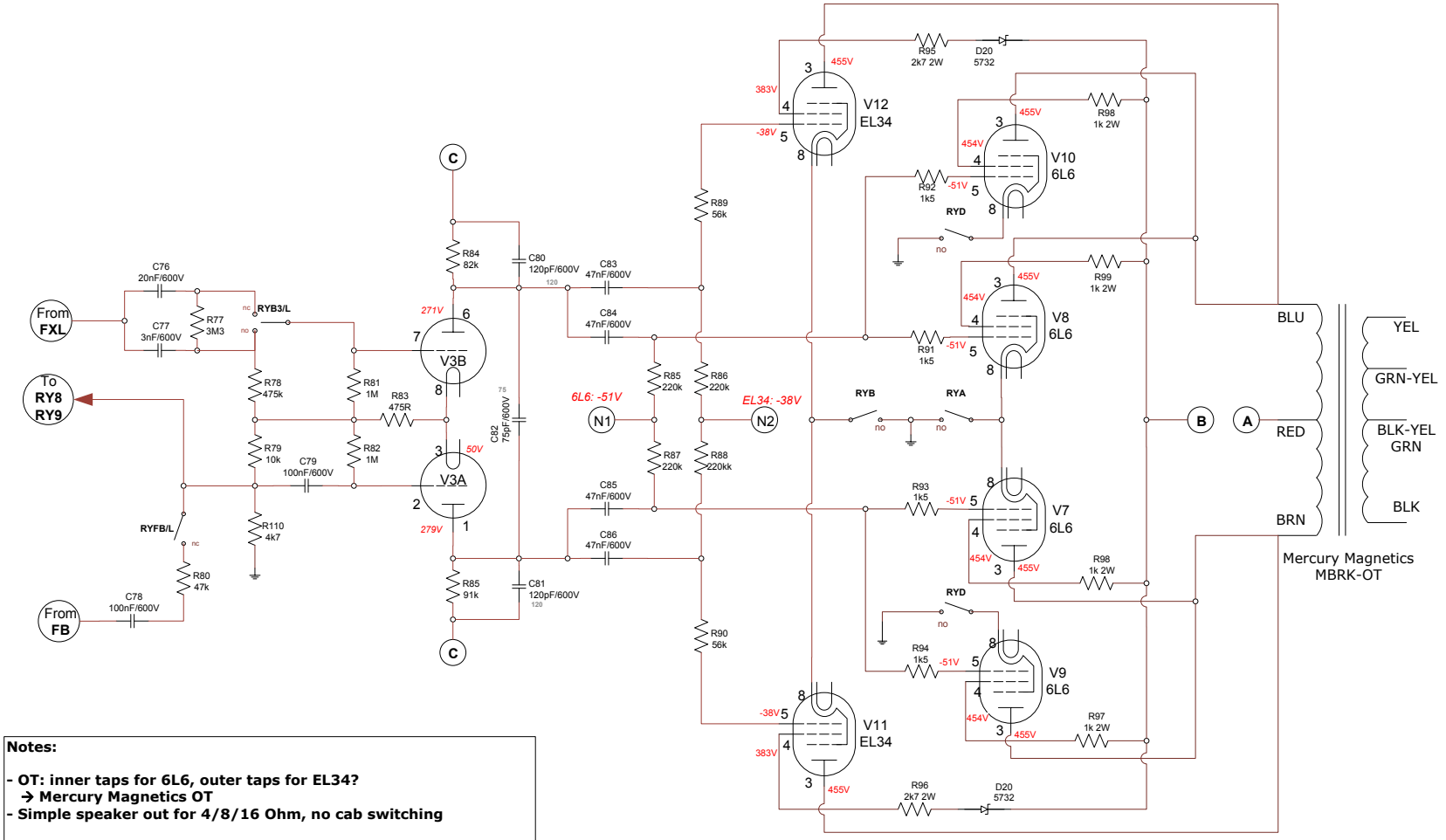
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POWER AMP SECTION



Notes:

- OT: inner taps for 6L6, outer taps for EL34?
→ Mercury Magnetics OT
- Simple speaker out for 4/8/16 Ohm, no cab switching

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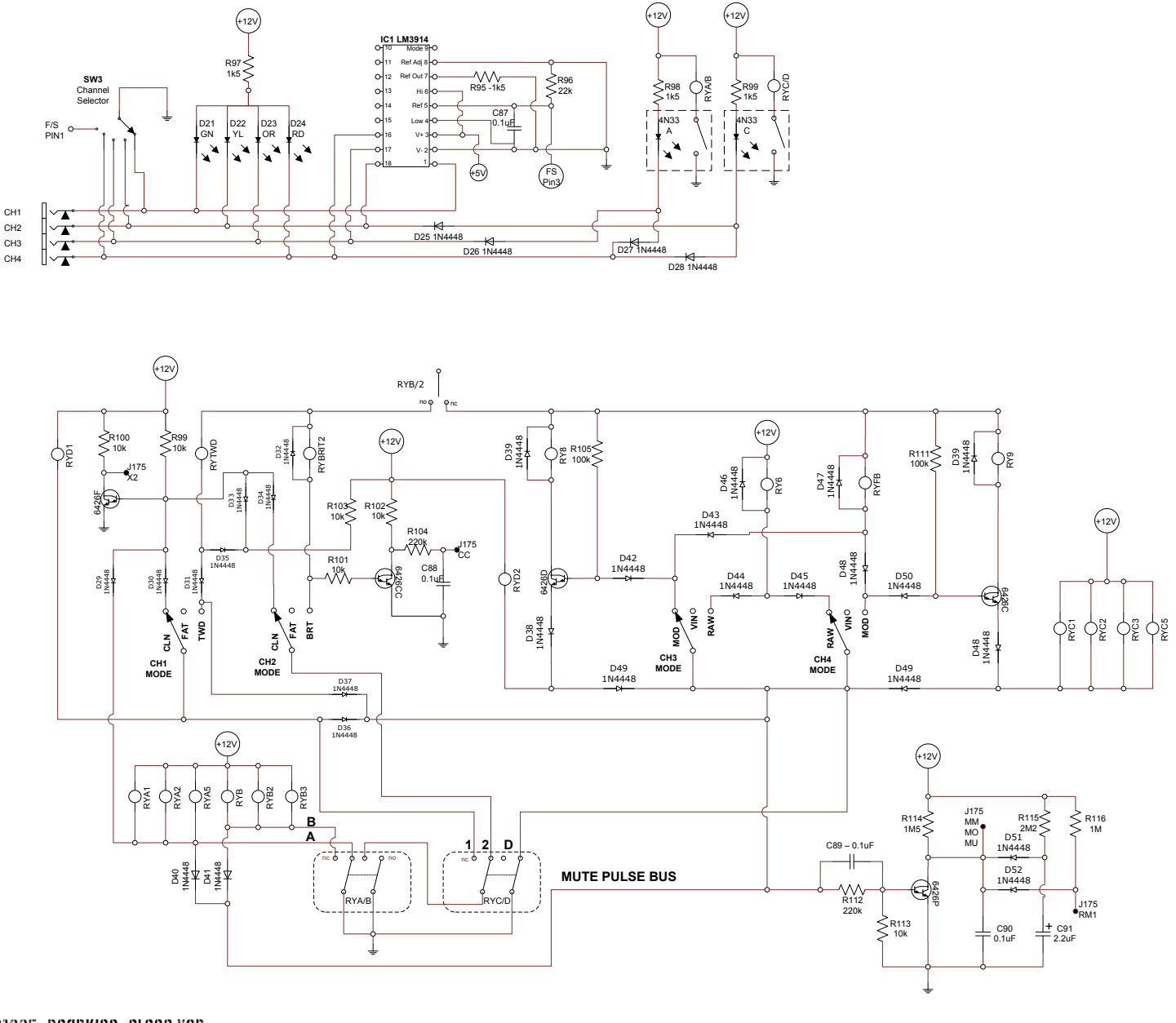
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SWITCH MATRIX PT1



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