



Lieberman Sound

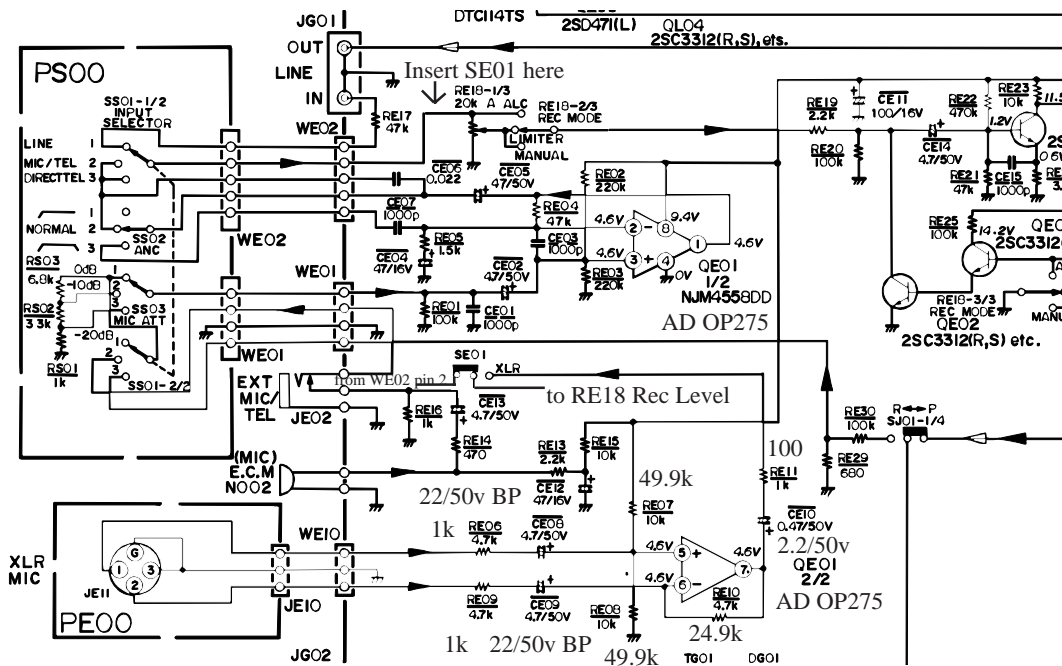
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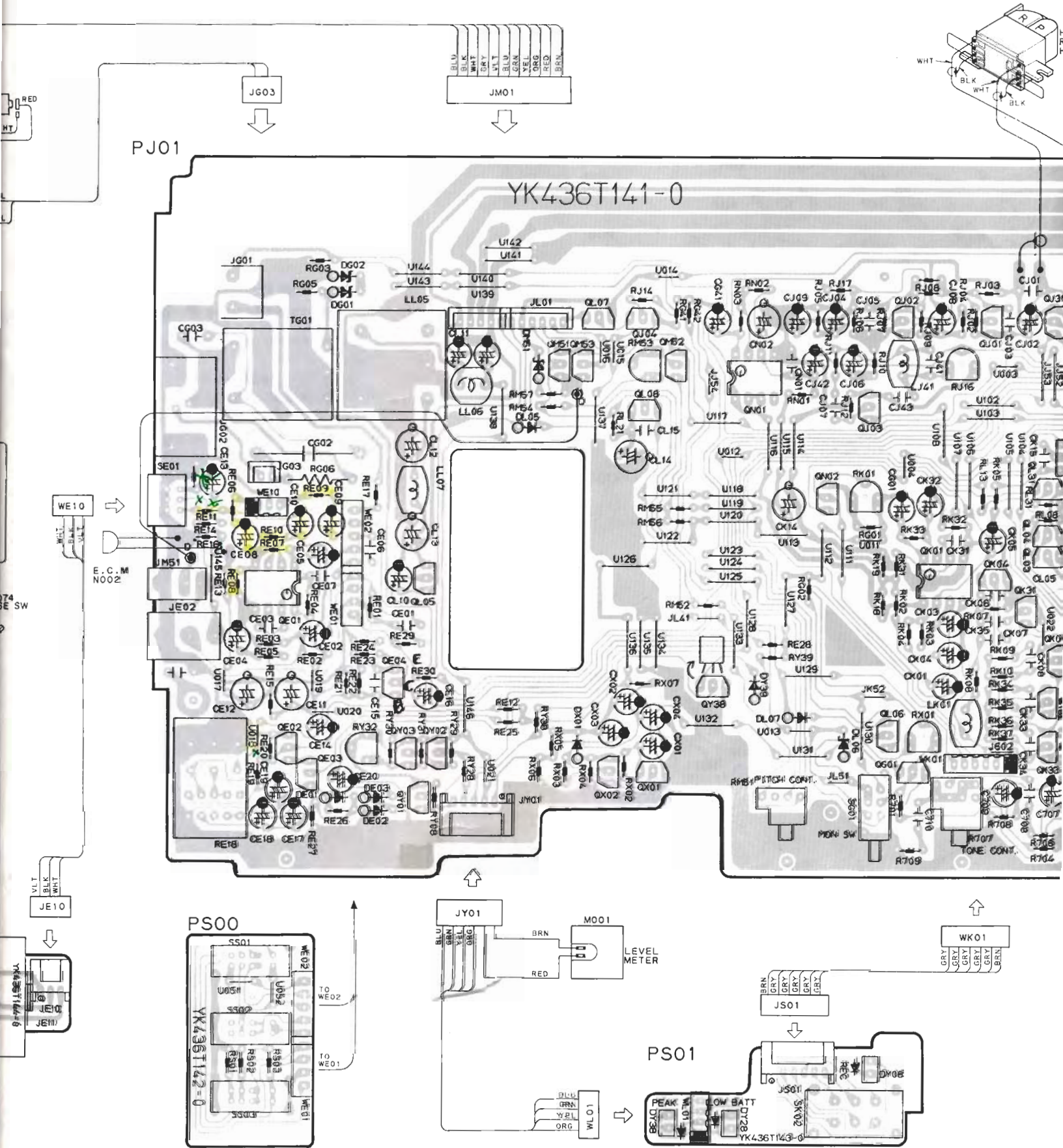
Marantz PMD222 Mic Preamplifier Modification

This modification reduces the input noise at the balanced XLR connector by up to 10dB. On units after serial number MZ0293xx27xxxx the improvement may be around 5.3dB, due to Marantz's upgrade of the original op-amp. Some improvement can be made by simply changing the op-amp to the AD OP275, but for the full improvement the entire modification below should be performed. Note that the XLR-ECM switch now becomes XLR-Input Select.

You may copy and distribute these instructions freely, as long as you retain the copyright, logo, and contact information shown on this page. It is completely our design, and has not been approved nor endorsed by Marantz. Any alteration of a unit still under warranty may void the warranty. Performing this modification is at your own risk, and we can not offer any technical support with this modification.



- 1) Change QE01 from NJM4556 to AD OP275 (Note: Do not use NE5532A, it draws too much current)
- 2) Change RE06, RE09 from 4.7k to 1k
- 3) Change RE10 from 4.7k to 24.9k
- 4) Change RE07, RE08 from 10k to 49.9k
- 5) Change CE08, CE09 from 4.7/50v to 22/50v (preferably bipolar to protect against phantom power)
- 6) Change RE11 from 1k to 100
- 7) Change CE10 from .47/50v to 2.2/50v (if flat low end is desired)
- 8) Cut trace between neg side of CE13 and SE01 and connect CE13 to RE16
- 9) Cut trace at center contact of SE01
- 10) Remove jumper U018
- 11) Connect center contact of SE01 to side of U018 that goes to Rec Level pot RE18
- 12) Connect other open contact of SE01 to side of U018 that goes to WE02 pin 2
- 13) Affix new label to switch (XLR - Input Select)
- 14) Test: Voltage at QE01 pin 8 = 9.4v, THD+N = 0.14%, CMRR = >80dB @ 1k, resp same as line in



MARANTZ PMD222 MIC INPUT MOD

Input level	S/N unweighted dB		S/N A-weighted dB	
	Stock	Modified	Stock	Modified
-60	47	57	49	59
-50	57	67	59	69
-40	67	74	69	76
-30	73	76	75	78

AP Output impeded 150ohm

PMD222 Input set to 0VU, Output level -3.2dBu

THD+N: Approx 0.135%

CMRR: 70dB or better