
Luxman C12 control amplifier & M12 power amplifier

General:

This pre-amplifier or control amplifier as Luxman likes to call it and power amplifier set was produced in the early 1980's.

They are part of the "Laboratory Standard Series" just as i.e. the T12 and the L10.

Special features:

The pre-amp section of this set, the C12 was remarkable because of several features. It employed no tone-control, it did however have a "Linear Equalizer". Below is explained what it does:

All the program sources available are not always perfect.

Record discs, cd's and tapes, as a program source, are liable to have a slight deviation of linear nature depending on the manufacturers.

For example, all recordings are equalized in accordance with RIAA standard, but its quite common to encounter variations in overall tonal balance from one recording to the other.

Also, differences in listening environment and room acoustics often require a subtle degree of tonal compensation that conventional tone controls cannot correct because of their wide range and overlapping characteristics.

The "Linear Equalizer" control provides a form of tonal compensation especially intended for this sort of tendency.

With the control in its mids position, flat frequency response is achieved.

Switched to the "up-tilt" positions, the entire response curve is rotated on a 1 kHz axis so as a linear increase treble response while simultaneously decreasing bas response.

Conversely, selection of one of the "down-tilt" positions rotates the response curve in a clockwise direction, providing a gradual decrease of treble response and simultaneous increase of bass response.

Degree of slope for either positive or negative settings has been carefully preset, and the overall response maintains complete linearity from 50 Hz to above 10 kHz, unlike the curvature in response normally associated with ordinary tone controls.

Specifically, when the control is turned to the max "up-tilt" position, it will decrease bass and increase treble by 2 dB at 100 Hz and 10 kHz respectively.

Selection of the max "down-tilt" position will decrease treble and increase bass by 2 dB at the same reference frequencies.

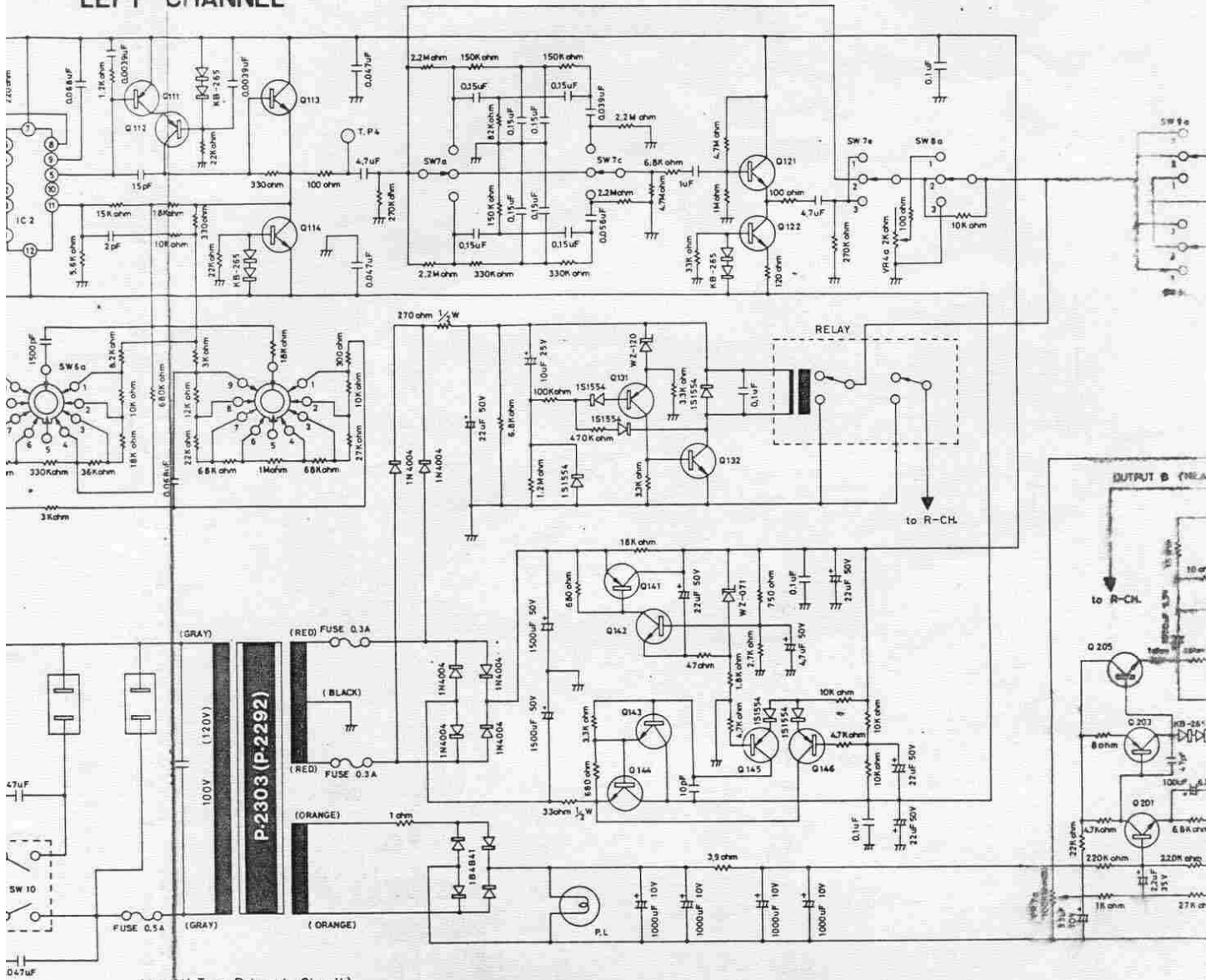
At the center of the rotation, components which consists the Linear

Equalizer are all by-passed to realize flat frequency response. The control is inserted in the flat amp circuit and is effective on ALL program sources. It introduces no increase of harmonic distortion in any of his settings because of the inherently linear nature of this circuit.

Schematic:

C12 schematic diagram:

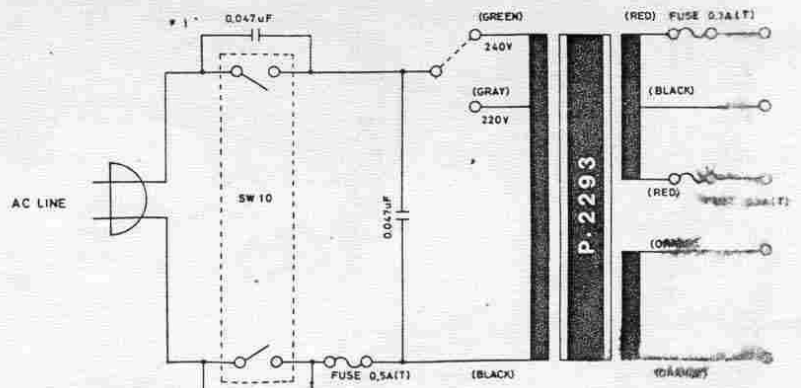
LEFT CHANNEL

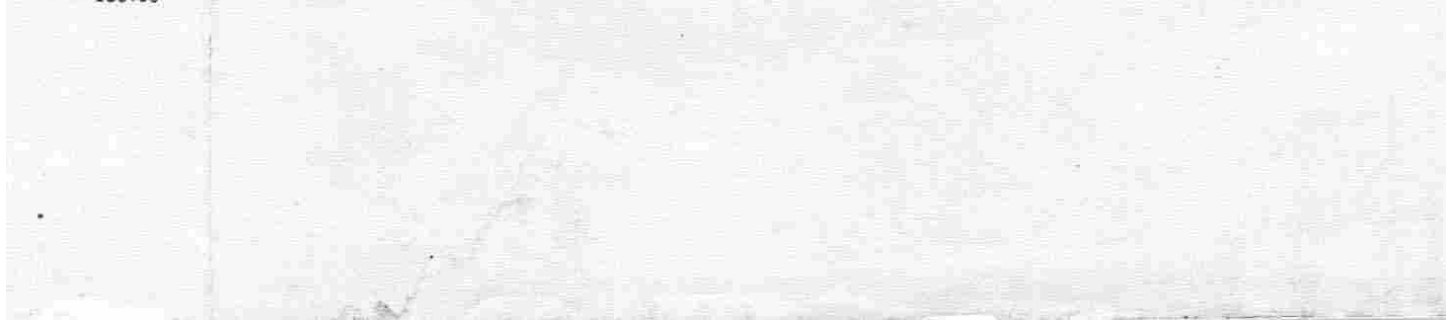


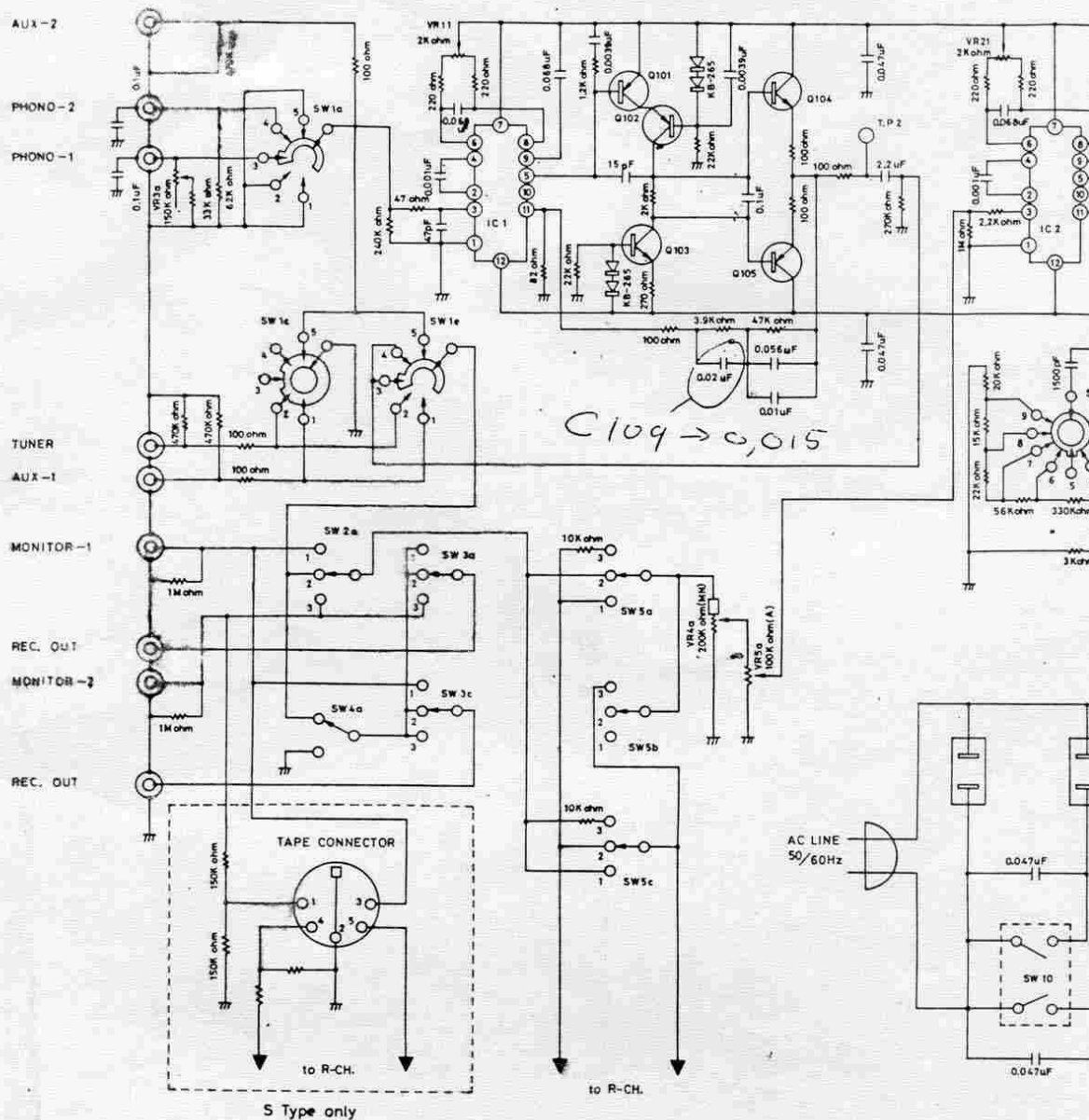
(J and U Type Primary Circuit)

- R22 — DC BALANCE
- PHONO IMPEDANCE ADJ.
- BALANCE
- VOLUME
- ATT. PRESET
- HEADPHONE LEVEL

- DML-02
- 112 — 2SA836
- 143 — 2SC1345
- 2SC1626
- 2SA816
- 2SC1940
- 2SC1775







SWITCHES

- | | |
|------------------|--|
| SW 1 a.b.c.d.e.f | INPUT SELECTOR
(1. AUX-1 2. TUNER 3. PHONO-1 4. PHONO-2 5. AUX-2) |
| SW 2 a.b | MONITOR
(1. TAPE-1 2. SOURCE 3. TAPE-2) |
| SW 3 a.b.c.d | DUBBING
(1.1 to 2 2. SOURCE 3. 2 to 1) |
| SW 4 a.b | RECORDING OUTPUT
(1. ON 2. OFF) |
| SW 5 a.b.c | MODE
(1. REV. 2. STEREO 3. MONO) |
| SW 6 a.b.c.d | LINEAR EQUALIZER
(1.2.3.4. UPTILT 5. FLAT 6.7.8.9. DOWNTILT) |
| SW 7 a.b.c.d.e.f | FILTER
(1. 1.7Hz 2. OFF 3. 4 Hz) |
| SW 8 a.b | ATTENUATE
(1. PRESET 2. OFF 3. SIGNAL OFF) |

VOLUMES

- VR11. VR12. VR21. VR22
- VR3 a.b
- VR4 a.b
- VR5 a.b
- VR6 a.b
- VR7 a.b

OTHERS

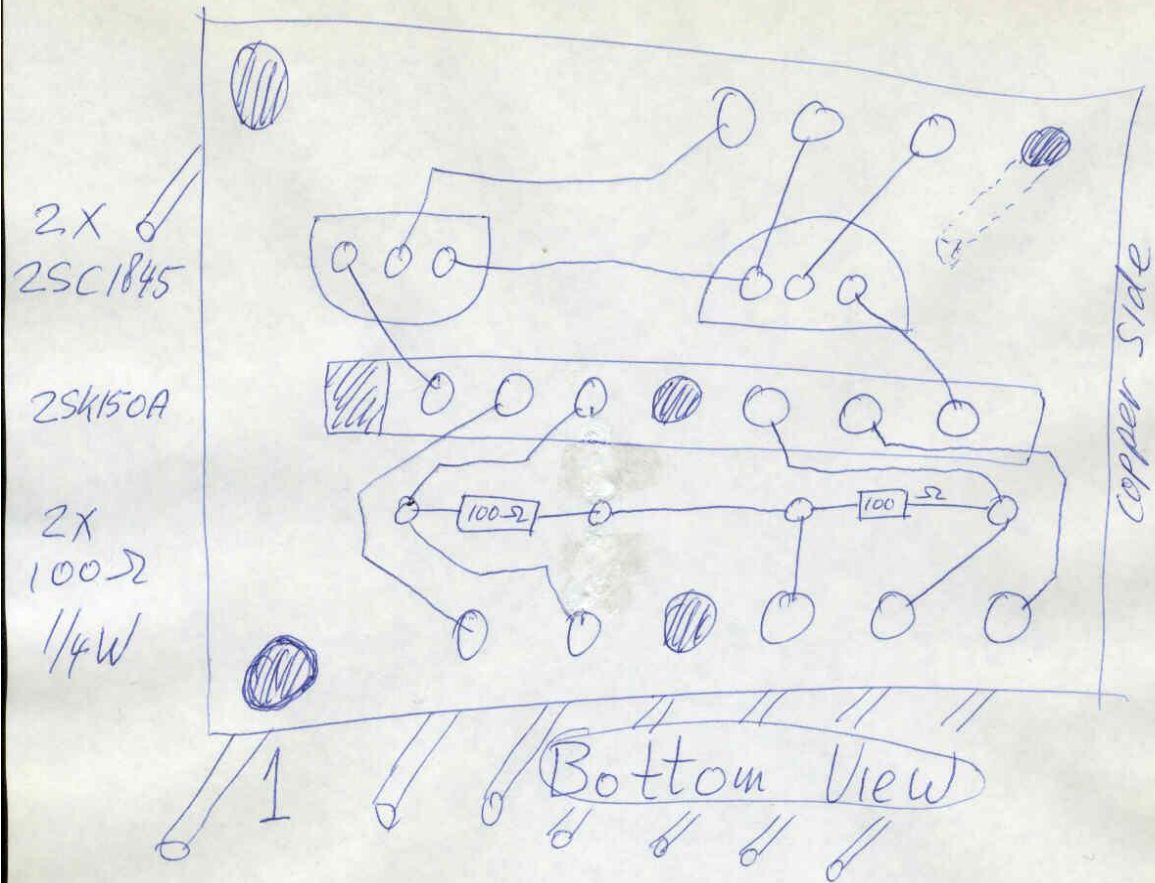
- IC 1. IC 2
- Q101. Q102. Q111. Q112
- Q131. Q145. Q146
- Q103. Q132. Q142. Q143
- Q104
- Q105
- Q113. Q114
- Q121. Q122

Modifications:

The DML ic's employed in both units are often the cause of problems and need to be replaced by discrete parts. Of the DML-01 there seem to be 3 different versions. Of the DML-02 is only one version known.

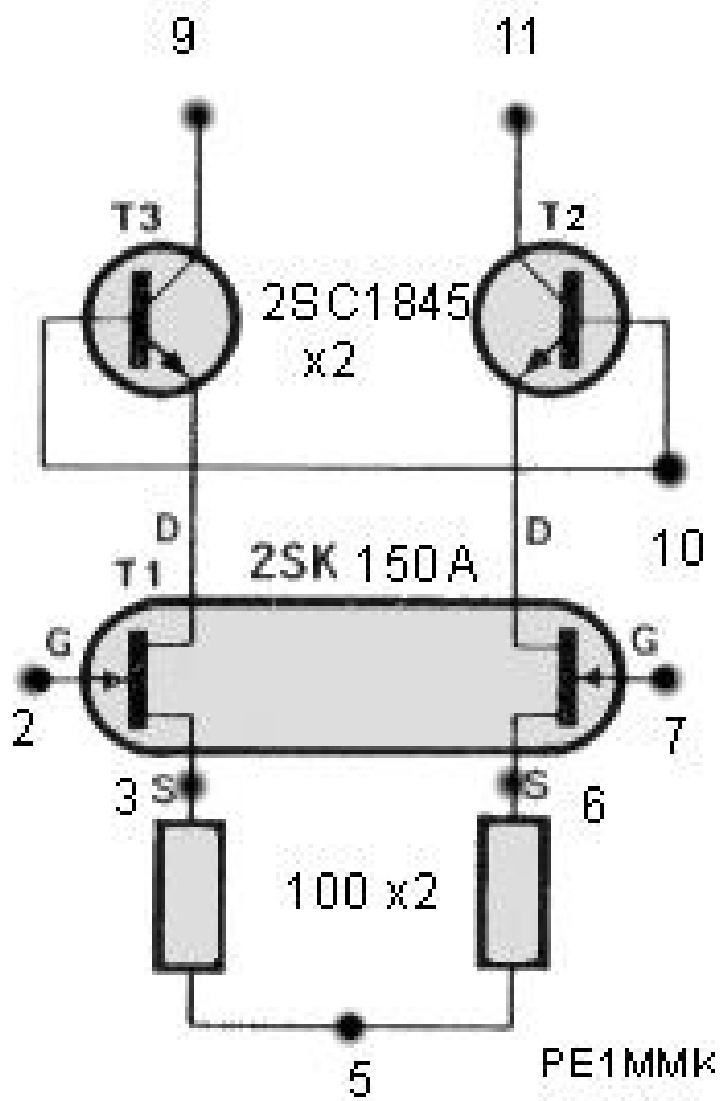
The layout of the DML-01 **version 2** is below:

DML-01



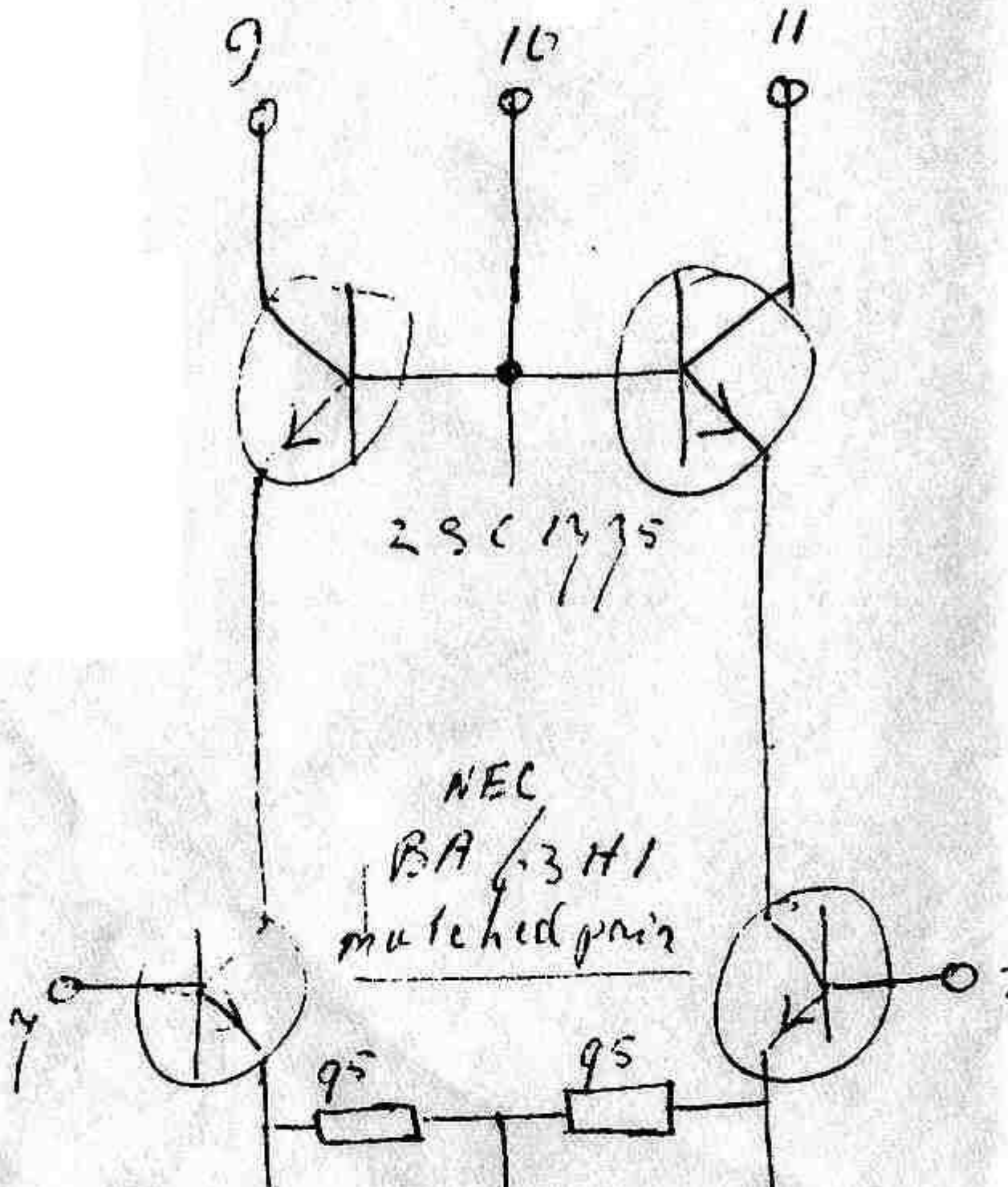
LUX MAN.
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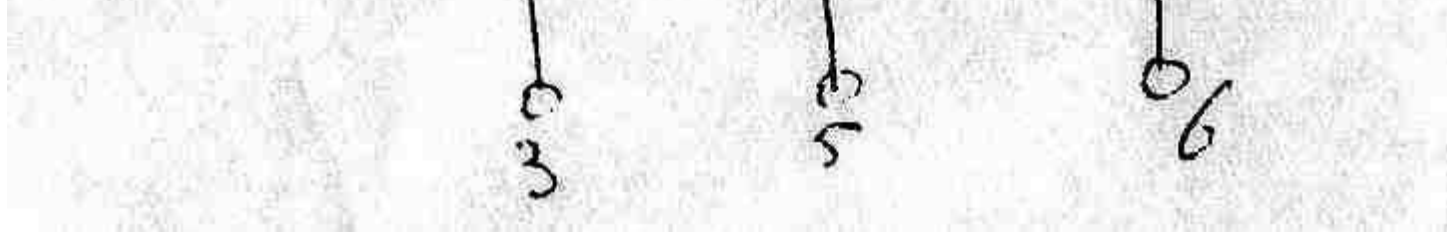
The schematic diagram of the DML-01 version 2:



The schematic diagram of the DML-01 version 1 is below:

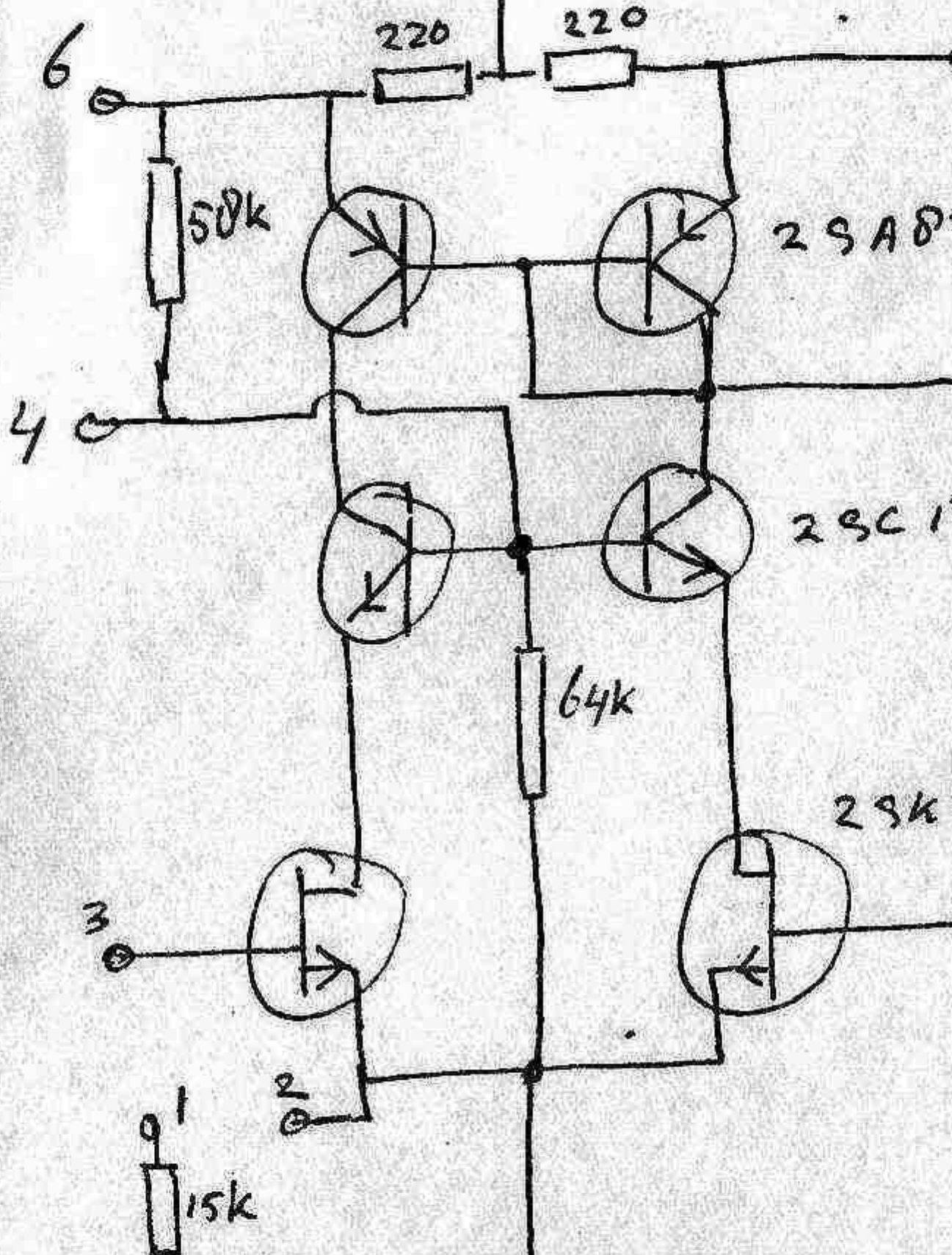
DML 01

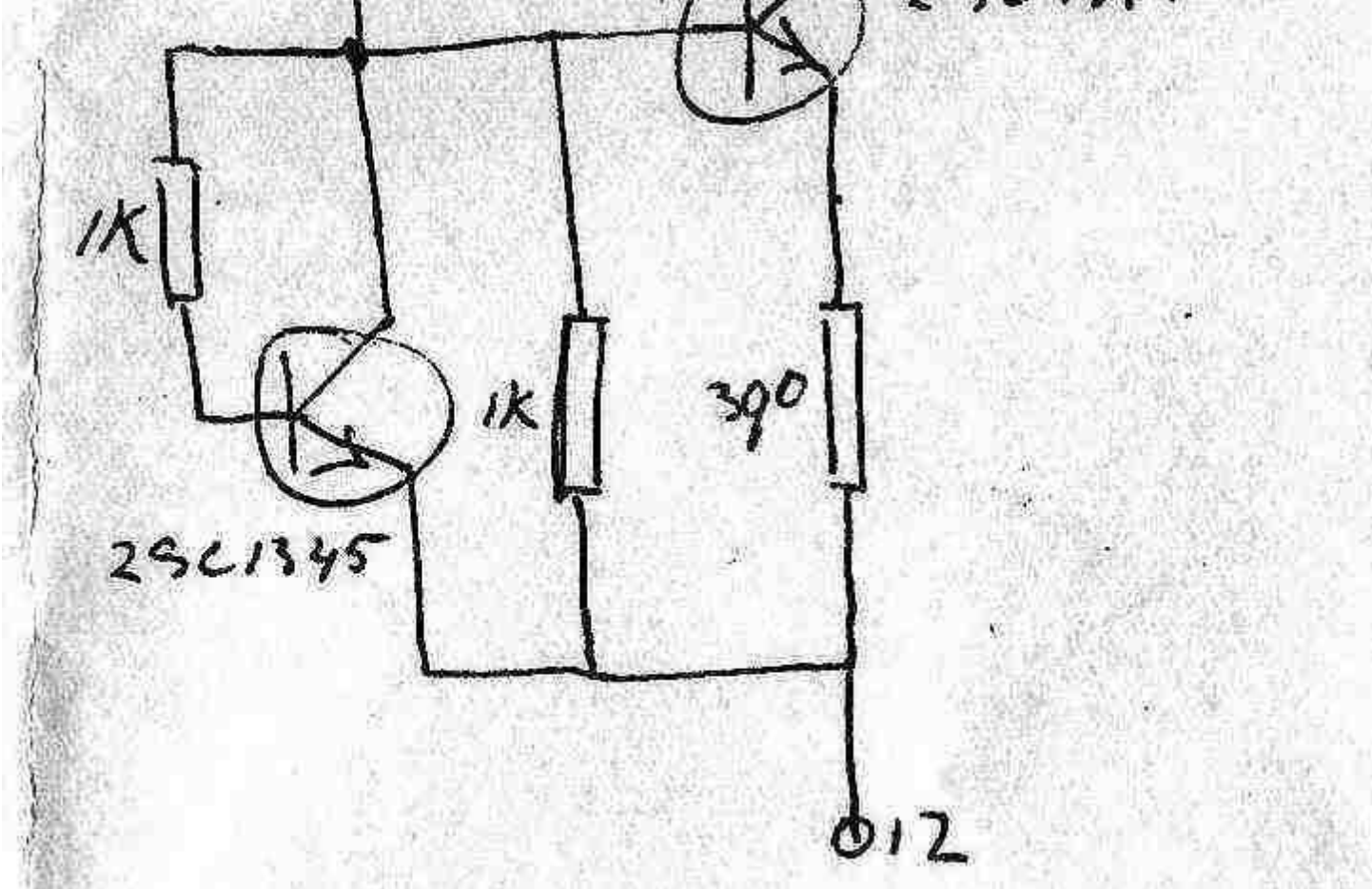




Below the schematic diagram of the DML-02:

07 DML 02





Sound:

These series of "High Quality" audio components soon got legendary of their outstanding quality and excellent sound quality.

LUXMAN