



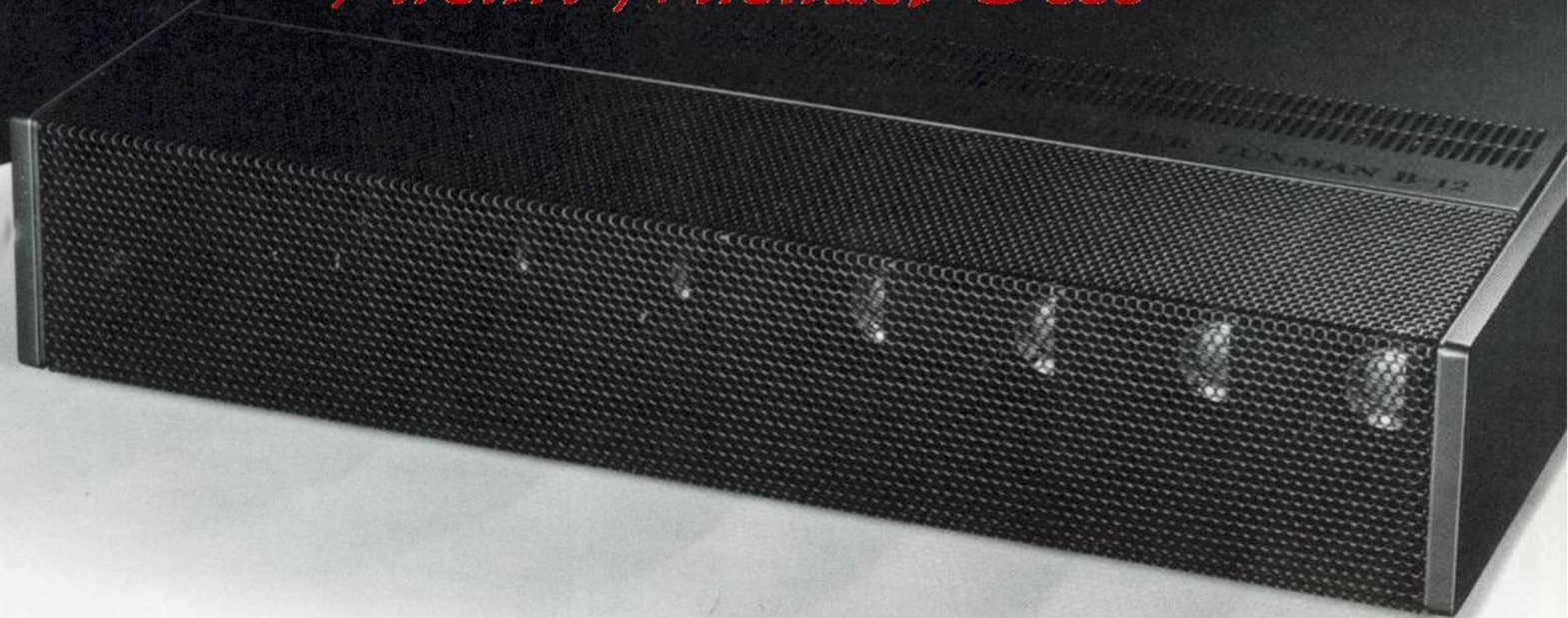
Laboratory Standard Series

DC MONAURAL POWER AMPLIFIER

An extremely compact monaural power amp of
unique appearance design for those
who pursuit perfect performance!

B-12

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Archiv Michael-Otto*



ULTIMATE HIGH FIDELITY STEREO COMPONENTS

LUXMAN

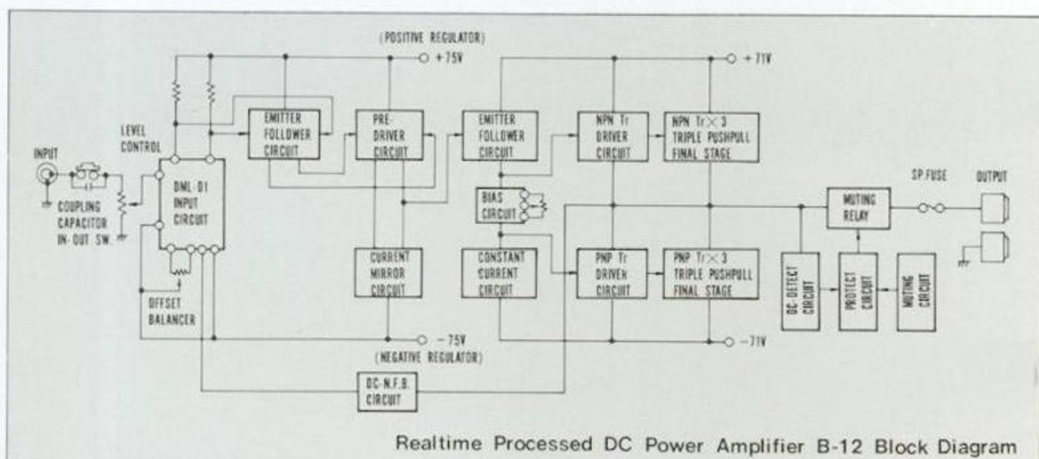
A lot of merits are obtained by making a monaural power amplifier. For instance, addition of a monaural power amplifier for use in driving a bass range unit easily realizes a 3D-system. Also positioning is flexible, therefore placing the amplifier near the speaker system is feasible. But above all, in pursuit of perfect performance, one has to inevitably divide function into many ways. In this respect, monaural power amplifier is the most suitable. But we dare say it is not sufficient merely to make a power amplifier monaural. It is necessary to scrutinize every possible aspect such as sonic quality, appearance design, chassis construction, and functions etc. to realize the ideal power amplifier.

The B-12 is an extremely compact monaural power amplifier of unique appearance design. The rated output is 150W minimum continuous into 8-ohm loads, from 20Hz to 20,000Hz with no more than 0.006% total harmonic distortion. In the output stage, power transistors are arranged in triple push-pull to use the most linear portion of each transistor effectively, and produces large output quite smoothly. Of course the Transient Intermodulation distortion is completely eliminated thanks to LUX's original "Realtime Processed" DC-amp. Almost perfect counter-measures are taken to reduce the Notch distortion which cannot be removed even if the amplifier is a DC-amp. Specially selected high speed transistors are arranged at the driver stage and the power output stage. Further class "AB" operation is adopted at the output stage. This has been made possible thanks to a large and effective heat-sink (which represents an important portion of the appearance design) and a huge toroidal power transformer.

It is difficult to design DC-amp circuitry for a large output power amplifier, since the DC-drift caused by the change of ambient conditions such as temperature becomes more severe as the power increases. To suppress this DC-drift, LUX's original DML-IC which includes the first stage differential amplifying circuit, the cascode circuit to assist it, and the constant current circuit is used. Further, the transistors arranged at the second stage differential amplifying circuit and the constant current circuit are thermally coupled. Of course those components such as resistors or capacitors of good temperature characteristic are carefully selected. All

these contribute to suppress DC-drift completely. Thus, in the B-12, stability and large power output have been combined in an ideal power amplifier.

The power supply section of a power amplifier directly affects its characteristics. Therefore, two low-impedance, large-sized electrolytic capacitors (15,000 μ F) are coupled to the huge and highly efficient toroidal power transformer, which enables the amplifier to produce high power output of 150W quite smoothly. The power supply to the pre-driver stage is, of course, regulated.



Realtime Processed DC Power Amplifier B-12 Block Diagram

B-12 SPECIFICATIONS

Power Output:	150W minimum continuous into 8-ohm loads, at any frequency from 20Hz to 20,000Hz with no more than 0.006% total harmonic distortion
Rated T.H.D.:	no more than 0.006% (8 ohms, 150W, 60Hz: 7kHz = 4 : 1)
Frequency Response:	DC - 100,000 Hz (within -1dB)
Input Sensitivity:	900 mV
Input Impedance:	20 ohms
Signal-to-Noise Ratio:	better than 110dB (IHF-A weighted, input short-circuited)
Damping Factor:	120 (8 ohms, 1kHz)
Protection Circuit:	Speaker protection by sensing DC-drift, Overcurrent Protection Circuit
Additional Features:	Input Capacitor IN/OUT Selector Input Attenuator
Power Consumption:	320W (8 ohms, at full power)
Dimensions:	436(W) x 328(D) x 95(H)mm (17-3/16" x 12-15/16" x 3-3/4")
Weight:	Net 11.5kgs (25.3 lbs.) Gross 13.5kgs (29.7 lbs.)

Specifications and appearance design are subject to possible change without notice.

LUX CORPORATION, JAPAN.

Printed in Japan

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