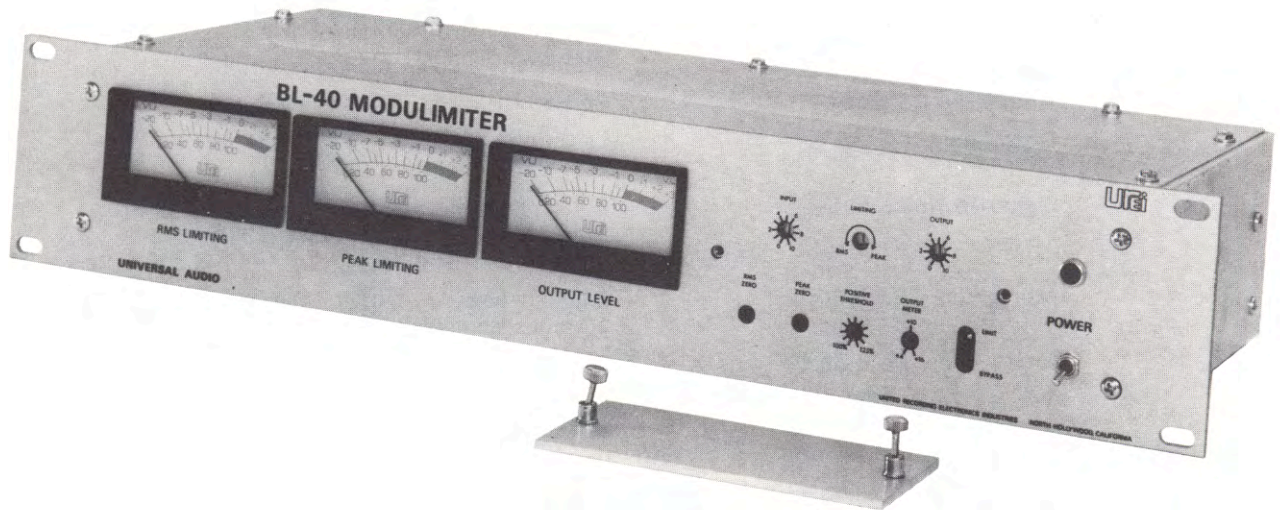


Universal Audio MODULIMITER

MODEL
BL-40



The Universal Audio BL40 MODULIMITER is specifically designed for AM Broadcasting, but will also find wide application in TV and CCTV audio signal processing, background music systems and commercial sound systems.

For the AM broadcaster, MODULIMITER eliminates unwanted overmodulation without clipping. Independent adjustments are provided for RMS and peak limiting, and variable positive overmodulation up to 125%. This permits tailoring of the modulation envelope to any program format or transmitter characteristics: constant full modulation or a more conservative approach.

A proprietary "Phase Optimizer" circuit automatically maintains most favorable signal polarity, reversing phase whenever negative peaks exceed positive peaks by a preset amount. Its action is instantaneous and silent — no relays are used.

No matter what YOUR format, hard rock to classical, MODULIMITER can be readily adjusted to maximize transmitter efficiency and extend coverage.

The BL-40 employs UREI's patented Electro-Optical Attenuator for unobtrusive, smooth, true RMS limiting. Its

characteristics cannot be duplicated by any other compressor or limiter.

An ultra-fast FET peak limiting section assures absolute protection from unwanted overmodulation, with no peak clipping. Attack time is essentially instantaneous. Unique proprietary circuitry results in low distortion combined with fast recovery.

MODULIMITER features low noise, low distortion integrated circuitry, and occupies only 3½" of rack space. Three separate meters indicate RMS LIMITING, PEAK LIMITING and OUTPUT LEVEL simultaneously. The output meter can be adjusted to match the input level of any transmitter.

All critical adjustments are located behind a removable security panel.

BL-40 MODULIMITER is the result of extensive engineering research and comprehensive field testing for more than one year by the company which has produced and sold more limiters than any other.

UREI

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TECHNICAL SPECIFICATIONS

Input Impedance	: 600 ohms bridged-T input control. Floating, transformer isolated.
Output Load Impedance	: Designed to work into 600 ohm load. Output transformer isolated.
Monitor Output Impedance	: 600 ohms, unbalanced.
Input Level	: -30 dBm to +25 dBm for 5 dB limiting.
Maximum Output Level	: +27 dBm.
Monitor Output Level	: 10 dBm below OUTPUT level.
Gain	: 70 dB with all controls at maximum.
Frequency Response	: 30 Hz - 15 kHz, +0 dB, -0.8 dB.
Distortion	: Less than 0.5% THD 30 Hz to 15 kHz, at +24 dBm output.
Signal-To-Noise Ratio	: Better than 70 dB at threshold of RMS limiting. Equivalent input noise less than -110 dBm.
Attack Time, RMS Section	: Signal dependent; 1 millisecond to 50 milliseconds for 63% correction.
Attack Time, Peak Section	: 5 micro-seconds for 10 dBm limiting.
Release Time, RMS Section	: Signal dependent; 50 milliseconds to 2 seconds for 63% return, depending on duration of compression.
Release Time, Peak Section	: 100 milliseconds.
Phase Optimizer	: Senses positive-negative imbalance and automatically changes signal polarity to guarantee maximum positive modulation.
Phase Indicator	: Front panel GREEN-RED LED indicates state of phase optimizer.
Metering	: 3 separate meters for: RMS limiting Peak limiting Output level
External Connections	: Barrier strip on rear.
Controls	: Input Level, Output Level, Output Meter Calibration, Peak Limiting, Asymmetrical Peak Limiting, Limit Bypass Switch, and Power Switch.
Power Requirements	: 100-120 VAC 50/60 Hz 10 W or 220-240 VAC 50/60 Hz 10 W.
Temperature	: Maximum ambient temperature +60°C (140°F).
RF Suppression	: Capable of operating in strong rf fields. (Field tested 150' from 50 kW array.)
Finish	: Clear anodized brushed aluminum front panel. Cadmium plated steel chassis.
Dimensions	: 19" x 3½" rack panel. Depth behind panel 8." (483 x 89 x 203 mm).
Weight	: 11 pounds, 5.0 kg.
Shipping Weight	: 16 pounds, 7.25 kg.