### Universal Audio

# **COMPRESSOR/LIMITER**

Covered by U.S. Patent No. 3,258,707

MODEL LA-4



The LA-4 Compressor/Limiter is another great performer in the continually expanding product line from UREI — the company which has built and sold more limiters and compressors throughout the world than any other manufacturer. Making use of patented Electro-Optical Attenuator technology owned by UREI, the LA-4 offers smooth, predictable performance coupled with ease of operation. Its' electroluminescent light source is a light-emitting semiconductor, which will not change or deteriorate with age.

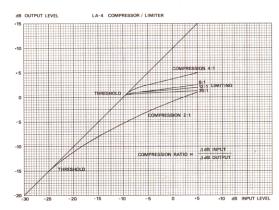
Compression is adjustable by an easily re-settable multiposition switch to allow ratios from a soft, smooth 2:1 compression through super tight-sounding 20:1 limiting. The gain reduction circuitry is RMS responding (like our ears) so there are no surprises in it's operation, as can happen with pure peak limiters.

The differential input and transformer isolated output assure trouble-free patching with freedom from grounding problems. The natural sounding gain control action of the LA-4 makes it an ideal tool for the professional recording studio, offering superior performance in all phases of recording and re-recording. The recent development of dedicated integrated circuits allow an even better signal-to-noise ratio than was possible in earlier designs.

Because its gain reduction circuitry is RMS responding, the LA-4 is not recommended for overmodulation protection of broadcast transmitters, disc or optical recorders, unless followed by a peak limiter, such as the UREI 1176 LN.

### **FEATURES**

- Long-life LED Optical Attenuator.
- Smooth, natural-sounding RMS action.
- Selectable compression ratios.
- Input overload indicator.
- Simple stereo coupling.
- True standard volume indicator (VU).
- Space-saving half rack size.
- UREI Quality, of course.



Typical input versus output level curves of LA-4 at various compression ratios.



## TECHNICAL SPECIFICATIONS

#### **ELECTRICAL**

**INPUT IMPEDANCE** 

: 40 kohm, used as a balanced differential input.

20 kohm, used as an unbalanced single-ended input.

**OUTPUT LOAD** 

: 150 ohms to infinity.

**EQUIVALENT INPUT NOISE** 

-90 dBm (15.7 kHz bandwidth).

GAIN

: 40 dB maximum.

FREQUENCY RESPONSE

: 20-20,000 Hz, ±0.5 dB

DISTORTION

: Less than 0.25% 30 Hz to 15 kHz.

ATTACK TIME

: 1 to 10 milliseconds for 63% correction depending

on signal waveform.

**RELEASE TIME** 

100 milliseconds to 1 second for 63% return depending

on duration of limiting.

**COMPRESSION RATIO** 

: 2:1, 4:1, 8:1, 12:1, 20:1

switch selectable from front panel.

THRESHOLD OF LIMITING

-30 dBm to +20 dBm.

**POWER OUTPUT** 

: +24 dBm into 600 ohm load

+20 dBm into 150 ohm load.

**EXTERNAL CONNECTIONS** 

Barrier strip on rear.

STEREO INTERCONNECT

Simple strapping between two units. Switch

defeatable from front panel.

**METERING** 

Standard VU (0 Ref. = + 4 or + 8 dBm),

Gain Reduction, LED indicator for input overload.

MAINS REQUIREMENT

: 100 - 125 VAC or 200 - 250 VAC 50/60Hz,

switch selectable, less than 10 W.

**ENVIRONMENT** 

: Operation + 10°C to + 50°C.

#### PHYSICAL:

**DIMENSIONS** 

: 3½" high x 8½ wide x 8" deep.

(89 x 216 x 203 mm).

**FINISH** 

Panel is 1/8" brushed black anodized aluminum.

Chassis is cadmium plated steel.

WEIGHT

:  $6\frac{1}{2}$  pounds, 2.95 kg.

**SHIPPING WEIGHT** 

8 pounds, 3.63 kg.

**ACCESSORIES** 

SR-3A Single Rack Mount Kit.

DR-3A Double Rack Mount Kit.