

Teletronix Leveling Amplifier



MODEL
LA-3A



REAR VIEW

GENERAL

The LA-3A Solid State Leveling Amplifier is the solid state successor to the well known Teletronix LA-2A. The unique characteristics of the T4A electro-optical attenuator have been maintained. It is these characteristics that have been greatly responsible for the acceptance and world wide popularity of LA-2A's. Improvements in overload characteristics and signal to noise ratio add to the performance and utility of the LA-3A. The new $\frac{1}{2}$ rack size allows installation of two LA-3A Leveling Amplifiers in only $3\frac{1}{2}$ inches of rack space. Contemporary styling complements existing studio equipment.

SYSTEM CONFIGURATION

The LA-3A consists of a low noise, 30 or 50 dB gain solid state amplifier capable of +24 dBm output level in normal application. The T4B electro-optical attenuator is used as a dynamically controlled attenuator ahead of the input stage of the amplifier. The gain reduction control and the gain control are independent, and provide for simple and convenient setting of the limiting or compressing action, and the system gain.

Limiting frequency response is adjustable to allow as much as 10 dB increase in gain reduction at 15kHz compared to frequencies below 1 kHz. This is advantageous in FM and TV transmission where pre-emphasis is used.

A switch is provided to change the characteristics from those of a compressor (linear gain reduction) to those of a limiter (a compression ratio approaching 50:1 where the dynamic content of the program material necessitates a large amount of limiting).

The electro-optical attenuators of two LA-3A units may be connected in tandem for stereo operation.



UNITED RECORDING ELECTRONICS INDUSTRIES

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MODEL
LA-3A

TECHNICAL SPECIFICATIONS

ELECTRICAL

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|-------------------------------|---|
| INPUT IMPEDANCE: | 600 ohms, (floating) |
| MAXIMUM INPUT LEVEL: | +20 dBm (30 dB Gain Pos.) 0 dBm (50 dB Gain Pos.) |
| OUTPUT LOAD IMPEDANCE: | 600 ohms, (floating). Damping factor 8. |
| MAXIMUM OUTPUT LEVEL: | +24 dBm (+27 dBm on peaks) |
| GAIN: | 50 dB or 30 dB (± 1 dB) Switching at rear panel |
| FREQUENCY RESPONSE: | ± 1 dB 20 Hz to 20 kHz. |
| SIGNAL-TO-NOISE RATIO: | Greater than 80 dB at threshold of limiting (30 Hz to 15 kHz Bandwidth) |
| THRESHOLD OF LIMITING: | -10 dBm at 30 dB position, -30 dBm at 50 dB position. |
| DISTORTION: | Less than 0.5% T.H.D. from 30 Hz to 20 kHz. |

Note: The low frequency Total Harmonic Distortion in a limiter is a function of release time. Under worst case conditions (a predominant low frequency energy envelope causing 15 dB of gain reduction) the 50 Hz THD will not exceed 0.7%. Typical THD over the program spectrum bandwidth, with 20 dB of gain reduction is less than 0.3%

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| ATTACK TIME: | Less than 250 microseconds to 0.5 milliseconds depending on program material. |
| RELEASE TIME: | Varies from 500 milliseconds to 5.0 seconds depending on the duration of the peak causing the onset of limiting. |
| EXTERNAL CONNECTIONS: | Jones Barrier terminals at rear. |
| STEREO INTERCONNECTION: | Terminals at rear of chassis. |
| POWER REQUIREMENTS: | 110-125 VAC 50/60 Hz, 6 watts. Switch provided for 220-250 VAC, 50/60 Hz. |
| ENVIRONMENTAL: | Max. ambient operating temperature 160°F. |

PHYSICAL

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| DIMENSIONS: | 3½" vertical 8½" horizontal. Depth behind panel 9¼". (Rack mounting accessories available) |
| WEIGHT: | 6½ pounds. |
| SHIPPING WEIGHT: | 8 pounds. |



SINGLE RACK MOUNTING — WITH ACCESSORY KIT SR-3A



DUAL RACK MOUNTING — WITH ACCESSORY KIT DR-3A