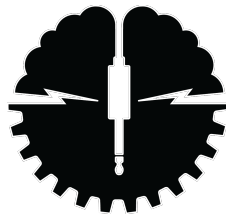


INSTRUCTION MANUAL
LEVELING AMPLIFIER
MODEL DLA-2A



DOC LLOYD AUDIO
CHICAGO, IL

WARNING

This product generates high voltage to power vacuum tube electronics.

Remove power before replacing tubes and whenever product is not in use.

INTRODUCTION

The DLA-2A Leveling Amplifier is a meticulous recreation of an iconic studio compressor. This includes the input transformer, output transformer, high voltage tube audio path, and the T4B optical attenuator module. Two sidechain tubes are replaced with high voltage solid-state circuitry to significantly reduce size without impacting the audio path.

Typical studio compressors require line level signals from low impedance sources. The DLA-2A has the standard transformer balanced line input as well as a high impedance input with a balanced gain stage, providing direct compatibility with guitar and bass.

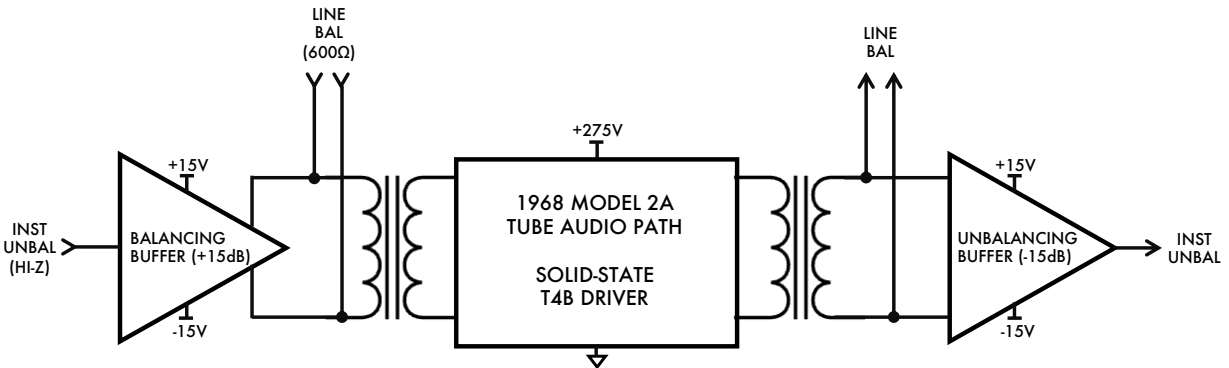
The compressed output signal is passed to a transformer balanced line output that can be connected to a mixing console or headphones as well as an instrument level unbalanced output that can be connected to a pedalboard or amplifier.

DC power is applied to the tube heater filaments and does not generate 60 Hz hum, resulting in lower noise than the classic reference design.

COMPONENTS

- Lundahl 1922 Input Transformer
- Lundahl 5402 Output Transformer
- Kenetek T4B Classic Optical Attenuator Module
- Tung-Sol 12AX7 Vacuum Tube
- JJ 12BH7-A Vacuum Tube
- Calibrated VU Meter with Backlight
- Vishay Beyschlag Thin Film Professional Resistors
- Non-piezoelectric Class 1 Ceramic and Film Capacitors
- Daka-Ware Bakelite Knobs

CIRCUIT BLOCK DIAGRAM



CONNECTIONS

- DC Power:** Connect 12 VDC, 1.5A, center positive power supply. Remove power when not in use to prolong tube life. Tubes remain powered in bypass mode.
- Input:** Connect source audio equipment to either instrument input or line input. Line input will override instrument input if both are connected.
- Output:** Connect line output to line-level equipment and instrument output to instrument-level equipment. Both outputs can be used simultaneously.

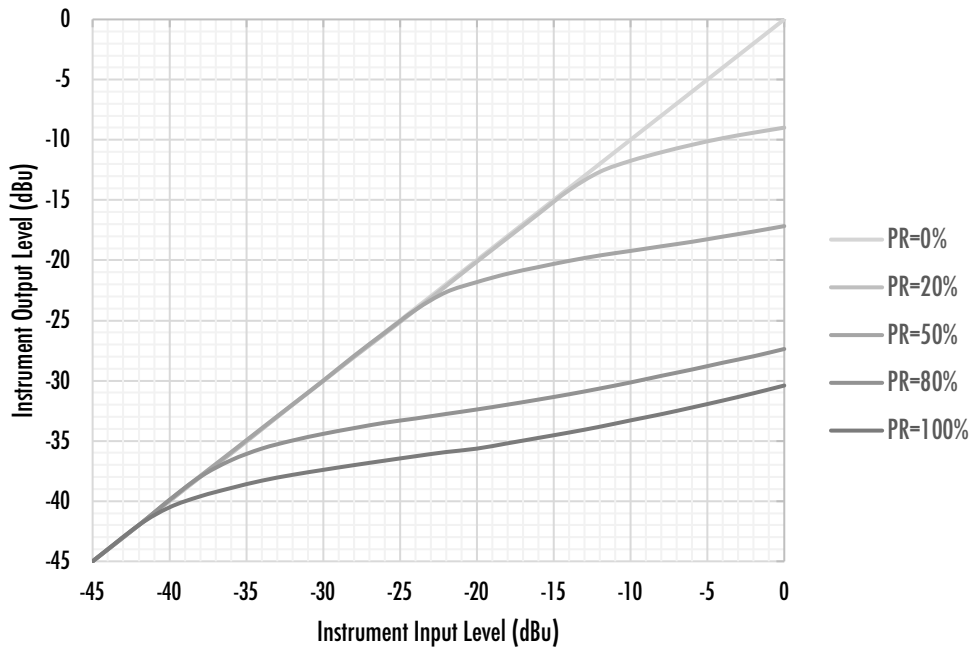
CONTROLS

- Peak Reduction:** Controls attenuator in sidechain amplifier. Set for desired compression.
- Gain:** Controls attenuator in audio amplifier. Set for desired output level. The output noise level is fixed, so higher gain settings improve signal-to-noise ratio.
- VU Meter:** Displays compression level in dB. Backlight indicates effect is engaged.
- Bypass:** Passes audio directly from line input to line output. Instrument input and output buffers remain active.
- Emphasis:** Set fully clockwise for flat sidechain response (default). Rotate counterclockwise to increase high frequency sensitivity.
- Mode:** Down position is low ratio compress mode. Up position is high ratio limit mode.

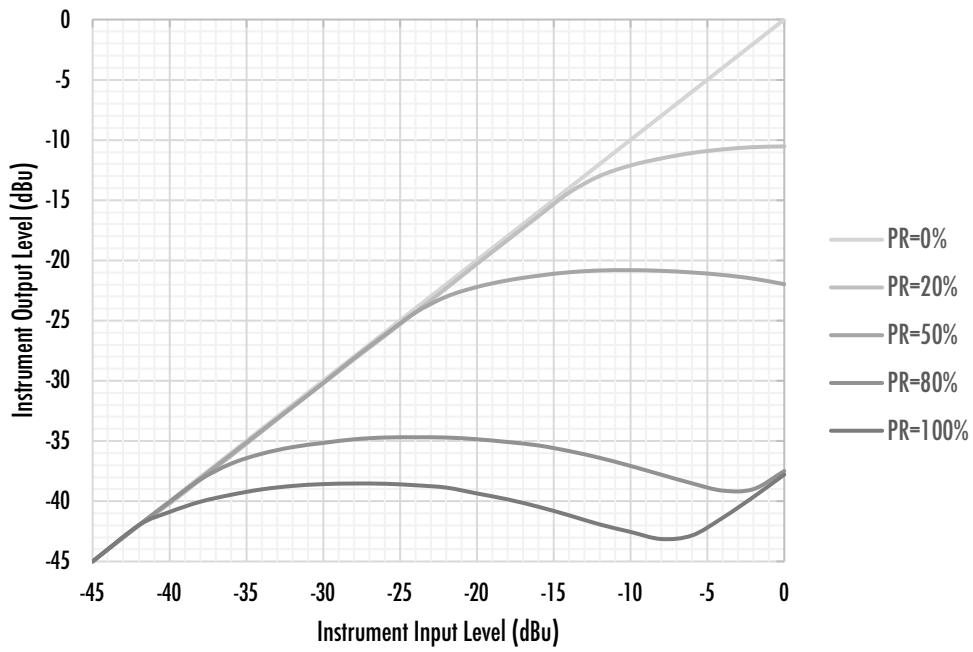
NOMINAL SPECIFICATIONS

Inst Input Impedance:	2 Megaohms Unbalanced
Inst Output Impedance:	50 Ohms Unbalanced
Line Input Impedance:	600 Ohms Balanced TRS
Line Output Impedance:	10 Ohms Balanced TRS
Input Power:	+12 VDC at 1.5A, Center Positive
Internal High Voltage:	+275 VDC
Internal Low Voltage:	+15 VDC, -15 VDC
Gain/Peak Reduction:	Up to 40 dB
Inst Input Level:	0 dBu maximum
Line Input Level:	16 dBu maximum
Compression Ratio:	4:1, Soft Knee
Attack Time:	0.2 milliseconds for 50% of full compression
Release Time:	60 milliseconds for 50% release, 0.5 to 5 seconds for complete release depending upon the amount of previous reduction
Frequency Response:	30 Hz to 15 kHz, +/- 1dB
Noise:	70 dB below 10 dBu output level
Tube Complement:	12AX7, 12BH7
Dimensions:	7.4" L x 5.1" W x 3.9" H
Weight:	2.6 lbs.
Accessories	<ul style="list-style-type: none">- Power Adapter, 100-240VAC Input, 12VDC Output, US Plug- Inline Switch Adapter, DC Power Jack- TRS to XLR Adapter, Male to Male- TRS to XLR Adapter, Male to Female

COMPRESS MODE - 1 kHz



LIMIT MODE - 1 kHz



GROUNDING

There are three common grounding scenarios for an audio signal chain:

- 1) Single Point Ground
- 2) Multi Point Ground
- 3) Floating (no earth ground connection)

Single Point refers to an earth ground connection provided by a single piece of equipment. This is generally the optimal grounding scheme to minimize hum/buzz noise.

Multi Point refers to an earth ground connection provided by two or more pieces of equipment. This creates ground loops allowing noise currents to flow in cable shields and other undesirable locations.

Floating refers to a signal chain without an earth ground connection. This configuration can be susceptible to common-mode noise from power supplies or other sources.

The diagram below shows recommended Single Point grounding schemes as well as configurations to avoid:

