

# LD-2 *Line Driver*

## FEATURES



Integrates different self-powered speakers



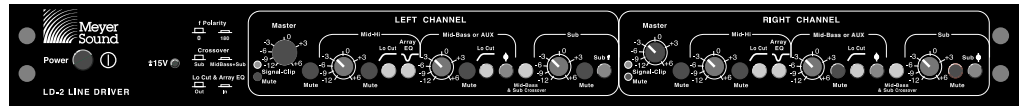
Maintains signal integrity over long cable paths



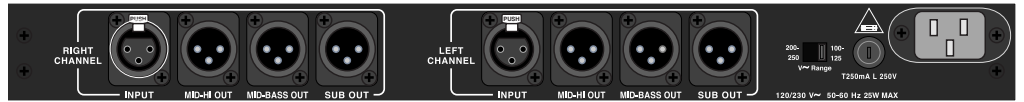
Separate Mid-Hi, Mid-Bass/AUX and Subwoofer output controls



Optimized filters to accommodate specific array configurations



LD-2 Front Panel



LD-2 Rear Panel

The LD-2 is a compact, one rack space device designed specifically for integrating different types of Meyer Sound self-powered loudspeakers into an optimized full-range system. As a line driver, the LD-2 can connect to cable runs of up to 1000 feet without introducing instability or distortion. In addition, the LD-2 incorporates a number of switching and filter options to facilitate quick set-up and accommodate a variety of different system configurations.

Each channel of the LD-2 includes three output/control sections, designated Mid-Hi, Mid-Bass/AUX and Sub. Each section provides a gain control (-12 to +6dB) and Mute switch with LED. In addition, the Mid-Hi section has an Array EQ filter to minimize the low-mid rise caused by horizontal arrays of three to five MSL-4 speakers; and Low Cut filter which performs a crossover function by either sending a full range signal to the Mid-Hi output or rolling off at 160Hz (12dB/octave). The Mid-Bass/AUX section also includes a low cut filter (160Hz, 12dB/octave). A separate Mid-Bass and Sub Crossover switch enables the LD-2 to accommodate either Mid-Bass or Subwoofers or both Mid-Bass and Subs, in the same system. With the switch engaged, the signal divides at

80Hz between the Mid-Bass and Sub outputs. With the switch out, a full range signal is sent to both sections. Polarity switches in both the Mid-Bass and Sub sections allow quick correction of any polarity reversal or alignment optimization problems. If only full range and subwoofers are used in the main system, the Mid-Bass/AUX section is available for auxiliary systems such as front-fill, down-fill or delays.

A Master section includes a gain control, a master Mute switch with LED, and a signal presence/clip LED. The compact, single rack space cabinet is made of 16-gauge steel to provide magnetic isolation from nearby devices, EMI immunity and protection from accidental impact damage.

### Applications

The LD-2 provides an alternative to the larger LD-1A line driver in applications where coverage is supplied primarily by the main Left and Right systems, with or without subwoofers, and few (if any) fill or auxiliary subsystems are used. Typical systems using the LD-2 could include concert halls and performing arts centers, nightclubs, houses of worship, corporate presentations, and touring systems for small to mid-sized venues.

### Architects and Engineers Specifications

The line driver shall be a two channel device with one input and three outputs for each channel (Left and Right). Each channel shall provide dedicated control sections and outputs for Mid-Hi powered loudspeakers, Mid-Bass powered loudspeakers or an auxiliary system, and powered Subwoofers. The Mid-Hi control section shall provide gain control over a -12 to +6dB range, a Mute switch, a Low cut filter (160Hz) and an Array EQ filter (-6dB at 220Hz, 0.6 octave bandwidth). The Mid-Bass or Aux section shall provide gain control over a -12 to +6dB range, a Mute switch, Low cut filter (160Hz), and polarity switch. The Subwoofer section shall provide gain control over a -12 to +6dB range, Mute button, and polarity switch. A Mid-Bass & Sub Crossover Switch at 80Hz shall allow use of either Mid-Bass or Sub for LF reproduction, or both. Each channel shall include a master gain control over a -12 to +6dB range, a signal presence/clip LED indicator, master Mute button, and an LED mute indicator. All outputs shall be on XLR-M connectors, and each shall have an output impedance of 10 $\Omega$  and provide a maximum output voltage of  $\pm 22.5$ Vpk. Inputs shall be XLR-M connectors with a 10k impedance. An internal power supply shall be switchable for 120V or 230V nominal operation on 50 or 60Hz line current. The line driver shall be housed in a 16-gauge steel, 1U rack mount chassis. The line driver shall be a Meyer Sound LD-2.

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**Meyer Sound**

PRELIMINARY

# LD-2 SPECIFICATIONS

## ARCHITECTURE<sup>1</sup>

Master Left and Right Gain Controls	-12 to +6 dB
Mid-Hi, Mid-Bass/Aux, Sub Gain Controls	-12 to +6 dB
Low-cut Filter for Mid-High & Mid-Bass/Aux Output	160 Hz high-pass, -12 dB/octave, Q = 0.8
Array EQ Filter for Mid-Hi Output	6 dB cut at 220 Hz, 0.6 octave bandwidth
Mute	Mute switches for Master, Mid-Hi, Mid-Bass/Aux, and Sub outputs
Polarity	Toggles for Sub and Mid-Bass/Aux outputs

## AUDIO INPUTS

Connector	1 female XLR per channel
Type	Differential balanced input circuit
Impedance	10 k $\Omega$ differential (between pins 2 and 3)
Wiring	Pin 1: chassis/earth ground; Pin 2: signal; Pin 3: signal
RF Filter	Common Mode: 425 kHz low-pass; Differential Mode: 142 kHz low-pass
Common Mode Rejection Ratio	> 80 dB (typically 90 dB); measured in the range 50 Hz – 1 kHz
Signal Presence/clip LED	(Variable intensity; monitored at the input for each channel)
LED Threshold	-26 dBV (50 mVrms) pink noise or sinewave
LED Full Intensity	-10 dBV (300 mVrms) pink noise or sinewave

## AUDIO OUTPUTS

Type	Balanced, cross-coupled simulated transformer topology
Impedance	10 $\Omega$ balanced (between pins 2 and 3)
RF Filter	Pins 2 and 3 shunted to chassis via 500 pF capacitance

## CONNECTORS

Main	1 female XLR/channel
Wiring	Pin 1: chassis/earth ground; Pin 2: signal; Pin 3: signal

## DRIVE CAPABILITY

Maximum Voltage	1600 $\Omega$ Load: $\pm 22.5$ Vpk (+24 dBV, +26.2 dBu sinewave) No Load: $\pm 25.0$ Vpk (+25 dBV, +27.2 dBu sinewave)
Maximum Current	$\pm 70$ mApk (10 Vrms into 200 $\Omega$ )
Cables and Load	Drives > 100,000 pF (> 1000 ft cable) without instability or distortion

## AC POWER

Connector	IEC 320 (line, neutral/line, earth)
Operating Voltage	90 – 125 VAC / 180 – 250 VAC (selectable with rear panel switch); 50/60 Hz
Maximum Power	25 Watts; Fuse: 5 x 20 mm, T 250 mA, 250 V, time-lag

## AUDIO PERFORMANCE

Frequency Response	< $\pm 0.2$ dB 20 Hz – 20 kHz
Bandwidth	DC to 60 kHz (-3dB)
Phase Response	< $\pm 3^\circ$ from pure 3 $\mu$ sec delay (DC – 20 kHz)
Dynamic Range <sup>2</sup>	> 120 dB
Noise Floor <sup>3</sup>	> -95 dBV A-weighted; > -90 dBV un-weighted
THD + N <sup>4</sup>	< 0.005% (typically 0.002%)
Gain Accuracy	< $\pm 0.15$ dB at +6 dB gain; < $\pm 0.25$ dB at 0 dB gain
Mute Attenuation	> 80 dB

## GAIN RANGE

Each Channel	-12 to +6 dB
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## PHYSICAL

Dimensions	Height: 1.75" (1 rack space); Width: 16.75"; Depth: 6.96"
Weight	13.5 lb (6.1 kg); shipping: 15 lb (6.8 kg)
Enclosure/Finish	Black 16-gauge steel chassis; 1/8" aluminum rack ears

## NOTES

- 0 dBV = 1Vrms; 0 dBu = 0.775 Vrms; 0dBm = 1 mWrms
- Ratio of maximum sinewave to A-weighted noise floor
  - Level set to unity gain (0 dB)
  - 0 dBV, 1 kHz sinewave input. Gain at +12 dB main channel

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Research remains an integral, driving force behind all production. Meyer strives for sound quality that is predictable and neutral over an extended lifetime and across an extended range.

Meyer Sound reserves the right to alter any specification without notice.

Please visit our web site at [www.meyersound.com](http://www.meyersound.com) for up-to-date information.

LD-2 – 04.088.004.01

# PRELIMINARY

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