





LD-1A *Line Driver*

FEATURES

 Integrates different self-powered speakers

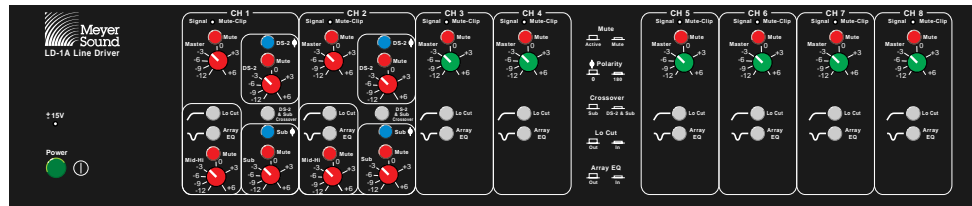
 Gain, mute, and optimized EQ for 2 auxiliary systems

 Maintains signal integrity for long cable paths

 Separate mid-hi, DS-2 (Mid-Bass), and sub output controls

 Male XLR loop connector to route the input signal to an aux. channel or another device

*Superior
engineering
for the art
and science
of sound.*



LD-1A Front Panel



LD-1A Rear Panel

The Meyer LD-1A Line Driver combines functions previously accessed on the control electronics units (CEU) for externally amplified Meyer loudspeakers with new features, and locates them in a self-contained device accessible to the sound engineer during both setup and performance. The LD-1A:

- integrates different types of Meyer self-powered speakers into a full-range system;
- provides gain, mute, and optimized EQ controls for six auxiliary systems;
- maintains signal integrity for long cable paths. Channels 1 and 2, equipped to control the main system, each have:
 - a gain control, mute switch, and crossover function;
 - separate Mid-Hi, DS-2 (mid-bass), and Sub output controls;
 - a male XLR Loop connector to route the input signal to an auxiliary channel or another device.

The Mid-Hi section has two switch-activated optimized filters. The Array EQ filter minimizes the low-mid frequency rise caused by horizontal arrays of three to five MSL-4 speakers. The Lo Cut filter performs a crossover function for the Mid-Hi output. With the Lo Cut filter out, a full-range signal is sent to the Mid-Hi output.

The DS-2 & Sub Crossover function is intended for the DS-2P mid-bass speaker when used with the 650-P or PSW-2 subwoofers. With the DS-2 & Sub Crossover switch in, the Sub output receives frequencies below 80 Hz, and the DS-2 output receives frequencies above 80 Hz. When the DS-2P is used alone as a subwoofer, or is not included in the system, the switch should be out, which sends a full-range signal to both outputs. The Mid-Hi, DS-2, and Sub outputs each have a mute switch and a gain control that modifies their channel's Master gain level; the DS-2 and Sub outputs have a polarity toggle.

The mute switches affect the Mid-Hi, DS-2, or Sub output only. For example, the Mid-Hi output can be muted without affecting the Loop, Sub, or DS-2 outputs.

The six auxiliary channels (3–8) control down-fill, front-fill, and delay systems. Auxiliary channels can also be used to divide the main system into subsystems, allowing independent signal levels for speakers directed at different audience locations. Each auxiliary channel has Lo Cut and Array EQ filters, a mute switch, and gain control. The two main and six auxiliary channels are fully independent from each other.

The LD-1A occupies two rack spaces and is constructed with a 16-gauge steel chassis and 1/8" aluminum rack ears. This rugged design provides protection from accidental impact, magnetic isolation from nearby devices, and EMI immunity.

LD-1A SPECIFICATIONS

ARCHITECTURE¹

MAIN (CHANNELS 1, 2)¹ Master Gain	
Controls	–12 to +6 dB
Mid-Hi, DS-2, Sub Gain Controls ⁴	–12 to +6 dB
Low-cut Filter for Mid-Hi 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, DS-2, and Sub outputs
Polarity	Toggles for Sub and DS-2 outputs
AUXILIARY (CHANNELS 3–8)	
Gain Control	–12 to +6 dB
Low-cut Filter	160 Hz high-pass, –12 dB/octave, Q = 0.8
Array EQ Filter	6 dB cut at 220 Hz, 0.6 octave bandwidth
Mute	Mutes the channel output

AUDIO INPUTS

Connector	1 female XLR per channel
Type	Differential balanced input circuit
Impedance	10 k Ω 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 LED	(Variable intensity; monitored at the input for each channel)
Threshold	–26 dBV (50 mVrms) pink noise or sinewave
Full Intensity	–10 dBV (300 mVrms) pink noise or sinewave

AUDIO OUTPUTS

CONNECTORS	Type	Balanced, cross-coupled simulated transformer topology
	Impedance	50 Ω balanced (between pins 2 and 3)
	RF Filter	Pins 2 and 3 shunted to chassis via 500 pF capacitance
DRIVE CAPABILITY	Main	4 female XLR/channel (Mid-Hi, DS-2, Sub, Loop)
	Auxiliary	1 female XLR/channel
	Wiring	Pin 1: chassis/earth ground; Pin 2: signal; Pin 3: signal
	Maximum Voltage	1600 Ω Load: ± 22.5 Vpk (+24 dBV, +26.2 dBu sinewave) No Load: ± 25.0 Vpk (+25 dBV, +27.2 dBu sinewave)
	Maximum Current	± 70 mApk (10 Vrms into 200 Ω)
	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	< ± 0.2 dB 20 Hz – 20 kHz
Bandwidth	DC to 60 kHz (–3dB)
Phase Response	< $\pm 3^\circ$ from pure 3 μ sec delay (DC – 20 kHz)
Dynamic Range ²	> 120 dB
Noise Floor ³	> –95 dBV A-weighted; > –90 dBV un-weighted
THD + N ⁴	< 0.005% (typically 0.002%)
Gain Accuracy	< ± 0.15 dB at +6 dB gain; < ± 0.25 dB at 0 dB gain
Mute Attenuation	> 100 dB

GAIN RANGE

Main Channels	–24 to +12 dB
Auxiliary Channels	–12 to +6 dB

PHYSICAL

Dimensions	Height: 3.45" (2 rack spaces); 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

NOTE

- 0 dBV = 1Vrms; 0 dBu = 0.775 Vrms; 0 dBm = 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, +6 dB auxiliary 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.



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MEYER SOUND LABORATORIES, INC.
2832 San Pablo Avenue
Berkeley, CA 94702
tel: 510.486.1166
fax: 510.486.8356
e-mail: techsupport@meyersound.com
http: www.meyersound.com