



PRE ST 1

4-CHANNEL STEREO MIXER PREAMPLIFIER

LDPREST1

INTRODUCTION

Permanent installations require solutions which offer a visually discrete design that blends into the background while still being flexible and versatile in their functions. You need to be able to connect different audio sources and manage them, to mute non-priority signals during announcements or emergency calls.

The PRE ST 1 is a 4-channel multi-functional stereo mixer preamplifier that allows users to mix 2 microphone/line sources together with an emergency line input and one of the 3 music sources available, including a Bluetooth receiver. These versatile connection options together with a four-level priority system, that combines contact closure inputs and VOX audio detection circuits, guarantees a seamless integration in almost any commercial audio application.

PRE ST 1 is equipped with two priority contacts: one for the emergency input, which mutes all the other signal sources, and one for the microphone inputs, which mutes the music signal sources. The stereo balanced line output includes a mono/stereo switch and separate tone controls for bass and treble. An automatic standby mode can also be activated in order to further reduce energy consumption when the device is not used.

The intuitive design of its control panel ensures an easy operation, with input and master volume controls, clear signal level and priority indications, and a practical music source selection and Bluetooth pairing activation via capacitive buttons. On the other hand, the clarity of the rear panel and the compact 9.5" format ensures that the preamplifier can be easily installed.

FEATURES

- Line input for emergency signal with contact closure
- 2 Mic/line input terminal blocks with microphone/line switching and switchable 24-V phantom power
- Priority contact closure and switchable chime function for mic/line channels
- 3 stereo music sources: 2 line inputs with RCA sockets plus Bluetooth 4.0 interface
- Gain control and Clip LED for emergency and Mic/Line inputs
- Balanced stereo line output (terminal block) with mono-stereo switching
- Separate tone controls for treble and bass on the rear panel
- 4 priority settings for versatile integration options
- Switchable auto standby mode to save energy
- User-friendly control interface - intuitive operation via capacitive controller (choice of music source and Bluetooth pairing)
- Easy installation thanks to the clear layout and labeling of the connections and controls on the back
- Universal wide-range switching power supply
- Format: Half rack width, 2 RU
- Optional: Rack installation kit (IMA RK) for the installation of one or two PRE ST1 or IMA 30/60 units in a 19" rack

TECHNICAL DATA

Item number	LDPREST1
Product type	Installation mixer preamplifier
Emergency input	1 balanced line input
Mic/Line inputs	2
Music sources	2 unbalanced stereo line inputs + 1 Bluetooth interface v4.0
Line outputs	2 (Stereo/Mono switchable)
Cooling system	Convection cooling
Priority levels	4

Emergency Input

Nominal input sensitivity	-3 dBu (Sine 1 kHz, Gain max)
Nominal input clipping	20 dBu (Sine 1kHz)
THD+N	< 0.02% (Line OUT, -16 dBu, Gain max, 20 kHz BW)
Frequency response	18 Hz - 20 kHz (Line OUT, -3 dB)
Input Impedance	10 kohms (Balanced)
SNR	>100 dB (LINE OUT, -6 dBu, CH Gain set 10 dB, Master Vol min (-inf), 20 kHz BW, a-weighted)
SNR (Best conditions)	>105 dB (LINE OUT, +18 dBu, Gain center (0 dB), 22 kHz BW, a-weighted)
CMRR	> 48 dB (LINE OUT, -6 dBu 1 kHz)
Gain	-40 to 15 dB
VOX Threshold	0%: Off, 25%: -6 dBu, 50%: -27 dBu, 100%: -35 dBu
Priority Contact closure	+5VDC Normally Open for dry contact
Connector	5-pin Terminal Block, pitch 5.08mm
Standby wake up threshold	-40 dBu

Mic/Line inputs 1-2

Nominal input sensitivity	Mic: -26 dBu (Sine 1 kHz, Gain max) Line: -2 dBu (Sine 1 kHz, Gain max)
Nominal input clipping	Mic: -5 dBu (Sine 1kHz) Line: +19dBu (Sine 1kHz)
THD+N	Mic: < 0.02% (LINE OUT, -38 dBu, 20-20 kHz, Gain max, 20 kHz BW) Line: < 0.01% (LINE OUT, +4 dBu, 20-20 kHz, CH Gain center (0dB), 20 kHz BW)
Frequency response	Mic: 165 Hz - 20 kHz (LINE OUT, -3 dB) Line: 20 Hz - 20 kHz (LINE OUT, -3 dB)
Input Impedance	Mic: 1.2 kohms (Balanced) Line: 10 kohms (Balanced)

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SNR	Mic: 80 dB (LINE OUT, -38 dBu, Gain max, 22 kHz BW, a-weighted) Line: >89 dB (LINE OUT, +4 dBu, CH Gain max, 20 kHz BW, a-weighted)	
SNR (Best conditions)	Mic: >102 dB (LINE OUT, -5 dBu, Gain Center (22 dB), 20 kHz BW, a-weighted) Line: >103 dB (LINE OUT, +18 dBu, CH Gain Center (0 dB), 20 kHz BW, a-weighted)	
CMRR	Mic: > 40 dB Line: > 45 dB	
Gain	Mic: 43 dB (LINE Out, Max. Gain) Line: 19 dB (LINE Out, Max. Gain)	
Phantom Power	+24V, 10mA Switchable	
VOX Threshold	Mic: 0%: Off, 25%: -40 dBu, 50%: -52 dBu, 100%: -66 dBu Line: 0%: Off, 25%: -6 dBu, 50%: -27 dBu, 100%: -35 dBu	
Priority Contact closure	+5VDC Normally Open for dry contact	
Connector	Mic/Line1: 5-pin Terminal Block, pitch 5.08mm + 1 XLR/6.3mm Jack combo connector Mic/Line2: 3-pin Terminal Block, pitch 5.08mm + 1 dual RCA Mono Summed	
Standby wake up threshold	Mic: -70 dBu Line: -35 dBu (Line), -40 dBu (Mono Sum)	

Chime

Play time	2s
Resolution	12 Bit

Music inputs - CD/AUX

Nominal input clipping	8 dBV (Sine 1kHz)
Connector	2 x dual RCA
THD+N	< 0.005% (LINE OUT, 0 dBV, 20-20 kHz, CH Gain max, 20 kHz BW)
Frequency response	20 Hz - 20 kHz (LINE OUT, -3 dB)
Input Impedance	20 kohms (Unbalanced)
SNR	>93 dB (LINE OUT, 0 dBV, CH Vol max., 20 kHz BW, a-weighted)
SNR (Best conditions)	>102 dB (LINE OUT, +8 dBV, 20 kHz BW, a-weighted)
Gain	-Inf to 6 dB
Standby wake up threshold	-45 dBu

Music input - BT

THD+N	< 0.2%
Frequency response	25 Hz - 20 kHz (AUX OUT, -3 dB)
SNR	>80 dB (LINE, -10 dBFS, Gain max, 20 kHz BW, a-weighted)
SNR (Best conditions)	>93 dB (LINE OUT, 0 dBFS, Gain max (0 dB), 20 kHz BW, a-weighted)

Item number LDPREST1**Line Output**

Outputs	Stereo Line Level, Mono Switchable
Connector	5-pin Terminal block, pitch 5.08mm
Max. output Level	16dBu
Frequency response	18 Hz - 25 kHz (-1,5dB)
Crosstalk, Stereo Separation	100Hz: 72dB, 1kHz: 90dB, 10kHz: 75dB
Output Noise Level	< -90 dBu / A-Weighted
Tone Control	BASS: +-10dB (100Hz), TREBLE: +-10dB (10kHz)

Power Supply

Type	SMPS (Switch-mode power supply)
Voltage Range	100 VAC - 240 VAC (+10%), 50-60 Hz
Mains fuse	T0.5A 250V
Connector	IEC Jack
Safety Class	Class 1
Max power consumption	6 W
Idle power consumption	5 W (no signal input)
Standby power consumption	< 1W
Operating Temperature	0°C - 40°C; < 85% humidity, non condensing

General

Time to standby	20 Min
Material	Steel chassis, Plastic Front panel
Dimensions (W x H x D)	210 x 95 x 266.76 mm (height with rubber feet)
Weight	2.08 kg
Optional Accessories	Rack mounting hardware (LDIMARK)