LBB 1920/00 Plena Universal Pre-Amplifier

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BOSCH
Invented for life

▶ Four universal low-noise input channels for microphone or line

▶ Separate tone control, speech filter and direct output per channel

▶ Selectable blocking, serial and mixing priorities

▶ Multifunctional inter-connection point

▶ Priority and emergency relay outputs

The Plena Pre-Amplifier is a versatile, high-performance unit with four mono-input channels. It fulfills a wide variety of public address requirements at a surprisingly low cost.

Functions

All input channels provide the choice of a balanced 3-pin XLR-connector for microphone or line level (selectable), a balanced 5-pin DIN-connector for microphone or line level with priority contact, or a line level stereo cinch-connector, converted to mono. Microphone inputs have a phantom power supply. Each input channel has its own volume and tone control, a selectable speech filter to reduce the bass content of the speech signal for improved intelligibility, and a balanced, direct output on XLR, that bypasses the channel controls.

Three priority modes are available for the input channels. In blocking mode the input channel that is activated first gets priority over all other input channels. In serial mode input channel 1 has priority over channels 2, 3 and 4; channel 2 has priority over channels 3 and 4; and channel 3 has priority over channel 4. Each of the input channels can be mixed to the master output, irrespective of priority, by separately setting that channel to the mixing mode.

Balanced XLR interconnection input and output are provided in combination with an insertion/cascade selector. In insertion mode an external sound processing device, e.g. an equalizer, can be connected between these connections. In the cascade mode, multiple LBB1920/00 pre-amplifiers can be cascaded to increase the number of input channels to 8, 12, or even more. Internally the interconnection input can be switched as an emergency input with a signal level detector (VOX). If an emergency audio signal is detected, this channel overrides all others. The emergency input channel has its own volume preset and bypasses the master volume control.

For the emergency input another VOX activated relay is provided to trigger external equipment or for local volume control override. An overload protected 24 VDC output provides power for driving external relays, making an external power supply unnecessary.

An additional microphone level output is available on the DIN connector, parallel to the balanced XLR master output. This provides an input signal for a mixing desk or a microphone input channel for a mixer amplifier, such as the Plena LBB 19xx/10. A tape output is also available.

The master output channel, or one of the input channels, can be selected to be monitored with headphone connector and LED meter.

Controls and indicators
Front
- LED power level bar
- Power on indication LED (green)
- Power button
- Four treble control knobs
- Four bass control knobs
- Four channel volume control knobs
- Master volume control knob
- Headphone channel selection knob

Back
- Mains voltage switch
- Insertion/ cascade switch

Interconnections
Front
- Headphone jack

Back
- Four channel inputs, each consisting of:
  - One DIN connector (priority)
  - One XLR connector
  - Two cinch connectors
- Four direct channel outputs
- Tape output
- Earth connection screw
- Emergency relay output
- 24 V DC backup power input
- 24 V DC output
- Insertion / cascade / emergency input
- Insertion / cascade output
- Master line output (XLR)
- Master mic output (priority)
- Mains socket

Certifications and approvals

Safety	acc. to EN 60065
Immunity	acc. to EN 55103-2
Emission	acc. to EN 55103-1

Region	Certification
Europe	CE

Installation/configuration notes

LBB 1920/00 rear view

Parts included

Quantity	Component
1	LBB 1920/00 Plena Universal Pre-amplifier
1	Power cord
1	19"mounting brackets
1	Plena CD
1	Installation and User Instructions

Technical specifications

Electrical

Mains power supply	
Voltage	230/115 VAC, ±15%, 50/60 Hz
Inrush current	1.5 A at 230 VAC / 3 A at 115 VAC
Max power consumption	25 VA
Battery power supply	
Voltage	24 VDC, +15% / -15%
Current max	1 A
Performance	
Frequency response	50 Hz to 20 kHz (+1 / -3 dB)
Distortion	<0.5 %
Bass control	±10 dB at 100 Hz
Treble control	±10 dB at 10 kHz
Channel separation	>70 dB at 1 kHz
Priority mute	>40 dB
Dynamic range	100 dB
Mic/line inputs	4 x
Connectors	3-pin XLR / 5-pin DIN, balanced
Sensitivity	1 mV (microphone), 200 mV (line)
Impedance	>1 kohm (microphone), >5 kohm (line)
S/N (flat at max volume)	>63 dB (microphone), >70 dB (line)
S/N (flat at min volume/ muted)	>75 dB
CMRR	>40 dB (50 Hz – 20 kHz)
Headroom	>25 dB
Speech Filter	-3 dB at 315 Hz, high-pass, 6 dB / oct
Phantom power supply	16 V via 1.2 kohm, in mic mode only
Line inputs	4 x

Connector	Cinch, unbalanced, stereo converted to mono
Sensitivity	200 mV
Impedance	22 kohm
S/N (flat at max volume)	>70 dB
S/N (flat at min volume/ muted)	>75 dB
Headroom	>25 dB
Direct outputs	4 x
Connector	3-pin XLR, balanced
Nominal level	1 V
Impedance	<100 ohm
Master output	1 x
Connector	3-pin XLR, balanced
Nominal level	1 V
Impedance	<100 ohm
Master output	1 x
Connector	5-pin DIN, balanced
Nominal level	4 mV (microphone level)
Impedance	<100 ohm
Tape output	1 x
Connector	Cinch, 2 x mono
Nominal level	350 mV
Impedance	<1 kohm
Headphone output	1 x
Connector	6.3 mm jack stereo, signal mono
Nominal level	3 V
Impedance	<100 ohm
Emergency input	1 x
Connector	3-pin XLR, balanced
Sensitivity	200 mV (interconnection), 100 mV to 1V adjustable (emergency)
Impedance	>10 kohm
VOX Threshold	45 mV (emergency)
Interconnection output	
Connector	3-pin XLR, balanced
Nominal level	200 mV
Impedance	<100 ohm
Relays	
Priority Relay Contacts	30 V, 1 A

Emergency Relay Contacts	30 V, 1 A
DC supply output	24 V, 250 mA max

Mechanical

Dimensions (H x W x D)	100 x 430 x 270 mm (19" wide, 2U high)
Weight	Approx. 5 kg
Mounting	Standalone, 19" rack
Color	Charcoal

Environmental

Operating temperature	-10 ºC to +55 ºC (+14 ºF to +131 ºF)
Storage temperature	-40 ºC to +70 ºC (-40 ºF to +158 ºF)
Relative humidity	<95%

Ordering information

LBB 1920/00 Plena Universal Pre-Amplifier
Universal pre-amplifier, high-performance unit with four mono-input channels.
Order number **LBB1920/00**