



# LBB 1938/20 Plena Power Amplifier



- ▶ 480 W power amplifier in a compact housing
- ▶ 70 V / 100 V and 8 ohm outputs
- ▶ Dual inputs with priority switching
- ▶ 100 V input for slave operation on 100 V speaker line
- ▶ Temperature controlled forced front to back ventilation, directly stackable.
- ▶ Mains, battery back-up and pilot tone supervision

The LBB 1938/20 is a very powerful 480 W power amplifier with supervision on the functioning of amplifier, on power supply of both mains and battery-back up and on overheating. These supervised functions are indicated on the front panel by 4 LED's. This high-performance mono amplifier is capable of fulfilling a wide variety of public address requirements. The LBB 1938/20 comes in a 19", 3U high housing for table-top use and rack mounting.

## Functions

The amplifier is protected against overload and short circuits. A temperature-controlled fan ensures high reliability at high output power and low acoustic noise at lower power output. Additionally, the power amplifier has an overheat protection circuit that switches off the power stage if the internal temperature reaches a critical limit due to poor ventilation or overload. On the LBB 1938/20 this is shown by the front panel overheat indicator.

The LBB 1938/20 has two balanced inputs with priority control, each with a loop-through facility. This allows for easy and automatic switching between e.g. a local music source and a priority announcement from a remote

system. An additional 100 V line input is provided to connect the power amplifier to a 100 V loudspeaker line, for additional output power e.g. on remote locations.

Supervision is implemented for functioning of the amplifier. Three relays are provided on the rear panel for each supervised function. The relays are normally energized (fail safe) and have three contacts each (normally open, common, normally closed). If supervision is not necessary, it is possible to switch off the indicators on the front panel by switches next to the relay outputs (to prevent the fault indicators from lighting up continuously). The relays are always functioning regardless of the settings of these switches. The pilot tone supervision monitors the presence of a 20kHz pilot tone. The pilot tone level input is 100mV -20dBV for input, and thus -20dB ref max power. Pilot tone supervision is done after the power stage at the loudspeaker line connections, thus monitoring the correct functioning of the amplifier.

Sensitivity or level control is located on the rear of the unit to avoid accidental setting change. A VU-meter with LED-bar shows the output level.

The amplifier has 70 V and 100 V outputs for constant voltage loudspeaker systems and a low impedance output for 8 Ohm loudspeaker loads.

The LBB 1938/20 has two separate priority controlled 100 V outputs for zones that only need announcements made via the priority input, and for zones that will not get any announcements made via the priority input.

The power amplifier operates both on mains power and on a 24 V battery power supply for emergency back-up, with automatic switchover.

The LBB 1938/20 has a front panel LED that indicates when the unit is battery operated.

### Certifications and Approvals

EMC emission	acc. to EN 55103-1
EMC immunity	acc. to EN 55103-2

### Parts Included

Quantity	Component
1	LBB 1938/20 Plena Power Amplifier
1	19" mounting brackets
1	Power cord

### Technical Specifications

#### Electrical

**Mains Voltage** 230 VAC,  $\pm 10\%$ , 50 / 60 Hz

**Max Mains Power Consumption** 1000 VA

**Max Mains Inrush Current** 16 A

Battery voltage 24 VDC, +20% / -10%

**Max Battery Current** 30 A

Battery Operation -1 dB ref. rated power

#### Performance

Frequency Response 60 Hz – 20 kHz (+1/-3 dB, @ -10 dB ref. rated output)

Distortion <1% @ rated output power, 1 kHz

**S/N (flat at max volume)** >90 dB

#### Inputs

Line input (3-pin XLR, 6.3mm phone jack, balanced)

Line Input 1, 2 (3-pin XLR, balanced)

Sensitivity 1 V

Impedance 20 kOhm

CMRR >25 dB (50 Hz - 20 kHz)

Gain 40 dB

100 V Input (Screw, unbalanced)

Sensitivity 100 V

Impedance 330 kOhm

#### Outputs

Line Loop-through Output (3-pin XLR, 6.3mm phone jack, balanced)

Line Loop-through Output 1,2 (3-pin XLR, balanced)

Nominal Level 1 V

Impedance Direct connection to line input

Loudspeaker Outputs (Screw, floating)

Max/rated Output Power

70 / 100 V Output 720 W / 480 W

8 ohm Output 62 V (480 W)

Output Power @ 24 V

#### Power consumption

##### 230/115 power W

Max power 986.7W

-3dB 715,3

-6dB 508,3

Pilot tone 112,7

Idle 25,3

**Power red. On 24V** -1 dB

-x dB

##### 24V current A

Max power 31.7A

-3 dB 25,7

-6 dB 18,4

Pilot tone 3,8

**230/115 power W**

Idle	0,7
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**24VDC power consumption W**

Max power	760.8W
-3 dB	616,8
-6 dB	441,6
Pilot tone	91,2
Idle	16,8

**Output contacts**

All contacts	Normally energized (failsafe)
Connector type	MC 1,5/6-ST-3,5
Rating	250 V 7A voltage free
Pilot tone (general fault)	NO / COM/ NC
Mains	NO / COM/ NC
24V	NO / COM/ NC

**Environmental**

Operating Temperature	-10 to +55°C
Storage Temperature	-40 to +70°C
Relative Humidity	<95%
<b>Acoustic Noise Level of Fan</b>	<48 dB SPL @ 1 m
<b>Dimensions</b>	145 x 430 x 370 mm (19" wide, 3U high, with feet)
<b>Weight</b>	approx. 25 kg

**Ordering Information****Model | Description**

LBB 1938/20 Plena Power Amplifier  
720 W / 480 W, 1000 VA, 19 A; 62 V (480 W), 2 balanced inputs, front panel LED, 2 separate controlled 100 V outputs

**Hardware Accessories**

LBC 1901/00 Rack Mount Kit  
For Plena amplifier, 19-inch

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