BOSCH

Invented for life

PLE-1MAxx0-US Plena Mixer Amplifier

‣ **4 microphone/line inputs, plus 3 music source inputs**

‣ **70 V and telephone input with priority & VOX**

‣ **Announcement only output, 3-wire volume override**

‣ **Voice-activated emergency override**

‣ **Wide range of power options (30, 60 and 120 Watts)**

‣ **2-tone chime**

‣ **Outputs for line out and music only out**

‣ **Unique easy-to-use intuitive tone controls**

These Plena mixer amplifiers are high performance, professional public address units with modern state-of-the-art features. They are easy to use, taking the complexity away from the user and putting it where it belongs, inside the equipment. Providing a crisp call or clear music is as easy as turning on the radio.

The amplifier is also surprisingly affordable, without sacrificing features such as ducking, priority and flexibility.

Functions

Microphone and line inputs

All mic/line inputs can be switched between microphone level and line level sensitivity. The inputs are balanced but can be used unbalanced. Phantom power can be switched on to provide power to condenser microphones.

Input channels 1 and 2 can take priority over all other microphone and music inputs:

* Input 1 can be activated by contact closure on the PTT (push to talk). A 2-tone chime can be configured to precede an announcement.
* Input 2 can be switched automatically if a signal is fed to the input, i.e., if someone speaks into the microphone (VOX activation).

When one or both inputs are configured to have priority, the amount of attenuation of the RCA input, can be set between -2 dB (little attenuation) or -∞ dB (mute). This provides a talk-over or voice-over function. Input channels 1 and 2 also feature selectable speech filters to enhance the clarity of announcements.

Music inputs

Separate music inputs are available with their own input selector and volume control. The user can choose a music source like a CD player or radio (like the PLN-DVDT), and set the level of music.

Personalized settings

More unique features are available such as detachable labels where the user can write the names for inputs, music sources and zones. These labels can then be mounted on the front, protected by the clear window.

Another useful feature is to indicate preferred settings on the front panel by inserting colored pins at the preset levels of all knobs. You can then instruct a user to set all the controls to the silver pins to configure the system for their particular use. A second user can set all controls to the red pins for their configuration.

Integration

A telephone / 70 V emergency input with VOX activation is provided for easy integration with another PA system or a telephone paging system. It has its own preset volume control and overrides all other inputs, including call station and inputs 1 and 2.

The unit also has a line output to add amplifiers for larger systems with more output power. This output can be switched to music only, for example, so that music on hold can be provided for the telephone system.

Power

The mixer amplifiers come in 30, 60 and 120 Watt output power options. This power is directly available on 25/70 V constant voltage connections and on a low impedance connection for a 4 ohm load. Moreover, the amplifiers have a separate 70 V call-only output channel for addressing areas where only priority announcements are required. The call-only output can also be used for 3-wire remote, volume control override.

Output status

An LED VU meter displays the master output level. A headphone jack socket, below the VU meter, provides the mixer output signal. For total reliability and ease of use, a limiter is integrated into the output stage to restrict output if the user applies too much signal.

Controls and indicators

Front

- On/off switch
- Power on LED
- LED VU meter for master output (LEDs for -18, -12 -6, -3, 0 dB)
- Master volume knob
- Four volume knobs for microphone inputs
- Knob for treble level
- Knob for bass level
- Headphone jack
- Two zone selector buttons
- Background music button

Back

- Dip switches
- Ducking level
- Tel/70 V volume control

Interconnections

See Technical Specifications.

Certifications and Approvals

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

Installation/Configuration Notes

Rear view

Parts Included

Quantity	Components
1	PLE-1MAxx0-US Plena Mixer Amplifier
1	Power cord
1	Manual
1	Set of 19"mounting brackets

Technical Specifications

Electrical

Mains power supply

Voltage	115 VAC ±10%, 50/60 Hz
Inrush current PLE-1MA030-US	4.5 A
Inrush current PLE-1MA060-US	5 A
Inrush current PLE-1MA120-US	10 A

Power consumption

PLE-1MA030-US	100 VA
PLE-1MA060-US	200 VA
PLE-1MA120-US	400 VA

Performance

Frequency response	50 Hz to 20 kHz (+1/-3 dB @ -10 dB ref. rated output)
Distortion	<1% @ rated output power, 1 kHz
Bass Control	Max -12/+12 dB (frequency is setting dependent)
Treble Control	Max -12/+12 dB (frequency is setting dependent)
RJ-45 input	**1 x**
Wall panel input	For PLE-WP3S2Z

Mic//Line input	4 x
Input 1	5-pin Euro style pluggable screw, balanced, phantom, incl. PTT
Input 2-4	3-pin Euro style connector, balanced, phantom
Sensitivity	1 mV (mic); 200 mV (line)
Impedance	>1 kohm (mic); >5 kohm (line)
Dynamic range	93 dB
S/N (flat at max volume)	>63 dB (mic); >70 dB (line)
S/N (flat at min volume/muted)	>75 dB
CMRR (mic)	>40 dB (50 Hz to 20 kHz)
Headroom	>17 dB
Speech filter	-3 dB @ 315 Hz, high-pass, 6 dB/oct
Phantom power supply	16 V via 1.2 kohm (mic)

Music input	3 x
Connector	RCA, 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

Emergency / telephone	1 x
Connector	7-pin Euro style pluggable screw connector
Sensitivity Tel.	1 V maximum
Sensitivity 70 V	70 V maximum
Impedance	>10 kohm
S/N (flat at max volume)	>65 dB
VOX	threshold 50 mV; attack time 150 ms; release time 2 s

Master/music output	1 x
Connector	3-pin Euro style, balanced
Nominal level	1 V
Impedance	<100 ohm

Loudspeaker output 25/70 V	
Connector	Euro style pluggable screw terminal, floating
Max / rated PLE-1MA030	45 W / 30 W
Max / rated PLE-1MA060	90 W / 60 W
Max / rated PLE-1MA120	180 W / 120 W

Loudspeaker output 4 ohm	
Connector	Euro style pluggable screw terminal, floating
PLE-1MA030-US	16 V (30 W)
PLE-1MA060-US	22 V (60 W)
PLE-1MA120-US	31 V (120 W)

Mechanical	
Dimensions (H x W x D)	100 x 430 x 270 mm (19" wide, 2U high)
Mounting	Stand-alone, 19" rack
Color	Charcoal
Weight	
PLE-1MA030-US	Approx. 11 lb
PLE-1MA060-US	Approx. 18.7 lb
PLE-1MA120-US	Approx. 23.2 lb

Environmental	
Operating temperature	+14 ºF to +113 ºF
Storage temperature	-40 ºF to +158 ºF
Relative humidity	<95%
Acoustic noise level of fan (PLE-1MA120-US)	<33 dB SPL @ 1 m

Ordering Information

PLE-1MA030-US Plena Mixer Amplifier 30 W	**PLE-1MA030-US**
PLE-1MA060-US Plena Mixer Amplifier 60 W	**PLE-1MA060-US**
PLE-1MA120-US Plena Mixer Amplifier 120 W	**PLE-1MA120-US**