BOSCH
Invented for life

LBB 1965/00 Plena Message Manager

- **Highly flexible stand-alone digital message player**
- **Up to 12 messages and 12 trigger inputs**
- **Downloads messages from a PC in WAV format**
- **Compliant with standards for emergency sound systems**
- **Zone control for Plena system preamplifier LBB 1925/10**
- **Front panel control and remote control**

The Plena message manager is a high performance, highly versatile stand-alone digital message player. Applications range from spot announcements in supermarkets and theme parks to warning and evacuation messages in emergency situations.

Functions

Messages

Up to 12 messages can be stored in the internal 64Mbit EEPROM, without the need for data retention battery backup. Each message can have any length within the total available capacity. A PC uploads messages and configurations via RS-232 to the unit, which can then operate without a PC. The standard WAV format is used for messages with sample rates of 8 kHz to 24 kHz with 16-bit word length (linear PCM). This gives up to 500 seconds of recording time with a CD-quality signal-to-noise ratio. The use of linear PCM instead of a compressed audio format, such as MP3, ADPCM and u-law/A-law, ensures high-quality playback of all types of audio signals, including sound effects and special tones, such as attention chimes.

The unit has 12 contact closure trigger inputs for announcements. Each can be configured for a sequence of up to four messages from those available. In this way messages can be used in combination with other messages, optimizing flexibility and storage space usage. When used together with the six-zone LBB 1925/10 Plena System Pre-Amplifier, a zone selection can be configured for each trigger input. The message manager communicates this selection to the LBB 1925/10 via an RS-232 connection. Continuous activation of a trigger input causes the corresponding message sequence to repeat.

Trigger Inputs

The trigger inputs have a serial priority, i.e., input 1 has priority over input 2, input 2 over input 3, etc. The high priority trigger inputs 1-6 are only accessible as contacts on the rear panel to prevent accidental use. The lower priority trigger inputs 7-12 are also available as trigger switches on the front panel.

Integrity and Dependability

The LBB 1965/00 can also play emergency/evacuation messages, as it fulfills the IEC 60849 standard. The microcontroller continually checks the data integrity of the system, and a watchdog circuit, in turn, checks the microcontroller. The unit monitors the D/A converter with a pilot tone, and the high priority trigger inputs (one to six) for cable short circuits and breaks. A 24 V battery

backup connection with automatic fail-safe provides continued operation if the mains power should fail. A 20 kHz pilot tone can be mixed with the output signal to supervise the link to the next amplifier. This also works for loudspeaker supervision in combination with 20 kHz detectors. Any failure causes a red LED fault indication, and activates a fault output contact.

Loop-through Facility

The LBB 1965/00 provides a loop-through facility with balanced XLR and unbalanced cinch inputs and outputs. This allows the unit to be inserted into an existing audio link. As long as no announcements are playing, the signal input is routed to the output. If an announcement begins, the input signal is interrupted and the announcement is routed to the output.

Updating

Messages and configuration settings are uploaded from a PC. After uploading, the trigger inputs 7-12 can be configured by using the front panel switches, without the need for a new upload or even a PC. Message content can be monitored using the available headphone jack.

Certifications and Approvals

Region	Certification	
Europe	CE	Declaration of Conformity
Safety		according to EN 60065
Immunity		according to EN 55103-2
Emission		according to EN 55103-1

Installation/Configuration Notes

LBB 1965/00 back view

Parts Included

Quantity	Component
1	LBB 1965 Plena Message Manager
1	Power cord
1	Set of 19" mounting brackets
1	Plena CD
1	Installation and User Instructions

Technical Specifications

Electrical

Mains power supply	
Voltage	230/115 VAC, ±10%, 50/60 Hz
Inrush current	1.5 A at 230 VAC / 3 A at 115 VAC
Max power consumption	50 VA
Battery power supply	
Voltage	24 VDC, +15% / -15%
Current max	1 A
Performance	
Supported sample rates (fs)	24 / 22.05 / 16 / 12 / 11.025 / 8 kHz
Frequency response	
@ fs=24kHz @ fs=22.05kHz	100 Hz to 11 kHz (+1 / -3 dB) 100 Hz to 10 kHz (+1 / -3 dB)
@ fs=16kHz	100 Hz to 7.3 kHz (+1 / -3 dB)
@ fs=12kHz	100 Hz to 5.5 kHz (+1 / -3 dB)
@ fs=11.025kHz	100 Hz to 5 kHz (+1 / -3 dB)
@ fs=8kHz	100 Hz to 3.6 kHz (+1 / -3 dB)
Distortion	<0.1% at 1 kHz
S/N (flat at max volume)	>80 dB
Supervision DAC	1 Hz pilot tone
Line input	1 x
Connector	3-pin XLR, balanced
Sensitivity	1 V
Impedance	20 kohm
CMRR	>25 dB (50 Hz-to 20 kHz)
Line input	1 x
Connector	Cinch, unbalanced
Sensitivity	1 V
Impedance	20 kohm
Trigger input	6 x
Connector	Screw
Activation	Contact closure
Supervision method	Cable loop resistance check
Line output	1 x
Connector	3-pin XLR, balanced
Nominal level	1 V, adjustable

Mains power supply	
Impedance	<100 ohm
Line output	1 x
Connector	Cinch, unbalanced
Nominal level	1 V, adjustable
Impedance	<100 ohm
Message active output	1 x
Connector	Screw
Relay	100 V, 2 A (voltage free, SPDT)
Fault output	1 x
Connector	Screw
Relay	100 V, 2 A (voltage free, SPDT)
Interconnection	1 x
Connector	9-pin D-sub (RS-232)
PC protocol	115 kb/s, N, 8, 1, 0 (upload)
LBB 1925/10 protocol	19.2 kb/s, N, 8, 1, 0 (zone control)
Messages	
Data format	WAV-file, 16-bit PCM, mono
Memory capacity	64 Mb EEPROM
Recording/playback time	500 s @ fs=8 kHz 167 s @ fs=24 kHz
Number of messages	12 (maximum)
Data retention time	>10 years
Mechanical	
Dimensions (H x W x D)	56 x 430 x 270 mm 2.20 x 16.92 x 10.62 inch (19" wide, 1U high, with feet)
Weight	Approx. 3 kg
Mounting	Stand-alone, 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 1965/00 Plena Message Manager high performance, highly versatile stand-alone digital message player	**LBB1965/00**

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T866759563 | Cur: en-US, V23, 27 Jan 2011