BOSCH
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LBB 3310 Control Unit

- **Supplies power for up to 50 contribution units**
- **Provides control for up to 150 contribution units**
- **Interfaces the system with external equipment**
- **Four selectable operating modes and a test mode**
- **Built-in loudspeaker and headphone socket**
- **Incorporates digital acoustic feedback suppression (only on model LBB 3310/10)**

The LBB 3310/xx Control Units form the heart of the CCS 800 Ultro Discussion System.

The Control Unit supplies the power for all delegate and chairman units in the system. The unit also controls the microphones of the chairman and delegate units, as well as providing connections for audio inputs and outputs.

Functions

Supplies power for up to 50 contribution units

The CPSU has two trunk outputs for the loop-through connection of contribution units. It is possible to connect 25 contribution units to each trunk output, with a maximum system cable length of 100 m (109.3 yards).

Provides control for up to 150 contribution units

Up to 3 CPSU's can be used together in a discussion system to power and control a maximum of 150 contribution units. In this configuration a single CPSU acts as a master controller of the entire system.

Interfaces the system with external equipment

The following equipment can be interfaced to the CCS 800 Ultro Discussion System through the CPSU:

- External wired or wireless microphone – for guest speakers or audience participation. (**Note:** The external microphone is muted when the priority button on a chairman unit is pressed, and when the system is operating in chairman only mode)
- External PA system – for transmitting the proceedings to an audience in the same room or an adjacent room
- Tape recorder – for recording and playing back meetings and discussions
- Audio equipment – for providing background music
- Telephone coupler – to allow a remote delegate to take part via telephone
- Audio processing unit – an insertion connector is provided (with a bypass switch)

Four selectable operating modes and a test mode

The following 5 modes can be selected using a rotary control on the unit's front panel:

- Open mode without auto-switch-off – allows selection of one to four microphones, which can be simultaneously active. Microphones must be switched off manually
- Open mode with auto-switch-off – allows selection of one to four microphones, which can be simultaneously active. If the delegate does not speak for 30 seconds, microphones are automatically switched off (can also be switched off manually)
- Override mode – delegates can override each other simply by activating their microphones. Only one microphone can be active at any one time. (**Note:** In override mode delegates cannot override chairmen)
- Chairman only mode – only chairmen can speak. Delegates microphones cannot be activated, even if no chairman is speaking
- Test mode –checks if system connections are correct. All microphone light rings and contribution unit LEDs light up to indicate the units are properly connected

Built-in loudspeaker and headphone socket

The built-in loudspeaker and headphone socket allow the conference to be monitored (e.g. to allow a stenographer to take notes on the conference).

Digital acoustic feedback suppression (LBB 3310/10 only)

The digital acoustic feedback suppression facility automatically eliminates acoustic feedback (also known as 'howling' or 'Larson effect'). This gives better speech intelligibility by allowing the speaker volume to be turned up as loud as required without any risk of feedback.

Controls and indicators

- Mains on/off switch
- Loudspeaker volume control, for setting output level of loudspeakers of contribution units. This control also determines the maximum level for the headphone outputs of the contribution units and the CPSU.
- Microphone mode rotary switch, for setting the number of simultaneously active microphones, and selecting one of the four operation modes (plus test mode)
- Microphone input gain adjustment (at rear of unit)
- Recorder input gain adjustment (at rear of unit)
- Insertion connector bypass switch (at rear of unit)
- On/off switch for digital acoustic feedback suppression facility (LBB 3310/10 only)
- Power on (green LED)

Interconnections

- 1 x AC input
- 2 x 7-pole circular female connectors, trunk in/out loop-through interconnection
- 1 x 3-pole female XLR connector, microphone input
- 2 x Cinch connector pairs (R/L channel), recorder input/output
- 1 x Cinch connector pair, line input
- 5 x Cinch connectors, line output, telephone input/output, insertion input/output
- 1 x 3.5 mm (0.14 inch) stereo headphone socket

Parts Included

Quant.	Component
1	Control Unit
1	Set of connectors
1	System installation and user instruction on CD ROM
1	Power cord

Technical Specifications

Electrical

Mains voltage	100 to 240 VAC ± 10 %
Current consumption	maximum 0.9 A (100 VAC) to 0.3 A (240 VAC)
DC supply to contribution units	24 V ± 1 V (current limited)
Loudspeaker volume control	mute (50 dB att.) + 10 steps of 1.9 dB
Limiter threshold level to unit	10 dB above nominal level loudspeaker / headphone
Gain reduction due to number of open microphones (NOM)	÷ NOM ± 1 dB
Typical frequency	25 Hz to 12.5 kHz
Total harmonics Nominal input (85 dB SPL) Max. input (110 dB SPL)	 < 0.5 < 0.5

Inputs and outputs – unbalanced

Line, telephone and insertion

Input sensitivity	-14 dBV (nominal) / +11 dBV (maximum)
Input impedance	33 kilohm
Output level	-14 dBV (nominal) / +11 dBV (maximum)
Output impedance	500 ohm

Tape recorder

Input sensitivity	-20 dBV (nominal) / +5 dBV (maximum)
Input sensitivity adjustment	0 dBV (nominal) / -20 dBV (maximum)
Input impedance	47 kilohm (for left and right channel)
Output level	-20 dBV (nominal) / +5 dBV (maximum)
Output impedance	500 ohm

External microphone input – balanced

Input sensitivity	-56 dBV (-6 dBV via included adapter)
Input sensitivity adjustment	+6 dBV (nominal) / -6 dBV (maximum)
Phantom supply (not available when using the included adapter)	12 V ± 1 V, 2 x 680 W (± 2%), according to DIN45596

Monitor loudspeaker

Output level at 0.5m	72 dB SPL (nominal) / 82 dB SPL (maximum)
Frequency response	320 Hz to 10 kHz (-10 dB, reference 1 kHz)
Impedance	25 ohm
Volume control	50 dB attenuation range

Monitor headphone – stereo jack socket

Output level	-8 dBV (nominal) / +2 dBV (maximum)
Output impedance	22 ohm
Allowed impedance	any impedance
Volume control	50 dB attenuation range

Mechanical

Dimensions including feet (H x W x D)	84 x 361 x 143 mm (3.4 x 14.2 x 5.6 in)
Height of feet	5.5 mm (0.22 in)

Mounting	tabletop (portable or fixed) 19-inch rack flush mounting
Weight	1.5 kg (3.3 lb)
Material (top)	polymer
Material (base)	painted metal
Color (top)	charcoal (PH10736)
Color (base)	black (PH80007)

Ordering Information

LBB 3310/00 Control and Power Supply Unit

LBB 3310/10 Control and Power Supply Unit
with digital acoustic feedback suppression

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