



BOSCH
Invented for life

LBB 3310 Control and Power Supply 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 and power supply units (CPSU) form the heart of the CCS 800 Ultra Discussion System. The CPSU 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 Ultra 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 the selection of the number of microphones, from one to four, which can be simultaneously active. Microphones must be switched off manually
- Open mode with auto-switch-off – allows the selection of the number of microphones, from one to four, which can be simultaneously active. If the delegate does not speak for 30 seconds, the microphone is automatically switched off (it 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 (to allow a stenographer, for example, 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 provides for 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
- 1 x RCA connector pair (R/L channel) , recorder input
- 1 x RCA connector pair (R/L channel) , recorder output
- 1 x RCA connector pair, line input
- 1 x RCA connector, line output
- 1 x RCA connector, telephone input
- 1 x RCA connector, telephone output
- 1 x RCA connector, insertion input
- 1 x RCA connector, insertion output
- 1 x 3.5 mm (0.14 inch) stereo headphone socket

| | |
|--|---|
| Mains harmonics | prepared to EN 61000-3-2 and EN 61000-3-3 |
| Shock resistance, vibration resistance, bump and transport | acc. to IEC 68, 5G acceleration |
| Transport | acc. to UN-D 1400 |

Certifications and Approvals

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|--------------|---|
| Safety | acc. to EN 60065 acc. to CAN / CSA-E60065 acc. to USA / UL 6500 |
| EMC Emission | EN 55103-1, FCC rules (part 15) class A |
| EMC Immunity | EN 50103-2 |
| ESD | acc. to IEC 801-2 and 801-4 |

Technical Specifications

Electrical

CPSU

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|--|---|
| Mains Voltage | 100 to 240 VAC \pm 10 % |
| Current consumption | maximum 0.9 A (100 VAC) to 0.3 A (240 VAC) |
| DC supply to contribution units | 24 V \pm 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) | \div NOM \pm 1 dB |
| Typical frequency | 25 Hz to 12.5 kHz |
| Total harmonics | |
| Nominal input (85 dB SPL) | < 0.5 |
| Max. input (110 dB SPL) | < 0.5 |

CPSU 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 | 12 V \pm 1 V, 2 x 680 W (\pm 2%), according to DIN45596 (Phantom supply not available when using the included adapter) |

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 |

CPSU

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 |

System limits and cabling

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|---|---|
| Maximum number of contribution units connected to CPSU | 50 units (can provide control for up to 150 units - consult your dealer for more information) |
| Maximum number of contribution units per trunk output | 25 units (2 trunk outputs per CPSU) |
| Maximum trunk length using CCS 800 Ultra standard cabling | 100 m |

Mechanical

Mounting

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|------------------|---|
| Mounting Options | Table top (portable or fixed) 19-inch rack Flush mounting |
|------------------|---|

Dimensions (H x W x D)

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|---------------------|--|
| CPSU including feet | 84 x 361 x 143 mm (3.4 x 14.2 x 5.6 inch) |
| Height of CPSU Feet | 5.5 mm (0.22 inch) |

Weight

| | |
|------|-----------------|
| CPSU | 1.5 kg (3.3 lb) |
|------|-----------------|

Construction Materials & Color

| | |
|------------|----------------------------------|
| CPSU Cover | polymer, charcoal gray (PH10736) |
| CPSU Base | painted metal, black (PH80007) |

Environmental

Temperature

| | |
|-----------------------|---------------------------------|
| Operating | +5°C to +45°C (+41°F to +113°F) |
| Storage and transport | -20°C to +70°C (-4°F to +158°F) |

Humidity

| | |
|-----------|---------------|
| Operating | 20% to 95% RH |
| Storage | up to 99% RH |

Air pressure

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|--------------|------------------|
| Air pressure | 600 to 1100 mBar |
|--------------|------------------|

Ordering Information

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|--|------------|
| LBB 3310/00 Control and Power Supply Unit | LBB3310/00 |
| LBB 3310/10 Control and Power Supply Unit with digital acoustic feedback suppression | LBB3310/10 |

Accessories

| | |
|--|------------|
| LBB 3312/10 Transport and Storage Suitcase for CPSU and six contribution units | LBB3312/10 |
| LBB 3311/00 19-inch Rack-Mounting Set | LBB3311/00 |

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