BOSCH

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CCS-CU Control Unit

- ▸ **Built-in MP3 recording and playback with graphical display**
- ▸ **Patent-pending recording buffer**
- ▸ **Digital Acoustic Feedback Suppression**
- ▸ **Discussion control without operator**
- ▸ **Controls up to 150 contribution devices**
- ▸ **Built-in monitor loudspeaker**

The Control Unit (CU) is the heart of the CCS 800 Ultro Discussion System and supplies the power for all delegate and chairman units in the system. The unit also controls the chairman and delegate unit microphones, as well as providing connections for audio inputs and outputs.

Functions

Built-in MP3 recording and playback with graphical display

(CCS-CUR, CCS-CURD)

The CU has a built-in recorder to digitally record a discussion to an SD Card. The graphical display shows the status of the recorder and the accompanying buttons can be used to configure the recorder. As an option, the recording is only active when a microphone is active.

The SD card can be removed from the CU and processed on a PC for transcription purposes; the recordings can also be retrieved by connecting a PC to the CU's USB. The recordings can be played back to the monitor loudspeaker or to delegate's loudspeakers. An audible beep and a flashing LED indicate when the SD Card is almost full and the user needs to replace it with a new card.

Patent-pending recording buffer

(CCS-CUR, CCS-CURD)

A card can be replaced by an empty card while recording is running. When the full card is removed, the recording is continued to a patent-pending recording buffer. When a new card is inserted into the CU, the buffered recording is written onto the new card and the recording continues normally. This gives seamless recording without the loss of any audio while an SD Card is exchanged.

Digital acoustic feedback suppression

(CCS-CUD, CCS-CURD)

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.

Discussion control without operator

The CU can be setup to operate standalone without the need for an operator. The following 5 modes can be chosen using a rotary control on the unit's top panel:

- Open mode – allows selection of one to four microphones (excluded chairmen microphones) which can be simultaneously active

- Open mode with auto-switch-off – allows selection of one to four microphones (excluded chairmen microphones) which can be simultaneously active. If the delegate does not speak for 30 seconds, microphones are automatically switched off
- 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. Delegate microphones cannot be activated, even when a chairman is not speaking
- Test mode –checks if system connections are correct. All microphone light rings and contribution unit LEDs light up to indicate that units are properly connected

Supplies power for up to 50 contribution units

The CU 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 CUs can be used together in a discussion system to power and control a maximum of 150 contribution units. In this configuration a single CU acts as a master controller for the entire system.

Built-in monitor loudspeaker

The built-in monitor loudspeaker and headphone socket allow the conference to be monitored.

Interfaces the system with external equipment

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

- 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 external recording and playing back meetings and discussions
- Audio equipment – for providing background music
- Telephone coupler – to allow a remote delegate to participate via telephone
- External audio processing – an insertion connector is provided

Controls and Indicators

Top

- Mains on/off switch
- Graphical display for status information (CCS-CUR, CCS-CURD)
- 5 soft buttons for configuration and control of the built-in MP3 recorder (CCS-CUR, CCS-CURD)
- 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 CU.

- Microphone mode rotary switch, for setting the number of simultaneously active microphones, and selecting one of the four operation modes (plus test mode)
- Power on LED

Back

- On/off switch for digital acoustic feedback suppression facility (CCS-CUD, CCS-CURD)
- Microphone input gain adjustment
- External recorder input gain adjustment
- Insertion connector bypass switch

Interconnections

Top

- 1 x 3.5 mm (0.14 inch) stereo headphone socket

Back

- 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 (can be used as line input by included 50dB attenuator)
- 1 x Cinch connector pair, line input/output
- 1 x Cinch connector pair, telephone input/output
- 1 x Cinch insertion input/output
- 2 x Cinch connector pairs (R/L channel), external recorder input/output
- USB interface (CCS-CUR, CCS-CURD)

1	CCS-CUD, CCS-CURD
2	CCS-CUR, CCS-CURD

Parts Included

Quant.	Component
1	Control Unit
1	50 dB Attenuator
1	User manual
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
Total harmonics	
Nominal input (85 dB SPL)	< 0.5
Max. input (110 dB SPL)	< 0.5

Sample frequency (CCS-CUR, CCS-CURD)

Recording	32 kHz
Playback	32, 44.1, 48 kHz

Bit rate (CCS-CUR, CCS-CURD)

Recording	64, 96, 128, 192, 256 KBit/sec
Playback	any bitrate

Compatible conform ID3V2 mp3-tags (CCS-CUR, CCS-CURD)

Memory card	Any SD Card up to 2 Gb (high speed cards advised)

Recording capacity (CCS-CUR, CCS-CURD)

	Internal memory	Card size		
Bit rate	225 MB	512 MB	1 GB	2 GB
64	07 h : 41 m	17 h : 14 m	34 h : 28 m	64 h : 56 m
96	05 h : 07 m	11 h : 29 m	22 h : 59 m	45 h : 58 m
128	03 h : 50 m	08 h : 37 m	17 h : 14 m	34 h : 28 m
192	02 h : 33 m	05 h : 44 m	11 h : 29 m	22 h : 58 m
256	01 h : 55 m	04 h : 18 m	08 h : 37 m	17 h : 14 m

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

CCS-CU Control Unit	**CCS-CU**
CCS-CUR Control Unit with Recorder	**CCS-CUR**
CCS-CUD Control Unit with DAFS	**CCS-CUD**
CCS-CURD Control Unit with Recorder and DAFS	**CCS-CURD**
CCS-CU-JP Control Unit (JP) Japanese version	**CCS-CU-JP**
CCS-CUR-JP Control Unit with Recorder (JP) Japanese version	**CCS-CUR-JP**
CCS-CUD-JP Control Unit with DAFS (JP) Japanese version	**CCS-CUD-JP**
CCS-CURD-JP Control Unit with Recorder and DAFS (JP) Japanese version	**CCS-CURD-JP**