

# MCW-D 50

Digital Discussion Control Unit



## FEATURES

- Central control unit to control up to 4096 digital wireless microphone units of the MCW-D 5xx series
- Specific DSSS modulation (Direct Sequence Spread Spectrum) ensures a high noise immunity when used with other wireless systems in the 2.4 GHz frequency band
- Wireless transmission in the world-wide approved frequency range of 2.4 GHz
- Maximum security against unauthorised listening:
  - Proprietary data format
  - 128 bit-encryption key
  - Optional entry of a freely definable eight-digit key for control unit and microphone units.  
Microphone units with a wrong key will be recognised and deactivated immediately.
- Can easily be updated with Field Programming Technology
- Up to 9 channels for audio transmission
- Depending on the version a maximum of three (e.g. 2 delegates and 1 chairman) or nine microphone units (e.g. 7 delegates and 2 chairmen) can be allocated simultaneously
- Integrated antenna splitter/combiner for diversity reception
- Digital limiter function per input channel (can be configured)
- Manual, Push-To-Talk, Override or Voice Activated mode
- RS 232 interface for external operation with PC or media control
- Network connection (TCP/IP) for external operation via PC or media control system
- MCW-D 50 Conference software for Windows® to configure the control unit and microphone units and control of the conference under Windows®
- Remote RF-receiving and transmitting antennae for large distances
- Quick setup for discussions without additional sound contracting devices
- Due to RF operation no extensive installations for transmitter or receiver components necessary (compared to infrared technology)
- Additional audio input for e.g. wireless microphones
- Recording output for documentation
- Master output for external sound contracting systems
- All connections are plug-in type
- 19" desktop housing, 2 HU

## DESCRIPTION

Digital control unit for an almost unlimited number of wireless microphone units with loudspeaker. Integrated diversity combiner for a maximum of 3 or 9 smart link receiving modules. Depending on the version of the MCW-D 50 control unit a maximum of 3 (e.g. 2 delegates and 1 chairman) or 9 microphone units (e.g. 7 delegates and 2 chairmen) can be activated simultaneously.

There is a constant status inquiry, monitoring or control due to the data connection to the microphone units. Individual microphone units can be activated via the RS 232 serial interface. The complete discussion system can be switched off via a control command or by pressing the "Stand-by" button on the front. The 9 LEDs on the front indicate the assigned transmission channels of the microphones. To increase the security of the system, the control unit can operate in the "security mode" i.e. the control unit only operates with microphone units which have the same encryption key. In addition to this, the audio data are encrypted.

## VERSIONS

MCW-D 50-3	Control unit with 1 RF module/3 channels . . . . .	Order # 479.705
MCW-D 50-9	Control unit with 3 RF modules/9 channels . . . . .	Order # 481.560

## SUPPLIED ACCESSORIES

1 Power cable		
1 serial null modem cable		
MCW-D 50	Conference Software, incl. base version of the Controller for 5 microphone units . . . . .	Order # 480.274

### Note:

Delivery does not include any antennae.

## OPTIONAL ACCESSORIES

CA 2411	Angled rod antenna, 2.4 GHz . . . . .	Order # 464.236
CA 2413	Planar antenna, 2.4 GHz . . . . .	Order # 464.252
CA 2414	Omnidirectional antenna for mounting to a ceiling, 2.4 GHz, N(HF) connection, female . . . . .	Order # 486.132
CA 2420	Standard cable, 2.4 GHz, sale per metre . . . . .	Order # 464.260
CA 2421	Standard cable, 2.4 GHz, N(HF)-N(HF), 10 m . . . . .	Order # 464.279
CA 2422	Standard cable, 2.4 GHz, N(HF)-N(HF), 20 m . . . . .	Order # 464.287
CA 2430	Low attenuation cable, 2.4 GHz, sale per metre . . . . .	Order # 464.295
CA 2431	Low attenuation cable, 2.4 GHz, N(HF)-N(HF), 10 m . . . . .	Order # 464.309
CA 2432	Low attenuation cable, 2.4 GHz, N(HF)-N(HF), 20 m . . . . .	Order # 464.325
CA 2441 RT	Antenna amplifier for transmitting and receiving, (10 dB gain), remote power supply 5 V via antenna cable . . . . .	Order # 470.309
CA 2441 T	Antenna amplifier for transmitting, (8 dB gain), remote power supply 5 V via antenna cable . . . . .	Order # 470.317
CA 2442	Adapter N(HF) Female - SMA Male . . . . .	Order # 464.376
CA 2443	Adapter N(HF) Female - SMA Female . . . . .	Order # 464.384
CA 2444	Adapter N(HF) Male - SMA Female . . . . .	Order # 464.392
CA 2445	Adapter N(HF) Male - SMA Male . . . . .	Order # 465.151
CA 2457	Charger/DC power supply unit for MCW-D 5** microphone units . . . . .	Order # 479.721
MCW-D 50 Controller	Licence for controller to control the system via PC . . . . .	Order # 480.262

## TECHNICAL SPECIFICATIONS

### General

Frequency range . . . . .	2400 - 2483.5 MHz (ISM-band)
Modulation . . . . .	Direct Sequence Spread Spectrum DSSS, digital signal processing acc. to own standard
Max. number of audio streams . . . . .	9 useable channels per system
Signal-to-noise ratio . . . . .	80 dB typ., (unweighted signal-to-noise ratio)
Range between microphone units and control unit. . . . .	> 100 m
Power supply. . . . .	110 - 240 V AC 50/60 Hz
Approval . . . . .	world-wide

### MCW-D 50 Control Unit

Frequency response . . . . .	70 Hz - 10 kHz (-3 dB)
Operation mode. . . . .	Diversity (receiver), separate for each channel
Antenna connection. . . . .	3 N-connectors (female)
Remote supply voltage for antenna amplifier . . . . .	5 V, max. 2 A
Transmitting power . . . . .	max. 15 dBm per channel (average, duty cycle ≤ 30%)*

Connections	
Serial control port. . . . .	RS 232
Ethernet port . . . . .	LAN, TCP/IP standard
Master output balanced . . . . .	XLR, +6 dBu
Master output unbalanced . . . . .	RCA, level adjustable (1.55 V - 300 mV range)
Input balanced . . . . .	XLR, +6 dBu, switchable
Input unbalanced . . . . .	RCA, (min. 500 mV for max. level), +15 dBu, -10 dBu, switchable
Power supply . . . . .	110 - 240 V AC 50/60 Hz
Fuse . . . . .	2 x 3.15 A (slow blow)
Power consumption . . . . .	20 W (without antenna amplifiers)
Temperature range . . . . .	+10° - +40°C (at < 90% humidity)
Indication. . . . .	9 channel LEDs (red/green) and Power LED (red/green)
Min. depth of Rack. . . . .	380 mm
Dimensions (W x H x D) . . . . .	19", 2HU (440 x 88 x 310 mm)
Weight. . . . .	4.7 kg

\*The transmitter power can differ from this value due to specific regulations in various countries.

## ARCHITECT'S SPECIFICATIONS

Central control unit of a wireless digital discussion system. Specific DSSS modulation (Direct Sequence Spread Spectrum) ensures a high noise immunity in the 2.4 GHz frequency band world-wide approved. A virtually unlimited number of microphone units can be controlled. Up to 9 data channels allow the use of max. 9 audio-voice streams. Depending on the version of the control unit a maximum of 3 or 9 microphone units can be allocated simultaneously. Automatic audio channel allocation. Diversity technology ensures a high transmission safety. Operation modes: manual: each participant can switch his microphone on or off; voice-controlled allocation: as soon as someone speaks into the microphone it is switched on; override: when a microphone is activated, the first one will be switched off; Push-To-Talk: the microphone

button must be held down while the participant is speaking. The complete system can be switched off with the stand-by button on the front or via a control command of the serial interface or the network connection. RS 232 serial interface / Ethernet interface for system configuration, PC or media control system. Audio input for external signals. All connections on the rear are plug-in types: audio master output (3-pin XLR, balanced, RCA, unbalanced), audio input (3-pin XLR balanced, RCA, unbalanced), antenna input A/B and antenna output (N-RF). 19" desktop housing, 2 HU. Dimensions (WxHxD) 440x88x310mm. Weight: 4.7 kg.

Manufacturer: beyerdynamic  
Product: MCW-D 50