MCW-D 521

Wireless, digital Delegate Microphone Unit
with Loudspeaker

Order # 479.748

FEATURES

- Direct Sequence Spread Spectrum (DSSS) provides high immunity from interference and unauthorised listening
- Wireless transmission with integrated transmitting/receiving antenna in the 2.4 GHz frequency band which is approved world-wide
- Digitally encoded audio signals prevent unauthorised listening
- Integrated loudspeaker with voice equalisation
- Gooseneck microphone provides excellent audio quality
- Red illuminated ring around the gooseneck to indicate the ready-to-talk status of the microphone
- Microphone button to switch the microphone on / off or to register it in the system
- Dual colour LED for microphone ON (red: communication is established; green: microphone is switched on and ready for talking)
- DC-connection for DC-operation and battery charging
- Charging contacts
- Power on LED
- Mini stereo jack (3.5 mm) as documentation output for the connection of recorders, PCs with the steno-s recording software etc.

- High-quality plastic housing with charcoal-grey, non-glare and scratch-resistant Nextel® finish
- The following parameters can be programmed: loudspeaker level, auto-off behaviour and voice-controlled activation
- Auto-Off function when nobody speaks into the microphone
- Fixed ducking level of -15 dB for the loudspeaker when the microphone is activated
- Microphone unit can be programmed by using the configuration software with the control unit
- APO function for **A**utomatic **P**ower **O**FF when the control unit is in the stand-by mode or switched off
- Processor-controlled charging electronics to prevent the "memory effect" of the battery
- Reliable charging electronics ensures immediate use of the microphone units
- LED ring of the gooseneck microphone indicates charging status
- Maximum charging time of 2 hours when the battery (NiMH) is completely empty
- Operating time approx. 20 hours

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DESCRIPTION

The MCW-D 521 delegate microphone unit is equipped with a microphone button in the housing with which the participant can switch his microphone on and off. With the Automatic Channel Allocation function the transmitting channels of the microphone units are allocated automatically. When the microphone button is pressed in the manual operating mode the request-to-talk is received by the control unit (a possible external dual colour LED will illuminate red). Then the control unit checks which of the available receiving channels is free. Then the control unit informs the microphone unit which channel it should use for transmitting. When the channel of the microphone unit is set and checked by the control unit, the microphone is switched on (dual colour LED changes from red to green). The ready-to-talk status of the microphone is also indicated by the red ring around the gooseneck microphone. In the Request-to-Talk-mode of the discussion system the request-to-talk is received, but the microphone is not switched on. The red LED indicates that the request-to-talk has been received. The microphone is switched on by the operator at the PC by using the "MCW-D 50 Conference" software or a media control system. When the microphone button is pressed once again, the delegate clears his/her request-to-talk.

Depending on the configuration with the "MCW-D 50 Conference" software the following operating modes are available:
Override: the first microphone is switched off, when the maximum number of switched on microphones is exceeded.
Voice activation: the microphone is switched on, when someone speaks into it.
Push-To-Talk: the microphone button is held down, while the participant is speaking.

The integrated loudspeaker reproduces the audio signal of the whole conference system. Depending on the audio signal routing in the control unit the loudspeaker can reproduce other audio signals such as a wireless microphone in the auditorium.

The parameters of the microphone unit are adjusted via PC by using the "MCW-D 50 Conference" software. The parameters are adjusted for all microphone units.
If a participant forgets to switch off his/her microphone and if nobody speaks into the microphone, the "Auto-Off" function switches the microphone off. The time when the "Auto-Off" function will be activated and the sensitivity can be configured. A headphone (e.g. DT 1) can be connected to the documentation output. The volume of the loudspeaker is adjusted and can be controlled with the MCW-D 50 control unit or a media control system. The ducking level determines the attenuation of the loudspeaker level when the microphone of the microphone unit is switched on. Each microphone unit has its own address. An existing system can be complemented at any time.

The DSSS-transmission provides high immunity against unauthorised listening. In addition to this, a conference system including the appropriate microphone units can be protected with an 8-digit alphanumeric code. A microphone unit that does not have the correct code will be identified by the control unit and switched off immediately.

The integrated rechargeable battery allows an operation of the microphone unit for approx. 20 hours depending on the amount of participation in the discussion. As soon as the remaining battery time is below a certain threshold of 1 hour, the power on LED on the rear of the microphone unit will flash or if the system is controlled by PC or a media control system, the low battery capacity can be also indicated. The charging time of a completely empty battery is around 2 hours with the integrated processor-controlled charging electronics. Depending on the use of the microphone unit the charging time can be less.
As an option the microphone unit can be powered and charged by a DC power supply adapter.

The microphone unit is switched on by briefly pressing the microphone button once. There are various ways to switch off the microphone unit:
1. Press the microphone button for 3 seconds.
2. Press the standby button of the MCW-D 50 control unit for 3 seconds to switch off all activated microphone units.
3. Switch off all microphone units via an RS 232 or TCP/IP command from the PC or media control system.
4. Switch off the control unit; after approx. 3 minutes the microphone unit will be switched off.

MCW-D 521

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

Microphone Units

Transmitter power. . . . . max. 15 dBm per
channel (average,
duty cycle $\leq$ 30%)*
Battery voltage . . . . 8 NiMH cells, 1600 mAh
External DC operation. . . . . 18 V DC (±0.5 V),
residual hum < 20 mV,
400 mA
Loudspeaker. . . . . Wide-band, integrated
loudspeaker
Volume decrease when
Mic On ("Ducking") . . . . 15 dB fixed setting
AF output. . . . . Documentation output,
unbalanced jack socket
(3.5 mm, stereo)

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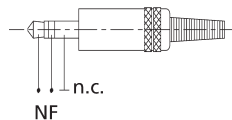
Connection. . . . . Tip = AF+
Ring = AF -
Shield = ground
Output level . . . . max. 2.4 V rms on open
circuit, T.H.D. < 1%
2.3 V rms at 80 Ω load,
T.H.D. < 1%
Min. impedance . . . . 600 Ω
Integrated limiter against clipping . . . . . cannot be switched off
Limiter activity at . . . . 126 dB SPL
Power supply . . . . 9.6 V with integrated
NiMH battery (8 cells)
Operating time depending on
the type of the microphone unit . . . . approx. 20 hours in
discussion mode;
operating time depends
on the volume
Temperature range
at < 90% humidity . . . . +10° - +40°C
Storage temperature
at < 90% humidity . . . . -20° - +55°C
Dimensions (without microphone)
Length . . . . 191 mm
Width. . . . . 156.5 mm
Height . . . . 52 mm
Weight . . . . 1.7 kg

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

ARCHITECT'S SPECIFICATIONS

Digital wireless delegate unit with one button to switch the micro-
phone on/off or to register the request to talk. DSSS modulation
(Direct Sequence Spread Spectrum) ensures high immunity from
interference. World-wide approval for the 2.4 GHz frequency band.
Integrated loudspeaker with voice equalisation for decentralised sound
reinforcement. ACA - Automatic Channel Allocation via integrated,
digital transceiver. Dual colour LED: green indicates switched on
microphone; red indicates a request-to-talk. Cardioid condenser
gooseneck microphone (back electret). Gooseneck length: 400 mm;
gooseneck diameter: 6 mm. Illuminated ring to indicate the ready-
to-talk condition. Using the configuration software with a PC it is
possible to adjust and configure the volume of the loudspeaker,
threshold for voice activation and auto-off-switching. Integrated
rechargeable NiMH battery ensures an operating time of approx.

20 hours. Processor-controlled charging technology for a charging
time of 2 hours without memory effect. The battery is monitored by
the control unit and an LED indicates when the capacity is too low.
2 charging contacts. Mini jack socket (3.5 mm) as documentation
or headphone output. DC-connection for recharging the battery or
powering the microphone unit with an external power supply unit.
High-quality plastic housing with charcoal-grey, non-glare and
scratch-resistant Nextel® finish. Integrated antenna.
Dimensions (Width x Height x Depth) 156.5 x 52 x 191 mm. Weight:
1.7 kg

Manufacturer: beyerdynamic
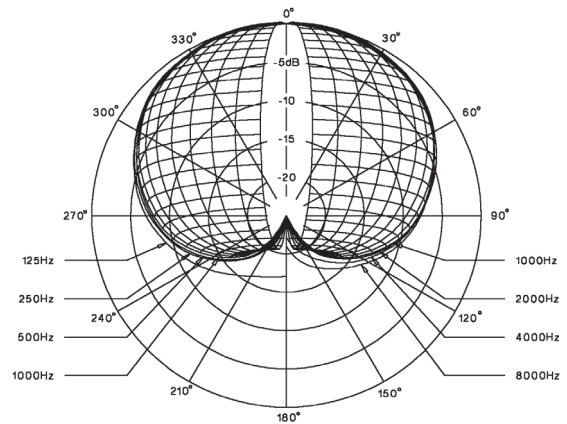Type: MCW-D 521
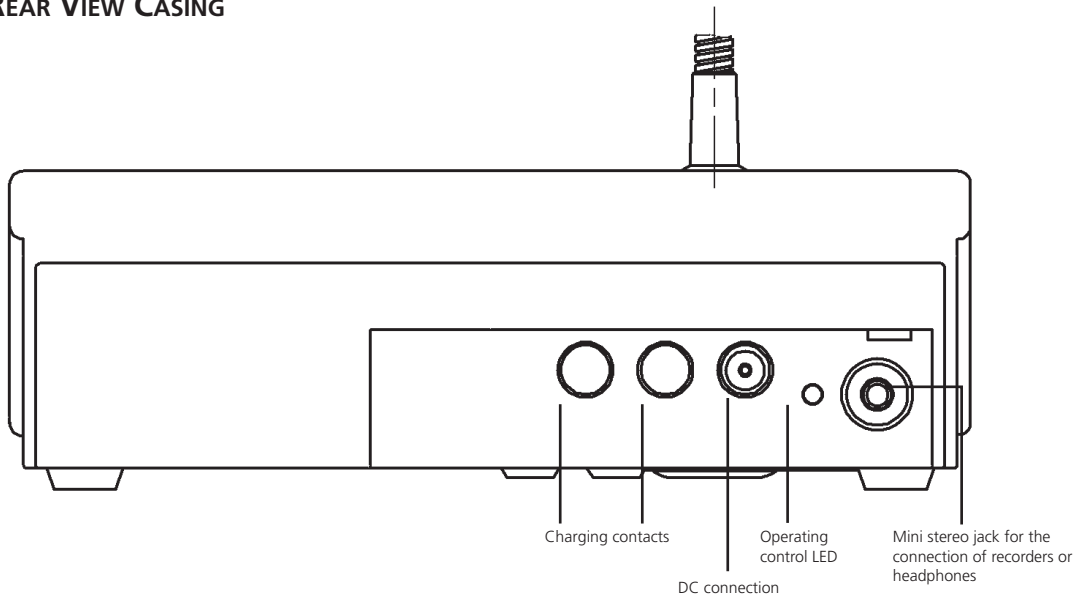
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SHM 214 C 03 MICROPHONE
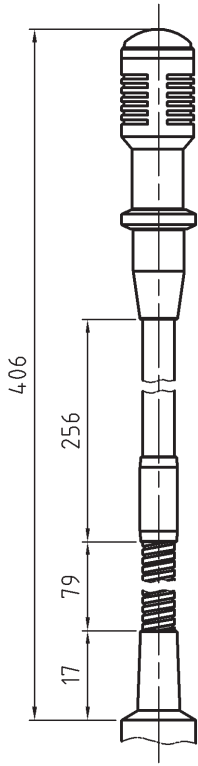
OPTIONAL ACCESSORIES

CA 2475   Microphone stand, 3/8",
adjustable height 870 - 1575 mm,
with heavy base plate and plate where
to place MCW-D or MCS
microphone units, basalt grey . . . . Order # 472.212

CA 2457   Charger/DC power supply unit
for MCW-D 5** microphone
units . . . . Order # 479.721
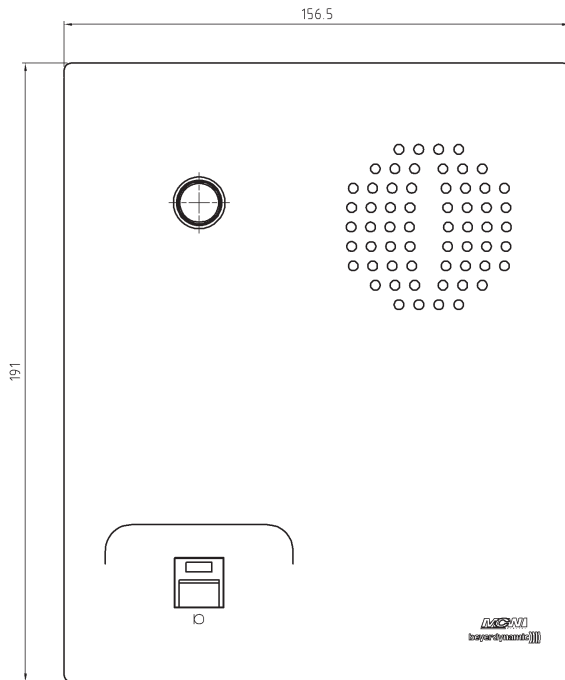
WIRING DIAGRAM

REAR VIEW CASING

Charging contacts

DC connection

Operating control LED

Mini stereo jack for the connection of recorders or headphones

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MCW-D 521

DIMENSIONS CASING

Top view

156.5

191

Lateral view

457

52

For further distributors worldwide, please go to www.beyerdynamic.com
Non-contractual illustrations. Contents subject to change without notice. E5 / MCW-D 521 (11.09)

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MCW-D 521

EXPLODED VIEW

Chassis BN 17- 642

Loudspeaker

Gooseneck Microphone
SHM 214 C03

Battery

Control Board B24-753
with radio module

Bottom BN 56-1025

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