

beyerdynamic

MCW DIGITAL

WIRELESS, DIGITAL CHAIRMAN MICROPHONE UNIT MCW-D 2073 WITH DISPLAY AND LOUDSPEAKER

Order # 472.778



FEATURES

- High safety against interferences and unauthorised listening due to specific DSSS modulation (Direct Sequence Spread Spectrum)
- 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
- Multilingual LC-Display 2 lines, 16 characters, with automatic switch-off of the illumination
- 3 multi-function buttons and LC-Display for votings, channel selection in interpreting applications, headphone volume, battery status or volume control of the whole discussion system
- 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
- Clear button to switch off all activated delegate microphone units
- Programmable function button for different priorities or external controls
- Green LED to indicate microphone is switched on and ready for talking
- Multi-function-connection for DC-operation or battery charging
- Gold-plated charging contacts
- Power on LED
- Mini stereo jack (3.5 mm) as headphone output or documentation output for the connection of recorders, dictating machines etc.
- Connection for 3/8" stand adapter (as an option)
- Modern fully metal housing with charcoal-grey, non-glare and scratch-resistant Nextel® finish
- The following parameters can be programmed:
 - loudspeaker level, recording/headphone level, loudspeaker attenuation when microphone is switched on, auto-off settings, RF transmitter power, RF input sensitivity, low battery indication, voice-controlled switching on, hold time
- Adjustable Auto-Off switching when nobody speaks into the microphone
- Microphone unit can be programmed by using the appropriate 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
- Maximum charging time of 2 hours when the battery (NiMH) is completely empty
- Operating time 8 - 9 hours depending on the relation between Speaking and Listening

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DESCRIPTION

The MCW-D 2073 chairman microphone unit is equipped with a clear, function and a microphone button in the housing with which the participant can switch on and off his microphone. The chairman microphone unit does not depend on the maximum number of simultaneous open microphones. Unlike the delegate microphone units the chairman microphone unit is not controlled by ACA (Automatic Channel Allocation), but has an extra transmitting channel exclusively for the chairman. The ready-to-talk status of the microphone is indicated by the green LED in the housing and the red illuminated ring around the gooseneck microphone. Using the clear button all switched-on microphones of the delegate microphone stations are switched off.

For the function button there are various configurations possible with the MCW-D 200 Editor software:

Priority "Normal"

When the chairman switches his microphone on with the function button the switched on delegate microphone units are switched off. Afterwards the delegates can switch on their microphone and take part into the discussion again, while the chairman's microphone is still switched on.

Priority "Mute"

When the chairman switches his microphone on with the function button the switched on delegate microphone units are muted as long as the chairman is speaking. If the chairman switches his microphone off, all delegate microphone units that had been switched on before, are switched on again.

Priority "Clear"

When the chairman switches his microphone on with the function button the switched on delegate microphone units are switched off. The delegates can switch on their microphone again, when the chairman has switched off his.

"Next" Function

Next function to allocate the next microphone unit which is in the internal request-to-speak list. A maximum of ten requests to speak can be registered in the internal request-to-speak list.

"Function"

When the button is pressed a control command is sent via the serial RS 232 interface. In conjunction with a media control system more programmable functions can be released with this control command, such as switching the light on or off, to pull out a screen etc.

Audio Mute

An audio signal, e.g. from a wireless microphone, can be switched off. This function can be combined with a "Clear" command to switch off activated delegate microphones.

Depending on the configuration with the "MCW-D 200 Editor" software the following operating modes are available:

Push-To-Talk: the microphone will be switched on as long as the microphone button will be pressed.

Voice activation: the microphone is switched on, when someone speaks into it.

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.

In the first line the LC-Display indicates the menu and the second line indicates the description of the appropriate button functions of the individual menus. With the middle button you can change from one menu to the next. The left and right button are for adjustments within the individual menus. Furthermore, the display is for voting and to indicate text messages (paging).

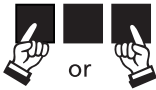
If one of the buttons is pressed the display will be illuminated. This illumination is switched off automatically after 10 seconds. In the menu "Channel Selection" it is possible to choose among 8 possible transmission channels for the headphone output (refer to illu. 1).

DESCRIPTION

Note:

The MCW-D 200 control unit has to be equipped with the CA 2451 PCB Individual In/Out so that the control unit can receive and transmit the appropriate foreign language channels. As a standard the control unit is equipped with 5 transmitting/receiving modules, i.e. for reception it is possible to use 1 data channel, 1 chairman microphone unit and up to 3 delegate microphone units and for transmission to the microphone units all 5 transmitting channels can be used. For a detailed description please refer to the appropriate MCW-D 200 or MCW-D 200 Editor manual. In the menu "Headphone Volume" the volume of the selected channel can be adjusted individually (refer to illu. 2). The menu "Battery" indicates the remaining operating time of the microphone unit (refer to illu. 3). Under the menu "Master Volume" the volume of the microphone unit's loudspeaker of the whole conference system can be adjusted (illu. 4).

Channel
- next +



illu. 1

Level (Headph.)
- next +



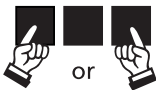
illu. 2

Battery: < 30 min
next



illu. 3

Master Volume
- next +



illu. 4

The parameters of the microphone unit are adjusted via PC by using the "MCW-D 200 Editor" software. The parameters can be adjusted for each microphone unit individually or for the complete discussion system.

It is determined which one of the 8 even or 8 odd transmitting and receiving channels the microphone unit should use for transmitting and receiving. 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.

The output level of the headphone connection can be set for recording level for documentation or for headphone level. The volume of the loudspeaker is adjusted and can be controlled with a media control system or via the menu "Master Volume". The ducking level determines the decrease of the loudspeaker level when the microphone of the microphone unit is switched on. The RF-transmitter power and the RF-receiving sensitivity can be adjusted for multi-channel use, in big conference halls or for safety reasons. Each microphone unit has its own address and existing systems can be complemented at any time.

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

The integrated rechargeable battery allows operation of the microphone unit of 8 - 9 hours depending on the amount of participation into the discussion. As soon as the remaining battery time is below a certain threshold of 30 minutes or 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 processor-controlled charging electronics inside the charging case. Depending on the use of the microphone unit the charging time can be less. As an option the microphone unit can be powered by a DC power supply adapter.

The microphone unit is switched on by 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 100 control unit for 3 seconds to switch off all activated microphone units.
3. Switch off all microphone units via an RS 232 command from the PC or media control system.
4. Switch off the control unit; after approx. 2 minutes the microphone unit will be switched off.

The microphone unit can be supplied in special colours subject to order and quantity requirements.

The weight of the all metal housing gives the microphone unit good physical isolation against mechanical coupling.

ARCHITECT'S SPECIFICATIONS

Wireless and digital chairman unit with three buttons to switch the microphone on/off, clear all activated delegate microphone units and a one special button that can be programmed e.g. as priority button or for special functions in conjunction with a serial interface at the control unit. DSSS modulation (Direct Sequence Spread Spectrum) ensures high noise immunity. World-wide approval for the 2.4 GHz frequency band. Integrated loudspeaker with voice equalisation for decentralised sound reinforcement. LC-Display, 16 characters/ 2 lines, with 3 multi-function buttons for voting, channel selection in interpreting applications, control of the headphone volume, volume of the whole discussion system and indication of the battery status. In the voting mode you can select one of the voting options with the multi-function buttons; the voting result is shown in the display. Green LED to indicate switched on microphone. Cardioid condenser gooseneck microphone (back electret). Gooseneck length: 400 mm; gooseneck diameter: 8 mm. Illuminated ring to indicate the ready-to-talk status. Using the configuration software with a PC it is possible to adjust and configure the RF transmitter power and receiving sensitivity, loudspeaker volume and attenuation, audio level at the record output and auto-off-switching. Integrated rechargeable NiMH battery ensures an operating time of 8 - 9 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 gold-plated charging contacts. Mini jack socket (3.5 mm) as documentation or headphone output. Multi-function-connection for recharging the battery via an external charger or powering the microphone unit with an external power supply unit. Fully metal housing with charcoal-grey Nextel® finish. Integrated antenna. Dimensions (Width x Height front / Height rear x Depth) 180 x 15 / 52 x 190 mm

Manufacturer: beyerdynamic
Product: MCW-D 2073

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 2455	Power supply with connecting cable and multi-pin plug	Order # 465.216
CA 2456	Charging power supply with connecting cable and multi-pin plug for single charging of the MCW-D microphone units	Order # 465.569

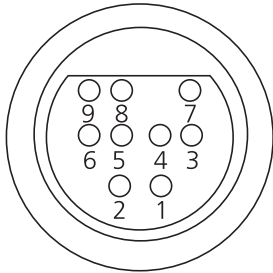
TECHNICAL SPECIFICATIONS

General

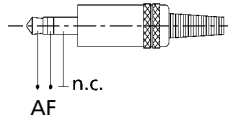
Frequency range	2400 - 2483.5 MHz (ISM-band)
Modulation	Direct Sequence Spread Spectrum DSSS, digital signal processing acc. to own standard
Max. number of channels	2*8 useable duplex channels per system
Signal-to-noise ratio	80 dB typ., (unweighted signal-to-noise ratio)
Range between microphone units and control unit	> 100 m at intervisibility
Power supply	110 - 240 VAC 50/60 Hz
Approval	world-wide

Microphone Units

Transmitter power	max. 10 mW per channel (10 dBm)
Connection	Multi-port connection, type mini DIN Pin 1 = Ground (ICP) Pin 2 = +VDD (ICP) Pin 3 = +VPP (ICP) Pin 4 = RB6 (ICP) Pin 5 = RB7 (ICP) Pin 6 = RC3 / SDL (I2C) Pin 7 = RC4 / SDA (I2C) Pin 8 = +Battery (parallel to the charging contacts) Pin 9 = +Supply (max. 180 mA) Reset = Pin 1 + 3 bridged* Housing = Ground



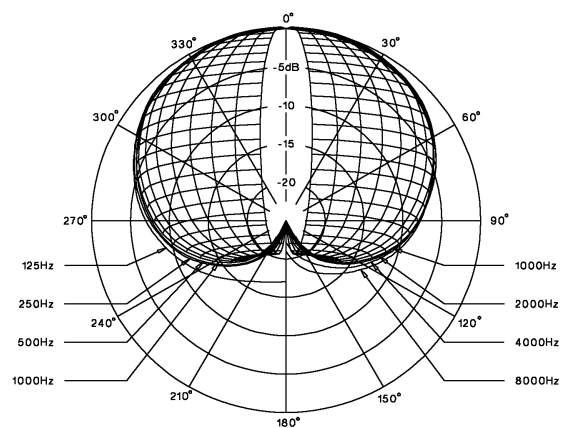
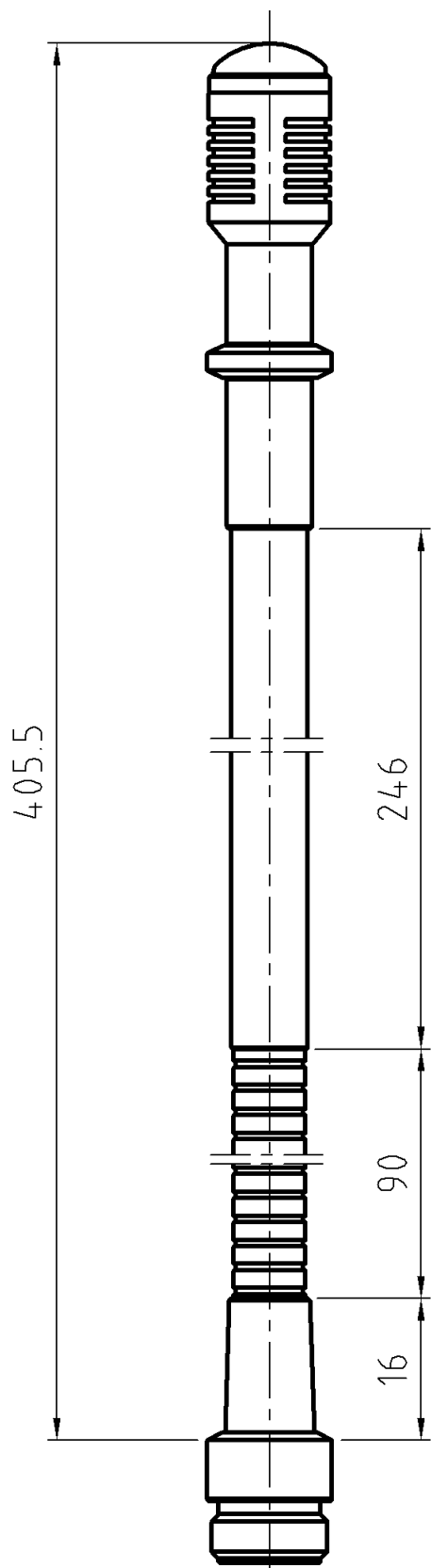
Battery voltage	12 NiMH cells, each with 1600 mAh
Current consumption	150 - 180 mA (depending on the operating status)
External DC operation	18 V DC (± 0.5 V), residual hum < 20 mV, 180 mA (at 18 V)
Loudspeaker	Wide-band, integrated loudspeaker
Volume decrease when Mic On (ducking)	adjustable, set to decrease 18 dB at the factory
AF output	Documentation output, adjustable, unbalanced jack socket (3.5 mm, stereo)



Connection	Top = AF+ Ring = AF - Shield = not connected
Output level	max. 2.4 V rms on open circuit, T.H.D. < 10% 2.3 V rms at 30 Ω load, T.H.D. < 10%
Min. impedance	200 Ω
Integrated limiter against talkover	cannot be switched off
Limiter activity	from 106 dB SPL
Microphone sensitivity	300 mV/Pa (measured at XLR-output of MCW-D 100) ± 2 dB (1 kHz)
Max. SPL	> 120 dB SPL
Power supply	14.4 V with integrated NiMH battery (12 cells)
Operating time	8 - 9 hours
Temperature range	+10° - 40°C (at < 90% humidity)
Storage temperature	-20° - 55°C (at < 90% humidity)
Dimensions (without microphone)	Length: 190 mm Width: 180 mm Height front: 15 mm Height rear: 52 mm
Weight	1780 g
Colour	Nextel®, stone grey (B2); special colours are available on request

*ATTENTION:

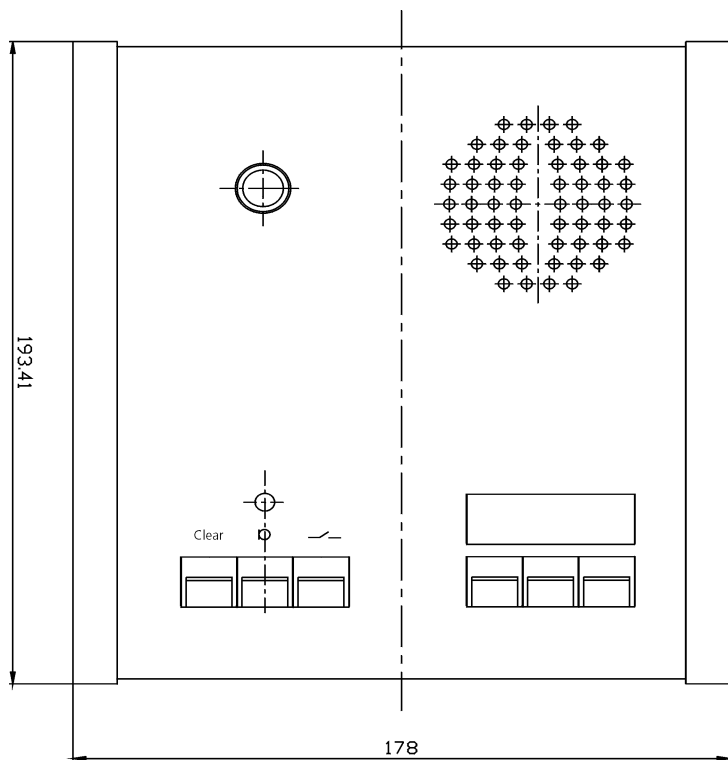
If Pin 1 + 3 are not bridged, the microphone unit will be destroyed.



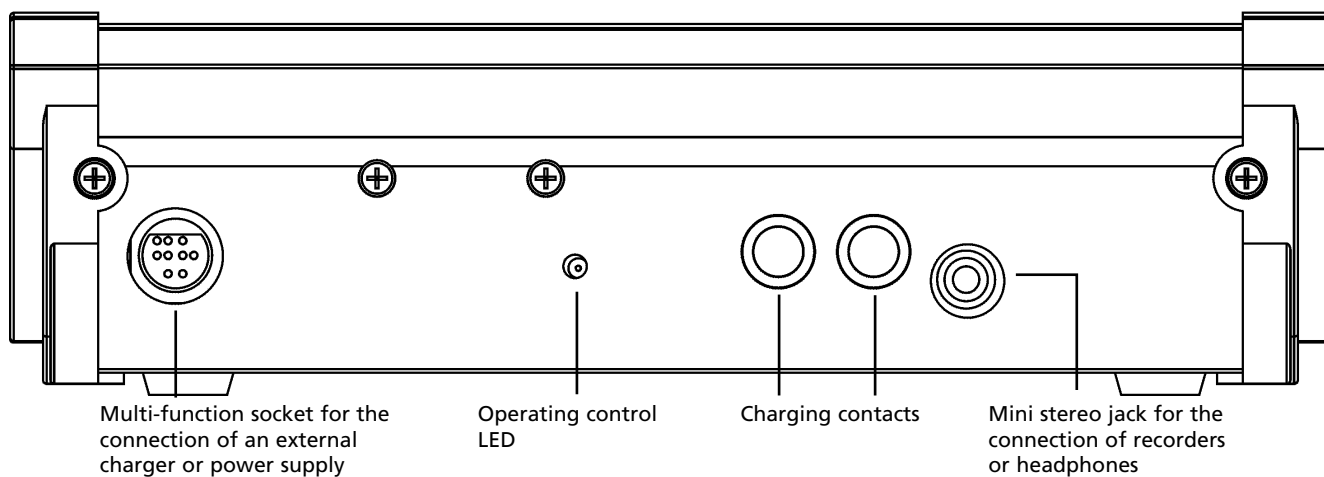
Measured in mm

DIMENSIONS CASING

Top View



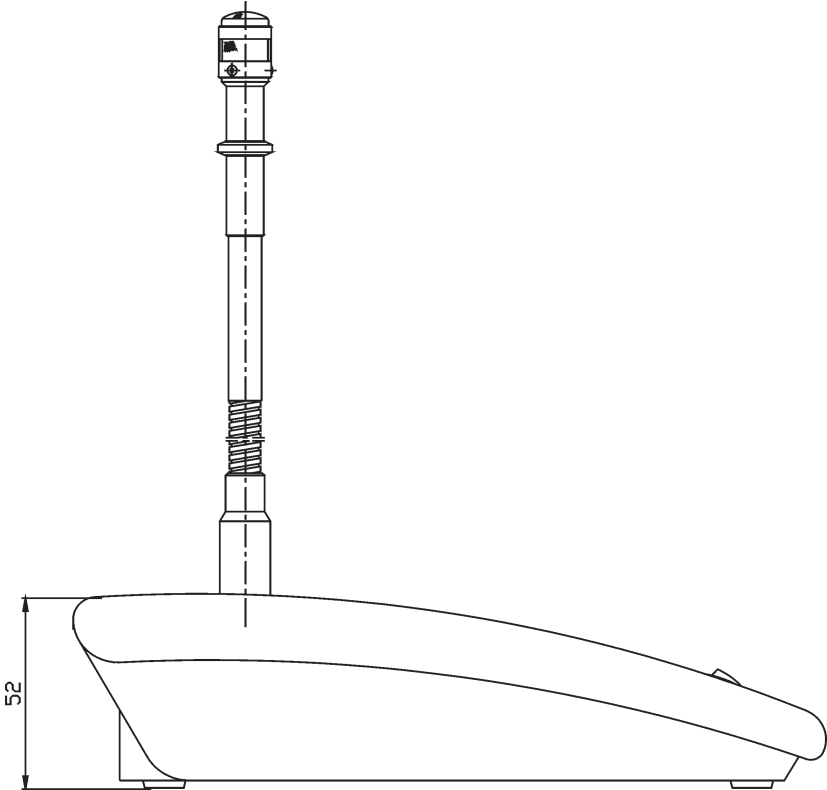
Rear view



Measured in mm

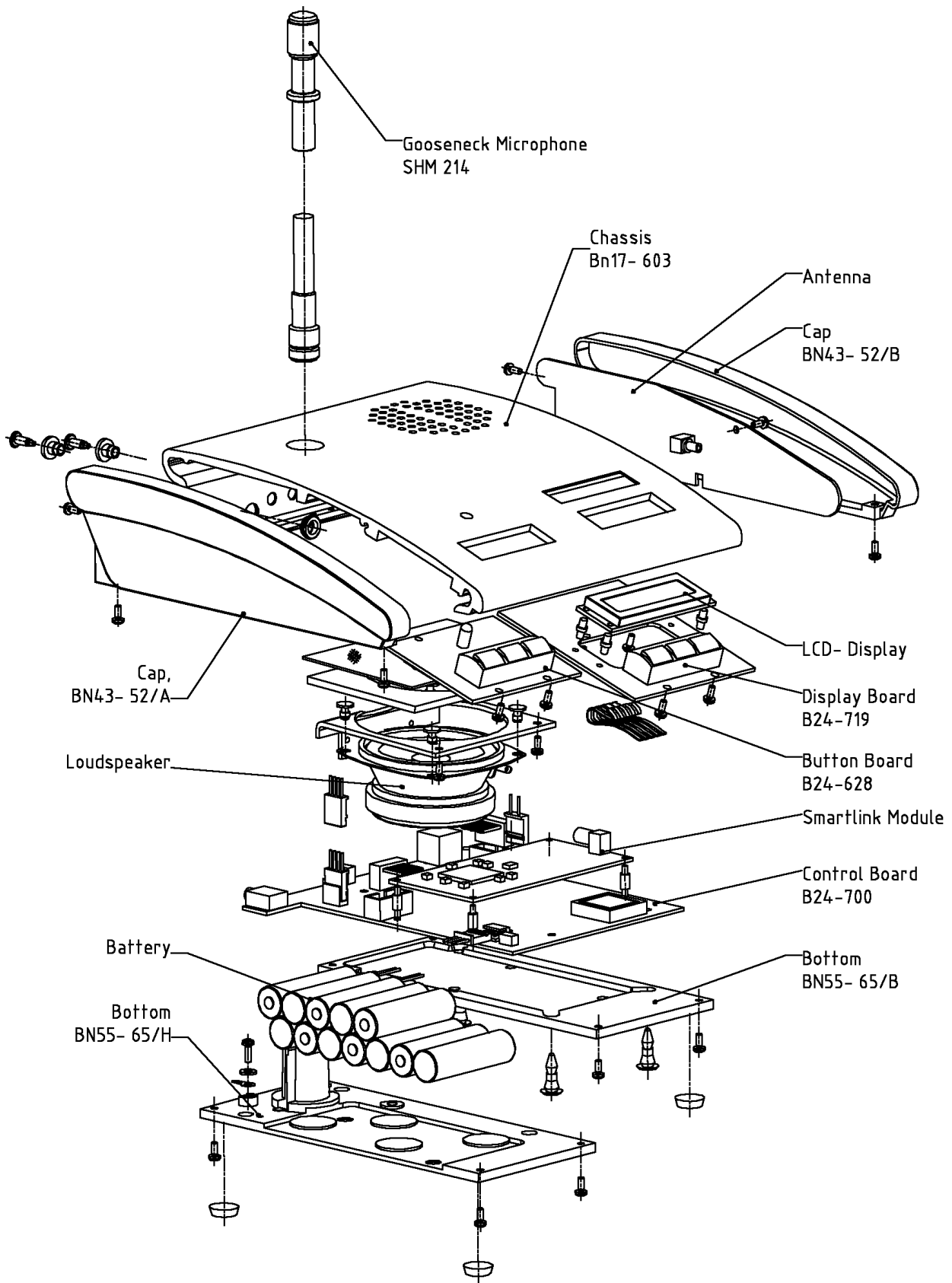
DIMENSIONS CASING

Lateral view



Measured in mm

EXPLODED VIEW



Non-contractual illustrations. Subject to change without notice.