

Operating Instructions Busch-AudioWorld®

Built-in loudspeaker
8222 EB-500
Busch-AudioWorld®



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1 Safety



Warning

Electric voltage!

Risk of death and fire due to electrical voltage of 230 V.

- Work on the 230V supply system may only be performed by authorised electricians!
- Disconnect the mains power supply prior to installation and/or disassembly!

2 Intended use

The device is part of the Busch-AudioWorld® system and is to be used exclusively with the components that are supplied and licensed as described in the "Structure and Function" chapter. The device must only be installed in dry indoor rooms.

2.1 Environment



Consider the protection of the environment!

Used electric and electronic devices must not be disposed of with domestic waste.

- The device contains valuable raw materials which can be recycled. Therefore, dispose of the device at the appropriate collecting depot.

All packaging materials and devices bear the markings and test seals for proper disposal. Always dispose of the packaging material and electric devices and their components via the authorized collecting depots and disposal companies.

The products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.

(EU Directive 2002/96/EC WEEE and 2002/95/EC RoHS)

(EU REACH ordinance and law for the implementation of the ordinance (EC) No.1907/2006)

3 User Manual

Detailed information for planning Busch-AudioWorld® systems is contained in the user manual. Download at www.Busch-Jaeger.com.

4 Technical data

General	
Basket diameter	5" (13 cm)
Impedance	16 ohm
Sound pressure	92 dB
Radiation angle	100°
Protection type	IP 20

Device-specific		
Nominal power	8222 EB-500	6 W RMS
	8224 EB-500	7 W RMS
Frequency response	8222 EB-500	50 ... 11000 Hz
	8224 EB-500	84 ... 16500 Hz
Temperature range	8222 EB-500	0 ... 35 °C
	8224 EB-500	-25 ... 55 °C

5 Setup and function

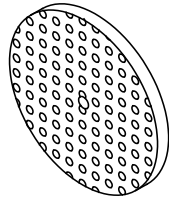
5.1 Features of function and equipment

The built-in loudspeaker 8222 EB-500 is used to play back the audio signals of Busch-Jaeger amplifier inserts, radios, MDRC amplifiers, and microphone consoles.

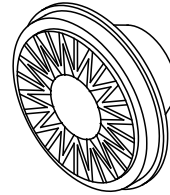
5.2 Possible combinations

	 8222 EB-500	 8222 EB-500
 8205	X	X
 8208	X	X
 8211 U	X	X
 8214 U	X	X
 8215 U	X	X
		 8227
		 8228
		 8229/1
		 8229/2

5.3 Device diagram

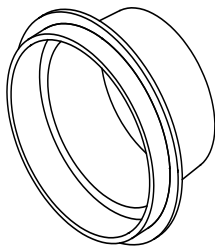


8227 Loudspeaker grille (plastic)
8228 Loudspeaker grille (metal)

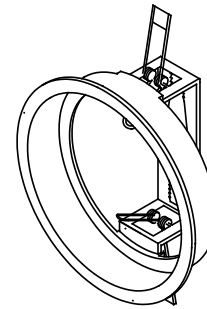


8222 EB-500 Panel loudspeaker
8224 EB-500 Moisture-proof loudspeaker 5"

Fig. 1: Device diagram for protection class IP 20



8229/1 Flush-mounted wall box



8229/2 Hollow-wall installation ring

Fig. 2: Device diagram for protection class IP 20

6 Installation and electrical connection



Warning

Electric voltage!

- Risk of death due to electrical voltage of 230 V during short-circuit in the low-voltage line.
- Low-voltage and 230 V lines must not be installed together in a flush-mounted socket!

6.1 Requirements for the electrician



Warning

Electric voltage!

Install the device only if you have the necessary electrical engineering knowledge and experience.

- Incorrect installation endangers your life and that of the user of the electrical system.
- Incorrect installation can cause serious damage to property, e.g. due to fire.

The minimum necessary expert knowledge and requirements for the installation are as follows:

- Apply the "five safety rules" (DIN VDE 0105, EN 50110):
 1. Disconnect from power;
 2. Secure against being re-connected;
 3. Ensure there is no voltage;
 4. Connect to earth and short-circuit;
 5. Cover or barricade adjacent live parts.
- Use suitable personal protective clothing.
- Use only suitable tools and measuring devices.
- Check the supply network type (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).

6.2 General installation instructions

- Terminate all branches of the wiring system via a connected bus device (e.g., indoor station, outdoor station, system device).
- Do not install the system controller directly next to the bell transformer and other power supplies (to avoid interference).
- Do not install the wires of the system bus together with 230 V wires.
- Do not use common cables for the connecting wires of the door openers and wires of the system bus.
- Avoid bridges between different cable types.
- Use only two wires for the system bus in a four-core or multi-core cable.
- When looping, never install the incoming and outgoing bus inside the same cable.
- Never install the internal and external bus inside the same cable.

6.3 Mounting methods

The built-in loudspeaker may be mounted only in the flush-mounted wall box 8229/1 or in the hollow wall -installation ring 8229/2.

6.4 Area of application

Interior areas

- Built-in loudspeakers 8222 EB-500 and 8228 are suitable for indoor areas and dry rooms.

Wet room area

- Built-in loudspeakers 8224 EB-500 and 8227 (ceiling and wall installation) are suited for outdoor areas and wet rooms.



Note

However, exposure to direct sunlight and driving rain should be avoided.

6.4.1 Mounting of the built-in loudspeaker

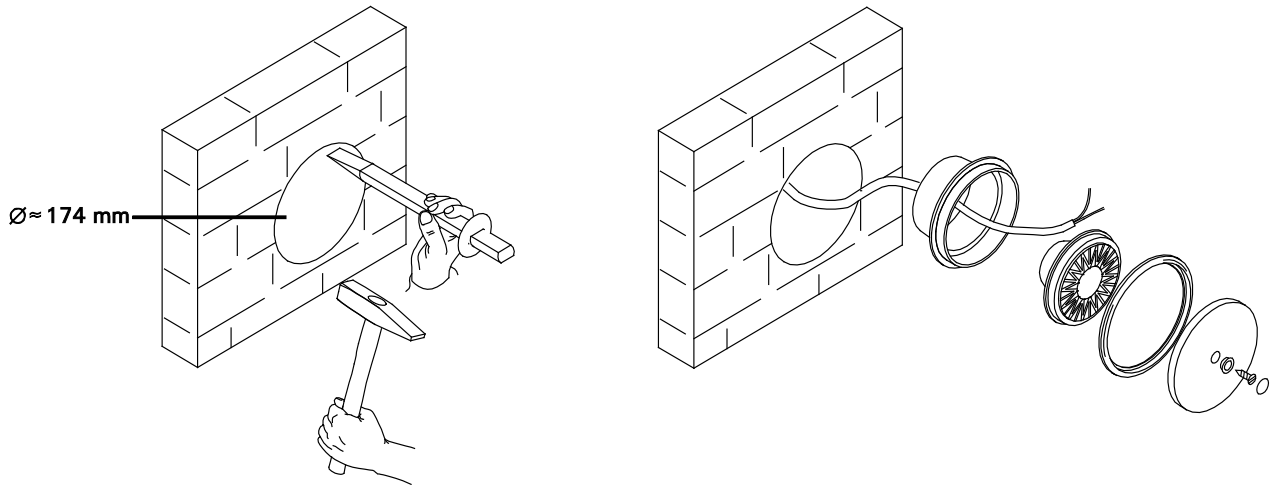


Fig. 3: Mounting the loudspeaker

Diameter of the mounting hole should be 174 mm.

1. Install the flush-mounted wall box or the hollow wall installation ring.
2. Connect the power to the loudspeaker.
3. Put the ring on the loudspeaker.
4. Install the loudspeaker grille with a screw as shown.

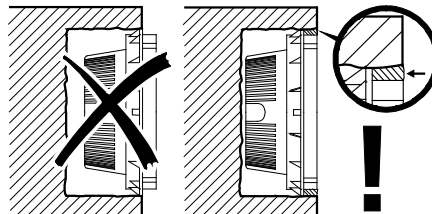


Fig. 4: Installation in flush-mounted wall box

6.5 Installation ring



Note

Use the installation ring for hollow walls!

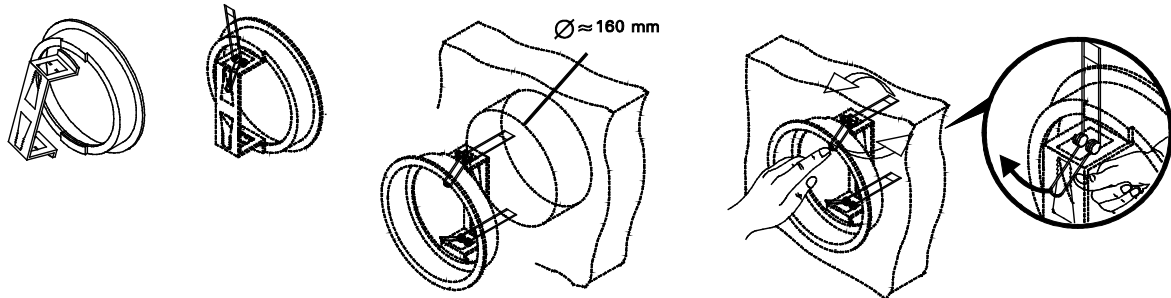


Fig. 5: Mounting the installation ring

1. Plug the spacer bracket into the opening provided.
2. Clip the tensioning spring into the spacer bracket at the top and bottom.
3. Press the tensioning springs in a horizontal direction.
4. Plug the installation ring into the 160 diameter hole.
5. Press the inside of the tensioning spring toward the back so that the large bracket folds toward the top and the bottom behind the wall.
The clamping effect prevents the it from falling out.

6.6 Disassembly of the built-in loudspeaker

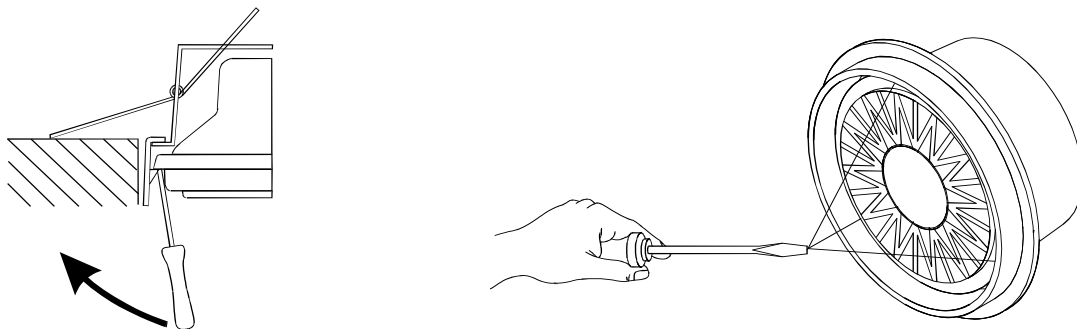


Fig. 6: Dismantling the built-in loudspeaker

1. Loosen the tensioning springs on the loudspeaker as shown.
2. Carefully remove the loudspeaker towards the front.

6.7 Electrical connection

6.7.1 Installation / connection possibilities

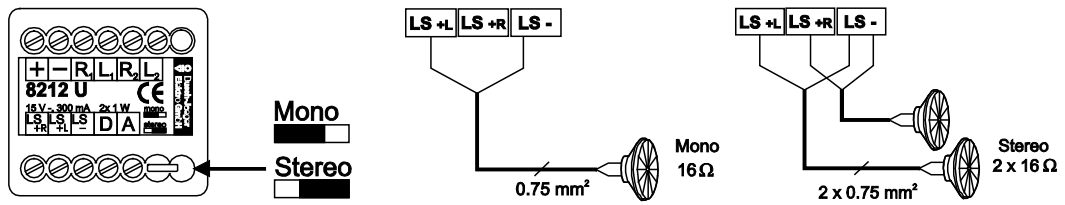


Fig. 7: Electrical connection

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