



dB Technologies Opera Reevo 210 Coax Quasi 3 Way Active Speaker User Manual

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WARNING

Only expert personnel may use the product and its accessories! To prevent hazards to people, animals and/or objects, make sure that the installation is stable and secure. Comply with the safety regulations and laws in force in the country in which you use the product. For safe use, periodically check that all parts are in good working condition before use. Only authorised personnel may carry out design, calculations, installation, testing and maintenance of professional flown or stacked audio systems. AEB Industriale shall not be liable for improper installation carried out without adequate safety measures.

Never suspend the speakers from the handles! Only use the accessories and configurations described in this manual, and proceed in accordance with the instructions given in the manuals for the accessories.

Do not obstruct the amplifier cooling fins at the back. In the event of overheating, the audio volume is gradually reduced until the module is thermally stable. The level is automatically restored on reaching the correct operating temperature. Do not attempt to open the amplifier. In the event of malfunction, immediately turn off the power, disconnect the unit from the mains and contact an authorised service centre.

Only use the power cable provided. Do not use the monitor for a prolonged period with the limiter LED steadily lit or flashing as this indicates operation under stress with excessive distortion.

Check periodically the integrity and the functionality of the accessories and the technical equipments for a safe installation. User should never apply a load that exceeds the working load limits of any rigging components or equipment here presented. Design, calculation, installation, testing and maintenance of suspension and stack systems for audio equipment must be performed only by qualified and authorized personnel. AEB Industriale s.r.l. denies any and all responsibility for improper installations, in the absence of safety requirements.

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IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong.

The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution, when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

ADDITIONAL SAFETY INSTRUCTIONS

- No naked flame sources, such as lighted candles, should be placed on the apparatus
- Do not use the apparatus in tropical climates

GENERAL INFORMATION

WELCOME!

Thanks for purchasing a product that was designed and developed in Italy by dBTechnologies! This active speaker embodies years of experience and innovation in the field of sound reproduction, with the use of cutting edge solutions in the fields of acoustics, electronics and materials research.

INTRODUCTORY OVERVIEW

OPERA REEVO is the new active speaker series composed of two models: OPERA REEVO 210 (with 10" neodymium woofers) and OPERA REEVO 212 (with 12" neodymium woofers). The sound reproduction of this series is called "Quasi 3-way" and is based on a dual woofer with a coaxial mid/high-frequency driver to increase the efficiency of the top woofer. A phase plug installed in the bottom woofer significantly improves the transient response and overall behaviour of the transducer.

Combining small size, wide acoustic coverage and high sound powers, these speakers are suitable for use as stage monitors as well as the main system in small/large venues.

The main features are:

- quick and easy to use
- easy to transport
- great versatility
- small size
- high sound powers

USER INFORMATION

To use your OPERA REEVO speaker in the best way, we recommend that you:

- read the Quick Start manual included in the package and all of this User Manual, and keep them throughout the entire life of the product.
- register the product in the “SUPPORT” section at the <http://www.dbtechnologies.com> website.
- keep proof of purchase and the WARRANTY (User manual “section 2”).

MECHANICAL AND ACOUSTIC FEATURES

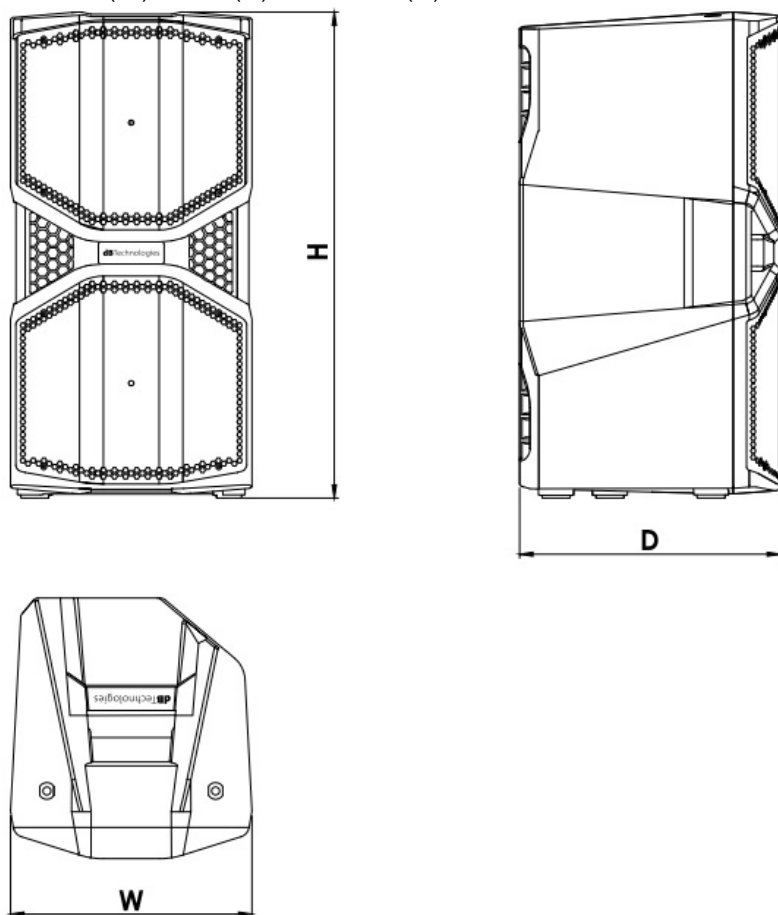
DIMENSIONS AND WEIGHT

The OPERA REEVO speakers have been designed with particular attention to optimising their weight and overall size. The OPERA REEVO 210 model weighs 17.2 kg, while the OPERA REEVO 212 mode weighs 20.4 kg. The box is made of polypropylene.

The dimensions are:

300 mm (W) x 604 (H) x 324 mm (D) – OPERA REEVO 210

345 mm (W) x 690 (H) x 376 mm (D) – OPERA REEVO 212



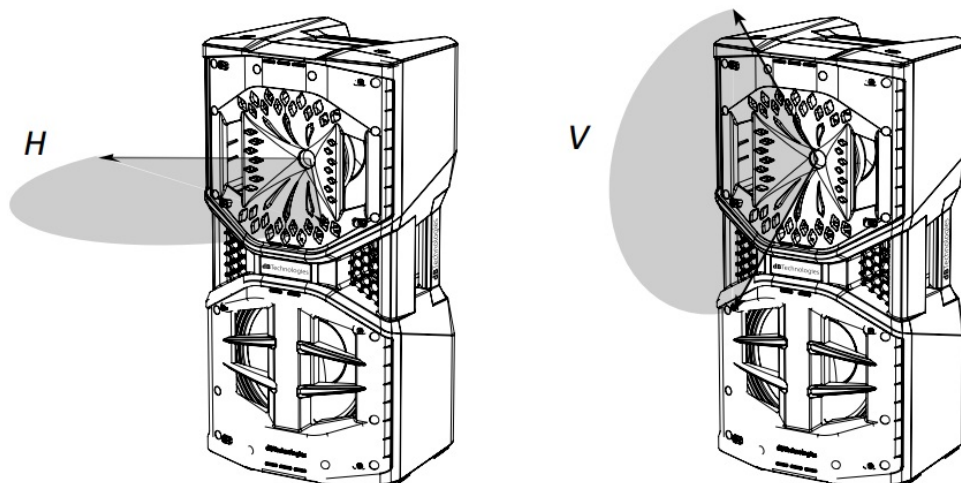
	W	H	D
OPERA REEVO 210	W _{mm} 300	604mm	324mm
OPERA REEVO 212	345mm	690mm	376mm

ACOUSTIC COVERAGE

The two models have the following acoustic coverage:

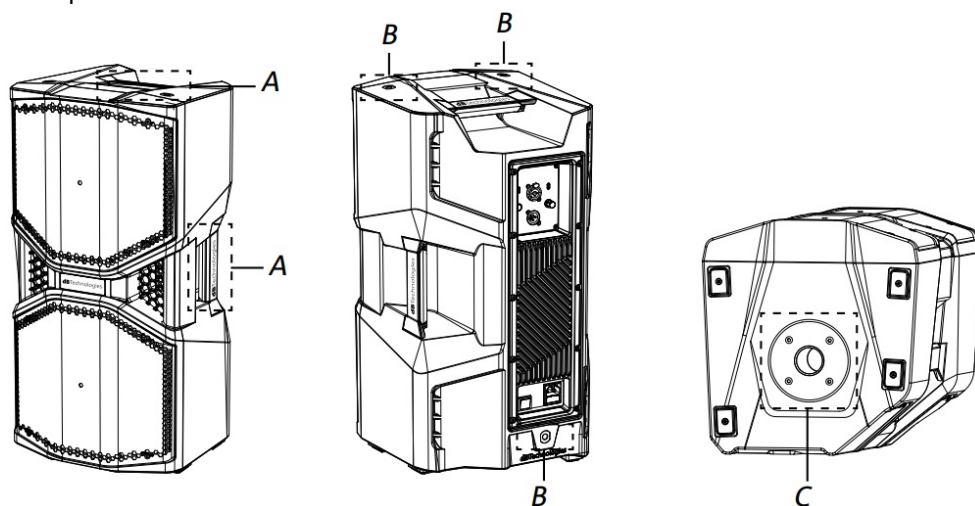
OPERA REEVO 210 100°x60° (HxV)

OPERA REEVO 212 100°x50° (HxV)



MECHANICAL FEATURES

Both models have two handles (A) for easy transport, one on the right side and one on the top. Three attachment points for lifting with eyebolts (B) and the provision for pole mounting (C) ensure that the speaker is ergonomic and quick to mount.



AMPLIFIER AND CONTROL SECTION FEATURES

The new generation Class D digital amplifier is the heart of the OPERA REEVO speakers. Totally silent, it delivers amplification power of 1050 W RMS.

All the inputs and controls are grouped together on the preamp panel.

The connection panel features:

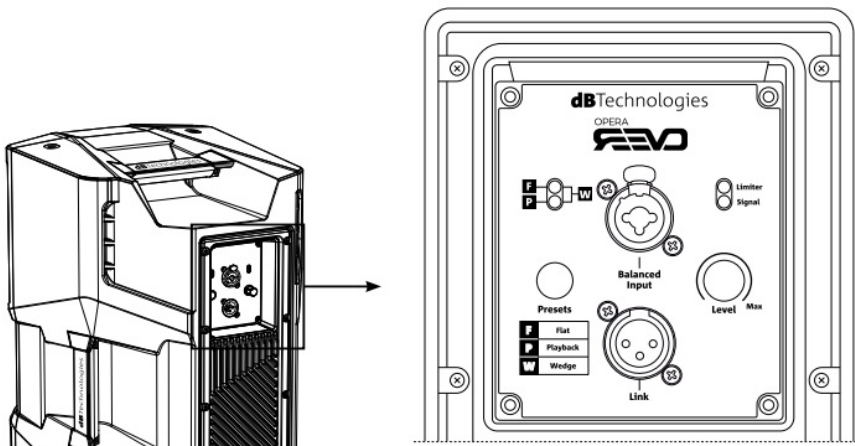
- Input and Output section
- Power supply section



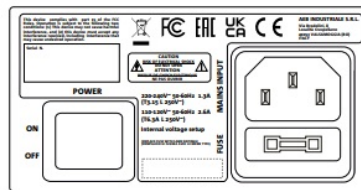
CAUTION!

- Protect the unit from moisture.
- Do not attempt to open the amplifier.
- In the event of malfunction, immediately turn off the power, disconnect the unit from the mains and contact an authorised service centre.

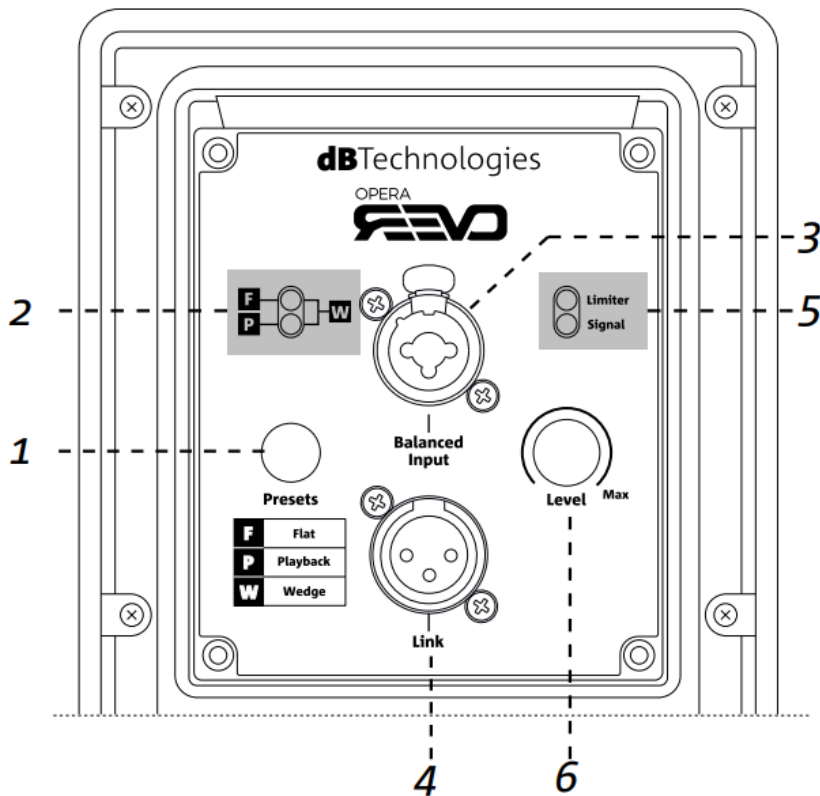
INPUT AND OUTPUT SECTION



POWER SUPPLY SECTION



INPUT AND OUTPUT SECTION



1. PRESETS

This button selects from three speaker equaliser settings:

Flat – default setting, no equalisation active. Playback – the response is optimised for playing music.

Wedge – choose this setting when the speaker is used as a stage monitor.

2. PRESET LED

The combination of the two LEDs indicates which preset is active. If both are on, the Wedge preset is selected.

3. **INGRESSO AUDIO (“Balanced input”)**




Input compatible with a balanced XLR/jack cable to connect the audio signal from a mixer or another speaker.

4. **USCITA AUDIO (“Link”)**

Output compatible with a balanced XLR/jack cable to link the signal to other speakers in a daisy-chain configuration.

5. **STATUS LED Main**

The LEDs provide an immediate indication of the speaker status, in accordance with the logic summarised in the table below:

	Limiter 	Signal 
Power up	OFF	OFF
Use	COMPRESSION LIMITER STATUS	SIGNAL OUTPUT STATUS
Partial malfunction	ACTIVE	ACTIVE
Partial malfunction	CYCLIC FLASHING	OFF

6. **LEVEL**

Knob to adjust the speaker level.

POWER SUPPLY SECTION

7. **ON/OFF SWITCH**

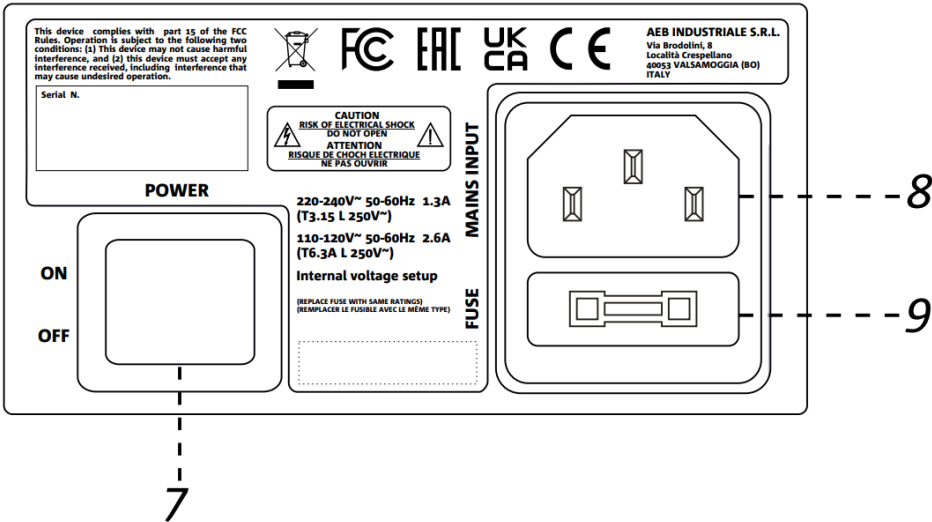
Switch to turn the device ON or OFF..

8. **“MAINS INPUT” POWER SUPPLY CONNECTOR**

Mains input for VDE connector.

9. **FUSE**

Protection fuse.



- Only use the power cable provided or other dBTechnologies power cables.
- Do not use the monitor for a prolonged period with the limiter LED steadily lit or flashing as this indicates operation under stress with excessive distortion.

FIRST POWER-ON

PACKAGE CONTENTS

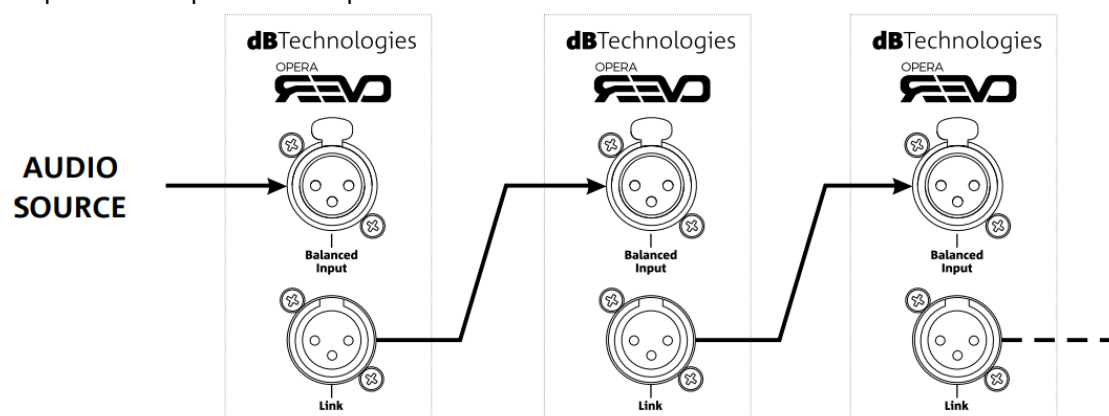
On opening the OPERA REEVO speaker package, check that no items are missing. The package contains:

- OPERA REEVO speaker
- power cable with VDE connector
- quick start manual and warranty documentation
- transport case

USE

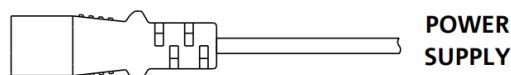
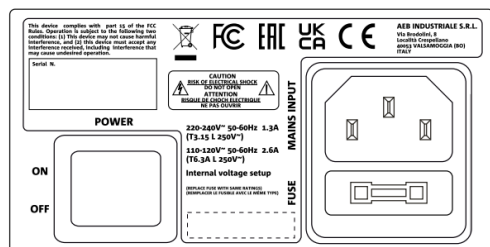
CONNECTING AND LINKING THE AUDIO SIGNAL

When linking the audio signal, connect the sound source to the “INPUT” of the first speaker first of all. Then connect a balanced XLR cable from the “LINK” output of the first speaker to the “INPUT” of the second, and so on. Repeat this step for all the speakers in the chain



CONNECTING THE POWER SUPPLY

Connect the power cable provided to the MAINS INPUT socket, and then to the mains supply and turn the power switch ON. The Limiter LED will flash briefly. Switch the speaker OFF before disconnecting the power cable.



- Check that the power supply voltage indicated corresponds to that in the country of use

EXAMPLES OF INSTALLATION

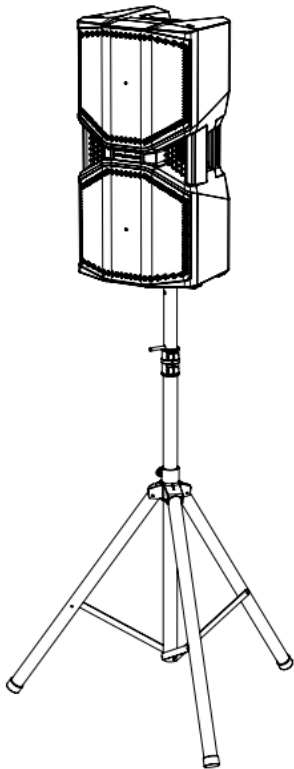


CAUTION!

- Only expert personnel may use the product and its accessories!
- To prevent hazards to people, animals and/or objects, make sure that the installation is stable and secure.
- Comply with the safety regulations and laws in force in the country in which you use the product.
- For safe use, periodically check that all parts are in good working condition before use.
- Do not suspend the speakers by the handles.
- Mount on a flat, level surface, otherwise
- additional safety fixings will be required.
- AEB Industriale shall not be liable for improper installation carried out without adequate safety measures.

INSTALLATION ON A STAND

The OPERA REEVO speaker can be mounted on the optional standard tripod stand with a 35 mm diameter pole. The maximum permissible height of the speaker base is 160 cm from the floor.



CAUTION!

- Use a tripod stand of suitable size with the central foot forward to ensure adequate stability.

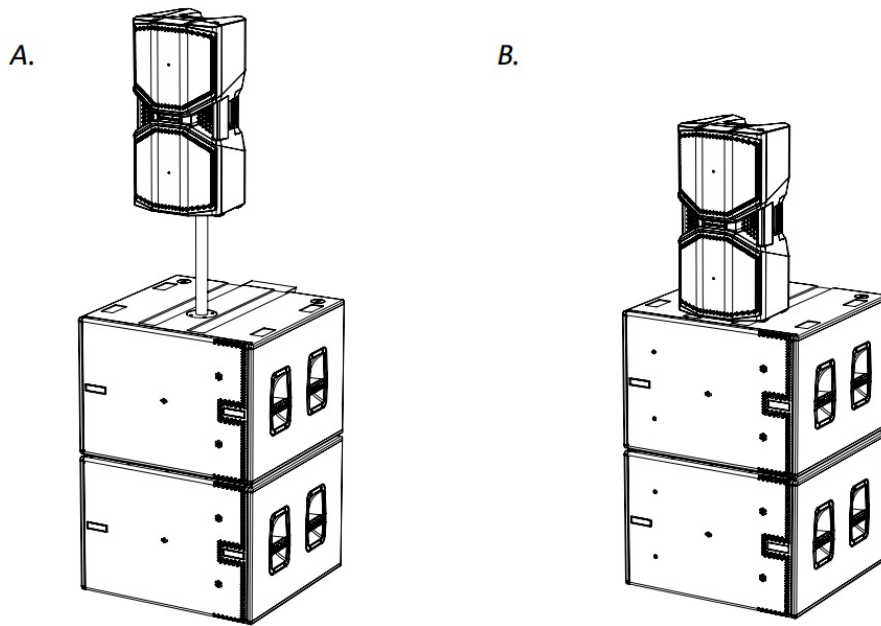
INSTALLATION ON A SUBWOOFER

The OPERA REEVO speaker can be installed on a subwoofer:

A. using a 35 mm diameter pole. In this case, the maximum permissible height of the speaker base is 215 cm

from the floor.

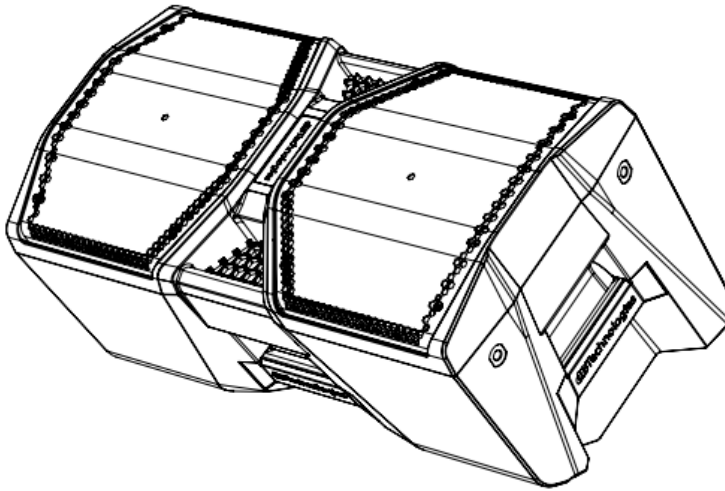
B. stacked with the DS2-S accessory



WEDGE INSTALLATION

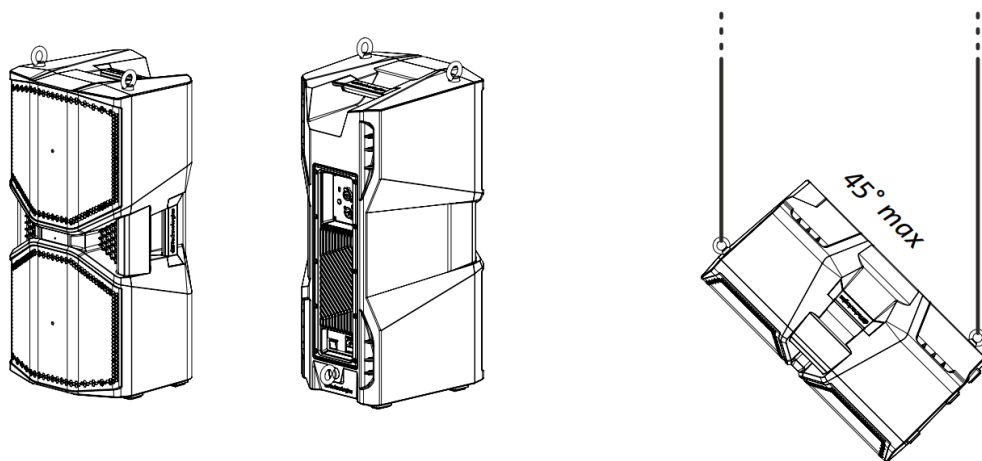
This type of installation is intended for use as a live monitor. In this case, place the sloping side of the speaker flat on the floor.

For an optimal response, we recommend selecting the WEDGE (W) preset from the amplifier panel.

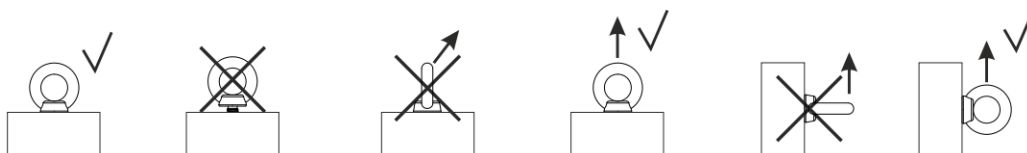


INSTALLATION SUSPENDED FROM EYEBOLTS

The speakers can also be suspended using eyebolts. The positioning is shown in the figure. The rear eyebolt can be used to adjust the tilt angle (MAX 45°).



- Screw in the eye bolts until the mating surface of the eye bolt is flush with the surface of the speaker to be lifted.
- When lifting the eye bolts, always pull longitudinally, never sideways.



TROUBLESHOOTING

The speaker does not power up:

1. Check that the system is connected to a working power supply.
2. Check that the power cord is plugged in correctly.
3. Check the fuse. Contact the service centre if the problem persists after replacing the fuse.

The monitor turns on but does not produce any sound:

4. Check that the audio signal inputs are connected correctly, preferably using cables with Neutrik® connectors.
5. Check that the cables used are not damaged.
6. Check that the mixer or audio source is on and clearly shows an output signal.

The sound from the monitor is distorted:

7. With the system powered on, first adjust the volume of the audio source. If the source LIMITER LED is on, the signal may already be distorted before it reaches the speaker.
8. Check that the connection cables are not damaged. If they are, replace them (a damaged cable may cause signal loss or alteration).

TECHNICAL SPECIFICATIONS

Type:	quasi 3-way active speaker	quasi 3-way active speaker
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ACOUSTIC DATA

Frequency response [-6 dB]:	52 – 19200 Hz	60 – 19200 Hz
Max SPL (@ 1m):	133 dB	132,5 dB
HF (coax):	1" exit	1" exit
HF Voice Coil:	1.75"	1.75"
Crossover frequency:	1260 Hz 24 dB/oct	1260 Hz 24 dB/oct
Coverage (HxV):	100° x 80°	100° x 90°
LF:	2 x 12" neo	2 x 10" neo
LF Voice Coil:	2.5"	2.5"

AMPLIFIER

Amplification class:	Class D	Class D
Peak power:	2100 W	2100 W
RMS power:	1050 W	1050 W
Power supply:	115/230 V	115/230 V
Cooling method:	Passive convection	Passive convection

PROCESSOR

Internal processing:	DSP 28/56 bit	DSP 28/56 bit
A/D D/A converter:	24 bit / 48 kHz	24 bit / 48 kHz
Limiter:	Peak, RMS, Thermal	Peak, RMS, Thermal

USER INTERFACE

Presets:	Flat, Playback, Wedge	Flat, Playback, Wedge
Controls:	Button (Preset), 2 Preset LED, 2 System LED	Button (Preset), 2 Preset LED, 2 System LED

INPUTS AND OUTPUTS

Audio inputs:	XLR/jack combo	XLR/jack combo
Audio outputs:	XLR Link OUT	XLR Link OUT

POWER SUPPLY SPECIFICATIONS (POWER CONSUMPTION / INSTALLATION)

Power consumption at 1/8 power in medium use conditions (*):	2.6 A @115V AC 1.6 A @230V AC	2.6 A @115V AC 1.6 A @230V AC
Power consumption at 1/3 power in medium use conditions (**):	5.2 A @115V AC 3.1 A @230V AC	5.2 A @115V AC 3.1 A @230V AC
Power consumption with speaker on but no signal (idle)::	0.27 A @115 V AC 0.13 A @ 230 V AC	0.27 A @115 V AC 0.13 A @ 230 V AC
Inrush current:	51.6 A	51.6 A

- **NOTE FOR THE INSTALLER:** Values refer to 1/8 power under normal operating conditions (music program with rare or no clipping). For any configuration type, we recommend considering them to be the minimum values for dimensioning.
- **NOTE FOR THE INSTALLER:** Values refer to 1/3 power under heavy operating conditions (music program with frequent clipping and limiting). We recommend dimensioning in accordance with these values for professional installations and tours.

DIMENSIONS

Material:	Polypropylene	Polypropylene
Grille:	Painted / CNC machined	Painted /CNC machined
Flown mounting:	with M10 eyebolts	with M10 eyebolts
Handles:	Integrated	Integrated
Pole mounting:	D36 mm	D36 mm
Width:	345 mm (27.3 inch.)	300 mm (11.8 inch.)
Height:	690 mm (13.6 inch.)	604 mm (23.8 inch.)
Depth:	376 mm (14.8 inch.)	324 mm (12.8 inch.)
Weight:	20.4 kg (45 lbs.)	17.2 kg (39.9 lbs.)

Product features, specifications and appearance are subject to change without prior notice. dBTechnologies reserves the right to make changes or improvements in design or manufacturing without any obligation to change or improve previously manufactured products.

EMI CLASSIFICATION

According to the standards EN 55032 and 55035 this is a Class A equipment, designed and suitable to operate for professional use.

Warning: This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

FCC CLASS A STATEMENT

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.


WARNING: Make sure that the loudspeaker is securely installed in a stable position to avoid any injuries or damages to persons or properties. Before hanging the loudspeaker check all the components for damages, deformations, missing or damaged parts that may compromise safety during installation. If you use the loudspeakers outdoor avoid spots exposed to bad weather conditions. Contact dB Technologies for accessories to be used with speakers. dBTechnologies will not accept any responsibility for damages caused by inappropriate accessories or additional devices.

Features, specification and appearance of products are subject to change without notice. dBTechnologies reserves the right to make changes or improvements in design or manufacturing without assuming any obligation to change or improve products previously manufactured.

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dBTechnologies

Documents / Resources

 <p>CE</p>	<p>dB Technologies Opera Reevo 210 Coax Quasi 3 Way Active Speaker [pdf] User Manual Opera Reevo 210, Opera Reevo 212, Opera Reevo 210 Coax Quasi 3 Way Active Speaker, Coax Quasi 3 Way Active Speaker, Quasi 3 Way Active Speaker, 3 Way Active Speaker, Active Speaker, Speaker</p>
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References

- [AEB Software for Global Trade and Logistics](#)
- [dBTechnologies - Professional Audio Equipment](#)
- [User Manual](#)

