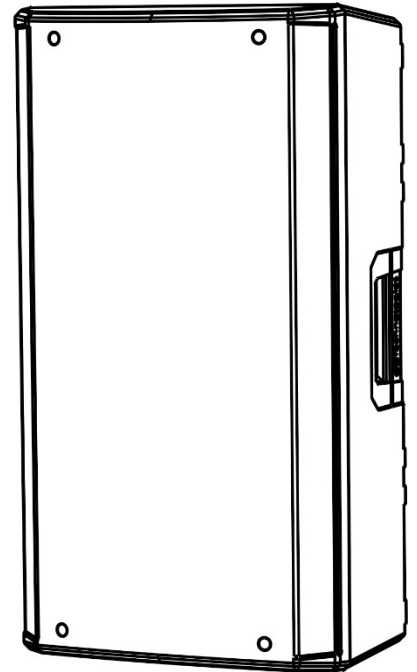
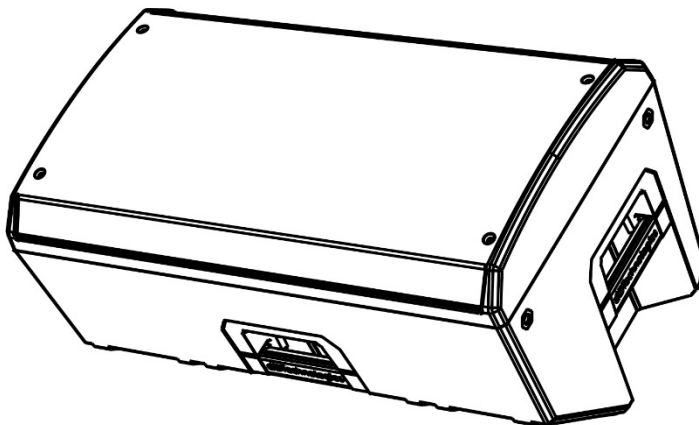


OPERA 12



Quick start user manual

Section 1

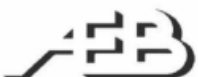
The warnings in this manual must be observed together with the "USER MANUAL - Section 2".

Le avvertenze nel presente manuale devono essere osservate congiuntamente al "MANUALE D'USO - Sezione 2".

Die Warnungen in diesem Handbuch müssen in Verbindung mit der "BEDIENUNGSANLEITUNG - Abschnitt 2" beobachtet werden".

Les avertissements spécifiés dans ce manuel doivent être respectés ainsi que les "CARACTERISTIQUES TECHNIQUES - Section 2".

Las advertencias del presente manual se deben tener en cuenta conjuntamente con las del "MANUAL DEL USUARIO" - Sección 2".



A.E.B. Industriale Srl Via Brodolini, 8 Località Crespellano 40053 VALSAMOGGIA BOLOGNA (ITALIA)
Tel +39 051 969870 Fax +39 051 969725 www.dbtechnologies.com info@dbtechnologies-aeb.com



Thank you for choosing a dBTechnologies Product!

The new OPERA 12 is a lightweight and versatile active speaker, designed for the use in live or installed scenarios. It is equipped with one 1" compression driver (1.4" voice coil), and one 12" woofer (2" voice coil). The dispersion pattern is asymmetrical on vertical axis, and it is diversified (top and bottom) on the horizontal one. This allows a good coverage also in case of reverberant environment. The double combo input (with source type selection and independent levels) allows an easy and versatile use. For example OPERA 12 can be used in a live scenario, mixing two channels (a microphone connected to channel 1, a high impedance source like an instrument connected to channel 2). The amplifier (600 W RMS) is controlled by a powerful DSP, which use FIR filters in audio real-time processing. Eight presets are available for different equalization settings, in stacked or wedge use. Various optional accessories are available for all configuration needs.

Check the site www.dbtechnologies.com for the complete user manual!

1) Unpacking

The box contains:

N°1 OPERA 12

N°1 Mains cable

This quick start and warranty documentation

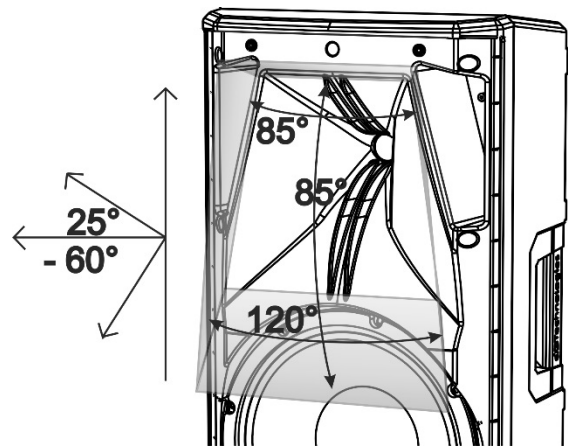
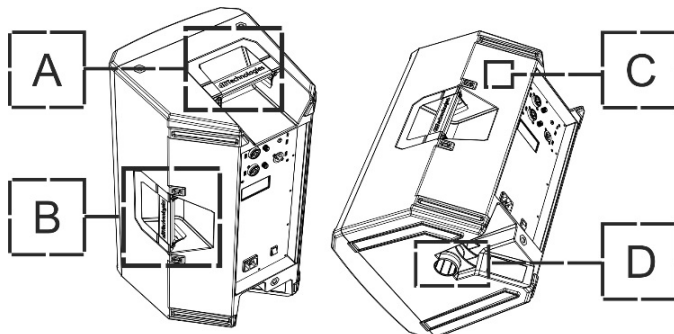
2) Easy installation

OPERA12 is equipped with:

Upper (A) and side (B) handles, which allow an easy displacement

Tilted side (C) for monitor (wedge) positioning

Pole mount (36 mm) (D) for tripod stand mounting



The main admitted configurations, thanks also to various accessories like wall bracket WB-OP12, as shown in the picture below, are:

X – on a tripod stand (the maximum admitted height from floor and the base of loudspeaker is 1,6 m)

Y – with wall bracket in truss mounting (via aliscaff)

Z – wall mounted

W – wedge (monitor configuration on the stage)

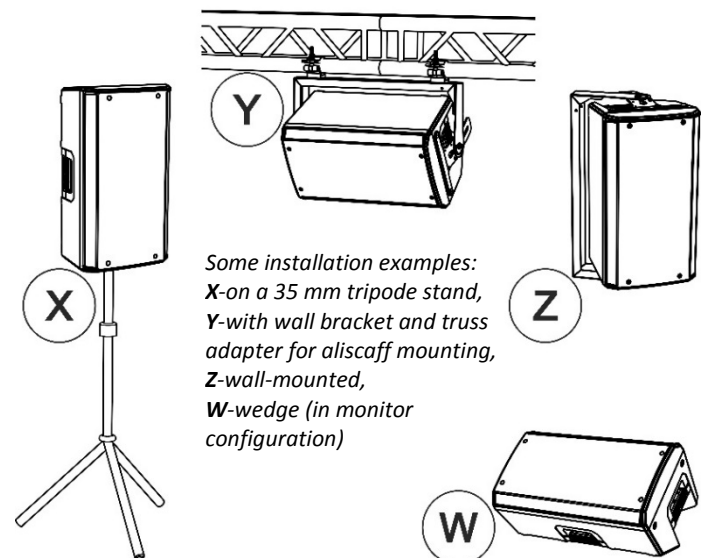
For further information about accessories and admitted configurations, please refer to the complete user manual.

⚠ NEVER USE THE HANDLES TO SUSPEND THE SPEAKER!

All those mechanical particulars were thought for an easy use and for different configuration needs. OPERA 12 is perfect for gigging bands as well as medium/small venues installations. The acoustical design allows to face different environments. The dispersion pattern is asymmetrical on the vertical axis, and the horizontal coverage varies within position: It is wider in the lower side and narrow in the upper one. As shown in the following picture, the related dispersion pattern data are:

a) vertical coverage: 85° asymmetrical (+25°/-60°)

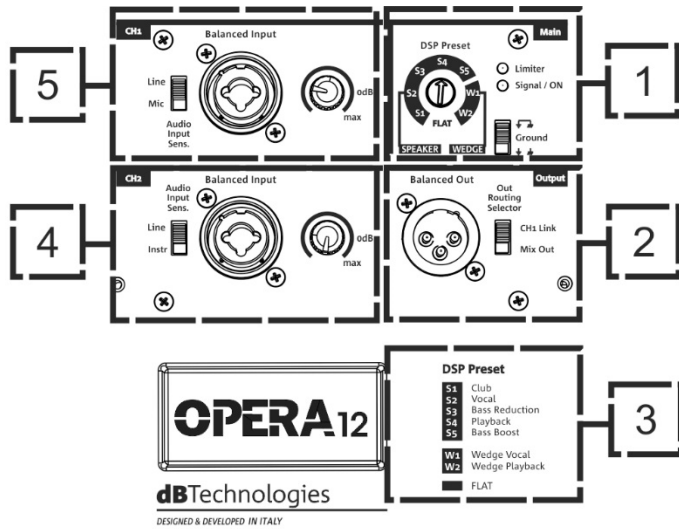
b) horizontal coverage: 100° (85° in the upper part, 120° in the lower one)



Some installation examples:
 X-on a 35 mm tripod stand,
 Y-with wall bracket and truss adapter for aliscaff mounting,
 Z-wall-mounted,
 W-wedge (in monitor configuration)

3) Connections and controls

All the connections and controls are in the amplifier panel side:



- 1–Main controls, with DSP preset rotary, ground lift switch and LEDs
- 2–Balanced output, with CH1/MIX selection
- 3–DSP Preset reference table
- 4–Combo input (CH2) with LINE/INSTR sensitivity switch and level control
- 5–Combo input (CH1) with LINE/MIC sensitivity switch and level control
- 6–Power switch
- 7–Mains input with fuse housing

a) Connect the audio inputs. It is possible to connect up to two sources (4, 5). The combo connector allows a TRS or XLR connection. In case of dynamic microphone, plug it into CH1 and select “MIC” in input sensitivity switch. In case of an instrument (high impedance source), plug it into CH2 and select “INSTR” in the related sensitivity switch. Put the levels of CH1 and CH2 temporarily to the minimum value.

b) If you need an output signal, set properly the output mode (2), choosing between “CH1 Link” and “Mix Out”. This selection allows the user to choose if the signal of the input channel CH1 must be directly linked in output, bypassing the possible CH2, or if it is necessary to send the mix of CH1 and CH2 channels. Then connect the “Balanced Output” (2) to another OPERA 12 or other dBTechnologies loudspeakers, using a cable with XLR (balanced) connector.

c) Set properly the DSP preset rotary (1), choosing between stacked “S” and wedge “W” configurations. The reference table (3) is useful to show the settings possibilities:

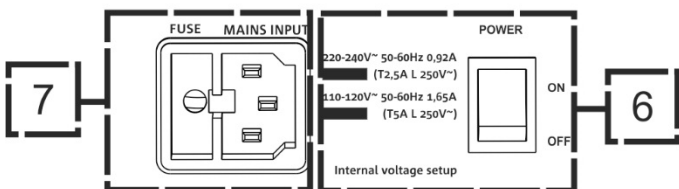
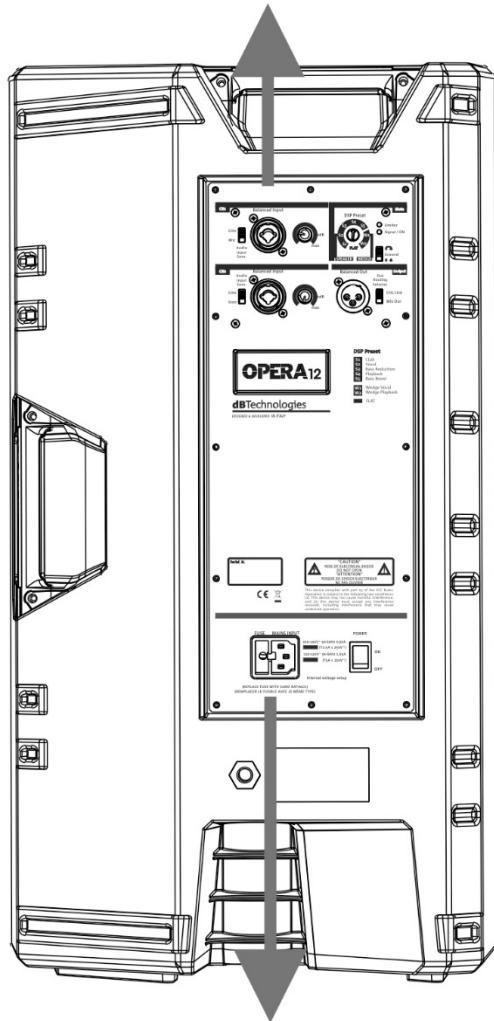
- S1**– Club, with frequencies enhanced for small/medium indoor environment
- S2**– Vocal, for an optimization in vocal and singing performances
- S3**– Bass reduction, with the use of high-pass filter, especially indicated in low-frequencies reverberant conditions
- S4**– Playback, for tracks (like mp3 reproduction)
- S5**– Bass boost, with a low-frequencies enhancement

- W2**– Wedge Vocal, designed for voice reproduction in monitoring (wedge) use
- W3**– Wedge Playback, designed for tracks reproduction in monitoring (wedge) use

FLAT– For an equalization without enhancement of a particular frequency band

d) Plug the mains input cable, and set the channels level (4, 5) to the desired value. The Signal/ON led starts blinking, signaling the presence of audio signal.

Check the site www.dbtechnologies.com for further information and for the complete user manual!



Technical Data

Speaker Type: 2-way active speaker

Usable Bandwidth [-10 dB]: 52 - 20000 Hz

Frequency Response [-3dB]: 67 - 19600 Hz

Max SPL (1 m): 129 dB

HF compression driver: 1" Exit

HF voice coil: 1.4"

LF: 12"

LF Voice Coil: 2"

Crossover frequency: 2000 Hz (24 dB/oct)

FIR filters: yes

Horizontal dispersion: 100° (85° up / 120° down)

Vertical dispersion: 85° (+25°/ -60°)

Amplifier

Amp Technology: Amp SMPS Power Supply

Amp Class: Class-D

RMS Power: 600 W

Peak Power: 1200 W



*Scan with your QR Reader
App to download the
complete User Manual*

Download the complete user manual on:

www.dbtechnologies.com/EN/Downloads.aspx

EMI CLASSIFICATION

According to the standards EN 55103 this equipment is designed and suitable to operate in E3 (or lower E2, E1) Electromagnetic environments.

FCC CLASS B STATEMENT ACCORDING TO TITLE 47, PART 15, SUBPART B, §15.105

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

WARNING: Make sure that the loudspeaker is securely installed in a stable position to avoid any injuries or damages to persons or properties. For safety reasons do not place one loudspeaker on top of another without proper fastening systems. 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.

Processor

Controller: 56 bit DSP, 24 bit/48 kHz AD/DA converter

Limiters: Peak, RMS, Thermal

Controls: Rotary encoder (8 presets)

Input

Mains connections: VDE

Signal Input: 2x Combo IN (MIC/LINE + MIC/INST)

Signal Out: (Balanced) 1x XLR OUT (CH1 Link/Mix OUT selectable)

Mechanics

Housing: Polypropylene

Grille: Full grille

Rigging points: (2x) M10 on top + (1x) M10 on the rear

Pole Mount: yes, 35 mm diameter

Width: 350 mm (13.78 in)

Height: 642 mm (25.28 in)

Depth: 349 mm (13.74 in)

Weight: 14.3 kg (31.53 lbs.)