dBTechnologies

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1. GENERAL INFORMATION

WELCOME!

Thanks for purchasing a product designed and developed in Italy by dBTechnologies! This ergonomic and versatile active speaker is the result of a long experience in the sound reinforcement industry, making use of optimized sound, electronic and material research solutions.

PRODUCT OVERVIEW

The new professional VIO X loudspeakers are equipped with a 1" driver (coil: 1.75") for model VIO X10, and a 1.4"driver (coil: 2.5") for models VIOX12 and VIOX15. In the three models, the LF section is respectively controlled by a 10" (voice coil: 2.5"), a 12" (voice coil:3") and a 15" (voice coil:3") neodymium woofer. These speakers main features include:

- an ergonomic, professional and versatile project that can be used in monitoring for live contests
- wooden box with black polyurea finish, for the higest acoustic performance
- digital reliable and silent amplifier that does not require active ventilation
- balanced In/LINK input and output audio connections
- presets selectable with different equalisations for different types of use, thanks to the DSP with FIR filters
- RDNet onboard board for the professional remote control through the interfaces Control2, Control 8 and the integration on the AURORA NET software

USER REFERENCE

To make the most of your VIO X speaker, we recommend that you:

- read the quick start user manual included in the package and this user manual thoroughly and keep this manual during the whole life of the product.
- Register your product at http://www.dbtechnologies.com under "SUPPORT".
- keep proof of purchase and WARRANTY (User manual "section 2").

MECHANICAL AND ACOUSTICAL FEATURES

DIMENSIONS

The VIO X series has been designed with the intent to optimise weight and dimensions.
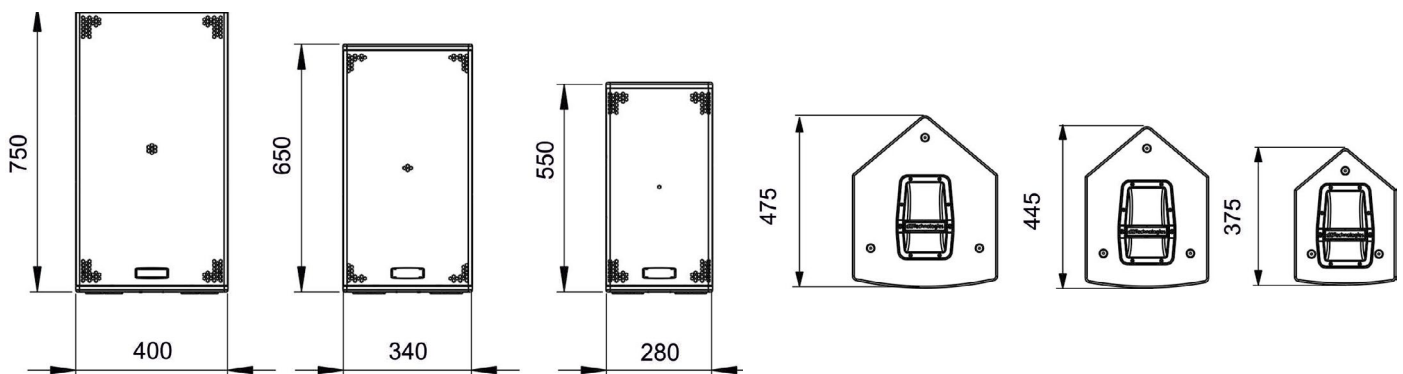The cabinet is light but resistant, and features 2 handles, one on the side or one at the top, for easy handling.
For a quick comparison of the 3 models, the overall dimensions are the following:

VIO X10 - 280 mm (L), 550 mm (H), 375 mm (D)
VIO X12 - 340 mm (L), 650 mm (H), 445 mm (D)
VIO X15 - 400 mm (L), 750 mm (H), 475 mm (D)

SOUND COVERAGE

The horn directivity ensures a covering of:
90°x40° (VIO X10)
60°X40° (VIO X12-VIOX15)
Take this into account for the different types of available installation.
E.g.: the special cabinet design and the DSP-controlled presets allow using WEDGE as stage monitor

FEATURES OF THE AMPLIFIER AND CONTROL SECTIONS

DIGIPRO G3 amplifier can deliver 900 W RMS for all the 3 models.
The system is silent and does not require a fan cooling. The system is controlled by a dedicated powerful DSP that manages the different parameters.

I/O, RDNET AND CONTROL SECTION

WARNING!

- **Protect the unit from moisture.**
- **Never attempt to disassemble the amplifier in any way.**
- **In the event of a malfunction, remove power supply immediately by disconnecting the unit from the power mains and contact an authorised repair centre.**
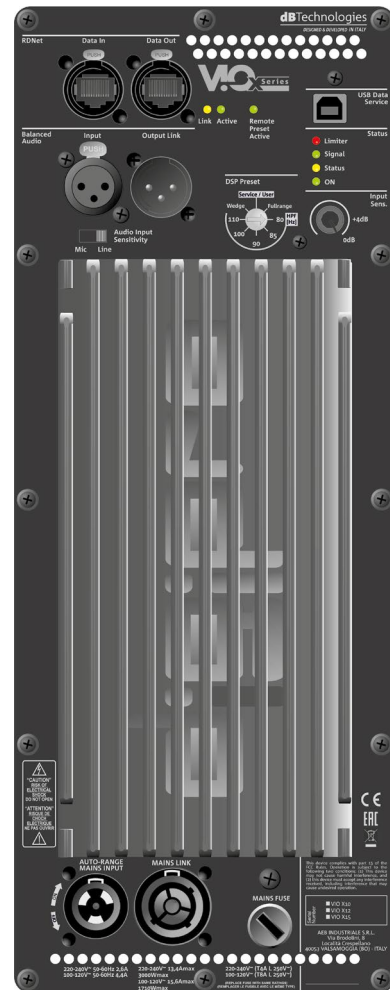
The DIGIPRO G3 panel is made up of:

- **I/O, RDNet and Control Section**
- **Power Supply Unit Section**

POWER SUPPLY UNIT SECTION

WARNING!

- **Never remove the front grille protecting the product.**
  To prevent the danger of electric shock, in case of accidental damage or replacement of the protection grille (to be carried out at the service), disconnect power supply immediately.
  Never connect mains power supply when the grille is removed.

INPUT, OUTPUT, RDNET AND CONTROL SECTION

1. INPUT AND OUTPUT LINK ("Balanced audio")
Input and output compatible with balanced XLR cables.
In particular, "Input" is used to connect with the audio
signal coming from the mixer or from another loudspeaker,
"Output Link" is used to link the signal to other
loudspeakers. Daisy-chain configuration.

2. INPUT SENSITIVITY
Allows adjusting the attenuation of the speaker using the
input volume.

3. INPUT AND NETWORK CONNECTION LINK RDNet
Section compatible with network cables with etherCON/RJ45
connectors.
In particular, "Data in" must be connected to devices such
as RDNet Control 2 or Control 8; "Data Out" is used to
link the network to additional loudspeakers in daisy-chain
configuration.

4. INPUT SENSITIVITY "Mic/Line" SWITCH
Set the switch to "Mic" in case of microphone input and to "Line" in case of signal coming from a mixer or from
another loudspeaker.

5. DSP PRESET - ROTARY
The presets that can be directly selected are the following ones: Fullrange, HPF (80, 85, 90, 100, 110) and wedge.
Please note that these are immediate selections to be made directly on the control panel. With the real time
remote control ensured by AURORA NET software (RDNet connections) it is possible to configure even the
smallest details of the functions of the speakers.

6. STATUS LEDs
LEDs relating to speaker operation. See explanatory table in the following page.

7. CONTROL LEDs
LEDs relating to module network operation (RDNet).
In particular, if "Link" is on the RDNet network is active and has acknowledged the device, if "Active" is flashing
there is data traffic, if "Remote Preset Active" is on all local control on the amplifier panel are by-passed by the
RDNet remote control.

8. SERVICE DATA USB PORT
It is a USB B port to be used only for product firmware update. For further information refer to "FIRMWARE
UPDATE".
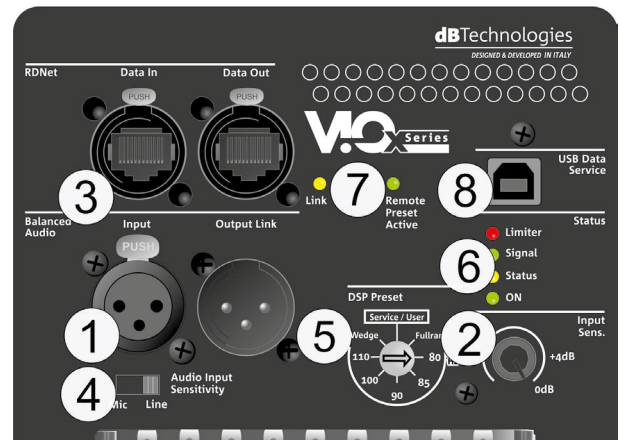
POWER SUPPLY UNIT SECTION
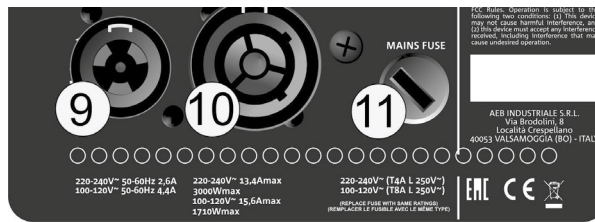
9. "MAINS INPUT" POWER CONNECTOR
Compatible with powerCON TRUE1 connector, the power supply features an auto-range function. It automatically recognises the voltage within the range [100-120V~] or [220-240V~].

10. "MAINS LINK" POWER DAISY CHAIN
Compatible with powerCON TRUE1 connector for power daisy chain to other speakers.
To find the maximum number of modules that can be connected in a re-linked system, see the TECHNICAL SPECIFICATIONS section.

11. MAINS FUSE
Housing for the mains fuse.

STATUS LED TABLE

| OPERA UNICA	Limiter 🔴	Signal 🟢	Status 🟡	ON 🟢
Switch on	*OFF*	*OFF*	*SOLID FOR A FEW SEC.*	*OFF*
Normal use	*ACTIVE*	*ACTIVE*	*OFF*	*SOLID*
Partial fault	*ACTIVE*	*ACTIVE*	*CYCLIC BLINK*	*SOLID*
Total fault	*CYCLIC BLINK*	*OFF*	*SOLID ON*	*OFF*

2. FIRST POWER-UP

PACKAGE CONTENTS

Check that the package content of the VIO X loudspeaker is complete.
The package contains:

- VIO X speaker
- power cable
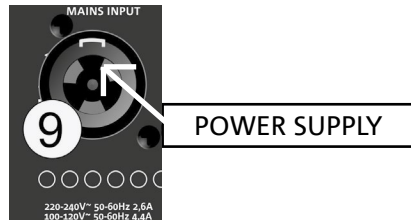- quick start user manual and warranty documents
- 1 fuse

USE

INPUT CONNECTIONS
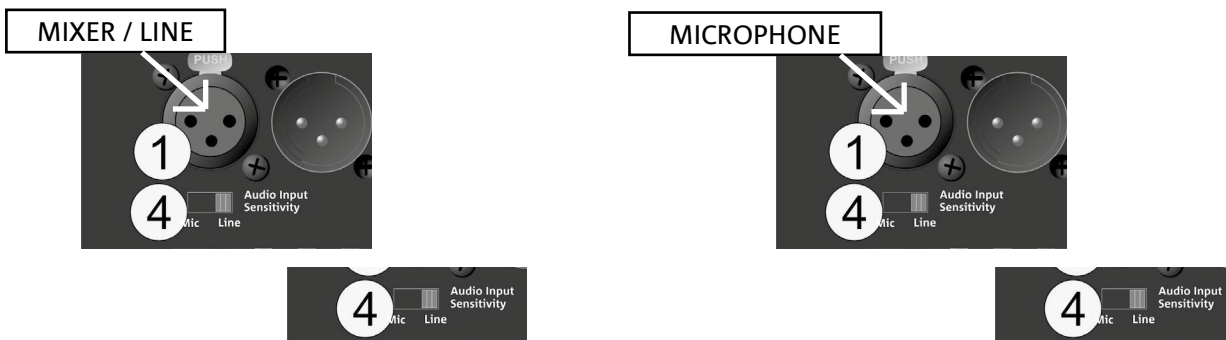
It is possible to connect 1 input in the input and control section at the back of the speaker. In particular, in case of microphone input, set switch 4 to "MIC".

POWER SUPPLY CONNECTION

CONNECTING THE OUTPUTS OF MULTIPLE SPEAKERS (audio daisy chain)

It is possible to link an audio signal by connecting the Output Link to the Input of a second VIO X. In the second speaker, Audio Input Sensitivity must be set to "Line".

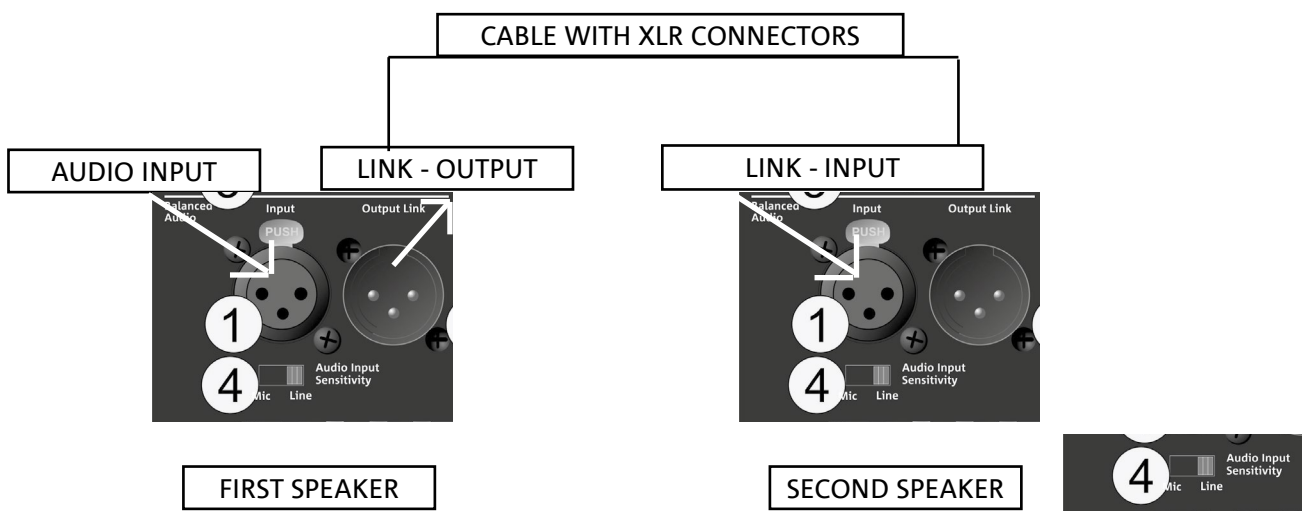*CONNECTING THE POWER SUPPLY OF MULTIPLE SPEAKERS*

It is possible to connect 1 input in the input and control section at the back of the speaker. In particular, in case of microphone input, set switch 4 to "MIC".
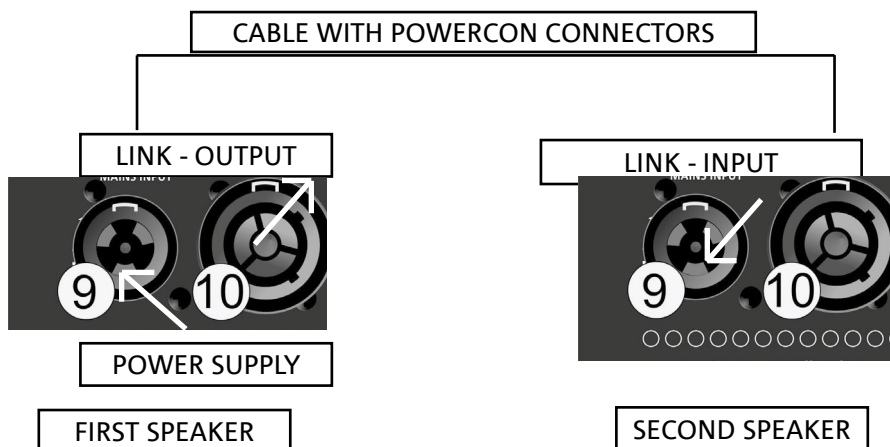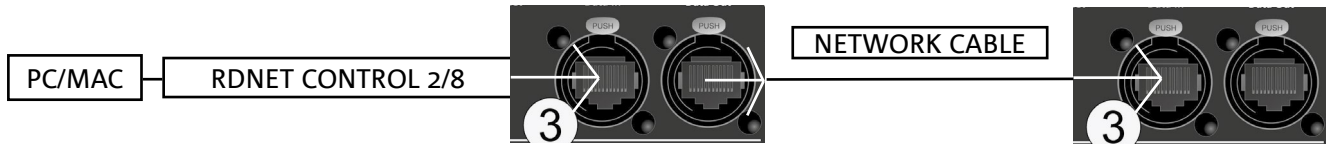
3. REMOTE CONTROL AND RDNET CONNECTION

- All speaker parameters can be adjusted with the remote control, once the RDNet connections have been properly made, using the free AURORA NET software (in Beta version at the date of release of this manual). When using the remote control, the local controls on the speaker are by-passed. Using this software, you can control a larger number of parameters (for more information, please refer to the full AURORA NET manual).

AURORA NET, in particular, is:

- multi-platform (Windows /MAC OS X)
- allows a more accurate control of the parameters and their history
- allows a more flexible management even in the case of large fixed/live installations (with advanced group control)
- is optimized for usability and speed of data displaying.
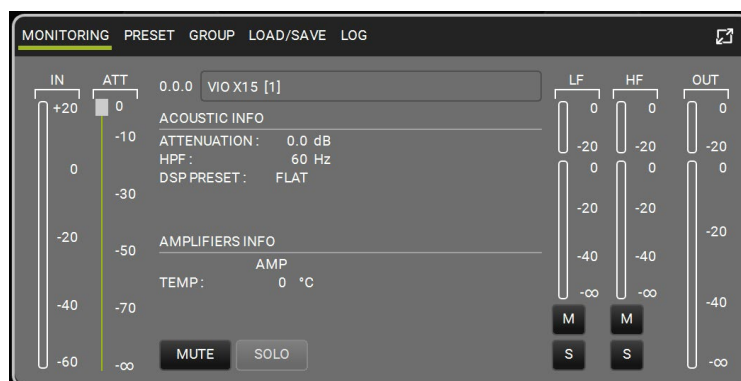
4. USAGE EXAMPLES

⚠

- Types of installation other than those here described are not allowed.
- Never use the handles to suspend the speaker
- Always check that the positioning is stable and that the installation does not pose a danger to people, animals or property.
- Perform the installation on a flat, not tilted surface, otherwise an additional safety fastening is mandatory.

BRACKETS

VIO X models can be installed on a wall in horizontal position using the accessory
WB-VIOX10H, WB-VIOX12H, WB-VIOX 15H (for VIOX10, VIOX12, VIOX15, respectively).
They can also be installed on a wall in vertical position, as well as be hung or fixed to a pole using accessory

Please see the related instructions for further information.

VIO-X10   VIO-X12   VIO-X15

VIO-X10   VIO-X12   VIO-X15

WB-VIOX10H   WB-VIOX12H   WB-VIOX15H

WB-VIOX10V WB-VIOX12V WB-VIOX15V
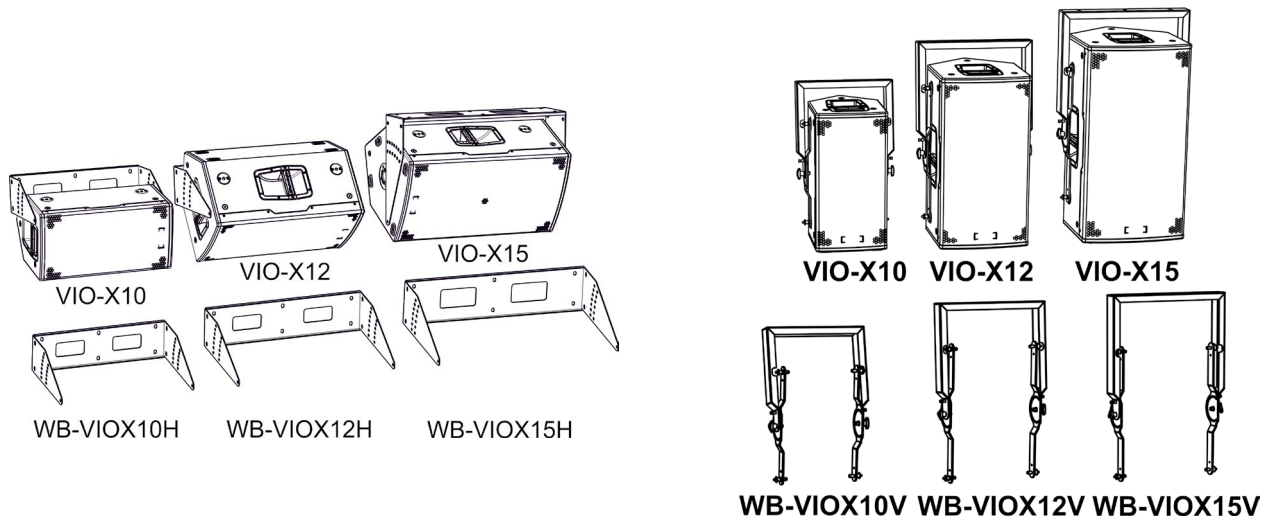
ON STAND   WALL - VERTICAL   WALL - HORIZONTAL   HANGING
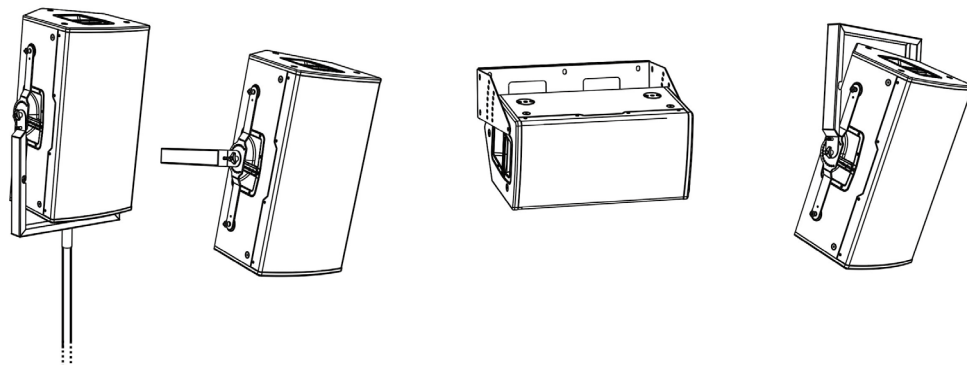
WEDGE (MONITORING) USE

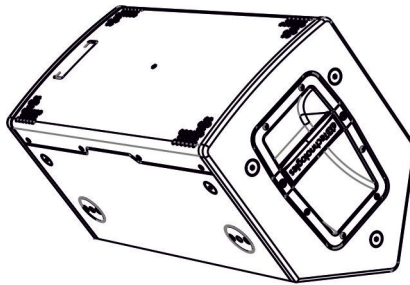The VIO X series speakers can be used as monitors for live contests. In this case, lay them horizontally on the tilted side. Be reminded of the sound coverage features reported in the relevant section. Use the suitable DSP settings as indicated in the "DSP preset" table in WEDGE mode..

5. ACCESSORIES

To completion of the series, the following accessories are provided as options:

- Wall brackets (see the pictures below)
- SSB2, set of tripod stands with diameter 35 mm
- Rain Cover RC-M1, valid for all models

VIO-X10 VIO-X12 VIO-X15

WB-VIOX10H   WB-VIOX12H   WB-VIOX15H
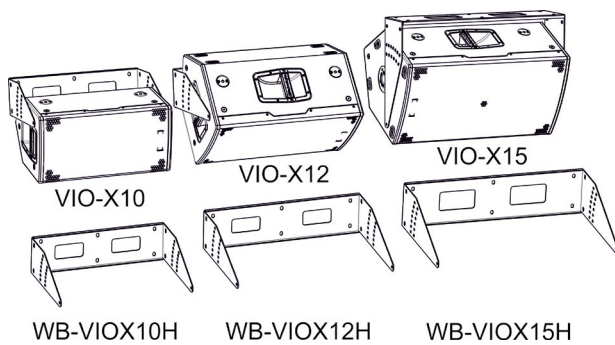
HORIZONTAL BRACKETS

RC-M1 (RAIN COVER)

VIO-X10 VIO-X12 VIO-X15
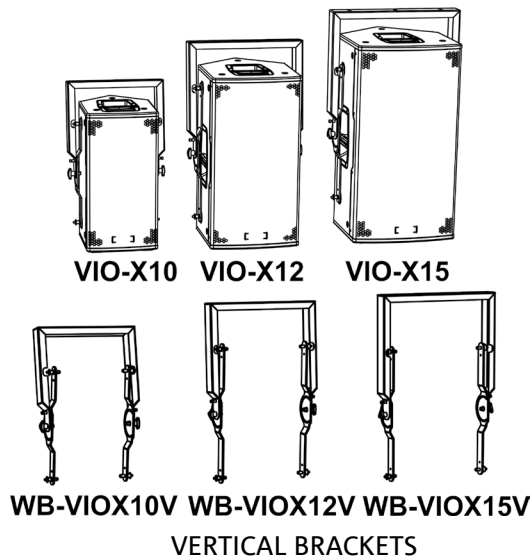
WB-VIOX10V WB-VIOX12V WB-VIOX15V
VERTICAL BRACKETS
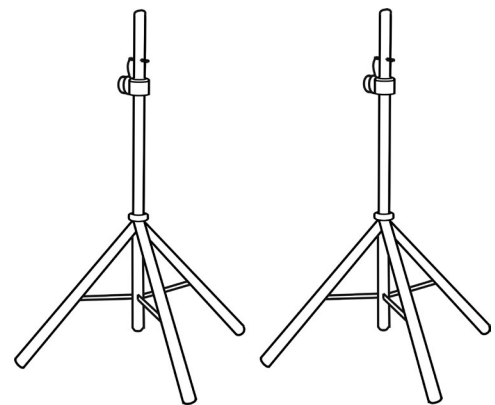
SSB2 (PAIR OF TRIPOD STANDS)

⚠️ WARNING!

- **Never suspend the speaker from the handles!**

Please read the corresponding manuals for more details.

For all updates on accessories, refer to the website www.dbtechnologies.com

6. TROUBLESHOOTING

The loudspeaker will not turn on:

1. Check that power supply is present upstream of the installation.
2. Ensure that the power supply cable is properly plugged in.

The speaker turns on but produces no sound:

1. Check that the input connection of the audio signal is correctly performed.
2. Check the cables for damage.
3. Ensure that the mixer or audio source is on and an output signal is present.
4. Check that the input level is appropriate.

Speaker sound is distorted or not sufficient:

1. Adjust the first source volume, then set the input gain to an adequate level. Check the cables for damage and replace them as required (a damaged cable may lead to signal loss or alteration).
2. Check that the selection settings of the input (Mic/Line) are correct with respect to the source
3. Check that the "DSP preset" settings are suitable for the use selected.

7. SPECIFICATIONS

GENERAL

Type:	2-way active professional speaker

ACOUSTICAL SPECIFICATIONS

Frequency response [-10dB]:	73- 21.4 kHz (X10) / 62 - 22 kHz (X12) / 55 -22kHz (X15)
Frequency response [-6dB]:	82- 20 kHz (X10) / 79 - 21 kHz (X12) / 72 -21kHz (X15)
Max SPL:	130 dB (X10) / 132 dB (X12) / 133.5 (X15)
HF voice coil:	1.75" (X10) / 2.5" (X12) / 2.5" (X15)
HF compression driver (exit):	1" (X10) / 1.4" (X12) / 1.4" (X15)
LF:	10" (X10) / 12" (X12) / 15" (X15)
LF Voice coil:	2.5" (X10) / 3" (X12) / 3" (X15)
Crossover frequency (24 dB/oct):	1600 Hz (X10) / 1000 Hz (X12) / 1000 Hz (X15)
Coverage (HxV):	90° x 40° (X10) / 60° x 40° (X12) / 60° x 40° (X15)

AMPLIFIER

Type:	Digipro© G3
Amplification class:	Class D
Power supply	PowerCON TRUE1 connector

RMS amplifier power:	900 W
Peak power:	1800 W

PROCESSOR

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

USER INTERFACE

Controls:	Input switch and level, DSP preset rotary

INPUTS & OUTPUTS

Inputs:	1 balanced audio input (with Line/Mic selection), 1 RDNet input
Outputs:	1x XLR Link OUT, 1 RDNet output
Power supply:	powerCON TRUE1 IN/LINK

POWER SUPPLY SPECIFICATIONS (ABSORPTION / INSTALLATION)

Absorption at 1/8th of power in medium use conditions (*):	1.3 A (230 V) - 2.1 A (115 V)
Absorption at 1/3rd of power in maximum use conditions (**):	2.6 A (230 V) - 4.4 A (115 V)
Absorption with speaker on in no-signal condition (idle):	19 W
Inrush current:	46 A
Number of linkable speakers:	6 (1+5) (230 V) / 3 (1+2) (115 V)

* NOTE FOR INSTALLER: Values refer to 1/8th of power, under average operating conditions (music programme with occasional or no clipping). For any type of configuration we recommend to consider them as minimum sizing values.

** NOTE FOR INSTALLER: Values refer to 1/3rd of power, under heavy operating conditions (music programme with frequent clipping and limiter activation). In case of professional installations and tours we recommend sizing according to these values.

DIMENSIONS

Material:	Wooden box / black polyurea finished
Grille:	Full CNC-machined
Provisions for brackets:	Yes
Handles:	2 (on side, on top)
Pole mount:	Yes, 36 mm
Width:	280 mm (X10) / 340 mm (X12) / 400 (X15)
Height:	550 mm (X10) / 650 mm (X12) / 750 (X15)
Depth:	375 mm (X10) / 445 mm (X12) / 475 (X15)
Weight:	16.6 kg (X10) / 20.7 kg (X12) / 25.4 kg (X15)

Product features, specifications and appearance are subject to changes without prior notice. dBTechnologies reserves the right to make changes or improvements in design or manufacture without any obligation to incorporate such changes or improvements in products manufactured before their introduction.