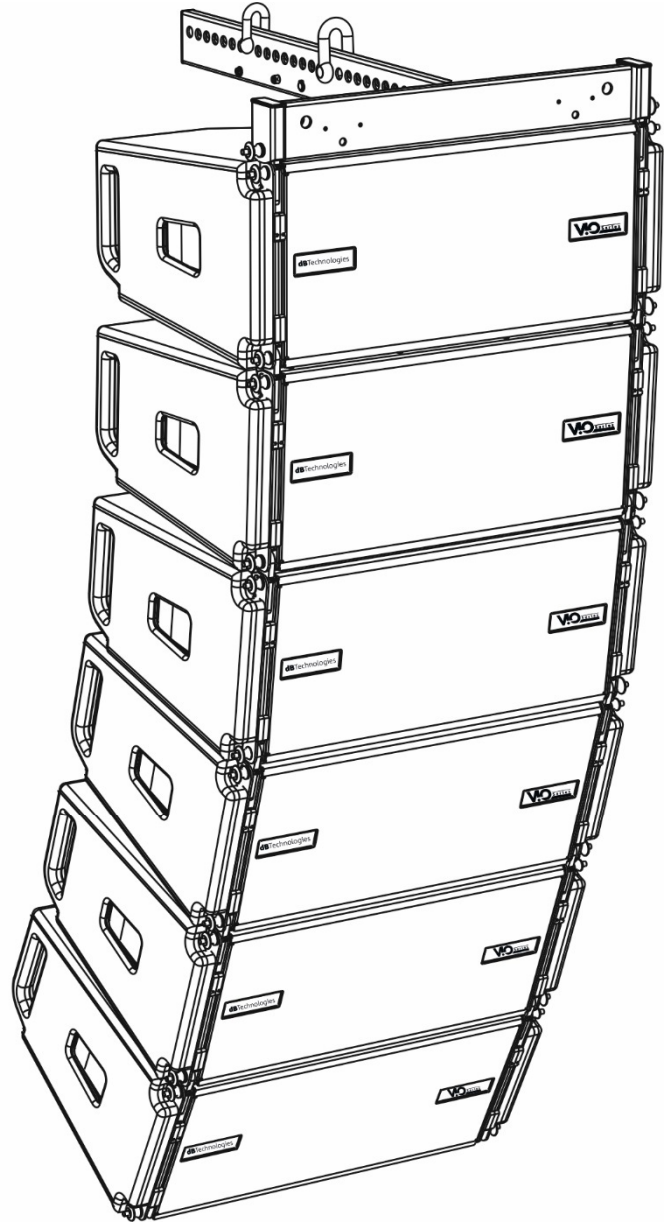# Quick start user manual
Section 1

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 - Sezione2".
Die Warnungen in diesem Handbuch müssen in Verbindung mit der "BEDIENUNGSANLEITUNG - Abschnitt 2" beobachtet werden".
Les avertissements specifiés 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".
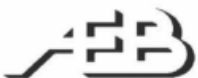
$C \in$

dBTechnologies

Thank you for choosing a dBTechnologies Product!
VIO L208 is the new dBTechnologies flagship 2-way professional active line array module. It is equipped with: one 1.4" neodymium compression driver exit (3" neodymium voice coil) and two 8" neodymium woofers (2" voice coil). The full-range acoustical design includes an efficient all-in-one panel with phase corrector, in order to reach the best coherence in line-array configuration. The mechanical design allows an easy, accurate and quick installation in flown or stack use. The powerful DIGIPRO® G3 amplifier section, capable of handling up to 900 W (RMS power), is controlled by a DSP, which can perform a detailed customization of the output sound of the speaker. In particular, thanks to the dual rotary encoder interface, it is possible to accurately tune the line-array configuration coverage, using the FIR filter technology. In addition, the integrated RDNET connections are useful for a remote in-depth line-array control and configuration.
Check the site www.dbtechnologies.com for the complete user manual!

In order to mount the line array, for each module:

1) Unpacking
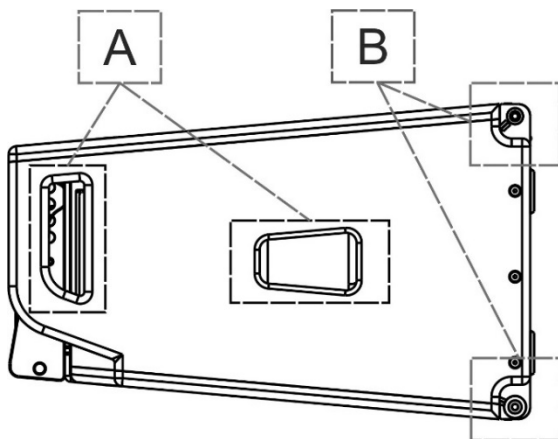The box contains:
N°1 VIO L208
N°1 100-120 V FUSE
This quick start and warranty documentation
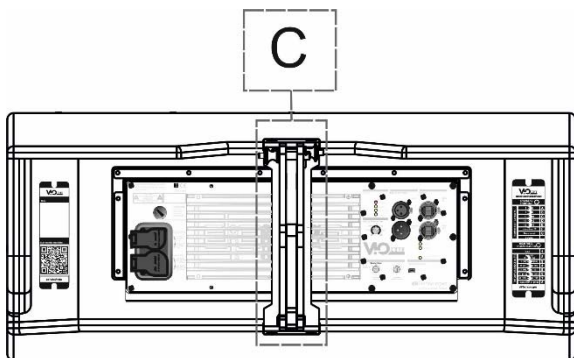
2) Easy installation
VIO L208 can be installed in different configurations. For a quick installation, in each side of the loudspeakers the user can find:

- Central and rear handles for easy handling (**A**)

- Two quick-release pin connections for frontal mounting (**B**), with upper integrated front arms.

- Remove the upper front pins and lift the front arms in the final position as shown.
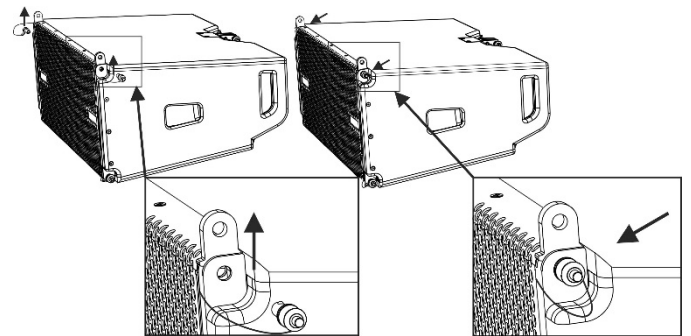- Fasten the arms with the pins in the lower holes.

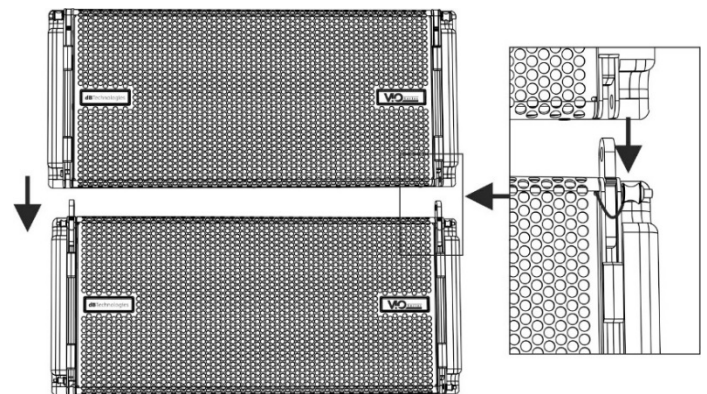In the rear side the user can find:

- One rear bracket (**C**) (with movable arm) for line-array mounting, with splay angles reference holes for easy setup and two quick-release pins.
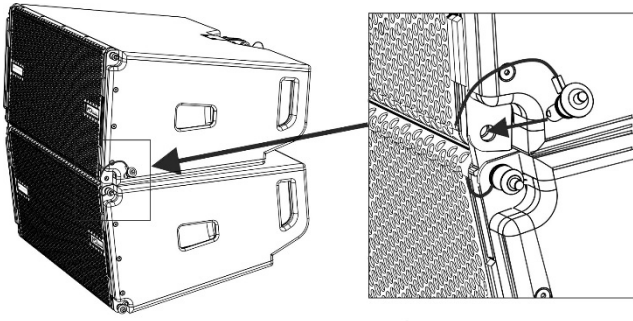

- Put a second VIO L208 and remove the lower frontal pins.
- Put this second enclosure on the top of the first.
- Insert the front arms in the position shown, aligning the related holes.

- Fasten the two enclosures using the quick-release pins of the upper VIO L208.
- Check that all the pins are properly inserted and locked before other mounting steps.
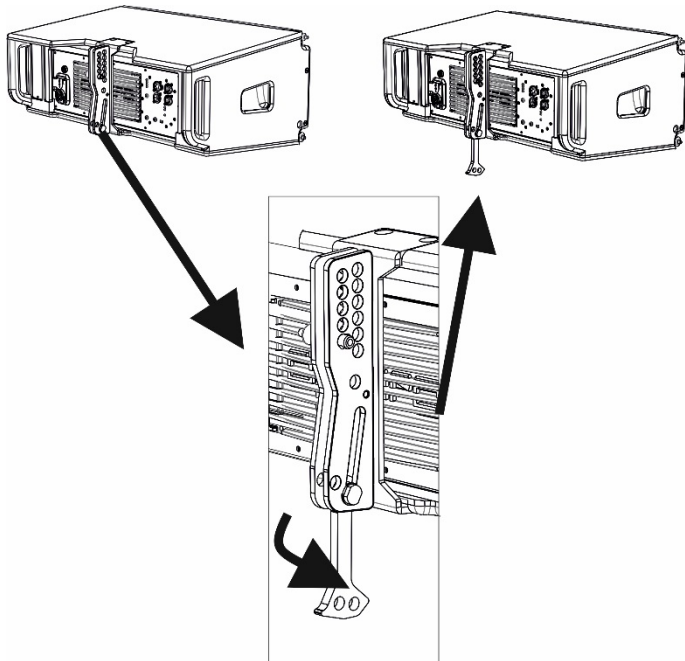
- Remove the rear pins and put the swing rear bracket in the final position as shown.

⚠ **CHECK PERIODICALLY THE INTEGRITY AND THE FUNCTIONALITY OF THE ENCLOSURE, OF THE PINS AND OF THE BRACKETS, FOR A SAFE INSTALLATION. MAKE SURE THAT THE PINS SECURE PROPERLY THE MODULES AND THAT THEY ARE FULLY LOCKED.**


- Insert the movable arm of rear bracket of the upper enclosure into the related housing of the lower one.

- Choose the desired splay angle between the two enclosures.
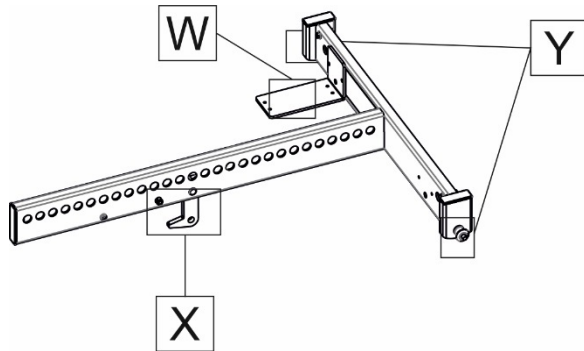
FLOWN (5°)

PIN 1
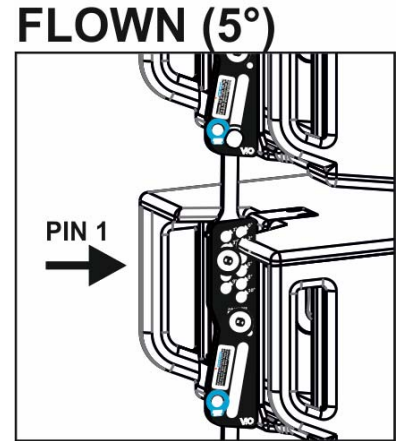
- If you need a flown installation, only one pin is required to secure the movable arm. Check that the arm is inserted in the bracket. Lift the arm (not the entire VIO-L208 module) to the desired tilt hole. Fasten one of the two rear pins in the desired angle, and let the second one in the position "PIN HOLDER". Check that the pins are fully inserted.

STACK (5°)

PIN 2

PIN 1
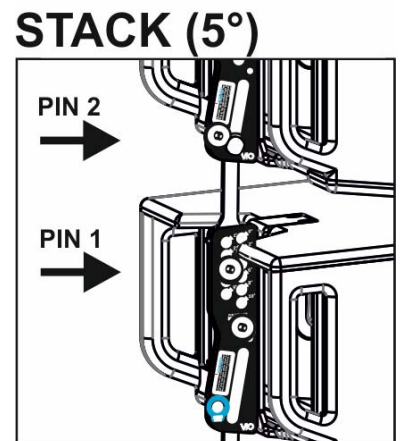
- If you need a stacked installation, it is mandatory to use two pins (of 2 different modules) to secure the rear bracket. Check that the arm is fully inserted in the bracket. Lift the arm (not the entire VIO-L 208 module) to the desired tilt hole and insert the PIN 1 in to the related splay angle position. Then lift the VIO-L208 upper module, until you can insert the PIN 2 in the "ANGLE LOCK" position as shown. Release the upper enclosure and check that the movable arm leans on the second pin, fastened in the correct position.
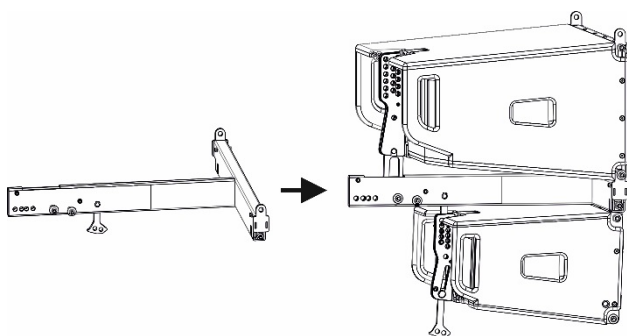
3) Accessories

For an easy setup are available among others: a professional fly-bar (DRK-208) for flown installation, an adapter (TF-VIO1) for the mounting with VIO-L210, a stack (and flown) frame to adapt to VIO-S118, and a trolley (DT-VIOL208) for a quick and safe transport.
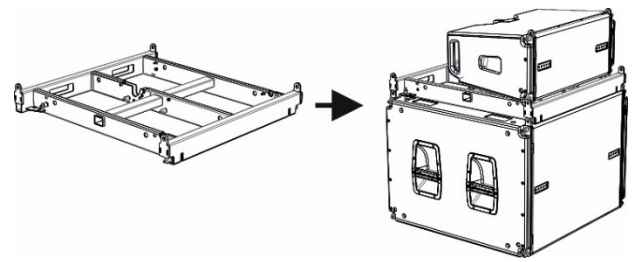

AF-VIO1

DSA-VIOL208

DRK-208

The DRK-208 fly-bar allows flown configuration, for the professional use. It has one rear arm [**X**] and 2 pins [**Y**] for the mounting. A [**W**] optional bracket, if needed, allows using a laser inclinometer (not supplied). The maximum admitted number of cabinets in different configurations depends on various parameters, like VIO L208 splay angles and DRK-208 tilt. The free dBTechnologies Composer (form version 6.4) software helps the user in the right choice for the best mechanical and acoustical result.
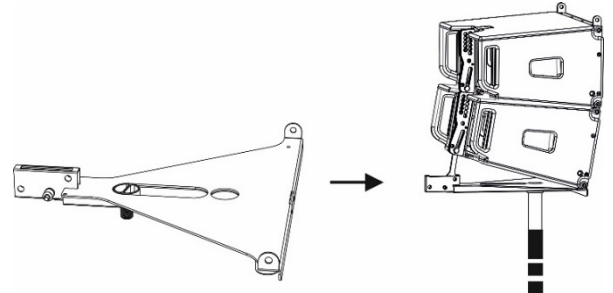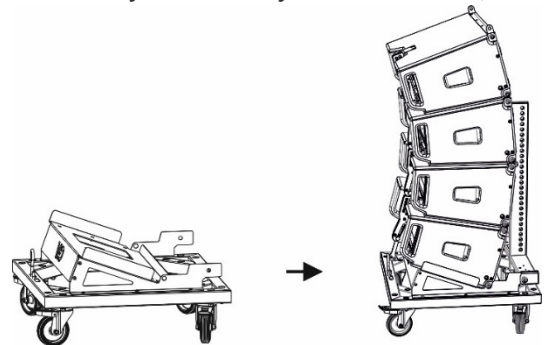
In stacked installation on a VIO-S118, for example, the AF-VIO1 must be used as illustrated. This versatile accessory is useful also in different scenarios (flown, adapting to VIO-L210s). For further and detailed information please refer to the related AF-VIO1 user manual. DSA-VIOL208 is designed for pole-mount application, as shown in the picture.

The DT-VIOL208 trolley can carry up to four VIO L208s. It has been designed for a quick displacement of the line-array elements. It is provided with wheels with brakes to protect the loudspeakers in a safe and ergonomic way. It can carry also 1 DRK-208, as shown.


CART-VIO-L208

For further and detailed information please refer to the related DT-VIOL208 user manual.

TF-VIO1

The TF-VIO1 allows combining VIO-L208 under VIO-L210 modules in line-array installations.

> ⚠ **CHECK PERIODICALLY THE INTEGRITY AND THE FUNCTIONALITY OF THE ACCESSORIES AND OF 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 MAINTAINANCE OF SUSPENSION AND STACK SYSTEMS FOR AUDIO EQUIPMENT MUST BE PERFORMED ONLY BY QUALIFIED AND AUTHORIZED PERSONNEL, USING THE SOFTWARE DBTECHNOLOGIES COMPOSER. AEB INDUSTRIALE S.R.L. DENIES ANY AND ALL RESPONSIBILITY FOR IMPROPER INSTALLATIONS, IN THE ABSENCE OF SAFETY REQUIREMENTS.**

4) First switch on for line-array setup

The DIGIPRO G3® amplifier of VIO L208 is controlled by a powerful DSP. All the connections and controls are in the rear amplifier control panel:
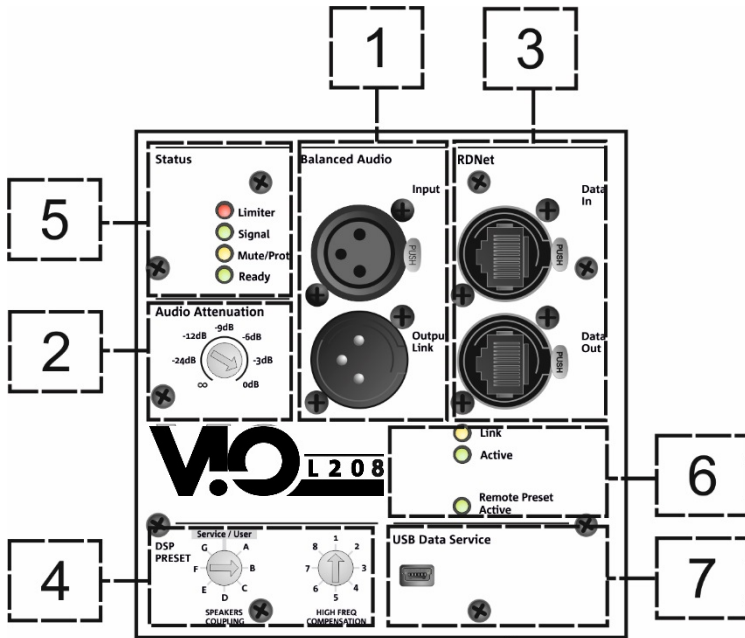
1 – Balanced audio input and output link
2 – Audio Attenuation rotary switch
3 – RDNet Data In / Data out
4 – DSP PRESET rotary switches (Speaker coupling/High frequency compensation)
5 – Status LEDs (Limiter, Signal, Mute/Protection, Ready)
6 – Control LEDs (Link, Active, Remote preset Active)
7 – Mini B-type USB port for firmware updating
8 – Auto-range Mains Input
9 – Mains link output
10 – Mains fuse

WARNING
The fuse is factory set for 220-240V~ operation.
*If it is necessary to change the fuse to 100-120V~ range:*
1. *Turn off the power and disconnect the speaker from any cable.*
2. *Wait 5 minutes.*
3. *Substitute the fuse with the correct one supplied.*

a)   Once you have properly set up the mechanical line-array configuration (see also the VIO L208 complete user manual and accessories instructions for further information), connect the audio input (**1**) of the first module of the array. Then connect the useful link audio output (**1**) to other VIO L208 modules, for the connection of all the line-array elements. Set the Audio Attenuation (**2**) of the loudspeakers to 0 dB.

b)   Check the rear panel reference label for a proper DSP regulation in line array. Please note that this kind of configuration can be set and modified also by the use of remote controller (RDNet Control 2 or RDNet Control 8) and software (Aurora, dBTechnologies Network, from 3.4 version). For this information see the chapter 5.

In this rear label ("SUGGESTED CONFIGURATIONS") you can find the suggested position of rotary switches (**4**) for each type of installation (Speakers Coupling positions and High Frequency Compensation). These settings are the main acoustic corrections to create the proper coupling between the elements of your line-array, in order to obtain the best coverage conditions.

In particular, the "SPEAKER COUPLING" rotary acts mainly on low frequencies, and it can be set in 6 positions, depending on the number of elements of line-array.
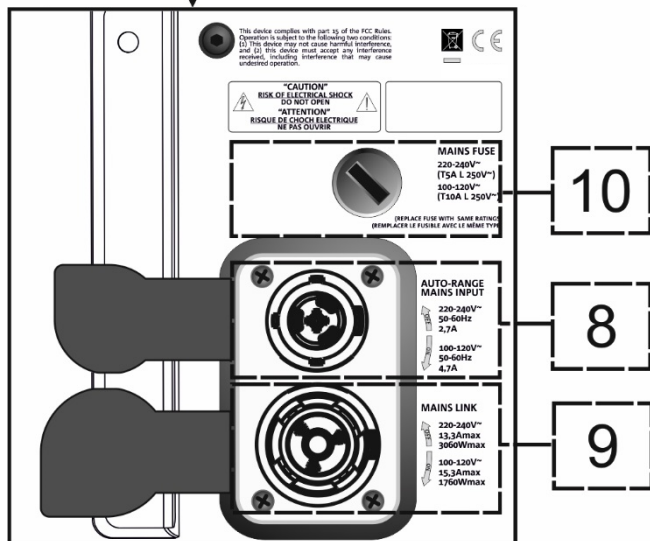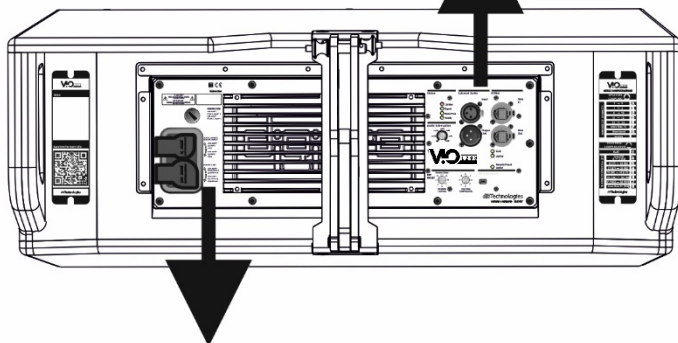
VIO L208 SUGGESTED CONFIGURATIONS

SPEAKERS COUPLING

NUMBER OF CABINETS	
2 → 6	A
7 → 8	B
9 → 10	C
11 → 12	D
13 → 14	E
more than 15	F
Bass boost	G
service/user	

HIGH FREQ. COMPENSATION

THROW DISTANCE m [ft]	
FLAT	1
front fill 0 → 10 [32]	2
11 [33] → 20 [66]	3
21 [67] → 30 [98]	4
31 [99] → 40 [131]	5
41 [132] → 50 [164]	6
more than 50 [165]	7
DOWN FILL	8

dBTechnologies

A seventh "Bass boost" position assign particular emphasis on the lower frequencies. The "service/user" one allows USB port communication for firmware updating (or can recall on the speaker user settings previously saved in remote control with dBTechnologies Network). The "HIGH FREQUENCY COMPENSATION" can act on medium-high frequencies. The user can choose among a "FLAT" position (which give a flat equalization in this frequencies band), and other 7 positions, depending on the distance between the line-array and the audience (in meters and feet).

c)   Connect the power link output (**9**) of the first module to the mains input (**8**) of a second VIO L208 module of the line-array, and so on, in order to link the power supply between all the elements. The maximum linkable rated power and current depends on the first module connection (type of cable, type of connector used). The plate data give information about the entire linked line-array system. The maximum number of modules for each power daisy chain connection [mains input + mains link] is: 1+5 VIO L208s** at 220-240V~, and 1+3 VIO L208s** at 100-120V~ (for further information see Technical Data).

d)   In case of remote control, connect the proper Data Input (**3**) of the first module of the line-array to the hardware remote controller (RDNet Control 2 or RDNet Control 8) with cables equipped with etherCON connectors. Then connect the Data Output (**3**) of the first module to the Data Input (**3**) of the second one, and so on. When the RDNet network is on and it has recognized the connected device, the LED "Link" (**6**) is on. The other LED (**6**) "Active" start blinking when there is the presence of data transmission, the "Remote Preset Active" advise that all the local controls set on the amplifier panel (level, DSP presets, etc.) are by-passed and controlled remotely by RDNet. See also RDNet Control 2 and RDNet Control 8 user manuals for further information.

e)   Connect the power supply (**8**) to the first module. The related "Ready" LED (**5**) turns on, signaling the proper power connection. The "Signal" LED (**5**) start blinking at the presence of audio signal (greater than -20dBu). Avoid audio distortion conditions, potentially signaled by the "Limiter" LED (**5**).

IN FLOWN CONFIGURATION, IT IS ADVISABLE TO START ALL THE CONNECTIONS FROM THE TOP ("FIRST ELEMENT") OF THE LINE-ARRAY, FOR THE BEST CABLING, IN ACCORDANCE WITH THE FOLLOWING SCREENS OF "DBTECHNOLOGIES NETWORK" SOFTWARE.

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5) Software (Aurora, dBTechnologies Network and dBTechnologies Composer)

VIO L208 can be fully remote controlled via RDNet. The connection details have been illustrated in the chapter 4 ("d" point). In remote control mode, the use of free professional software, developed by dBTechnologies, allows a complete system management: Aurora Net, dBTechnologies Network. dBTechnologies Composer is a predictive software for the design and the check of acoustical and mechanical settings. They can be downloaded for free from the official site:
www.dbtechnologies.com/EN/Downloads.aspx
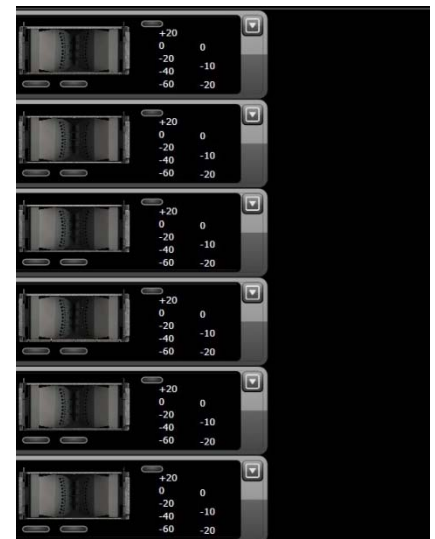Check always for software updates!

a) Aurora Net
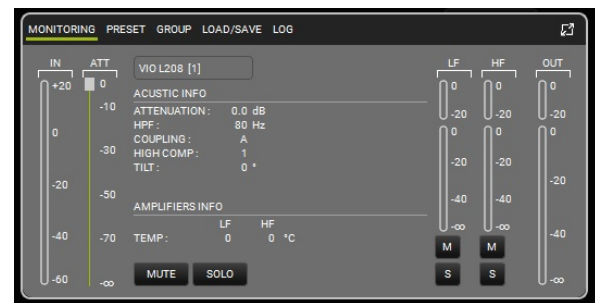
The software which must be used in case of remote control is Aurora Net. This cross-platform product allows the user controlling, setting and organizing all the ViO family. It also fully supports DANTE audio networking. Check the site www.dbtechnologies.com for further information.

b) dBTechnologies Network

A second software which must be used in case of remote control is dBTechnologies Network (from the version no. 3.4). This software can control different speakers in different configurations. It allows a complete remote control and a full real-time monitoring in various scenarios. For example, the user can control a setup with 2 line-arrays of VIO L208 and 3 VIO S118 subwoofers, and change different parameters while the entire system is sounding.
It can also offer a deeper loudspeaker control than the simple rear amplifier panel rotaries.
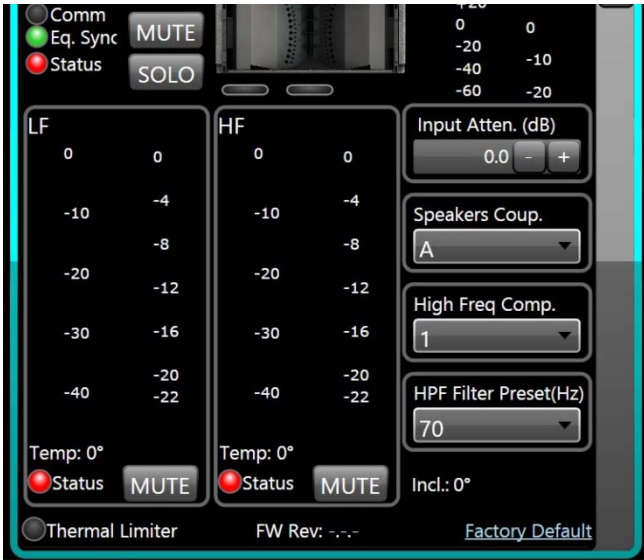
Those VIO L208 parameters can be controlled by using dBTechnologies Network:

- MUTE/SOLO switch*
- INPUT ATTENUATION
- SPEAKERS COUPLING
- HIGH FREQUENCY COMPENSATION
- HPF FILTER PRESET*
- DELAY*

The * parameters can be controlled only via software.

> **LAST SETTINGS STORED ON VIOL208 (USING DBTECHNOLOGIES NETWORK SOFTWARE), CAN BE RECALLED LATER ON THE SPEAKER, WITHOUT RDNET REMOTE CONTROL: SIMPLY TURN THE ROTARY "SPEAKER COUPLING" ON "SERVICE/USER" POSITION.**
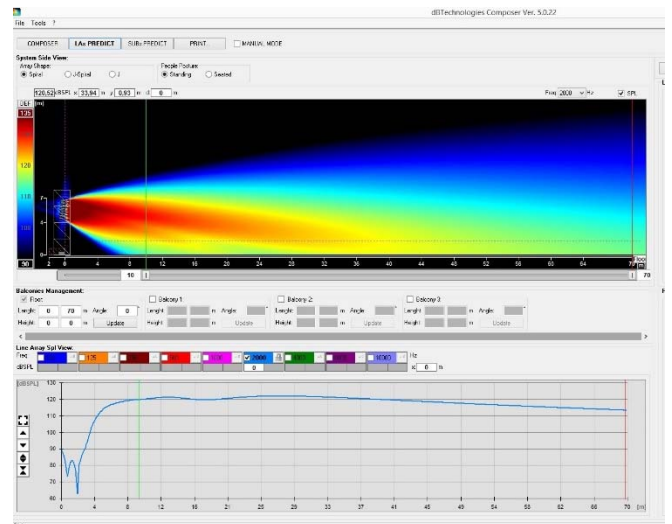
c) dBTechnologies Composer

The software dBTechnologies Composer (from version no. 6.4) is useful for complete sound systems design. It has been developed to optimize complex acoustical settings like line-array alignment and to calculate easily all parameters needed in professional sound system scenarios.
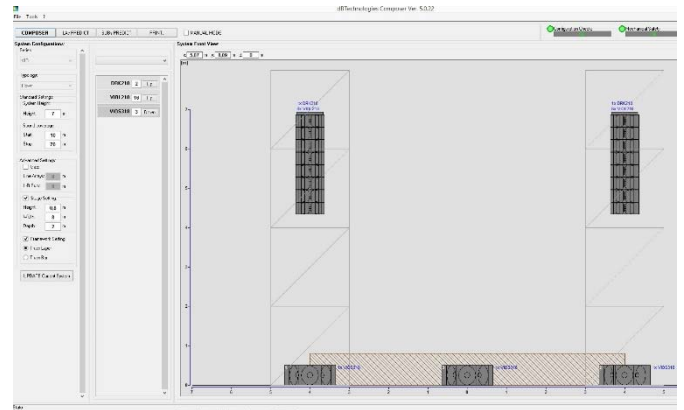
It is used to predict completely the acoustical behaviour of professional dBTechnologies products in an immediate way.
In particular, it can simulate different parameters, for example: mechanical safety in fly-bar use, SPL levels in outdoor environment, system coverage, system delays. The user-friendly graphic interface helps the user to easily understand in-depth settings.

Check the complete user manual on www.dbtechnologies.com for further information about the system and available accessories.
Scarica il manuale completo da **www.dbtechnologies.com** per ogni ulteriore informazione sul sistema e sugli accessori disponibili.
Für weitere Informationen und verfügbares Zubehör lesen sie bitte die vollständige Bedienungsanleitung unter **www.dbtechnologies.com.**
Vérifiez le manuel de l'utilisateur complet sur **www.dbtechnologies.com** pour des informations complémentaires du système et des accessoires disponibles.
Compruebe el manual de usuario completo sobre **www.dbtechnologies.com** para la información adicional sobre el sistema y accesorios disponibles.

dBTechnologies

Technical Data

Speaker Type: **2-way professional active line-array element**

Acoustical data

Usable Bandwidth [-6 dB]: **75 – 20000 Hz**
Frequency Response [±3dB]: **85 – 18100 Hz**
Max SPL (1 m): **133.5 dB**
HF compression driver: **1.4" Exit, Neodymium**
HF voice coil: **3", Neodymium**
Waveguide HF: **yes**
LF: **(2x) 8", Neodymium**
LF Voice Coil: **2"**
LF Phase plug: **All in one panel with phase corrector**
Crossover frequency: **1000 Hz**
FIR filters: **yes**
Horizontal dispersion ([-6dB] 500 – 18100 Hz): **100°**
Vertical dispersion: **varies on number of modules and configurations**

Amplifier

Amp Technology: **Digipro® G3 - Autorange**
Amp Class: **Class-D**
RMS Power: **900 W**
Peak Power: **1800 W**
Cooling: **Passive (convection)**

Operating range: **220-240V~ (50-60Hz)/100-120V~ (50-60 Hz)**
Temperature range: **-15 +55 [°C]**

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

Processor

Controller: **DSP, 28/56 bit**
AD/DA Conversion: **48 kHz**
Limiter: **Dual Active Peak, RMS, Thermal**
Controls: **Audio attenuation, DSP presets**
Advanced DSP function: **Linear Phase FIR filters**
Rotary presets: **2 Rotary BCD 8 positions for line-array configuration (Speaker Coupling, High Frequency Compensation)**

Input / Output

Mains connections: **PowerCON® TRUE1 In / Link**
Maximum number of modules for each daisy chain power connection [mains input + mains link]: **1+5 VIO L208** (220-240v~), 1+3 VIO L208** (100-120V~)**

Signal Input: **(Balanced) 1x XLR IN**
Signal Out: **(Balanced) 1 x XLR link OUT**
RDNET connectors: **Data In / Data Out**
USB connector: **mini USB B-type (for SERVICE DATA)**

Mechanics

Housing: **Wooden box – Black polyurea finished**
Grille: **CNC machined full metal grille**
Rigging points: **3 (Easy Rigging)**
Handles: **2 side handles + 2 wooden handles (integrated)**

Width: **600 mm (25.98 in)**
Height: **260 mm (10.24 in)**
Depth: **390 mm (15.35 in)**
Weight: **18.1 kg (39.9 lbs.)**

POWER SUPPLY SPECIFICATIONS (POWER ABSORPTION)

Draw at 1/8 of full power in average use conditions (*): 1.6 A (220-240V~) - 2.8 A (100-120V~)
Draw at 1/3 of full power in maximum use conditions (**): 2.7 A (220-240V~) - 4.7 A (100-120V~)
Power absorption with speaker turned on without signal (idle): 22 W

* INSTALLER NOTES: The values refer to 1/8 of full power, in average operating conditions (music program with infrequent or no clipping). It is recommended to consider them the minimum sizing values for any type of configuration.
** INSTALLER NOTES: The values refer to 1/3 of full power, in heavy operating conditions (music program with frequent clipping or activation of the limiter). We recommend sizing according to these values in case of professional installations and tours.

Download the complete user manual on:
www.dbtechnologies.com/EN/Downloads.aspx

VIO L208   cod. 420120268Q rev.1.2