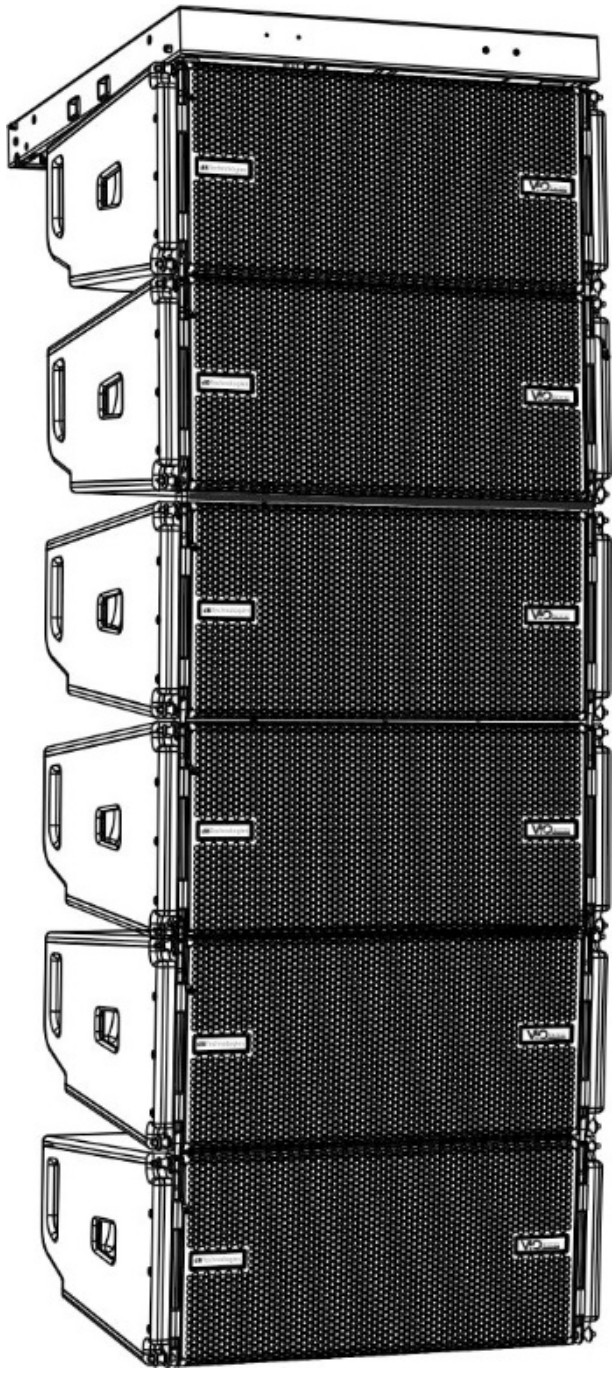

VIO L210

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".

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Tel +39 051 969870 Fax +39 051 969725 www.dbtechnologies.com info@dbtechnologies-aeb.com

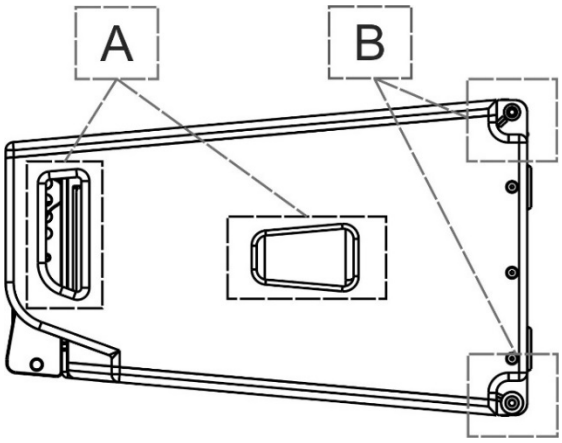
Thank you for choosing a dBTechnologies Product!
VIO L210 is the new dBTechnologies flagship 2-way professional active line array module. It is equipped with: one 1.4" neodymium compression driver exit (3" titanium voice coil) and two 10" neodymium woofers (2.5" voice coil). The full-range acoustical design includes an efficient waveguide and a phase plug with phase correctors, 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 new 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!

1) Unpacking
The box contains:
N°1 VIO L210
N°1 100-120 V FUSE
This quick start and warranty documentation

2) Easy installation
VIO L210 can be installed in different configurations.
For a quick installation, in each side of the loudspeakers the user can find:

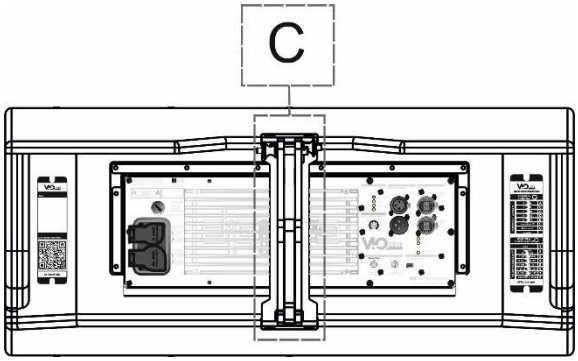
Central and rear handles for easy handling (**A**)

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

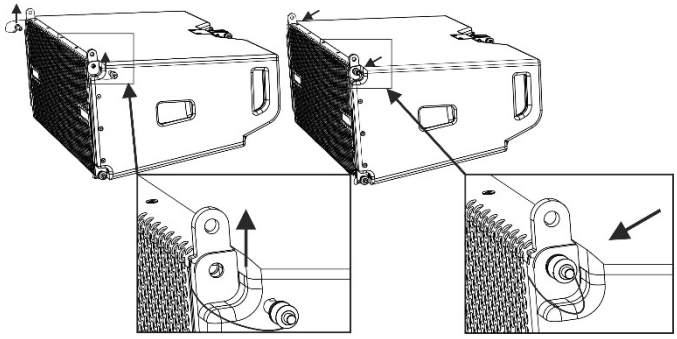


In the rear side the user can find:

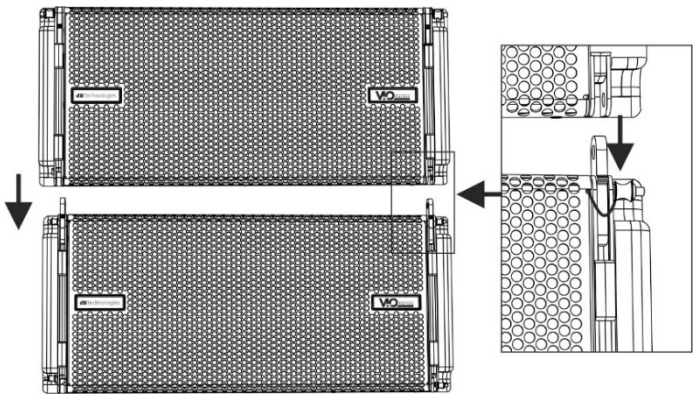
- One swing rear bracket (**C**) for line-array mounting, with splay angles reference holes for easy setup and two quick-release pins.



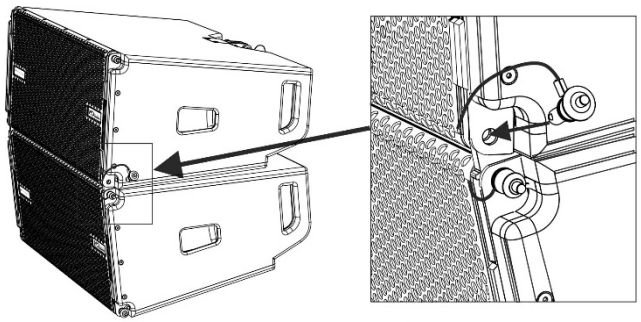
In order to mount the line array, for each module:



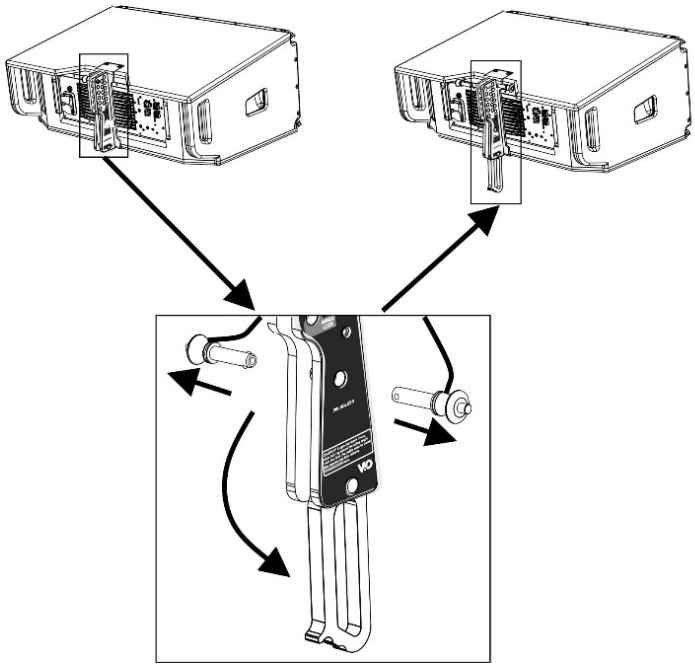
- Remove the upper front pins and lift the front arms in the final position as shown.
- Fasten the arms with the pins in the lower holes.



- Put a second VIO L210 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.

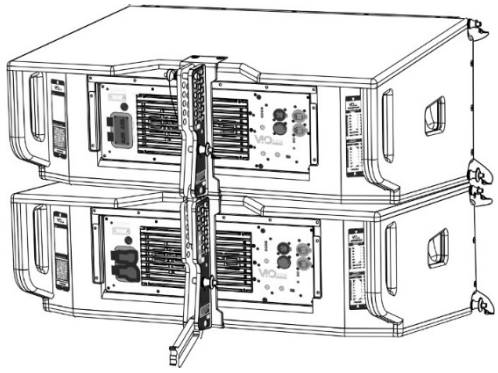


- Fasten the two enclosures using the quick-release pins of the upper VIO L210.
- Check that all the pins are properly inserted and locked before other mounting steps.



- Remove the rear pins and put the swing rear bracket in the final position as shown.

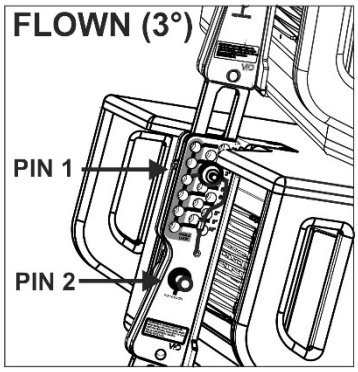
⚠ CHECK PERIODICALLY THE INTEGRITY AND THE FUNCTIONALITY OF THE ENCLOSURE, OF THE PINS AND OF THE BRACKETS, FOR A SAFE INSTALLATION. MAKE SURE THAT THE PINS SECURE PROPERLY THE MODULES AND THAT THEY ARE FULLY LOCKED.



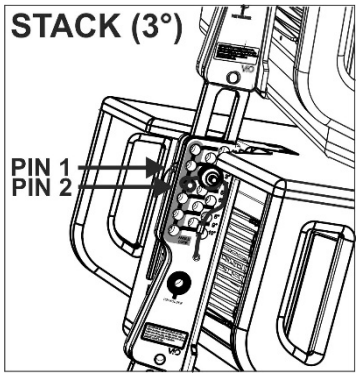
- Insert the swing rear bracket of the upper enclosure into the related housing of the lower one.

- Choose the desired splay angle between the two enclosures.

- If you need a flown installation, only one pin is required to secure the rear bracket. Fasten one of the two rear pins in the desired angle with the rear bracket inserted in, and let the second one in the position "PIN HOLDER".



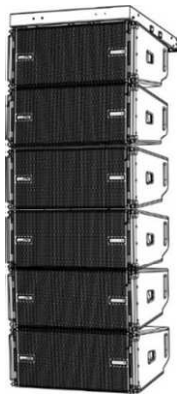
- If you need a stacked installation, it is mandatory to use both the pins to secure the rear bracket. Fasten one of the two pins in the desired angle, with the rear bracket inserted in. Lift the rear of the upper enclosure to the maximum height allowed by the first pin, and fasten the second pin in the related "ANGLE LOCK" position. Then release the upper enclosure and check that the rear bracket leans on the second pin, fastened in the correct position.

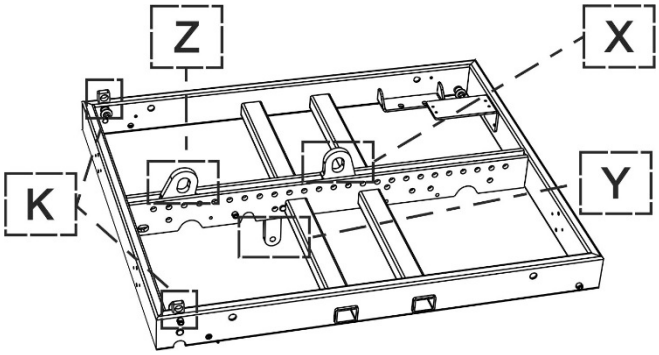


3) Accessories

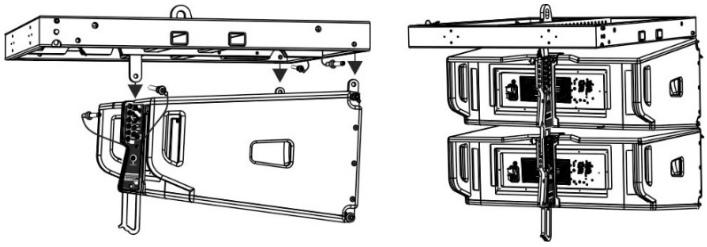
For an easy setup are available among others: a professional fly-bar (DRK-210) for flown and stacked installation, and a trolley (DT-210) for a quick and safe transport.

a) *DRK-210 FLY-BAR*

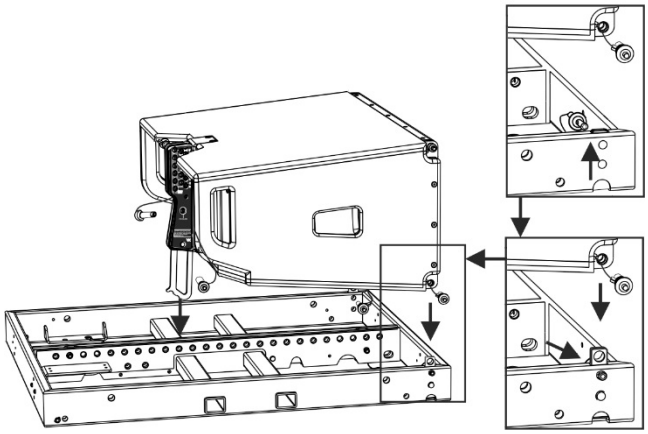




The DRK-210 fly-bar allows different configurations, flown or stacked, for the professional stage use. It has 2 load adaptors (X, Z) for the use of up to two different rigging motors, one rear bracket (Y) specifically designed for the flown installation, and 2 movable bars [K] for stack mounting. The maximum admitted number of cabinets in different configurations depends on various parameters, like VIO L210 splay angles and DRK-210 tilt. The free dBTechnologies Composer software helps the user in the right choice for the best mechanical and acoustical result.



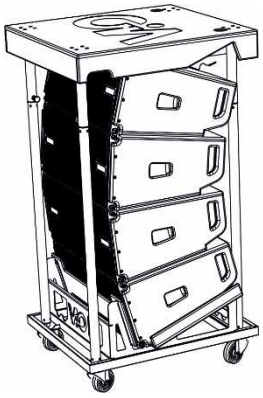
As shown in the picture, in flown installation, the use of the pins and of the rear bracket of DRK-210 make the assembly with the first element of the line-array simple and safe.



In stacked installation (for example a line-array stacked on a S318 sub), the use of the pins, of the rear bracket of VIO-L210, and of the 2 movable bars of DRK-210, as shown, make the assembling quick and easy.
For further and detailed information please refer to the related DRK-210 user manual.

b) *DT-210 TROLLEY*

The DT-210 Trolley can carry up to four VIO L210s.
It has been designed for a quick displacement of the line-array elements. It is provided with wheels and upper coverage to protect the loudspeakers in a safe and ergonomic way.

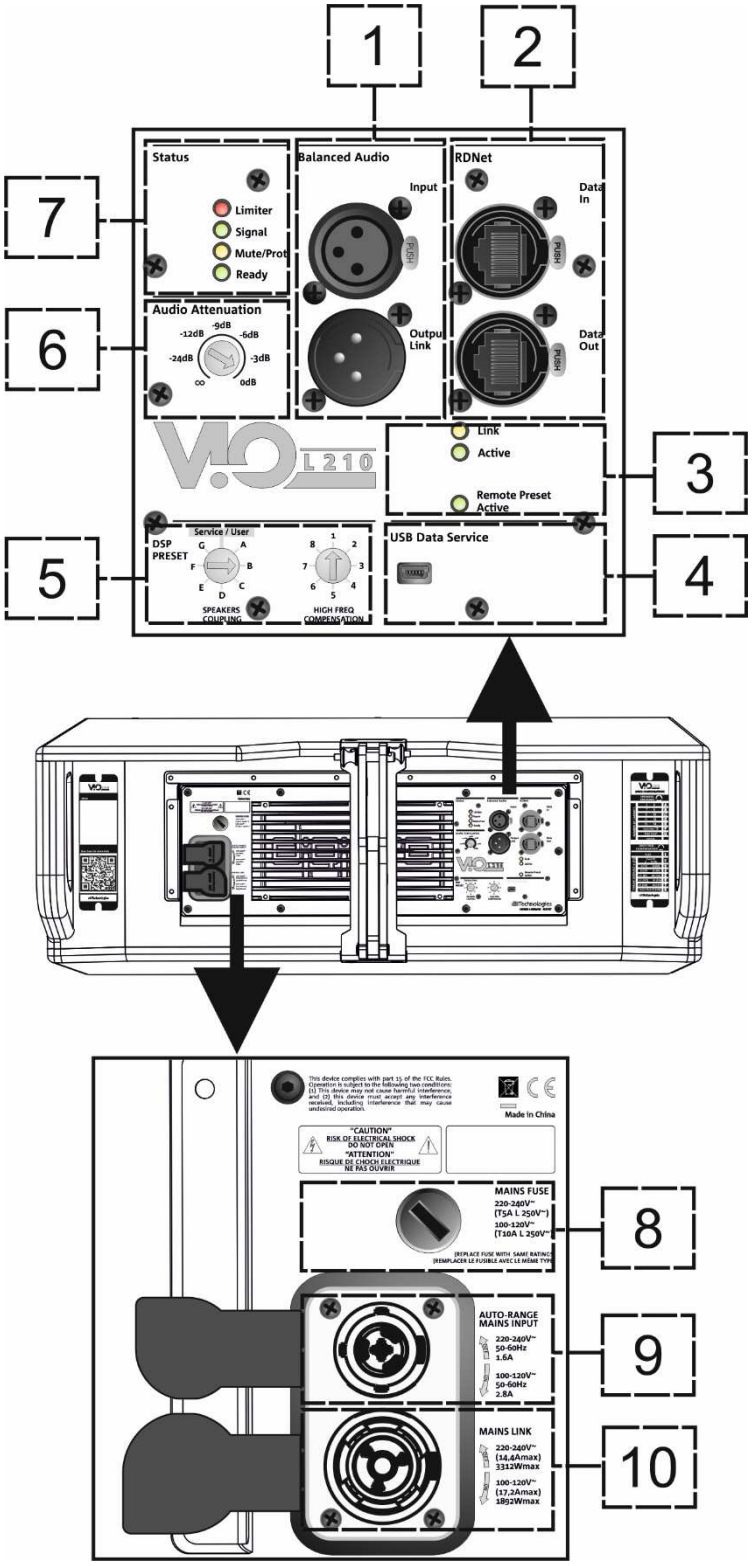


For further and detailed information please refer to the related DT-210 user manual.

⚠ 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. 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 L210 is controlled by a powerful DSP. All the connections and controls are in the rear amplifier control panel:

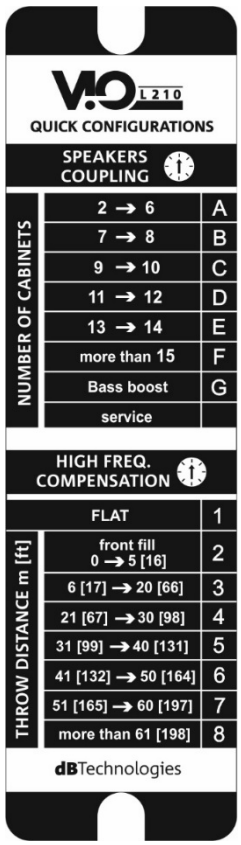


1 – Balanced audio input and output link
2 – RDNet Data In / Data out
3 – Control LEDs (Link, Active, Remote preset Active)
4 – Mini B-type USB port for firmware updating
5 – DSP PRESET rotary switches (Speaker coupling/High frequency compensation)
6 – Audio Attenuation rotary switch
7 – Status LEDs (Limiter, Signal, Mute/Protection, Ready)
8 – Mains fuse
9 – Auto-range Mains Input
10 – Mains link output

WARNING
The fuse is factory set for 220-240 V operation.
If it is necessary to change the fuse to 100-120 V range:
1. *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 L210 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 L210 modules, for the connection of all the line-array elements. Set the Audio Attenuation (**6**) 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 (dBTechnologies Network). For this information see the chapter (5).
In this rear label ("QUICK CONFIGURATIONS") you can find the suggested position of rotary switches (**5**) for each type of installation (Speakers Coupling positions and High Frequency Compensation). These settings are the main acoustic corrections to create the best 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.



A seventh "Bass boost" position assign particular emphasis on the lower frequencies, while the "service" one allow USB port communication for firmware updating. The "HIGH FREQUENCY COMPENSATION" can act on medium-high frequencies. The user can choose 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 (**10**) of the first module to the mains input (**9**) of a second VIO L210 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 linkable modules is 10 VIO L210s at 220-240 V, and 7 VIO L210s at 100-120 V.

d) In case of remote control, connect the proper Data Input (**2**) 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 (**2**) of the first module to the Data Input (**2**) of the second one, and so on. When the RDNet network is on and it has recognized the connected device, the LED "Link" (3) is on. The other LEDs (3) "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 (**9**) to the first module. The related "Ready" LED (**7**) turns on, signaling the proper power connection. The "Signal" LED (**7**) start blinking at the presence of audio signal (greater than -20dBu). Avoid audio distortion conditions, potentially signaled by the "Limiter" LED (**7**).

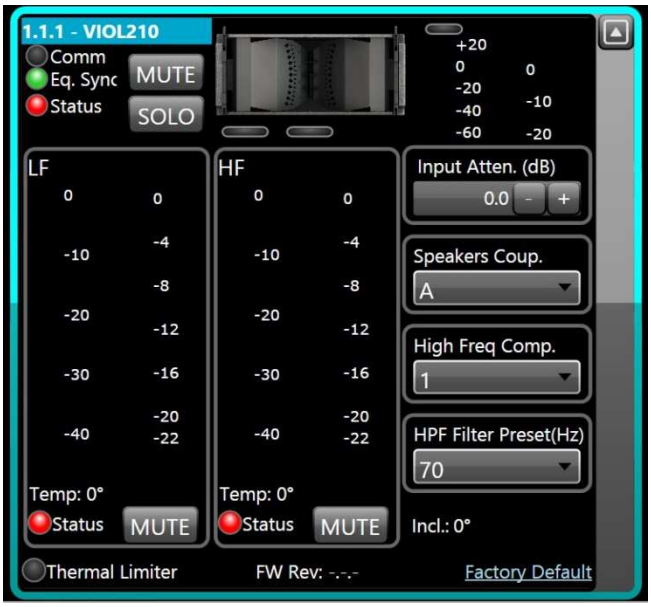
IN FLOWN CONFIGURATION, IT IS ADVISABLE TO START ALL THE CONNECTIONS FROM THE TOP ("FIRST ELEMENT") OF THE LINE-ARRAY, TO OBTAIN THE BEST CABLES MANAGEMENT, IN ACCORDANCE WITH THE FOLLOWING SCREENS OF "DBTECHNOLOGIES NETWORK" SOFTWARE.

5) Software (dBTechnologies Network and dBTechnologies Composer)

VIO L210 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: dBTechnologies Network and dBTechnologies Composer.

a) dBTechnologies Network

The software which must be used in case of remote control is dBTechnologies Network. 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 L210 and 3 VIO S318 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.
It can be downloaded for free from the official site:
www.dbtechnologies.com/EN/Downloads.aspx
Check always for software updates!



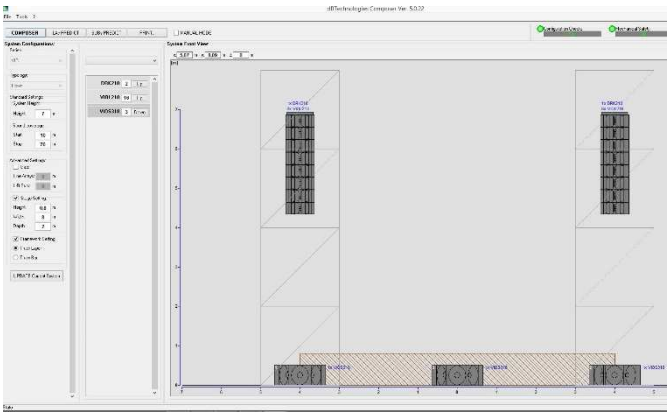
Those VIO L210 parameters can be controlled by using dBTechnologies Network:

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

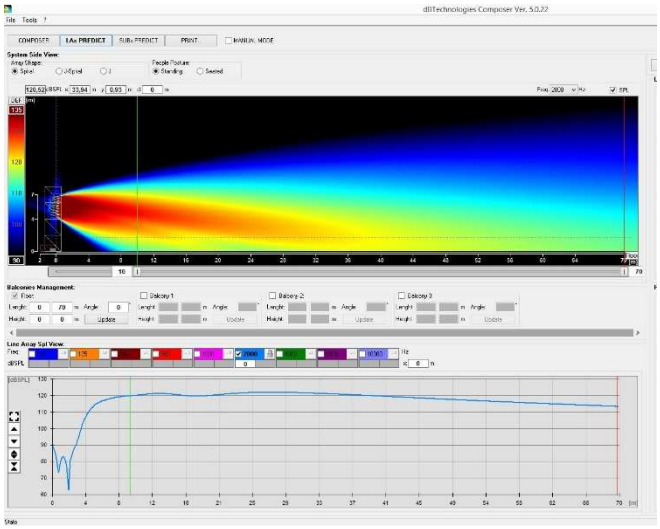
The * parameters can be controlled only via software.

b) dBTechnologies Composer

The software dBTechnologies Composer 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.



It can be downloaded for free from the official site:
www.dbtechnologies.com/EN/Downloads.aspx

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

Technical Data

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

Acoustical data

Usable Bandwidth [-6 dB]: 67 - 20000 Hz
Frequency Response [±3dB]: 78 - 18100 Hz
Max SPL (1 m): 134 - 136 dB (dependent on frequency/preset)
HF compression driver: 1.4" Exit, Neodymium
HF voice coil: 3", Titanium
Waveguide HF: yes
LF: (2x) 10", Neodymium
LF Voice Coil: 2.5"
LF Phase plug: Aluminum phase corrector
Crossover frequencies: 950 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)

Processor

Controller: DSP, 28/56 bit 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
Power consumption: 1.6 A (220-240 V) / 2.8 A (100-120 V)
Maximum number of power linked elements: up to 10 VIO L210 (220-240 V), up to 7 VIO L210 (100-120 V)
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 for each side
Width: 720 mm (28.35 in)
Height: 320 mm (12.60 in)
Depth: 520 mm (20.47 in)
Weight: 28.6 kg (63 lbs.)

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.