V.O L210



2-WAY ACTIVE LINE ARRAY SYSTEM

NETWORK READY WITH AN INTEGRATED RDNET PORT

WOODEN ENCLOSURE COATED WITH POLYUREA

SMOOTH CONFIGURATION AND SET UP OPERATIONS THANKS TO THE INTEGRATED 3-POINT RIGGING HARDWARE

UP TO 6 MODULES IN A SINGLE 16A 230V CIRCUIT

ALUMINIUM PHASE PLUGS FOR AN EXTREMELY CONSTANT DISPERSION

ADVANCED DSP FEATURING LINEAR PHASE FIR FILTERS FOR IMPROVED INTELLIGIBILITY

EXCLUSIVELY DESIGNED HF WAVEGUIDE FOR IMPRESSIVE THROW DISTANCE AND PHASE COHERENCE

LIGHTWEIGHT NEODYMIUM MAGNETS FOR ALL TRANSDUCERS

ON-BOARD DOUBLE ROTARY EQ CONTROL SYSTEM FOR PRECISE TUNING

BUILT-IN INCLINOMETER

INTRODUCTION TO VIO L210

As a result of many years' experience developing solutions for powered line array systems, VIO L210 reaches the next level among dBTechnologies' speaker range aimed at larger sound reinforcement applications. The internal acoustic design and sound processing developed by dBTechnologies' R&D department merge to deliver outstanding performances in terms of sound pressure, coverage coherence, intelligibility and sound definition.

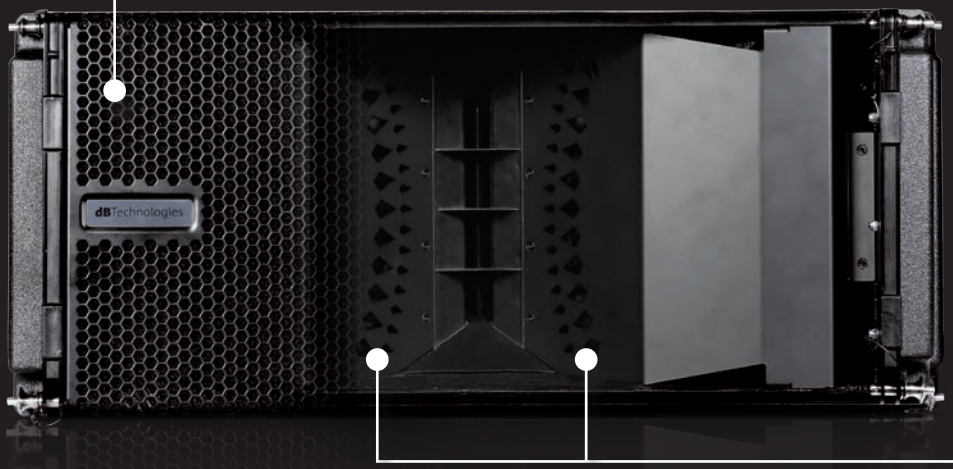
Speaker Type	2-Way Active Line Array Module
Usable Bandwidth [-6dB]	67 - 20.000 Hz
Frequency Response [+/- 3dB]	78 - 18.100 Hz
Max SPL	One Unit: 135 dB
HF	1 x 1.4", 3" v.c. - Neodymium, Titanium diaphragm
LF	2 x 10", 2.5" v.c. - Neodymium
Phase Correction	Aluminum Phase Plug
Horizontal Directivity	100°
Vertical Directivity	depends on array size and configuration
Amplifier	900 W RMS Class-D Digipro® G3
Cooling	Convection
Power Supply	Auto-range SMPS
Controller	DSP 28/56 bit
AD/DA Converter	24 bit/48 kHz
Limiter	Dual Active Multiband Peak, RMS, Thermal
Processing (filters)	FIR Linear phase
Signal Input	1x XLR female, balanced
Signal Output	1x XLR male, balanced
Network	RDNet remote control RJ45 connector IN/OUT
Power Socket	1x PowerCON TRUE1 In 1x PowerCON TRUE1 Out
Controls	1 x Speaker Coupling (7 presets) 1 x HF Compensation (8 presets) 1 x Input Attenuation Rotary Switch
Special Features	Opto-isolated floating pre-amp Inclinometer
Housing	Multiplex plywood - Polyurea painting
Housing Design	Trapezoidal 10°
Handles	1 x Side, 2 on back
Rain cover	Included
Rigging Points	Integrated rigging hardware
Width x Height x Depth	720 x 320 x 520 mm (28.35 x 12.6 x 20.47 in)
Weight	28.6 kg (63 lbs)

UNIQUE ACOUSTIC DESIGN

Functional yet unobtrusive design

Made of solid multiplex plywood coated with a black polyurea finish, the housing is fronted with a black grille which complete a sober, unobtrusive look which can easily adapt to any scenic design. The speaker's cabinet is easy to tote thanks to its 4 handles, 1 per side and 2 on the back, and its amplifier module is protected with an integrated black raincover.







Phase plug

Acoustic enclosure is completed by two massive aluminum phase plugs located in front of both 10" woofers. Their external surface is the prosecution of the constant directivity high-frequency waveguide.

Each phase plug features 26 diamond-shaped holes essential to reduce the interference between the two LF emission points and to improve frequency and transient response.

Transport & Installation Accessories

DT-VIOL210



Touring cart for 4 VIO L210 modules and a DRK-210 flybar. Including 4 poles and a wooden lid.

DRK-210



Flybar for VIO L210. Suitable for fly and stack use.

FSA-VIOL210



Adapter to fly VIO L210 down VIO S118.

GSA-VIOL210



Adapter to stack VIO L210 above VIO S118.

TF-VIO1



Transition frame for flying VIO L208 below VIO L210.

AF-VIO1



Adapter frame for flying VIO L208 below VIO S118 / VIO L210 and groundstacking VIO L208/L210 above any VIO sub.

Woofers

The two premium 10” neodymium transducers, positioned in a V form and sealed in a bass reflex enclosure, have been custom-designed to improve efficiency. In facts, their voice coils, made of copper plus aluminum coating, are designed to last even in the most demanding conditions, providing an accurate transient response and an extended low-end reproduction. Furthermore, these transducers have been specifically designed for the VIO in order to make the most of the system.



High-frequency

One single 3” voice coil compression driver (1.4” exit throat) accurately delivers high frequencies. The waveguide contributes to create a cylindrical wavefront, allowing a very precise high-frequency directivity control, much to the advantage of the system’s throw-distance.

The crossover frequency between the 2 ways lows down to 950 Hz and each module guarantees a uniform 100° horizontal coverage.



Bags & Covers

TC-VIOL210



Transport cover for DT-VIOL210. Waterproof.

Cables

DAC-70	XLR-XLR audio cable (70 cm).
DCK-27T	Cable-Set containing 2x DAC-70 and 2x DPTC-70L.
DPTC-70L	PowerCON TRUE1-PowerCON TRUE1 power link cable (70cm).
DPTC-1000M	Mains PowerCON TRUE1 cable (10m). Different plugs available for several countries.
DPTC-2000M	Mains PowerCON TRUE1 cable (20m). 16A CekON
RDC-45F	RJ45 to XLR 3 poles female conversion cable, 6 cm length. The cable converts from RDNet RJ45 to XLRF.
RDC-45M	RJ45 to XLR 3 poles male conversion cable, 6 cm lenght. The cable converts from RDNet RJ45 to XLRM.
RJ45-RJ45-150	RJ45-RJ45 link cable (150cm) for RDNet speakers. EtherCON connectors.
RJ45-RJ45-75	RJ45-RJ45 link cable (75cm) for RDNet speakers. EtherCON connectors.

ADVANCED DSP

Advanced DSP paired with notable efficiency

The module features a 900W RMS Class D Digipro G3 highly efficient amplifier allowing the system to achieve up to 135 dB SPL. High efficiency is a key feature of the VIO L210: it is actually possible to connect up to 6 modules on a single 16A 230V circuit.

The amplifier also features an auto-range circuit and is fed via PowerCON TRUE1 waterproof connectors.

A perfectly coherent coverage is granted even at a long distance thanks to advanced sound processing with FIR filters. The pre-amp module is also equipped with a digital optical isolation on the signal input stage, which makes the system more resistant to any interference.



FLYING HARDWARE

Smart rigging hardware & accessories

The VIO L210 comes with a built-in 3-point rigging system allowing a smooth and fast set up of the system. The 2 front links easily connect the modules from any angle.

The back central rigging strand is equipped with a hook type link to set the relative splay angles, determined via the prediction software dBTechnologies Composer.

While lifting up the array, the rigging strand will automatically block the system at the preset angles. Splay angles can be set directly while the system is still located on the transport cart DT-VIOL210, which houses up to 4 modules.





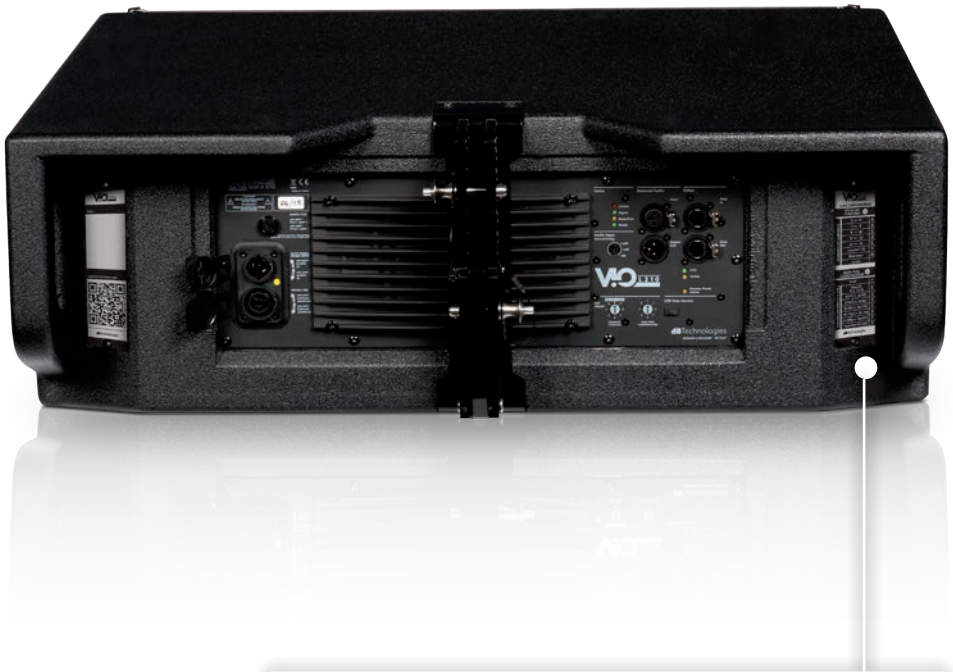
Flying and stacking cabinets

The dedicated flying frame DRK 210 comes with 2 hooks whose design allows to set a more precise inclination of the array. The DRK 210 can also serve as a groundstacking accessory to secure VIO L210 cabinets on a VIO S318 subwoofer. When not in use, the flying frame can be fixed and stored on the top lid of DT-VIOL210 transport cart. Even details like cables mounts, or the attachment of a laser inclinometer are included in the design.

Complete EQ controls

VIO L210 features a double rotary user interface to process the system manually. The first rotary is dedicated to low frequency adjustments in order to control coupling effects depending on the array dimensions. The second rotary helps to compensate for the high frequencies loss due to throw distance.

Both rotaries features several accurate presets, while the prediction software dBTechnologies Composer provides for more precise configurations. Any preset can be easily changed remotely via dBTechnologies Network.



Rotary 1 - Speaker coupling presets

Depending on the dimension of the array, the coupling effect affects frequency response. This dedicated “speaker coupling” control allows the user to attenuate the mid-low frequency according to the total number of line array cabinets.

SPEAKER 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	

Rotary 2 - High Freq. compensation presets

Being a considerable long-throw system, VIO L210 is capable to provide incredibly flat response all over the target area also thanks to the high frequencies compensation control. Choosing among the different presets, allows the user to compensate high frequencies loss due to air absorption in each cabinet.

HIGH FREQ. COMPENSATION	
FLAT	1
THROW DISTANCE m [ft]: front fill 0 → 5 [16]	2
6 [17] → 20 [66]	3
21 [67] → 30 [98]	4
31 [99] → 40 [131]	5
41 [132] → 50 [164]	6
51 [165] → 60 [197]	7
more than 61 [198]	8