

TOURING & INSTALL

2022-2023

FBT

AUDIO CONTRACTOR

2022-2023



TOURING & INSTALL

2022-2023



PORTABLE SOUND

2022-2023



- Security and Emergency systems EN 54-16
- Conference systems & Intercom systems
- Microphones
- Preamplifier equipment
- Control equipment
- Power amplifiers
- Integrated amplifiers
- Music sources
- Ceiling speakers
- Sound projectors
- EN 54-24 speakers
- Spherical diffusers
- Speaker systems
- Column speakers
- Weatherproof speakers

- Variable curvature line array
- Constant curvature line array
- Column line array
- Point source
- Subwoofer
- Monitor
- Digital loudspeaker management
- Power amplifier
- Accessories

- Line array systems
- Speaker systems
- Subwoofer
- Monitor
- Integrated sound systems
- Digital loudspeaker management
- Power amplifier
- Accessories



since 1963
Made in Italy

Variable Curvature Line Array

5 Muse	ACTIVE	ARRAY	210 LA 600+300W RMS 135dB SPL	SUB	118 FSA/FSCA 1200W RMS 139dB SPL
		PASSIVE	210 L 800+250W RMS 133dB SPL		118 FS/FSC 1200W RMS 139dB SPL
11 Horizon	ACTIVE	ARRAY	VHA 406A 600+300W RMS 133dB SPL	SUB	VHA 112SA 1200W RMS 135dB SPL
		PASSIVE			VHA 118SA 2500W RMS 143dB SPL
17 Mitus	ACTIVE	ARRAY	206LA 600+300W RMS 134dB SPL	SUB	212FSA 1200W RMS 138dB SPL
		PASSIVE	206L 500+150W RMS 133dB SPL		118FSA/FSCA 1200W RMS 139dB SPL
23 QA	ACTIVE	ARRAY	108A 400+100W RMS 131dB SPL	SUB	212FS 1000W RMS 138dB SPL
		PASSIVE	108 350+200W RMS 131dB SPL		118FS/FSC 1200W RMS 139dB SPL

Constant Curvature Line Array

27 Modus	ACTIVE	ARRAY	4805 LA 600+300W RMS 137dB SPL	4820LA 600+300W RMS 137dB SPL	SUB	118FSA 1200W RMS 137dB SPL	215FSA 2000W RMS 146dB SPL
		PASSIVE					
33 QSA	ACTIVE	ARRAY	112.0A 1100+300W RMS 139dB SPL	112.A 1100+300W RMS 139dB SPL	SUB	118SA 1200W RMS 137dB SPL	118S 1400W RMS 138dB SPL
		PASSIVE	112.0 600+240W RMS 138dB SPL	112 600+240W RMS 138dB SPL			
39 Shadow	PASSIVE	ARRAY	142L 1000W RMS 137dB SPL		SUB	CLA 118SA 1200W RMS 138dB SPL	CLA 208SA 600W RMS 129dB SPL
							

Column Line Array

43 Vertus	ACTIVE	ARRAY	CLA 406.2A 600+300W RMS 133dB SPL	CLA 206A 600+300W RMS 133dB SPL	SUB	CLA 118SA 1200W RMS 138dB SPL	CLA 208SA 600W RMS 129dB SPL
		PASSIVE					
CLA 803T	ACTIVE	ARRAY	CLA 803T 240W RMS 119/122dB SPL	CLA 403T 120W RMS 116/119dB SPL	SUB	CLA 1244A 16x50W RMS 126dB SPL	CLA 804A 8x50W RMS 123dB SPL
		PASSIVE					
MLA 608A	ACTIVE	ARRAY	MLA 608A 6x250W RMS 137dB SPL	MLA 801A 8x50W RMS 139dB SPL	SUB	DLA 1244A 16x50W RMS 126dB SPL	CLA 604 500W RMS 123dB SPL
		PASSIVE					

Point Source

67 Mitus

ACTIVE	SPEAKER 215A 1100+250W RMS 136dB SPL	152A 1100+250W RMS 136dB SPL	115A 600+300W RMS 133dB SPL	112A 600+300W RMS 133dB SPL
PASSIVE	215 1600W RMS 138dB SPL	152 800W RMS 132dB SPL	115 800W RMS 132dB SPL	112 700W RMS 131dB SPL

73 Archon

PASSIVE	SPEAKER 115 1000W RMS 134dB SPL	112 1000W RMS 133dB SPL	110 700W RMS 129dB SPL	108 350W RMS 121dB SPL
PASSIVE	106 300W RMS 119dB SPL	105 200W RMS 115dB SPL	SUB 215S 2000W RMS 142dB SPL	208S 600W RMS 132dB SPL

79 Shadow

PASSIVE	SPEAKER 112HC 600W RMS 132dB SPL	112CT 600W RMS 128dB SPL	108CT 450W RMS 124dB SPL	105T 120W RMS 112dB SPL	SUB 114S 700W RMS 129.5dB SPL
---------	---	---------------------------------------	---------------------------------------	--------------------------------------	--

Subwoofer

86 Mitus

ACTIVE	SUB 118SA 1200W RMS 139dB SPL
PASSIVE	118S 1000W RMS 139dB SPL

88 Q

ACTIVE	SUB 118SA 1200W RMS 137dB SPL
PASSIVE	118S 1600W RMS 140dB SPL

90 Archon

PASSIVE	SUB 215S 2000W RMS 142dB SPL	208S 600W RMS 132dB SPL
---------	---	--------------------------------------

Monitor

94 Mitus

ACTIVE	MONITOR 210MA 600+300W RMS 134dB SPL
PASSIVE	210M 800W RMS 132dB SPL

96 StageMaxX

ACTIVE	MONITOR 12MA 400+100W RMS 130dB SPL
--------	--

Digital loudspeakers management / Power Amplifier

Accessories

HISTORY, EXPERIENCE AND INNOVATION IN TRADITION. MADE IN ITALY.

Since 1963, FBT designs and builds sound in Recanati, a small city located in the centre of Italy, a city of Poetry, of Art, of Music, from immemorial time the soundtrack for entire generations.



IN FBT EVERY DEPARTMENT
IS A COMPANY
IN THE COMPANY
WHOSE AIM IS TO MAKE
QUALITY WITHIN
THE ENERGY OF SOUND.

A technological know-how that extends from research to planning, from electronics to design, from wood to metal, from plastics to painting. A highly innovative product and a manufacturing process determined by a strict final electronic testing.



VARIABLE
CURVATURE
LINE ARRAY



Muse

Muse

Variable Curvature Line Array

6



A true line array system encompassing advanced technology and refined Italian engineering - these are the principles behind MUSE, a new sound reinforcement solution from FBT that redefines the modern line array in terms of power, size, light weight, flexibility and ease of use. True modularity means that MUSE is ready for any application, from a small installation using two enclosures to a large outdoor concert deploying 16 speakers per hang.

THE WAVEGUIDE, OPTIMISED VIA A SERIES OF SIMULATIONS USING BEM FINITE ELEMENTS TO ELIMINATE DISTORTION, BOASTS A HORIZONTAL DISPERSION OF 90°.

7

It has been designed to present an optimal load to the driver's diaphragm at 800Hz, thereby allowing the propagation of an acoustic wave in the horizontal field up to 18kHz. The resulting enclosure can contend with even the most challenging of physical environments, delivering an ideal cylindrical source, while the acoustic configuration of the central horn offers a particularly linear and symmetric horizontal dispersion.

FBT has also applied its Italian design expertise to the cabinet, creating an enclosure that is equally rugged, practical and stylish. Constructed from 15mm Birch plywood, each **MUSE** element incorporates two die-cast aluminium handles and fully integrated hardware to suit any application. Up to **16 MUSE** enclosures can be flown with ease in a single array. Each cabinet can be splayed in 1° increments via simple pin adjustments on the integrated fly-ware, from a minimum of 0° to a maximum of 10°. No matter the application, **MUSE** brings an easy-to-use functionality and elegant aesthetic to every project.

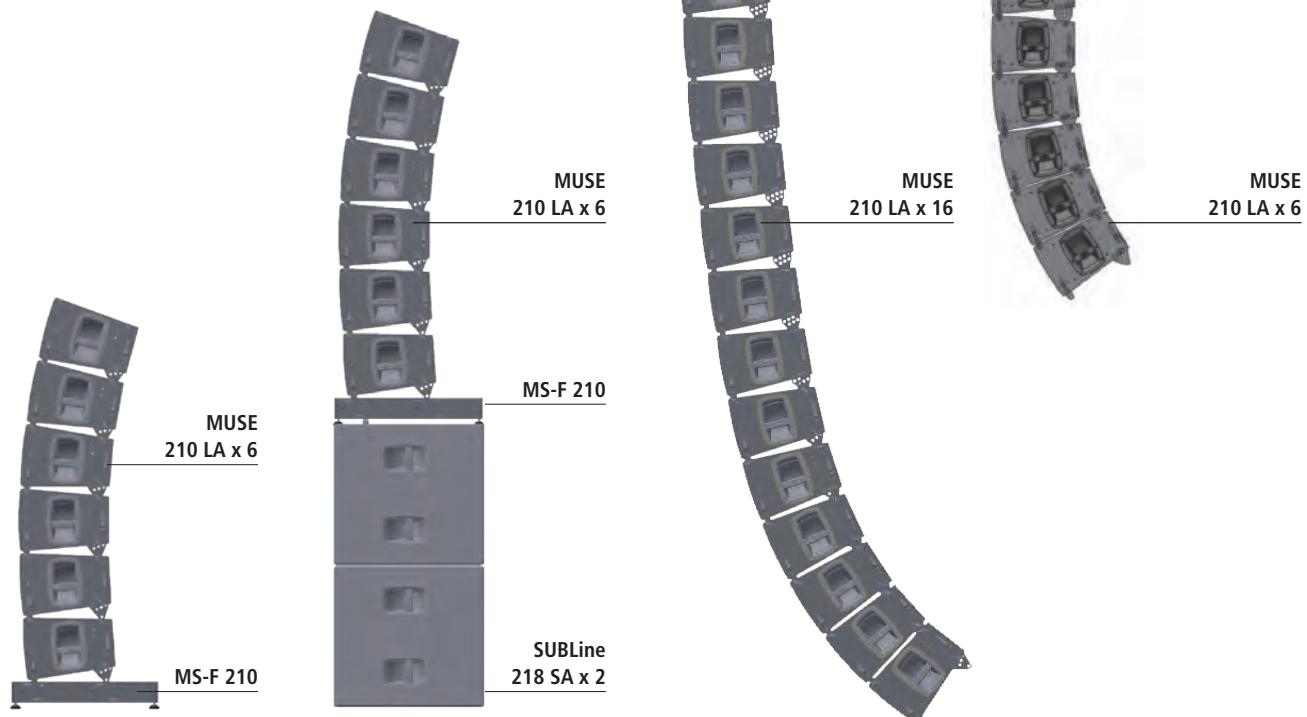
Inside the box, power is courtesy of the convection-cooled, 600 +300 Wrms Class-D amplifier module, housed in a protective, fully sealed die-cast aluminium chassis. Meanwhile the onboard DSP offers a choice of eight presets, allowing users to easily configure their **MUSE** system depending on the curvature of arrays and the number of speakers used.

To extend the low frequency performance of a **MUSE** system, users can benefit from the matched subwoofer - the **SUBLINE 218SA**, which is ideal for ground-stacking. Each **SUBLINE 218SA** incorporates two 460mm B&C woofers and a 1200W Class-D amplifier with a switch-mode power supply. Alternatively, **MUSE** can be matched to the **MITUS218SA sub**, boasting two 460mm neodymium loaded woofers from B&C, and a 2000W switch-mode Class-D amplifier capable of an SPL of 145dB.

With its unique focus on modularity and working in conjunction with EASE FOCUS 2 PC software, **MUSE** allows you to build the ideal solution to any sound reinforcement challenge.

FBT PRESENTS A NEW WAY TO FLY CARDIOID SUBWOOFER CONFIGURATIONS

The **Muse 118FSA** is a true reversible flyable subwoofer. Designed and manufactured by FBT's renowned engineers and artisans, the **Muse 118FSA** is a prime example of audio perfection with ergonomic innovations. The **Muse 118FSA** is a hybrid loaded 18" neodymium subwoofer designed to suspend from the Muse flybar either facing forward or rearward. When flown facing rearward, the sub's user removable grille can be moved by the user to the new "front" of the enclosure and the amplifier module can be moved to the new 'rear' of the enclosure, thus obtaining aesthetic consistency when flown with additional forward facing Muse 118FSA's. Thus, when creating a **cardioid sub package**, no additional hardware is needed to easily achieve sleek visual continuity. The model **MUSE 118FSCA** is already factory preconfigured as rear facing for cardioid applications



Each modular **MUSE** element comprises two 250mm (10") custom-designed woofers with 64mm high excursion voice coils and two custom B&C HF compression drivers with 25mm (1") throat.



MS-T 210 Code 38886
Trolley for 4 Muse 210



MS-F 210 Code 38834
Flying bar Muse 210
and Muse 118



MS-J 210 Code 39401
Metal Bracket to fix MS-F 210
to Subline 218/ Mitus 218



MS-P 210 Kit Code 38861
Pin Lock Set (4pcs box)



MS-FK 210 Code 39675
Flight-case for 2 x Muse 210



MS-C210 Code 39340
Rain cover for Muse 210
and Muse 118



Muse 210 LA

PRECISION COVERAGE
VERTICAL ACTIVE ARRAY
600W + 300W RMS - 135dB SPL

- 2-way, compact bass-reflex line array system
- Two 250mm (10") woofers with 64mm (2.5") voice coils
- Two custom B&C HF compression drivers with 25mm (1") throats
- Precision waveguide delivering 90° of horizontal dispersion up to 18Khz
- Frequency response from 55Hz to 20KHz
- Onboard **Class-D** bi-amp system delivering **600Wrms** and **300Wrms** for LF and HF with switch-mode power supplies
- Onboard **DSP** processor with **8 EQ** presets, adjustable HF level of +/- 5db for accurate amplitude shading
- Control panel with XLR input and link, preset control, HF level control, HP-filter and ground lift
- Strong birch plywood cabinet with integrated aluminum handles, hardware and fly-ware offering adjustable angling ranging from **0° to 10° in 1° increments**
- Wide range of accessories to offer ultimate flexibility no matter whether your MUSE line array system is suspended or ground-stacked, plus a specially designed cover to guard against bad weather

Muse 210 L

PRECISION COVERAGE
VERTICAL PASSIVE ARRAY
800W + 250W RMS - 135dB SPL





Muse 118FSA/FSCA

**PROCESSED CARDIOID-FLYABLE
ACTIVE SUBWOOFER
1200W RMS - 139dB SPL**

- **Compact Hybrid band pass cardioid-arrayable subwoofer.** Hybrid configuration permit to obtain extension and speed of vented with high SPL and acoustic filtering of band pass
- Suspension hardware fully compatible with MUSE 210LA allowing the enclosure to be suspended front or rear-firing for easy cardioid configurations
- Subwoofer can be suspended facing forward or rearward with capability of front- or rear-mounting the grille and amp module for aesthetic uniformity in cardioid configuration
- Very large area laminar-flow port to ensure no power compression and very low port turbulence
- For cardioid configurations with one SUB rear-firing and two sub front-firing, more than 15db SPL rejection can be obtained behind the array
- **18" (460mm) custom B&C neodymium** magnet high excursion woofer with 3.5" (88mm) voice coil

Muse 118FS/FSC

**FLYABLE PASSIVE
SUBWOOFER
1200W RMS - 139dB SPL**

- **Passive version, recommended amplifier of 1000Wrms / 8ohm**
- Neutrik Speakon NL- 4MDV connectors IN & LINK OUT
- External digital processor required



Muse

Variable Curvature Line Array

10



Model	210LA	118FSA/FSCA
Configuration	way	2
Built-in amplif. cont. rms LF/HF	W RMS	400/200
Built-in amplif. max. rms LF/HF	W	600/300
Built-in amplif. max. peak LF/HF	W	1200/600
Frequency response	@-6dB	55Hz - 20KHz
Low frequency woofer	inch	2x10 - 2.5 coil
High frequency driver	inch	2x1 - 1.7 coil
Maximum SPL cont/peak	dB	128 / 135
Dispersion	H x V	90° x 10° max dependant upon n° of element
Input impedance	kOhm	22
Crossover frequency	kHz	1.1
AC Power requirements	VA	640
Input connectors		XLR with loop
Power cord	m / ft	-
Net dimensions (WxHxD)	mm inch	652x296x425 25.66x11.65x16.73
Net weight	Kg/Lb	38 / 83.77
Transport dimensions (WxHxD)	mm inch	748x390x510 29.44x15.35x20.07
Transport weight	Kg/Lb	41 / 90.38

Model	210L	118FS/FSC
Configuration	way	2
Recommended amplifier	W RMS	800LF / 200HF
Long term power	W	400LF / 100HF
Short term power IEC 268-5	W	1600LF / 400HF
Nominal impedance	Ohm	16LF / 32HF
Frequency response	@-6dB	60Hz - 18KHz
Low frequency woofer	inch	2x10- 2.5 coil
High frequency driver	inch	2x1- 1.7 coil
Sensitivity (@1W/1m)	dB	101LF / 112HF
Maximum SPL cont/peak	dB	128/135
Dispersion	H x V	90° x 10° dependant upon n° of element
Crossover frequency	kHz	external active
Recommended HP filter		32hz - 24dboct
Recommended external filter		Digital management with presets
Input connectors		2 x Speakon NL4 in & throu
Net dimensions (WxHxD)	mm inch	652x296x425 25.66x11.65x16.73
Net weight	Kg / Lb	38 / 83.77
Transport dimensions (WxHxD)	mm inch	748x390x510 29.44x15.35x20.07
Transport weight	Kg / Lb	41 / 90.38

VERTICAL HORIZONTAL |¹¹
LINE ARRAY



Horizon

FBT LOOKS TO THE HORIZON WITH NEW VERTICAL HORIZONTAL ARRAY

Developed to meet the increasingly diverse needs of rental companies and systems integrators, the **HORIZON VHA (Vertical Horizontal Array) series** by FBT is set to rewrite the rules of sound reinforcement system design when it debuts at Frankfurt Pro Light + Sound 2018.

Delivering optimal audience coverage with the ability to adapt to the requirements of the project at hand, **HORIZON VHA** represents a step forward in flexible sound reinforcement technology with exceptional sound quality.

Crafted in Italy with the no-compromises manufacturing excellence for which FBT is known, the HORIZON VHA series comprises the full range **VHA406A**, plus two options for low-end extension in the shape of the **12" VHA112SA and 18" VHA118SA**.



VHA 406A x 3
VHA 112SA
VHA-T 406

VHA 406A x 2
VHA 112SA
VHA-B 406
VHA 118SA

VHA 406A
VHA-S 406
VHA 118SA

VHA 406A/
VHA 112SA max 3
VHA-T 406



VHA-FH 406-1
VHA 406A

Constructed in birch plywood with a tough and tour-ready synthetic rubber surround, each **VHA406A** **comprises four 6.5-inch woofers plus a 1.4" large-format neodymium compression driver with a 2.5" voice coil**. The purpose-designed central waveguide, optimized with BEM finite element simulations, offers dispersion of **90° horizontal and 20° vertical**, with precise and focused vertical control across the enclosure's entire operating range. The result is a combination of perfectly balanced, symmetrical dispersion – multiple system can be coupled with full coherence far beyond 18KHz, plus a particularly powerful, defined midrange with a frequency response extending from **65Hz to 20KHz**.

The **VHA406A's Class-D**, switch mode amplifier module is constructed in die-cast aluminum with natural convection to deliver **600W for the LF section and 300W for the HF**. Courtesy of an integrated DSP processor with next generation algorithms, users can choose from eight presets to further tailor system performance whilst enjoying the system's tremendous headroom to ensure the best possible audio fidelity. Integrated hardware allows the linking of up to six **VHA406A** cabinets with variable angles from **5° to 20° (in 5° steps)**, ensuring an easy and error-proof system configuration and set-up. Rigging is simplified even further by the inclusion of only one setting point per side. All setting pins are fixed and integrated into the hardware, eliminating both the risk of loss and damage in transport. Crucially, the **HORIZON VHA** system also boasts integrated quick-release anchor points that facilitate the creation of horizontal arrays using the dedicated flybar. Each flybar will



support up to three VHA406A cabinets, while multiple flybars can be joined for the creation of arrays delivering up to 360° coverage.

For low-end extension, meanwhile, the **VHA112SA flyable bass-extension module** is ideal for small-to-medium sized projects, seamlessly matching the VHA406A in both size and shape yet housing a single **12" B&C long excursion woofer**. The bass reflex design incorporates a laminar air flow to minimize turbulence and compression, while the Class-D amplifier module drives the system with **1200W**, and includes on-board DSP with filtering, equalization and limiting. For larger spaces, the ground-stacked **VHA118SA** is an **exceptionally powerful and versatile subwoofer** that sets a new standard for SPL to size ratio. Comprising a single **18" B&C woofer**, the birch plywood, bass reflex sub again deploys a laminar air-flow for refined performance, while its **2500W Class-D amplifier** module offers a selection of six entirely rewritten preset algorithms.

The design of the **VHA118SA** has produced a unique low-end module that is capable of generating extremely high levels of SPL for prolonged periods. Using BEM finite element simulations, FBT has optimized the woofer's load volume, while careful study of the grille and the assembly's protective fabric have minimized acoustic impedance for a net improvement in performance compared to previous models. The addition of the **VHA118SA** extends the overall system frequency response to 30Hz, while the sub can support fully ground-stacked configurations thanks to the dedicated accessory.



Horizon

Vertical Horizontal Line Array

14



VHA-F 406 Code 41779

Flying bar for vertical configuration
HORIZON VHA 406 A



VHA-FH 406-1 Code 41780

Flying bar for horizontal
configuration 1x VHA 406 A



VHA-FH 406-5 Code 41781

Flying bar for horizontal
configuration for 2-5 HORIZON
VHA 406 A



VHA-B 406 Code 41783

Metal base to ground VHA 406/VHA
112 array and stack on VHA 118SA



VHA-T 406 Code 42126

Trolley for 3 x VHA406/VHA112 and
metal base to ground 4x VHA406/
VHA112



VHA-S 406 Codice 41782

Cluster bracket with speaker pole
for 1xVHA 406A



Horizon VHA 406A

VERTICAL HORIZONTAL ACTIVE LINE ARRAY 600W + 300W - 133 DB SPL

- Bi-amplified **2-way** line array
- **4 x 165mm (6.5") custom woofers with 38mm (1.5") coil**
- Large format FBT waveguide with **90° (H) x 20° (V)** dispersion
- Frequency response from 65Hz to 20KHz
- **Class-D 600Wrms for LF and 300Wrms for HF amplifiers** with switch mode power supply
- **DSP processor with 8 equalization presets**
- Control panel with XLR input and link, volume, presets, filter-HP, ground-lift
- **Neutrik PowerCON TRUE1 IN and LINK power connectors**
- Cabinet in 12mm (0.5") **birch plywood** with anti-scratch varnish. Handles with rubber inserts and **rubber-coated sides** to protect the cabinet from bumps and scratches.
- Side suspension hardware with integrated setting pins, inclination between adjacent cabinets from **5° to 20° in 5° steps**. Possibility of **vertical and horizontal installation through dedicated flybars**.
- Wide range of accessories for suspension, pole-mounting or ground-stacking.
- Ideal for both live applications, assisted by one or both subs of the VHA range, and for fixed installations



Horizon VHA112SA

VERTICAL HORIZONTAL ARRAY ACTIVE SUBWOOFER
1200W - 135 DB SPL

- Bass-reflex amplified subwoofer
- 320 High-excursion 320mm (12") Woofer B & C
- Frequency response from **50Hz to 120Hz**
- **1200Wrms class D amplifier** with switching mode power supply
- **DSP** processor with **8** presets, delay
- Control panel with XLR input and link, volume, presets, delay, low extension
- **Neutrik PowerCON TRUE1 IN and LINK power connectors**
- Cabinet in 12mm (0.5") **birch plywood** with anti-scratch varnish. Handles with rubber inserts and **rubber-coated sides** to protect the cabinet from bumps and scratches
- **Ideal for reinforcing and extending the low range of the VHA406A line array**

Horizon VHA118SA

PROCESSED ACTIVE SUBWOOFER
2500W - 143 DB SPL

- Bass-reflex amplified subwoofer
- 460mm (18") high excursion woofer B&C with 100mm (4") coil
- Frequency response from **30Hz to 100Hz**
- **2500Wrms class D amplifier** with switching power supply
- **DSP** processor with **6** presets, 6-step delay
- Control panel with XLR input and stereo link, volume, presets, delay, status led
- **Neutrik PowerCON TRUE1 IN and LINK power connectors**
- Box in 18mm (0.7") **birch plywood** with anti-scratch varnish
- Two M20 stand sockets and 4 FBT aluminum handles, predisposed for 4 x 100mm (4") swivel casters
- Extremely robust grid with protective fabric
- Ideal for reinforcing and extending the low range of the VHA system



Horizon

Vertical Horizontal Line Array

16



Model	VHA 406A	VHA 112SA	VHA 118SA
Configuration	way	2 REFLEX	1 REFLEX
Built-in amplif. max. LF/HF	W RMS	600 / 300	1200
Built-in amplif. max. peak LF/HF	W	1200 / 600	2400
Frequency response	@-6dB	65Hz - 20KHz	preset dependant
Low frequency woofer	inch	4x6.5- 1.5 coil	1x12- 3 coil
High frequency driver	inch	1x1.4 - 2.5 coil - neodymium	-
Maximum SPL cont/peak	dB	128/133	131.5/135 half-space
Dispersion	H x V	90 x 20	omnidirectional
Input impedance	kOhm	22	22
Crossover frequency	kHz	1,2	preset dependant
AC Power requirements	VA	640	650 (1/4 max pwr)
Input connectors		XLR with loop	XLR with loop
Power cord	m / ft	5	5
Net dimensions (WxHxD)	mm inch	612x360x397 24.1x14.2x15.6	612x360x397 24.1x14.2x15.6
Net weight	Kg/Lb	31/68.3	26/57.3
Transport dimensions (WxHxD)	mm inch	720x410x515 28.3x16.1x20.3	720x410x515 28.3x16.1x20.3
Transport weight	Kg/Lb	33/72.7	28/61.7
			75/165.3

VARIABLE
CURVATURE
LINE ARRAY
17



Mitus

THE MITUS 206 LA IS A TRULY INNOVATIVE LINE ARRAY SPEAKER SYSTEM ENRICHED BY FBT'S HIGHLY SKILLED ENGINEERING AND TECHNOLOGICAL ADVANCEMENTS SUCH AS POWER, PERFORMANCE, WEIGHT, FLEXIBILITY AND EASE OF USE.

These are the credentials of the **MITUS 206LA** engineered to respect the physical criteria of the ideal cylindrical wave source to entire audio range. The cabinet features **2 x 6.5" B&C woofers** (with 1.7" high excursion voice coils) and a B&C neodymium magnet **HF compression driver with a 64mm (2.5") voice coil** and a 35mm (1.4") exit throat coupled to a waveguide.



Line Array



Mitus 206LA
600 + 300W

Subwoofers



Mitus 212FSA
1200W



Mitus 118FSCA/FSA
1200W

Mitus 206L
500 + 150W

Mitus 212FS
1000W

Mitus 118FSC/FS
1200W

The modularity of the **MITUS 206LA**, makes it extremely flexible for a wide range of applications, from a **small 2 cabinet P.A.** system to an elaborate line array system consisting of up to **12 MITUS 206LA** cabinets along with multiple MITUS 212FSA subs for large concert events. The waveguide, optimized by **BEM** finite element simulation, offers 100° horizontal dispersion.

The **gas-injected polypropylene molded enclosure** weighs only (14Kg), permitting a great advantage for flying multiple arrayed cabinets for large events and installations where total system weight could be a problem and make flying applications difficult.

The **MITUS 206 LA** cabinets **coupling hardware is internally integrated** and allows the suspension of 12 arrays with a **10:1** safety factor. The cabinets can be easily angled from 0° to 10°, **adjustable in 2° steps** by simple pin adjustments on the cabinets integrated fly ware. The aesthetic elegance of the enclosures makes them ideal for permanent fixed installations where system appearance also is a factor. The Class D (**PWM**) amplifier module with switch mode power supply provides **600W RMS LF+300W RMS HF**. The amp module is contained inside an aluminum die-cast chassis, which also acts as the framework for suspending the system and angle adjustment inclination of the cabinets. The digital signal processor has **8 selectable equalization** presets making the MITUS 206LA easily configurable according to the array curve and the number of speaker units utilized.

To increase low frequency SPL, two flyable subwoofers models are available:

MITUS 212FSA is a compact bass pass design subwoofer features a 1200W RMS Class D amplifier and delivers **138dB SPL**.

It is equipped with **2 x 12" B&C neodymium** magnet woofers custom manufactured for FBT.

The **Mitus 118FSA and FSCA** are cardioid arrayable and flyable subwoofers. Designed and manufactured by FBT's renowned engineers and artisans, the **Mitus 118FSA/FSCA** is a prime example of audio perfection with ergonomic innovations. The **Mitus 118FSA/FSCA** is a hybrid loaded 18" neodymium subwoofer designed to suspend from a **MT-F 212** flybar either facing forward (**FSA model**) or rearward (FSCA model). The FSCA model is the version designed to be suspended rearward facing, equipped with the protection grille on the new 'front' and the amplifier module on the new 'rear' of the enclosure. Thus, when creating a **cardioid sub package**, no additional hardware is needed to easily achieve sleek visual continuity as all the grille are visible from the front of the array and all the amplifiers module are on the back. This is a truly advantage in today most demanding installations where elegant aesthetic is a must.

MITUS Series
is also available
in white colour



The MT-J206 joint bar provides for direct connection to the MITUS 206LA enclosures and allows for the subs integration and placement on top of **MITUS 206LA** line arrays, or for a ground stack configuration for stacking the arrays on top of the sub(s).

To further extend the low frequency SPL and low frequency range, the **MITUS 212FSA** or **MITUS 118FSA** can be used along with the other ground stackable subwoofers in the MITUS Series, the **MITUS 218SA**, **MITUS 118SA** and **MITUS 121SA**. For this application these subs feature an "INFRA" mode preset.

Through use of the FBT aiming software program for PC it is possible to simulate the SPL distribution and frequency response of the listening area.

Key Features

- High quality B&C neodymium magnet woofers, custom manufactured for FBT
- The latest generation of B&C compression drivers
- High efficiency Class D power amp modules with switch mode power supplies, fixed to a die-cast aluminum chassis. This provides maximum protection of the electronics from dust or dirt, prevents air loss through the input control panel that can cause fastidious noise, and it maximizes heat dissipation thanks to the air created by the excursion of the woofer, avoiding the use of a fan to cool the circuitry. All this has allowed the realization of a 3.2 Kg lightweight power amp module that delivers 1200Wrms!
- DSP with A/D-D/A low noise converters providing crossover, equalization, system protection along with 8 selectable presets to customize the sound program for various applications
- Heavy duty metal grille with anti-resonance spacers and exclusive synthetic cloth to protect the drivers from dust and moisture, without modifying the acoustic fidelity. Unlike widely used conventional foam linings, our FBT exclusive synthetic cloth will not break down or disintegrate over time.



Mitus

Variable Curvature Line Array

20



MT-F 206 Code 31805
Flying Bar Mitus 206



MT-S 206 Code 33324
Cluster bracket with speaker pole for 2 x Mitus 206



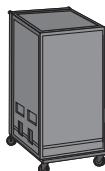
MT-J 206 Code 31806
Joint Bar Mitus 212 or Mitus 118 with 206



MT-F 212 Code 31804
Flying bar Mitus 212 and Mitus 118



MT-B 206 Code 31888
Metal Base to ground 206 array or stack on 118/121 subs



FK 206-6 Code 33933
Flight-case for 6 x Mitus 206
FK 206-4 Code 34911
Flight-case for 4 x Mitus 206
FK 206-2 Code 33931
Flight-case for 2 x Mitus 206



Mitus 206LA

PRECISION COVERAGE VERTICAL ACTIVE ARRAY
600W + 300W RMS - 134dB SPL

- 2 x 165 mm (6.5") B&C neodymium woofers with 44 mm (1.7") coil
- 36 mm (1.4") exit B&C neodymium driver with 64 mm (2.5") coil
- Frequency response from 68Hz to 20kHz
- Latest class D built-in amplifiers, **600W RMS to the LF and 300W RMS to the HF** with switch mode power supply
- **DSP on-board** with 8 EQ presets, +/- 5dB HF level control for accurate amplitude shading
- Control panel with XLR input and link, volume, presets, HF level, HP-filter, ground-lift
- **100°** horizontal waveguide with very low distortion and near flat waveform up to 18Khz
- High impact **polypropylene gas-injected enclosure** with integrated rigging hardware adjustable with **0° to 10°** angle between cabinets at **2° step**
- Ideal for small to medium sized application, from single pole mounted loudspeakers with 100°H x 10°V coverage to multiple cabinet full sized line array, the MITUS 206LA maybe used also in outdoor applications where the system is not directly exposed to the elements
- **Very lightweight**, only 14Kg / 30.8lb

Mitus 206L

PRECISION COVERAGE VERTICAL PASSIVE ARRAY
500W + 150W RMS 16ohm
129dB SPL LF/133dB SPL HF

- Internal HF protection
- Neutrik Speakon NL- 4MDV connectors IN & LINK OUT
- External digital processor required

Mitus 212FSA

PROCESSED FLYABLE ACTIVE SUBWOOFER
1200W RMS - 138dB SPL

- **Compact subwoofer in vented band pass design** sharing the same width and hardware suspension of the MITUS 206LA
- **320 mm (2 x 12") B&C neodymium** magnet high excursion subwoofers with 75 mm (3") voice coils
- Frequency Response from 45Hz to 120Hz
- **Class D** amplifier delivering **1200W RMS**
- Switch mode power supply
- **DSP with 8 EQ presets**, cardioid and infra configurations, delay
- Control panel with XLR input and link, volume, presets, delay, phase 0°-180°, ground-lift
- 15 mm (5/8") **birch plywood enclosure**, scratch resistant black textured paint
- Low frequency extension cabinet for the MITUS 206LA line array for flying or ground stacked configurations.
- M20 top mount stand socket

Mitus 212FS

FLYABLE PASSIVE SUBWOOFER
1000W/4ohm - 138dB SPL

- Neutrik Speakon NL- 4MDV connectors IN & LINK OUT
- External digital processor required



Mitus 118FSA/FSCA

PROCESSED CARDIOID- FLYABLE ACTIVE SUBWOOFER
1200W RMS - 139dB SPL

- **Compact Hybrid band pass cardioid-arrayable subwoofer.** Hybrid configuration permit to obtain extension and speed of vented with high SPL and acoustic filtering of band pass
- Suspension hardware fully compatible with MITUS206La allowing the enclosure to be suspended front (**FSA model**) or rear-firing (**FSCA model**) for easy cardioid configurations
- Very large area laminar-flow port to ensure no power compression and very low port turbulence
- For cardioid configurations with one SUB rear-firing and two sub front-firing, more than 15db SPL rejection can be obtained behind the array
- **18"** (460mm) custom **B&C neodymium** magnet high excursion woofer with 3.5" (88mm) voice coil
- Frequency Response from 33Hz to 250Hz
- **Class D** amplifier delivering **1200WRMS**
- Switch mode power supply
- **DSP with 8 presets**, cardioid and with infra configurations, delay
- Control panel with XLR input and link, volume, presets, delay, phase 0°-180°, ground-lift
- **5/8"** (15mm) **birch plywood enclosure**, scratch resistant black paint
- Low frequency extension cabinet for the MITUS 206LA line array for flying or ground stacked configurations.
- Very low profile for a 18" size woofer

Mitus 118FS/FSC

FLYABLE PASSIVE SUBWOOFER
1200W/8ohm -138dB SPL

- Passive version, recommended amplifier of 1200Wrms / 8ohm - 139dB SPL
- NeutrikSpeakon NL- 4MDV connectors IN & LINK OUT
- External digital processor required



FBT PRESENTS
A NEW WAY
TO FLY CARDIOID
SUBWOOFER
CONFIGURATIONS

The innovative design permit to suspend facing forward (118FSA model) or rearward (118FSCA model) creating cardioid sub package with aesthetic consistency and sleek visual continuity.



Mitus

Variable Curvature Line Array

22



Model	206LA	212FSA	118FSA/FSCA
Configuration	way	2	1 Bandpass
Built-in amplif. max. LF/HF	W RMS	600/300	1200
Built-in amplif. max. peak LF/HF	W	1200/600	2400
Frequency response	@-6dB	68Hz - 20KHz	45Hz - 120Hz
Low frequency woofer	inch	2x6.5 - 1.7 coil neodymium	2 x 12 - 3 coil neodymium
High frequency driver	inch	1 x 1.4 - 2.5 coil neodymium	-
Maximum SPL cont/peak	dB	125 / 134	134 / 138 half-space
Dispersion	H x V	100° x 10° max dependant upon n° of element	omnidirectional
Input impedance	kOhm	22	22
Crossover frequency	kHz	1.2	preset dependant
AC Power requirements	VA	640	640
Input connectors		XLR with loop	XLR with loop
Power cord	m / ft	5 / 16.4	5 / 16.4
Net dimensions (WxHxD)	mm inch	574x220x383 22.6x8.7x15.1	576x420x660 22.7x16.5x26
Net weight	Kg/Lb	14 / 30.8	36.5 / 80.5
Transport dimensions (WxHxD)	mm inch	655x455x280 25.8x17.9x11	780x710x520 30.7x28x20.5
Transport weight	Kg/Lb	15.7 / 34.6	41 / 90.4
			135 / 139 half-space

Model	206L	212FS	118FS/FSC
Configuration	way	2	1 Hybrid Bandpass
Recommended amplifier	W RMS	500LF / 150HF	1000
Long term power	W	250LF / 70HF	500
Short term power IEC 268-5	W	1000LF / 300HF	2000
Nominal impedance	Ohm	16LF / 16HF	8
Frequency response	@-6dB	75Hz - 20KHz	50Hz - 120Hz
Low frequency woofer	inch	2x6.5 - 1.7 coil neodymium	2 x 12 - 3 coil neodymium
High frequency driver	inch	1 x 1.4 - 2.5 coil neodymium	-
Sensitivity (@1W/1m)	dB	97LF / 108HF	99
Maximum SPL cont/peak (Bi-Amp)	dB	125/129LF - 129/133HF	134/138 half-space
Dispersion	H x V	100° x 10° max dependant upon n° of element	omnidirectional
Crossover frequency	kHz	external active	external active
Recommended HP filter		65hz - 24dboct	40hz - 24dboct
Recommended external filter		Digital management with FBT presets	Digital management with FBT presets
Input connectors		2 x Speakon NL4MD-V in & thru	2 x Speakon NL4MD-V in & thru
Net dimensions (WxHxD)	mm inch	574x220x383 22.6x8.7x15.1	576x420x660 22.7x16.5x26
Net weight	Kg / Lb	13.5 / 29.8	35 / 77.2
Transport dimensions (WxHxD)	mm inch	655x455x280 25.8x17.9x11	780x710x520 30.7x28x20.5
Transport weight	Kg / Lb	15.2 / 33.5	39.5 / 87
			135 / 139 half-space



Point Source page 67



Subwoofers page 86



Monitor page 93

Mitus 215A
1100 + 250W

Mitus 215
1600W

Mitus 152A
1100 + 250W

Mitus 152
800W

Mitus 115A
600 + 300W

Mitus 115
800W

Mitus 112A
600 + 300W

Mitus 112
700W

Mitus 118SA
1200W

Mitus 118S
1000W

Mitus 210MA
600 + 300W

Mitus 210M
800W

VARIABLE
CURVATURE
LINE ARRAY |
23

QA

THE **QA108 LINE ARRAY SYSTEM** IS FBT'S LATEST DEVELOPMENT IN THE GROWING DEMAND FOR COMPACT AND PORTABLE PROFESSIONAL LINE ARRAYS.

Both the **QA108 passive** and the **QA108A powered** models feature extraordinary power output, clarity and flexibility to deliver high quality audio reproduction in attractive, compact, easy to handle and affordable systems.



Subwoofers



Mitus 218SA
2000W

Q 118SA
1200W

Mitus 218S
4000W

Q 118S
1600W



HSA 108 Code 34633
Flying bar QA 108A/QA 108



WT-108 Code 34723
Wooden Trolley to transport
QA 108A/QA 108 line array
speaker



SS 108 Code 34722
Joint Bar QA 108A/QA 108
with SUBWOOFER



MMH-108 Code 34562
Metal Base to ground
QA 108A/QA108 array or stack



QA 108A

**PRECISION COVERAGE VERTICAL
ACTIVE ARRAY
400W+100W RMS - 131dB SPL**

- **1 x 200mm (8") B&C neodymium woofer with 2" coil**
- **150mm (6") neodymium Pleated Diaphragm Tweeter** with a cylindrical 10°V x 100°H waveguide
- Frequency response from 68Hz-23kHz
- **Class D built-in Amplifier, 400W RMS to the LF and 100W RMS to the HF with a switch mode power supply**
- **DSP on-board** with 4 configuration presets (1 - 2 - 4 - 6 to 12 box)
- Control panel features: balanced XLR-F input connector and a balanced XLR-M loop output connector to daisy chain the signal input to additional QA108A speakers, Volume, EQ Preset, HP filter, 3 status LED indicators (Power-On, Peak and Protection/Limiter)
- **Neutrik Powercon IN and LINK OUT AC power connectors**
- Trapezoidal shape compact enclosure with an angle of 10°, and are constructed with 12 mm (1/2") **Baltic birch plywood** and finished with scratch and scuff resistant black paint
- Heavy duty metal grille with cloth protect the drivers from dust and moisture. The cabinets are provided with two integrated aluminum fly hardware for suspension allowing settings in **1° steps from 0° to 10°**

QA 108

**PRECISION COVERAGE VERTICAL
PASSIVE ARRAY
350W + 200W RMS 8OHM**

- Dual mode passive internal crossover (Full-range or Bi-Amp configurable)
- Neutrik Speakon NL-4MDV connectors IN & LINK OUT
- External digital processor required



QA

Variable Curvature Line Array

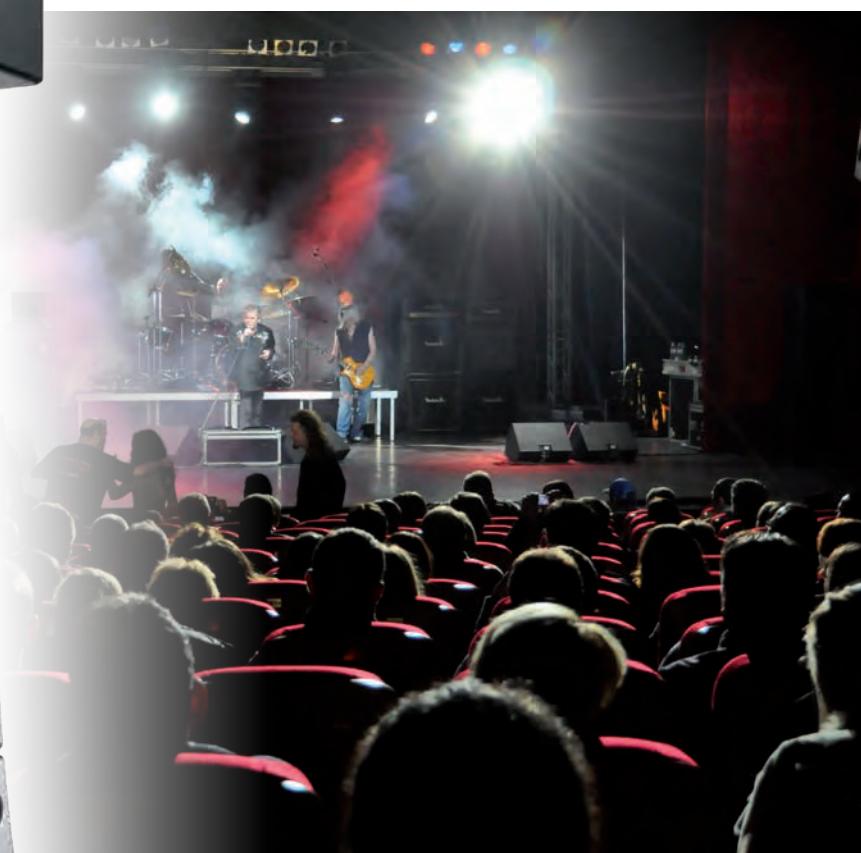
26



Model		
108A		
Configuration	way	2
Built-in amplif. max. LF/HF	W RMS	350/80
Built-in amplif. max. peak LF/HF	W	400/100
Frequency response	@-6dB	68Hz - 23KHz
Low frequency woofer	inch	8 - 2 coil - neodymium
High frequency driver	inch	6 pleated diaphragm - neodymium
Maximum SPL cont/peak	dB	123 / 131
Dispersion	H x V	100° x 10°
AC Power requirements	VA	450
Power cord	m / ft	5 / 16.4
Net dimensions (WxHxD)	mm inch	455x220x350 17.91x8.66x13.77
Net weight	kg / lb	15,5 / 34.17
Transport dimensions (WxHxD)	mm inch	580X295X480 22.83x11.61x18.89
Transport weight	kg / lb	17.2 / 37.91

Model		
108		
Configuration	way	2
Recommended amplifier (Bi-Amp LF/HF)	W RMS	350 (350/200)
Long term power (Bi-Amp LF/HF)	W RMS	175 (175/100)
Nominal impedance (Bi-Amp LF/HF)	Ohm	8 (8 / 8)
Frequency response	@-6dB	70Hz - 23KHz
Low frequency woofer	inch	8 - 2 coil - neodymium
High frequency driver	inch	6 pleated diaphragm - neodymium
Maximum SPL cont (Bi-Amp LF/HF)	dB	123 (120/127)
Maximum SPL peak (Bi-Amp LF/HF)	dB	131 (123/131)
Dispersion	H x V	100° x 10°
Input connectors		2 x Speakon NL4 in&throu
Net dimensions (WxHxD)	mm inch	455x220x350 17.91x8.66x13.77
Net weight	kg / lb	15.4 / 33.95
Transport dimensions (WxHxD)	mm inch	580X295X480 22.83x11.61x18.89
Transport weight	kg / lb	17.1 / 37.69

CONSTANT |²⁷
CURVATURE
LINE ARRAY



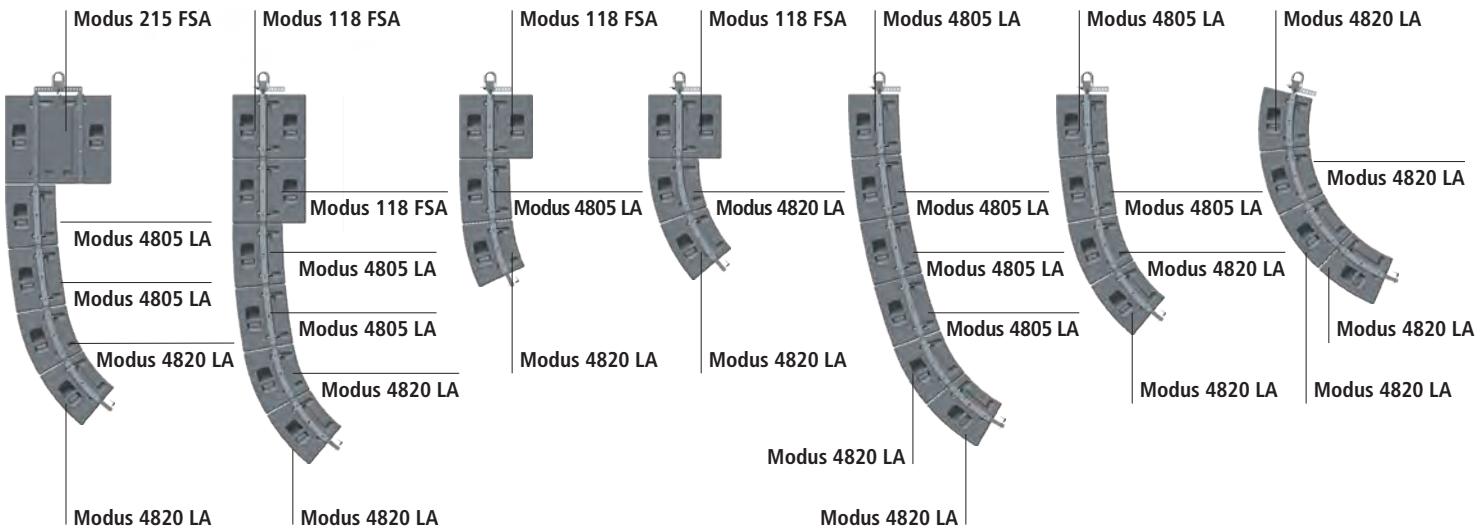
Modus

MODUS ESSENDI

MODUS IS NOT JUST
ANOTHER LINE ARRAY IN
THE MARKET.



IT'S THE ESSENCE OF IDEAS
AND USE OF TECHNOLOGIES
CONDENSED INTO ONE FOCUS:
THE INVENTION OF THE MOST
FLEXIBLE SOUND REINFORCEMENT
SYSTEM ABLE TO SATISFY THE
BROADEST APPLICATIONS, FROM
LIVE TOURING TO PERMANENT
INSTALLATION, WITHOUT
COMPROMISING QUALITY AND
EXPECTATIONS.



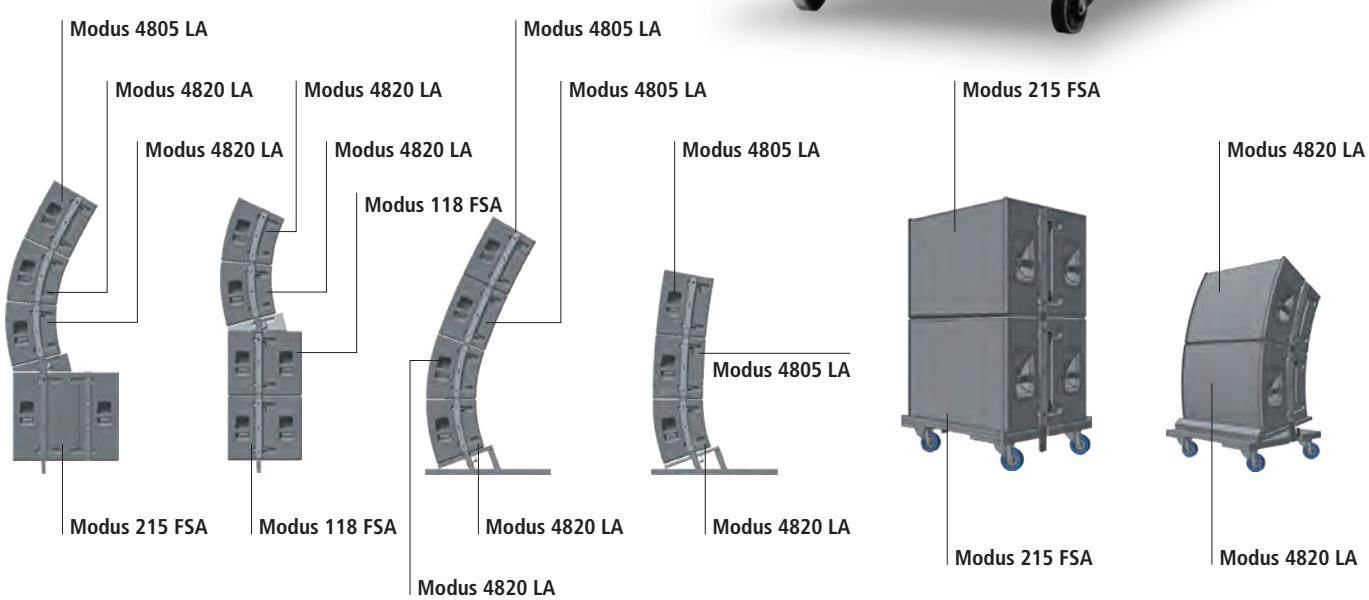
MODUS is a constant curvature line array system comprising two modules, the **MODUS 4805** (5°V) and the **MODUS 4820** (20°V). The system is designed to achieve a very uniform distribution of SPL in the listening area in both large and small venues thanks to its total modularity. The constant curvature overcomes the limitations of line arrays with variable angles which inevitably create unmatched SPL between neighbouring enclosures at high frequencies.

The grouping of two 'classic' array modules in one gives an amazing economic advantage and simplifies the setup of the system.

Two subwoofers are available for low frequency extension, both with mechanical suspension hardware to deliver seamless integration.

The **MODUS 215 FSA** is a dual 15" subwoofer with a band-pass design and push-pull configuration, delivering significantly extended low frequency response despite its compact size. It is acoustically designed to support two or three **MODUS 4805** or **4820** modules.

The **MODUS 118 FSA** is a single 18" subwoofer with a bass-reflex design and compact dimensions that make it ideal for suspension. Designed to support one or two **MODUS 4805** or **4820** modules and aesthetically similar to a **4805** module, the sub is capable of very high SPL in relation to its size. It can either be suspended above the line array modules or ground stacked. Additionally, the **118 FSA** can be used in conjunction with the **215 FSA** to further extend and reinforce low end performance.



Modus

Constant Curvature Line Array

30



MD-F Sat Code 25391

Flying bar for rigging
Modus 4805 LA
Modus 4820 LA
Modus 118 FSA



MD-F Sub Code 26214

Flying bar for rigging
Modus 215 FSA



MD-T 48 Code 38887

Trolley for 2 x Modus 4805 LA
Modus 4820 LA



MD-T 118 Code 38888

Trolley for 2 x Modus 118 FSA



MD-T Sub Code 25394

Trolley for 2 x Modus 215 FSA



MD-B Code 25393

Stand base to tilt
Modus 4805 LA
Modus 4820 LA



MD-WB Code 29309

Stand base to tilt
Modus 4805LA
Modus 4820LA
on Modus 118FSA
or Modus 215FSA

FBT new **MODUS systems** offer a very complete range of active line arrays and subwoofers: 4805LA (5°V) and 4820LA (20°V) are two constant curvature line array systems, easy to configure in multiple solutions, equipped with 4 x 8" (2" VC) neodymium magnet woofers and 4 x 1" (1.7"VC) neodymium magnet HF compression drivers.

118FSA and 215FSA are two active subs designed for the optimal low frequencies extension.



5° VERTICAL DISPERSION Modus 4805 LA

- **2 Way powered bi-amplified true line array, bass reflex design**
- 4x200mm (8") custom neodymium woofers with 50mm voice coil (2")
- 4x25mm (1") neodymium compression drivers and 44mm voice coil (1.7")
- 58Hz - 20Khz frequency response
- **Class D 600 Wrms amplifier for LF**
- **Class D 300 Wrms amplifier for HF**
- **High efficiency switching power supply**
- DSP on board with 8 EQ presets, +/- 5db HF level control for accurate amplitude shading
- Control panel with XLR input and link, volume, presets, HF level, HP filter, ground-lift

20° VERTICAL DISPERSION Modus 4820 LA

- 90° horizontal waveguide with near flat waveform up to 18Khz
- 18mm (3/4") birch plywood enclosure, with handles and mechanical hardware for suspension
- Mechanical hardware for suspension with 10:1 safety factor
- different configurations allowed by a complete range of optional accessories
- Performance comparable to high-end touring line arrays at an extremely competitive cost
- The extended frequency response at 58Hz allows the use in medium SPL applications without additional subwoofers





Modus 118 FSA

- **Compact bass reflex subwoofer**
- 460mm (18") custom B&C neodymium woofer with 76mm (3") voice coil
- **Class D amplifier delivering 1200W RMS with high efficiency switch mode power supply**
- DSP with 8 EQ presets cardioids configurations, delay
- Control panel with XLR input and link, volume, presets, delay, phase 0°-180°, ground lift
- Frequency response extended to 36Hz
- 18mm (3/4") birch plywood enclosure, with 4 integrated handles and mechanical hardware for suspension
- Can either be suspended above the line array modules or ground stacked
- 4 Optional wheels for transport

Modus 215 FSA

- **Powered subwoofer in bandpass push-pull**
- 2x380mm (15") B&C neodymium subwoofer with 100mm (4") coil
- **Class D amplifier delivering 2000W RMS with high efficiency switch mode power supply**
- DSP with 6 EQ presets cardioids configurations, delay
- Control panel with XLR input and link, volume, presets, delay, phase 0°-180°, ground lift
- Frequency response extended to 33Hz
- 18mm (3/4") birch plywood enclosure, with 4 integrated handles and mechanical hardware for suspension
- The particular acoustic loading enable to drastically reduce the distortion and movement of the cone, ensuring high SPL and very high reliability
- Can either be suspended above the line array modules or ground stacked
- 4 Optional wheels for transport



Modus

Constant Curvature Line Array

32



Model		Modus 4805 LA	Modus 4820 LA	Modus 118 FSA	Modus 215 FSA
Configuration	way	2	2	1	1
Built-in amplifier max. rms LF/HF	W	600/300	600/300	1200	2000
Built-in amplifier max. peak LF/HF	W	1200/600	1200/600	2400	4000
Frequency response	@-6dB	58Hz - 20KHz	58Hz - 20KHz	36Hz - 120Hz	33Hz - 100Hz
Low frequency woofer	inch	4 x 8 2 coil-neodymium	4 x 8 2 coil-neodymium	18 3 coil-neodymium	2 x 15 4 coil - neodymium
High frequency driver	inch	4 x 1 1.7 coil-neodymium	4 x 1 1.7 coil-neodymium	-	-
Maximum SPL cont/peak	dB	130 / 137	130 / 137	133 / 137 half-space	140 / 146 half-space
Dispersion	H x V	90° x 5°	90° x 20°	omnidirectional	omnidirectional
Input impedance	kOhm	22	22	22	22
AC Power requirements	VA	640	640	640	1840
Input connectors		XLR with loop	XLR with loop	XLR with loop	XLR with loop
Power cord	m / inch	5 / 16.4	5 / 16.4	5 / 16.4	5 / 16.4
Net dimensions (WxHxD)	mm inch	728x510x406 28.66x20.07x15.98	728x510x406 28.66x20.07x15.98	728x512x580 28.66x20.15x22.83	728x713x836 28.66x28.07x32.91
Net weight	kg / lb	48/105.82	45.5/100.31	47.5/104.71	94.5/208.33
Transport dimensions (WxHxD)	mm inch	810x600x500 31.88x23.62x19.68	810x600x500 31.88x23.62x19.68	770x560x630 30.31x22.04x24.80 800x680x700 (with pallet) 31.49x26.77x27.55 (with pallet)	765x750x875 30.11x29.52x34.44 795x1100x905 (with pallet) 31.29x43.30x35.62 (with pallet)
Transport weight	kg / lb	51/112.43	48.5/106.92	57/125.66 (with pallet)	105/231.48 (with pallet)

CONSTANT
CURVATURE
LINE ARRAY

|³³



QSA

QSA SOUND PRODUCTS FULFIL THE WIDEST SOUND REINFORCEMENT NEEDS WITH COMPLETE RANGE OF SYSTEMS STUDIED TO MEET LIVE SOUND APPLICATIONS AS WELL AS PERMANENT INSTALLATIONS

QSA112/112.0 coherent coverage line-array system is ideal for sound rental companies, fixed installations, music applications and mobile DJs, thanks to its compact size, portability and versatility. The fixed angle approach and constant curvature technology permit to simplify set-up while granting the best uniformity of coverage and SPL in the audience. Originally Intended for small and mid-sized venues, the **QSA112/QSA112.0** combination, matched with the dedicated **QS118S** subwoofer, perform well also in medium/large touring events and is designed to the same high standards and uses the highest quality components which already characterize QSA's serious approach to pro-sound. The **QSA112/112.0** delivers extraordinary power handling, clarity, flexibility and, of course, stunning sound in an attractive, easy to handle and affordable package.



Suspended
with HSA 600



QSA 112A with
QSA 118SA subwoofer



Ground stacked
with WD 112 trolley



HSA 600 Code 37998
Rigging hardware/Flying bar



WMA 112 Code 29198
Wooden support to tilt down
(-7,5°) QSA 112 fitted over
QSA 118S



SS-212 Code 29303
Adjustable pole for use with
QSA 118S for stacking QSA 112.
M 20 threads on bottom



WD 112 Code 27896
Trolley with wheels to transport
QSA-112 & QSA 112A (4 pcs)



WD 118S Code 27897
Trolley with wheels to transport
Qube Line array speakers
QSA-118S&QSA 118SA (2pcs)



QSA 112.0A

**POWERED CONSTANT CURVATURE
2-WAY LINE ARRAY SPEAKER
1100W + 300W RMS 139dB SPL**

- **1 x 320mm (12") B&C® high excursion LF neodymium woofer 3" coil and three 1" exit (1.7" voice coils) neodymium HF drivers which are coupled to three waveguide providing 100°H dispersion**
- Frequency response from 60Hz-20kHz
- **5° vertical dispersion**
- Built in power amplifier, **1100W Class D for the LF and a 300W Class G for the HF.**
- **DSP on-board** provides 8 different equalization presets and 256 delay settings (0.25m to 32m), HF amplitude shading +/- 3dB
- Control panel features: balanced XLR-F input/output connectors, Gain, EQ Preset, Delay, HP filter switch, 3 status LED indicators (Power-On, Peak and Protection/Limiter)
- Neutrik Powercon IN and LINK OUT AC power connectors
- 18mm (3/4") **baltic birch plywood cabinet** finished with scratch and scuff resistant black paint, heavy duty metal grille
- Ergonomically placed handles and mechanical hardware for suspension with a **10:1 safety factor** are provided
- QSA112.0A coupled to QSA112A cabinet permit to construct a J-array configuration and cover long distance with impressive SPL

QSA 112.0

**PASSIVE CONSTANT CURVATURE LINE ARRAY
600W + 240W RMS 8OHM
SPL 130dB (LF)/138dB (HF)**

- Dual mode passive internal crossover (Full-range or Bi-Amp configurable) with HF amplitude shading switch (-3, 0, +3dB)
- Neutrik Speakon NL-4MDV connectors IN & LINK OUT
- External digital processor required

Addressing the growing demand for a compact and portable professional sound system, FBT developed the **QSA112/QSA112.0 Constant Curvature Line Array**



QSA 112A

**POWERED CONSTANT CURVATURE LINE
ARRAY SPEAKER
1100W + 300W RMS 139dB SPL**

- **1 x 320mm (12") B&C® high excursion LF neodymium woofer 3" coil and three 1" exit (1.7" voice coils) neodymium HF drivers which are coupled to three waveguide providing 100°H dispersion**
- Frequency response from 60Hz-20kHz
- **15° vertical dispersion**
- Built in power amplifier, **1100W Class D for the LF and a 300W Class G for the HF**
- DSP on-board provides 8 different equalization presets and 256 delay settings (0.25m to 32m), HF amplitude shading +/- 3dB
- Control panel features: balanced XLR-F input/output connectors, Gain, EQ Preset, Delay, HP filter switch, 3 status LED indicators (Power-On, Peak and Protection/Limiter)
- Neutrik Powercon IN and LINK OUT AC power connectors
- **18mm (3/4") baltic birch plywood cabinet** finished with scratch and scuff resistant black paint, heavy duty metal grille
- Ergonomically placed handles and mechanical hardware for suspension with a **10:1 safety factor** are provided
- QSA112A coupled to QSA112.0A cabinet permit to construct a J-array configuration and cover long distance with impressive SPL

QSA 112

**PASSIVE CONSTANT CURVATURE LINE ARRAY
600W + 240W RMS 80HM
SPL 130dB (LF)/138dB (HF)**

- Dual mode passive internal crossover (Full-range or Bi-Amp configurable) with HF amplitude shading switch (-3, 0, +3dB)
- Neutrik Speakon NL-4MDV connectors IN & LINK OUT
- External digital processor required



QSA 118SA

PROCESSED ACTIVE SUBWOOFER 1200W RMS - 137dB SPL

- Bass-reflex Subwoofer
- 1 x 460mm (18") B&C woofer with 4" voice coil
- Frequency Response from 35Hz to 120Hz
- **Class D amplifier delivering 1200W RMS with a switch mode power supply**
- **DSP on-board** provides 8 different equalization/gain presets and 256 delay settings (0.25m to 32m)
- Control panel features: stereo balanced XLR-F input/output connectors, Volume, EQ Preset, Delay, Phase Reversal switch, GND-Lift switch, status LED indicators
- Neutrik Powercon IN and LINK OUT AC power connectors
- 18mm (3/4") **baltic birch plywood cabinet** finished with scratch and scuff resistant black paint, heavy duty metal grille and M20 top mount stand socket
- Optional 4 swivel-mount 80mm casters on request
- Ergonomically placed integrated handles provide for easy handling / lifting / transporting and integrated mechanical hardware for suspension on top of the QSA112/QSA112.0 cabinet

QSA 118S

PROCESSED PASSIVE SUBWOOFER 1400W/4OHM -138dB SPL

- Neutrik Speakon NL-4MDV connectors IN & LINK OUT
- External digital processor required



Model	112.0A	112A	118SA
Configuration	way	2	1
Built-in amplif. max. LF/HF	W RMS	800/200	800/200
Built-in amplif. max. peak LF/HF	W	1100/300	1100/300
Frequency response	@-6dB	60Hz - 20KHz	60Hz - 20KHz
Low frequency woofer	inch	12 - 3 coil - neodymium	12 - 3 coil - neodymium
High frequency driver	inch	3x1 - 1.7 coil - neodymium	3x1 - 1.7 coil - neodymium
Maximum SPL cont/peak	dB	129 / 139	129 / 139
Dispersion	H x V	100° x 5°	100° x 15°
AC Power requirements	VA	800	800
Power cord	m / ft	5 / 16.4	5 / 16.4
Net dimensions (WxHxD)	mm inch	605x385x450 23.81x15.15x17.71	605x395x460 23.81x15.55x18.11
Net weight	Kg / Lb	37.5 / 82.67	37.5 / 82.67
			133 / 137 half space

Model	112.0	112	118S
Configuration	way	2	1
Recommended amplifier	W RMS	600/240	600/240
Long term power	W	300/120	300/120
Nominal impedance	Ohm	8 (8 / 8)	8 (8 / 8)
Frequency response	@-6dB	70Hz - 23KHz	70Hz - 23KHz
Low frequency woofer	inch	8 - 2 coil - neodymium	8 - 2 coil - neodymium
High frequency driver	inch	6 pleated diaphragm - neodymium	6 pleated diaphragm - neodymium
Maximum SPL cont (Bi-Amp LF/HF)	dB	127 / 135	127 / 135
Maximum SPL peak (Bi-Amp LF/HF)	dB	130 / 138	130 / 138
Dispersion	H x V	100° x 5°	100° x 15°
Input connectors		2 x Speakon NL4 in&thru	2 x Speakon NL4 in&thru
Net dimensions (WxHxD)	mm inch	605x385x450 23.81x15.15x17.71	605x395x460 23.81x15.55x18.11
Net weight	Kg	36 / 79.36	36 / 79.36
			133 half space
			138 half space
			H x V omni
			2 x Speakon NL4 in & thru
			605x555x700 23.81x21.85x27.55

CONSTANT |³⁹
CURVATURE
LINE ARRAY
ALL WEATHER



Shadow

Shadow

Constant Curvature Line Array

40

HIGH PERFORMANCE AND
EFFICIENCY FOR A WIDE
RANGE OF PROFESSIONAL
INDOOR OR OUTDOOR
APPLICATIONS



ITALIAN STYLE

FBT's SHADOW loudspeakers are completely designed and manufactured in Italy, assuring an elegant and attractive aesthetic to a very high technical system and featuring a high degree of quality standard.

WATER STOP GRILL

The prime consideration in designing SHADOW cabinets was extreme weather resistance, also for the drivers that would be employed inside them. The exceptionally weather resistant driver is further protected by the water-stop grille: it stops the elements, solid or liquid, from getting inside the enclosure. Each protective grille is a 3 layers structure that consists of an external perforated stainless steel panel treated with a special protection, a center layer of reticulated foam and an inner layer of water-repellent polyester mesh, providing maximum protection and minimal acoustic attenuation.

CIRCUITRY PROTECTION

All internal circuitry is protected with a special sealing and treated with weather proofing compound against the effects of moisture, corrosion and oxidation.

MOUNTING ACCESSORIES

Weather resistant steel mounting brackets are included with all models.



Shadow 142L

SHADOW 142L is a weatherproof full range, two way loudspeaker system offering high performance and efficiency for a wide range of professional indoor or outdoor applications.

This horn loaded design with its smooth frequency response and very high efficiency product ensures excellent quality music reproduction, and clear intelligible speech. Line Array configuration make SHADOW 142L perfect for convention centers, stadiums, arena and many other indoor or outdoor installations, where long throw full range sound reproduction is required.

14" LINE ARRAY SPEAKER SYSTEM
1000W / 8ohm - 137dB SPL

- **14" woofer with a 3" coil**
- HF section is a constant directivity horn loaded to **2x1.4"** driver with a **2.5"** coil for smooth, wide dispersion
- Sturdy molded polyethylene curved enclosure, full UV protection
- Water-stop grill with 3 layers of protection
- **IP55 weather resistant**
- **100° x 15°** coverage
- **7.5° or 15°** adjustable angle
- Standard grey finishes



SW-F 142 Code 36350
Flying bar for rigging
SHADOW 142 L



Shadow

Constant Curvature Line Array

42



SHADOW	142L
Configuration	way 2
Recommended amplifier (Biamp LF/HF)	W rms 1000
System Long term power (Biamp LF/HF)	W 500
System Short term power IEC 268-5 (Biamp LF/HF)	W 2000
Transformer	V/W -
Nominal impedance (Biamp LF / HF)	Ohm 8 (8 / 8 optional)
Frequency response	@-6dB 60Hz - 20Khz
Low frequency woofer	inch 14 - 3 coil
AES power	350
High frequency driver	inch 2 x 1.4 - 2.5 coil
AES power	150
Sensitivity (@1W/1m) (Biamp LF/HF)	dB 98 / 110
Maximum SPL cont/peak	dB 126.5 / 137
Dispersion	H x V 100° x 15°
Crossover frequency	kHz 1.2 (opt Bi-Amp)
Recommended HP filter	40hz - 24db/oct
Input connectors	2 x Amphenol LTW 4pole
Net dimensions (WxHxD)	mm 615x430x415 inch 24.41x16.92x16.33
Net weight	kg/lb 38 / 83.7
Transport dimensions(WxHxD)	mm 715x530x515 inch 28.14x20.86x20.27
Transport weight	kg/lb 40 / 88,2



Shadow 112HT
600W



Shadow 112CT
600W



Shadow 108CT
450W



Shadow 105C
150W



Shadow 114S
700W

COLUMN |⁴³
LINE ARRAY



Vertus
CLA

Vertus CLA

Column Line Array

44

STEEPED IN CLASSIC ITALIAN DESIGN AND ACOUSTIC EXPERTISE, **VERTUS** HAS BEEN CREATED WITH THE AIM OF EXTENDING TRUE LINE ARRAY TECHNOLOGY, AN UNDISPUTED SUCCESS IN THE FIELD OF PROFESSIONAL AUDIO, INTO A NEW RANGE OF APPLICATIONS WITHIN BOTH THE LIVE AND FIXED INSTALLATION FIELDS.

The column system is compact and elegant, with a refined yet functional design. Most importantly it offers an uncompromising quality capable of successfully solving applications where conventional systems are inadequate.

Compared to a traditional two-way speaker, the sound is distributed in a much more uniform manner into the listening area, regardless of whether the application is indoors, outdoors or acoustically difficult in terms of reverberation. The cylindrical wave front of the CLA projects sound forwards in a very precise and coherent fashion without the reverberant performance that is typical of conventional speakers which can excite environmental reflections, directing acoustic energy where it is not needed, especially towards the ceiling and floor.

Even acoustic feedback such as that generated by microphones is rejected to a far greater extent than a conventional enclosure.

Finally, the columns narrow dimensions allow the discreet, unobtrusive integration of the column into any environment.

The qualities of the system CLA can be summarized as:

- High-end sound quality with a **frequency response of 33Hz to 20kHz**, designed specifically for live
- Improved dispersion within a set listening area plus extended projection
- High power performance and dynamic range thanks to the tri-amplification system
- Portability and modularity – elements can be rapidly daisy-chained via a quick release system, extending both the vertical directivity and sound pressure level
- Design and elegance for easy integration even in the most demanding installations – the compact dimensions ensure listeners will focus on the sound and not the speaker!
- Wide horizontal dispersion

The launch of the **new VERTUS columns** follows a steep rise in the use of the VERTUS CLA406A for

mobile sound reinforcement applications – a trend spurred on by the column's depth of versatility and performance. Now making life easier for those on the road, both the **CLA406.2A** and more compact **CLA206A** have been designed with portability in mind, from the rugged hardware to new accessories which make set-up both extremely quick and highly intuitive. Included within the extended accessories range is a flybar for easy system suspension (users simply add a clamp for tubular coupling), plus a foldable floor stand offering a choice of angles from 0°-10°, and a bracket for coupling two enclosures at angles of 0°- 20° (in steps of 5°). The accessories connect to the cabinets using supplied M10 screws for fixed installation, or via quick release pins (optional) for mobile use. In terms of hardware, the enclosures now offer four lateral inserts which can accept both the quick release pins and M10 screws, while M6 rear suspension points have been added for additional installation flexibility.

The active **CLA406.2A** is a **Class-D 600W + 300W** system delivering a maximum SPL of 133 dB courtesy



COLUMN | 45 LINE ARRAY

of **four 6.5" customer woofers and a 1.4" B&C HF compression driver with a 2.5" voice-coil.**

On-board DSP offers a choice of eight presets while the enclosure's large-format waveguide delivers 100° (H) x 25° (V) dispersion. The **CLA206A**, meanwhile, incorporates the same waveguide but with only **two**

6.5" woofers. The compact column can be used stand-alone or in clusters, or as an ideal complement for the CLA406.2A, forming an overall system with increased mid-high dispersion and consistent sound pressure uniformity in the listening area.

Additional accessories are available for system suspension as well as flying the accompanying CLA118SA subwoofer.

The **CLA 118SA** is a subwoofer in birch plywood with a **460mm woofer from B&C in a bass reflex port with an extensive laminar airflow**, minimizing turbulence and power compression. The **Class-D**, switching power amplifier module is constructed in die-cast aluminum with natural convection, and is rated at **1200W**. **Onboard DSP also offers functions such as filtering, equalization and protection.**

When you need to extend the performance of the CLA 406.2A and CLA 206A, especially in live applications, the CLA118SA acts as a support and base for the CLA 406.2A and CLA 206A column that can be applied, via optional hardware, with M20 points positioned on the top of the sub. The CLA118Sa is also modular and can be stacked thanks to special milling, increasing the SPL and raising the base of CLA 406.2A and CLA 206A.



The **CLA 406.2A** is a truly professional line array that, despite its compact size, still delivers an impressive SPL of 133dB. It can be integrated elegantly and with minimal intrusion into any environment that requires high quality sound with powerful directional control.

Vertus CLA

Column Line Array

46



Vertus CLA 406.2A

ACTIVE COLUMN LINE ARRAY 600W + 300W - 133 DB SPL

- Bi-amplified **2-way** line array
- **4 x 165mm (6.5") custom woofers with 38mm (1.5") coil**
- **Neodymium B & C compression HF driver with 36mm (1.4") throat and 64mm (2.5") coil**
- Large format FBT waveguide with 100 ° H x 25 ° V dispersion
- Frequency response from **65Hz to 20KHz**
- **Class-D 600Wrms for LF and 300Wrms for HF amplifiers** with switch mode power supply
- **DSP processor with 8 equalization presets**
- Control panel with XLR input and link, volume, presets, filter-HP, ground-lift
- **Neutrik PowerCON TRUE1 IN and LINK power connectors**
- Cabinet in **12mm (0.5") birch plywood** with scratch-resistant varnish, two side handles, rubber inserts for protection and upper and lower anti-slip
- **4 lateral inserts**, two upper and two lower points **designed to accept quick release pins or M10 screws**, two rear M6 suspension points. New hardware for flying installations, for ground setups, and the possibility of coupling two or more **CLA406.2A / CLA206A** with an angle of **0°-20° in 5° steps vertically**, all with optional quick release pins for touring.
- **35mm stand socket**
- Top side inclined by 10° to have maximum flexibility of use in combination with other CLA406.2A or CLA206A in order to adapt the vertical dispersion angle of the system to the listening area.
- The system can be used both in point source systems with the VERTUS CLA118SA sub and in vertical clusters of two to have a dispersion of 40° (V). It can also be considered a down-fill for CLA406A systems.



Vertus CLA 206A

ACTIVE COLUMN LINE ARRAY 600W + 300W - 133 DB SPL

- Bi-amplified **2-way** line array
- **2 x 165mm (6.5") custom woofers with 38mm (1.5") coil**
- **Neodymium B & C compression HF driver with 36mm (1.4") throat and 64mm (2.5") coil**
- Large format FBT waveguide with 100° H x 25° V dispersion
- Frequency response from **65Hz to 20KHz**
- **Class-D 600Wrms for LF and 300Wrms for HF amplifiers** with switching mode power supply
- **DSP processor with 8 equalization presets**
- Control panel with XLR input and link, volume, presets, filter-HP, ground-lift
- **Neutrik PowerCON TRUE1 IN and LINK power connectors**
- Cabinet in **12mm (0.5") birch plywood** with scratch-resistant varnish, two side handles, rubber inserts for protection and anti-slip upper and lower
- **4 lateral inserts**, two upper and two lower points **designed to accept quick release pins or M10 screws**. New hardware for flying installations, for ground setups and the possibility of coupling two or more **CLA406A / 206A** with an angle of **0° - 20° in 5° steps vertically**, all with optional quick release pins for touring.
- **35mm stand socket**
- Top side inclined 20° to have maximum flexibility of use in combination with other CLA206A or CLA406A in order to adapt the vertical dispersion angle of the system to the listening area.
- The system can be used both in small point source systems with the VERTUS CLA118SA sub and in clusters of two to have a dispersion of 40° (V). It can also be considered a down-fill for CLA406A systems.



CLA 118SA

PROCESSED ACTIVE SUBWOOFER

1200W - 138 dB SPL

- Active subwoofer in bass-reflex design
- 460mm (18") B&C high excursion woofer with 75mm (3") voice coil
- Frequency response from 33Hz to 100Hz
- **1200W RMS Class D power amplifier** with switching mode power supply
- Processor **DSP with 8 presets**, cardioid configuration, delay
- Control Panel with XLR input and link, volume, presets, delay, phase 0 ° -180 °, ground-lift
- **Neutrik powerCON** power IN and LINK connectors
- 15mm (5/8") birch plywood with scratch-resistant coating
- Stackable
- M20 (20mm) top mount speaker stand socket, two diecast aluminium carrying handles with rubber inserts
- Optional 4 swivel-mount casters 80mm (3.15") on request
- Suitable for low frequency extension and reinforcement of the **CLA 406A** array, especially for live performance



VT-S 30 406 Code 39903
Speaker Stand h 30cm



VT-S 0 406 Code 39904
Speaker Stand h 0cm



VT-J 406.2 Code 41802
Joint Bar CLA 406.2A +
CLA 206A or CLA 406.2A



VT-F 406.2 Code 41803
Flying bar CLA 406.2A and
CLA 206A

Vertus CLA

Column Line Array

48

THE TECHNOLOGY AND QUALITY OF A PROFESSIONAL LINE ARRAY IN A COMPACT COLUMN



VERTUS CLA was created with the thought of **integrating professional line array technology in an extremely compact and elegant speaker column**.

Compared to the traditional two-way speakers, the **sound is distributed much more evenly throughout the audience**, both in outdoor and in indoor environments acoustically difficult or reverberating as well. The CLA cylindrical wave front boasts the pleasant effect of present and precise forwardly projected sound. Even acoustic feedback towards microphones is reduced.

CLA 604A is an extruded aluminum column speaker fitted with **6 x 4"** custom woofers and **4 x 1"** dome tweeters, each coupled to a wave guide. The internal **Class D amplification**, 400W for woofers and 100W for tweeters with switch mode power supply and **DSP processor with 4 equalization presets** provide unexpected dynamics in a system of these dimensions. The rapid latching system with pins allows for the expansion of the system, doubling-up CLA604A modules to form a unified column with an absolute and coherent source integration and increase of SPL and low-frequency directivity control.

CLA 208SA is a **2 x 8"** active subwoofer in bass-reflex design and birch ply enclosure. The internal Class D amplifier delivers 600W and is matched with a switch mode power supply and a DSP processor with filtering functions, equalization and speaker protection. **Created with the idea of extending the CLA608A's low frequency performance in live applications**, the CLA208SA serves as the base support for the CLA604A column speaker which can either be frontally mounted to the sub, as well as fixed upon the optional stand through the M20 socket on the upside of the sub. The CLA208SA subwoofers are modular as well, and they can be stacked to enlarge and increase the maximum SPL.



VERTUS CLA is a light and compact modular line array system created for both live and fixed installations, comprised by two products:

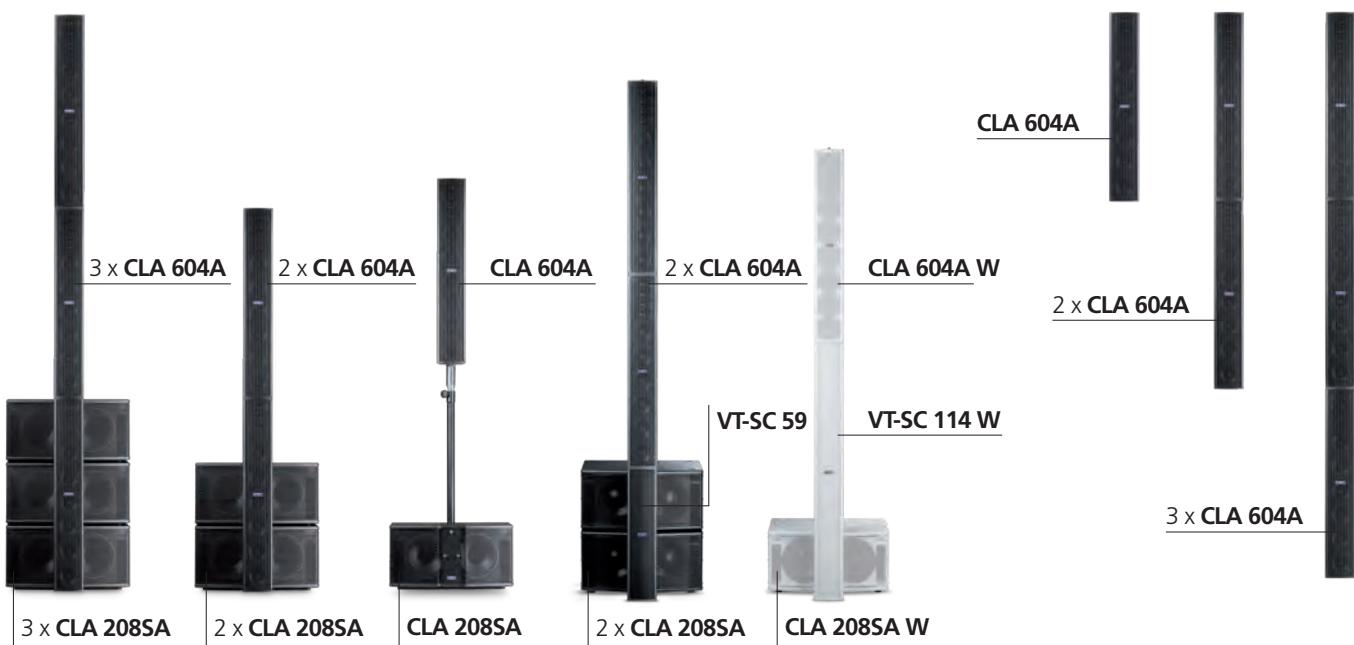
- **CLA 604A**
bi-amp two-way active column speakers
400 + 100W RMS
- **CLA 208SA**
active subwoofer
600W RMS



CLA system features:

- High-level sound quality from 50Hz to 20kHz expressly developed for live performance
- Long distance sound projection and better SPL distribution towards the audience
- Great and dynamic power performance thanks to tri-amplification system
- Lightweight and easy to carry
- Design and elegance for an easy integration even in the most demanding installations
- Very compact dimensions enable the listener to concentrate on sound and not on speakers!
- High horizontal dispersion

The internal XLR signal link system and Neutrik POWERCON power supply on both the sub and the satellite, **allows for hiding wires and cables from open sight, preserving the system's clean aesthetics.**



Vertus CLA

Column Line Array

50

VERTUS CLA is a true professional line array system that can satisfy the musician looking for a compact PA solution, easily to carry, modular, ready to use in just minutes with no-compromise quality. It is capable of being integrated into any environment or installation requiring high-quality sound and controlled directional characteristics.



Vertus CLA 604A

COLUMN ACTIVE LINE ARRAY 400W + 100W RMS - 125dB SPL

- 2-way bi-amplified Line Array Column
- **6 x 100 mm (4")** custom woofer with 25 mm (1") voice coil
- **4 x 25 mm (1")** neodymium dome tweeter on waveguide
- 130Hz to 20KHz frequency response
- **Class D 400W RMS** amplifier for **LF** and **100W RMS** for **HF** with switch mode power supply
- **DSP processor** with 4 available equalization presets
- Control panel with volume, presets, HP filter, Mic-Line, status LED
- XLR input and Neutrik POWERCON supply input at the lower part of the column; XLR link and Neutrik POWERCON loop output at the higher part, in order to hide each connection cable

- **100°H x 20°V dispersion**
- **Extruded-aluminum power coated cabinets.**
Superior latching system enables the extension of the length of the line array by adding CLA604A modules for increased modularity of the system
- Possibility to angle the columns of +/- 30° on a horizontal plane
- Ideal for both live applications, assisted by the CLA 208SA active subwoofer, as well as for fixed installation
- **Easily expandable for a total power of 6600W**
(stereo system composed of 3 x CLA604A and 3 x CLA208SA)
- Very light and easy to carry

Vertus CLA 604A



Vertus CLA 208SA

PROCESSED ACTIVE SUBWOOFER
600W RMS - 129dB SPL

- Active subwoofer in bass-reflex design
- **2 x 200 mm (8")** custom neodymium, **high-excitation woofer** with 50 mm (2") voice coil
- 50Hz to 180Hz frequency response
- **Class D 600W RMS** amplifier with switch mode power supply
- **DSP processor** with 4 available presets
- Control panel with combo XLR/Jack stereo input and link, XLR Hi-pass out stereo, volume, presets, 0°-180° phase switch, status LED
- **Neutrik POWERCON** input and link
- **15 mm birch plywood enclosure** with anti-scratch paint finish, stackable
- M20 stand adapter, 2 integrated handles, front hardware to sustain CLA604A modules
- Suitable for low frequency extension and reinforcement of the CLA604A array, especially for live performance



Vertus CLA

Column Line Array

52



Model	CLA 406.2A	CLA 206A	CLA 118SA	CLA 604A	CLA 208SA
Configuration	way	2	1 REFLEX	2	1 REFLEX
Built-in amplifier max. LF/HF	W RMS	600 / 300	600 / 300	400/100	600
Built-in amplifier max. peak LF/HF	W	1200 / 600	1200 / 600	800/200	1200
Frequency response	@-6dB	65Hz - 20KHz	65Hz - 20KHz	33Hz - 120Hz	130Hz - 20KHz
Low frequency woofer	inch	4x6.5- 1.5 coil	2x6.5 - 1.5 coil	1x18- 3 coil	6 x 4" - 1" coil
High frequency driver	inch	1x1.4 - 2.5 coil neodymium	1x1.4 - 2.5 coil neodymium	-	4 x 1" - 1" coil
Maximum SPL cont/peak	dB	128/133	125/133	134/138 half-space	122 / 125
Dispersion	H x V	100° x 25°	100° x 25°	omnidirectional	100° x 20°
Input impedance	kOhm	22	22	22	22
Crossover frequency	kHz	1.2	1.2	preset dependant	2.5
AC Power requirements	VA	640	640	640	450
Input connectors		XLR with loop	XLR with loop	XLR with loop	stereo XLR with loop/ HP out
Power cord	m / ft	5 / 16.4	5 / 16.4	5 / 16.4	5 / 16.4
Net dimensions (WxHxD)	mm inch	190x1135x290 7.48x44.68x11.41	190x777x290 7.5x30.6x11.4	550x550x660 21.65x21.65x25.98	130x841x130 5.12x33.1x5.12
Net weight	Kg/Lb	27 / 59.52	19 / 41.9	40 / 88.18	9 / 19.84
Transport dimensions (WxHxD)	mm inch	315x1225x420 12.4x48.2x15.3	315x862x420 12.4x33.9x16.5	755x700x800 29.7x27.5x31.5	220x930x220 8.66x36.61x8.66
Transport weight	Kg/Lb	32 / 70.54	22 / 48.5	50 / 110.23	11.5 / 25.35



COLUMN | 53
LINE ARRAY



Vertus
CLA

Vertus CLA

Column Line Array

54

FBT GROWS INSTALLATION OPTIONS WITH VERTUS CLA FAMILY

Bringing new coverage options to the installed sound market, the new VERTUS CLA (Column Line Array) range will receive its official launch at Frankfurt Pro Light + Sound 2018. Boasting **EN54-24 certification and an IP55 rating**, the range has been created to add discreet but powerful sound reinforcement in even the most challenging of projects, including the ability to select dispersion angles depending on the project's requirements.



Vertus
CLA 803TB



Vertus
CLA 403TB



Suited to both indoor and outdoor use, the VERTUS CLA range comprises two models: the **VERTUS CLA 803, with eight 3" full range woofers**, and the **CLA 403, with four 3" full range woofers**. Both versions have the same sleek, lightweight and durable, powder-coated aluminum housing. **Completely dustproof and weatherproof, the enclosure's grille is covered with a special hydrophobic fabric to ensure absolute rejection of all atmospheric agents. Full EN54-24 certification also means both columns can be used for emergency and evacuation applications** - in the event of a fire, all VERTUS CLA columns are equipped with a ceramic terminal block and thermal fuse.

The range also offers powerful new features for systems integrators facing challenging acoustic conditions. Both the **CLA 803 and CLA 403** are characterized by an integrated passive directivity control system which delivers a consistent frequency-based vertical dispersion, and which offers users the choice of **two angles – NARROW and WIDE (110° (H) x 15° (V) and 110° (H) x 40° (V)**, respectively.

This new functionality guarantees **enormous flexibility for the integrator**, even allowing for the horizontal mounting of columns. In addition, each VERTUS CLA enclosure is fully modular, so **multiple enclosures can be linked** to increase low frequency control, high frequency dispersion and overall SPL. Other features include a **100V line transformer with switchable power levels**.

A **wide range of accessories** is also available for total system configuration flexibility, including a bracket with two diffusers offering a 0° - 15° swivel range (in 5° steps); a fixed 0° bracket for assembling straight arrays; a tilting wall-bracket for mounting at up to 20° (V) and 90° (H); and a fixed wall support for near-flush mounting. A flybar is also available (with optional clamp), plus a foldable floor stand. The accessories match to the enclosures with sliding guides and integrated quick release pins for an exceptionally quick, easy and effective installation.

Line Array					IP55 	EN 54 - 24
Vertus CLA 803TB 240W	Vertus CLA 803TW 240W		Vertus CLA 403TB 120W		Vertus CLA 403TW 120W	

Vertus CLA

Column Line Array

56



VT-F 3 Code 41795

Code 41820 WHITE

Flying bar for CLA 803 and CLA 403



VT-J 3 Code 41794

Code 41819 WHITE

Joint bar 0°-15° for CLA 803 and CLA 403



VT-W 3 Code 41797

Code 41821 WHITE

Directional wall mount for CLA 803 and CLA 403 in vertical



VT-WH 3 Code 41798

Code 41822 WHITE

Directional wall mount for CLA 803 and CLA 403 in horizontal

Vertus CLA 803T

IP55, EN54-24 COLUMN LINE ARRAY

240W - 119 / 122dB SPL

- Passive column array
- **8 x 3" full-range custom woofers with 0.7" voice-coils**
- Frequency response from **140Hz to 20KHz**
- Vertical dispersion angle selector: **110° H x 15° V (NARROW), 110° H x 40° V (WIDE)**
- Ceramic screw-in connector with thermal fuse
- **100V / 120W** line transformer with power selector (excludable)
- Extruded aluminum cabinet with powder coating
- Grille with hydrophobic fabric
- Wide availability of accessories for installation
- Multiple CLA 803 and CLA 403 columns can be linked to increased SPL and coverage
- **IP55 rating** means suitable for outdoor installation
- **EN54-24 certification** means suitable for emergency and evacuation systems
- Ideal for fixed installations in reverberant environments where requiring heightened intelligibility of both music and voice



Vertus CLA 403T

IP55, EN54-24 COLUMN LINE ARRAY
120W - 116 / 119dB SPL

- Passive column array
- **4 x 3" full-range custom woofers with 0.7" voice-coils**
- Frequency response from **140Hz to 20KHz**
- Vertical dispersion angle selector: **110° H x 25° V (NARROW), 110° H x 50° V (WIDE)**
- Ceramic screw-in connector with thermal fuse
- **100V / 60W** line transformer with power selector (excludable)
- Extruded aluminum cabinet with powder coating
- Grille with hydrophobic fabric
- Wide availability of accessories for installation
- Multiple CLA 803 and CLA 403 columns can be linked to increased SPL and coverage
- **IP55 rating** means suitable for outdoor installation
- **EN54-24 certification** means suitable for emergency and evacuation systems
- Ideal for fixed installations in reverberant environments where requiring heightened intelligibility of both music and voice

Vertus CLA

Column Line Array

58



Model	CLA 803T	CLA 403T
Code	41806 - White 41823	41807 - White 41824
Configuration	way	1
Rated noise power (100hrs)	W Vrms	100 / 28.2
Recommended amplifier	W rms	200
Nominal impedance	Ohm	8
Nominal impedance (100v line)	Ohm/W	200 / 100 400 / 50
Sensitivity (@1w/1m)	@-dB	94
Max sound pressure SPL (@1m/4m)	@-dB	112 / 100
Frequency response (@ -6db)	@-dB	150 Hz - 20kHz
Fullrange driver	inch	8 x 3" / 0.75" coil
Dispersion horizontal (-6db) Narrow = wide setting	dB/Hz	500Hz - 360° 1kHz - 170° 2kHz - 125° 4kHz - 125° 8kHz - 100°
Dispersion vertical (-6db) Wide setting	dB/Hz	500Hz - 70° 1kHz - 35° 2kHz - 26° 4kHz - 26° 8kHz - 20°
Dispersion vertical (-6db) Narrow setting	dB/Hz	500Hz - 70° 1kHz - 35° 2kHz - 18° 4kHz - 10° 8kHz - 10°
Input connectors		Ceramic terminal block
Operating / storage temperature		25°C ÷ +55°C / -40°C ÷ +70°C
Relative umidity	%	< 95
Net dimensions (wxhxd)	mm/ inch	100x704x125 - 3.93x27.69x4.92
Transport dimensions (wxhxd)	mm/ inch	160x760x180 - 6.29x29.92x7.08
Net weight	kg/lb	5.5 / 12.12
Transport weight	kg/lb	6.2 / 13.66
		3 / 6.61
		3.5 / 7.71

COLUMN | 59
LINE ARRAY



**Vertus
MLA-DLA**

Vertus MLA-DLA

Column Line Array

60

VERTUS EXTEND TRUE LINE ARRAY TECNOLOGY

The **new VERTUS series** is aimed at breaking the limits traditionally associated with the column line array systems, proposing an innovative and highly professional solution. Refined in fine details both in design and acoustic solutions, the new VERTUS series has been created in order to extend true line array technology, which has achieved unquestionable success in the professional audio industry, towards new applications both in live performance and fixed installation. It proposes column speaker systems differing one another both in size and application yet united by high quality, stylish features and by the passion and dedication of those who conceived the series.

VERTUS is composed of three systems named **MLA** (Mixed control Line Array), **DLA** (Digital control Line Array) and **CLA** (Column Line Array), which are all characterized by an extruded aluminum chassis of considerable width with internal ribbing creating an absolute structural rigidity. They are all modular and through a rapid latching system it is possible to connect different elements in order to increase and extend the vertical directivity at low frequencies as well as to boost the acoustic pressure available.

Vertus MLA is composed of a minimum of two modules:

- **MLA608a** for Mid/Low frequencies (60Hz - 2KHz)
- **MLA801a** for High frequencies (2KHz - 20KHz)

It is possible to emulate the directivity of a classic J-form line array, either curved or straight. Starting from the analysis of known line array systems with digital directivity control (columns with small wide-band speakers) or mechanical directivity (all systems with inclinable cabinets that form a curved or straight J-form array), we decided to condense into one product the advantages of both types of controls, while at the same time surpassing their traditional limits.

The principle behind the operation of **MLA** is based on the **combined mechanical/digital control of directivity**. Digital allows for the control of directivity up to around 4KHz; mechanical, assisted by digital, from 4KHz to over 15KHz. This enables the system to reach the following targets:

- **An aesthetically non-intrusive vertical column** that is readily adaptable to any environment
- **Control of full-range directivity** from the lower frequencies (depending upon the length of the column) up to and over 15KHz
- **Elevated SPL**, thanks to the usage of a compression drivers e wave guide at high frequencies
- **Limited number of transducers** and therefore DSP channels and amplifiers associated with "no compromise" systems of exclusively digital steering with drastic reduction of cost.

The digital control part is activated by discrete amplification channels (one for each transducer) and DSP which operates in signal processing management sent to each speaker and driver.

The mechanical part is entrusted to **8 hybrid stepped motors**, each



Vertus
MLA 608A
6 x 250W

Vertus
MLA 801A
8 x 50W

Vertus
DLA 1244A
16 x 50W

Vertus
DLA 804A
8 x 50W

Vertus
CLA 604
500W 8ohm

of which is dedicated to the rotation of wave guide by 0,01° steps on the horizontal axis. It is thus possible to **activate any radiation pattern** in the maximum rotation range of the wave guide which goes from +35 to -35 with respect to the horizontal axis.

The MLA system features a **RS-485 network connection for total control through PC and dedicated software** with which it is possible to simulate the environment to sound reinforce, select the appropriate dispersion pattern for the audience, transfer all the aiming parameters of the system through the network with a single button. Various types of autosplay routine enable a totally automatic configuration of the system, without precluding for the possibility of aiming 'fine-tuning' in manual mode.

In mainly Live situations, when time is limited and it isn't possible to connect to a PC, it is possible to manage steering, lobe width and equalization through 3 switch controls available on the back panel of the MLA column.

The modularity of the system allows for the construction of a column composed of a maximum of two MLA801a modules and 3 ML608A modules for a total of 4000W and a minimum frequency control of 100hz!

For usage in fixed installations, bars are provided for the close-fitting installation adjacent to walls. For live usage, an accessory is available for positioning on the 118Sa and 121Sa subwoofers of the FBT MITUS series.

The characteristics of the lobe radiation directional controls, the high SPL, the Hi-Fi frequency range, the elegance and overall dimensions, make the MLA system particularly suitable for high quality sound even in acoustically difficult environments, reverberating and very large, given the capacity of the wavefront to soften of about 3 dB upon doubling the distance from the source. Thus, it is ideal in large churches, theatres, auditoriums, large convention and multimedia halls, as well as in public places such as airports, railroad stations, etc...

Why MLA?

Currently, known line array systems activate directivity control in a digital or mechanical manner.

Digital steering allows to maintain the sources as fixed (column systems) and control the directivity associating delays and different filters in each transducer. This requires the usage of a number of channels of amplification and signal processing (DSP) equal to the number of transducers available in the column.

The physical limits to this approach are that the maximum frequency of control is strictly tied to the distance between the sources and that it is necessary to have NON DIRECTIVE sources, given the fact that control is based precisely upon reciprocal interference between sources. This implicates that on one side,

to have control over high frequencies, the acoustic centers of the sources need to be very close (less than 17mm @ 10KHz), and on the other side, the impossibility to utilize wave guides in order to have an adequate SPL. For however much it is possible to create very small sources (10-15mm diameter), in order to have an adequate SPL it would be necessary to utilize a too high number of sources - and the fact that one would need to designate a channel of amplification to each source would increase costs and complexity of realization to unacceptable commercial levels. Notwithstanding that the market offers us examples of products manufactured in this manner, they are, for the major part, compromises and very expensive.

Mechanical steering adjustments, the dominant traditional method present in the major part of modular PA systems, consists of the angling of the array speakers to form a geometrical curve between each element, variable according to area to sound reinforce, and to a general aiming of the speaker column. This approach has the advantage of creating systems having a large SPL, thanks to the utilization of waveguides and the ability to control the full-range directivity in an accurate way.

On the other hand, the system's geometry imposes a difficult and invasive positioning, especially in fixed installations and the modular construction of the cabinets and hardware imposes generally high costs.

To summarize:

- Digital control: Straight column, limited bandwidth or full-range but with low SPL and high cost.
- Mechanical control: Curved column, J-array or straight but inclined (high- impact aesthetics and difficulty in installation), limited control possibility, high SPL, high costs for hardware and angling.
- Mixed Mechanical/ Digital Control: Straight column, full control on all the audio frequency bandwidth, high SPL, limited costs.



Vertus MLA

Column Line Array

62

Vertus MLA is a column speaker system with vertical directional characteristics fully controllable by the user both for the steering of the radiation lobe and for the width and form of the lobe itself.



Vertus MLA 608A

MIXED CONTROL ACTIVE LINE ARRAY 6 x 250W RMS - 137dB SPL

- 6-way active Mid/Low Line Array Column, in bass reflex with digital directivity aiming
- **6 x 8"** (200mm) custom **neodymium** woofers with 2" (50 mm) voice coil
- 60Hz to 2KHz frequency response
- **6 class D 250Wrms amplifiers** with three switch mode power supplies for a **total of 1500W** power
- **Completely controllable directional features**, through control switches on the back panel or through PC software and dedicated RS-485 network
- Digital full-range aiming from **+5 to -25°** with included beamwidth between 5° and 25/40°
- PC/Slave function for aiming control via PC or other MLA module in the network
- Frontal status LED
- Possibility of mounting on subwoofer from the MITUS series through the optional mounting accessory and of wall-mount installation with the supplied bars
- DSP processor for the management of digital aiming and signal processing, 4 available presets
- Control panel with XLR input and XLR link, XLR HP-filtered output, volume, presets, 7-step angle aiming, 8-step lobe width, HP filter, ground-lift, RJ45 in/out for **RS-485 network**, screw connectors for in/out audio and for installation
- 90° Digital-Mechanical controlled dispersion
- **Extruded-aluminum powder-coated cabinets**. Superior latching system as well as inferior for the MLA series, allowing for great component modularity

Vertus MLA 801A

MIXED CONTROL ACTIVE LINE ARRAY 8 x 50W - 139dB SPL

- 8-way active HF Line Array Column, in bass reflex with digital/mechanical directivity aiming
- **8 x 0,75"** (20mm) **B&C neodymium drivers** with 1" (25 mm) voice coil on wave guide
- 1.8KHz to 20KHz frequency response
- **8 class D 50Wrms amplifiers for a total of 400W power**
- **Completely controllable directional features**, through control switches on the back panel or through PC software and dedicated network
- **Revolutionary combined aiming digital/mechanical full-range system from +5 a -25°** with included lobe width between 5° and 25/40°
- **8 hybrid stepped motor controlled by a microprocessor for the mechanical aiming of wave guides**
- PC/Slave function for aiming control via PC or other MLA module
- Frontal status LED
- DSP processor for the management of digital aiming and signal processing, 4 available presets
- Control panel with XLR input and XLR link, XLR HP-filtered output, volume, presets, 7-step angle aiming, 8-step lobe width, HP filter, ground-lift, RJ45 in/out for **RS-485 network**, screw connectors for in/out audio and for installation
- 90° Digital-Mechanical controlled dispersion
- **Extruded-aluminum powder-coated cabinets**. Superior latching system as well as inferior for the MLA series, allowing for great component modularity



VERTUS SERIES IS ENRICHED BY TWO NEW MODELS, **DLA804A** AND **DLA1244A**, DIGITAL DIRECTIVITY AIMING COLUMN ARRAYS.

The experience gained during the development of our leading MLA series has been transferred to these two new exclusively digital beamsteering models using the same innovative algorithms for steering and beamwidth control.

Built in elegant aluminum scratch-resistant cabinet, the DLA series can solve many problems of sound related to difficult and reverberant environments. DLA804A is composed of 8 x 100mm (4") full-range column loudspeakers matched with 8 x 50W power amplifiers in Class D and switching mode power supply. Designed especially for voice reproduction, DLA804A has a frequency response from 120Hz to 10kHz. It can be used alone or together with other DLA804A modules in order to extend the SPL and the minimum control frequency as well as to reduce beamwidth of radiation lobe.

DLA1244A is composed of 12 x 100mm (4") loudspeakers and 4 x 25mm (1") dome tweeters combined to waveguides to improve efficiency, 16 x 50W power amplifiers in Class D, switching mode power supply and a powerful DSP processor in floating point.

With a 100Hz to 20kHz frequency response, it is recommended both for voice and high-quality music reproduction. It can be used in association with DLA804A in order to create a full-range system with even better directivity control and increased SPL.

Both DLA models have a dedicated SUB output on the Euroblock connector, to extend performance at low frequencies. It is possible to use any active subwoofer within the wide range proposed by FBT.

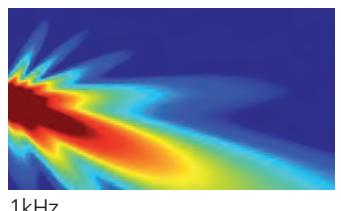
The wide range of controls and connections include: IN on XLR, IN/Link and SUB OUT on euroblock connectors, HP filter, volume, 2 switches for steering and beamwidth angle in 8 steps for a quick set up of the directional characteristics without the need of connecting a PC, and 4 equalization presets.

The PC-slave position allows control and configuration via PC. RJ45 connectors for RS-485 network data configuration via provided software. Power connection through neutrik Powerconn. The range of accessories allows wall-mount and stand mounting.

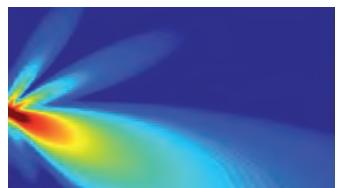
Key features

- High intelligibility even in reverberant environments
- Homogeneous SPL in the listening zone for a better acoustic comfort
- High direct to reverberant ratio
- Wide selection of directivity adjustments for a better adaptation to any environment
- Quick and simple setup even without a PC
- High quality transducers
- Modularity
- Elegant aesthetic design for the most demanding installations

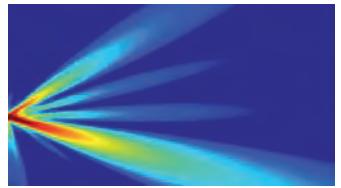
Examples of directivity aiming with DLA1244A



1kHz

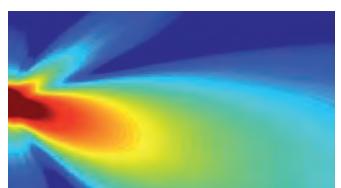


4kHz

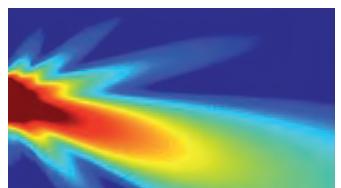


10kHz

By connecting a DLA1244A system with a DLA804A the lobe beamwidth reduces even further.



500Hz – DLA1244A only



500Hz – DLA1244A+DLA804A

Vertus DLA

Column Line Array

64

Built in elegant aluminum scratch-resistant cabinet, the **DLA series** can solve many problems of sound related to difficult and reverberant environments.



Vertus DLA 1244A

DIGITAL CONTROL ACTIVE LINE ARRAY 16 x 50W RMS - 126dB SPL

- 2-way active column line array with digital beam steering technology
- 12 x 100mm (4") full-range custom speakers with 25mm (1") voice coil
- 4 x 25mm (1") dome neodymium tweeter on waveguides
- Frequency response from 100Hz to 20kHz
- 16 x 50W RMS power amplifiers in Class D with switching mode power supply for a total of 800 W RMS
- The 2 way system design allows a high-quality full-range reproduction of the musical signal
- Perfect for the reproduction of high-quality speech/vocal application in reverberant environments, it can be used also for sound reinforcement as well as for fixed installations
- Possibility of stacking on a subwoofer from the MITUS range through the optional mounting accessory and of wall-mount installation with the supplied bars

Vertus DLA 804A

DIGITAL CONTROL ACTIVE LINE ARRAY 8 x 50W RMS - 123dB SPL

- Active column line array with digital beam steering technology
- 8 x 100mm (4") full-range custom speakers with 25mm (1") voice coil
- Frequency response from 120Hz to 10kHz
- 8 x 50W RMS power amplifiers in Class D with switching mode power supply for a total power of 400 W RMS
- Perfect for the reproduction of high-quality speech/vocal application in reverberant environments, it can be used also for sound reinforcement as well as for fixed installations
- Possibility of stacking on a subwoofer from the MITUS range through the optional mounting accessory and of wall-mount installation with the supplied bars



DLA 1244A

Vertus CLA

Column Line Array



EN 54 - 24

0068-CPR-054/2013

Vertus CLA 604

PASSIVE COLUMN LINE ARRAY

500W 8ohm 123dB SPL

- 2-way passive column line array
- **6 x 100mm (4")** custom woofer with 25mm (1") voice coil
- **4 x 25mm (1")** dome neodymium tweeter on a waveguide
- Frequency response from **130Hz to 20kHz**
- 100V transformer with 2 levels of power, 100 and 200W
- **100°H x 20°V dispersion**
- 4-pole Euroblock input connector: 8ohm - 100W/100V - 200W/100V
- Extruded-aluminum powder-coated cabinets
- Wall-mount installation bars are supplied
- Expandable line array by adding CLA604 modules in order to increase SPL and reduce the vertical radiation lobe width
- Ideal for fixed installation in reverberant environments, it can improve both music and voice intelligibility by improving direct/reflected sound quality

FBT

Vertus

MLA-DLA-CLA

66

Column Line Array



VERTUS	MLA 608A	MLA 801A	DLA 1244A	DLA 804A
Configuration way	6	8	16	8
Built-in amplifier cont. rms LF/HF W	6 x 230	8 x 40	16 x 40	8 x 40
Built-in amplifier max. rms LF/HF W	6 x 250	8 x 50	16 x 50	8 x 50
Built-in amplifier max. peak LF/HF W	6 x 500	8 x 100	16 x 100	8 x 100
Frequency response @-6dB	60Hz - 2KHz	1.8KHz - 20KHz	100Hz - 20KHz	120Hz - 20KHz
Low frequency woofer inch	6 x 8 - 2 coil - neodymium	-	12 x 4 - 1 coil	8 x 4 - 1 coil
High frequency driver inch	-	8 x 0.75 - 1 coil - neodymium	4 x 1 - 1 coil - neodymium	-
Maximum SPL cont/peak dB	133 / 137	135 / 139	123 / 126	120 / 123
Dispersion H x V	90° x Digital Controlled	90 x Digital-Mechanical Controlled	100° x Digital Controlled	100° x Digital Controlled
Steering Angle V	+5 / -25	+5 / -25	+30 / -30	+30 / -30
Beamwidth Angle V	5 / 40	5 / 40	10 / 40	10 / 40
Input impedance kOhm	22	22	22	22
Crossover frequency kHz	1.8	1.8	3	3
AC Power requirements VA	1350	300	650	400
Input connectors	XLR with loop, SUB out	XLR with loop, SUB out	Euroblock with loop and SUB OUT	Euroblock with loop and SUB OUT
Power cord mm/inch	5 / 16.4	5 / 16.4	5 / 16.4	5 / 16.4
Net dimensions (WxHxD) mm/inch	240x1285x242 9.5x50.6x9.52	240x625x242 9.5x24.6x9.52	130x1685x131 5.11x66.33x5.15	130x965x131 5.11x38x5.15
Net weight kg/lb	27 / 59.5	18 / 39.7	22 / 48.50	12 / 26.66
Transport dimensions(WxHxD) mm/inch	320x1385x322 12.6x54.5x12.67	320x725x322 12.6x28.54x12.67	220x1760x220 8.66x69.29x8.66	220x1040x220 8.66x40.94x8.66
Transport weight kg/lb	31 / 68.4	20.5 / 45.2	24.5 / 54.01	14.5 / 31.96



VERTUS	CLA 604
Configuration way	2
Recommended amplifier W RMS	250
Long term power W RMS	100
Short term power IEC 268-5 W RMS	500
Transformer V/W	100/200
Nominal impedance Ohm	8
Frequency response	130Hz - 20kHz
Low frequency woofer inch	6 x 4 - 1 coil
High frequency driver inch	4 x 1 - 1 coil neodymium
Sensitivity (@1W/1m) dB	93
Maximum SPL cont/peak (Bi-Amp) dB	120/123
Dispersion H x V	100° x 20°
Crossover frequency kHz	3
Recommended HP filter	80Hz - 24dboct
Input connectors	cavo 4 conduttori
Net dimensions (WxHxD) mm/inch	130x849x130 5.12x33.42x5.12
Net weight Kg/lb	8 / 17,6
Transport dimensions (WxHxD) mm/inch	170x900x170 6.7x35.4x6.7
Transport weight Kg/lb	10 / 22

POINT |⁶⁷
SOURCE



Mitus

THE MITUS SOUND REINFORCEMENT POINT SOURCE SPEAKER SERIES IS THE TRUE RESULT OF OUR EXPERIENCE AND PASSION FOR EXCELLENCE

This comprehensive range of both powered and passive 2-way speakers delivers the finest sound reproduction for both live sound touring and permanent installations.

MITUS 215A, 152A, 115A, 114A and MITUS112A are 2-way FOH speaker systems to provide for a wide range of applications, especially when matched along with the **MITUS subs**, guaranteeing stunning sound reproduction for any live sound event or permanent installations.

- High quality B&C neodymium magnet woofers, custom manufactured for FBT
- The latest generation of B&C compression drivers
- High efficiency Class D power amp modules with switch mode power supplies, fixed to a die-cast aluminum chassis. This provides maximum protection of the electronics from dust or dirt, prevents air loss through the input control panel that can cause fastidious noise, and it maximizes heat dissipation thanks to the air created by the excursion of the woofer, avoiding the use of a fan to cool the circuitry. All this has allowed the realization of a 3.2 Kg lightweight power amp module that delivers 1200Wrms!
- DSP with A/D-D/A low noise converters providing crossover,

equalization, system protection along with 8 selectable presets to customize the sound program for various applications, or simply to taste of the user through an easy to use and efficient setup selection.

- A wide range of accessories makes the MITUS range extremely flexible for live or permanent installations.
- New aluminum die-cast carrying handles with rubber inserts for a secure and comfortable hold.
- Heavy duty metal grille with anti-resonance spacers and exclusive synthetic cloth to protect the drivers from dust and moisture, without modifying the acoustic fidelity. Unlike widely used conventional foam linings, our FBT exclusive synthetic cloth will not break down or disintegrate over time.

Speaker Systems



Mitus 215A
1100 + 250W

Mitus 152A
1100 + 250W

Mitus 115A
600 + 300W

Mitus 112A
600 + 300W

Mitus 215
1600W

Mitus 152
800W

Mitus 115
800W

Mitus 112
700W



Mitus 215A

PROCESSED ACTIVE SPEAKER
1100W + 250W RMS - 136dB SPL

- **2 x 380 mm (15") B&C neodymium magnet woofer** with 75 mm (3") voice coil
- 50 mm (2") exit **B&C HF driver** with 64 mm (2.5") voice coil
- Frequency response from 42Hz to 20kHz
- Class D built-in amplifiers, **1100W RMS** to the LF and 250W RMS Class G to the HF
- **60°H x 40°V rotatable HF horn**
- DSP with 6 EQ presets
- 2-way, bi-amplified, bass-reflex design
- Switch mode power supply
- DSP with 8 EQ presets
- Birch plywood enclosure, scratch resistant black paint finish
- Control panel with XLR input and link, volume, presets, HP filter, ground-lift
- 12 x M10 fly points and two FBT design aluminium handles
- Ideal for live sound reinforcement applications and permanent installations

Mitus 215

PASSIVE REINFORCEMENT SPEAKER
1600W/4ohm - 138dB SPL

- Hi-grade passive internal crossover featuring "soft-trip" circuitry protection of LF and HF transducers
- Speakon NL4MD-V connectors IN & LINK OUT



Mitus 152A

Mitus 152

Active Mitus Speakers

2-way, bi-amplified, bass-reflex design

Switch mode power supply

DSP with 8 EQ presets

Birch plywood enclosure, scratch resistant black paint finish

Control panel with XLR input and link, volume, presets, HP filter, ground-lift

12 x M10 fly points and two FBT design aluminium handles

Ideal for live sound reinforcement applications and permanent installations

Passive Mitus Speakers

Hi-grade passive internal crossover featuring "soft-trip" circuitry protection of LF and HF transducers

Speakon NL4MD-V connectors IN & LINK OUT

PROCESSED ACTIVE SPEAKER

1100W + 250W RMS - 136dB SPL

- **380 mm (15") B&C neodymium magnet woofer** with 75 mm (3") voice coil
- 50 mm (2") exit **B&C HF** driver with 64 mm (2.5") voice coil
- Frequency response from 45Hz to 20kHz
- Class D built-in amplifiers, **1100W RMS** to the LF and 250W RMS Class G to the HF
- **60°H x 40°V rotatable HF** horn
- 35 mm (1.38") speaker stand socket
- DSP with 6 EQ presets
- **Very lightweight**, only 36.5Kg / 80.46Lb
- 2-way, bi-amplified, bass-reflex design
- Switch mode power supply
- DSP with 8 EQ presets
- Birch plywood enclosure, scratch resistant black paint finish
- Control panel with XLR input and link, volume, presets, HP filter, ground-lift
- 12 x M10 fly points and two FBT design aluminium handles
- Ideal for live sound reinforcement applications and permanent installations

PASSIVE REINFORCEMENT SPEAKER

800W/8ohm - 132dB SPL

- Hi-grade passive internal crossover featuring "soft-trip" circuitry protection of LF and HF transducers
- Speakon NL4MD-V connectors IN & LINK OUT



Mitus 115A

PROCESSED ACTIVE SPEAKER
600W + 300W RMS - 133dB SPL

- **380 mm (15") B&C neodymium magnet woofer** with 75 mm (3") voice coil
- 25 mm (1") exit B&C neodymium magnet HF driver with 44 mm (1.7") voice coil
- Class D built-in amplifiers, 600W RMS to the LF and 300W RMS to the HF, switch mode power supply
- Frequency response from 46Hz to 20kHz
- **80°H x 50°V rotatable HF horn**
- 35 mm (1.38") speaker stand socket
- **Very lightweight**, only 28Kg / 61.7Lb

Mitus 112A

PROCESSED ACTIVE SPEAKER
600W + 300W RMS - 133dB SPL

- **320 mm (12") B&C neodymium magnet woofer** with 75 mm (3") voice coil
- 25 mm (1") exit B&C neodymium magnet HF driver with 44 mm (1.7") voice coil
- Class D amplifiers, 600W RMS to the LF and 300W RMS to the HF, switch mode power supply
- Frequency response from 50Hz to 20kHz
- **80°H x 50°V rotatable HF horn**
- 35 mm (1.38") speaker stand socket
- **Very lightweight**, only 20Kg / 45Lb

Mitus 115

PASSIVE REINFORCEMENT SPEAKER
800W/8ohm - 132dB SPL

Mitus 112

PASSIVE REINFORCEMENT SPEAKER
700W/8ohm - 131dB SPL



Model	215A	152A	115A	112A	
Configuration	way	2	2	2	
Built-in amplif. max. LF/HF	W RMS	1100/250	1100/250	600/300	
Built-in amplif. max. peak LF/HF	W	2200/500	2200/500	1200/600	
Frequency response	@-6dB	42Hz - 20KHz	45Hz - 20KHz	46Hz - 20KHz	
Low frequency woofer	inch	2x15 - 3 coil neodymium	1x15 - 3 coil neodymium	1x15 - 3 coil neodymium	
High frequency driver	inch	1 x 2 - 2.5 coil	1 x 2 - 2.5 coil	1 x 1 - 1.7 coil	
Maximum SPL cont/peak	dB	133 / 136	129 / 136	127 / 133	
Dispersion	H x V	60° x 40°	60° x 40°	80° x 50°	
Input impedance	kOhm	22	22	22	
Crossover frequency	kHz	1.2	1.2	1.5	
AC Power requirements	VA	800	800	640	
Input connectors		XLR with loop	XLR with loop	XLR with loop	
Power cord	m / ft	5 / 16.4	5 / 16.4	5 / 16.4	
Net dimensions (WxHxD)	mm inch	493x1245x471 19.04x49x18.5	425x805x421 16.7x31.7x16.6	425x750x421 16.7x29.5x16.6	380x660x380 15x26x15
Net weight	Kg/Lb	52.5 / 115.74	36.5 / 80.46	28 / 61.7	20 / 45
Transport dimensions (WxHxD)	mm inch	618x1355x610 24.3x53.3x24	550x915x560 21.6x36x22	550x560x860 21.7x22.1x33.9	485x495x750 19.1x19.5x29.5
Transport weight	Kg/Lb	58 / 127.86	58 / 127.86	40 / 88.18	22 / 48.5

Model	215	152	115	112	
Configuration	way	2	2	2	
Recommended amplifier	W RMS	1600	800	800	
Long term power	W	800	400	400	
Short term power IEC 268-5	W	2800	1400	1400	
Nominal impedance	Ohm	4	8	8	
Frequency response	@-6dB	47Hz - 20KHz	47Hz - 20KHz	50Hz - 18KHz	
Low frequency woofer	inch	2x15 - 3 coil neodymium	1x15 - 3 coil neodymium	1x15 - 3 coil neodymium	
High frequency driver	inch	1 x 2 - 2.5 coil	1 x 2 - 2.5 coil	1 x 1 - 1.7 coil	
Sensitivity (@1W/1m)	dB	103	100	100	
Maximum SPL cont/peak (Bi-Amp)	dB	134 / 138	128 / 132	128 / 132	
Dispersion	H x V	60° x 40°	60° x 40°	80° x 50°	
Crossover frequency	kHz	1.2	1.2	1.6	
Recommended HP filter		40hz - 24dboct	40hz - 24dboct	40hz - 24dboct	
Input connectors		2 x Speakon NL4MD-V in & throu	2 x Speakon NL4MD-V in & throu	2 x Speakon NL4MD-V in & throu	
Net dimensions (WxHxD)	mm inch	493x1245x471 19.04x49x18.5	425x805x421 16.7x31.7x16.6	425x750x421 16.7x29.5x16.6	380x660x380 15x26x15
Net weight	Kg / Lb	48 / 105.82	32 / 70.54	26 / 57.3	18 / 39.7
Transport dimensions (WxHxD)	mm inch	618x1355x610 24.3x53.3x24	550x915x560 21.6x36x22	550x560x860 21.7x22.1x33.9	485x495x750 19.1x19.5x29.5
Transport weight	Kg / Lb	53.5 / 117.94	35.5 / 78.26	28.5 / 62.8	20 / 44.1



POINT |⁷³
SOURCE



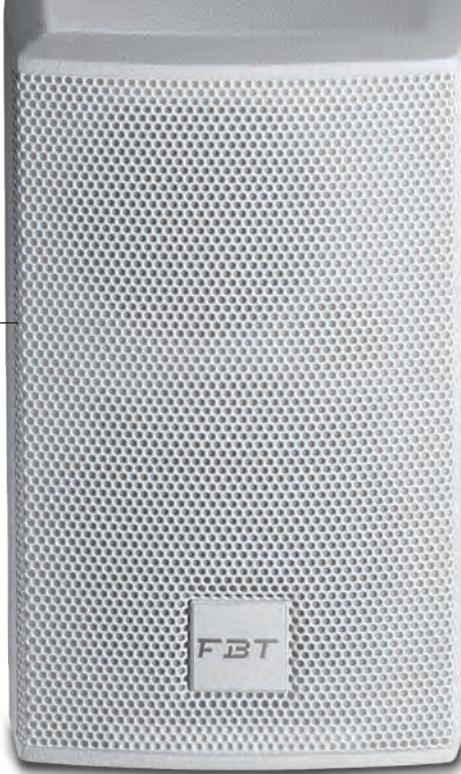
Archon

Archon

Point Source

74

Also available in white



THE ARCHON SERIES OF FULL-RANGE AND BI-AMPED SPEAKER SYSTEMS HAVE BEEN DESIGNED TO PROVIDE AMPLE BANDWIDTH AND HIGH SPL FOR AN ACCURATE SOUND REPRODUCTION IN THE MOST VARIOUS APPLICATION PROJECTS

With the Archon series FBT wants to meet today's expectations of the installed sound market: a new generation of improved speakers responding to high quality sound requirements for modern indoor spaces.

The FBT Archon series lines up three 2-way full range/bi-amp models and three 2-way full range compact models; in addition, two low-profile subwoofers (2x8" and 2x15") increase the low frequency extension of the desired systems. All Archon speakers are elegantly designed and crafted to meet the most demanding architectural design.

The FBT Archon series has been engineered to fulfill the need of high quality sound in bars, pubs, restaurants, retail shops, clubs, entertainment venues, fitness centres, conference rooms, theatres, educational institutions, houses of worship, museums, exhibition centres, cruise ships, corporate AV, granting excellent speech intelligibility, wide and precise band coverage, ease of installation thanks to the flexible mounting hardware.

- Stylish architectural cabinet design
- Acoustically transparent steel grilles with protection cloth
- High SPL, fast responding dynamics, excellent intelligibility, wide band, extremely low distortion
- Baltic birch plywood cabinets available in black or white extra texture paint
- Choice of different RAL paint colours on order
- Choice of different paint finish: glossy, matt, textured and more, on order
- Custom designed low frequency woofers, Made in Italy
- Custom designed high frequency compression drivers, Made in Italy
- Rotatable horns for optimal horizontal or vertical sound dispersion angle
- Selectable bi-amp/full range crossover network
- Full suspension possibilities through multiple M10 / M5 threaded rigging points and a wide range of mounting hardware
- Possibility to install line transformers for 100V/70V applications
- Possibility to order weatherproof versions for outdoor use
- Possibility to extend low frequencies performance through dedicated and compact subwoofers (Archon 208S, Archon 215S)

Point Source



Archon 115 1000W	Archon 112 1000W	Archon 110 700W	Archon 108 350W	Archon 106 300W	Archon 105 200W
------------------------	------------------------	-----------------------	-----------------------	-----------------------	-----------------------

Subwoofer



Archon 215S 2000W	Archon 208S 600W
-------------------------	------------------------



Archon 115

PASSIVE SOUND REINFORCEMENT

1000 W / 8 ohm - 134dB SPL

- **1 x 15" (3" VC) B&C** custom made high excursion LF woofer
- **1 x 2" (2.5" VC) B&C** custom made HF compression driver
- 1 x 2" FBT rotatable **60° x 40°** constant directivity horn
- 2-way, passive sound reinforcement systems
- 2 x Neutrik NL-4 speakon connectors
- 1 x 4 Euroblock terminal speaker connector
- **B&C** custom designed high excursion **LF woofers**
- **B&C** custom designed **HF compression drivers**
- **Full range / bi-amp crossover** networks with protection

Archon 112

PASSIVE SOUND REINFORCEMENT

1000 W / 8 ohm - 133dB SPL

- **1 x 12" (3" VC) B&C** custom made high excursion LF woofer
- **1 x 1.4" (2.5" VC) B&C** custom made HF compression driver
- 1 x 1.4" FBT rotatable **70° x 50°** constant directivity horn
- 2-way, passive sound reinforcement systems
- 2 x Neutrik NL-4 speakon connectors
- 1 x 4 Euroblock terminal speaker connector
- **B&C** custom designed high excursion **LF woofers**
- **B&C** custom designed **HF compression drivers**
- **Full range / bi-amp crossover** networks with protection

15mm (0.6") baltic birch plywood cabinets

12 x M10 threaded rigging points

2 x metal flange threads for U bracket wall mount

Acoustically transparent steel grille and antidust protection cloth

Rear pocket handle to ease lifting and installation of the cabinet

35mm (1. 3/8") top hat for speaker stand

New FBT rotatable logo badge following vertical or horizontal installation

Optional mounting hardware

Optional line transformer (300W for Archon 115 and 112)

A new generation
of improved speakers
for modern indoor spaces



Archon 110

Archon 108

PASSIVE SOUND REINFORCEMENT

700 W / 8 ohm - 129dB SPL

- **1 x 10" (2.5" VC) B&C** custom made high excursion LF woofer
- **1 x 1" (1.7" VC) B&C** custom made HF compression driver
- 1 x 1" FBT rotatable **80° x 50°** constant directivity horn
- 2-way, passive sound reinforcement systems
- 2 x Neutrik NL-4 speakon connectors
- 1 x 4 Euroblock terminal speaker connector
- **B&C** custom designed high excursion **LF woofers**
- **B&C** custom designed **HF compression drivers**
- **Full range / bi-amp crossover** networks with protection

PASSIVE SOUND REINFORCEMENT

350W / 8 ohm - 121dB SPL

- **1 x 8" (2" VC) custom made** LF woofer with rubber surround
- **1 x 1.5" HF** high-end dome tweeter
- **8 x M5** threaded rigging points
- 2-way, passive sound reinforcement systems
- Custom designed LF woofers, Made in Italy
- Custom designed HF dome tweeter, Made in Italy
- Crossover networks equipped with 4 x Euroblock speaker terminals; factory preset for optimal line transformer installation

12mm (0.47") baltic birch plywood cabinets

Multiple M5 threaded rigging points

Acoustically transparent steel grille and antidust protection cloth

New FBT rotatable logo badge following vertical or horizontal installation

Optional mounting hardware

Optional line transformer (200W for Archon 110, 100W for Archon 108 and 106, 50W for Archon 105)



Archon 106

PASSIVE SOUND REINFORCEMENT
300W / 8 ohm - 119dB SPL

- **1 x 6" (1.25" VC) custom made LF woofer with rubber surround**
- **1 x 1" HF dome tweeter**
- **6 x M5** threaded rigging points
- 2-way, passive sound reinforcement systems
- Custom designed LF woofers, Made in Italy
- Custom designed HF dome tweeter, Made in Italy
- Crossover networks equipped with 4 x Euroblock speaker terminals; factory preset for optimal line transformer installation

Archon 105

PASSIVE SOUND REINFORCEMENT
200W / 8 ohm - 115dB SPL

- **1 x 5" (1.25" VC) custom made LF woofer with rubber surround**
- **1 x 1" HF dome tweeter**
- **4 x M5** threaded rigging points
- 2-way, passive sound reinforcement systems
- Custom designed LF woofers, Made in Italy
- Custom designed HF dome tweeter, Made in Italy
- Crossover networks equipped with 4 x Euroblock speaker terminals; factory preset for optimal line transformer installation

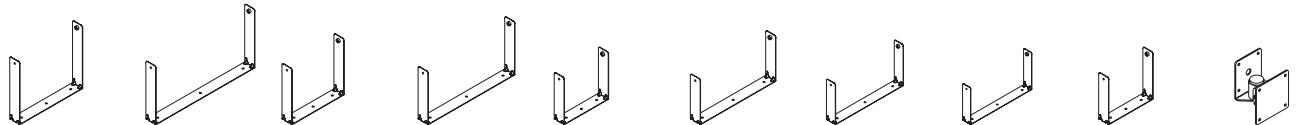
Archon

Point Source

78



Model	115	112	110	108	106	105
Configuration	way	2	2	2	2	2
Recommended amplifier	W rms	1000	1000	700	350	300
System Long term power	W	500	500	350	175	150
System Short term power IEC 268-5	W	2000	2000	1400	700	600
Transformer	V/W	100 /300 optional	100 /300 optional	100 / 200 optional	100 / 100	100 / 100
Nominal impedance	Ohm	8	8	8	8	8
Frequency response	@-6dB	48Hz - 18KHz	50Hz - 18KHz	60Hz - 18KHz	55Hz - 22KHz	60Hz - 22KHz
Low frequency woofer	inch	15 - 3 coil	12 x 3 coil	10 - 2.5 coil	8 - 1.5 coil	6.5 - 1.5 coil
AES power	W	400	400	300	-	-
High frequency driver	inch	2 - 2.5 coil	1.4 - 2.5 coil	1 - 1.7 coil	1.5 - 1.5 coil dome	1 - 1 coil dome
AES power	W	80	80	50	-	-
Sensitivity (@1W/1m)	dB	100	99	97	92.5	91
Maximum SPL cont/peak (Bi-Amp)	dB	130 / 134	129 / 133	125 / 129	118 / 121	116 / 119
Dispersion	H x V	60° x 40°	70° x 50°	80° x 50°	90°	100°
Crossover frequency	kHz	1.3 passive or active Bi-Amp	1.6 passive or active Bi-Amp	1.8 passive or active Bi-Amp	2	2.5
Recommended HP filter		35hz - 24dboct	40hz - 24dboct	45hz - 24dboct	40hz - 24dboct	45hz - 24dboct
Recommended external filter		Digital management with presets	Digital management with presets	Digital management with presets	-	-
Input connectors		2 x Speakon NL4 in & thru 4 x Euroblock	2 x Speakon NL4 in & thru 4 x Euroblock	2 x Speakon NL4 in & thru 4 x Euroblock	4 x Euroblock	4 x Euroblock
Net dimensions (WxHxD)	mm inch	435X740X421 17.12x29.13x16.57	365X660X380 14.37x25.98x14.96	320X550X325 12.59x21.65x12.79	248X411X248 9.76x16.18x9.76	216X370X216 8.50x14.56x8.50
Net weight	kg/lb	32/70.54	25.5/56.21	19/41.88	8/17.63	5.5/12.1
Transport dimensions(WxHxD)	mm inch	590x840x520 23.22x33.07x20.47	490x760x470 19.29x29.92x18.50	420x650x400 16.53x25.59x15.74	350x535x315 13.77x21.06x12.40	330x450x320 12.99x17.71x12.59
Transport weight	kg/lb	36/79.36	28.5/62.83	21.5/47.39	9.5/20.94	7/15.43



AC-U 115V	AC-U 115H	AC-U 112V	AC-U 112H	AC-U 110V	AC-U 110H	AC-U 108H	AC-U 106H	AC-U 105H	AC-W 568
Wall metal bracket to mount in vertical position for Archon 115	Wall metal bracket to mount in horizontal position for Archon 115	Wall metal bracket to mount in vertical position for Archon 112	Wall metal bracket to mount in horizontal position for Archon 112	Wall metal bracket to mount in vertical position for Archon 110	Wall metal bracket to mount in horizontal position for Archon 110	Wall metal bracket to mount in horizontal position for Archon 108	Wall metal bracket to mount in horizontal position for Archon 106	Wall metal bracket to mount in horizontal position for Archon 105	Directional wall metal bracket black for Archon 105



Archon 215S 2000W Archon 208S 600W

POINT |⁷⁹
SOURCE



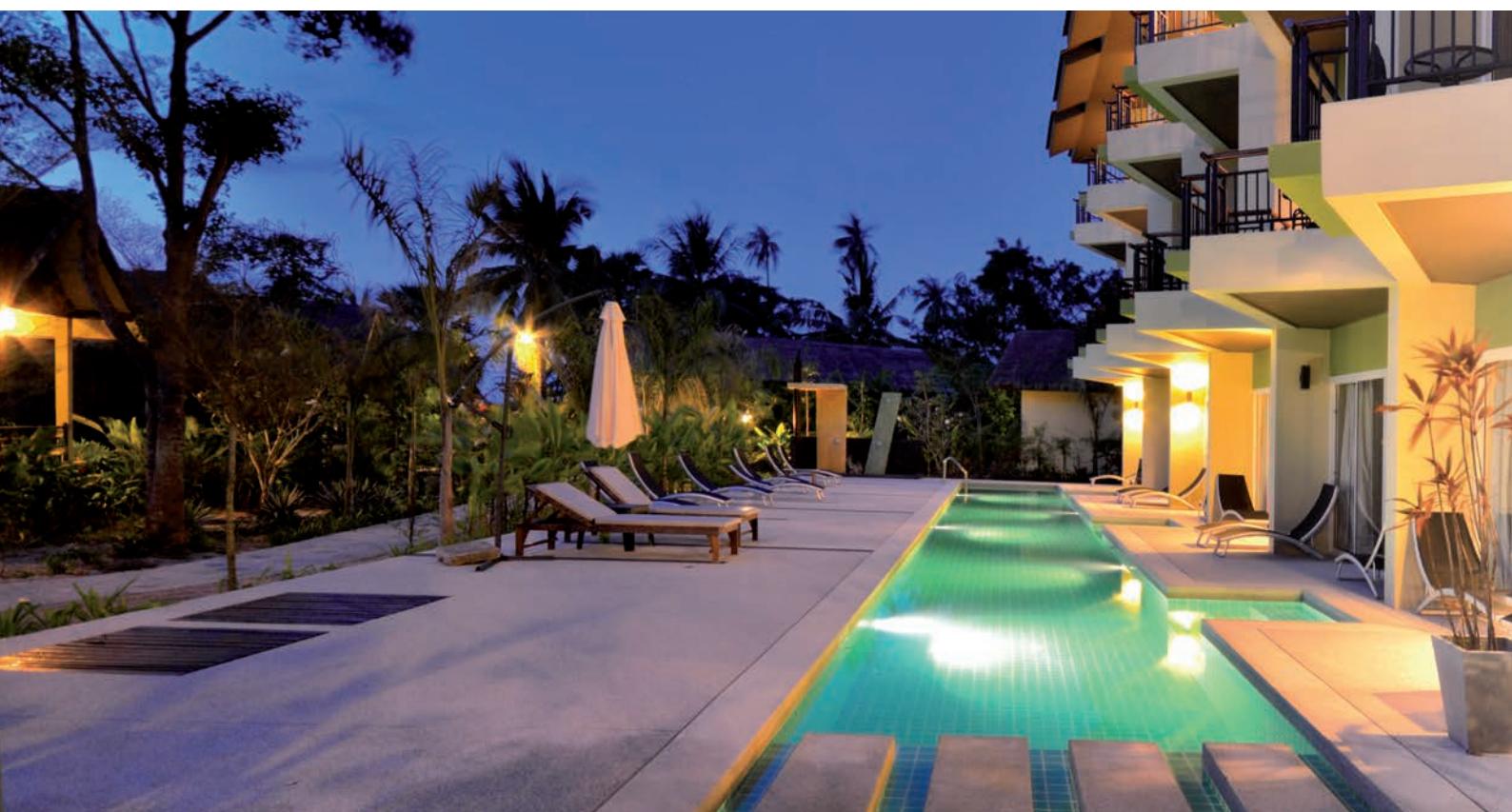
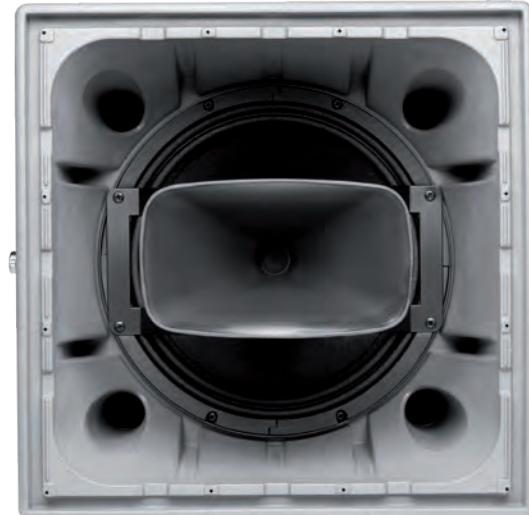
Shadow

Shadow

Point Source

80

HIGH PERFORMANCE AND
EFFICIENCY FOR A WIDE RANGE
OF PROFESSIONAL
INDOOR OR OUTDOOR
APPLICATIONS



Point Source



Shadow 112HC
600W



Shadow 112CT
600W



Shadow 108CT
450W



Shadow 105T
150W



Subwoofer

Shadow 114S
700W

SHADOW is a complete range of **very high performance full range and horn leaded loudspeakers**, designed to provide high quality music and voice reproduction in applications with extreme weather conditions resistance, ensuring a long term exposure to all kind of severe environment conditions.

High quality voice reproduction and music performance, normally associated only with indoor systems, are now available for outdoor use, with the brand **new SHADOW series of speaker cabinets**. The all Italian Style and the severe construction methods make all loudspeakers suitable for any indoor environment as well. These all weather products family provide the system designer with the right choice to handle a wide range of applications, that span from sports fields to stadiums, theme parks, swimming pools, themed restaurants, and all environment demanding the highest quality speech and music reproduction, combined with the product durability. FBT brand new all weather speaker range will provide long term reliability for temporary and permanent outdoor installations, as these speaker systems are manufactured applying the most severe standard expected from a classification of International Protection Rating IP 55. So they represent the fruit of many years of experience in research, development and testing, that makes FBT proud to apply the long experience as speaker manufacturer in this new systems for all weather applications.

SHADOW 112HC is a very high performance horn loaded system, to provide maximum intelligibility from the same compact enclosure, with the same dimensions of **SHADOW 112CT**. Extremely powerful system for voice announcements and music reproduction. **SHADOW 112HC** can act as both a musical entertainment loudspeaker and a voice PA loudspeaker at the same time.

The wide range, smooth frequency response and high efficiency of **SHADOW 112HC** ensure excellent quality music reproduction and clear intelligible speech with very low distortion.

ROTMOLDED ENCLOSURES

The cabinet of these loudspeakers is a single piece rotomolded enclosure, made in polyethylene, fully UV protected equipped with a stainless steel U-Bracket for fixed installation.

The curved shape helps to reduce acoustic reflections and standing waves within the enclosure, for improved LF performance, and in outside the rounded shape inhibits standing water and helps to diffract wind, reducing load on the structure.

This is a compact, low frequency system for additional low end.

SHADOW 114S system has the same enclosure and hardware accessories of the **SHADOW 112**, with additional extended low frequencies reproduction to provide a wide range of applications.

It ensures excellent high fidelity music reproduction and a clear intelligible speech, with a very low distortion over medium and long distances.

SHADOW 112CT is suitable for convention centers, athletic fields or stadiums, theme parks, swimming pools, cruise ships, malls, ballrooms and in general for outdoor background music and paging systems.

SHADOW 108 CT provides excellent music and speech reproduction in a compact enclosure, ensuring a clear intelligibility, with very low distortion also over long distances. Its wide range, smooth frequency response and high efficiency ensure high quality music reproduction and make this system suitable for a variety of applications, such as athletic fields or arenas, amusement parks, swimming pools, cruise ships, convention centers, ballrooms and in general for outdoor background music and paging systems.

SHADOW 105 CT is the most compact model in the **SHADOW family**. It's built to provide high quality voice and music performance in both indoor and outdoor venues.

Suited for installations in kiosks, water parks, cruise ships, queue lines, ticket counters, train platform, sport venues and many other applications.



Shadow

Point Source

82



Shadow 112HC

**HIGH PERFORMANCE 12" COAX HORN LOADED, MEDIUM/LONG THROW
600W/8ohm - 132dB SPL**

- 12" woofer with 2.5" coil horn loaded
- Constant directivity horn 1" HF driver with 1.7" coil
- An optional transformer model, SHADOW 112HCT, is also available with **200W/100W power tapping** selection
- 90x60° coverage
- 4 wires cable to select the desired power tapping
- Sturdy molded polyethylene curved enclosure
- Water-stop grill with 3 layers of protection
- Steel U bracket and other included hardware accessories
- **IP55 weather resistant**
- Standard grey finishes



Shadow 112CT

**MULTIPURPOSE HIGH PERFORMANCE 12" COAX
600W/8ohm - 128dB SPL**

- 12" coaxial woofer with 2.5" coil and 1" HF driver with 1.7" coil on conical 90° horn
- **100V line transformer** with selectable **200W/100W power tapping**
- Sturdy molded polyethylene curved enclosure
- 4 wires cable to select the desired power tapping
- Water-stop grill with 3 layers of protection
- **IP55 weather resistant**
- Standard grey finishes



Shadow 108CT

MULTIPURPOSE

8" COAX

450W/8ohm - 124dB SPL

- 8" coaxial woofer with 2" coil and 1" HF driver with 1.4" coil on conical 90° horn
- 100V line transformer with selectable 100W/50W power tapping
- Sturdy molded polyethylene curved enclosure
- Steel U bracket and other included hardware accessories
- 4 wires cable to select the desired power tapping
- Water-stop grill with 3 layers of protection
- **IP55 weather resistant**
- Standard grey finishes

Shadow 105T

MULTIPURPOSE 5" FULL RANGE

120W/8ohm - 112dB SPL

- 2 way configuration with an high power 5" cone and 1" dome for high frequencies
- 100V line transformer with selectable 50W/25W power tapping
- Die-cast aluminum wall bracket with ball/ socket for multi angle adjustment capability, with a security cable
- 4 wires cable to select the desired power tapping
- Water-stop grill with 3 layers of protection
- **IP55 weather resistant**
- Standard grey finishes

Shadow 114S

14" SUBWOOFER

700W/8ohm - 129,5dB SPL

- 14" woofer with 3" coil
- An optional transformer model, **SHADOW 114ST**, is also available providing impedance matching to 100V lines, with 300W power
- 4 wires cable to select the desired power tapping
- Sturdy molded polyethylene curved enclosure
- Water-stop grill with 3 layers of protection
- Steel U bracket and other included hardware accessories
- **IP55 weather resistant**
- Standard grey finishes

Shadow

Point Source

84



SHADOW	112HC	112CT	108CT	105T	114S
Configuration	way	2	2	2	2
Recommended amplifier (Biamp LF/HF)	W rms	600	600	450	120
System Long term power (Biamp LF/HF)	W	300	300	225	60
System Short term power IEC 268-5 (Biamp LF/HF)	W	1200	1200	900	240
Transformer	V/W	100 / 200 optional	100 / 200	100 / 100	100 / 50
Nominal impedance (Biamp LF / HF)	Ohm	8	8	8	8
Frequency response	@-6dB	95Hz - 20KHz	70Hz - 20KHz	80Hz - 20KHz	90Hz - 20KHz
Low frequency woofer	inch	12 - 2.5 coil	12 - 2.5 coil	8 - 2 coil	5 - 1 coil
AES power		250	250	200	50
High frequency driver	inch	1 - 1.7 coil	1 - 1.7 coil	1 - 1.4 coil	1 - dome
AES power		50	50	25	10
Sensitivity (@1W/1m) (Biamp LF/HF)	dB	101	98	95	89
Maximum SPL cont/peak	dB	128 / 132	124 / 128	120 / 124	109 / 112
Dispersion	H x V	90° x 60°	90° conical	90° conical	100°
Crossover frequency	kHz	1.6	1.6	1.8	3
Recommended HP filter		70hz - 24dboct	50hz - 24dboct	60hz - 24dboct	70hz - 24dboct
Input connectors		4 wire cable	4 wire cable	4 wire cable	4 wire cable
Net dimensions (WxHxD)	mm inch	430x430x400 16.92x16.92x15.74	430x430x400 16.92x16.92x15.74	285x285x250 11.22x11.22x9.84	168x222x200 6.61x8.74x7.87
Net weight	kg/lb	21 / 46,3	15 / 33	7 / 15,4	3,5 / 7,7
Transport dimensions(WxHxD)	mm inch	530x530x500 20.86x20.86x19.68	530x530x500 20.86x20.86x19.68	365x365x330 14.37x14.37x12.99	250x300x280 9.84x11.81x11.02
Transport weight	kg/lb	23/50,7	17/37	9/19,8	4,5/9,9
					19/41,8





The image features a large, black, rectangular subwoofer with a mesh grille in the foreground. The brand name 'FBT' is visible on the front panel. In the background, a vibrant night club scene is depicted. A DJ is visible on a stage with a turntable, and a large crowd of people is cheering with their hands raised. The scene is filled with colorful stage lights and a disco ball, creating a dynamic and energetic atmosphere.

Mitus
Q
Archon

MITUS MODELS ARE THE FLAGSHIP FAMILY OF FBT SUBWOOFER ENCLOSURES. FRONT LOADED OR BAND-PASS TUNED THEY ARE THE PERFECT LOW-FREQUENCY EXTENSION FOR MITUS LINE ARRAY, POINT SOURCE, OR STAGE MONITOR RANGE IN LIVE EVENTS OR PERMANENT INSTALLATIONS WHERE RICH AND HIGH SPL BASS FREQUENCIES NEED TO BE EMPHASIZED. ALL ARE CONSTRUCTED IN MULTI PLY BALTIC BIRCH PLYWOOD WITH A DURABLE BLACK PAINT FINISH.

- High quality B&C neodymium magnet woofers, custom manufactured for FBT
- High efficiency Class D power amp modules with switch mode power supplies, fixed to a die-cast aluminum chassis. This provides maximum protection of the electronics from dust or dirt, prevents air loss through the input control panel that can cause fastidious noise, and it maximizes heat dissipation thanks to the air created by the excursion of the woofer, avoiding the use of a fan to cool the circuitry. All this has allowed the realization of a 3.2 Kg lightweight power amp module that delivers 1200Wrms!
- DSP with A/D-D/A low noise converters providing crossover, equalization, system protection along with 8 selectable presets to customize the sound program for various applications, or simply to taste of the user through an easy to use and efficient setup selection.
- A wide range of accessories makes the MITUS subwoofers range extremely flexible for live or permanent installations.
- Aluminum die-cast carrying handles with rubber inserts for a secure and comfortable hold.
- Heavy duty metal grille with anti-resonance spacers and exclusive synthetic cloth to protect the drivers from dust and moisture, without modifying the acoustic fidelity. Unlike widely used conventional foam linings, our FBT exclusive synthetic cloth will not break down or disintegrate over time.





Mitus 118SA

PROCESSED ACTIVE SUBWOOFER

1200W RMS - 139dB SPL

- Compact vented **band pass subwoofer** design enclosure
- **460 mm (18") custom B&C neodymium** magnet high excursion woofer with 75 mm (3") voice coil
- Frequency response from 36Hz to 100Hz
- Class D amplifier delivering **1200W RMS** with switch mode power supply
- **DSP with 8 presets**, cardioids and infra configurations, delay
- 18 mm (3/4") **birch plywood enclosure**, scratch resistant black textured paint
- Eight M10 fly points and two FBT design aluminum handles
- Perfect low-frequency extension for the MITUS range and an ideal companion for the MITUS 206LA line array for ground stack applications with optional MTB206 metal base
- M20 top mount stand socket
- Optional 4 swivel-mount casters 80 mm (3.15") on request
- Control panel with XLR input and link, volume, presets, delay, phase 0°-180°, ground lift

Mitus 118S

PASSIVE SUBWOOFER

1000W/4ohm - 139dB SPL

- Neutrik Speakon NL4MD-V connectors IN & OUT
- External digital processor required: FBT DLM26 Digital Loudspeaker Management

A NEWLY DESIGNED, EXTREMELY POWERFUL SUBWOOFER, CAPABLE OF DELIVERING EXTREMELY HIGH SPL AND GUARANTEEING SIGNIFICANT LOW FREQUENCY EXTENSION

The optimisation of the woofer load volume and vented port with BEM finite element simulation, and the careful development of the grille and the protective fabric to minimise acoustic impedance, has led to a net improvement in performances as compared with previous models. **Equipped with an high excursion ceramic B&C woofer with 100mm ventilated coil**, it has negligible power compression, ensuring maximum acoustic pressure even after hours of continuous use.

The supplied 1200W RMS class D amplifier with switching power is equipped with a digital signal processor with entirely new algorithms.

Equipped with 6 presets, each of which is not only associated with a different equalisation – to tailor the subwoofer response to various usage conditions – but also with different dynamic processor calibration to extend the maximum acoustic pressure to very high levels, with no deterioration of the original signal. This ensures absolute configurability of the sound obtained, great flexibility of use and above all an impressive SPL/size ratio.

AN exceptionally powerful and versatile subwoofer that can be combined with a wide range of FBT speakers.

The presets include:

ORIGINAL: general preset, suitable for the majority of uses. Low pass filter is set at 95Hz, peak limiter is adjusted for getting the perfect balance between high SPL and low distortion

DEEP: this preset extends and boosts subwoofer low range to approx. 40Hz. Low pass filter is set at 95Hz, peak limiter is extremely fast and guarantees to remove almost completely the distortion due to amplifier clipping. This necessarily causes little reduction in maximum SPL. Generally recommended for applications requiring extremely pure sound and maximum low frequency extension.

PUNCH: Preset providing maximum power concentration in the 60 - 95Hz frequency range. Perfect for rock music and high power applications. Distortion is slightly higher, since it is less limited by the peak limiter, while sound pressure level increases. Low pass filter is set at 95Hz.

INFRA: Similar to DEEP as for the extension and absence of distortion. It differs for low pass filter setting at 75Hz. This allows for ground-stacked use of the subwoofer in applications featuring also a flying subwoofer. Thanks to the all pass filter for phase alignment, the frequency overlap in the 50Hz - 75Hz range for the two subwoofers is perfectly in phase.

CARDIOID REAR ORIGINAL 1 FRONT: preset to be used in systems with two subwoofers; select the ORIGINAL preset on the speaker oriented toward the audience.

CARDIOID REAR ORIGINAL 2 FRONT: preset to be used in systems with three subwoofers; select the ORIGINAL preset on the two speakers oriented toward the audience.





Q 118SA

PROCESSED ACTIVE SUBWOOFER 1200W RMS - 139dB SPL

- **18" woofer with 4" voice coil**
- **1200W RMS Class D power amplifier with switch mode power supply**
- DSP with 6 presets, digital 6 step Delay
- Control panel with: 3 status led indicators, Phase, Level, Preset, Delay, stereo XLR in/link, Power supply with powerCON TRUE1 cable duplex with input and output
- 0,70" baltic birch plywood cabinet with scratch and scuff resistant paint finish
- 2 M20 top mount speaker stand socket, 4 aluminum carrying handles, optional wheels

Q 118S

PASSIVE SUBWOOFER 1600W RMS - 140dB SPL

- Neutrik Speakon NL4MD-V connectors IN & OUT
- External digital processor required: FBT DLM26 Digital Loudspeaker Management

18mm birch plywood cabinet

Equipped with 4 aluminium handles and two M20 stand supports, suitable for use on either the short or the long side

Compatible with MITUS 206 and MUSE 210 systems in ground-stacked configuration, and is designed to allow 4 optional 100mm wheels to be fitted

Archon

Subwoofer

90

THE FBT ARCHON SERIES LINES UP THREE 2-WAY FULL RANGE/BI-AMP MODELS AND THREE 2-WAY FULL RANGE COMPACT MODELS; IN ADDITION, TWO LOW-PROFILE SUBWOOFERS (2X8" AND 2X15") INCREASE THE LOW FREQUENCY EXTENSION OF THE DESIRED SYSTEMS. ALL ARCHON SPEAKERS ARE ELEGANTLY DESIGNED AND CRAFTED TO MEET THE MOST DEMANDING ARCHITECTURAL DESIGN.

Point Source



Subwoofer



Archon
115
1000W

Archon
112
1000W

Archon
110
700W

Archon
108
350W

Archon
106
300W

Archon
105
200W

Archon
215S
2000W

Archon
208S
600W



Archon 215S

**PASSIVE SOUND REINFORCEMENT
SUBWOOFER
2000W / 4ohm 142dB SPL**

- 2 x 15" (4" VC) custom made high excursion woofer with bass-reflex enclosure
- 18mm (3/4) birch plywood enclosure
- Four FBT design aluminum handles
- 2 x Speakon NL-4 connectors

Archon 208S

**PASSIVE SOUND REINFORCEMENT
SUBWOOFER
600W / 8ohm 132dB SPL**

- 2 x 8" (2" VC) custom made high excursion woofer with bass-reflex enclosure
- 15mm (5/8) birch plywood enclosure
- Two pocket handles
- 2 x Speakon NL-4 connectors



Mitus

Q

Archon

92



Model	Mitus 118SA	Q 118SA
Configuration	way 1	1 Bass Reflex
Built-in amplif. max. LF/HF	W RMS 1200	1200
Built-in amplif. max. peak LF/HF	W 2400	2400
Frequency response	@-6dB 36Hz - 100Hz	30Hz - 100Hz
Low frequency woofer	inch 1x18- 3 coil - neodymium	1x18 - 4 coil
Maximum SPL cont/peak	dB 135 / 139 half-space	135 / 139 half-space
Dispersion	H x V omnidirectional	omnidirectional
Input impedance	kOhm 22	22
AC Power requirements	VA 640	800
Input connectors	XLR with loop	stereo XLR with loop
Power cord	m / ft 5 / 16.4	5 / 16.4
Net dimensions (WxHxD)	mm 574x594x730 22.6x23.4x28.7 inch 21.65x27.55x28.34	500x700x720
Net weight	Kg/Lb 47 / 103.6	58.5 / 128.97
Transport dimensions (WxHxD)	mm 460x775x765 18.1x30.5x30.1 inch 21.55x34.05x31.49	700x865x800
Transport weight	Kg/Lb 56.2 / 123.9	69.5 / 153.22

Model	Mitus 118S	Q 118S	Archon 215S	Archon 208S
Configuration	way 1 band-pass	1 bass reflex	1	1
Recommended amplifier	W RMS 1000	1600	2000	600
Long term power	W 500	800	1000	300
Short term power IEC 268-5	W 2000	3200	4000	1200
Nominal impedance	Ohm 4	4	4	8
Frequency response	@-6dB 36Hz - 400Hz	35Hz - 250Hz	35Hz - 500Hz	50Hz - 500Hz
Low frequency woofer	inch 1x18- 3 coil neodymium	1x460 - bobina 100 neodimio	2 x 15 - 3 coil	2 x 8 - 2 coil
Sensitivity (@1W/1m)	dB 101	99	101	95
Maximum SPL cont/peak (Bi-Amp)	dB 136 / 139 half-space	136 / 140 half-space	139 / 142 half-space	129 / 132 half space
Dispersion	H x V omnidirectional	omnidirezionale	omnidirectional	omnidirectional
Recommended HP filter	32hz - 24dboct	28hz - 24dboct	28hz - 24dboct	40hz - 24dboct
Recommended external DSP	FBT DLM26	FBT DLM26	FBT DLM26	FBT DLM26
Input connectors	2 x Speakon NL4MD-V in & thru	2 x Speakon NL4MD-V in & thru	2 x Speakon NL4 in & thru	2 x Speakon NL4 in & thru
Net dimensions (WxHxD)	mm 574x594x730 22.6x23.4x28.7 inch 21.65x27.55x28.34	500x700x720 21.65x27.55x28.34	900x480x640 35.42x18.89x25.19	550x285x500 21.65x11.22x19.68
Net weight	Kg / Lb 45 / 99.2	58.5 / 128.97	63/138.89	15/33.06
Transport dimensions (WxHxD)	mm 460x775x765 18.1x30.5x30.1 inch 21.55x34.05x31.49	700x865x800 21.55x34.05x31.49	1150x640x800 45.27x25.19x31.49	680x375x620 26.77x14.76x24.40
Transport weight	Kg / Lb 54.2 / 119.5	69.5 / 153.22	75/165.34	22.5/49.6

Line Array page 17





Mitus StageMaxX



MUSICIANS AND VOCALISTS NEED SUPERB SOUND FIDELITY MONITORING TO ASSURE THEIR BEST PERFORMANCES

- High quality B&C neodymium magnet woofer, custom manufactured for FBT
- High quality B&C neodymium magnet coaxialwoofer and HF driver, custom manufactured for FBT
- High efficiency Class D power amp modules with switch mode power supplies, fixed to a die-cast aluminum chassis. This provides maximum protection of the electronics from dust or dirt, prevents air loss through the input control panel that can cause fastidious noise, and it maximizes heat dissipation thanks to the air created by the excursion of the woofer, avoiding the use of a fan to cool the circuitry. All this has allowed the realization of a 3.2 Kg lightweight power amp module that delivers 1200Wrms!
- DSP with A/D-D/A low noise converters providing crossover, equalization, system protection along with 8 selectable presets to customize the sound program for various applications, or simply to taste of the user through an easy to use and efficient setup selection.
- Neutrik Powercon IN and LINK OUT power receptacles
- Heavy duty metal grille with anti-resonance spacers and exclusive synthetic cloth to protect the drivers from dust and moisture, without modifying the acoustic fidelity. Unlike widely used conventional foam linings, our FBT exclusive synthetic cloth will not break down or disintegrate over time.

With a discreet low profile enclosure design, the **MITUS 210MA** is undoubtedly the most advanced stage monitor of its type delivering maximum high fidelity monitoring, making it an ideal choice for all musical performances as well as TV studio broadcasts.

95



Mitus 210Ma

PROCESSED ACTIVE STAGE MONITOR 600W + 300W RMS - 134dB SPL

- 2-way bi-amplified, bass-reflex design with **coaxial HF compression driver**
- **2 x 250 mm (2 x 10") B&C** custom neodymium magnet **speakers** with 64 mm (2.5") voice coil, one of them is **coaxial with 36 mm (1.4") exit titanium compression driver** and 64 mm (2.5") voice coil
- Frequency response from 60Hz to 20kHz
- Class D built-in amplifiers, **600W RMS to the LF and 300W RMS to the HF** with switch mode power supply
- **DSP with 8 EQ presets**
- Control panel with XLR input and link, volume, presets, HP-filter, ground-lift
- **70° conical dispersion**
- 15 mm (5/8") birch plywood enclosure, scratch resistant black textured paint finish
- 35 mm (1.38") stand socket and back side carrying handle
- Ideal for live sound stage monitoring applications, as well as a front of house main PA speaker
- **Very lightweight**, only 19Kg / 41.9Lb

Mitus 210M

PASSIVE STAGE MONITOR 800W/8ohm- 132dB SPL

- **Passive version**, recommended amplifier of **800W RMS / 8ohm**
- Hi-grade passive internal crossover featuring "soft-trip" circuitry protection of LF and HF drivers



StageMaxX

Monitor

96

FBT'S BRAND **NEW STAGEMAXX HAS BEEN INSPIRED BY THE NEED TO HAVE A PRODUCT SPECIFICALLY DESIGNED AND ENGINEERED FOR USE AS STAGE MONITOR, OVERCOMING ALL COMPROMISES FOR A FULL USER SATISFACTION**



The extremely heavy-duty and resonance free polypropylene cabinet is born from the enormous experience of FBT in gas injected mold engineering it acoustically behaves like a wooden cabinet allowing **the perfect integration of all the components** for an uncompromising quality in a compact, elegant, unobtrusive on stage, extremely comfortable and easy to carry product.

StageMaxx 12Ma is the right combination of all the quality features to be a perfect stage monitor:

- Low profile and aesthetic elegance
- Compact size
- Frequency response studied for stage monitor applications
- High headroom before feedback
- High sound quality
- Great power and dynamics
- Symmetric dispersion
- Aligned LF and HF acoustic centers
- Easy handling on stage
- Lightweight
- Heavy-duty polypropylene cabinet

StageMaxX features a 12" B&C loudspeaker custom made for FBT and coaxially mounted with a B&C 1" exit throat compression driver.

The coaxial configuration allows perfect alignment of the acoustic centers of the transducers, guaranteeing symmetry of dispersion and improving focus of the stereo image in Left-Right configuration. Bi-amplification design with high dynamic Class D amplifiers delivering 400W + 100W RMS through a switch mode power supply. Digital Signal Processor with 4 factory equalization presets provides simple and efficient EQ adjustment to optimize the acoustical response for different applications. The FOH preset allows the use in suspended installation as well as 'drum fill' applications.

StageMaxX features two lateral M10 rigging points and wall mounting bracket for different applications (optional accessories).

3 frontal status LED indicators to control ON OFF limiter and protection state.



Monitor 55°

Monitor 35°

New Neutrik POWERCON TRUE 1 AC connector with Input and loop out to supply AC power to up to 7 additional StageMaxX speakers at 230Vac and 3 at 117Vac.

Three ergonomic integrated carrying handles, one frontally placed to easily drag and move the monitor on stage and the replaceable Teflon feet ensure sliding on stage with minimal wear.

The cabinet has 35° or 55° tilted front panel for an optimal listening distance for single user (35°) or for more users (55°).

The 4 presets are:

- ORIGINAL: is the typical "MaxX" sound adapted to "STAGE" application
- HI-CUT/DRUM FILL: provides less mid-high for a comfortable listening in near-field at high level
- LO-CUT/DOUBLE: provides less low frequency for better intelligibility and for optimal coupling in stereo configuration
- FOH: Front Of House use in suspended or pole-mount installations

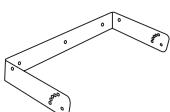


StageMaxX 12Ma

PROCESSED ACTIVE REINFORCEMENT MONITOR 400W + 100W RMS - 130dB SPL

- 2-way, bi-amplified, bass reflex design cabinet
- Coaxial custom FBT 320 mm (12") B&C speakers with 64 mm (2.5") voice coil
- B&C 25 mm (1") exit throat compression driver and 44 mm (1.7") voice coil
- **Bi-amp: high dynamic Class D amplifiers 400W + 100W RMS** to provide a pleasant sound even at loud volume
- High efficiency switch mode power supply
- Digital Signal Processor with 4 factory equalization presets
- Control Panel: XLR/Jack input and XLR link out, Volume, 4 Presets, HP Filter, 3 frontal status LED indicators
- Neutrik POWERCON TRUE 1 AC connector with Input and loop out to supply AC power to additional StageMaxX speakers

- 90° Directivity Horn
- Proprietary filtered algorithms, dynamic equalization at low frequencies, advanced energy control allows an high SPL while granting reliable and distortion free audio reproduction with high headroom
- Sturdy gas-injected polypropylene molded enclosures engineered to avoid undesired resonance
- Weather resistant coating under the grill to protect the driver and the speaker
- High SPL in a compact size monitor
- 35° or 55° tilted front panel for an optimal listening distance for single or multiple users
- Three ergonomic integrated carrying handles, two M10 rigging points
- Teflon replaceable feet allow an easy use on stage

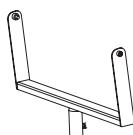


SM-U 12W

Black **Code 36066**

White **Code 36735**

Wall metal bracket to mount in horizontal position



SM-S 12 Code 37099

Metal bracket with top-hat speaker stand socket



Available in
white colour:
StageMaxX 12Ma W

Mitus StageMaxX



Model	Mitus 210Ma	StageMaxX 12Ma
Configuration	way	2
Built-in amplif. max. LF/HF	W RMS	600/300
Built-in amplif. max. peak LF/HF	W	1200/600
Frequency response	@-6dB	60Hz - 20KHz
Low frequency woofer	inch	2x10 - 2.5 coil neodymium
High frequency driver	inch	1 x 1.4 - 2.5 coil - neodymium-coax
Maximum SPL cont/peak	dB	127 / 134
Dispersion	H x V	70° - conical
Input impedance	kOhm	22
Crossover frequency	kHz	1.2
AC Power requirements	VA	640
Input connectors		XLR with loop
Power cord	m / ft	5 / 16.4
Net dimensions (WxHxD)	mm inch	574x290x402 22.6x11.4x15.8
Net weight	Kg/Lb	19 / 41.9
Transport dimensions (WxHxD)	mm inch	890x390x510 35x15.4x20.1
Transport weight	Kg/Lb	21.1 / 46.5
		13.6 / 29.98
		670x430x500 26.37x16.92x19.68
		16.4 / 36.15

Model	Mitus 210M
Configuration	way
Recommended amplifier	W RMS
Long term power	W
Short term power IEC 268-5	W
Nominal impedance	Ohm
Frequency response	@-6dB
Low frequency woofer	inch
High frequency driver	inch
Sensitivity (@1W/1m)	dB
Maximum SPL cont/peak (Bi-Amp)	dB
Dispersion	H x V
Crossover frequency	kHz
Recommended HP filter	
Input connectors	
Net dimensions (WxHxD)	mm inch
Net weight	Kg / Lb
Transport dimensions (WxHxD)	mm inch
Transport weight	Kg / Lb



Mitus 206LA
600 + 300W
Mitus 206L
500 + 150W

Mitus 212FSA
1200W
Mitus 212FS
1000W

Mitus 118FSA
1200W
Mitus 118FS
1200W

Mitus 215A
1100 + 250W
Mitus 215
1600W

Mitus 152A
1100 + 250W
Mitus 152
800W

Mitus 115A
600 + 300W
Mitus 115
800W

Mitus 112A
600 + 300W
Mitus 112
700W

Mitus 118SA
1200W
Mitus 118S
1000W

DIGITAL LOUDSPEAKER MANAGEMENT |⁹⁹

POWER AMPLIFIERS



**DMM 8008
DLM26
AX Series**

DMM 8008

Digital Loudspeaker Management

100



THE DMM 8008 IS A HIGH PERFORMANCE 8 INPUT X 8 OUTPUT DIGITAL MATRIX MIXER

Specially designed for commercial and professional application such as Conference rooms, Auditoriums, Sport utility buildings, House of worship, Pubs and Disco.

It includes 8 independently switchable Line/Mic inputs with Phantom power supply, 8 Line outputs, managed by a powerful 48kHz 24 Bit DSP engine, in addition to high performance 24 Bit AD/DA converters. The **DMM 8008** supports a full matrix mixing mode where inputs may be routed/mixed in any ratio to any output. Each Mic/Line input channel provides Lo/Hi pass 1st order filters, 3-band parametric EQ, Noise Gate function and Gain control. In addition Mic inputs include a Feedback Eliminator function, based on a powerful «Pitch Shifting» algorithm, particularly suitable for voice applications. Automixing function

automatically adjusts input level to make operating easier using either NOM (Number of Open Mics) attenuation function or Gain sharing algorithm. In addition Ducking process enforces a «priority order» of open microphones in order that high-priority inputs attenuate lower-priority inputs. Each output offers up to 5-band of parametric equalization, crossover filters, RMS compressor, Peak limiter, Phase and Delay controls; 8 digital In/Out ports are provided for general purpose (preset recall, trigger third parts or device); 8 front knobs provides a quickly way to control input Gain; Up to 32 units can be managed by software applications.

DMM 8008

101

- Excellent audio performance with 24 bit converters coupled with 48kHz sample rate
- 8 Mic/Line inputs, 8 outputs with full matrix mixing, 3 band parametric equalization and Low/High pass filters per input channel
- 5 band parametric equalization per output channel; each band can be switched to peaking, Low/High shelving with variable Q response
- Crossover filters with slopes from 6dB/Octave up to 24dB/Octave including Butterworth, Bessel, Linkwitz-Riley
- Gain control, Noise Gate, Feedback eliminator (Mic input only) per input channel
- Each output features a precision dynamic range controller composed of a Peak Limiter and a RMS Compressor with selectable ratio and variable knee
- Automixing functions include: Configurable NOM attenuation, Gain sharing algorithm, Priority Ducking
- Adjustable Delay time up to 380mS per output channel
- Front panel interactive LCD display for local access and configuration
- Front panel 6-led status indicators per In/Out channel
- 8 front knobs available for Mic input Gain control
- 4 input contacts for additional 4 preset selections with priority configuration
- 4 digital output ports for triggering external devices
- Simultaneous control up to 32 units via PC software
- Security lockout
- TCP/IP, RS 485 and USB connection for remote controls

3 AVAILABLE MODE TO MANAGE THE DMM 8008



Via RS 485 / TCP-IP / USB
PC software for system design and real time control.



Via RS 485
Optional Wall Control Panel WP 8008 configurable for global or single zone control.

Model	DMM 8008
AUDIO	
Analog Output	8 electronically balanced (Mic - Line - Unbalanced)
Uscite Analogiche	8 electronically balanced
Maximum Input Level	Line: +14dBu; Mic: -20/0dBu (+6dBu unbalanced)
Mic Input Gain	34dB (22dB analog, 12dB digital)
Maximum Output Level	+14dBu
THD+N	0.005% at 1kHz 0dBu
S/N	>104dBA
Frequency Response	20Hz-20kHz +/-1dB
AD & DA Converters	4 x AK5385B 24bit, 1 x Ak4358 24bit (48kHz)
Phantom Power	48Vdc
DSP & PROCESSING	
DSP Engine	Dream SAM3716, 24bit (data) x 96bit (coeff.)
DSP Resolution	24 x 32 bit for filtering process; 96bits resolution on intermediate computation results
Input Equalization	3-band parametric selected as peaking or Low/High shelving with variable Q per input channel Low/High pass 1st order filter per input channel
Output Equalization	5-band parametric EQ selected as peaking or Low/High shelving with variable Q per output channel
Filter Gain	From -12dBu up to +12dBu by 0.5dBu resolution steps
Center Frequency	Selectable with a 1/24th of octave resolution step from 20Hz up to 20kHz
Filter Q/BW	Q from 0.4 up to 10 by 0.1 resolution steps
Crossover Section HPF/LPF	Butterworth 6/12/18/24dB per octave Bussel, Linkwitz-Riley and custom 12/24dB per octave Filter resolution 1/24th of octave
RMS Compressor and Peak Limiter	Threshold from 14dBu up to -34dBu Attack time from 5ms up to 200ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution) Ratio from 1:1 to 32:1 (compressor only) Adjustable soft or hard knee (compressor only)
Delay	380,998 ms 21 us increment/decrement steps per output channel only
Feedback Eliminator	Pitch shifting algorithm only for Mic input channels
Automixing Functions	NOM attenuation, Gain sharing algorithm and priority ducking processing
GENERAL	
Device Presets	6 user presets + 4 by using S1-S4 digital input ports
Front Panel	2 x 24 character LCD display with white/blue LED backlight 6-LED status indicators (Line, Mic, Mute I/O, Signal, Clip,Limiter) 1-LED indicator Phantom power 6 x front push button (Preset recall, Setup) USB type B connector
Rear Panel	2 x 12 pin Phoenix connector (Mic/Line inputs) 2 x 12 pin Phoenix connector (Line outputs) 2 x 4 pin Phoenix connector (S1-S4 digital input ports - TTL level 0-5V) 2 x 4 pin Phoenix connector (S1-S4 digital output ports - TTL level 0-5V) 2 x RJ45 for RS485 In/Out connection 1 x RJ45 with activity leds for Ethernet connection (10/100 TCP-IP) IEC C13 16A connector; power on/off switch
Optional Device	FBT WP8008 wall panel control
Included Software	PC users interface
Main AC	90-240Vac (50/60Hz) - 40W
Dimensions	19" x 1.75" x 9" (483 x 44 x 229mm) - 1RU
Weight, Net/Shipping	7.71lbs (3.5kg) / 8.82lbs (4kg)

DLM26

Digital Loudspeaker Management

102



THE DLM26 IS A DSP BASED 2 INPUT X 6 OUTPUT DIGITAL LOUDSPEAKER MANAGEMENT PROCESSOR, IDEALLY SUITED FOR FIXED INSTALLATIONS AND LIVE EVENTS

It combines the functions of a multitude of conventional products in a compact 1U unit with extensive PC remote control capabilities.

Features superb audio quality with premium hi-end AKM5392 24bit A/D converters and AKM 4396 24bit D/A converters, carefully optimized double precision signal processing coupled with 24bit conversion ensure a dynamic range >110dB. The unit can work in STANDARD MODE or in DCL MODE. The first mode permits to configure the crossover in 2x2 way + SUB, 2x3 way or 6way, the input L, R, L+R are freely assignable to each output.

In DCL mode the unit can be configured in 3ch DCL, 2ch DCL + 2ch standard, 1ch DCL + 4ch standard. DCL mode means double compressor limiter, each DCL channel have a double band limiter and compressor with assignable LO/HI split frequency.

Each input has 5 fully configurable filters, a delay of 288.66ms max in step of 6.8us, gain.

Each output has 4 fully configurable filters, a delay of 288.66ms max in step of 6.8us, gain, phase, LO-pass/Hi-pass crossover

from 6 to 24db/Oct with standard or custom Q, RMS compressor with soft knee and peak limiter.

The 2 input levels are displayed by rows of 6 level LED + 1 clip LED, the 6 output levels are displayed by rows of 5 level LED + 1 clip LED + 1 Limiter LED. The unit has 2 analog inputs, a stereo digital SPDIF input, and 6 analog outputs. Linking functions between inputs and linking functions between outputs are available.

The PC SW for the remote control via RS485 or USB is allowing to connect in net up to 32 units and is allowing to control full parameters of the processor, to show the phase of the filter setting and to adjust graphically the RMS compressor and the Peak limiter. The comprehensive standard specification also include up to 64 memories with security lockout and two password level settings.

DLM26

Digital Loudspeaker Management

103



Rear panel

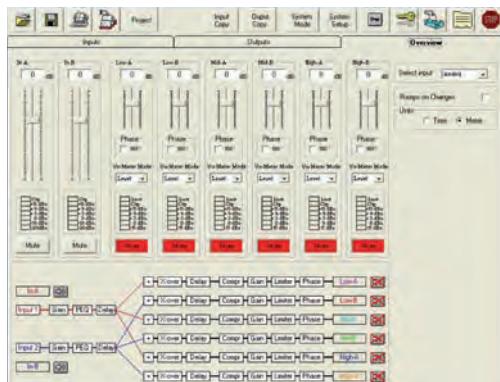
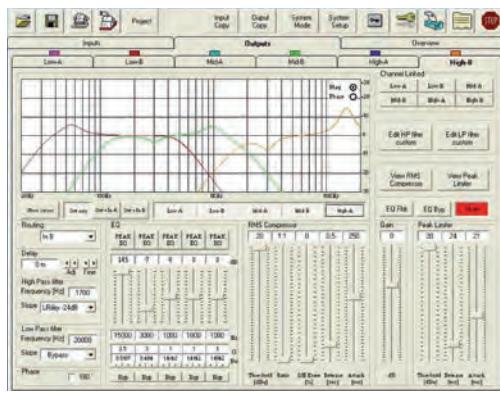
Special features:

- Hi-pass/Lo-pass/Shelving custom Q second order filters
- RMS compressor and PEAK limiter on each output channel with time constant and algorithm optimized for speaker thermal and mechanical protection while maximizing the output with no audible distortion
- Input channel L, R or L + R freely assignable to each output channel
- Double Compressor Limiter Mode (DCL) with two band RMS compressor and Peak limiter with adjustable HP / LP split frequency and separate parameter adj.

This is an exclusive and very useful feature in general purpose digital processors

- ALL PASS first and second order filters useful for Cardioid SUB configurations, very precise phase crossover alignment, special pattern control array, alignment between different speakers and systems

PC software screenshots



Inputs / Outputs	XLR balanced +20dbu max level
Total memories	64
THD+N	0.001% at 1kHz 0dBu
S/N	>110dB
Frequency Response	20Hz - 20kHz @ -0.5dB
A/D and D/A Resolution	24bits
Filters (5 each in/out)	
Type	Peaking EQ, Hi-Shelv 1/2/Q, Lo-Shelv 1/2/Q, HPF 1/2/Q, LPF 1/2/Q, All Pass 1/2 , Band pass, Notch
Orders	symmetrical Bell or High/Low Shelving up to second order
Filter gain	-15dBu / +15dBu by 0.5dBu resolution steps
Centre frequency	selectable with a 1/24th of octave resolution steps 20Hz / 20kHz
Filter Q/BW	Q from 0.05 up to 3 by 0.05 resolution steps
Compressors	
Threshold:	-10 / 20dbu
Ratio:	1:1 / 32:1
Soft Knee:	0 / 100%
Attack Time:	10ms / 4s
Release Time:	0.1 / 3s
Limiters	
Threshold:	-10 / +20dbu
Attack time:	2ms / 50ms
Release Time:	20ms / 200ms
High pass and Low Pass Filters	From 1st order (Butterworth -6dB/Oct) up to 4th Order (Butterworth, Linkwitz or Bessel -24dB/Oct), Custom Q
Filter's setting step:	1/24th of octave
Maximum Delay:	288.66ms by 6.8us increment/decrement step, on each Input and Output channel
Net Dimensions (WxHxD)	mm 480 x 40 x 220 - 19" (1U rack) inch 18.8x1.5x8 - 19" (1U rack)
Net Weight:	Kg 2.8 Lb 6.1
Transport Dimensions (WxHxD)	mm 530x100x310 inch 20.8x3.9x12.2
Transport Weight	Kg 3.9 Lb 8.6
Voltage	90 - 240Vac 50/60Hz
Power	30VA

AX Series

Power Amplifiers

104



TOUR TOUGH BUILT, SLEEK DESIGN,
IMPRESSIVE SPECS, EXCELLENT COST
PER WATT PERFORMANCE, **EFFICIENT**
UNDER ANY APPLICATION



With these credentials, FBT proudly presents the new **AX series of power amplifiers**, the perfect power mates for sound reinforcement speaker systems.

The **AX series** consists in four 2HU rack mount models, **from 800 to 3000 watts**, all designed with sophisticated power amp circuits for improved quality, stability and reliability, all equipped with Stereo-Parallel-Bridge operation mode, dB sensitivity switch (26-29-32dB), limiter, ground lift, XLR/Jack inputs (plus extra RCA input on AX 800), Speakon/Binding posts outputs.

APPLICATIONS

Amplification for live sound reinforcement speaker systems in clubs, discos, piano bar, conference halls, houses of worship, sports arenas, schools, theatres, mobile D.J. use, recording studio monitors, foreground music reproduction, etc.

Model		AX 800	AX 1200	AX 2000	AX 3000
Both channels driven	1%THD	230/250	340/350	630/650	880/650
Stereo Continuous	Wrms				
8ohm /Impulsive					
Both channels driven	1%THD	350/400	460/600	840/1000	1300/1500
Stereo Continuous	Wrms				
4ohm /Impulsive					
Bridge 8ohm	W RMS	700/800	920/1200	1680/2000	2600/3000
Continuous / Impulsive					
Frequency Response	@-1dB	20Hz-40kHz	20Hz-40kHz	20Hz-40kHz	20Hz-40kHz
Class	W	AB	H - 2 step	H - 2 step	H - 2 step
Signal to noise ratio	A weight	>100dB	>100dB	>100dB	>100dB
THD	50% Pmax	< 0,03%	< 0,03%	< 0,03%	< 0,03%
Damping factor		> 400	> 400	> 400	> 230
Input Impedance	ohm	20k balanced	20k balanced	20k balanced	20k balanced
Protections		Short circuit / Thermal	Short circuit / Thermal	Short circuit / Thermal	Short circuit / Thermal
Power Supply		120 or 230 Vac 50/60Hz	120 or 230 Vac 50/60Hz	120 or 230 Vac 50/60Hz	120 or 230 Vac 50/60Hz
Power Consumption		1000 VA	1300 VA	2400 VA	3600 VA
Connectors		IN: XRL/Jack OUT: Speakon/ Binding post	IN: XRL/Jack OUT: Speakon/ Binding post	IN: XRL/Jack OUT: Speakon/ Binding post	IN: XRL/Jack OUT: Speakon
Dimensions (WxHxD)	mm inch	482x88x290 19x3.5x11.4	482x88x290 19x3.5x11.4	482x88x290 19x3.5x11.4	482x88x290 19x3.5x11.4

ACCESSORIES

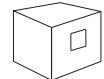
106

Muse

Rain Cover **MS-C 210**
39340
Muse 210



MS-C 118FSA
40837
Muse 118 FSA



Flying bar **MS-F 210**
38834
Muse 210



Trolley **MS-J 210**
38886
Muse 210 x 4



Metal Bracket
to fix **MS-F 210** to
Subline 218/
Mitus 218



Pin lock set **MS-P 210 KIT**
(4pcs box)
38861
Muse 210



Flight-case **MS-FK 210**
39675
Muse 210 x2

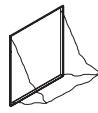


Horizon

Rain cover **VHA-RC 406**
42408



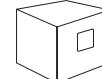
VHA-RC 118
42409



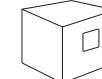
Nylon cover **VHA-C 406/112**
41958
Horizon
VHA 406/112



VHA-C 118S
41959
Horizon VHA 118S



VHA-CH 118S
41960
Horizon VHA 118S
with wheels



Flying bar **VHA-FH 406-1**
41780
1x Horizon VHA 406 A



VHA-FH 406-5
41781
2-5 Horizon VHA 406 A



VHA-F 406
41779
Horizon VHA 406 A



VHA-B 406
41783
Horizon VHA 406 A



VHA-T 406
42126



VHA-S 406
41782



Mitus

Nylon Cover **MT-C 215**
36063
Mitus 215



MT-C 152
36062
Mitus 152



V 67
33831
Mitus 115



MT-C 114
37932
Mitus 114



V 66
33830
Mitus 112



V 70
33834
Mitus 210M



MT-C 218
36064
Mitus 218S



MT-CH 218
37066
Mitus 218S
with wheels



V 69
33833
Mitus 121S
Mitus 121SA



MT-CH 121
37067
Mitus 121S
with wheels



V 68
33830
Mitus 112



MT-CH 118
37068
Mitus 118S
with wheels



Flying bar **MT-F 206**
31805
Mitus 206LA/L



MT-F 212
31804
Mitus 212FSA/FS



Joint bar

MT-J 206
31806
Mitus 212FSA/FS
with
Mitus 206LA/L



Metal base
to ground
206LA/L
array or
stack on
SUB 118SA/S
or 121SA/S



MT-B 206
31888
Mitus 206L
on 118 or 121
Mitus 206LA
on 118SA/S
or 121SA/S

MT-S 206
33324
Mitus 206LA/L



Flight-case **FK 206-6**
33933
6 Mitus
206LA/L



FK 206-4
34911
4 Mitus
206LA/L



FK 206-2
33931
2 Mitus
206LA/L



FK 212-2
33931
2 Mitus
212FSA



FK 210-2
34719
2 Mitus
210M/MA



FK 121-1
34690
1 Mitus
121S/SA



FK 118-1
33932
1 Mitus
118S/SA



4 wheels
kit with
brake
100mm ø

KBW-1004S
25197
Mitus 218S/SA
Mitus 118S/SA
Mitus 121S/SA
Mitus 118FS/SA



ACCESSORIES

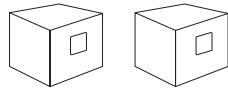
QA	Flying bar HSA 108 34633 QA 108A QA 108	Wooden trolley WT-108 34723 QA 108A QA 108	Joint bar SS 108 34722 QA 108A/108	Metal base MMH-108 34562 QA 108A QA 108			
							
Modus	Flying bar MD-F SAT 25391 Modus 4805 Modus 4820 Modus 118	MD-F SUB 26214 Modus 215	Trolley MD-T 48 38887 Modus 4805 Modus 4820 x 2	MD-T 118 38888 Modus 118 x 2	MD-T SUB 25394 Modus 215 x 2	Stand base MD-B 25393 Modus 4805 Modus 4820	MD-WB 29309 Modus 4805 Modus 4820 on Modus 118 Modus 215
							
QSA	Flying bar HSA 600 37998 QSA 112.0A QSA 112.0 QSA 118SA	Wooden support WMA 112 29198 QSA 112.0A su QSA 118SA	Adjustable pole SS 112 29198 QSA 112.0A su QSA 118SA	Trolley with wheels WD 112 27896 QSA 112/112A	WD 118S 27897 QSA 118/118SA		
							
Shadow	Flying bar SW-F 142 36350 SHADOW 142 L						
							
Vertus	Nylon cover VT-C 604 36122 Vertus CLA 604	VT-C 114 37145 Vertus VT-SC 114	VT-C 59 37146 Vertus VT-SC 59	VT-C 208 36123 Vertus CLA 208	VT-C 406 40565 Vertus CLA 406A and CLA 406.2A	VT-C 118SA 40567 Vertus CLA 118SA	VT-CH 118SA 40566 Vertus CLA 118SA with wheels
							
	Speaker stand VT-S 30 406 39903 Vertus CLA 406A	VT-S 0 406 39904 Vertus CLA 406A	Flying bar VT-F 406.2 41803 Vertus CLA 406.2A	Joint bar VT-J 406.2 41802 Vertus CLA 406.2A with CLA 406.2A/ CLA206A	VT-A 608 34552 Joint to fix MLA 608 to subwoofer with M20	VT-T 406 41805 Clamp to hang VT-F 406.2 on truss	
							
	Flying bar VT-F 3 41795 Black 41820 White Vertus CLA 803 CLA 403	Joint bar 0°-15° VT-J 3 41794 Black 41819 White Vertus CLA 803 CLA 403	Directional wall mount vertical VT-W 3 41797 Black 41821 White Vertus CLA 803 CLA 403	Directional wall mount horizontal VT-WH 3 41798 Black 41822 White Vertus CLA 803 CLA 403			
							
	Stand adapter ø 35mm VT-S 604/W 35723 Black 37044 White Vertus CLA 604A	Directional stand adapter VT-DS 604/W 37053 Black 37054 White Vertus CLA 604A	Directional wall mount bracket VT-W 604/W 35722 Black 37043 White Vertus CLA 604A	Stand column h 59cm VT-SC59 604/W 36879 Black 36883 White Vertus CLA 604A	Stand column h 114cm VT-SC114 604/W 37041 Black 37042 White Vertus CLA 604A	Pin Lock 4 pieces VT-P 604 Kit 40732 Vertus CLA 604	
							

ACCESSORIES

108

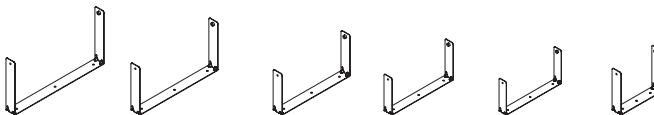
Q

Nylon cover	QB-C	40498
		40497
		Q118SA/S with wheels



Archon

Wall metal bracket to mount in horizontal position



AC-U 115H
36328
Archon 115

AC-U 112H
36327
Archon 112

AC-U 110H
36326
Archon 110

AC-U 108H
40338
Archon 108

AC-U 106H
40337
Archon 106

AC-U 105H
40336
Archon 105

Wall metal bracket to mount in vertical position



AC-U 115V
36331
Archon 115

AC-U 112V
36330
Archon 112

AC-U 110V
36329
Archon 110

Directional wall metal bracket

AC-W 568
36987
Archon 105
Archon 106
Archon 108

AC-W 568W
37330
Archon 105
Archon 106
Archon 108



StageMaxX

Nylon cover

SM-C 12
36065
StageMaxX 12Ma



Wall metal bracket to mount in horizontal position



SM-U 12W
36066 Black
36735 White
StageMaxX 12Ma

Metal bracket with top-hat speaker stand socket



SM-S 12
37099
StageMaxX 12Ma

ACCESSORIES AVAILABLE FOR ALL PRODUCTS

Tripod speaker stand

MSA 300BK
39326



MSA 310BK
39327



MSA 325BK
39328



Microphone stand

MSA 100BK
39321



MSA 200BK
39322



MSA 180BK
39323



MSA 400BK
39324



DTA 500BK
39325



Telescopic speaker pole



MSA 210BK
39329



MSA 220BK
39330

Speaker stands bag



MSA BAG
39331

PROFESSIONAL CABLES

NC3FXX
NC3MXX



**Balanced Signal
Cables**

XMF-05

39728
Length 0.5mt

XMF-01

39729
Length 1mt

XMF-02

39730
Length 2mt

XMF-03

39731
Length 3mt

XMF-06

39732
Length 6mt

109



XMF-10

39733
Length 10mt

XMF-15

39734
Length 15mt

XMF-20

39735
Length 20mt

XMF-30

39736
Length 30mt

**PowerCON
TRUE1
NAC3MX
NAC3FX**



PMF-05

39409
Length 0.5mt

PMF-1

39408
Length 1mt

PMF-2

37893
Length 2mt

**PowerCON
TRUE1
NAC3MX
NAC3FX (UL series)**



PMF-05 UL

39651
Length 0.5mt

PMF-1 UL

39652
Length 1mt

PMF-2 UL

39653
Length 2mt

**PowerCON
NAC3FCA
NAC3FCB**



PAB-025 UL

39658
Length 0.25mt

PAB-05 UL

39657
Length 0.5mt

PAB-1 UL

36642
Length 1mt

PAB-2 UL

37303
Length 2mt

**PowerCON
NAC3FCA
NAC3FCB
(UL series)**



PAB-025

36645
Length 0.25mt

PAB-05

36644
Length 0.5mt

PAB-1

36643
Length 1mt

PAB-2

37892
Length 2mt

**SpeakON
NL4FX**



SP4-025

39754
Length 0.25mt

SP4-05

39755
Length 0.5mt

SP4-2

39756
Length 2mt

SP4-10

39757
Length 10mt

SP4-20

39758
Length 20mt

NL4MMX



Lockable 4 pole speakON adapter

39772

PROFESSIONAL CABLES

110

Professional Microphone Cable

FBT M222
33022



Professional Microphone Cable

FBT M234
33023



Professional Microphone Cable

FBT M322
33024



Professional Speaker Cable

FBT S275
33025

FBT S225
33028

FBT S215
33027

FBT S210
33026

FBT S240
33029

FBT S425
33030

FBT S440
33031



Cable Display

FDSY-1
33060

Tube to accomodate Cable Drum

DTB-55
33105

Display hook to Accomodate Assembled cables

DHK-25
33106

CONNECTOR

NC3FXX 39726 3 pole XLR female cable connector	NC3MXX 39727 3 pole XLR male cable connector	NAC3MX 37662 PowerCON TRUE1 male cable connector	NAC3FX 37661 PowerCON TRUE1 male cable connector	NAC3FCA 20132 PowerCON female cable connector	NAC3FCB 20134 PowerCON cable connector	NL4FX 39908 SpeakON 4 pole cable connector
--	--	--	--	---	--	--

111



FBT Elettronica SpA
has the right to amend products
and specifications without notice.

ALPS™, B&C and Neutrik™ are the trademarks
of their respective owners.

Graphics
Studio Conti

Photography
Giuseppe Saluzzi

Printing
Tecnostampa - Pigini Group Printing Division
Loreto - Trevi

Date of printing: December 2018

FBT.TI.18/19.0.UK

Italian style, expert
research and industrial design.
FBT is where form and
function meet.

FBT Elettronica SpA
62019 Recanati (MC) - Italy
Tel: +39 071 750591
Fax: +39 071 7505920
info@fbt.it - www.fbt.it
(International Headquarter - Factory)

FBT Audio (UK) Ltd
Rochester, Kent, UK
Tel: 0203 598 5162
Fax: 0203 598 5163
info@fbtaudio.co.uk
www.fbtaudio.co.uk

Distributed by

English