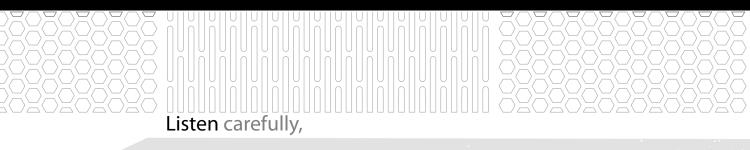


VH Subwoofer Series
User Manual V_1.0 en



feel better!



General information

General information

VH Subwoofer Series User Manual

Version: 1.0 en_01/01/2021

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Loud Professional reserves the right to alter any specifications to the products and published documentations without notice.

Keep this document with the product or in a safe place so that it is available for future reference.

We recommend you to regularly check the Loud Professional website for the latest version of this document.

When reselling this product, hand over this document to the new owner.

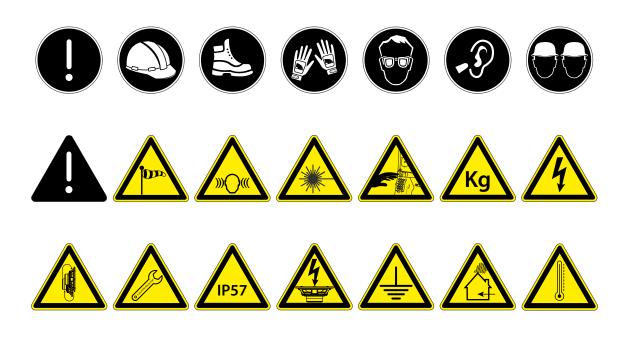
If you supply Loud Professional products, please draw the attention of your customers to this document. Enclose the relevant documents with the systems. If you require additional documents for this purpose, you can order them from Loud Professional.

Loud Professional Italy Via Sebino,29 - 00199 Roma, Italy Tel: +39 06 35.29.89.13 Fax: +39 06 35.29.89.13 loud@loud.com loudprofessional.com

Table of contents

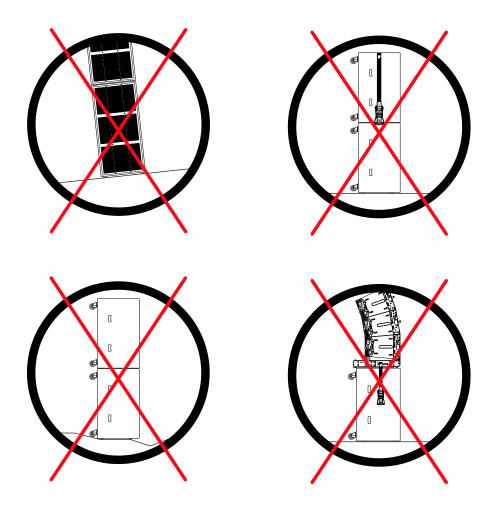
- 1 Safety symbols & Precautions (04 10)
- 2 Product description & System type (11 15)
- 3 Technical specifications (16 20)
 - **3.1** Frequency response (21)
 - 3.2 Wiring system & Transducers connection types (22 27)
 - **3.3** Touring Rack PoweRack V.1 (28 34)
 - **3.4** Speaker cables & Cable accessories (35 44)
 - 3.5 Dedicated presets, Settings & Prediction software (45 46)
 - **3.6** System configurations (47 51)
 - 3.7 Suggested amplifers (52 53)
 - **3.8** Load Pack (54 55)
- 4 System components & Accessories (56 60)
- **5** Technical drawings (61 68)
- **7** EU Conformity Declaration (CE) (69)
- 8 Coordinates (70)

Safety symbols





Safety symbols





Precautions





It is mandatory to read this manual before using the Formula Series system.



This system is intended for professional use.



Inspect the product before any operations.

Qualified personnel must not assume rigging parts or any system componenents if not have been inspected, prior to use by someone else.



Never integrate different equipment or accessories not approved by Loud Professional



Important operating instructions.

Observe all instructions given on the respective instruction labels of the rigging components such as load beams, flying and compression frames, touring carts and loudspeaker cabinets.



Instructions must be strictly followed by operators to ensure proper installations.



Assembly operations should always be carried out by minimum two authorized personnel.

During assembly and disasssembly operations necessarily wear suitable protective clothing and safety devices. Pay attention to any potential risk of personal injury due to possibility of crushing.













Precautions





Be aware of high wind force.

in outdoor envinroments it is advisable to have an anemometer. Flying loudspeakers overhead at wind force higher than 6 bft (20 knots), is not recommended.

If the wind force exceeds 8 bft (35 knots):

- Make sure that no people remains in the closer proximity of the array
- Lower and secure the array.



Be aware of excessive loads.

Pay attention, excessive loads can cause permanent personal injury. Please check and respect the regulations relating to maximum load handled per person.



Be aware of sound levels.

Loudspeaker systems are capable of producing very high sound pressure levels (SPL) which can instantaneously lead to permanent hearing damage to performers, production crew and audience members. Hearing damage an also occur at moderate level with prolonged exposure to sound. Check the applicable laws and regulations relating to maximum sound levels and exposure times.



Be aware of laser beams.

In connection with a laser inclinometer take precautions to prevent anyone from looking directly into the laser beam and wear appropriate eye protection. Laser beams can cause permanent personal injury.





Precautions





Attention! Crushing points.



Attention! Do not open, risk of electric shock.



Attention! Electronic devices must be ground earthed.





Attention! Do not leave electronic devices exposed to extreme conditions.



Attention! Check the IP rate specifications on the user manual.



Attention! Potential risk of damages.



Attention! Channels overlap.



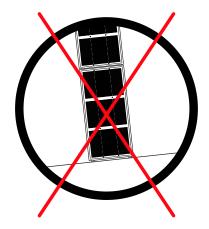
Attention! In case of assistance read carefully the operating instructions.



Attention! Possible overturning causes damages and personal permanent injury.

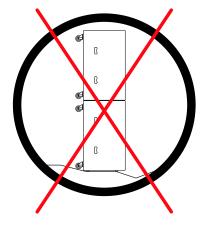
Safety symbols





Do not stack on downhill surfaces.

It is really dangerous to stack subwoofers on downhill surfaces, risk of overturning! This can causes damages and permanent personal injury.



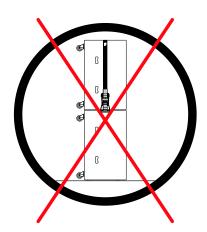
Do not stack on unstable surfaces.

It is really dangerous to stack subwoofers on unstable surfaces, risk of overturning! This can causes damages and permanent personal injury.

MLoud Professional[™]

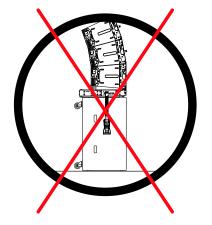
Safety symbols





Do not stack subwoofers without a properly fixed security belt.

It is really dangerous to stack subwoofers without a security belt properly fixed, risk of overturning! This can causes damages and permanent personal injury.



Do not stack speakers without a properly fixed security belt.

It is really dangerous to stack speakers on top of subwoofers without a security belt properly fixed, risk of overturning! This can causes damages and permanent personal injury.



VH Sub118R is a special lightweight and compact Sub-Bass unit housing a single long excursion 18in. direct radiating transducer mounted in a Bass Refex tuned enclosure.

Thanks to the Bass Reflex differentially flared design the optimized vented port reduces turbulence and port noise at high levels while also increasing LF efficiency and extending the response down to 35 Hz.

Designed for ground stacked configurations it can be positioned in cardioid subwoofer array with one cabinet physically facing backwards and processed by a dedicated amplifier channel.

It allows to achieves an exceptional benefit controlling the lower frequencies response and significantly reducing the energy radiating towards to the rear.

Thanks to the system efficiency the VH Sub118R is capable of delivering high standard SPL output, still maintaining a great linearity in the frequency response.

The special system ability to control the exceptional transducer excursion keep really low the total harmonic distortion level.

Its dimensions make this unit extremely modular for many different configurations allowing arrays of large dimensions, make easier and faster the ground stacked deployments.

Significant construction criteria, combined with the latest technologies and innovative materials, ensure a great reliability.

The VH Sub118R cabinet is constructed from Birch-ply and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish.

It can be as well matched with all the most challenging Full Range and Line Array Loud Professional systems, significantly boosting their LF extension.



VH Sub218R is a special Sub-Bass unit housing two long excursion 18in. direct radiating transducers mounted in two separated Bass-refex tuned enclosures. It consists of two coupled VH Sub118R with one physically facing up in the cabinet bottom side.

This particular "V-shape" design allows to obtain a larger unique reflex port exactly in the cabinet middle, maximizing the system efficiency in the lower frequency response.

The reflex port center alignment increases more the system performances due to its exponential front loading path. Coupling several units in a large array the result becomes more significant.

Thanks to the Bass-reflex differentially flared design, the optimized vented port reduces turbulence and port noise at high levels, while also increasing LF system efficiency and extending the frequency response down to 32 Hz.

Designed for ground stacked configurations it can be positioned in a cardioid subwoofer array with one cabinet physically facing backwards and processed by a dedicated amplifier channel.

It allows to achieve a remarkable benefit controlling the lower frequencies response and significantly reducing the energy radiating towards to the rear.

Thanks to the special system efficiency, VH Sub218R is capable of delivering a high standard SPL output still maintaining a great frequency response linearity.

The particular system ability to control exceptional transducer excursions keeps really low the total harmonic distortion levels (THD).

Excellent bass-punch response combined together with a really extended lower frequency reproduction make unique this interesting Sub-Bass unit, compared to double 18in. transducers standard vented enclosures. It can be considered the ideal companion of all on-stage applications as Side Fill or Drum Fill.

The VH Sub218R is one-of-a-kind, a true reference!

Lightweight and compact dimensions make this unit extremely modular for many different setups, allowing arrays of large dimensions.

A complete range of accessories makes easier and faster all deployments such as stacked configurations with pole-mounted speakers.

Significant construction criteria, combined with the latest technologies and innovative materials, ensure a great reliability over time.

VH Sub218R cabinet is constructed from marine Birch-ply and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish.

It can be as well matched with all the most challenging Loud Professional Full-Range and Line-Array systems, significantly boosting their LF extension.



VH Infra218R is a special Infra-Bass unit housing two long excursion 18in. direct radiating transducers mounted in two separated Bass-refex tuned enclosures.

Vertically formatted Infra218R features the two opposite LF transducers facing each other and one physically facing up in the trapezoidal cabinet bottom side.

This particular "V-shape" design allows to obtain a larger unique reflex port exactly in the cabinet middle, maximizing the system efficiency in the lower frequency response.

The reflex port center alignment increases more the system performances due to its exponential front loading path, specially when coupling more units.

Thanks to the Bass-reflex differentially flared design, the optimized vented port reduces turbulence and port noise at high levels, while also increasing LF system efficiency and extending the frequency response down to 25 Hz.

The same cabinet shape of VH-emotion series allows perfect ground stacked configurations.

Special is the speaker design, it allows to achieves an exceptional benefit controlling the lower frequencies response and significantly reducing the energy radiating towards to the rear.

Thanks to the system efficiency the VH Infra218R is capable of delivering a high standard SPL output still maintaining a great frequency response linearity.

The system ability to control the exceptional transducer excursion keeps really low the total harmonic distortion level.

Significant construction criteria, combined with the latest technologies and the innovative materials, ensure a great reliability over time.

VH Infra218R cabinet is constructed from marine Birch-ply and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish.

It has been expressly designed to be combined with the VH e-motion Series (VH MH210H / VH Bass215H / VH F12H) as perfect integration, further extending the system response.

It can be as well matched with all the most challenging Loud Professional Full-Range and Line-Array systems, significantly boosting their LF extension.



VH Sub218H is a particular Sub-Bass unit housing two long excursion 18in. horn loaded transducers mounted on a folded horn without any compromise.

Thanks to its special compound design the system sensitivity is really high, giving a maximum SPL output of 152 dB (peak @ 1mt in half space).

Considering the system type, extended is the low frequency reproduction, specially in the lower end region where the unit is able to reproduce frequencies down to 40 Hz with a plenty and sensational sound impact for an unrivaled bass-punch as you've never heard before!

The result becomes more evident, specially when coupling several units in a large array for really long throw applications.

Remarkable SPL output, due to the special folded horn loading technique, makes the system extremely effective when providing sound to spacious outdoor environments. Really longer distances are reached with ease!

The special system ability to control transducers linear excursion keeps really low the total harmonic distortion levels, still maintaining a great linearity in lower frequency reproduction for the fastest transient response all over conditions.

Significant construction criteria, combined with the latest technologies and innovative materials, ensure a great reliability over time.

The VH Sub218H cabinet is constructed from Birch-ply and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish.

It can be as well matched with all the most challenging Loud Professional Full-Range and Line-Array systems, significantly boosting their LF extension.



VH Sub121H is a special Sub-Bass unit expressly designed and engineered for lower frequencies response at the maximum SPL output.

The hybrid system configuration (Bass-reflex & Horn Loading techniques) houses a single 21in. transducer of a 4.5in. voice coil woofer, tuned in a Bass-reflex enclosure to extend the LF output to below the natural horn cut-off point.

This particular compound system combines the high efficiency and great impact of the horn loading technique with the low frequency extension of the Bass-reflex enclosure.

Two extra-large ports allow to further extend the system frequency response down to 35 Hz.

The benefits of this ideal combination ensure a superior sound impact along the most accurate lower reproduction.

Bass-punch is unrivaled and the incredible high SPL output makes the system extremely effective when providing sound to spacious outdoor environments. Longer distances are reached with ease! Specially designed for large scale open air venues, smaller compared to VH Sub218H, 121H can also be used in indoor environments of large dimensions.

The use is strongly recommended whenever a great impact, accuracy and transients fast response become mandatory.

Significant construction criteria, combined with the latest technologies and the innovative materials, ensure a great reliability over time.

VH Sub121H cabinet is constructed from Birch-ply and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish.

It can be as well matched with all the most challenging Loud Professional Full-Range and Line-Array systems, significantly boosting their LF extension.

System Type Dedicated Sub-Bass enclosure

Acoustic Load

LF Bass Reflex loaded

PERFORMANCE

Frequency Range
LF

35 Hz -150 Hz +/-3 dB

Recommended HPF System ≥ 25 Hz - 90 / 120 Hz

Recommended HPF System ≥ 25Hz, 24 dB/octave

Suggested System High Pass Filter ≥ 30Hz, 24 dB/octave

Nominal Directivity LF	Omnidirectional or cardiod	(paired)	
Maximum peak SPL	Axial sensitivity (2.83V @ 1mt)	Continuos	Peak
LF	101 dB	132 dB	138 dB



Components

LF 1 x 18in. (460 mm) Ferrite cone driver

Nominal Impedance

LF 8Ω

Power Handling	(AES / Peak)
LF	1.500 / 6.000 W

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Operating Mode	Amplifier Channels	Supported Processing
LF	1	Armonia Pro Audio Suite & A+
	Cabinet per channel	Suggested Amplifiers
	1 to 4	Powersoft X Series:
	Suggested	X8 - X4L - X4 ETH (Dante opt.)
	$3(2.7 \Omega \text{ nom. load per ch.})$	Powersoft T Series:
		T602 - T604

DImensions	H,W,D, (mm / in.) Weight (Kg / lbs)	In & Out Connections Description	Shell Construction Description
Height (Fron Height (Rear Width (Front Width (Rear) Depth Weight	575 / 22.63 585 / 23.03	2 x SpeakON™ NL4 paralleled connectors Pin assignment: 1+/1- LF 2+/2- Through	Multi-laminate Birch-ply 18/24 mm PCP (Polyurea Cabinet Protection) 2 mm Powder coated Metal Rigid Grille Acoustic Foam (opt.)

System Type Acoustic Load LF1 / LF2 Dedicated Sub-Bass enclosure

Bass Reflex loaded

PERFORMANCE

Frequency Range LF1 / LF2 Crossover points 32 Hz -150 Hz +/- 3 dB 25 Hz - 90 / 120 Hz

Recommended HPF System \geq 25 Hz, 24 dB/octave Suggested System High Pass Filter \geq 25 Hz, 24 dB/octave

Nominal Directivity LF / LF2

Omnidirectional or cardiod (paired)

Maximum peak SPL Axial sensitivity (2.83V @ 1mt) Continuos Peak
LF1 / LF2 104 dB 138 dB 144 dB



Components

LF1/LF2

2 x 18in. (460 mm) Ferrite cone driver

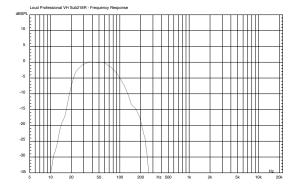
Nominal Impedance

LF1/LF2

2 x 8Ω

Power Handling (AES / Peak)

LF1 / LF2 2 x 1.500 / 2 x 6.000 W



Operating Mode	Amplifier Channels	Supported Processing
LF1/LF2	2	Armonia Pro Audio Suite & A+
	Cabinets per pairs of ch.	Suggested Amplifiers
	1 to 4	Powersoft X Series:
	Suggested	X8 - X4L - X4 ETH (Dante opt.)
	$3(2.7 \Omega \text{ nom. load per ch.})$	

Dimensions	H,W,D, (mm / in.)	In & Out Connections	Shell Construction
	Weight (Kg / lbs)	Description	Description
Height (Fron Height (Rear Widht (Front Widht (Rear) Depth Weight	1182,5 / 46.55 585 / 23.03	2 x SpeakON™ NL4 paralleled connectors Pin assignment: 1+/1- LF1 2+/2- LF2	Multi-laminate Birch-ply 18/24 mm PCP (Polyurea Cabinet Protection) 2 mm Powder coated Metal Rigid Grille Acoustic Foam (opt.)

System Type Acoustic Load LF1 / LF2 Dedicated Sub-Bass enclosure

Bass Reflex loaded

PERFORMANCE

Frequency Range LF1 / LF2 Crossover points 25 Hz -150 Hz +/- 3 dB 25 Hz - 90 Hz

Recommended HPF System \geq 25 Hz, 24 dB/octave Suggested System High Pass Filter \geq 25 Hz, 24 dB/octave

141 dB

147 dB

Nominal Directivity
LF / LF2

Omnidirectional

Maximum peak SPL

Axial sensitivity (2.83V @ 1mt)

Continuos

Peak



Components

LF1/LF2

LF1/LF2

2 x 18in. (460 mm) Ferrite cone driver

Nominal Impedance

LF1/LF2

2 x 8Ω

106 dB

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Power Handling (AES / Peak)

LF1 / LF2 2 x 1.500 / 2 x 6.000 W

 Operating Mode
 Amplifier Channels
 Supported Processing

 LF1 / LF2
 2
 Armonia Pro Audio Suite & A+

 Cabinets per pairs of ch.
 Suggested Amplifiers

 1 to 4
 Powersoft X Series:

 Suggested
 X8 - X4L - X4 ETH (Dante opt.)

DImensions	H,W,D, (mm / in.)	In & Out Connections	Shell Construction
	Weight (Kg / lbs)	Description	Description
Height (Fron Height (Rear Width (Front Width (Rear) Depth Weight	1160 / 45.66 3) 815 / 32.08	2 x SpeakON™ NL4 paralleled connectors Pin assignment: 1+/1- LF1 2+/2- LF2	Multi-laminate Birch-ply 18/24 mm PCP (Polyurea Cabinet Protection) 2 mm Powder coated Metal Rigid Grille Acoustic Foam (opt.)

CO	NIE	IGH	RΔ.	ΓΙΟΝ	١
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System Type Acoustic Load Dedicated Sub-Bass enclosure

Folded Horn loaded

PERFORMANCE

Frequency Range LF1 / LF2 Crossover points 40 Hz -150 Hz +/- 3 dB 25 Hz - 90 / 120 Hz

Recommended HPF System \geq 25 Hz, 24 dB/octave Suggested System High Pass Filter \geq 30 Hz, 24 dB/octave

Nominal Directivity
LF / LF2
Omnidirectional

Maximum peak SPL
Axial sensitivity (2.83V @ 1mt)
Continuos
Peak
LF1 / LF2
111 dB
146 dB
152 dB



Components

LF1/LF2

2 x 18in. (460 mm) Ferrite cone driver

Nominal Impedance

LF1/LF2

2 x 8Ω

dBSPL	Lo	ud F	rote	essional VH	Sub218	9H - F	requ	ienc	ун	esp	onse															
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Power Handling (AES / Peak)

LF1 / LF2 2 x 1.500 / 2 x 6.000 W

 Operating Mode
 Amplifier Channels
 Supported Processing

 LF1 / LF2
 2
 Armonia Pro Audio Suite & A+

 Cabinets per pairs of ch.
 Suggested Amplifiers

 1 to 4
 Powersoft X Series:

 Suggested
 X8 - X4L - X4 ETH (Dante opt.)

Dimensions	H,W,D, (mm / in.) Weight (Kg / lbs)	In & Out Connections Description	Shell Construction Description
Height (Fron Height (Rear Width (Front Width (Rear) Depth Weight	(r) 1250 / 49.21 (c) 960 / 37.79	2 x SpeakON™ NL4 paralleled connectors Pin assignment: 1+/1- LF1 2+/2- LF2	Multi-laminate Birch-ply 18/24 mm PCP (Polyurea Cabinet Protection) 2 mm Powder coated Metal Rigid Grille Acoustic Foam (opt.)

System Type	Dedicated Sub-Bass enclosure
Acoustic Load	
LF	Hybrid: Bass Reflex & Folded Horn loaded

PERFORMANCE

Frequency Range		Crossover points
LF	35 Hz -150 Hz +/- 3 dB	25 Hz - 90 / 120 Hz
	Recommended System HPF \geq 25 Hz, 24 dB/octave Suggested System High Pass Filter \geq 30 Hz, 24 dB/octave	

Nominal Directivity LF	Omnidirectional		
Maximum peak SPL	Axial sensitivity (2.83V @ 1mt)	Continuos	Peak
LF	106 dB	139 dB	145 dB



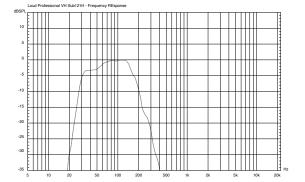
Components

LF 1 x 21in. (530 mm) Ferrite cone driver

Nominal Impedance

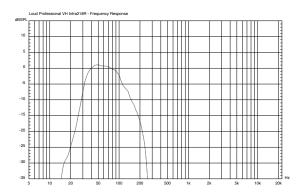
LF 8Ω

Power Handling	(AES / Peak)
LF	2.000 / 8.000 W



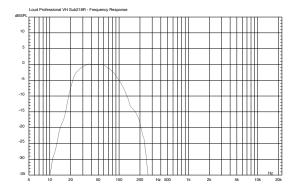
Operating Mode	Amplifier Channels	Supported Processing
LF	1	Armonia Pro Audio Suite & A-
	Cabinets per channel	Suggested Amplifiers
	1 to 4	Powersoft X Series:
	Suggested	X8 - X4L - X4 ETH (Dante opt.)
	3(270 nom load por ch)	

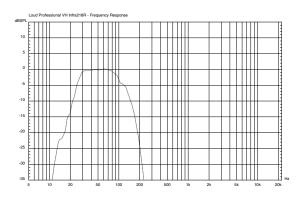
Width (Rear) 685 / 26.96 1+/1- LF Protection) Depth 900 / 35.43 2+/2- Through 2 mm Powder coated Weight 118 / 260 Metal Rigid Grille				
Height (Rear) 1215 / 47.83 paralleled connectors Birch-ply 18/24 mm Width (Front) 685 / 26.96 Pin assignment: PCP (Polyurea Cabine Width (Rear) 685 / 26.96 1+/1- LF Protection) Depth 900 / 35.43 2+/2- Through 2 mm Powder coated Weight 118 / 260 Metal Rigid Grille	Dimensions			
	Height (Rear Width (Front Width (Rear) Depth	1215 / 47.83 685 / 26.96 685 / 26.96 900 / 35.43	paralleled connectors Pin assignment: 1+/1- LF	Birch-ply 18/24 mm PCP (Polyurea Cabinet Protection) 2 mm Powder coated

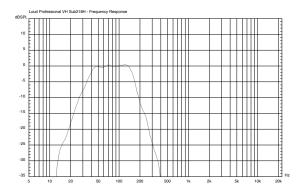


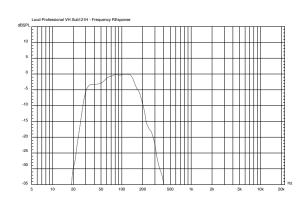
1 - Frequency response.

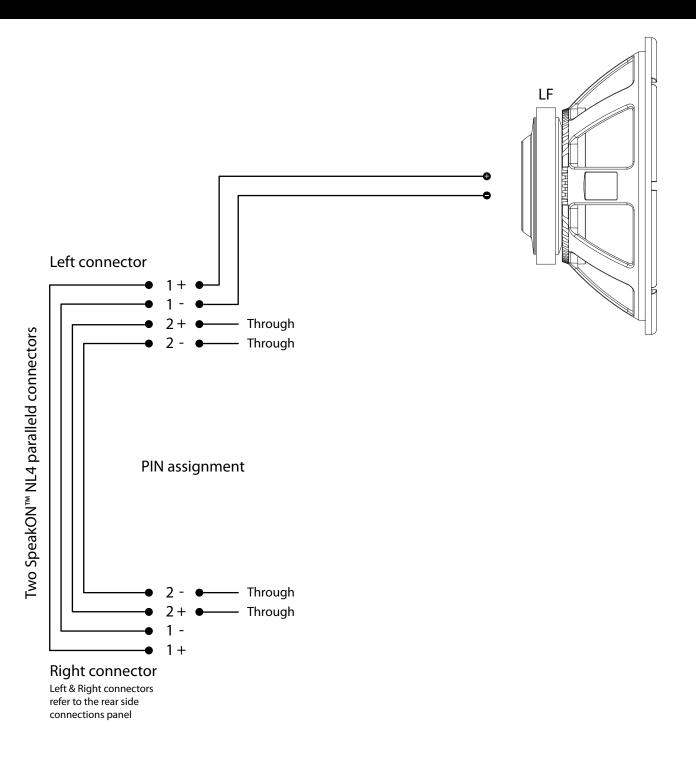
The graphs below show the frequency response referred to a single box, measured with 1W applyed (2.83V) in free field, at 1 meter distance.

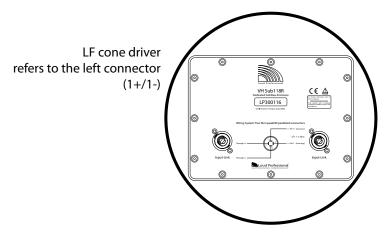


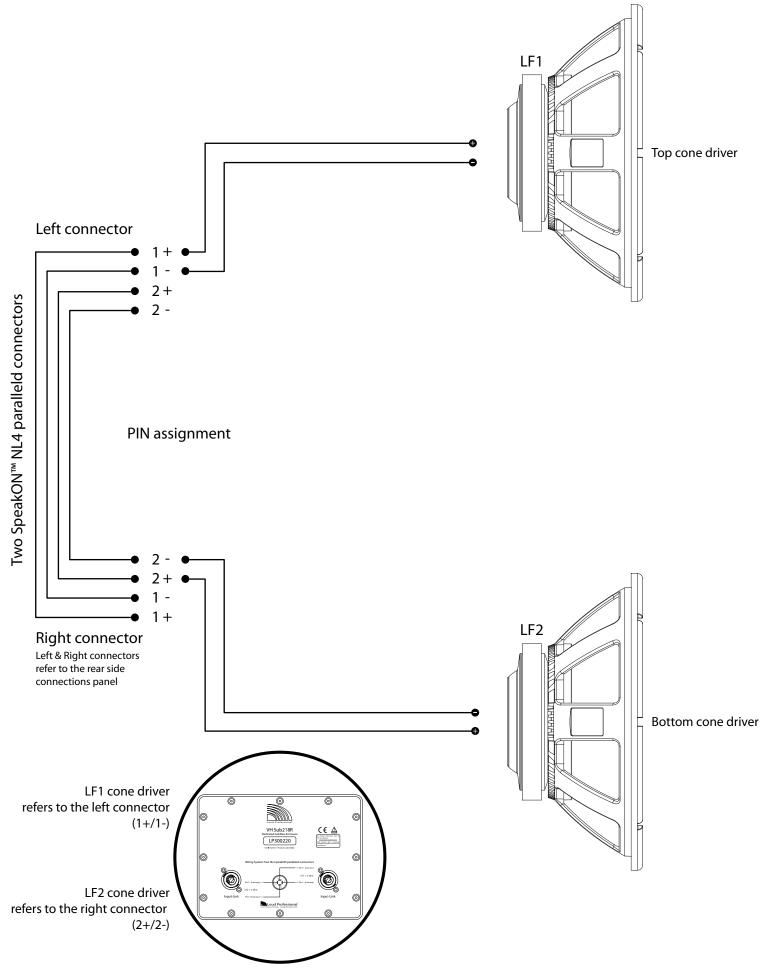


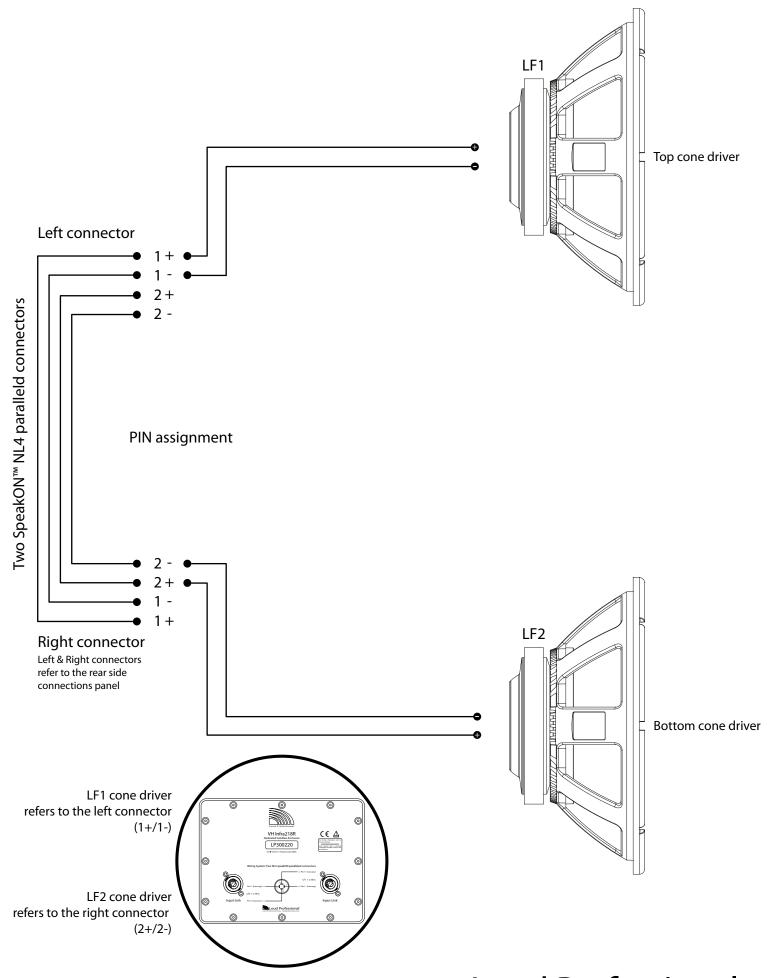


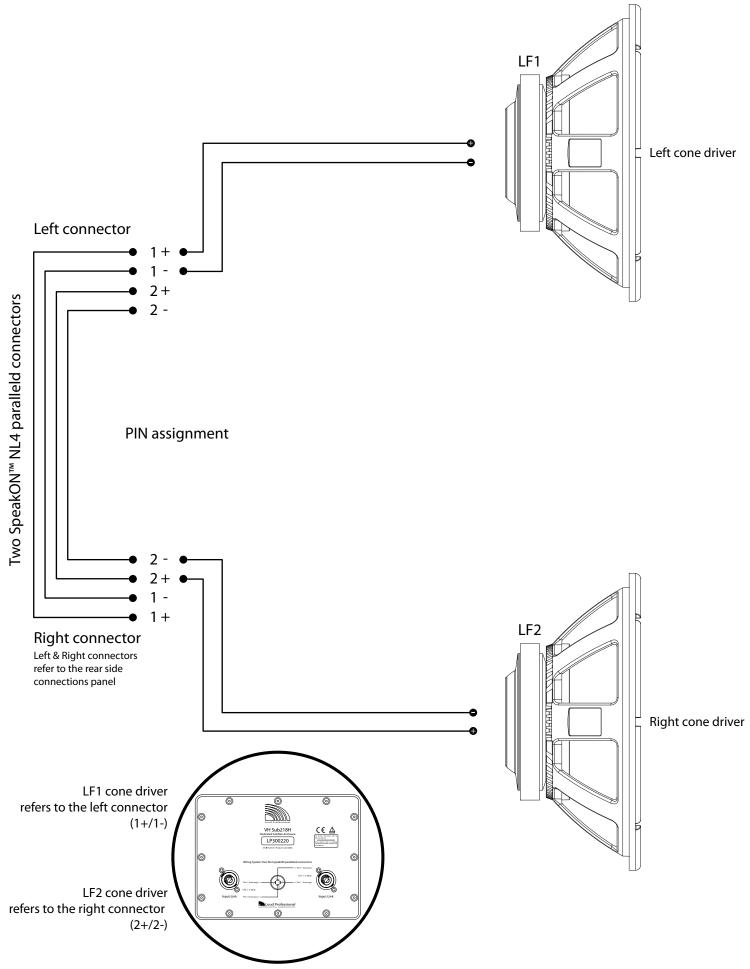


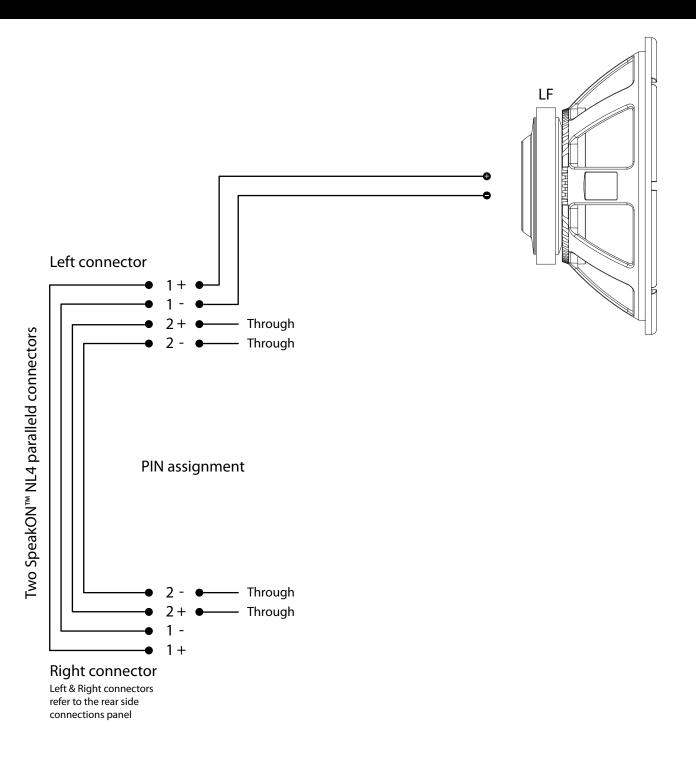


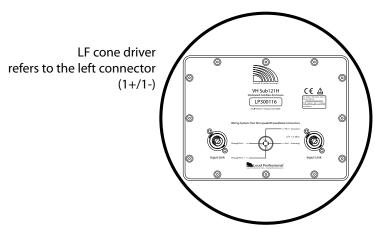


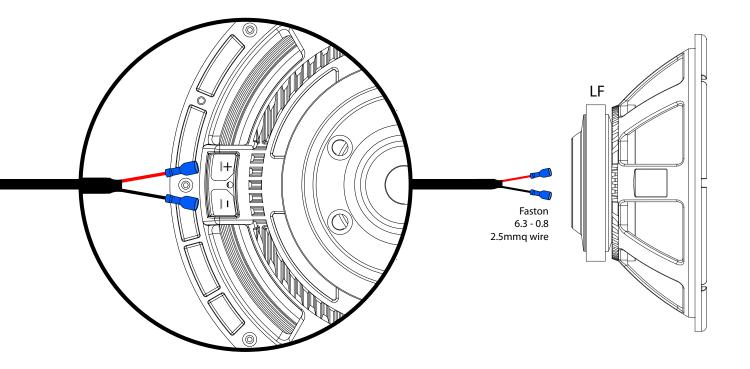


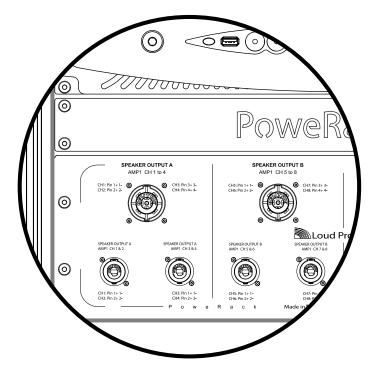












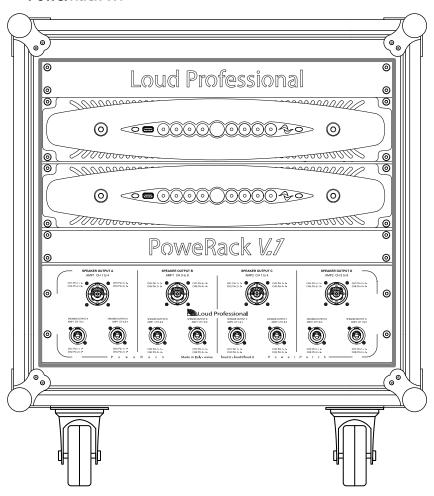
1.0 - Touring Rack, two units *PoweRack* V.1

Connecting, Processing & bringing power to the Loud Professional speakers universe. *All-in-one* for all touring applications, providing flexible solutions in every system configuration.

A complete range of accessories and toolkits [pag. 81 - 82 - 83] allows to quickly get the system ready to start.

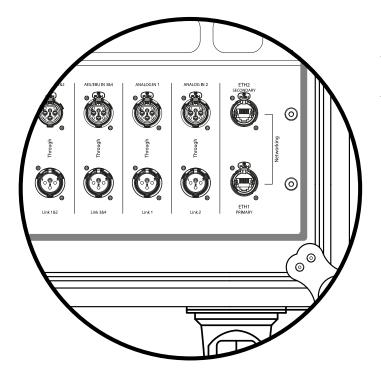
The *PowerPatch* unit combines all the 16 amplifier output channels in four mains sections: "SPEAKER OUTPUT A,B,C & D"; each features a single NL8 and two NL4 speakON connectors.

PowerRack V.1





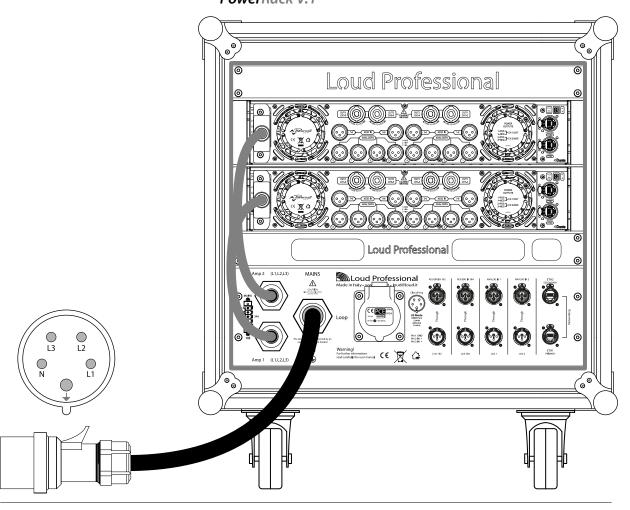
Attention! Do not open risk of electric shock, do not leave the rack exposed to the elements.



1.1 - Touring Rack, two units *PoweRack* V.1

The AC Mains & Signals Patch features: a 32 A three-phase circuit: one IN plug and one LINK OUT outlet to power a secondary rack; The PoweRack V.1 is fed with AES/EBU signals through 2 IN XLR3 connectors, each of them receiving 1 digital signal conveying 2 audio channels with link-out capability to other racks. The patch also features 2 analog signals and 2 Ethercon I/O connectors. The Ethernet connectors allow the remote control of the rack using Armonia management.

PowerRack V.1





Attention! Do not open risk of electric shock, do not leave the rack exposed to the elements.

X8

8-Channel High Performance Amplifier Platform



Powersoft X8 has been designed to be versatile and easy to use in any operation condition. Equally useful for most subwoof ers as well as high-power fullrange systems, Powersoft X8 suites any configuration and purpose.

Ultimately flexible and safe, Powersoft's legendary power supply is now suitable to Single Phase, Bi-Phase or Three Phase op eration from 85 V AC up to 460 V AC without need of selection. True Three Phase load balancing is directly achievable by the unit without any complex load assignment in the power distribution system.

Powersoft X8 provides eight fully process able channels and selectable inputs from analog sources as well as digital AES3 and two redundant Dante™* streams. Channel mixing and routing can be easily performed thanks to the integrated revolutionary low latency DSP, providing the highest degree of freedom in sound shaping and speaker management.

Full support to 100 Mbps and Gigabit Ethernet makes it easy to integrate Powersoft X8 into any existing infrastructure.

Completely integrated into Armonía Pro Audio Suite™, the new Powersoft X8 inter face is also available for smartphone and tablet, providing a new experience in power management.

Innovative power supply design

Suitable for Single-Phase, Bi-Phase or Three-Phase operation from 85 $\,V_{AC}$ up to 460 V $_{AC}$, the X8 power supply provides maximum flexibility and versatility in any power distribution design. Power Load Balancing with Power Factor Correction enhances efficiency in power distribution.

Smart Rails Management increases efficiency by means of the dynamic rails modulation.

The legendary Powersoft Green Audio Power * technologies improves efficiency and minimizes the 'carbon footprint' and the operational costs.

New standard of quality and usability

Flexible routing/mixing provided by the internal 8x8 input/output matrix, allows the user to mix and route analog and digital I/O.

Easy plug-and-play Dante™* networking allows easy routing of the signal from any node within the network to Powersoft X8.

8 input channels with physical analog and digital AES3 connectors and 2 redundant Dante™* connection provide maximum flexibility. Improved reliability thanks to the customizable input backup policy that allows to automatically switch input source in case of signal failure.

Complete user interface integrated into Armonía Pro Audio Suite™. WiFi remote monitoring through smartphone and tablet.

Highly integrated

Top-grade DSP with high dynamic range and extensive feature set. Multi-stage signal processing: innovative solutions for modeling speakers behaviour and power handling.

Input and output IIR, FIR, IIR+FIR equalizers and raised-cosine filters. Complete sets of limiters: peak, RMS voltage, RMS current, and $TruePower^{TM}$.

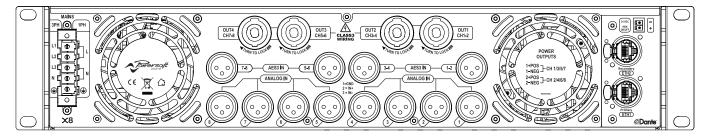
Compensation of the speaker cable losses with Active DampingControl $^{\mathbb{M}}$. Even more reliabile

Full protection circuitry: over/under AC voltage; troublesome signals (clipping, VHF, long-term RMS); DC; thermal; short circuit; mute at power on/off.

^{*} DANTE version only

X8

8-Channel High Performance Amplifier Platform



Specifications

Channel Handling	
Number of output channels	8 mono, bridgeable per ch. pair
Number of input channels:	
Analog	8 (8x XLR)
AES3	8 (4x XLR)
Dante™*	16 (2x RJ45)

* DANTE version only

Audio	
Output Noise A-Weighted @ 8 Ω - Analog to Analog / Digital to Analog	< -70.0 dBV
Dynamic Range A-Weighted @ 8 Ω - Analog to Analog / Digital to Analog	114,3 dB
Damping Factor @ 8 Ω, 20Hz - 500Hz	> 5000
Slew Rate (input filter bypassed)	> 50 V/μs
Frequency Response (-3 dB , 1 W @ 8 Ω)	5 Hz - 30 kHz
Crosstalk (1 kHz)	-70 dB
THD+N (from 0.1 W to Full Power)	< 0.5% (typical < 0.01%)
DIM (from 0.1 W to Full Power)	< 0.5% (typical < 0.01%)
Input Impedance	$20~k\Omega$ Balanced
Input Acceptance	+27 dBu

DSP	
AD converters	24 Bit Tandem™ @ 96 kHz 129 dB Dynamic Range - 0.00056 % THD+N
DA converters	24 Bit Tandem™ @ 192 kHz 121 dB Dynamic Range - 0.00084 % THD+N
Sample rate converter	24 Bit @ 44.1 kHz to 192 kHz 140 dB Dynamic Range - 0.0001 % THD+N
Internal precision	40 bit floating point
Delay	2 s + 100 ms for time alignment
Equalizer	Raised-cosine, custom FIR, parametric IIR: peaking, hi/lo-shelving, all-pass, band-pass, band-stop, hi/lo-pass
Crossover	linear phase (FIR), hybrid (FIR-IIR), Butterworth, Linkwitz-Riley, Bessel: 6 dB/oct to 48 dB/oct (IIR)
Limiters	TruePower™, RMS voltage, RMS current, Peak limiter
Damping control	Active DampingControl™

Construction	
Dimensions	483 mm x 89 mm x 495 mm (19.0 in x 3.5 in x 19.5 in)
Weight	24 kg (52.9 lb)

Output Stage	
Maximum output power per channel @ 8 Ω	1600 W
Maximum output power per channel @ 4 Ω	3000 W
Maximum output power per channel @ 2.7 Ω	4000 W
Maximum output power per channel @ 2 Ω	5200 W
Maximum output power @ 8 Ω Bridged	6000 W
Maximum output power @ 4 Ω Bridged	10400 W
Peak total output, all channels driven	40000 W
Maximum unclipped output voltage	175 V _{peak}
Maximum output current	130 A peak

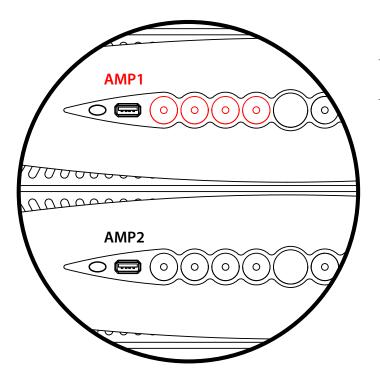
The power figure is calculated by driving and loading symmetrically all the channels: uneven loads allow to achieve highest performance.

AC Mains Power		
Single Phase		
Nominal Voltage	100 - 240 V @	50/60Hz
Operating Range	90 - 264 V from [OC to 200 H
Power Factor 1/8 Maximum Output Power @ 4 Ω	> 0	.9
Current Draw 1/8 Maximum Output Power @ 4 Ω	32 A _{rms} @100V	18 A _m @240\
Suggested circuit breaker	C3	2

Suggested circuit breaker	C32	
Three Phase		
Nominal Voltage	173Y /100 - 416Y /240 V	
	3~, 3W+N+PE / 3W+PE	
Power Factor 1/8 Maximum Output Power @ 4Ω	> 0.9	
Current Drawn from Each Single Phase 1/8 Maximum Output Power @ 4 Ω	12 A _{rms} @ 173Y	6 A _{rms} @ 416Y
Suggested circuit breaker (per phase)	C16	
Idle Consumption (all AC MAINS cases)	< 200 W	
Max consumption (all AC MAINS cases)	< 5000 W	

Note: 173Y/100 V = 173 V phase-to-phase, 100 V phase-to-neutral

Thermal		
Operating temperature	0° - 45°C / 32° - 113°F	
Cooling	Fan, continuously variable speed, teperature controlled	
Thermal dissipation		
Single phase	115V	230V
1/8 Maximum Output Power @ 8 Ω	2117 BTU/h	1946 BTU/h
1/4 Maximum Output Power @ 8 Ω	3892 BTU/h	2875 BTU/h



1.2 - Touring Rack, SPEAKER OUTPUT A,B,C & D

The *PowerPatch* unit combines all the 16 amplifier output channels in four mains sections: **SPEAKER OUTPUT** *A,B,C & D*. Each features a single NL8 and two NL4 speakON connectors and refers to a group of four output channels, respectively:

SPEAKER OUTPUT A AMP1 CH 1 to 4

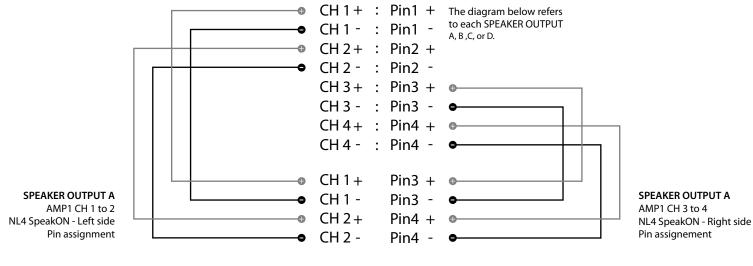
SPEAKER OUTPUT B AMP1 CH 5 to 8

SPEAKER OUTPUT C AMP2 CH 1 to 4

SPEAKER OUTPUT A AMP1 CH 5 to 8

SPEAKER OUTPUT A

AMP1 CH 1 to 4 NL8 speakON - Pin assignment



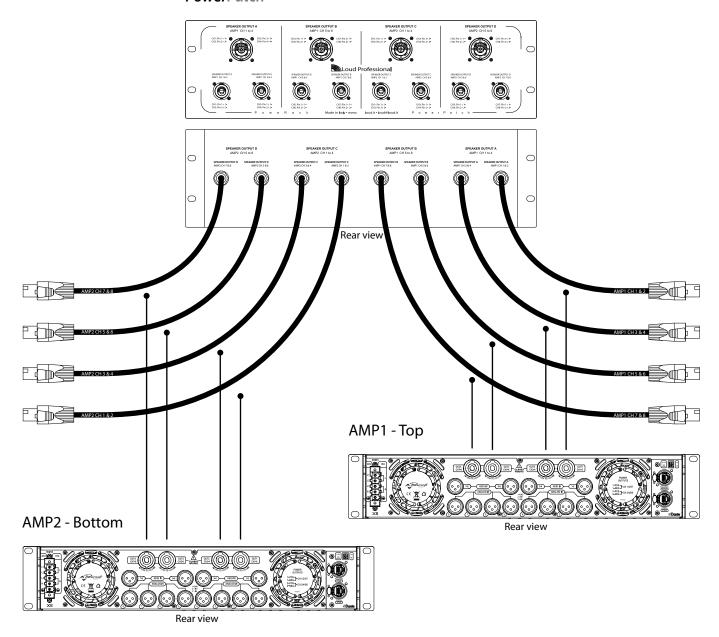




Attention! Do not open risk of electric shock, do not leave the rack exposed to the elements.

1.3 - PowerPatch, NL4 speakON details

PowerPatch

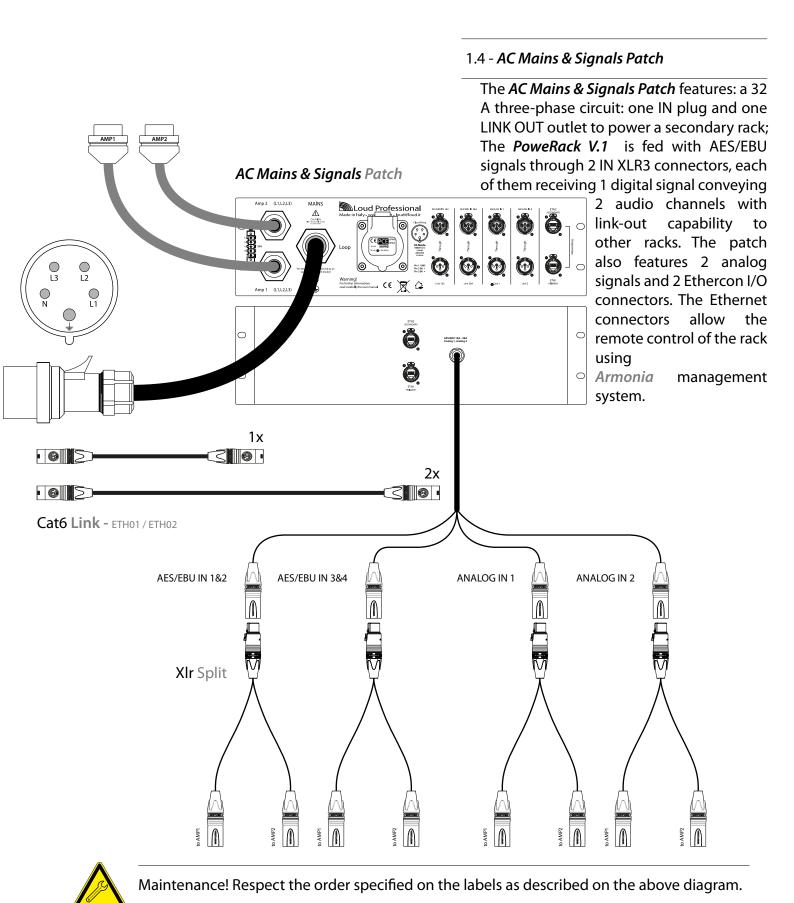




Maintenance! Respect the order specified on the labels as detailed on the above diagram.

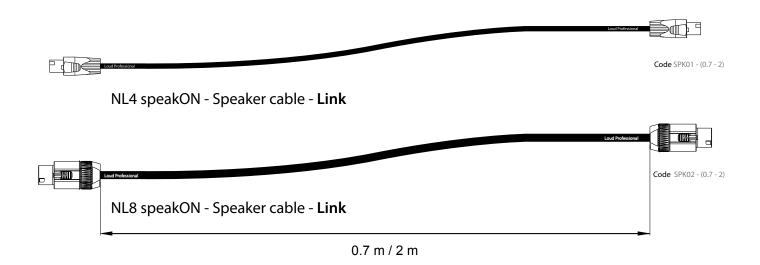


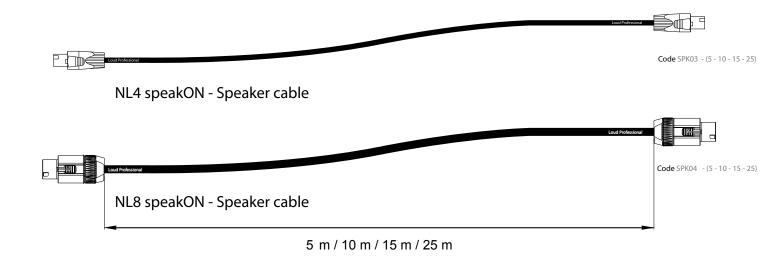
Potential risk of damages! No other wiring system is accepted.



1.0 - Speaker cables & cable accessories

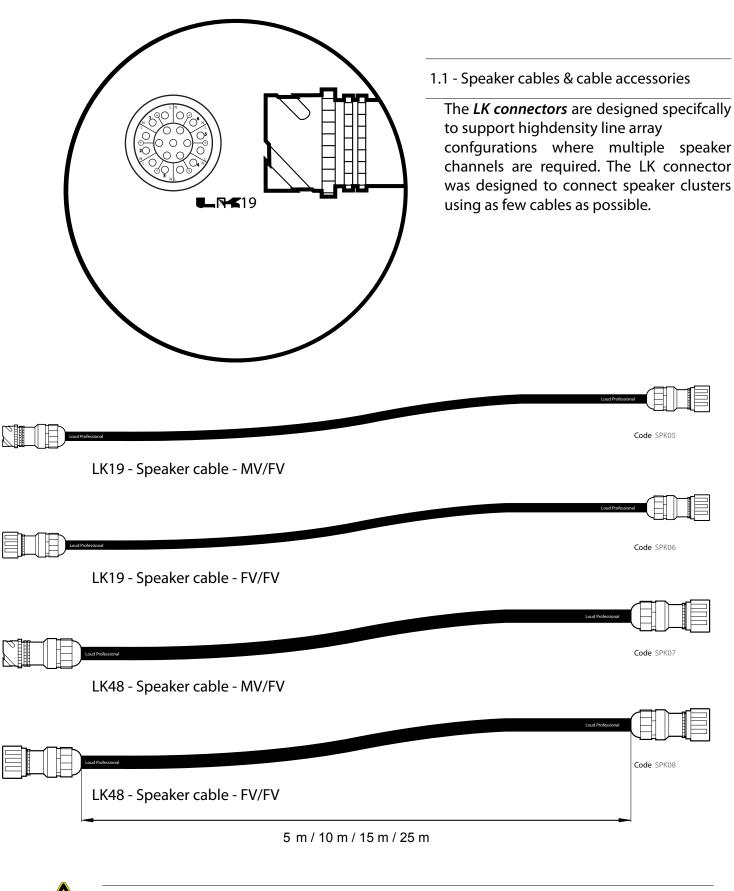
Loud Professional provides a complete range of speaker cables for many system configurations. Different lenghts, adapters and split boxes allow to always give the right wiring solution.





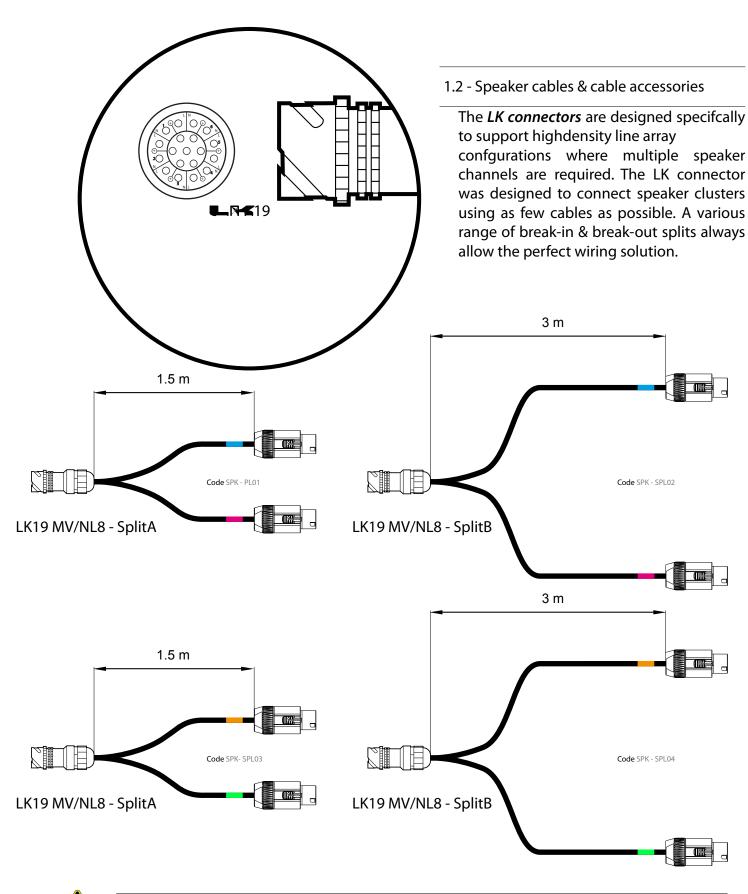


Potential risk of damages! No other wiring system is accepted.

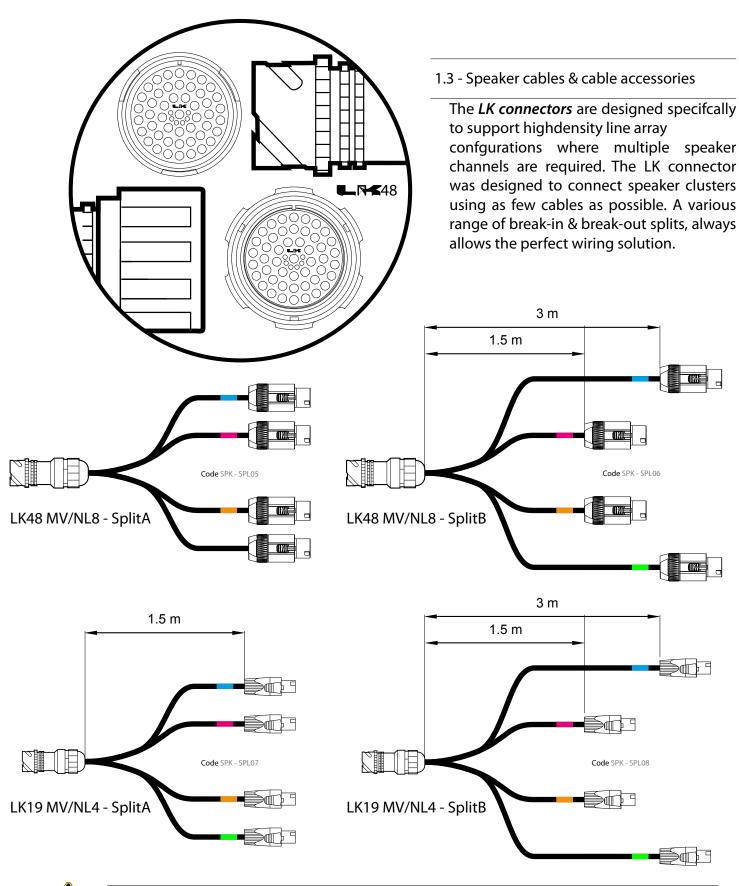




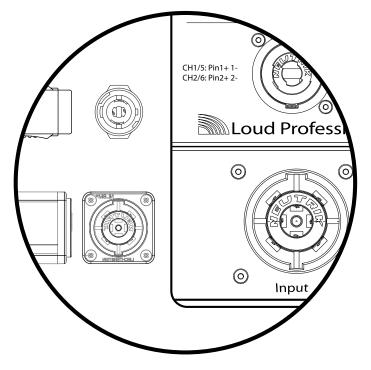
Potential risk of damages! No other wiring system is accepted.



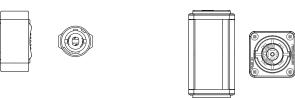




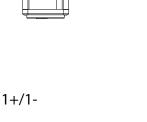




NL4 Adapter Code SPK - AD01 **NL8 Adapter** Code SPK - AD02



311 Abot Nebridapter Code 311 Aboz



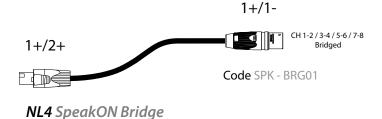
CH2/4/6/8

Code SPK - CNR01

NL4 SpeakON Converter

2+/2-

0.3 m



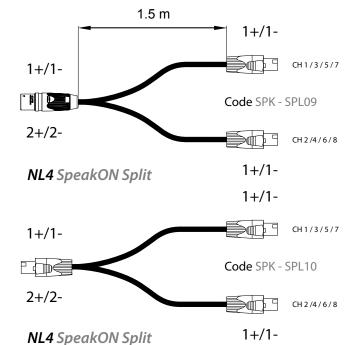
1.4 - Speaker cables & Cable accessories

Loud Professional provides a complete range of speaker cables for many system configurations. Different cable lenghts, NL4/NL8 Adapters, Split & Split Boxes always allow to give the best wiring solution.

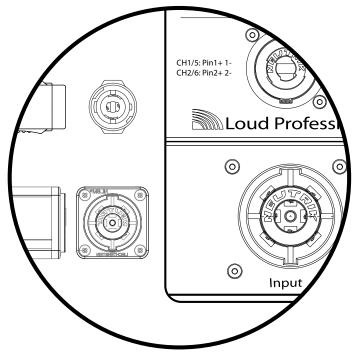
NL4 SpeakON Converter converts the the NL4 ouput 2+/2- pins of each SPEAKER OUTPUT section A, B, C or D into 1+/1- pins of the same output section (refer to pag.30).

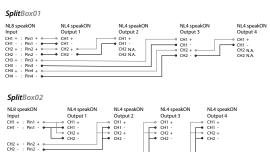
NL4 SpeakON Bridge allows to bridge pairs of output channels of each NL4 SPEAKER OUTPUT section A, B, C or D (refer to pag.30).

NL4 SpeakON Split separates/combines pair of output channels that refer of each NL4 SPEAKER OUTPUT section A, B, C or D.













1.5 - Speaker cables & Cable accessories

Loud Professional provides a complete range of speaker cables & accesories for many system configurations. Different cable lenghts, NL4/NL8 Adapters, Split & Split Boxes always give the best wiring solution.

SplitBox01 splits each NL8 speakON connector (setions A, B, C or D) into four NL4 connectors, dividing the output channels that refer to it.

The NL4 Output 1 & 3 also return pairs of channels: 1 & 2 or 5 & 6 and 3 & 4 or 7 & 8.

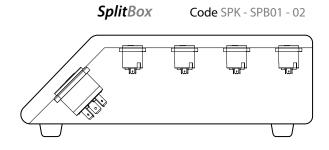
SplitBox02 combines pairs of positive pins (1+, 2+) and negative pins

(1-, 2-) that refer to each Output

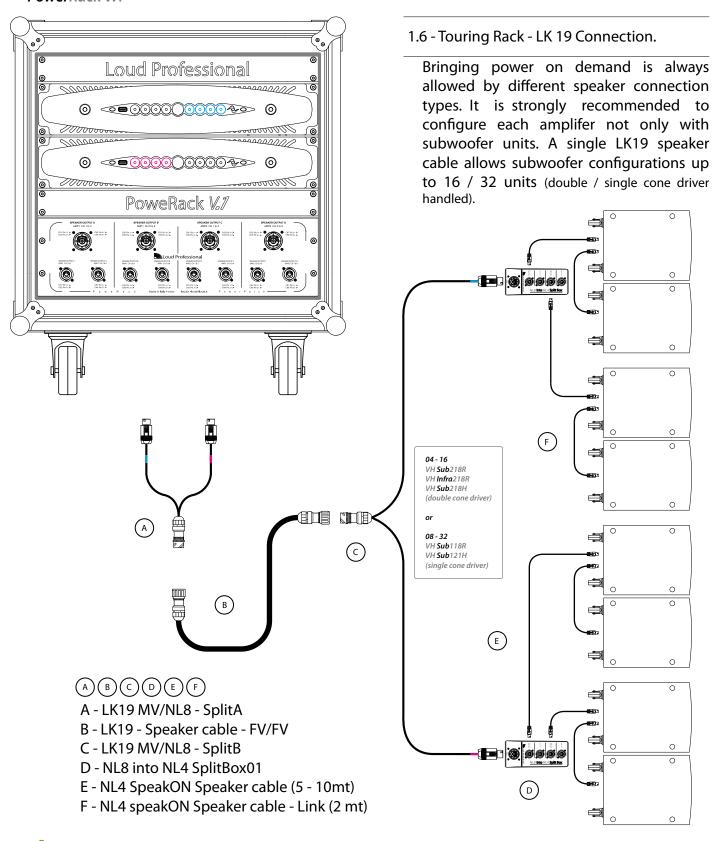
connectors 1, 2, 3 or 4, into the same NL8 Input connector.

It's particularly usefull when setting a double cone driver system, as the VH Sub218R, for subwoofer cardioid configurations.

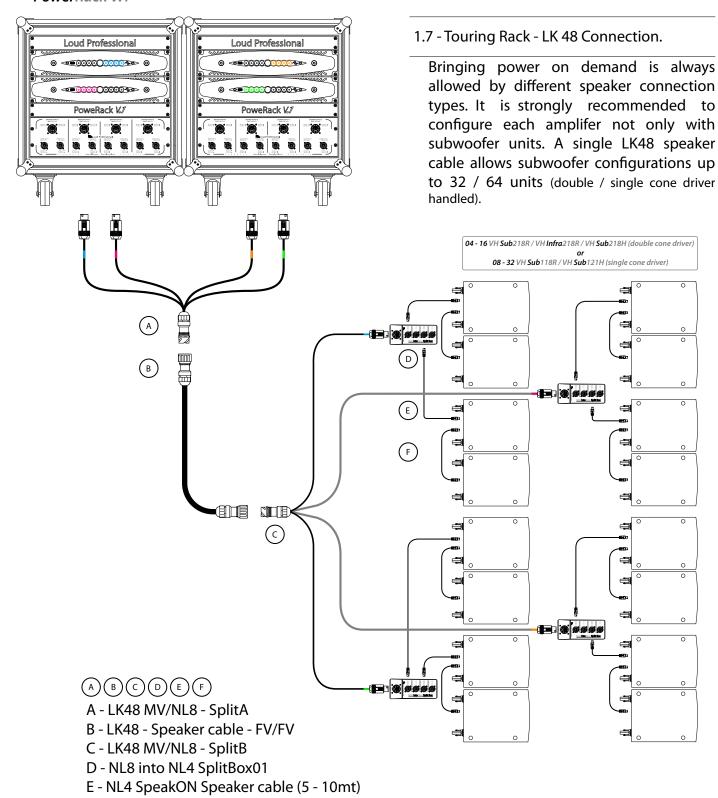
The Splitbox02 allows to use only one amplification channel for each phase reversed subwoofer.







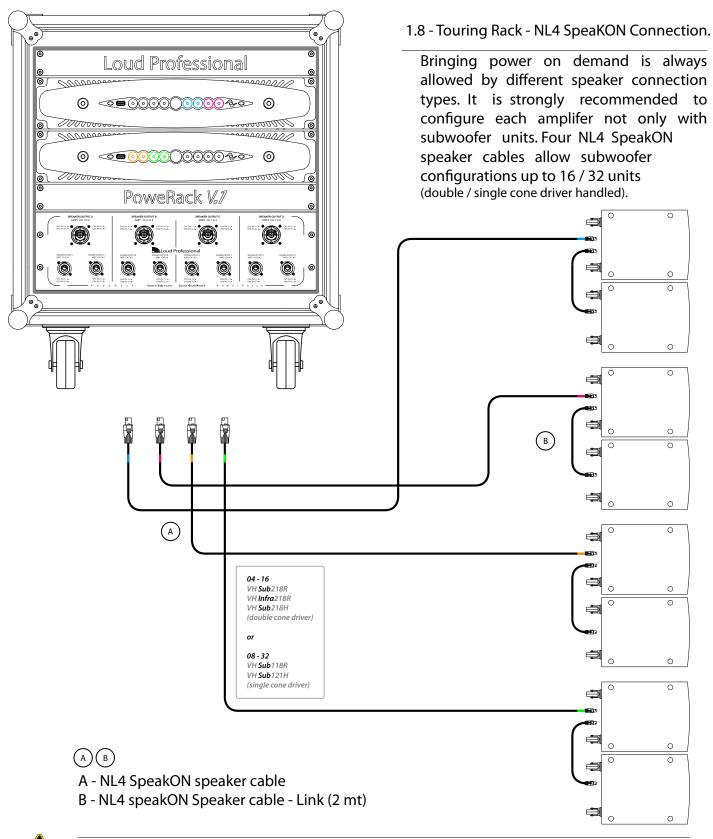




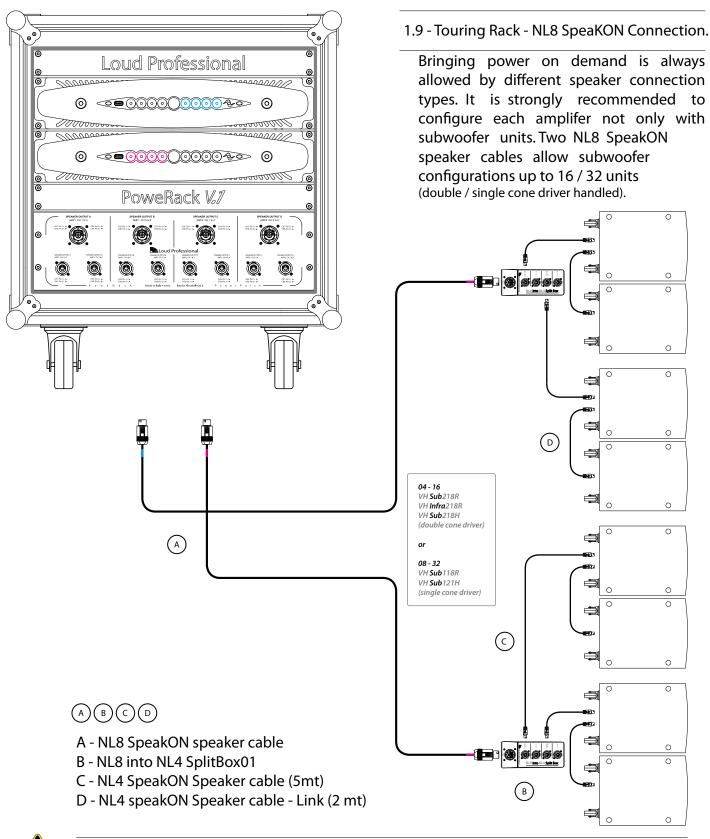


Potential risk of damages! No other wiring system is accepted.

F - NL4 speakON Speaker cable - Link (2 mt)

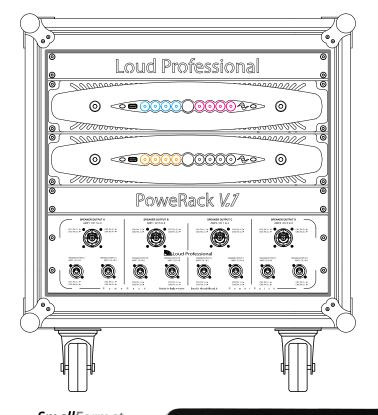








Armonia V_2.11.4

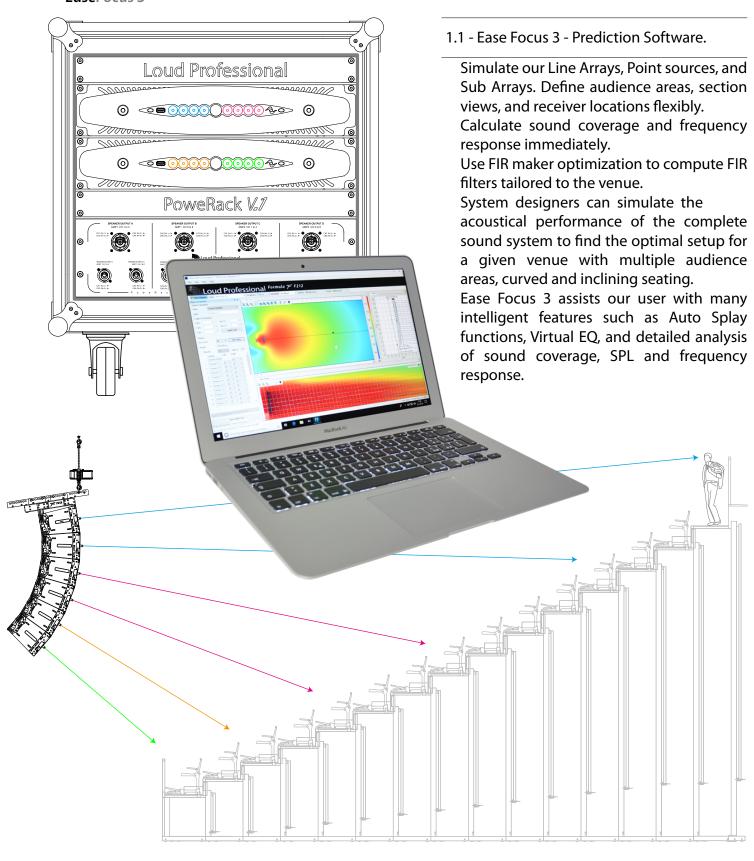


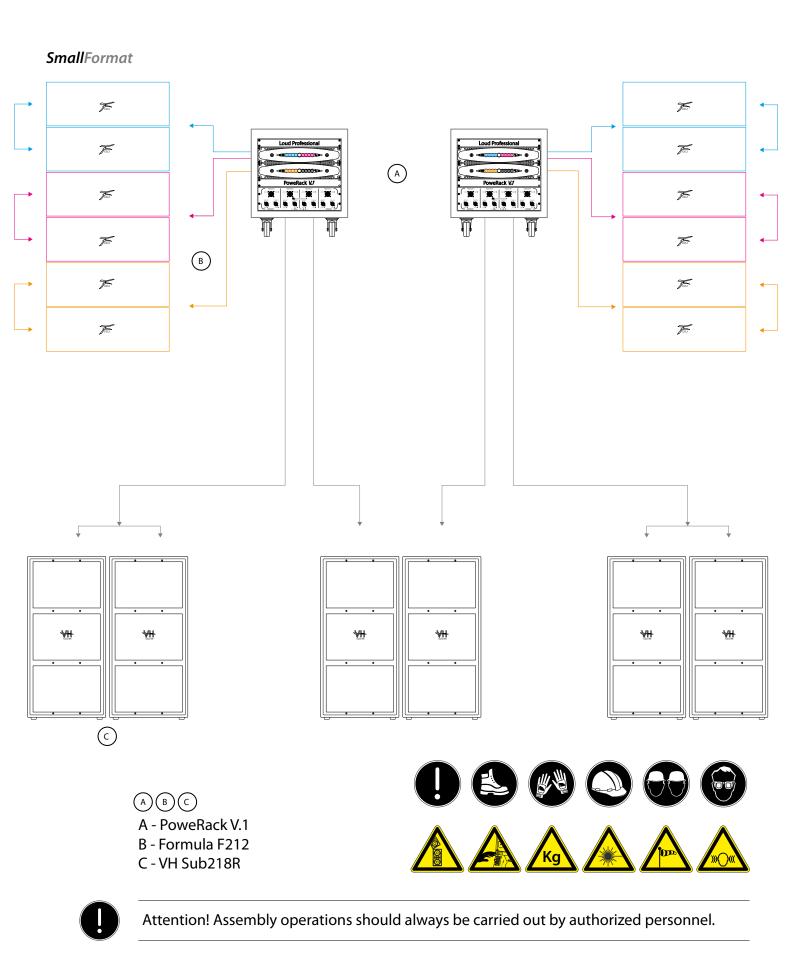
1.0 - Armonia - Management Software.

Thought to be the most efficient audio management software on the market, Armonia, intuitive and interactive, is the perfect fit for all everyday need. Factory speaker presets, dedicated settings, special system configurations and sophisticated projects can be easily uploaded on the amplifiers, more quickly getting the system ready to work, always obtaining the best performaces for every application.



EaseFocus 3





MediumFormat × \bigcirc \bigcirc (c)



A - PoweRack V.1

B - Formula F212

C-VH Sub218R



















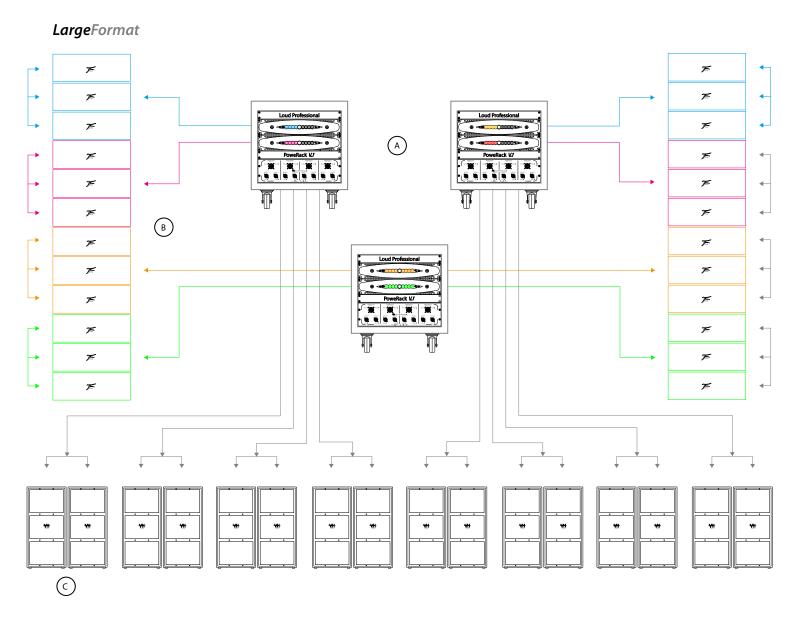








Attention! Assembly operations should always be carried out by authorized personnel.







B - Formula F212

C-VH Sub218R



















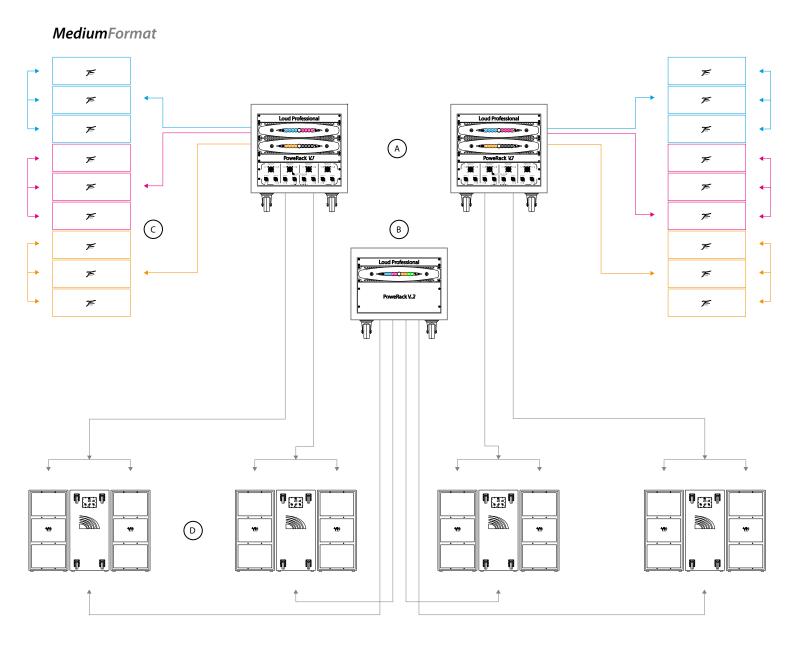








Attention! Assembly operations should always be carried out by authorized personnel.





- A PoweRack V.1
- B PoweRack V.2
- C Formula F212
- D-VH Sub218R



















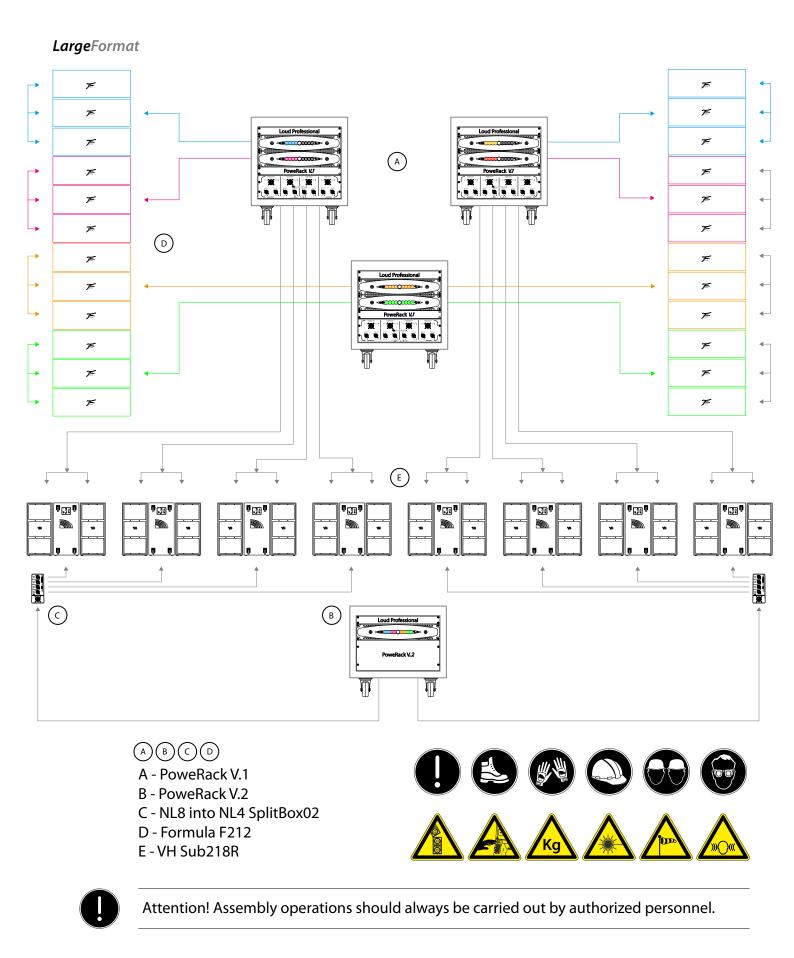








Attention! Assembly operations should always be carried out by authorized personnel.



X8

8-Channel High Performance Amplifier Platform

8 x 1.500 @ 8 Ω / 8 x 3.000 @ 4 Ω / 8 x 5.200 @ 2 Ω





X4L

4-Channel High Performance Amplifier Platform

4 x 4.800 @ 8 Ω / 4 x 6.800 @ 4 Ω / 4 x 8.200 @ 2 Ω





X4

4-Channel High Performance Amplifier Platform

4 x 1.500 @ 8 Ω / 4 x 3.000 @ 4 Ω / 4 x 5.200 @ 2 Ω





T602

2-Channel High Performance Amplifier Platform

2 x 1.300 @ 8 Ω / 2 x 2.500 @ 4 Ω / 2 x 3.000 @ 2 Ω





T604

4-Channel High Performance Amplifier Platform

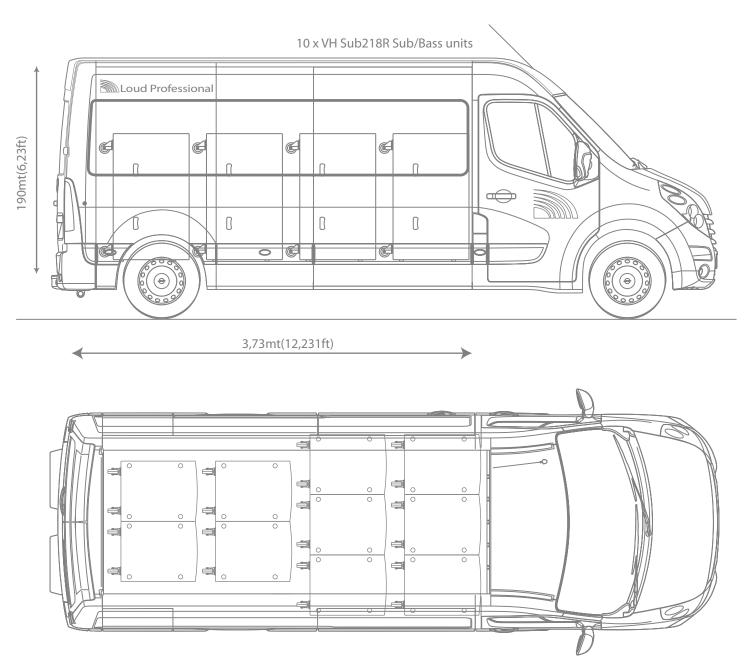
4 x 1.250 @ 8 Ω / 4 x 1.500 @ 4 Ω / 4 x 1.500 @ 2 Ω







Van Loud Pack

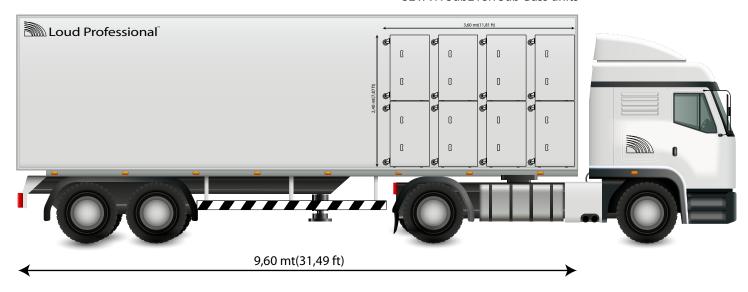


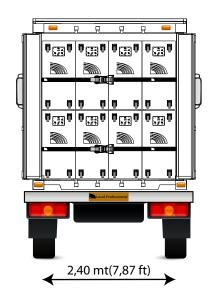
Loud Professional



Truck Loud Pack

32 x VH Sub218R Sub-Bass units



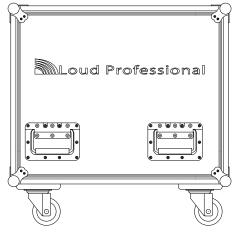




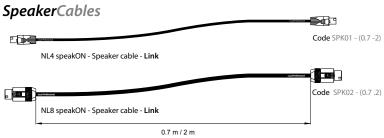
Loud Professional

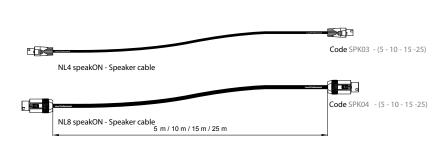


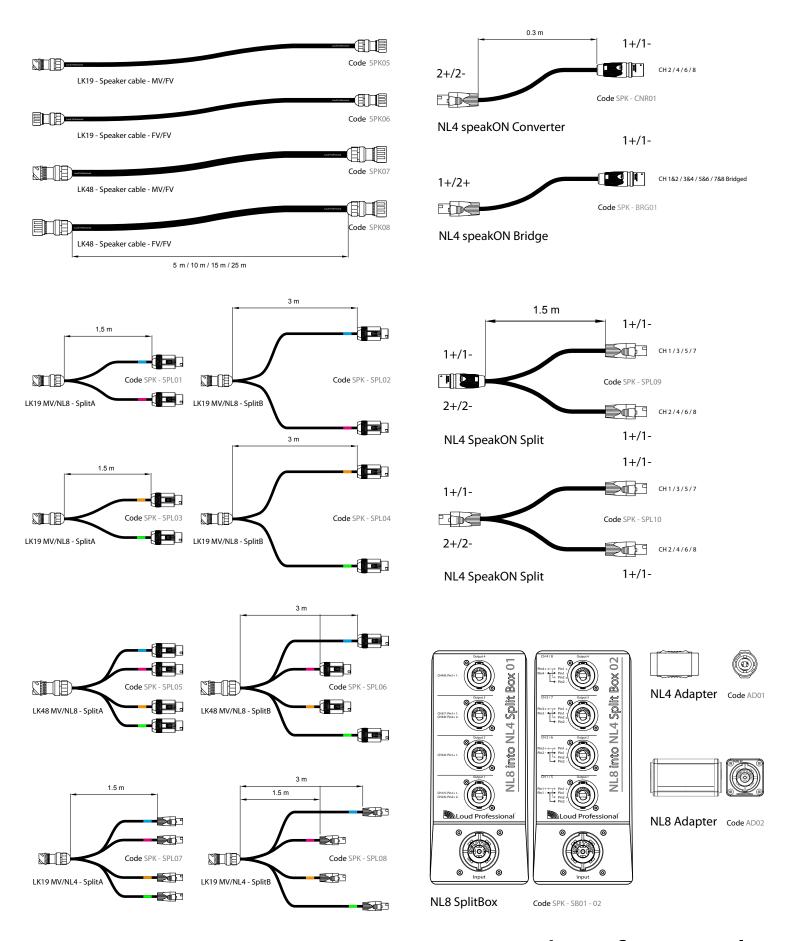
PoweRack V.1 Code PWR01

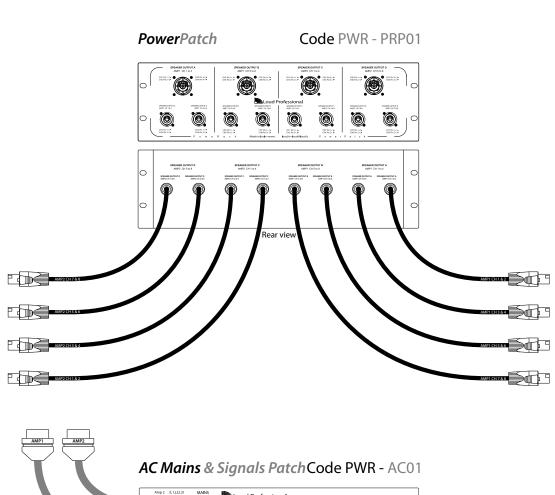


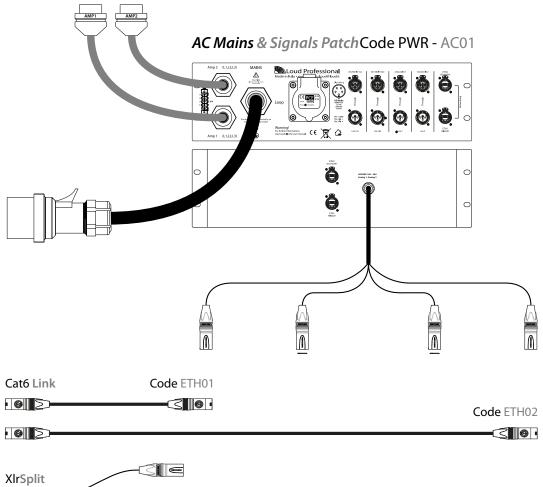


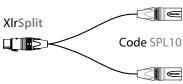














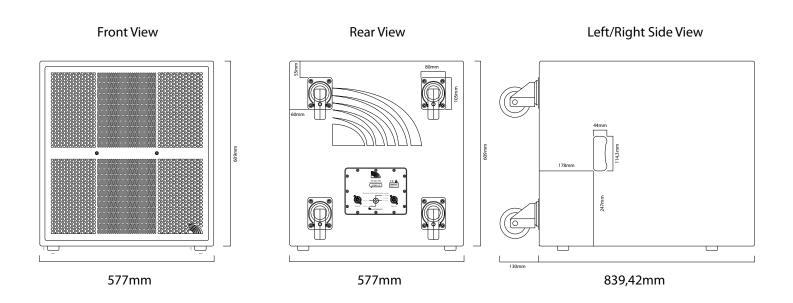
Loud Professional

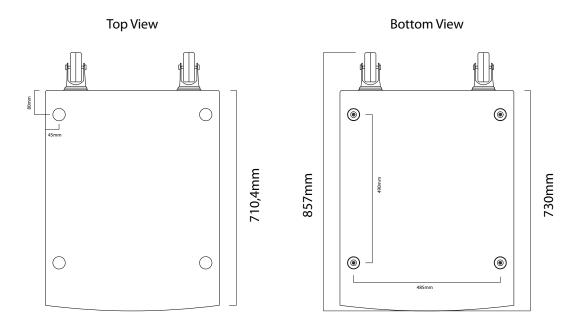


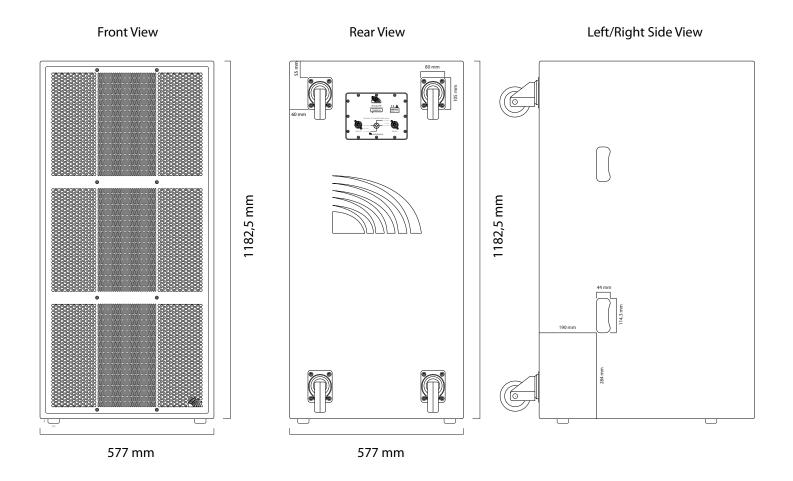


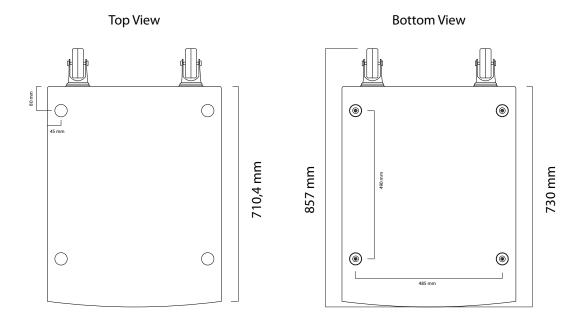




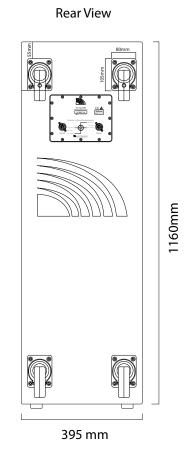


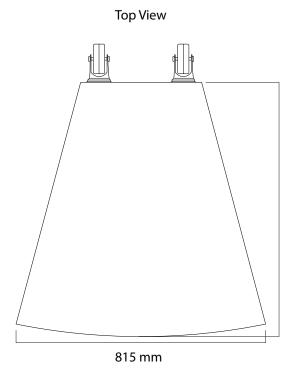




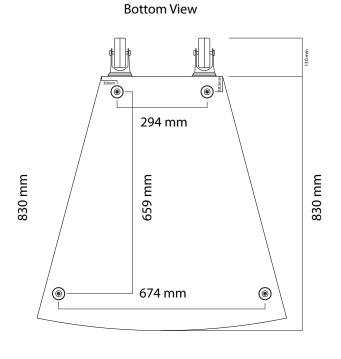


Front View

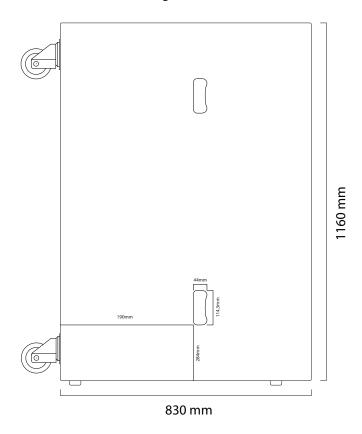




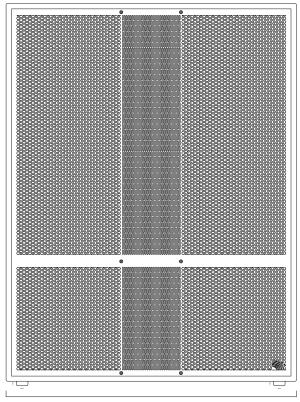
815 mm



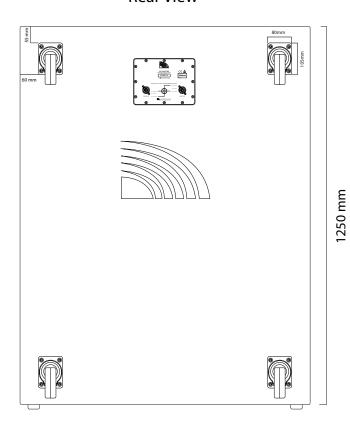
Left/Right Side View



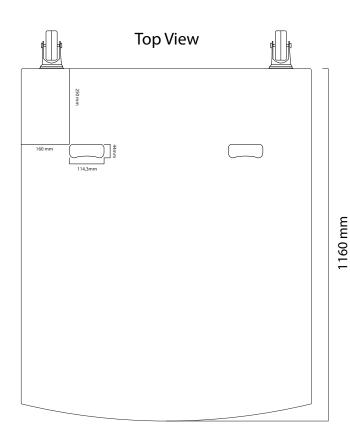
Front View

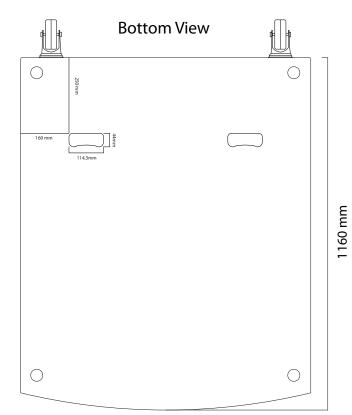


Rear View

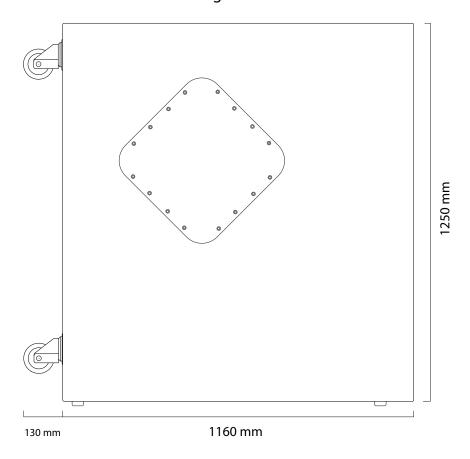


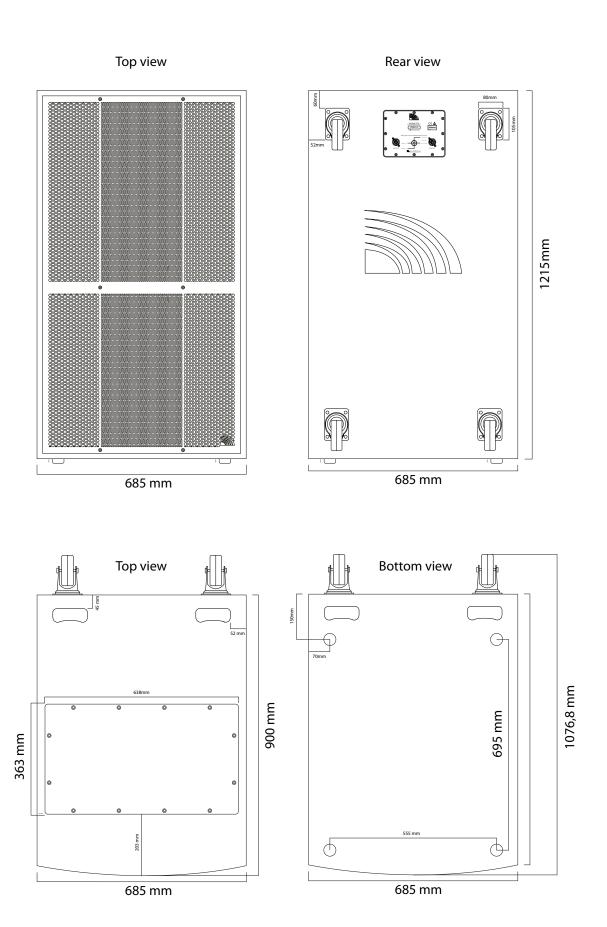
960 mm



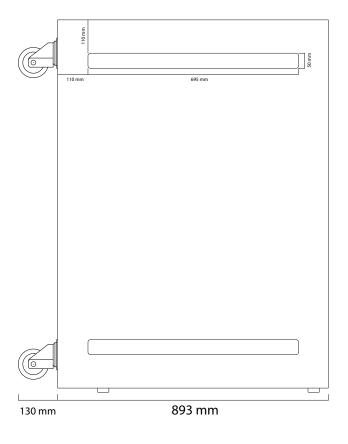


Left / Right Side View





Left / Right Side View







Dichiarazione di conformità

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In qualità di legale rappresentante della ditta LOUD PRO S.R.L.

con sede in Via Sebino 29 - 00199 - Roma (RM)

Partita IVA: 14234841006

Dichiara

che i prodotti della famiglia: Loud Professional VH Subwoofer Series

modello: VH Sub118R, VH Sub218R, VH Infra218R, VH Sub218H, VH Sub121H

con fabbricazione nel corso dell'anno: 2021 e precedenti

sono stati fabbricati rispettando le seguenti direttive e norme:

- Direttiva 2014/35/UE nota come "Direttiva bassa tensione"
- Direttiva 2014/30/UE nota come "Direttiva compatibilità elettromagnetica"
- Direttiva 2011/65/CE nota come "RoHS"
- Direttiva 2012/19/UE nota come "RAEE"
- Direttiva 2001/95/CE nota "Sicurezza generale dei prodotti"
- EN 55103-1:2009 /A1:2012
- EN 55103-2:2009 /IS:2012
- EN 60065:2014 /AC:2016

sono quindi conformi alle direttive ed alle normative vigenti.

La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.

Data: 01/01/2021

Firma: Value Olem



Via Lauro, 95 Cadoneghe Padova Italy

Consulenti e Periti per : Guardia di Finanza, Tributaria, Autorità Doganali, Carabinieri, Polizia di Stato, Unioncamere, Tribunali.

L'analisi dei rischi, il manuale e la documentazione che costituisce il fascicolo tecnico è stata verificata dall'ing. Renato Carraro

Via Sebino 29 00199 Roma, Italia

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