



# L-ARRAY SERIES

## *User's Manual*

### **L-ARRAY 28HA/18SA**

ACTIVE LINE ARRAY SYSTEM

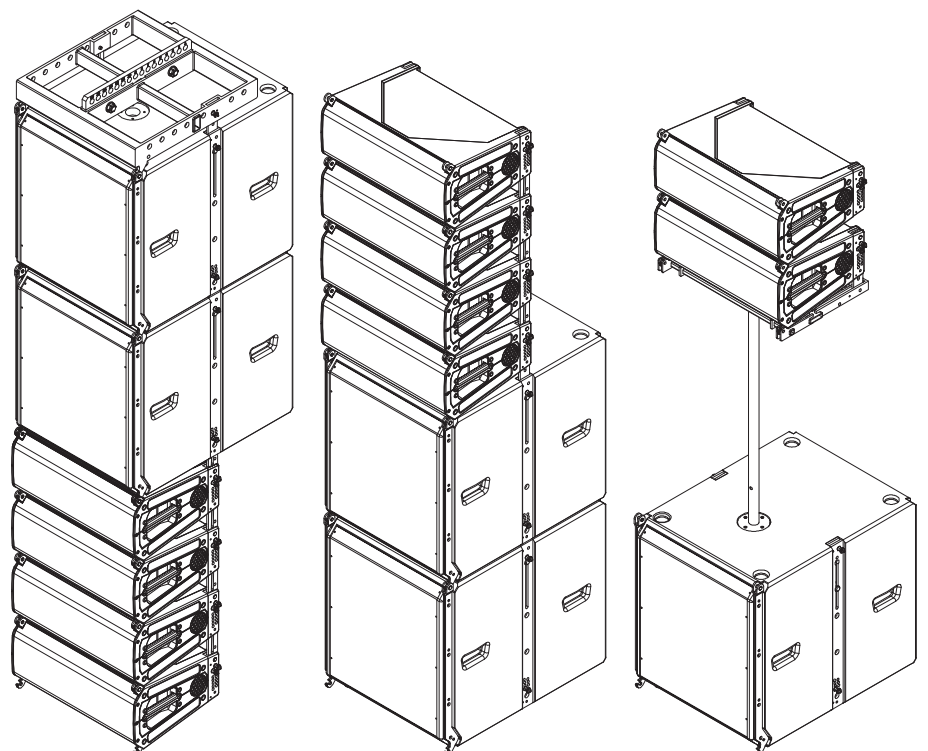
**8"**

Speaker Cabinet



**18"**

Speaker Cabinet



## Important Safety Instructions



TO REDUCE THE RISK OF ELECTRIC SHOCK PLEASE DO NOT REMOVE THE COVER OR THE BACK PANEL OF THIS EQUIPMENT. THERE ARE NO PARTS NEEDED BY USER INSIDE THE EQUIPMENT. FOR SERVICE, PLEASE CONTACT QUALIFIED SERVICE CENTERS.



This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages in the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock or death.



This symbol, wherever used, alerts you to important operating and maintenance instructions. Please read.



Protective Ground Terminal



AC mains (Alternating Current)



Hazardous Live Terminal

ON: Denotes the product is turned on.

OFF: Denotes the product is turned off.

### CAUTION

Describes precautions that should be observed to prevent damage to the product.

1. Read this Manual carefully before operation.
2. Keep this Manual in a safe place.
3. Be aware of all warnings reported with this symbol.
4. Keep this Equipment away from water and moisture.
5. Clean it only with dry doth. Do not use solvent or other chemicals.
6. Do not damp or cover any cooling opening. Install the equipment only in accordance with the Manufacturer's instructions.
7. Power Cords are designed for your safety. Do not remove Ground connections! If the plug does not fit your AC outlet, seek advice from a qualified electrician. Protect the power cord and plug from any physical stress to avoid risk of electric shock. Do not place heavy objects on the power. This could cause electric shock or fire.
8. Unplug this equipment when unused for long periods of time or during a storm.
9. Refer all service to qualified service personnel only. Do not perform any servicing other than those instructions contained within the User's Manual.
10. To prevent fire and damage to the product, use only the recommended fuse type as indicated in this manual. Do not short-circuit the fuse holder.

### WARNING

To reduce the risk of electric shock and fire, do not expose this equipment to moisture or rain.



Dispose of this product should not be placed in municipal waste and should be separate collection.

Before replacing the fuse, make sure that the product is OFF and disconnected from the AC outlet.

11. Move this Equipment only with a cart, stand, tripod, or bracket, specified by the manufacturer, or sold with the Equipment. When a cart is used, use caution when moving the cart/equipment combination to avoid possible injury from tip-over.



12. Permanent hearing loss may be caused by exposure to extremely high noise levels. The US Government's Occupational Safety and Health Administration (OSHA) has specified the permissible exposure to noise level. These are shown in the following chart:

Hours x day	SPL	Example
8	90	Small gig
6	92	Train
4	95	Subway train
3	97	High level desktop monitors
2	100	Classic music concert
1.5	102	
1	105	
0.5	110	
0.25 or less	115	Rock Concert

According to OSHA, an exposure to high SPL in excess of these limits may result in the loss of heat. To avoid the potential damage of heat, it is recommended that Personnel exposed to equipment capable of generating high SPL use hearing protection while such equipment is under operation.

The apparatus shall be connected to a mains socket outlet with a protective earthing connection.

The mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

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**EMI CLASSIFICATION** According to the standards EN 55032 and EN 55035 this equipment is designed and suitable to operate in class B electromagnetic environments. **FCC CLASS B STATEMENT** This device complies with part 15 of the FCC Rules, Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio technician for help.

**WARNING:**

Make sure that the loudspeaker is securely installed in a stable position to avoid any injuries or damages to persons or properties. For safety reasons do not place one loudspeaker on top of another without proper fastening systems. Before hanging the loudspeaker check all the components for damages, deformations, missing or damaged parts that may compromise safety during installation. If you use the loudspeakers outdoor avoid spots exposed to bad weather conditions. Contact TOPP PRO for accessories to be used with speakers. TOPP PRO will not accept any responsibility for damages caused by inappropriate accessories or additional devices. Features, specification and appearance of products are subject to change without notice. TOPP PRO reserves the right to make changes or improvements in design or manufacturing without assuming any obligation to change or improve products previously manufactured.

**Don't forget to visit our website at [www.toppopro.com](http://www.toppopro.com) for more information about this and other Topp Pro products.**

# 1

## Introduction

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Thank you for choosing **TOPP PRO**. The new **TOPP PRO MUSIC GEAR** cabinets have been designed to provide a cost effective high grade solution while maintaining high quality cabinet construction and optimum components.

Our Professional Audio Products are designed and tested by a highly qualified engineering team with more than 20 years of experience. Great care is placed in delivering products with excellent performance, specifications and dependable reliability. Also great emphasis is placed in creating and bringing to market products that can fill multiple applications and also offer customers exceptional value.

Every **TOPP PRO** audio product is strictly tested and complied to very strict standards.

# 2

## Features

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### L-ARRAY 28HA

- 8" 2-way Active Speaker System
- 800W Continious/1600W Program Power/3200W Peak Power
- 130dB Max.
- Frequency Response: 65Hz-20kHz (-10dB)
- 2x 8" Ferrite Woofer , 2" (50.5mm) Voice Coil
- 2x 1" Neodymium Compression Driver, 1.35" (34mm)Voice Coil
- Dispersion(-6dB): 110° Horizontal, 15° Vertical
- Attachment Points: Vertical Splay Adjustable in 1.0° Increments from 0°-12°
- Connections: Input: 1 x Combo-XLR&1/4"Balanced/Unbalanced Line Input  
Output: 1 XLR Thru Balanced line
- Network I/O: Input: 1 x etherCON(RJ45) Input  
Output: 1 x etherCON(RJ45) Output

### L-ARRAY 18SA

- 18" Active Line Array Vented Subwoofer
- 1000W Continous / 2000W Program Power / 4000W Peak Power
- 135dB Max
- Frequency Response:35Hz–150Hz(-10dB)
- 18"Ferrite Woofer, 4"(100mm)Voice Coil with Long Excursion
- Connections: Input: 1 x Combo-XLR&1/4"Balanced/Unbalanced Line Input  
Output: 1 XLR Thru Balanced line
- Network I/O: Input: 1 x etherCON(RJ45) Input  
Output: 1 x etherCON(RJ45) Output

# 3

## Useful Data

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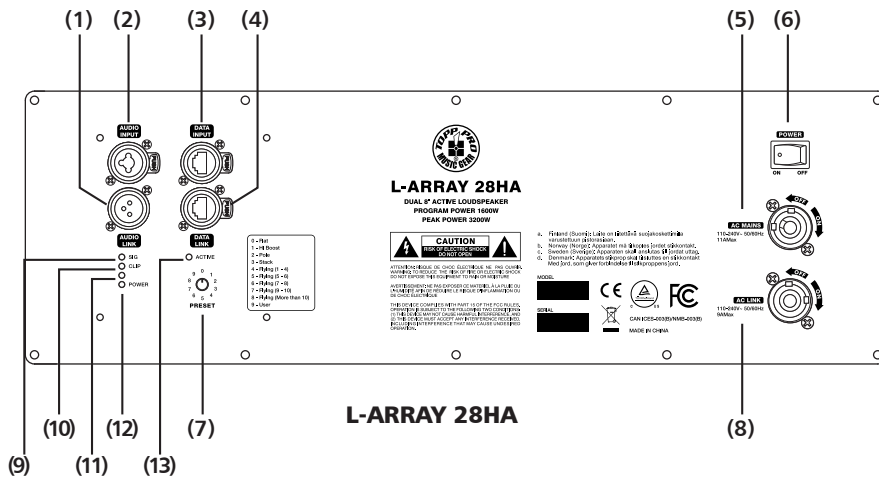
Please write your serial number here for future reference.

<b>Serial Number:</b>
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<b>Date of Purchase:</b>
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<b>Purchased at:</b>
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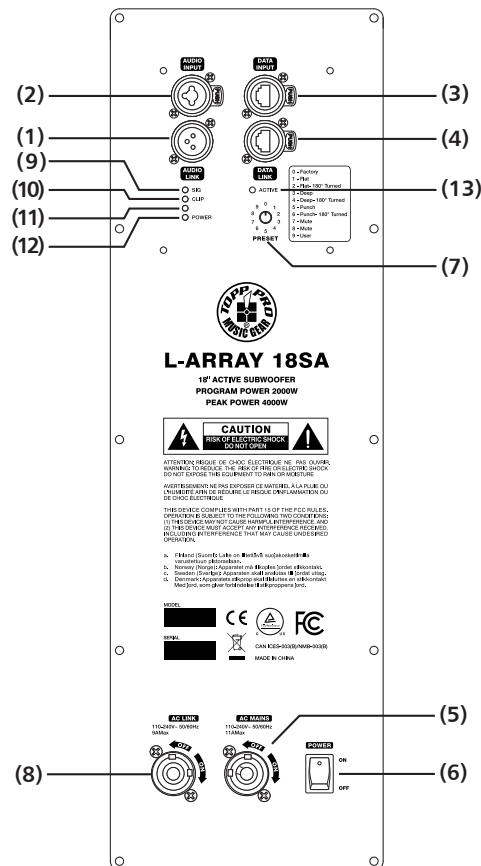
# Back Panel Description



- (1) Audio Link on XLR
- (2) Audio line In with XLR
- (3) Network Date in with RJ45
- (4) Network Date link on RJ45
- (5) AC Mains
- (6) AC Link
- (7) DSP Preset

This 10-position rotary switch makes it possible to select the nine preset equalization curves (selector 0-8). Position 9 ("user") is reserved for advanced operations such as firmware update.

- (8) AC Link
- (9) Signal LED indicator
- (10) Clip LED indicator
- (11) Protect LED indicator
- (12) Power LED indicator
- (13) Active LED indicator



L-ARRAY 18SA

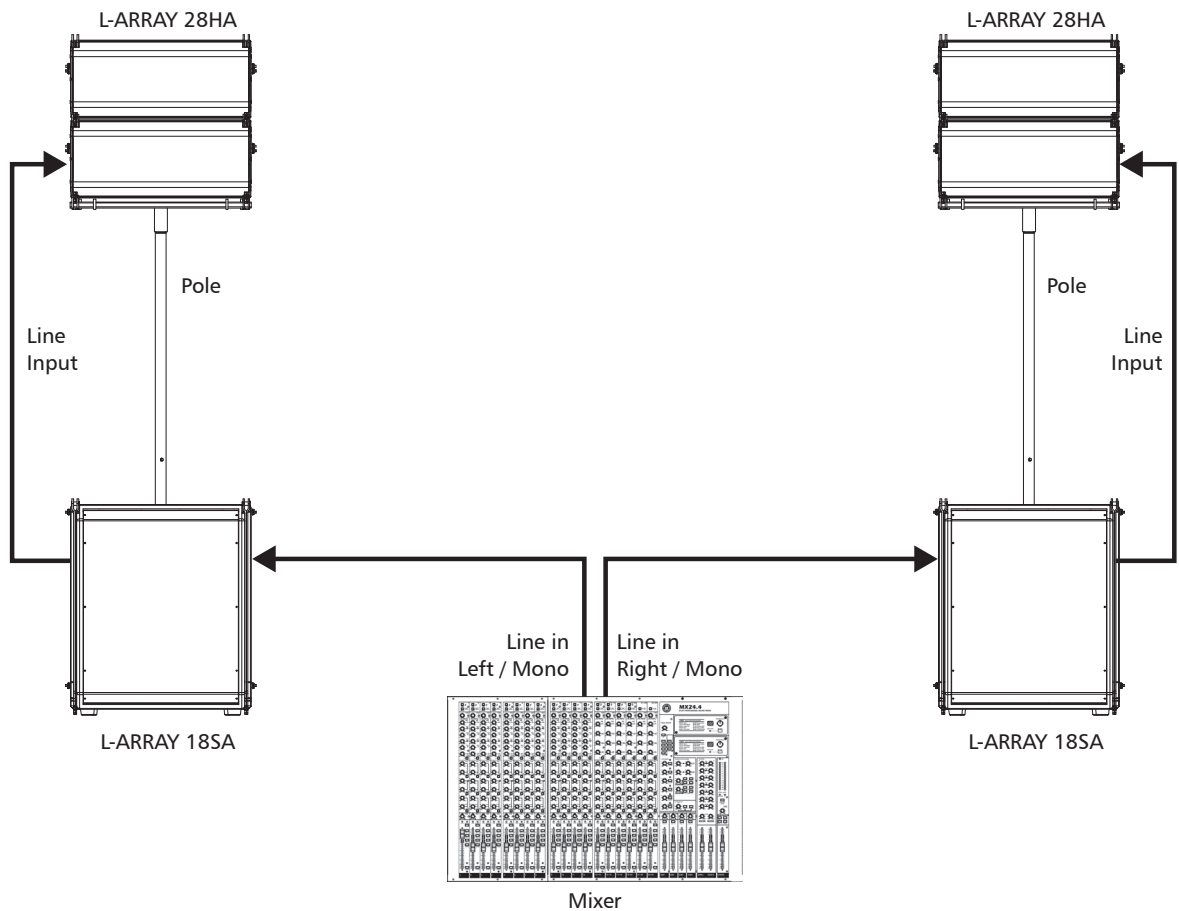
# 5

## Layout of the connector panel L-ARRAY

Make your initial connections with all the equipment powered off, and ensure that all the main volume controls are turned down completely.

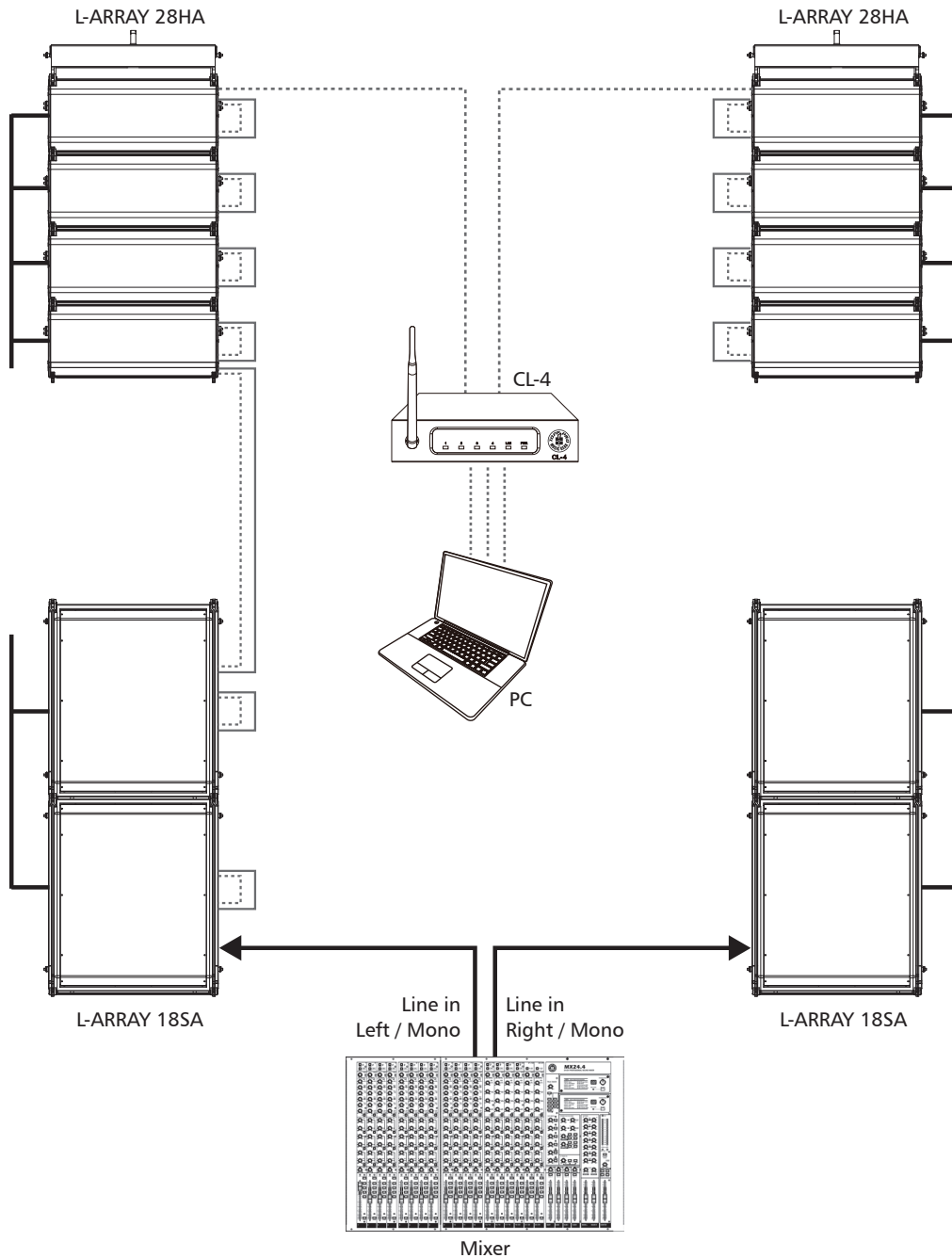
### Two Active Subwoofers & Four Active Satellite Speakers

- 1) Connect one side of the signal cable at your mixer into the Output Left / Right and the other side of the cable into the Line Input of your active subwoofers.  
Connect one side of the network cable at your control center CL-4 and the other side of the cable into the Date input of your active subwoofers.
- 2) Connect one side of another signal cable at your active subwoofers into Out Audio Link Right, and the other side of the cable into the Line Input Left / Right of your active satellite speakers.  
\* If you connect into Out Left / Right and press Bypass switch, the 80Hz HPE will be activated.
- 3) Connect the power cord to main.
- 4) Turn ON your mixer first. then the active speaker cabinets.
- 5) Turn up the volume control of the active speaker cabinets.
- 6) Use PFL function to get the proper input level for the mixer, and adjust the Main Mix Level control to reach the desired output level.
- 7) After use, turn off your active speaker cabinets first, then the mixer.



# Layout of the connector panel L-ARRAY

5



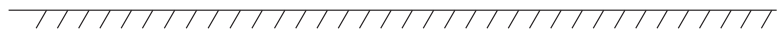
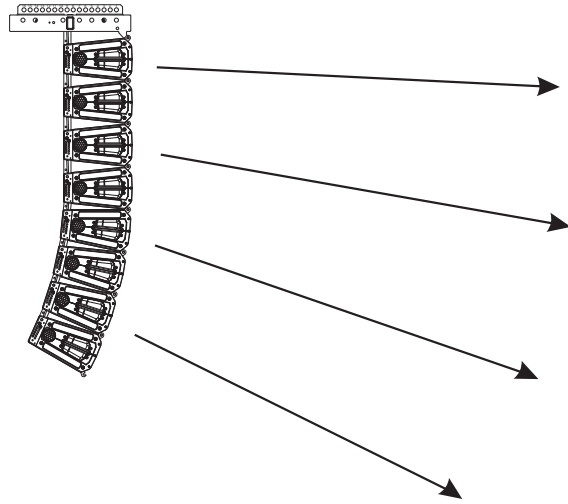
- POWER SUPPLY
- AUDIO CABLE
- - - NETWORK CABLE

# 5

## Layout of the connector panel L-ARRAY

### Medium Array Configuration

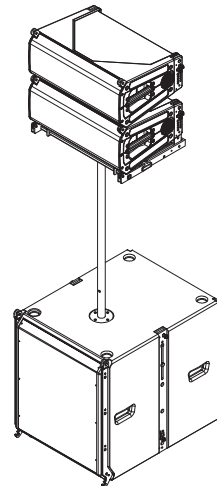
Below is an example of applying the HFC to eight L-ARRAY 28HA's in an array. In this particular configuration, the HFC on the top speaker is set at +3dB, and the bottom speaker 0dB.



### Small Array Configuration

This is an example two L-ARRAY 28HA and one L-ARRAY 18SA in a satellite system. Do not stack more than two L-ARRAY 28HA speakers on the pole.

NOTE: Be sure to lock the two speaker cabinets with the original hardware.



### Array Frame

The following table defines the maximum number of speakers that be suspended using the **FLYING BAR Array Frame**. A security design factor is maintained for the speaker configurations indicated in the table.

Maximum quantity of L-ARRAY 28HA in array (satellite)	2	4	4	6	8	8	16	16
Maximum quantity of L-ARRAY 18SA in array	1	1	2	2	2	0	0	2

### Suspension Safety Warning

Never exceed the maximum recommended speaker cabinet listed on the table.

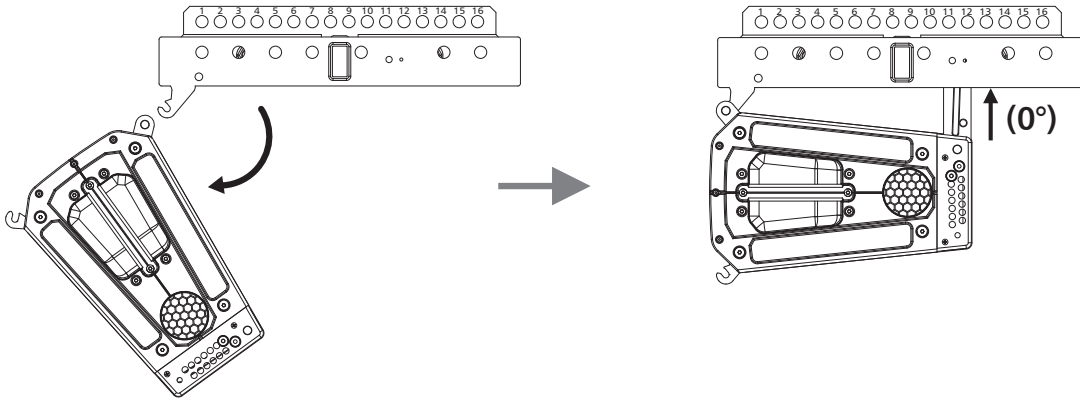
Research and understand the local regulations and requirements of the country where you intend to install the line array. The correct assembly of all associated hardware is required for a safe suspension system. Two point suspension with uniform loading of each lifting location is recommended when using **Array Frame FLYING BAR**.

## Layout of the connector panel L-ARRAY

# 4

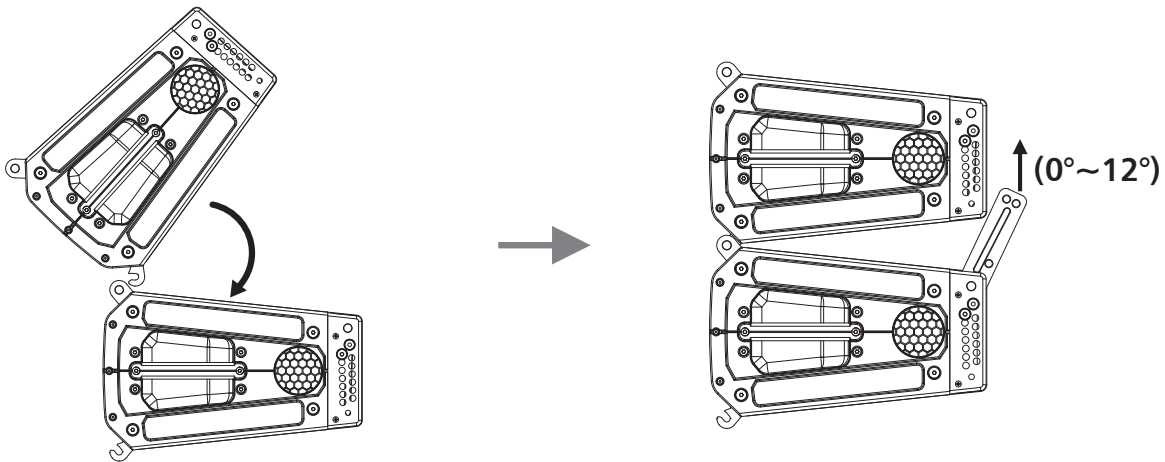
### Array Frame Connection

The FLYING BAR frame is connected to L-ARRAY quick release pins.



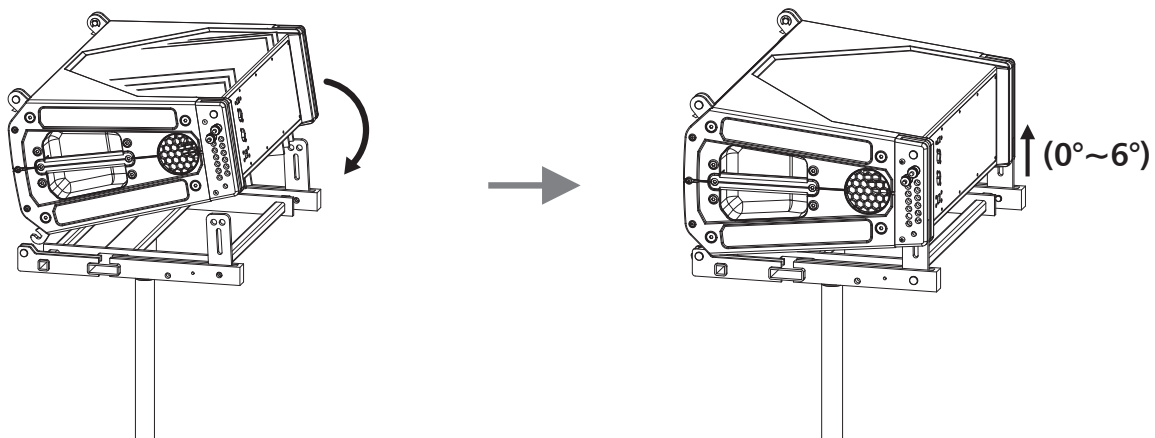
### Locking the loudspeakers together

Any time two or more L-ARRAY18SA and L-ARRAY28HA are arrayed together, they must be mechanically secured to each other. See diagram below for details.



### Array Pole Mount Connection

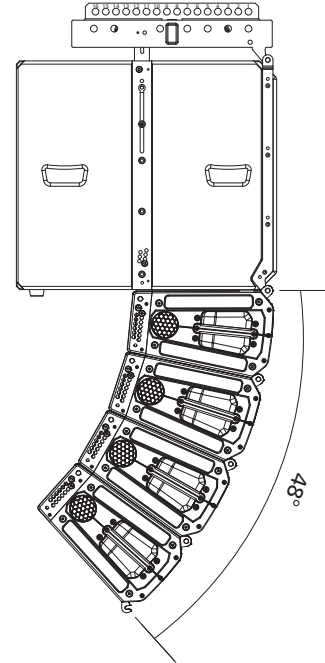
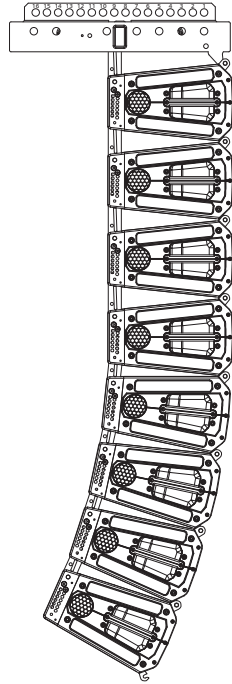
The Pole Mount is connected to L-ARRAY quick release pins.



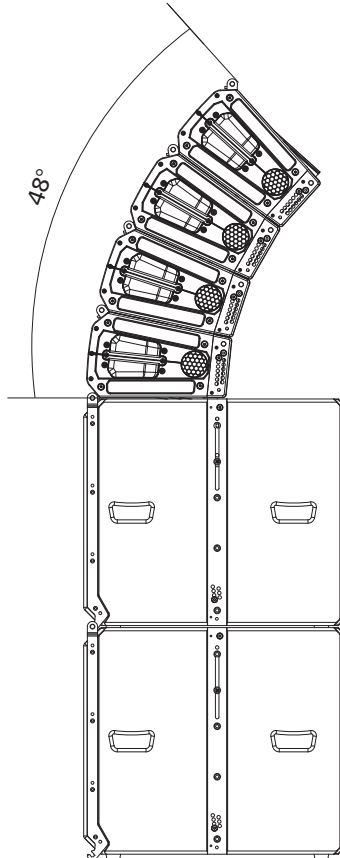
# 5 Layout of the connector panel L-ARRAY

## Deploying the system in Suspension & Compression

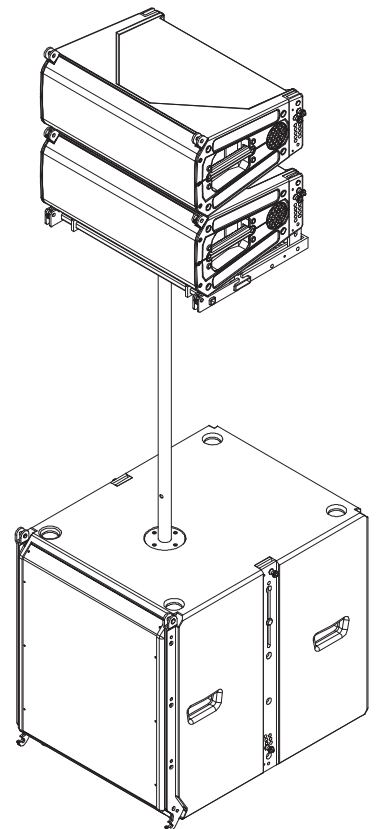
### Suspension



### Stack

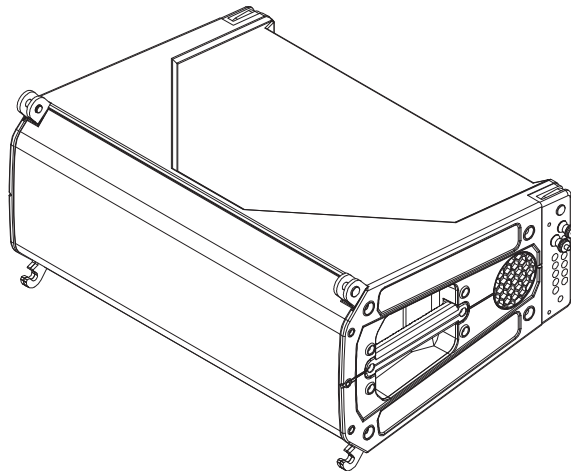


### Pole Mount



## Introduction to L-ARRAY 28HA

# 6



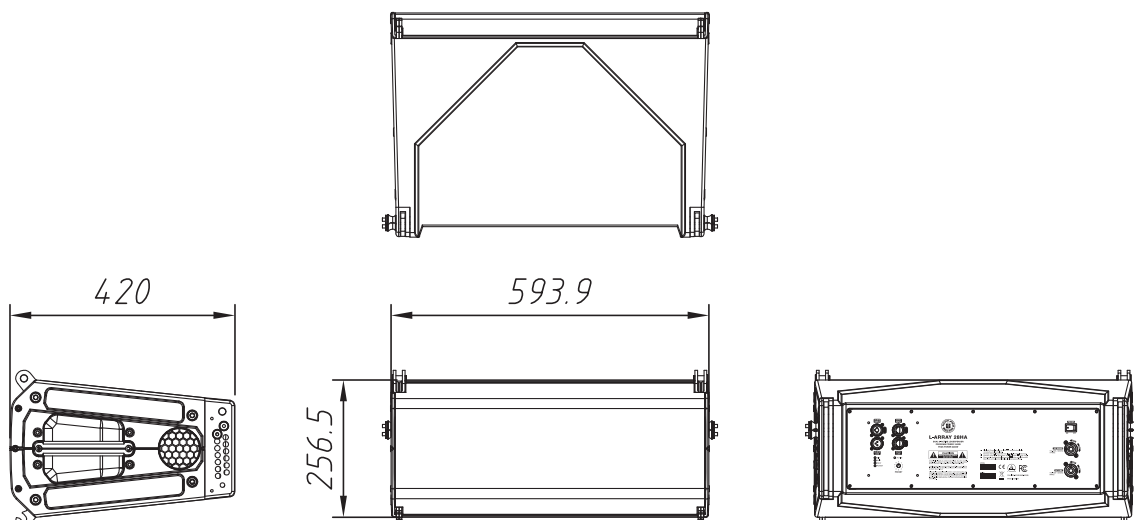
The **L-ARRAY** is a compact two-way passive, line array system, intended for use in arrays with fixed curvature, up to six cabinets of **L-ARRAY 28HA**. L-ARRAY is a versatile loudspeaker system for medium & large indoor venues. It is suitable in small and medium outdoor scale application, or as a delay tower for large scale sound reinforcement system.

**L-ARRAY** was born for making a line-array with fixed curvature, with 100° horizontal & 15° vertical coverage pattern, aim to simulate a coherent waveguide with six enclosure.

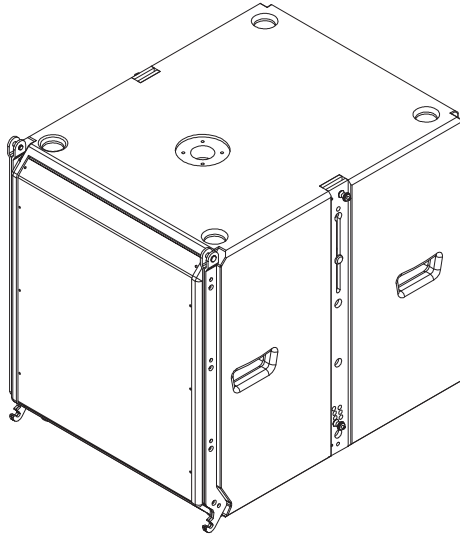
A main frame hardware defines the tilting of the complete array system between 0°~12°. The **L-ARRAY 28HA** includes a dual angle pole socket, plus the accessory for a suspension options. It is easy to use integral rigging hardware, and give the possibility to assemble a max. of 16 x **L-ARRAY 28HA** in suspension or 2 x **L-ARRAY18SA** PLUS 8 x **L-ARRAY28HA** in the same way as a single source. A high frequency selector gives you more flexibility to define an amplitude shading of the **L-ARRAY**. The 0dB position is normally used to coverage the near field audience. The +3dB position is normally used to coverage the far field audience.

The **L-ARRAY 28HA** is equipped with two custom high power 8" Mid-Bass of the 2" sandwich copper voice coil on fiberglass former and two 1" high frequency drivers with 1.4" voice coil of titanium diaphragm are used on double proprietary waveguide horn.

### Dimension Drawings of L-ARRAY 28HA

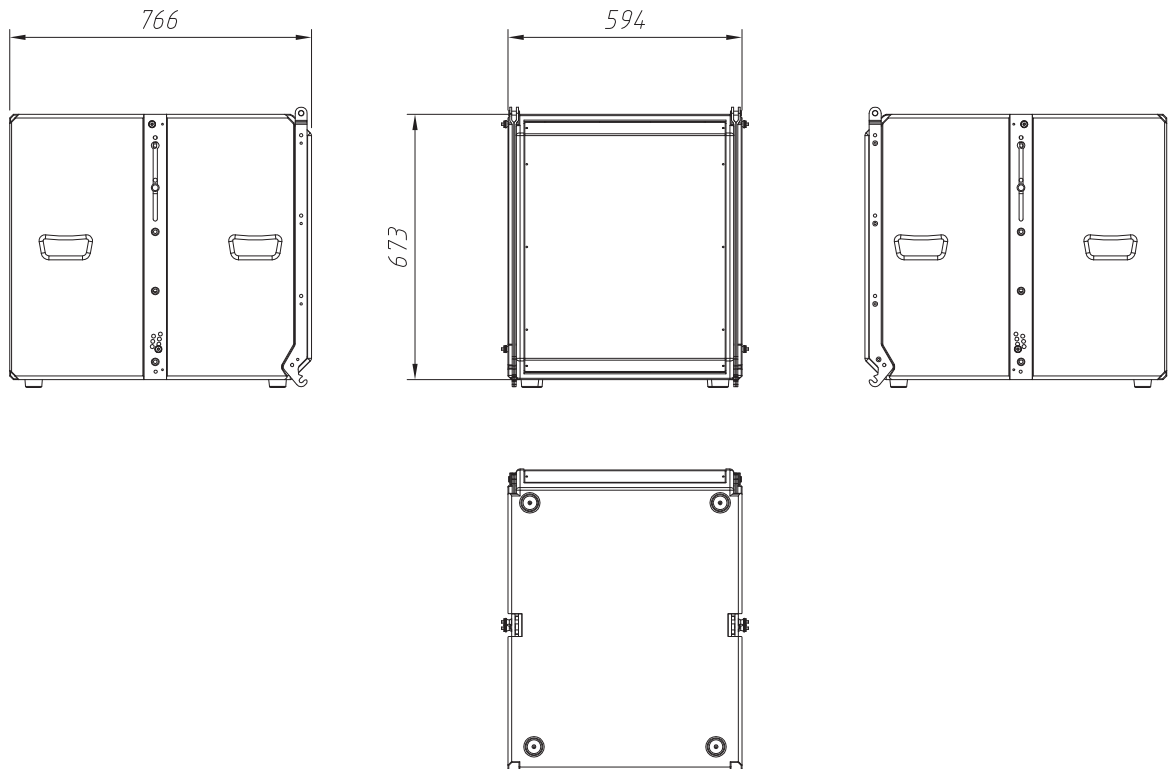


# 7 Introduction to L-ARRAY 18SA



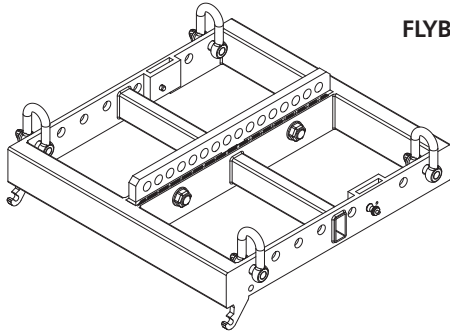
The **L-ARRAY 18SA** is a vented subwoofer equipped with a single custom high power 18" Subwoofer with 4" high-power sandwich copper voice coil on fiberglass former, double spider, ceramic magnet, and weather resistant cone. The enclosure is made with a 18mm multi-layer plywood, finished with anti-scratch black paint, with a strong perforated metal grille, four metal handles, one pole socket for satellite and four wheels.

## Dimension Drawings of L-ARRAY 18SA

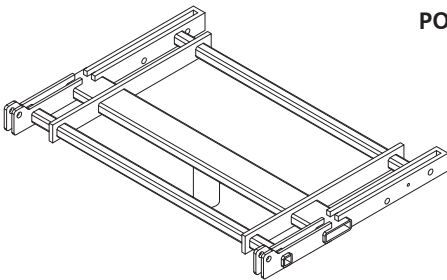
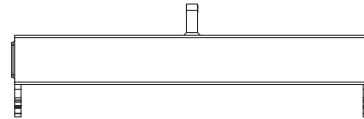


# L-ARRAY Hardware Parts

# 8



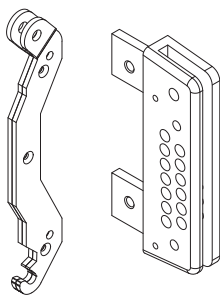
**FLYBAR BRACKET**



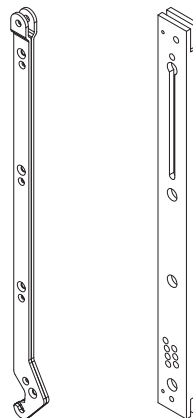
**POLE MOUNT**



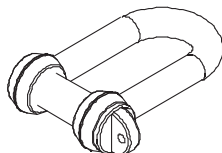
**SAT BRACKET**



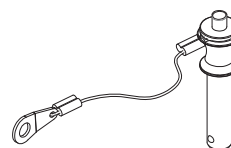
**SUB BRACKET**



**U bolt for flying bar**



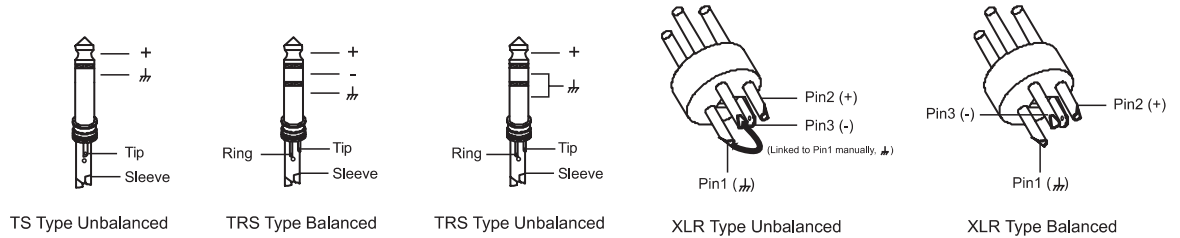
**PIN**



# 9

## Wire Connections

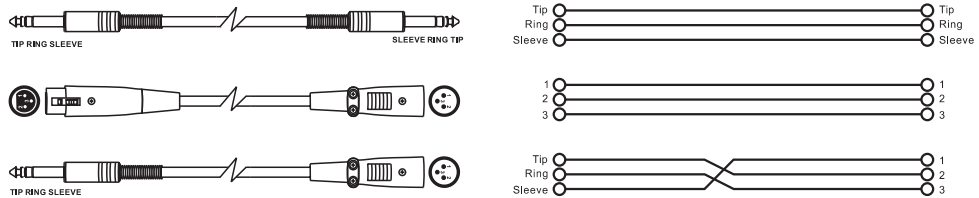
Either the 1/4" TRS phone jack or XLR connector can be wired in balanced and unbalanced modes, which will be determined by the actual application status, please wire your system as the following wiring examples:



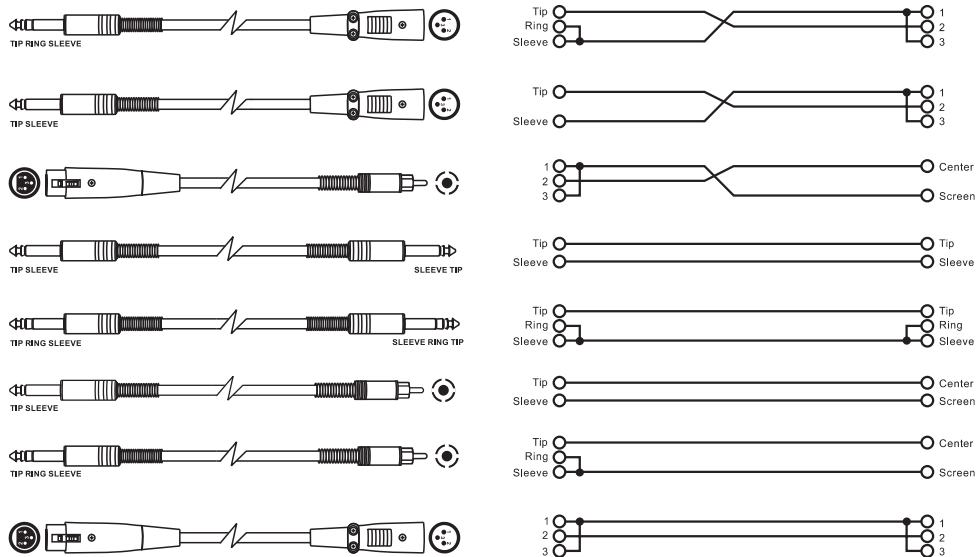
### In-line Connection

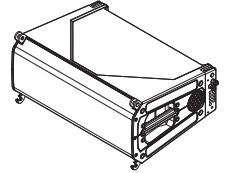
For these applications the unit provides 1/4" TRS and XLR connectors to easily interface with most professional audio devices. Follow the configuration examples below for your particular connection:

#### Balanced



#### Unbalanced



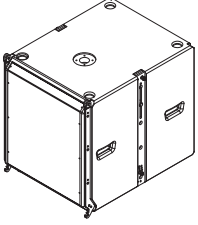


## Technical specification

Model	<b>L-ARRAY 28HA</b>
System Type	8" 2-way Active Line Array Loudspeaker System
Output Power	800W Continuous / 1600W Program Power / 3200W Peak Power Class D @ 8 Ohms
Maximum SPL @ 1m	130dB Max.(calauated)
Frequency Response	65Hz-20kHz (-10dB)
Transducer Low	2x 8" Ferrite Woofer , 2" (50.5mm) Voice Coil
Transducer High	2x 1" Neodymium Compression Driver, 1.35" (34mm)Voice Coil
Crossover Frequency	1.8kHz
Dispersion(-6dB)	110° Horizontal, 15° Vertical
Attachment Points	Adjustable Rigging System, Vertical Splay Adjustable in 1.0° Increments from 0°-12°
Connections	Input: 1 x Combo-XLR&1/4" Balanced / Unbalanced Line Input Output: 1 XLR Thru Balanced line
Network I/O	Input: 1 x etherCON(RJ45) Input ; Output: 1 x etherCON(RJ45) Output .
DSP Processor	Venue Settings (Adjustable via Optional Software) 32bit,24bit/48kHz Audio Conversion AD/DA,Digital Volume Control
External Controls	9 Presets EQ / 1 Service Use Power ON with Green LED,Clip / SIG / PROT with LED
Electronic Protections	Over heat Protection / Short Circuit Protection / Digital Compressor
Enclosure Construction	Polypropylene enclouse, Steel Grille with foam, Two Handles on Each Side.
Fittings information	4Flying Points
Mounting	4-Point Suspension, Three Configuration Styles(Small, Stack and Array)
Dimensions (HxWxD)	(H)292mm*(W)594mm*(D)420mm
Net Weight	Approach 21.5kg

# 10

## Technical specification



Model	<b>L-ARRAY 18SA</b>
System Type	18" Active Line Array Vented Subwoofer
Power Rating	1000W Continuous / 2000W Program Power / 4000W Peak Power Class D @ 8Ohms
Transducer Low	18" Ferrite Woofer, 4"(100mm)Voice Coil with Long Excursion
Frequency Response	35Hz – 150Hz (-10dB)
Maximum SPL @ 1m	135dB(calauated)
Connections	Input: 1 x Combo-XLR&1/4" Balanced / Unbalanced Line Input Output: 1 XLR Thru Balanced line
Network I/O	Input: 1 x etherCON(RJ45) Input ; Output: 1 x etherCON(RJ45) Output .
DSP Processor	Venue Settings (Adjustable via Optional Software) 32bit, 24bit/48kHz Audio Conversion AD / DA,Digital Volume Control
External Controls	9 Presets EQ / 1 Service Use Power ON with Green LED, Clip / SIG/ PROT with LED
Electronic Protections	Over heat Protection / Short Circuit Protection / Digital Compressor
Enclosure Construction	Plywood Cabinet, Resistant Black Paint, Metal Grille with Foam, Rubber Feet, Four Handles on Each Side.
Fittings information	4Flying Points
Mounting	One Metal Standard Pole-Mount
Dimensions(WxHxD)	(H)692mm*(W)594mm*(D)766mm
Net Weight	Approach 68.8Kg

## Guarantee

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**Topp Pro** guarantees the normal operation of the product against any defect of manufacture and/or vice of material, by the term of (12) months, counted as of the date of purchase on the part of the user, committing itself to repair or to change, to its election, without position some, any piece or component that will fail in normal conditions of use within the mentioned period.

This guarantee is valid if the original buyer will have to present/display this certificate properly sealed and signed by the selling house, accompanied by the corresponding invoice of purchase where it consisted the model and serial number of the acquired equipment.

The guarantee does not cover:

- Damages caused by the illegal use of the product, repair and/or nonauthorized modification conducted by people by **Topp Pro**.
- Damages caused by the connection of the equipment to other equipment different from the specified ones in the manual of use, or by bad connection to these last ones.
- Damages caused by electrical storms, blows and/or incorrect transport.
- Damages caused by excesses or falls of tension in the network or by connection to networks with a tension different from the required one by the unit.
- Damages caused by the presence of sand, acid of batteries, water, or any strange element inside the equipment.
- Deteriorations produced by the course of the time, use and/or normal wear of the unit.
- Alteration or absence of the serial number of factory of the equipment.

The repairs could only be carried out the authorized technical service by **Topp Pro**, that will inform about the term and other details into the repairs to take place according to this guarantee.

**Topp Pro**, will repair this unit in counted a term nongreater to 30 days as of the date of entrance of the unit to the Technical Service. In those cases in that due to the particularity of the spare part, outside necessary their import, the repair time and the viability of the same one will be subject to the effective norms for the import of parts, in which case one will inquire to the user about the term and possibility into repair.

With the object of its correct operation, and of the validity of this one guarantee, this product will have to be installed and to be used according to the instructions that are detailed in the manual associate or the package of the product.

This unit will be able to appear for its repair, next to the invoice of purchase (or any other proof where the date of purchase consists), to its authorized distributor **Topp Pro** or an authorized technical center on watch by **Topp Pro**.

### Exclusion of damages:

**THE RESPONSABILITY OF TOPP PRO BY ANY DEFECTIVE PRODUCT IS LIMITED THE REPAIR OR THE REPLACEMENT OF HE HIMSELF, TO TOPP OPTION PRO. IF WE CHOSE TO REPLACE THE PRODUCT, THE REPLACEMENT CAN BE A RECONDITIONATED UNIT. TOPP PRO WILL NOT BE RESPONSIBLE BY THE DAMAGES BASED ON THE LOST, INCONVENIENCE, LOSS OF USE, BENEFITS, LOST SAVINGS, BY THE DAMAGE TO OTHER EQUIPMENT OR OTHER ARTICLES IN THE USE SITE, OR BY ANY OTHER DAMAGE IF HE IS FORTUITOUS, CONSEQUENT OR OF ANOTHER TYPE, ALTHOUGH TOPP PRO HAS BEEN NOTICED OF THE POSSIBILITY OF SUCH DAMAGES.**

Some states do not allow to the exclusion or the limitation to the fortuitous or consequent damages, so the aforesaid limitation can not be applied to you.

This guarantee gives specific legal rights him, you you can also have other right that varies of state to state.



***TOPP PRO MUSIC GEAR***

[www.topppro.com](http://www.topppro.com)



**ARRAY**  
SERIES