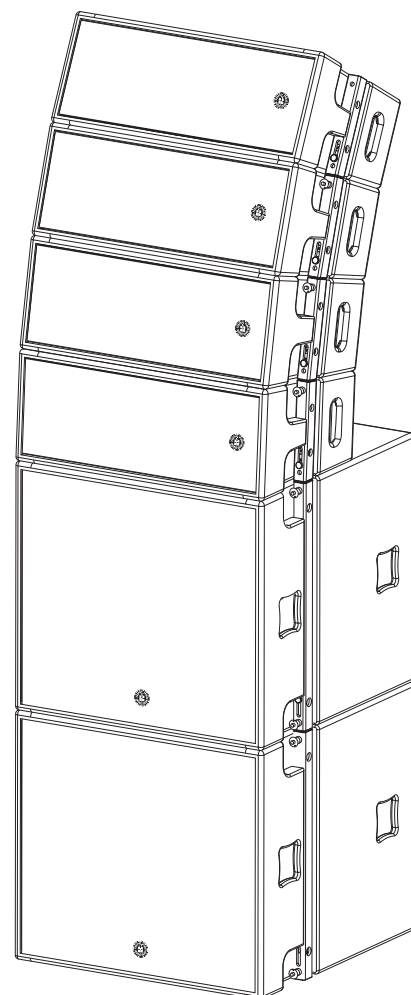
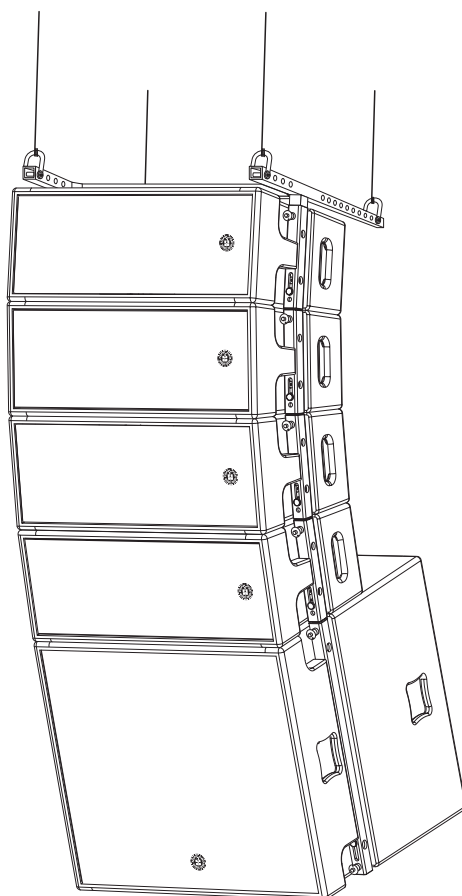




T-ARRAY
S E R I E S

User's Manual

T-ARRAY
SAT28P / SUB18P



SAFETY RELATED SYMBOLS



This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages within 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.

WARNING: Describes precautions that should be observed to prevent the possibility of death or injury to the user.

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



Do not deposit any part of this unit in the municipal waste baskets. Use special depots for those effects.

WARNING

Power Supply

Ensure that the mains source voltage (AC outlet) matches the voltage rating of the product. Failure to do so could result in damage to the product and possibly the user. Unplug the product before electrical storms occur and when unused for long periods of time to reduce the risk of electric shock or fire.

External Connection

Always use proper ready-made insulated mains cabling (power cord). Failure to do so could result in shock/death or fire. If in doubt, seek advice from a registered electrician.

Do Not Remove Any Covers

Within the product are areas where high voltages may present. To reduce the risk of electric shock do not remove any covers unless the AC mains power cord is removed. **Covers should be removed by qualified service personnel only.** No user serviceable parts inside.

Fuse

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

Protective Ground

Before turning the product ON, make sure that it is connected to Ground. This is to prevent the risk of electric shock. Never cut internal or external Ground wires. Likewise, never remove Ground wiring from the Protective Ground Terminal.

Operating Conditions

Always install in accordance with the manufacturer's instructions. To avoid the risk of electric shock and damage, do not subject this product to any liquid/rain or moisture. Do not use this product when in close proximity to water. Do not install this product near any direct heat source. Do not block areas of ventilation. Failure to do so could result in fire. Keep product away from naked flames.

IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions
- Follow all instructions
- Keep these instructions. Do not discard.
- Heed all warnings.
- Only use attachments/accessories specified by the manufacturer.

Power Cord and Plug

Do not tamper with the power cord or plug. These 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 cord. This could cause electric shock or fire.

Cleaning

When required, either blow off dust from the product or use a dry cloth. Do not use any solvents such as Benzol or Alcohol. For safety, keep product clean and free from dust.

Servicing

Refer all servicing to qualified service personnel only. Do not perform any servicing other than those instructions contained within the User's Manual.

PORTABLE CART WARNING



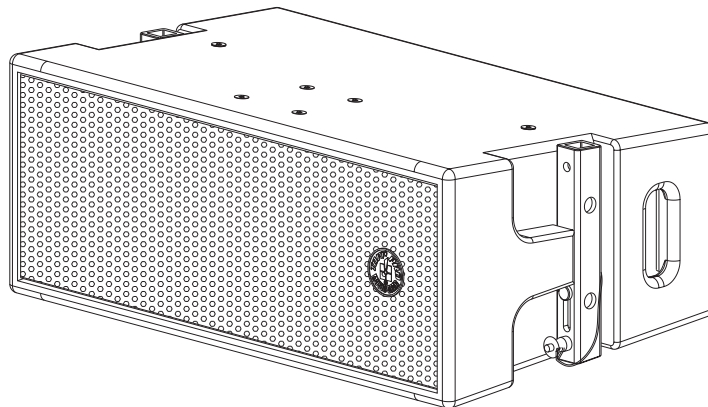
Carts and stands - The Component should be used only with a cart or stand that is recommended by the manufacturer. A Component and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the Component and cart combination to overturn.

Index

1. INTRODUCTION TO T-ARRAY SAT28P	4
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1

Introduction to T-ARRAY SAT28P



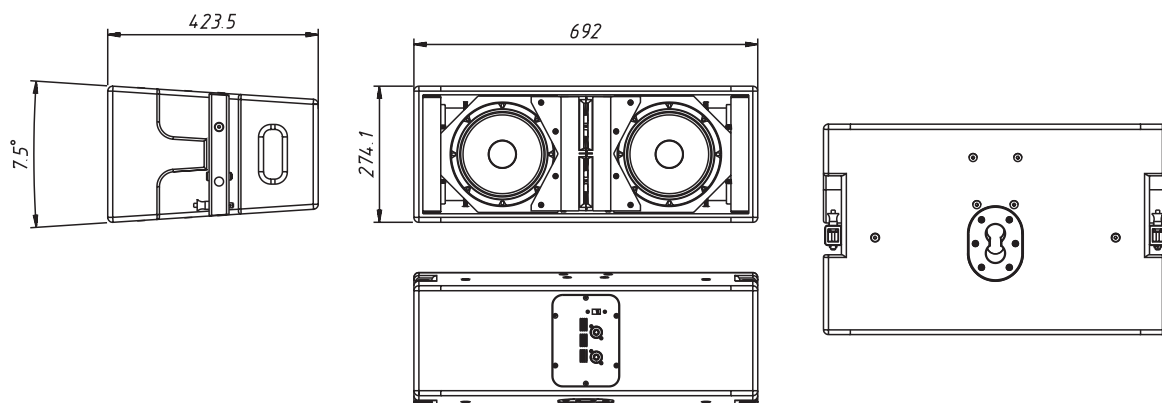
The **T-ARRAY** is a compact two-way passive, line array system, intended for use in arrays with fixed curvature, up to six cabinets of **SAT28P**. **T-ARRAY** is a versatile loudspeaker system for medium & large indoor venues. It is suitable in small and medium outdoor scale application, or as a delay tower for large scale sound reinforcement system.

T-ARRAY was born for making a line-array with fixed curvature, with 100° horizontal & 7.5° 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 +20° / -25°. The **SAT28P** 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 6 x **SAT28P** in suspension or 1x **SUB18P** plus 4 x **SAT28P** in the same way as a single source. A high frequency selector gives you more flexibility to define an amplitude shading of the **T-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 **SAT28P** 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 T-ARRAY SAT28P



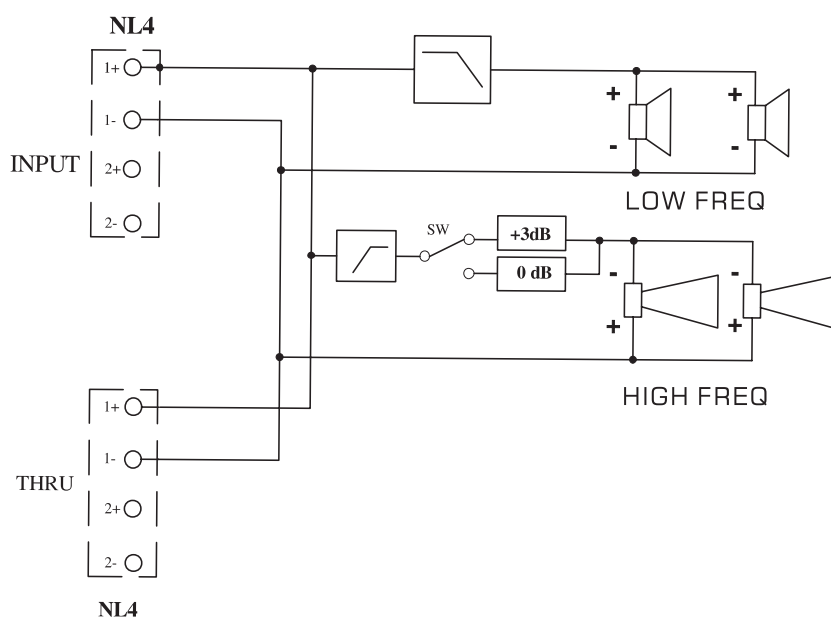
T-ARRAY SAT28P Technical Specifications

2

Model	T-ARRAY SAT28P
Configuration	Two-way, Passive, with a total of four speakers
Operation Frequency Range	65Hz / 20KHz (-10dB)
Frequency Response	77Hz / 18KHz (± 3 dB)
Maximum Peak SPL	124 dB SPL (calculated)
Power rating (AES Standard)	400W / 800W / 1600W
Coverage Horizontal	100° nominal, single unit
Coverage Vertical	7.5° variable with array configuration
Transducers Low-Mid	2 x 8" Mid-Bass, 2" high-power voice coil, ceramic magnet, wheather resistant cone. Impedance 16 ohm
Transducers High	2 x 1.4" Titanium diaphragm, neodymium magnet, 1" exit, impedance 16 ohm, 95dB SPL
Crossover modes	High frequency externally level selector, Used for Far field (+3dB) or Near field (0dB)
System Sensitivity (1w@1m)	95 dB SPL
Nominal Impedance	8 Ohm
Suspension / Mounting	Integrated hardware for suspension in Line Array, dual pole socket, two handle
Enclosure	18mm laminated plywood, black finish, perforated metal grille
Input Connectors	2 Speakon N-L 4 type, Input 1+ / 1- Thru 1+ / 1-
Dimension (W x D x H)	538 x 392 x 754mm (21.2" x 15.43" x 29.7")
Net Weight (Kg/Lbs)	26.8 Kg / 59 lbs

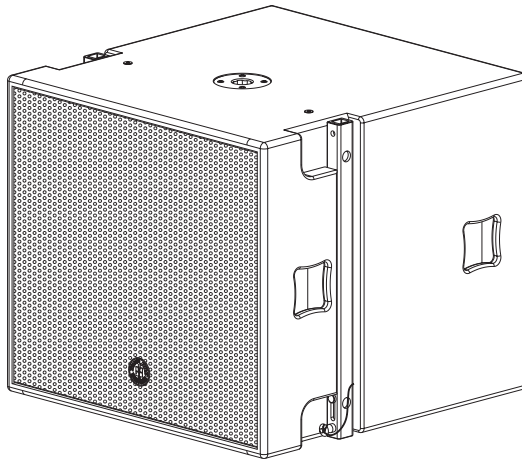
1. "Frequency Response" is measured in half-space condition.
2. AES filtered pink noise with 6 dB crest factor for 2 hours.

T-ARRAY SAT28P Block Diagram



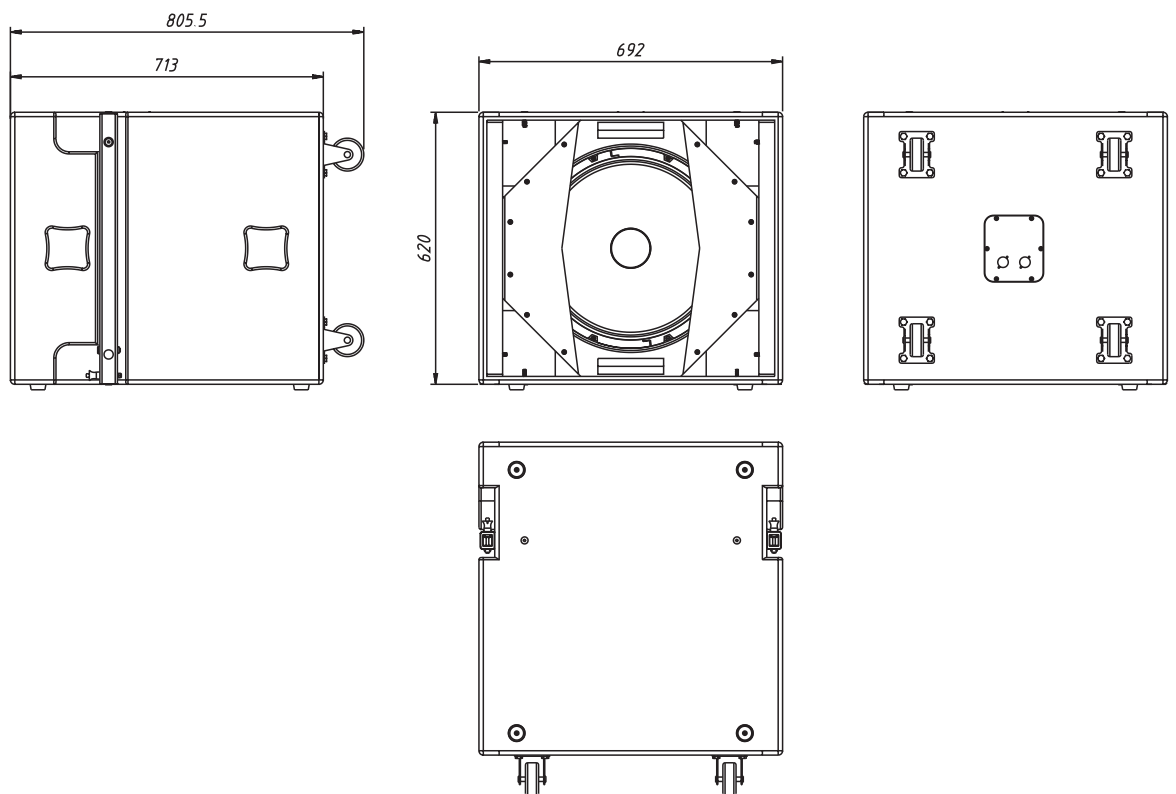
3

Introduction to T-ARRAY SAT18P



The **SUB18P** 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 T-ARRAY SUB18P



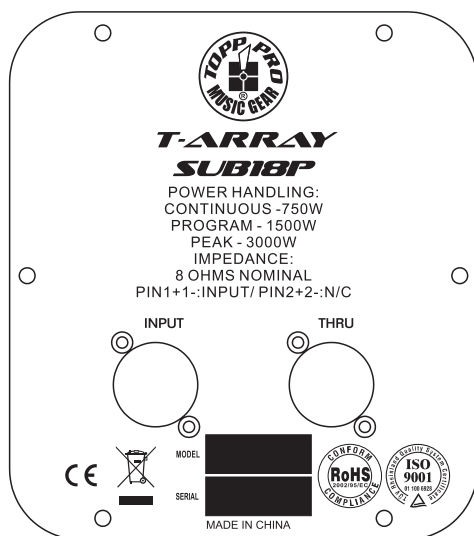
Especificaciones Técnicas del T-ARRAY SAT18P

4

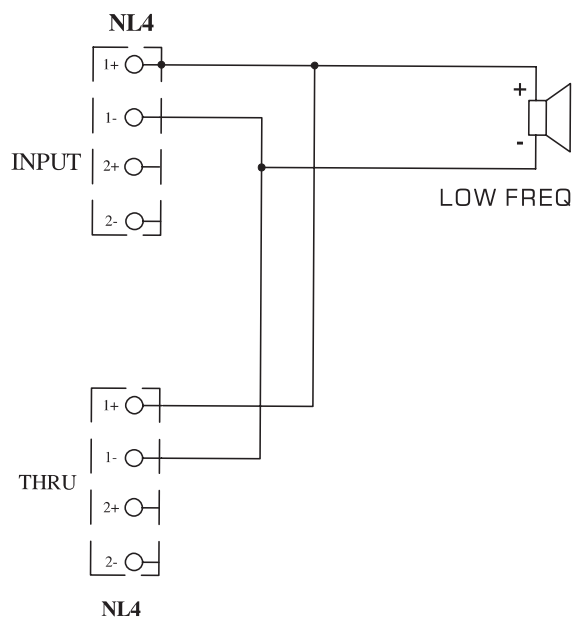
Model	T-ARRAY SAT18P
Configuration	Vented Subwoofer, Passive
Operation frequency Range	37Hz / 200Hz (-10dB)
Frequency Response	43Hz /200Hz (±3dB)
Maximum Peak SPL	129 dB SPL (calculated)
Power rating (AES Standard)	750W / 1500W / 3000W
Transducers Low	18" subwoofer, 4" high-power voice coil, ceramic magnet, weather resistant cone
System Sensitivity (1w@1m)	97dB SPL
Nominal Impedance	8 Ohm, nominal
Suspension / Mounting	single 36mm pole socket, four integrated point for line array suspension, four handle, four optional wheels
Enclosure	18mm laminated plywood, black finish, perforated metal grille
Input Connectors	Two Speakon N-L 4, input +1 / -1, Thru +1 / -1
Dimension (W x D x H)	920 x 795 x 690mm (36.2" x 31.3" x 27.2")
Net Weight (Kg/Lbs)	77 Kg / 169.8 lbs.

1. "Frequency Response" is measured in half-space condition.
2. AES filtered pink noise with 6 dB crest factor for 2 hours.

Rear Panel



T-ARRAY SAT18P Block Diagram



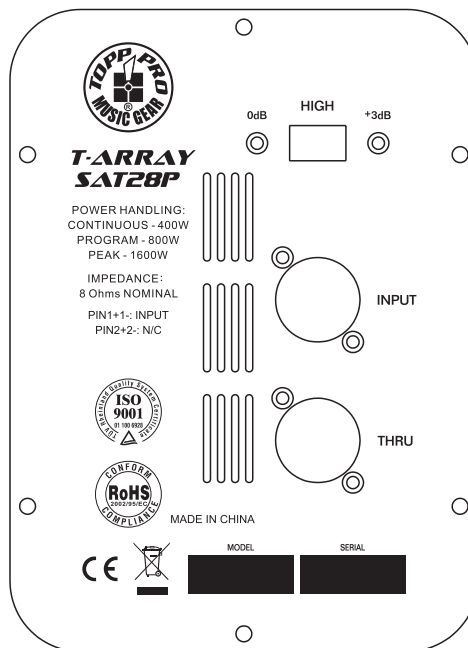
5

Layout of the connector panel T-ARRAY

1 - High Frequency Configurator (HFC)

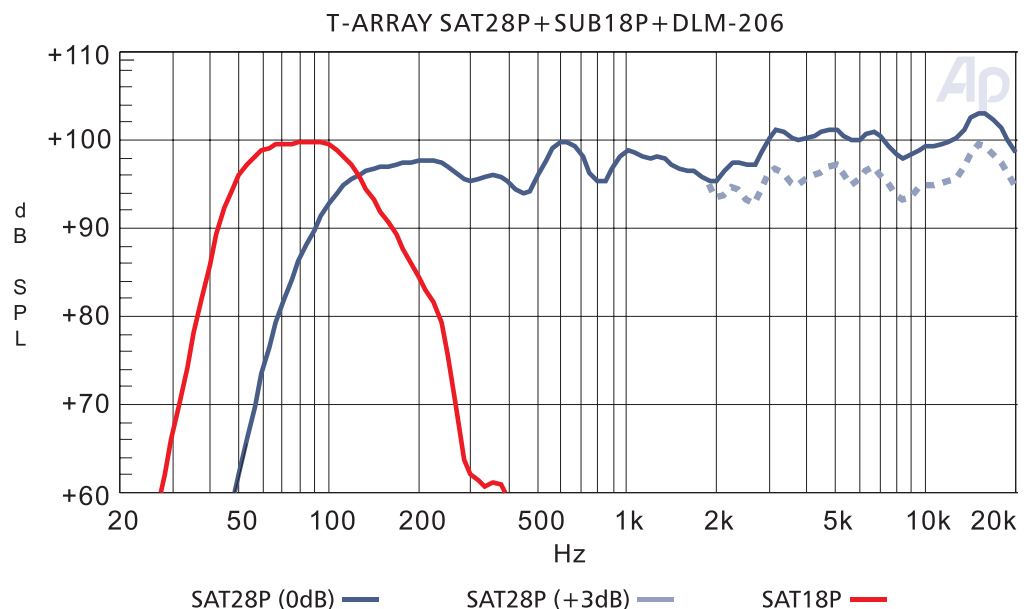
The High Frequency Configurator gives you the possibility to define the best sound pressure level in front of the audience.

The +3 dB position is normally used for the **SAT28P** that work in array for covering the more distant audience. The 0dB is normally used for covering the nearest audience.



2 - Frequency Response

In the frequency response is visible the HFC in the two different position of the selector, 0dB (dotted line) and +3dB (continuous).

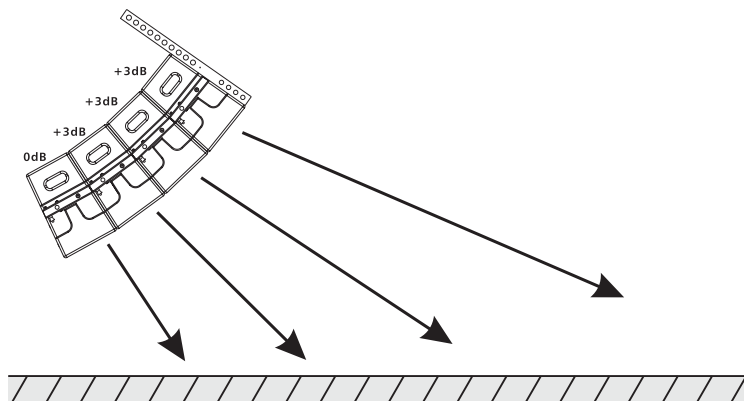


Layout of the connector panel T-ARRAY

5

Medium Array Configuration

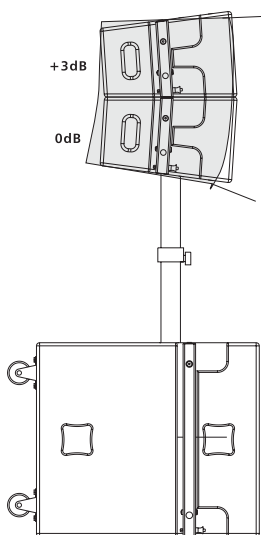
Below is an example of applying the HFC to four **SAT28P**'s in an array. In this particular configuration, the HFC on the top speaker is set at +3dB, and the bottom speaker 0dB.



Small Array Configuration

This is an example of the HFC application with two **SAT28P**'s in a small array, with the top speaker set at +3dB and the bottom speaker at 0dB. Do not stack more than two **SAT28P** 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 may be suspended using the **FB-1 Array Frame**. A security design factor is maintained for the speaker configurations indicated in the table.

Maximum quantity of SAT28P in array (satellite)	2	3	4	5	6
Maximum quantity of SAT18P in array	1	1	1	0	0

Suspension Safety Warning

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

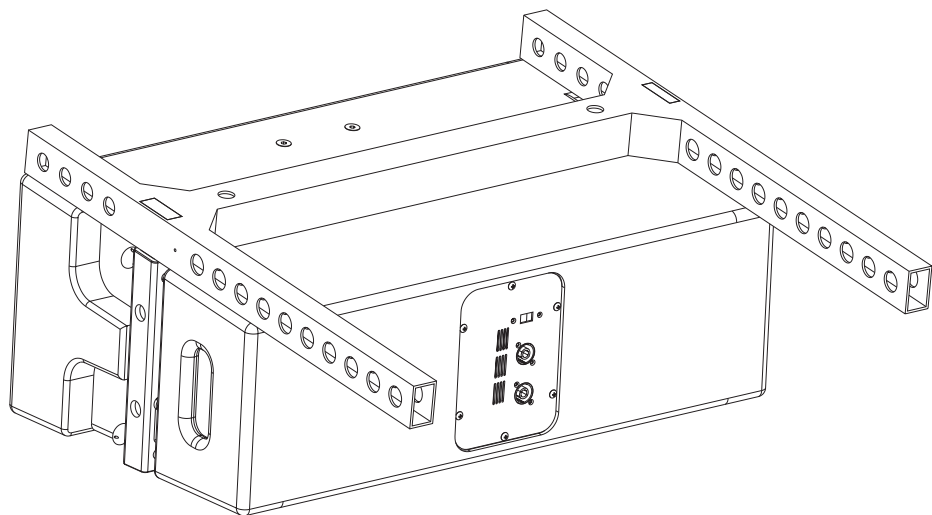
Research and understand the local regulations and requirements of the country where you intend to install the line array. The correct assembly of all associated hardware is required for a safe suspension system. Two point suspension with uniform loading of each lifting location is recommended when using **Array Frame FB-1**.

5

Layout of the connector panel T-ARRAY

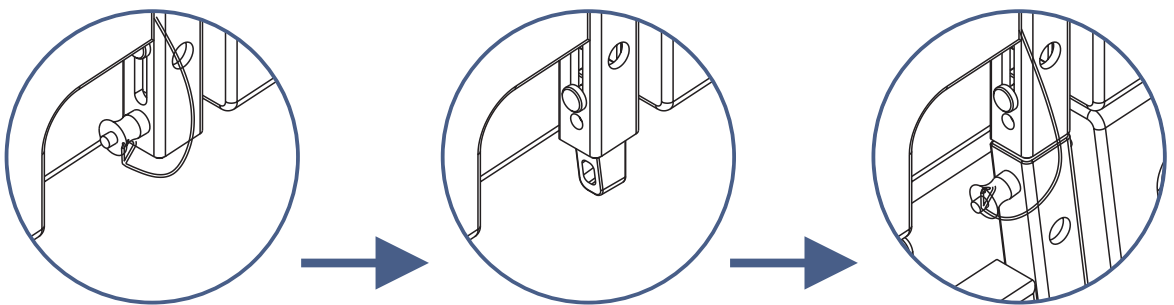
Array Frame Connection

The FB-1 frame is connected to **SAT-HD-L** and **SAT-HD-R** with **T-ARRAY** quick release pins.



Locking the loudspeakers together

Any time two or more **SUB18P** and **SAT28P** are arrayed together, they must be mechanically secured to each other. See diagram below for details.

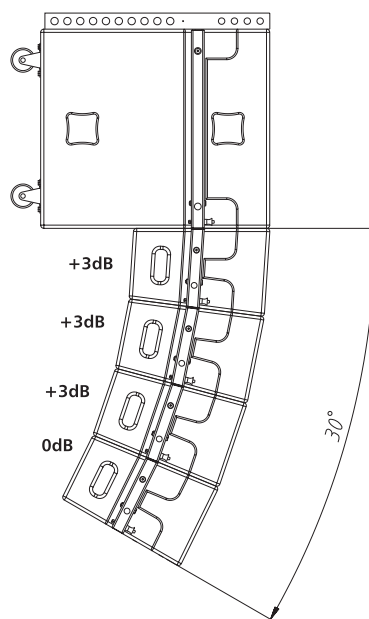
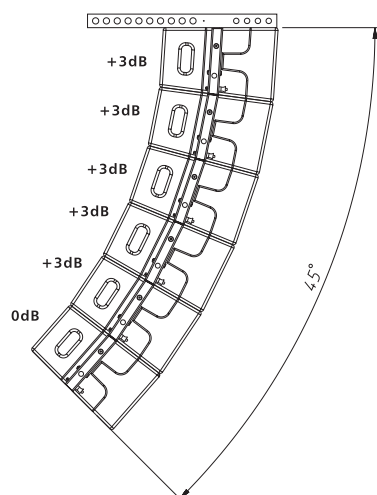


Layout of the connector pannel T-ARRAY

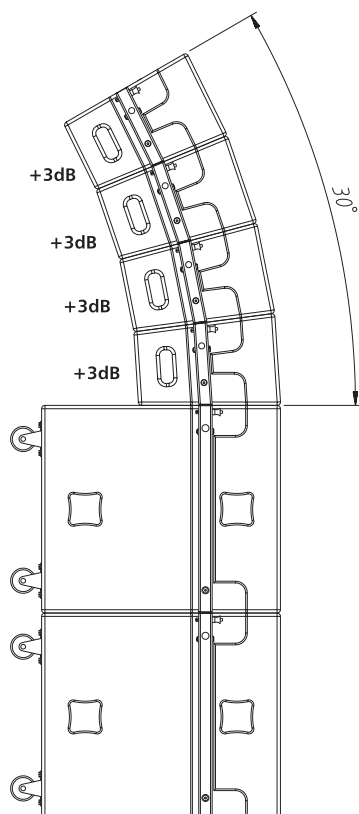
5

Deploying the system in Suspension & Compression

Suspension



Stack



6

Speaker Management: RT-DRIVE DLM-206



USER PRESET: 4 x SUB18P + 8x SAT28P

EDIT → XOVER	FILTER TYPE	FILTER SHAPE	FREQUENCY	PHASE
OP 1&2	LPF	But24	117 Hz	Φ 0°
	HPF	But24	37.2 Hz	
OP 3&4	LPF	Thru	2K00Hz	Φ 0°
	HPF	But24	82.5 Hz	
OP 5&6	LPF	Thru	2K00Hz	Φ 0°
	HPF	But24	82.5Hz	

EDIT → OUT EQ	FILTER SELECT	FILTER TYPE	FREQUENCY	FILTER Q	GAIN
OP 1&2	EQ1	PEAK	37.2 Hz	1.95	+3dB
	EQ2	PEAK	101 Hz	1.95	+6dB
	EQ3 Default		Hz		
	EQ4 Default		Hz		
	EQ5 Default		Hz		
OP 3&4	EQ1	PEAK	1 KHz	1.00	-3.5dB
	EQ2	PEAK	1k8Hz	0.60	-3.5dB
	EQ3	PEAK	8k28Hz	1.95	+3.0dB
	EQ4 Default	PEAK	420 Hz	0.6	+6dB
	EQ5 Default		Hz		
OP 5&6	EQ1	PEAK	1 KHz	1.00	-3.5dB
	EQ2	PEAK	1k8Hz	0.60	-3.5dB
	EQ3	PEAK	8k28Hz	1.95	+3.0dB
	EQ4	PEAK	420 Hz	0.6	+6dB
	EQ5 Default				

EDIT → OUT GAIN	
OP 1&2	-3.0 dB
OP 3&4	0 dB Default
OP 5&6	0 dB Default

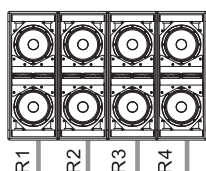
EDIT → POLARITY	
OP 1&2	NORMAL
OP 3&4	NORMAL
OP 5&6	NORMAL

EDIT → COMP/LIM			
OP 1&2	SLOW	LIM.	
OP 3&4	FAST	LIM.	
OP 5&6	FAST	LIM.	

Configurations

Hook-up: 4 x SUB18P + 8 x SAT28P

RIGHT ARRAY

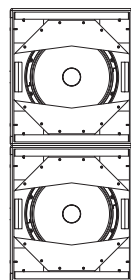


SAT28P

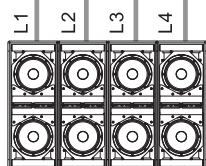
Hardware for each **T-ARRAY SUB18P**
2 x SUB-HD-L
2 x SUB-HD-R

Hardware for four **SAT28P**
4 x SAT-HD-L per array
4 x SAT-HD-R per array
Deploy in suspension or compression

Subwoofer
SUB18P

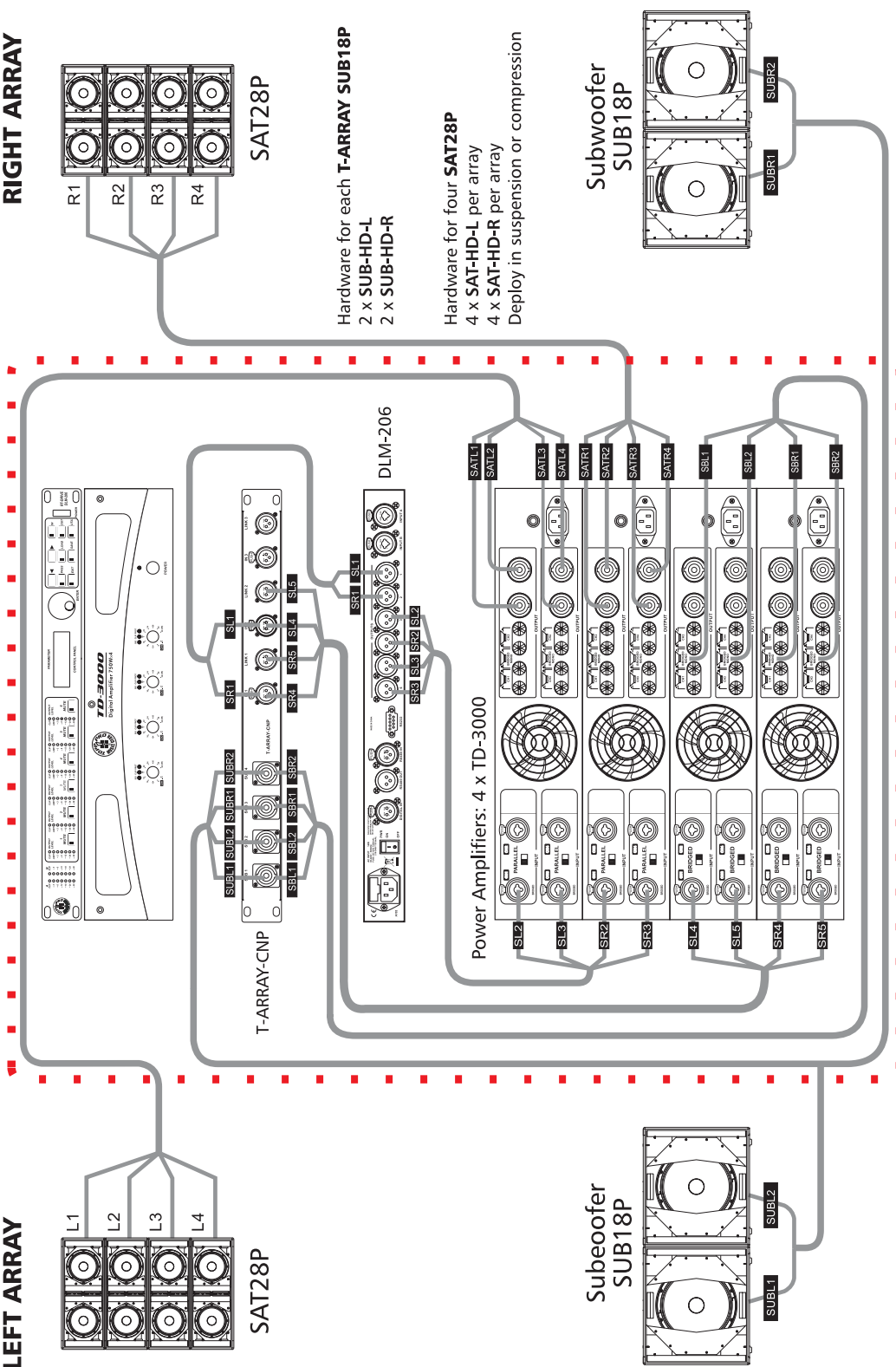
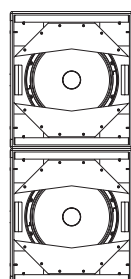


LEFT ARRAY



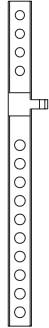
SAT28P

Subwoofer
SUB18P

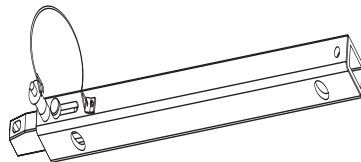
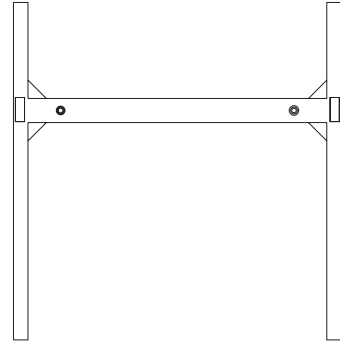


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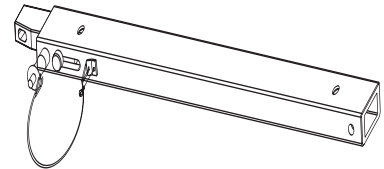
T-ARRAY Hardware Parts



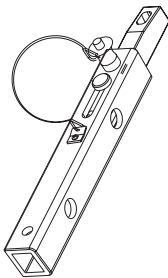
FB-1



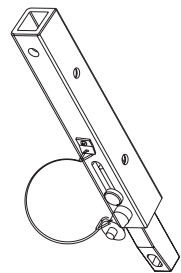
SUB-HD-L



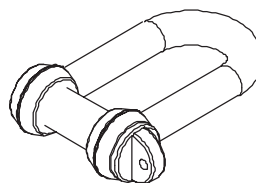
SUB-HD-R



SAT-HD-L



SAT-HD-R



SH

GUARANTEE

9

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

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7" SERIES