

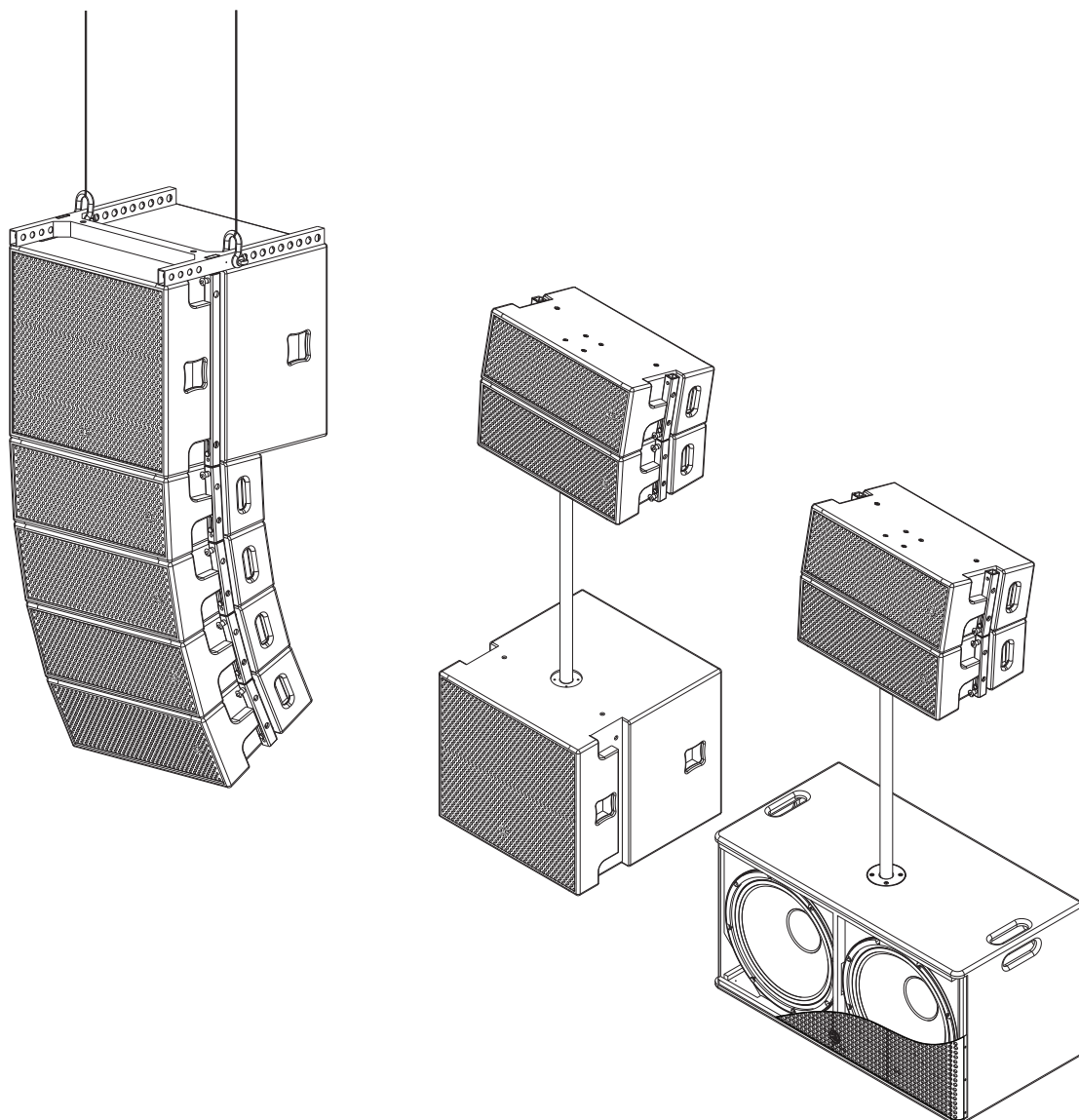


KS ARRAY

S E R I E S

User's Manual

KS T28A / KS 218A SUB / KS LT118A SUB



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 cloth. 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 hearing. To avoid the potential damage of hearing, 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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- **KS T28A, KS 218A SUB, KS LT118A SUB** are Active Speakers for professional use, they can be used in following electro- magnetic environment: residential, commercial and light industrial, urban outdoors.
- When two or more **KS T28A** are arrayed together, it will induce strong peak inrush current. The Amplifier can protect themselves from strong current impact with stand-by function. The stand-by function will be activated automatically within 1 second when input signal is about -30dB. The DSP signal completely startup about 5s.

Don't forget to visit our website at www.topppro.com
for more information about this and other Topp Pro products.

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Prologue

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

The **KS ARRAY** series is designed light weight powered loudspeaker systems and all new class D power amplifiers.

The **KS T28A** use 650 Watt continuous class D power module, and **KS 218A SUB** use 2000 Watt continuous class D power module. This series also breaks from the traditional loudspeaker paradigm, every model is fit with the identical 1.4" voice coil Compression Driver and woofer of high quality for unparalleled performance, regardless of speaker size. Extensive DSP processing is employed throughout, providing levels of sonic clarity and total output that defy the system's size and weight. Premium-grade materials, advanced construction processes and multiple mounting and suspension options allow for a wide range of live and installed applications. Great pride & care is placed in delivering products with excellent performance, specifications, and dependable reliability.

The **KS LT118A SUB** 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 handles, one pole socket for satellite and four wheels.

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

Please carefully read this manual before starting operation! Thank you again for choosing **TOPP PRO MUSIC GEAR KS ARRAY** series.

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Features

KS T28A / KS 218A SUB / KS LT118A SUB

- 650W ClassD BI-AMP for **KST28A**, 2000W for **KS 218A SUB**, 3000W for **KS LT118A SUB**.
- Connectors: Input: Left Mono (Combo) / Right (XLR-F) / Output: Left Mono / Right (XLR-M), Link-Left / Mono-Right (XLR-M) Balanced 15 KOhms.
- Volume control / Power ON with green LED / Clip limiter with Red LED / Ground lift / IP Control Module (Optional).
- Protections: Thermal / Convection Fan / Overload / Digital Lim / Compressor.
- Neutrik POWER CON® connector, 110-120V/220-240V-50/60Hz Switchable.
- Plywood cabinet, resistant black paint, metal grille with foam, **KS T28A**, **KS 218A SUB** has double handle. **KS LT118A SUB** has four handle.
- One metal standard pole-mount.

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Usefull Data

Please write your serial number here for future reference.

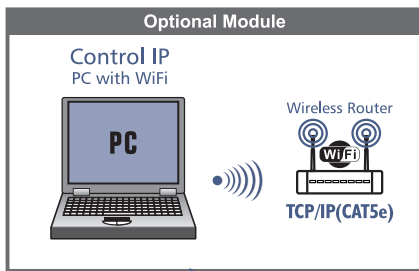
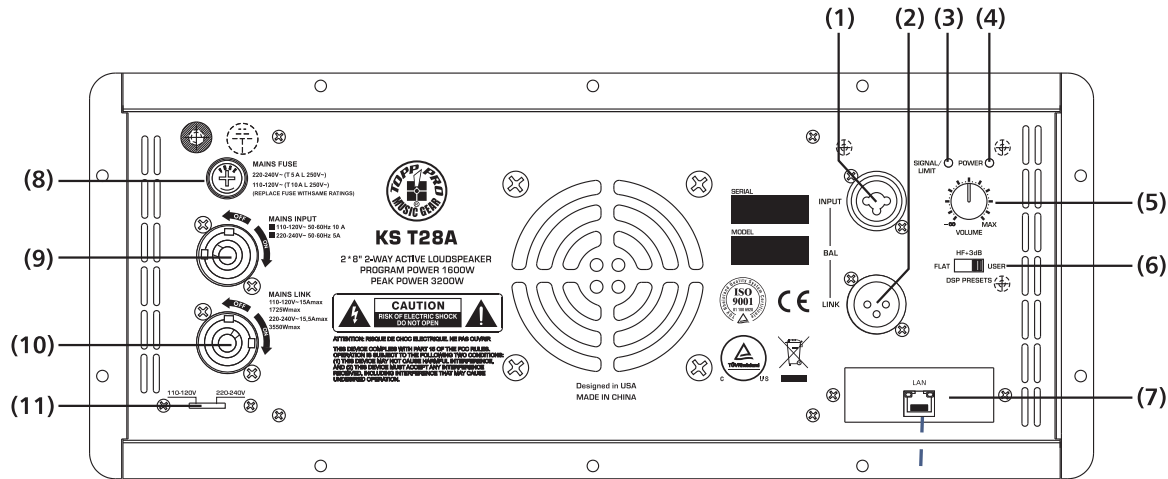
Serial Number:

Date of Purchase:

Purchased at:

Back Panel Description

Active Speaker KS T28A

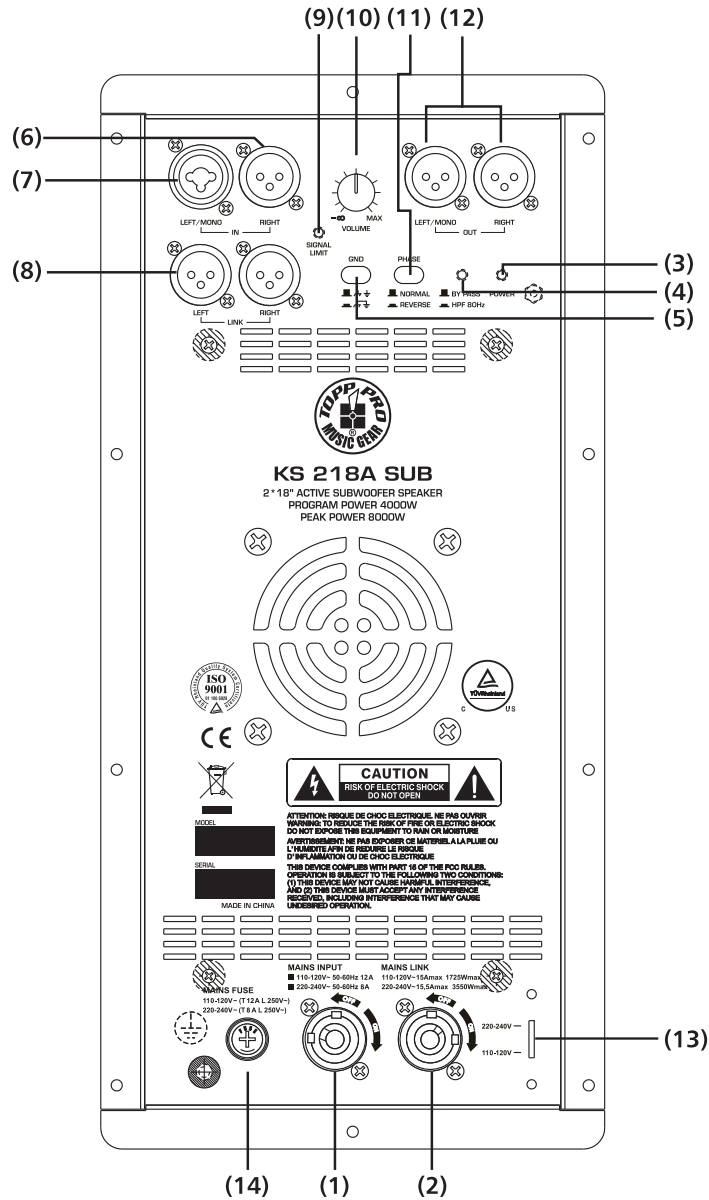


- (1) Line in with combo
- (2) Link on XLR
- (3) Clip LED indicator
- (4) Power LED
- (5) Volume control
- (6) DSP Presets: Flat / HF + 3dB / User (Custom Sound)
 Flat: preset is suited for live sound reinforcement making sound more enjoyable.
 HF + 3dB: preset is to emphasize high frequencies by +3dB.
 User: preset is to change different EQ to match the voice that the user need sound, it can be done by connecting amplifier module to a PC via the LAN port by internet. (the factory preset of User is the same as Flat, after changed, it can be saved into the product)
- (7) IP Control Module (Optional)
- (8) Mains Fuse
- (9) Mains input
- (10) Mains link
- (11) AC input voltage selector

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Back Panel Description

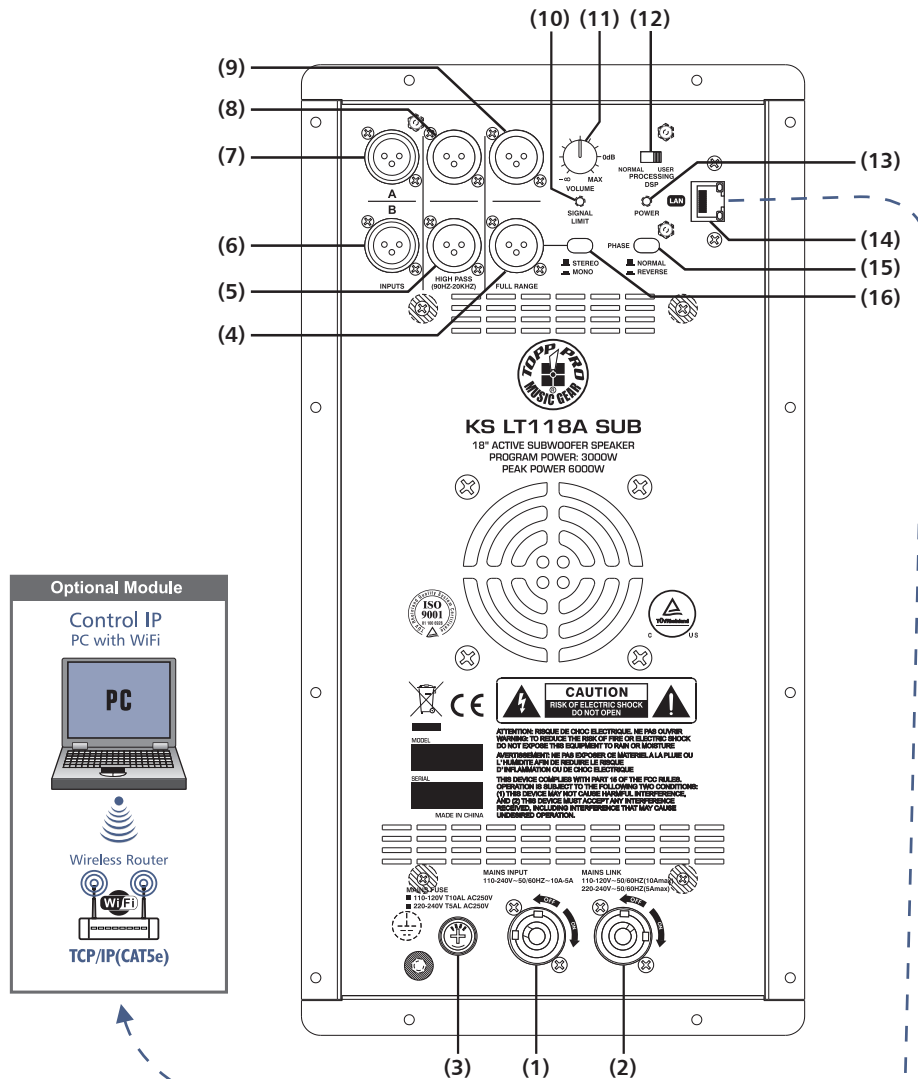
Active Subwoofer KS 218A SUB



- (1) Mains Input
- (2) Mains Link
- (3) Power and activity indicator green LED
- (4) High pass filter or bypass selector
- (5) Ground selector (GND)
- (6) Right line input XLR connector
- (7) Left line mono input Combo connector
- (8) Left-Right Link XLR connector
- (9) Peak and signal presence red LED
- (10) Volume main power control
- (11) Normal/Reverse phase switch (Polarity)
- (12) Left-Right Line Output XLR connector
- (13) Voltage selector
- (14) Mains Fuse

Back Panel Description

Active Subwoofer KS LT118A SUB



- (1) Mains input
- (2) Mains link
- (3) Mains fuse
- (4) Full range output channel XLR connector.
- (5) High pass output channel XLR connector.
- (6) Input channel XLR connector.
- (7) Input channel a on XLR connector.
- (8) High pass output channel a on XLR connector.
- (9) Full range output channel a on XLR connector.
- (10) Signal/limit, red LED, indicate on status.
- (11) Volume main power amplifier control.
- (12) Processing: normal/user(custom sound)
 Normal: preset is suitable for subwoofer speakers to reinforce the low frequency, making the sound more enjoyable.
 User: preset is to change different EQ to match the voice that the user need sound, it can be done by connecting amplifier module to a PC via the LAN port by internet. (the factory preset of User is the same as Flat, after changed, it can be saved into the product).
- (13) Power. green LED, indicate on status.
- (14) IP control
- (15) Normal / reverse phase switch (polarity).
- (16) Stereo I mono switch (full range).

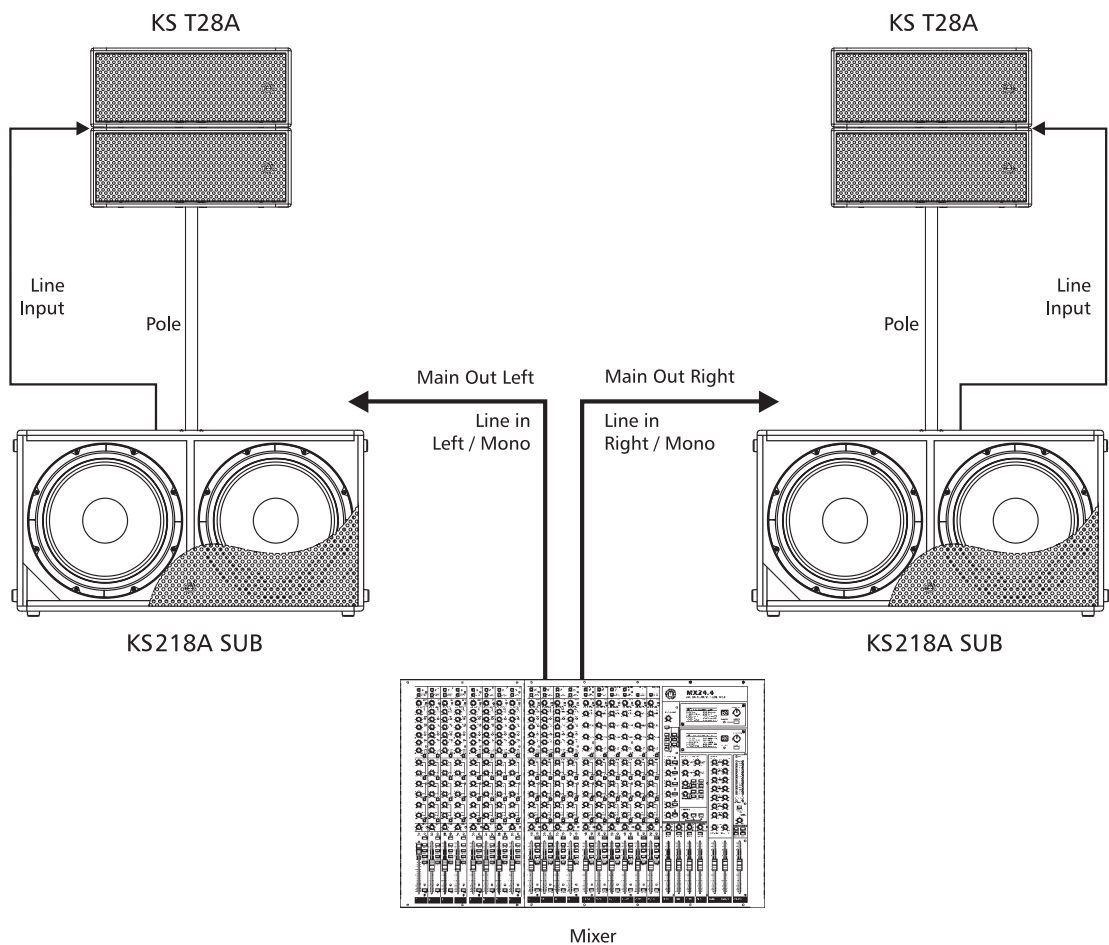
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Connection Plate

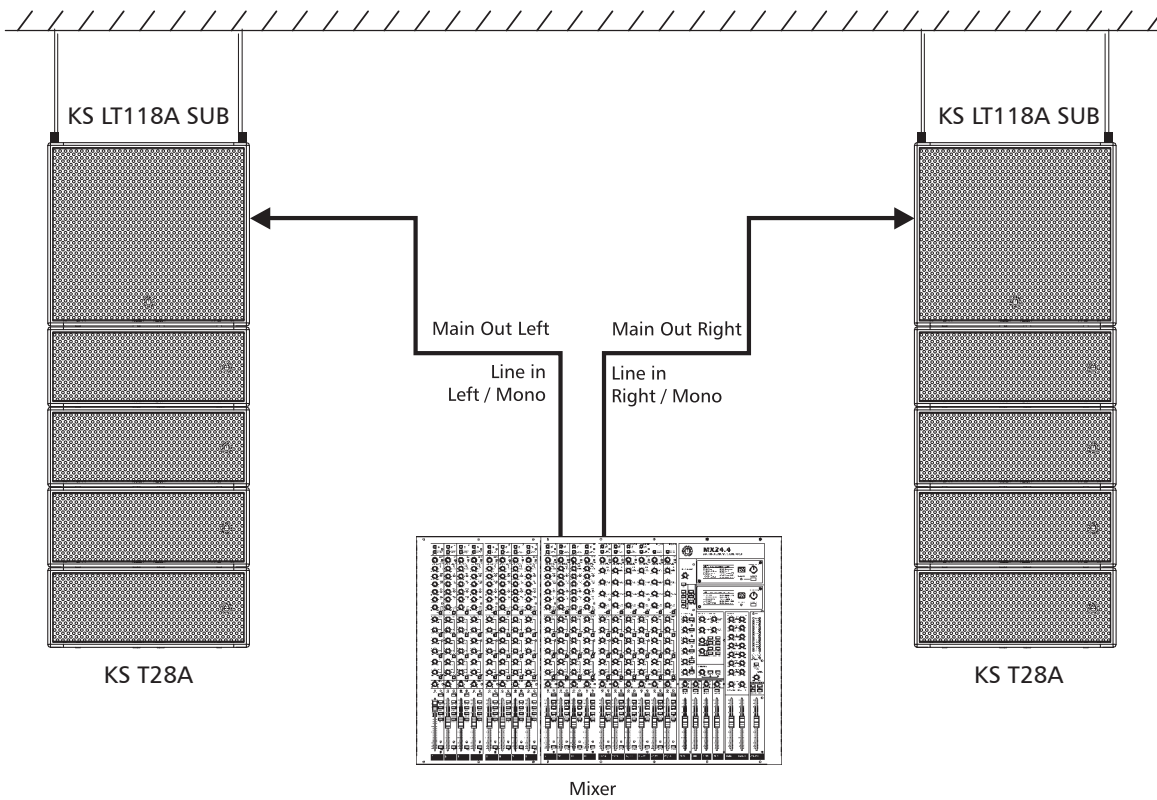
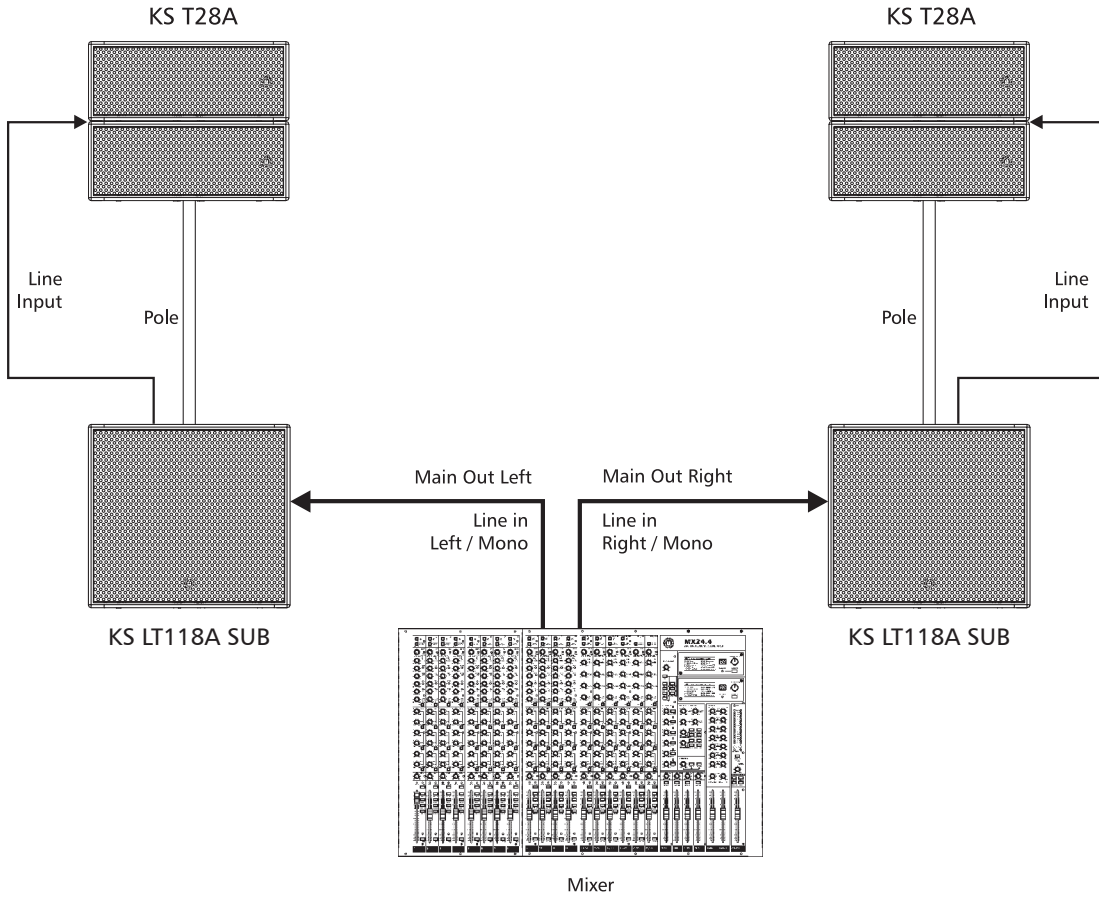
Make your initial connections with all the equipment powered off, and ensure that all the main volume controls are turned down completely.

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.
- 2) Connect one side of another signal cable at your active subwoofers into Link Left/ Right or Out Left/ 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 HPF 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.



Connection Plate

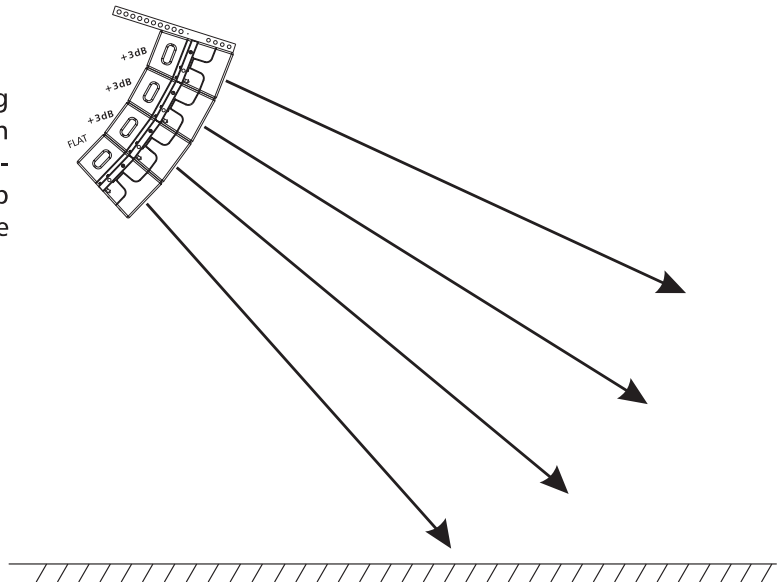


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Layout of the connector panel KS ARRAY

Medium Array Configuration

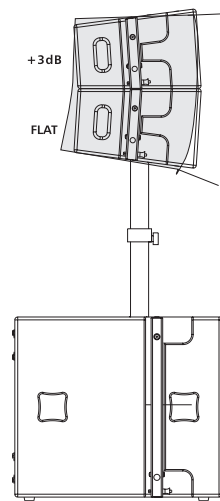
Below is an example of applying the HFC to four **KS T28A**'s in an array. In this particular configuration, the HFC on the top speaker is set at +3dB, and the bottom speaker FLAT.



Small Array Configuration

This is an example of the HFC application with two **KS T28A**'s in a small array, with the top speaker set at +3dB and the bottom speaker at FLAT. Do not stack more than two **KS T28A** 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 KS T28A in array (satellite)	2	3	4	5	6
Maximum quantity of KS LT118A SUB in array	1	1	1	0	0

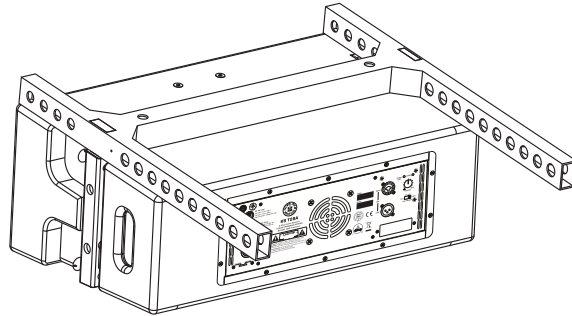
Suspension Safety Warning

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**.

Layout of the connector panel KS ARRAY

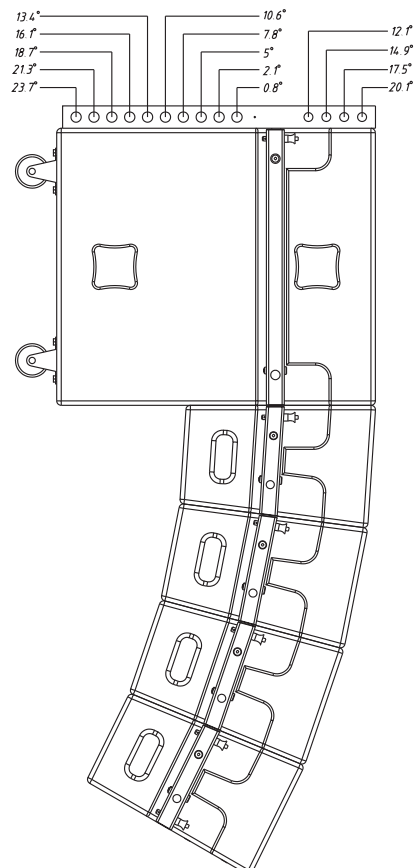
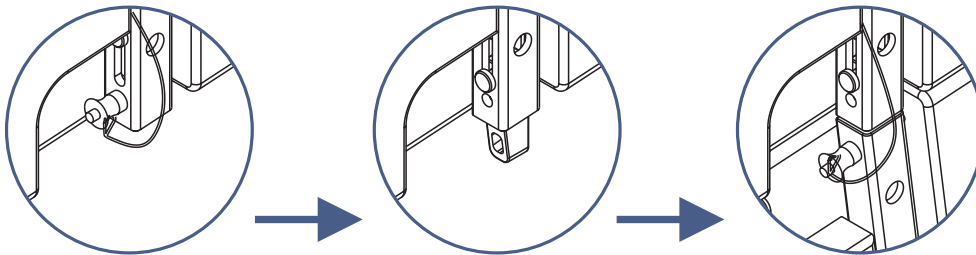
Array Frame Connection

The Flying Bar frame is connected to KS T28A hardware with KS ARRAY quick release pins.



Locking the loudspeakers together

Any time two or more KS LT118A SUB and KS T28A are arrayed together, they must be mechanically secured to each other. See diagram below for details.

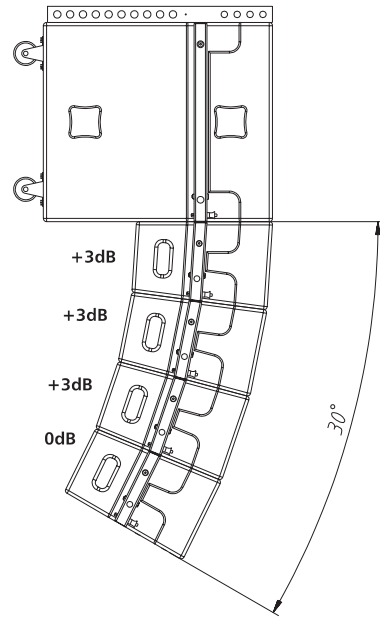
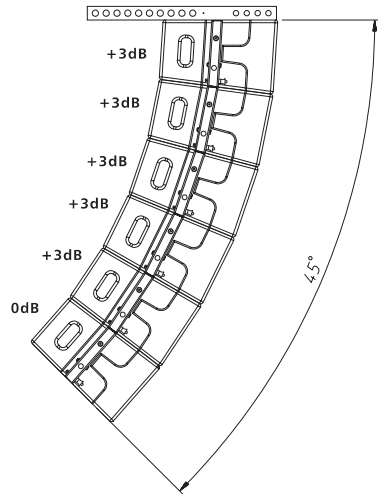


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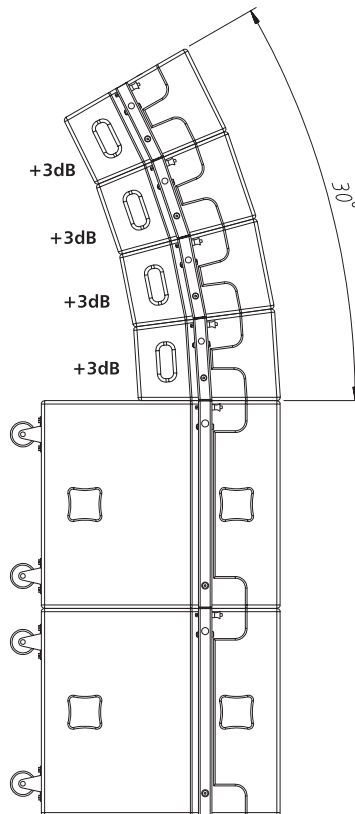
Layout of the connector panel KS ARRAY

Deploying the system in Suspension & Compression

Suspension

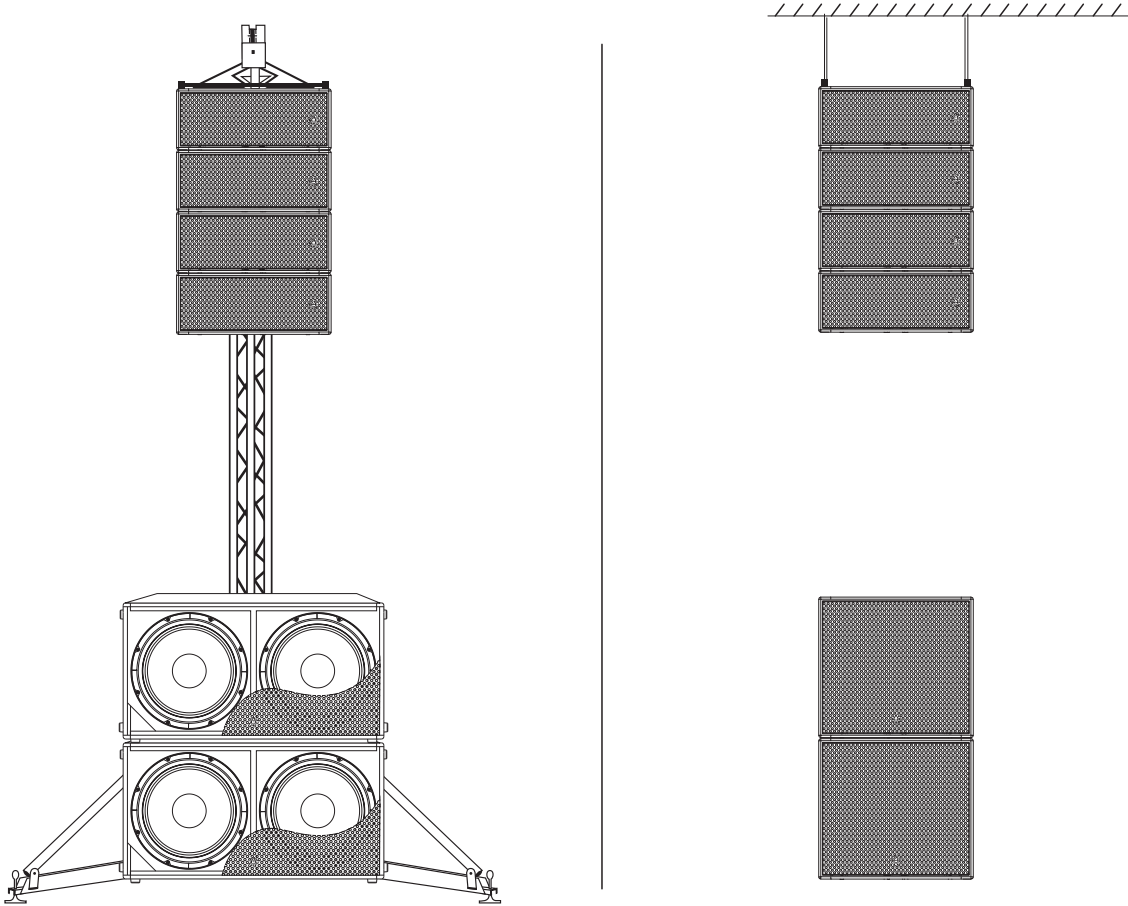


Stack



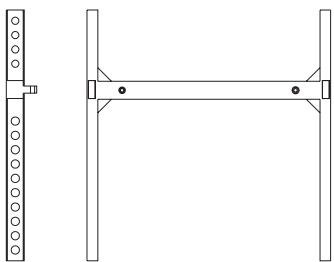
Layout of the connector panel KS ARRAY

6

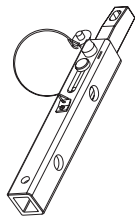


Hardware Parts

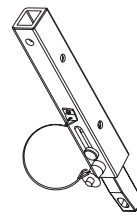
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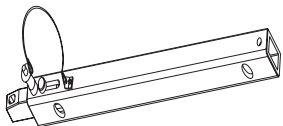
H Type Flying Bar



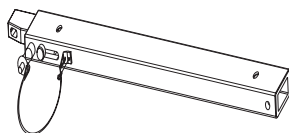
L Hardware for
KS ARRAY KS T28A



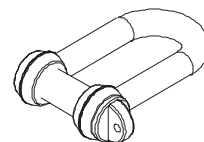
R Hardware for
KS ARRAY KS T28A



L Hardware for
KS ARRAY KS LT118A SUB



R Hardware for
KS ARRAY KS LT118A SUB

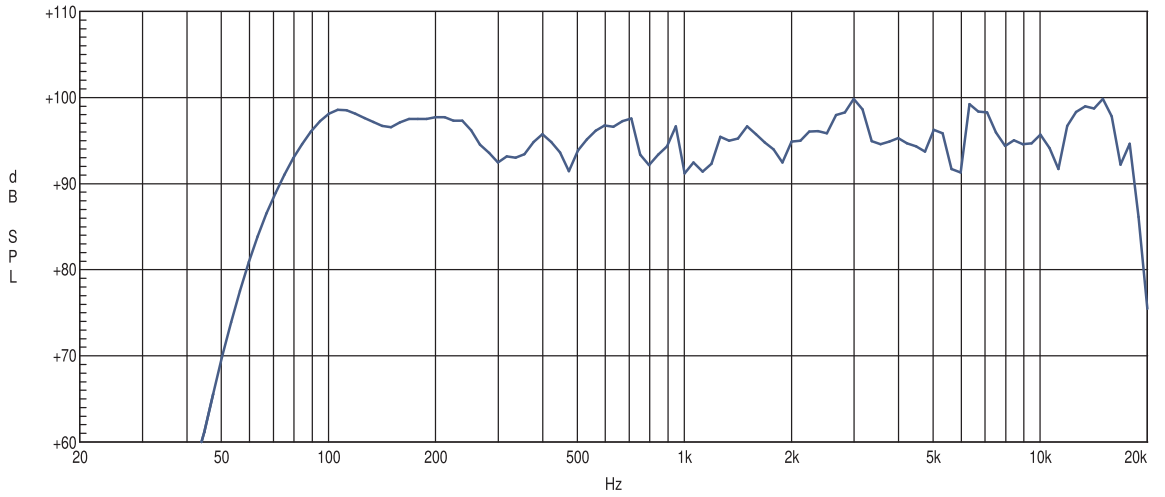


U Bolt for flying bar

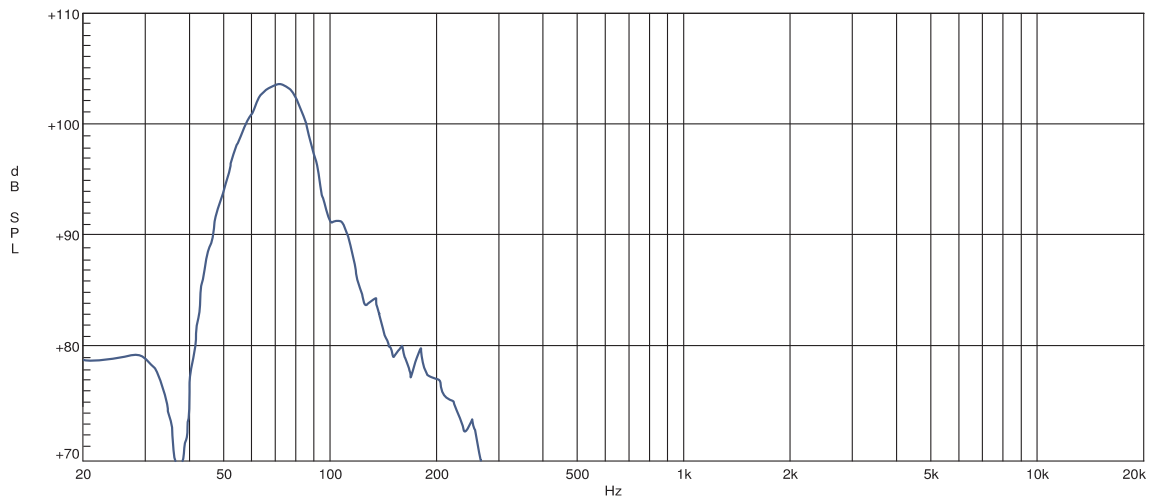
8

Frequency Response Diagrams

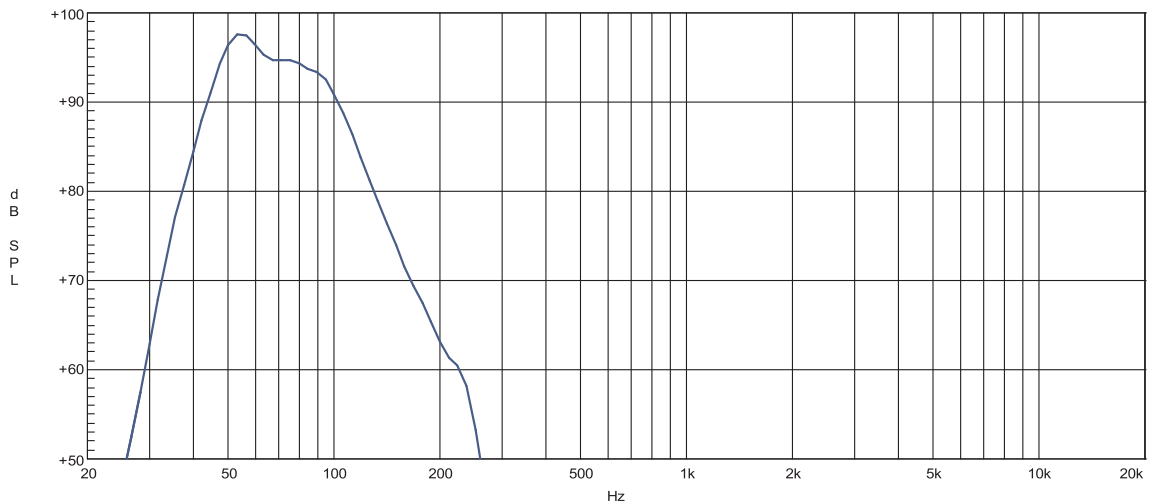
KS T28A



KS 218A SUB

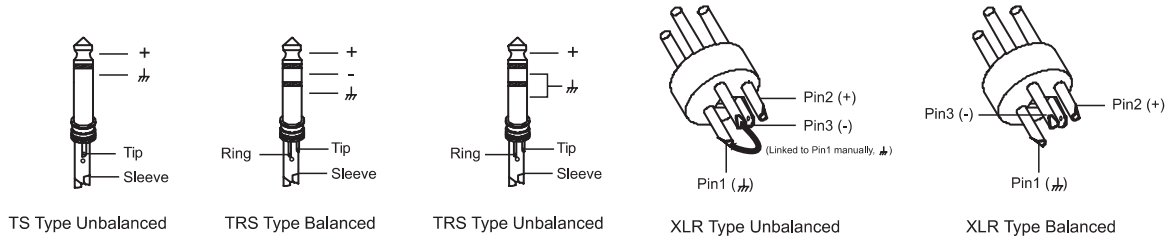


KS LT118A SUB



Wire Connections

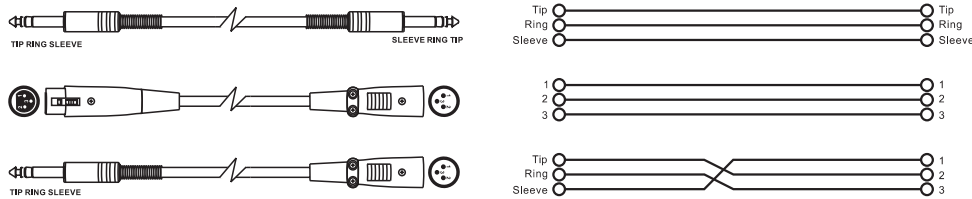
Either the 1/4" TRS phone jack or XLR connector can be wired in balanced and unbalanced modes, which will be determined by the actual application status, please wire your system as the following wiring examples:



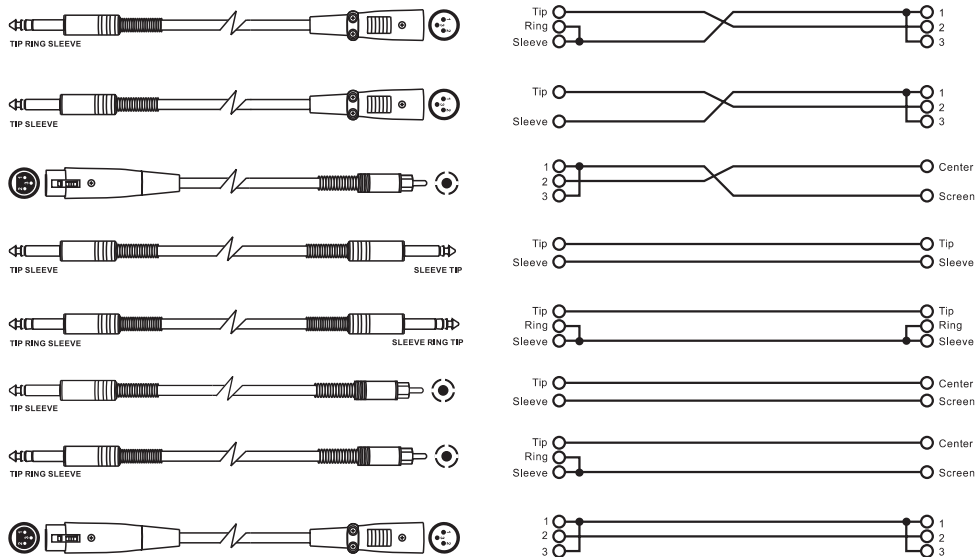
In-line Connection

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

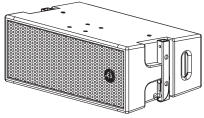


• Unbalanced

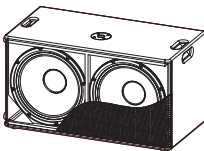


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Technical Specifications



Model Active	KS T28A
System Type	2-Way Active Vented Speaker with DSP
Transducer Low	2 x 8" Woofer, 2" voice coil
Transducer Driver	2 x 1" Titanium diaphragm, neodymium magnet, 1.4" voice coil
Coverage Horizontal	100° nominal, single unit
Coverage Vertical	7.5° variable with array configuration
Frequency Response (-6dB)	65Hz - 20KHz
Crossover Frequency	At 2.0K Hz with 24dB filter slope, DSP process
Max SPL	129dB Max.
AMP Power Output	800W Continuous, Bi-AMP (Class D-650W LF, Class AB-150W HF), 1600W Peak
Input Connector	Line in - Combo / Link-XLR
Dsp Presets	Flat / HF +3dB / User (Customer Sound)
Line Input	Combo Connector -6dBu
External Controls	Volume Control / Neutrik POWER CON® connector (Grey) offers linking the mains power supply power display with green LED / Clip Limiter with Red LED / IP Control Module (Optional)
Electronic Protections	Thermal / Convection-Fan / Overload / Digital Lim. / Compressor
Power Supply	Neutrik POWER CON® connector, 110-120V / 220-240V ~ 50/60Hz Switchable
Suspension/Mounting:	Integrated hardware for suspension in Line Array, dual pole socket, two handles
Enclosure Construction	18mm calibrated plywood, black painted finish, 1.2T metal grille, power coating finish with internal foam
Dimensions (HxWxD)	271.5 (10.7") x 692 (27.25") x 423.5mm (16.7")
Net Weight	29.1kg / 64.15Lbs

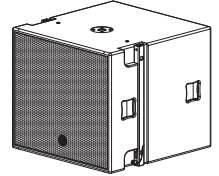


Model Active	KS 218A SUB
System Type	Active Subwoofer
Power Rating	2000W Class D
Woofer	2 x 18" Woofer, 3" Voice Coil
Max. SPL	133 dB
Frequency Response (-6dB)	35Hz to 120Hz
Crossover Frequency	Low pass band type 12dB/oct, Analog processor.
Connectors	Input: Left Mono (Combo) Right (XLR-F) Output: Left Mono Right (XLR-M), Link-Left / Mono-Right (XLR-M)
External Controls	Volume Control / Neutrik POWER CON® connector (Grey) offers linking the mains power supply / Phase Switch / HPF-100Hz for L - R Satellite or By Pass / Power ON with Green LED / Clip Limiter with Red LED / Ground Lift
Electronic Protections	Thermal / Convection-Fan / Overload / Lim/Compressor
Power Supply	Neutrik POWER CON® connector, 110-120V / 220-240V-50/60Hz Switchable
Enclosure Construction	Plywood cabinet, resistant black paint, metal grille with black foam, rubber feet, double handles
Mounting	One metal standard pole-mount
Dimensions (HxWxD)	535mm (21.06") x 518mm (20.41") x 1000mm (52.36")
Net weight	46.64Kg / 102.82Lbs.

Technical Specifications

10

Model Active	KS LT118A SUB
System Type	Active Subwoofer
Power Rating	Program 3000W, Peak 6000W
Woofers	18" Woofer, 4" Voice Coil
Max. SPL	132 dB
Frequency Response (-6dB)	38Hz to 120Hz
Crossover Frequency	Band pass type 24dB filter slope, DSP process
Connectors	Input: A and B XLR-F/HIGH PASS and Full RANGE: A and B XLR-M
External Controls	Volume / DSP Processing / Signal Limit LED / Power on with Green LED / Lan / Phase / Stereo or Mono
Electronic Protections	Thermal / Convection-Fan / Overload / Lim / Compressor
Power Supply	Neutrik POWER CON® connector, 110-240V~50/60Hz Switchable
Enclosure Construction	Plywood cabiner, resistant black paint, metal grille with black foam, rubber feet
Suspension/Mounting	Integrated hardware for suspension in Line Array, One metal standard pole-mount, four handles
Dimensions (HxWxD)	620mm(24.41")×692mm(27.24")×713mm(28.07")
Net weight	74KG/163.14Lbs



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Guarantee

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

KS ARRAY
S E R I E S