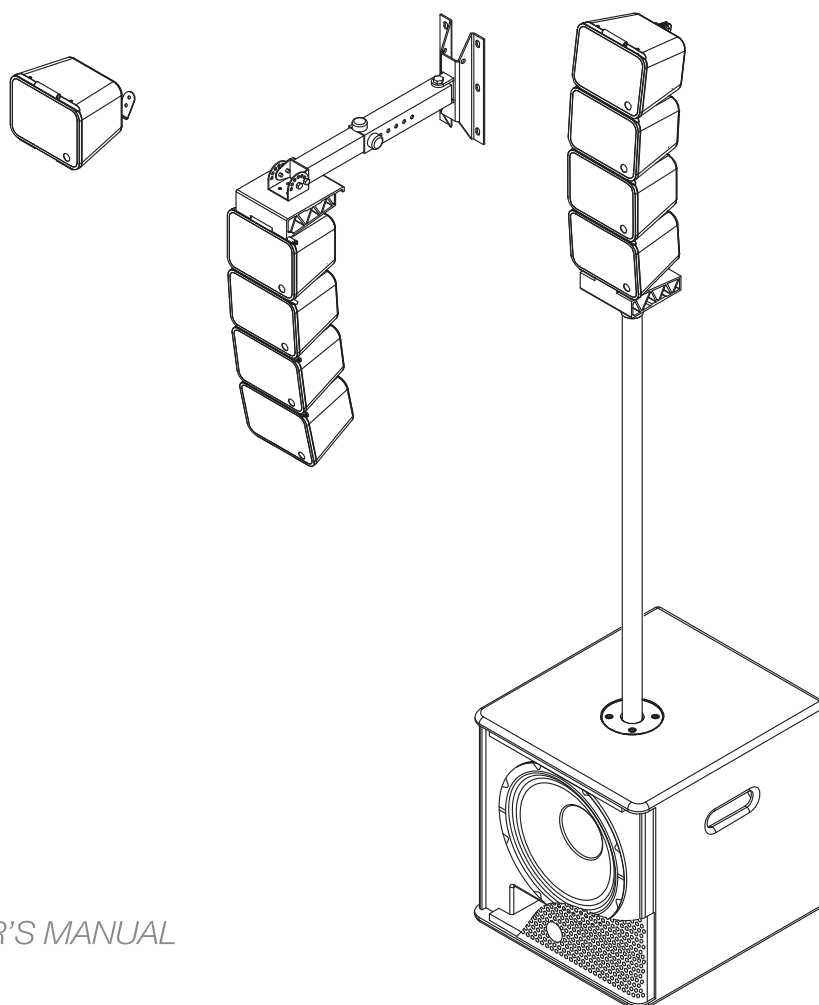


MINI ARRAY SYSTEM

4" Two-way passive system

GS / DF12P / DF12A



EN OWNER'S MANUAL

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.



CAUTION: To reduce the risk of electric shock, do not connect the loudspeaker to a power outlet while the grille is removed.

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Introduction

Thank you for choosing the new **ARRAY SERIES** cabinets have been designed to provide a cost effective high grade solution while maintainig high quality cabinet construction and optimum components.

The array series, can be used for all types of applications including, but not limited to, churches, conference centers and discos.

The woofer and neodymium driver combination provides excellent performance rivaling those cabinets costing much more.

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.

Installation Tips

- Speakers should be placed in a position that allows for unobstructed sound projection. In many instances it is beneficial for speakers to elevate on tripod stands to achieve maximum dispersion and reach. Consider speaker stand or equivalent to raise speakers.
- Using quality cables ensure best possible sound. Consider using 16 or 14 gauge cables or equivalent.
- For best results match the speakers to a good amplifier that matches the wattage and impedance of your speakers. Proper amplification power results in good quality audio and longer component life. Check out.
- Avoid pointing microphone directly at an amplified speaker otherwise could cause feedback possible damaging speaker components and your hearing.

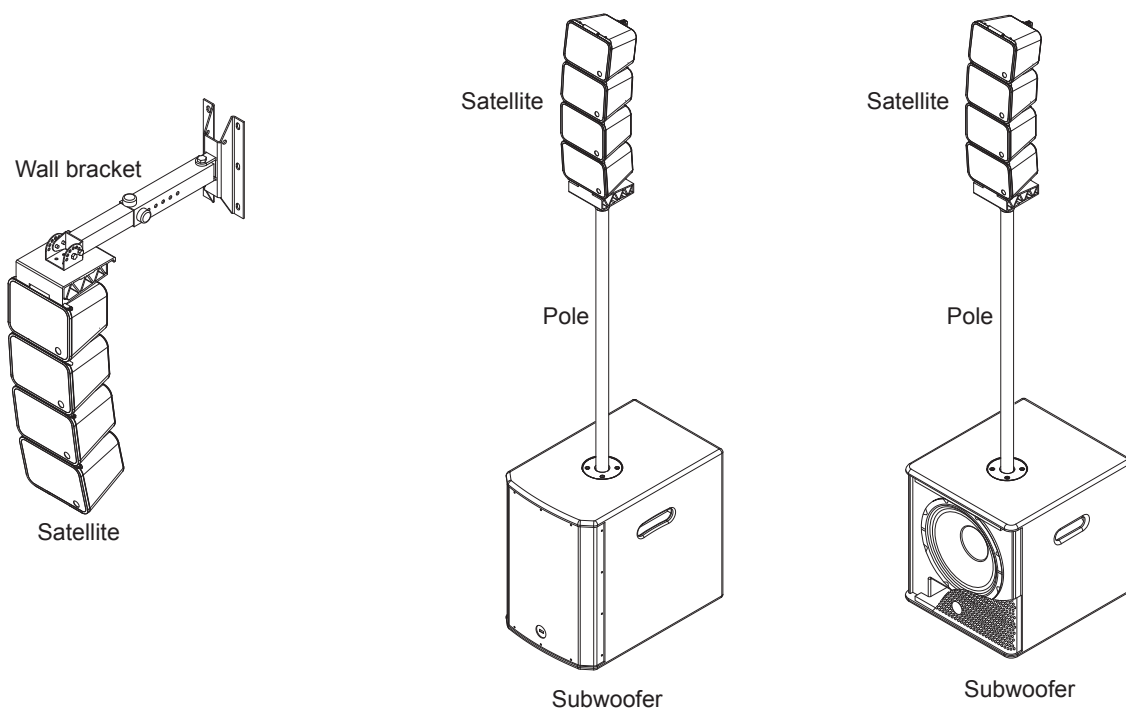
Enjoy the sound!

Quick Start

When mounting a speaker onto any stand, always ensure that the stand is on a flat, level surface, with the legs fully extended. Be sure to check that the maximum load weight for the stands is greater than the weight of the **ARRAY SYSTEMS** loudspeaker. Never use a stand with a maximum load weight lower than the speaker. Do not attempt to mount more than one speaker on a stand at one time.

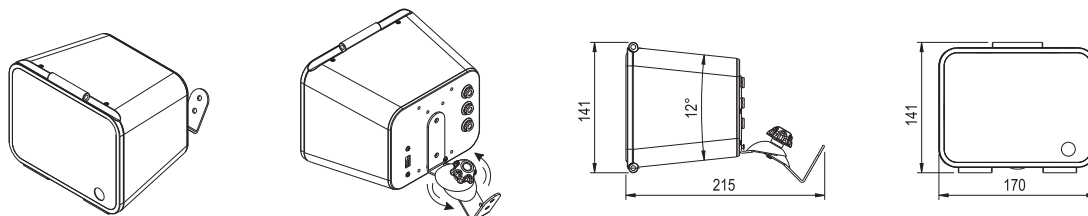
The **ARRAY SYSTEMS** loudspeakers are heavy. It is recommended that a second person to help place the cabinet on a stand.

When the speaker is placed on a stand, always check the integrity and center of gravity of the system. If the speaker can be tipped easily, or the pole is swaying, it is recommended that you lower the height of the stand. Position the stand and route cables so that the performers and the audience cannot tip over or trip on the system.

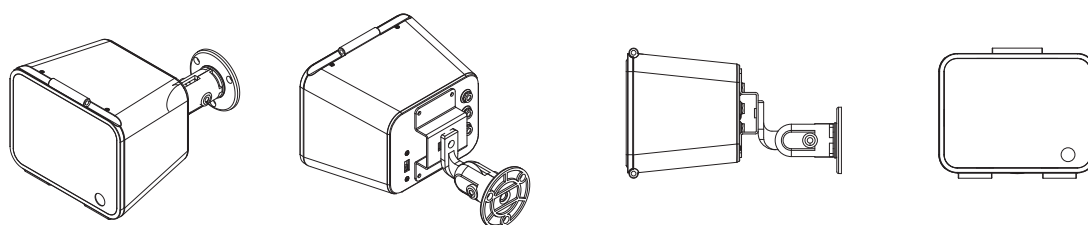


Satellite Layout of The Connector Panel

One module



* Option wall bracket



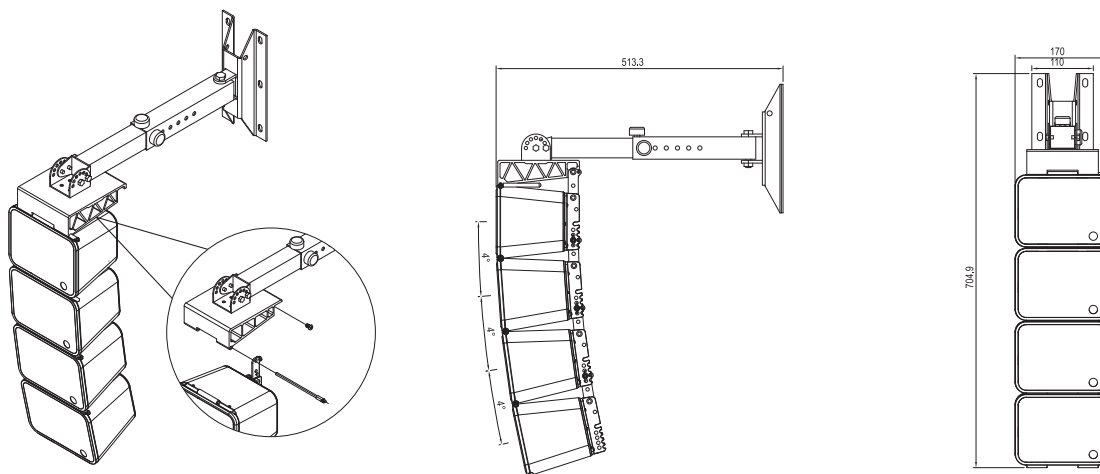
The direction of the bracket can be adjusted from any side.

More module

Versatile mounting options

Compared to many other speaker designs, the satellite Series is remarkably easy to install in several ways. It can be hung easily with chains, strong wires and cables using the accessory brackets.

There are also options for hanging with a pre-install frame by itself or configured with a subwoofer. There are also other options including ceiling and wall brackets as well as an adapter for use with a dedicated stand.

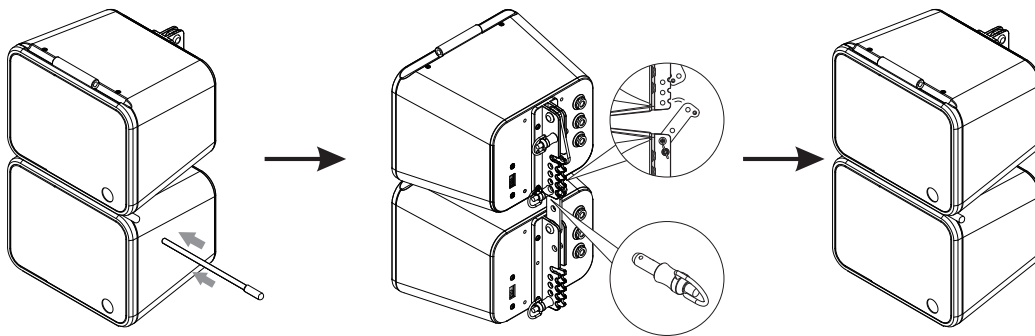


The bracket support wall and ceiling mounting with most 8 modules .
The direction and angle can be adjusted from any side.

Satellite Layout of The Connector Panel

Connect Manner

- 1 Align two units to make the latch hole in the same line. Insert the latch and lock the screw tightly.
- 2 Adjust the angles of the unit (four angles: 0°-4°-8°-12 can be adjusted), insert the rear connecting pin into the related slot and put the latch into the hole.

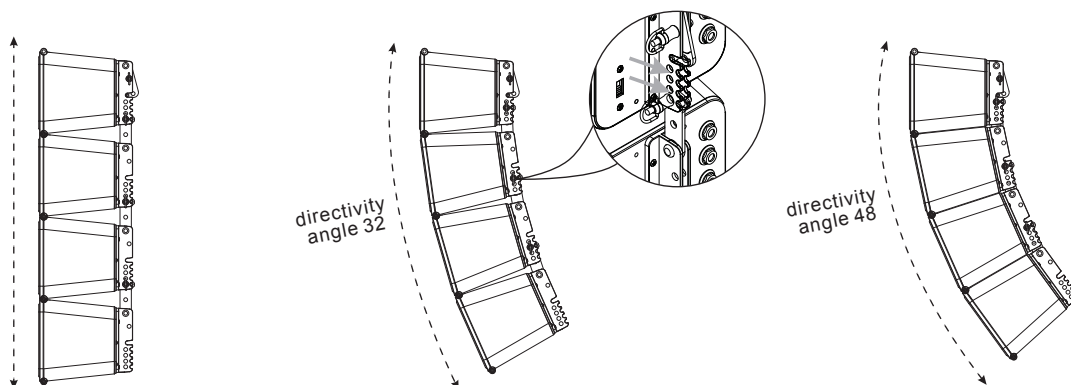


You can insert each three different holes when connecting the rear bracket. You can obtain different sound by different angles.

Adjustable sound dispersion(for example four pcs)

A system in configured by vertically stacking four speaker modules with a total driver complement of four woofers and 12 tweeters positioned along the baffle surface, this configuration allows the variable directivity control and low-frequency dispersion control comparable to using a large constant-directivity horn speaker. A choice of three directivity angles---0, 4, 8 and 12 degrees can be employed as needed.

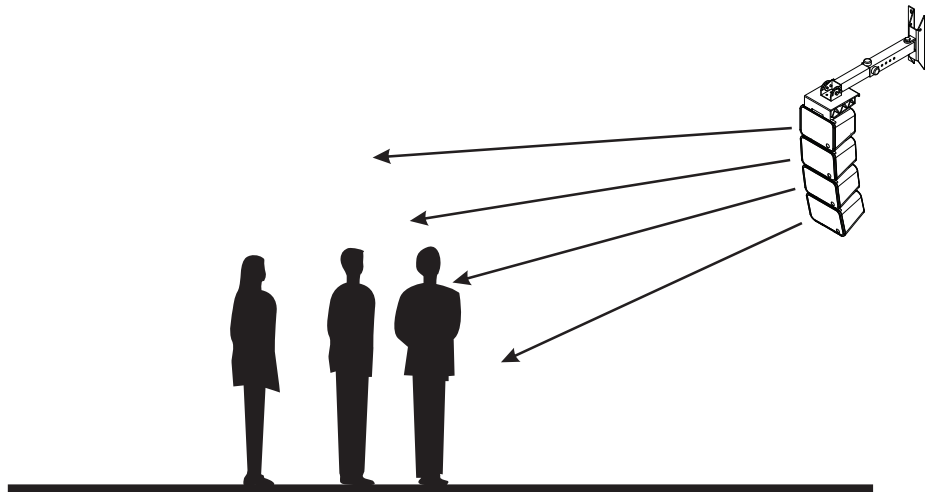
For instance, a specific directivity angle, or each module can have its directivity independently set for a specific coverage requirement. When two or multiple modules are connected to configure an arc, they effectively function as an immense single speaker controlling directivity for considerably lower frequencies. As a result, public address functions demonstrate optimal intelligibility even in environments with long reverb times.



Satellite Layout of The Connector Panel

Minimal reflective effects

Whether mounted on the wall or ceiling, the satellite is remarkably free from the comb filter and interference effects often encountered with other speaker designs. It can therefore produce more low frequency output even when mounted on the wall or ceiling.



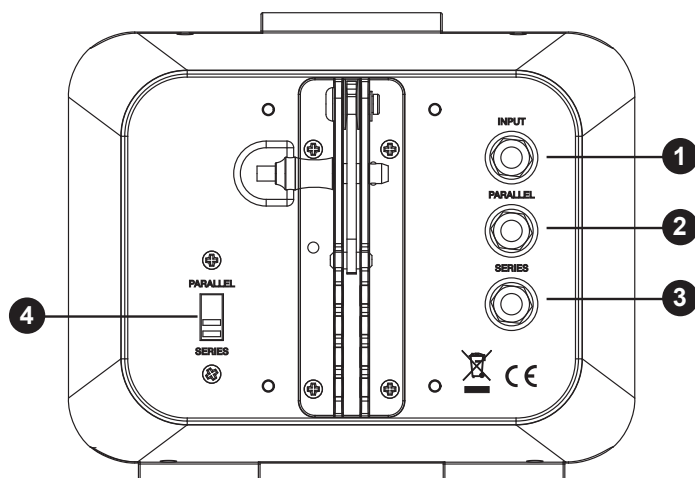
Satellite Back Panel Description

1) INPUT: Receive the power coming from an external power amplifier.

2) PARALLEL: power output for another product to parallel, parallel and input are link.

3) SERIES: Power output for another satellite speaker to series.

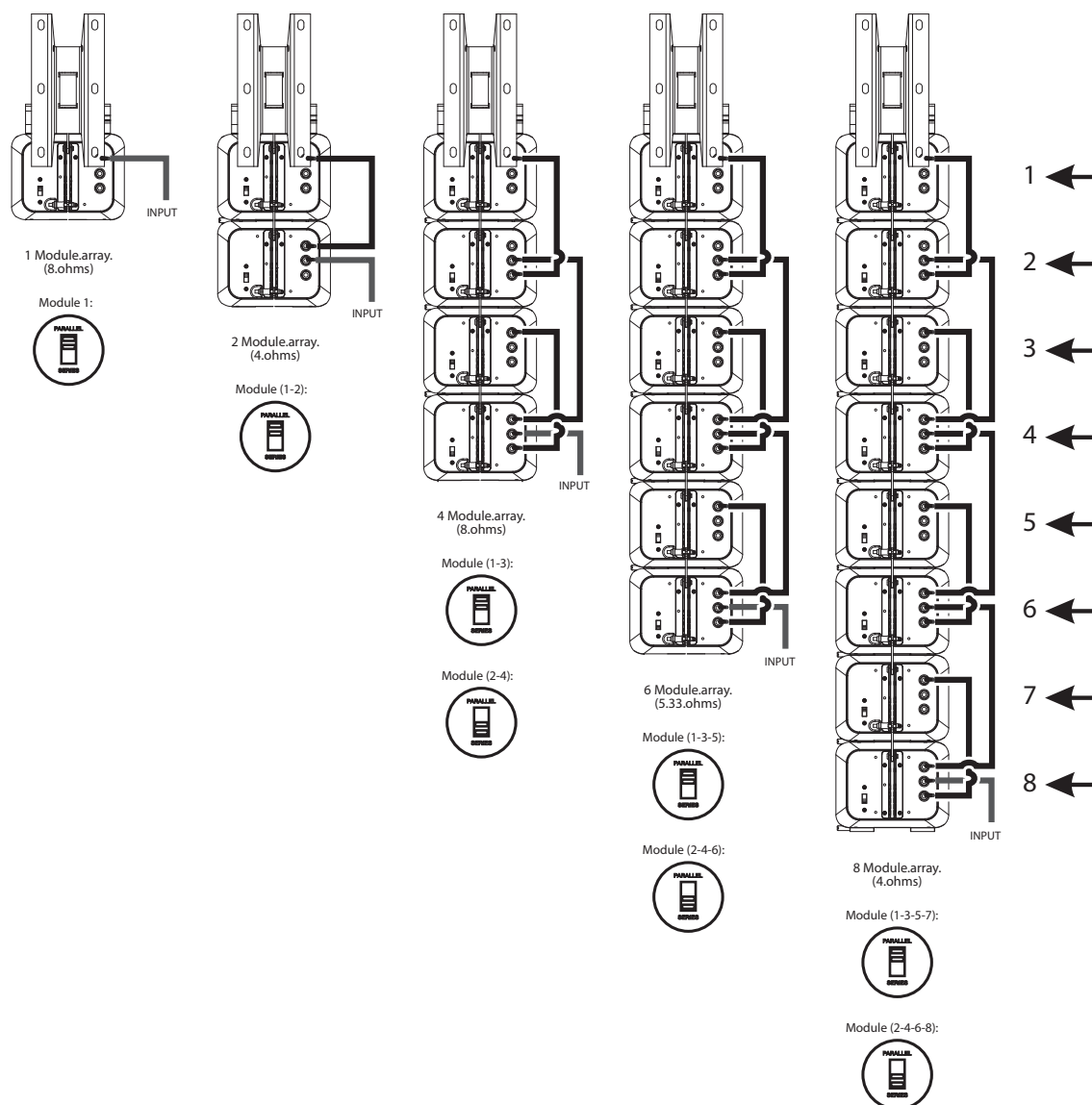
4) Slide Switch: Parallel or Series Transform Switch



a. set the slide switch at "parallel" position to make the product in parallel.

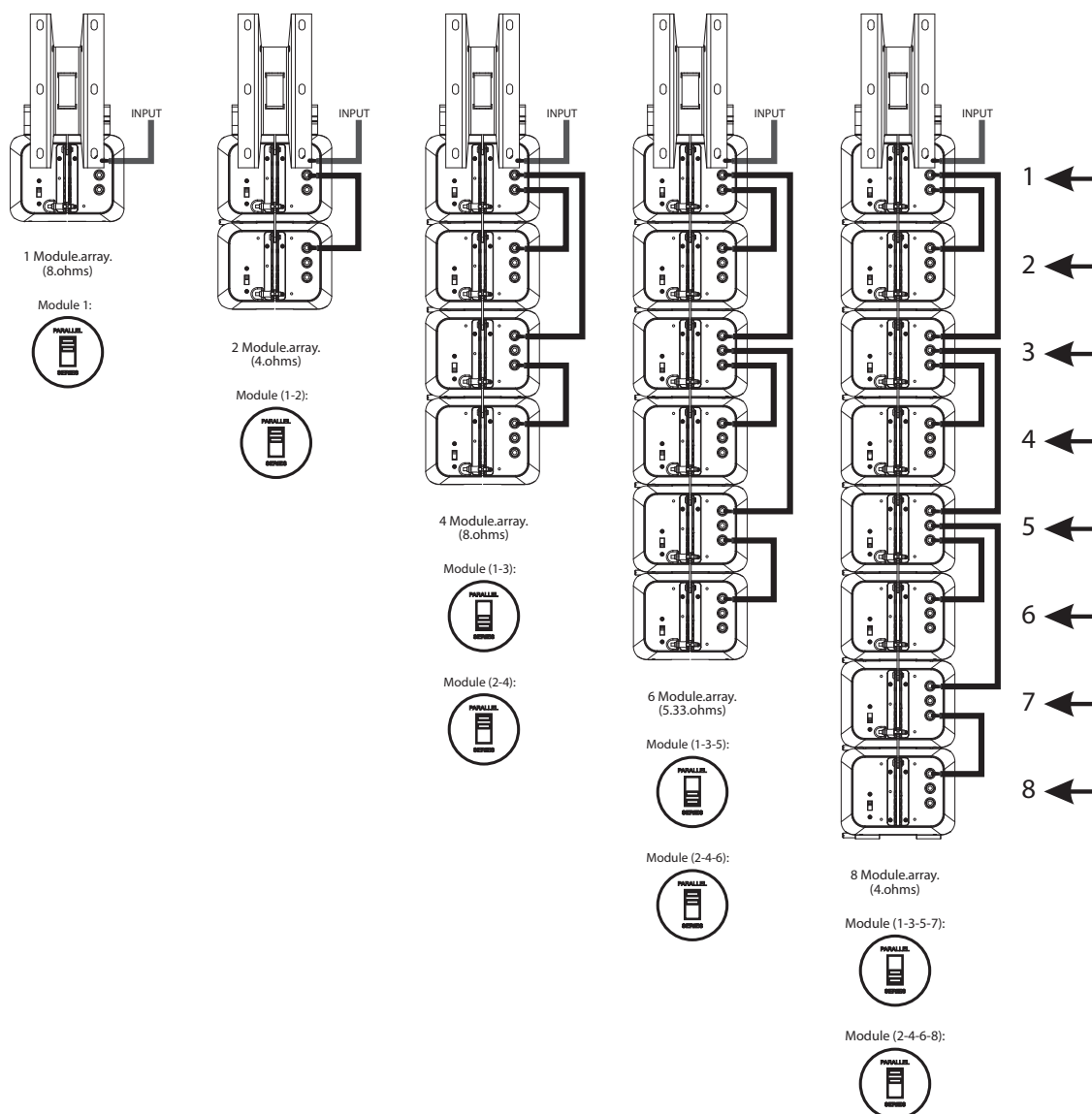
b. Set the switch at "series" position to make products in series, but the slide switch of the last product has to set at "parallel" position.

Satellite Down Connection



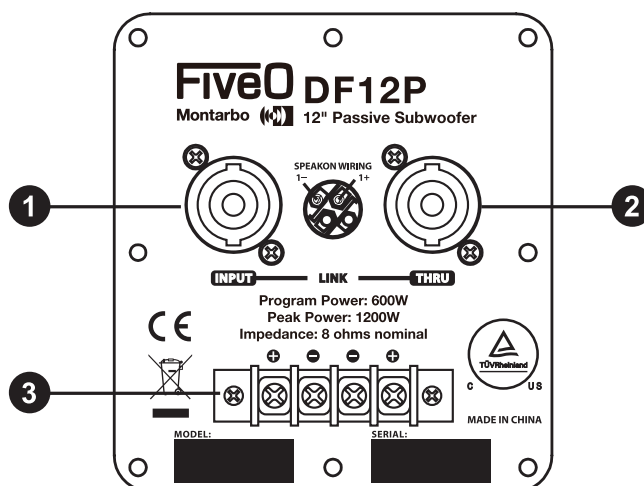
- Power output for satellite speaker down connection

Satellite Up Connection

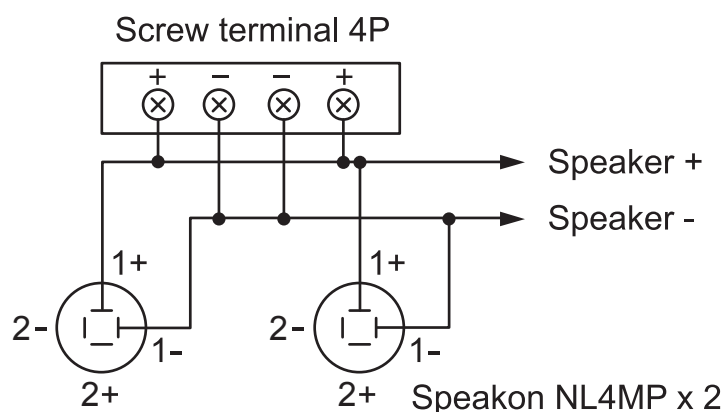


- Power output for satellite speaker UP connection

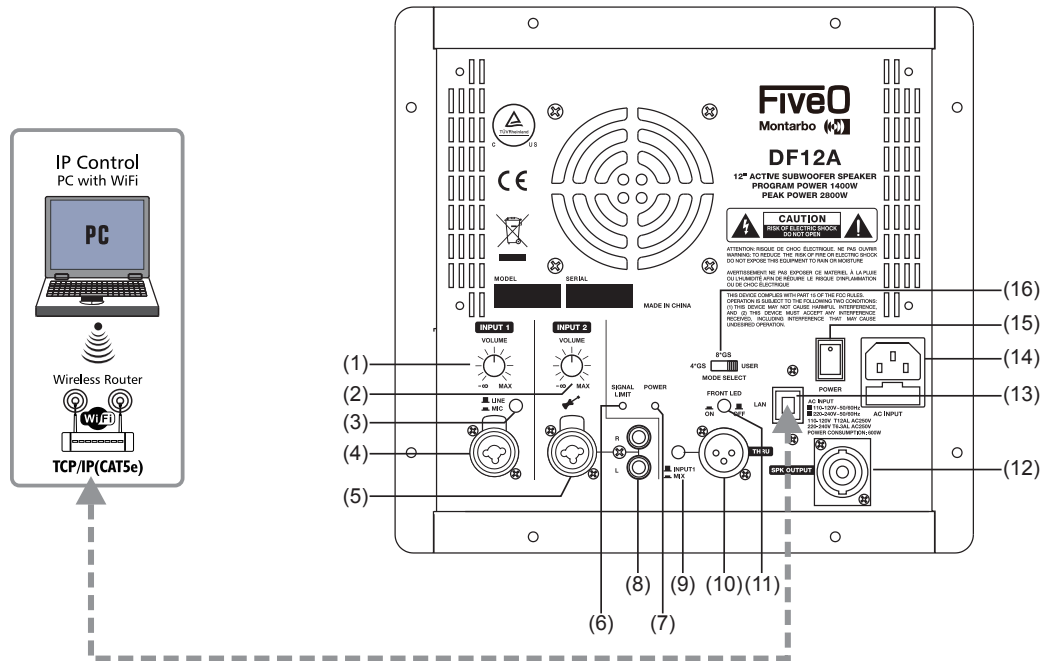
Subwoofer Back Panel Description



- ❶ INPUT: Receive the power coming from an external power amplifier.
(SPK +1/-1 connected; +2/-2 not connected).
- ❷ OUTPUT: Power output for satellite speaker, under passive crossover filtered at 180 Hz.
(SPK +1/-1 connected; +2/-2 not connected).
- ❸ Speakon Parallel Socket



Subwoofer Back Panel Description



- (1) Input 1 Volume Control
- (2) Input 2 Volume Control
- (3) LINE / MIC Switch (Input1 only)
- (4) XLR AND 1/4" COMBO INPUT1
INPUT1 may accept a MIC or line-level signal via XLR or line-level signal via TRS 1/4" cable.
Be aware of the position of the MIC/LINE switch (3).
- (5) XLR AND 1/4" COMBO INPUT2
INPUT2 may accept Hi-Z sources (such as guitars) via the TRS 1/4" input, or line-level signal via XLR.
NEVER connect the output of an amplifier directly to the input of the loudspeaker. This could damage the input circuitry of the active loudspeaker.
- (6) SIGNAL / LIMIT LED-red, indicating ON status.
- (7) POWER LED-green, indicating ON status.
- (8) RCA INPUTS (Input2 only)
- (9) INPUT 1 / MIX Switch (Thru output)
This switch allows you to choose whether only the input1 signal is sent out to the next loudspeaker (switch out-input1) or mix of the input1 and input2 signals are sent out to the next loudspeaker (switch in-Mix).
- (10) Thru output on XLR Connector
This is a male XLR-type connector that produces exactly the same signal that is connected to the main input jack or a mix of input1 and input2.
- (11) Switch for Front LED ON or OFF
- (12) SPK Connector to satellite: Use pins + 1 positive / -1 negative
- (13) IP Control
- (14) AC Power Socket with Main Fuse.
- (15) ON-OFF Main Power Switch.
- (16) Preset Selector: **4*GS** / **8*GS** / **User** (Custom Sound)
4*GS: Allow use this subwoofer with the 4 speaker satellite--Default factory set.
8*GS: Allow use this subwoofer with the 8 speaker satellite--Default factory set.
User: Adjust the Equalization according to the requirement of the user, depending on the acoustics of the place and the implementation of the system. This setting can be performed by a PC via LAN port, using a router for internet. This "preset" comes from factory set with the parameters of the **4*GS**, after making the necessary changes you can be save into the system.

Technical Specifications

Model	GS (one module)
System Type	4" Two-way passive system
Rated Power	60W Program, 90W Peak @ 8 ohms
Sensitivity (1W/1M)	88dB Continuous / 91dB
Frequency Response	100Hz-20 KHz (-10dB)
Crossover Frequency	3.0kHz passive
Transducer Low	4" Neodymium Woofer, 1" Voice Coil 8 ohms
Transducer High	3 x 0.5" soft dome tweeter / 16 ohms
Dispersion(-6dB)	110° Horizontal, 20° Vertical (one module)
Maximum SPL @ 1m	103dB Max.(calculated)
Impedance	8 ohms
Enclosure	Aluminum Alloy Cabinet
Finish	Resistant Black Paint
Connectors	Parallel or Series Ø6.3mm Socket / Selection Switch
Fittings information	Steel Stirrup Material , 3Flying Points M6, threaded sockets (3 in top)
Dimensions (HxWxD)	(W)141mm*(H)170mm*(D)162mm / (W)5.55" * (H)6.69" * (D)6.38"
Net Weight	1.46kg / 3.21 lbs

satellite Line Array:

Indicates number of amp ch \$ impedance (per ch)

Multiple modules connected in series (+) & parallel (//)

See patch sketches in "Powering your mini line array."

Single channel configuration		Array Power Rating(AES)
1 module array	1ch 8 ohms	30W
2 module array	1ch 4 ohms (2//)	60W
4 module array	1ch 8 ohms (1+2)/(3+4)	120W
6 module array	1ch 5.33 ohms (1+2)/(3+4)/(5+6)	180W
8 module array	1ch 4 ohms (1+2)/(3+4)/(5+6)/(7+8)	240W

Technical Specifications

Model Active	DF12P
System Type	12" Passive Vented Subwoofer
Rated Power	300W Program, 600W Peak @ 8 Ohm
Sensitivity	122dB Continuous / 125dB Peak
Frequency Response	45Hz-2.8kHz (-10dB)
Impedance	8 ohms
Transducer Low	12" (320mm) Ferrite Woofer, 2.55" (64.5mm) Voice Coil
Connector	4 PIN Terminal Block and 2*NL-4 Speakon Parallel Socket
Enclosure Construction	Plywood Cabinet, Resistant Black Paint, Metal Grille
Mounting information	One Metal Standard Pole-mount
Dimensions (WxHxD)	350 x 500 x 542 mm
	13.78" x 19.69" x 21.33"
Net Weight	8 kg / 17.6 lbs

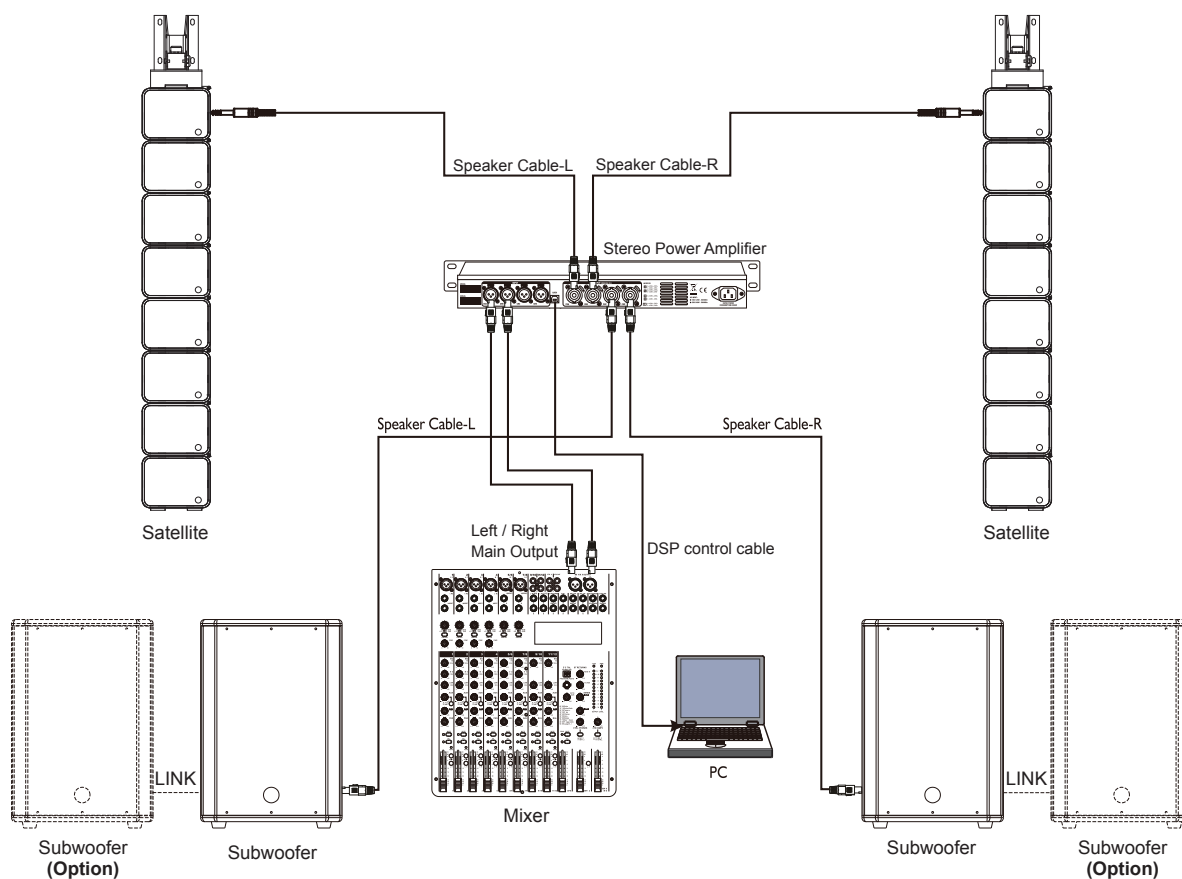
Active Subwoofer	DF12A
Subwoofer	1 x 12", ϕ 320mm-2.5" Voice Coil
Frequency response -6 dB	40Hz-500Hz
Amplifier, subwoofer	500 W Program / 1000 W Peak Class-D @ 4ohms
Amplifier, satellite / mid! high unit	240W Program / 360 W Peak Class-D @ 4ohms
Axial sensitivity 1W@1m	96dB / 130dB Max
Electronic Protections	Thermal DC / Overload / Digital Compressor / Limit
Cooling	Temperature-controlled fan
Connections	Input: 2 Combo - XLR 1/4", 1 RCA in L&R
	Output: SPK Satellite / XLR Link
External Controls	Volume Control / Switch for Input sens. / Switch for mode selector / Power ON with Green LED / Limiter with Red LED / Ground Lift / IP Control
Power Supply	115V / 230V Switchable
Enclosure Construction	Plywood cabinet, resistant black paint, metal grille with foam, rubber feet, handles
Mounting	one metal standard pole-mount
Dimensions (W x H x D)	430 x 450 x 480 mm (16.93" x 17.72" x 18.90")
Net Weight	12 kg / 26.5 lbs

System Connection Plate

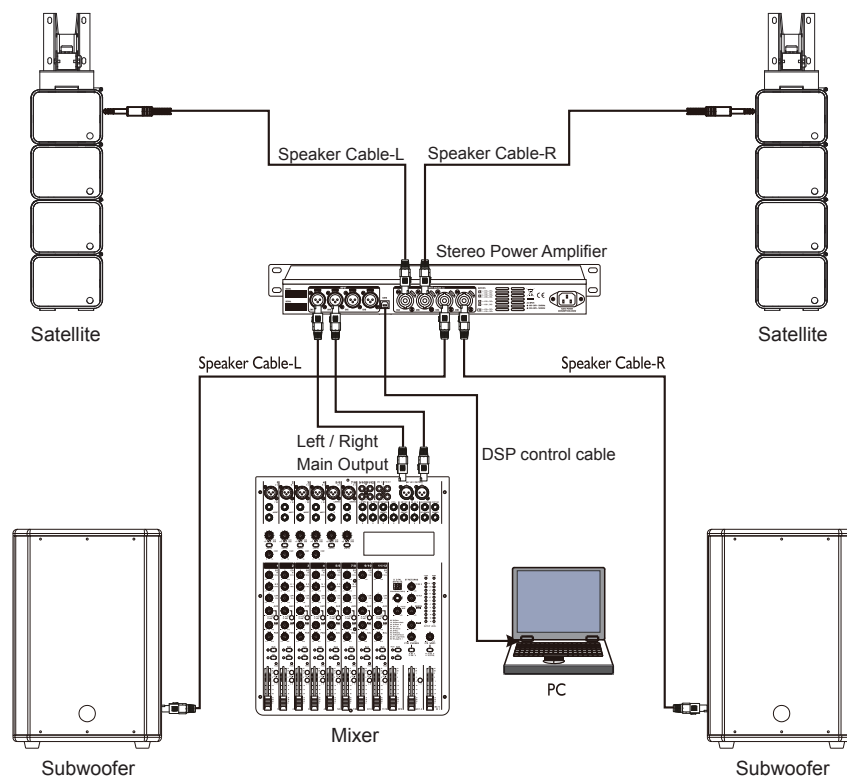
Make your initial connections with all the equipment powered off, and ensure that all the main volume controls are turned completely down.

For Passive Full-range Speaker Cabinet

- 1) Connect one side of the speaker cable to the Output CH A / CH B to Binding Post of your stereo power amplifier and the other side to the Input socket of your speaker cabinet.
- 2) Complete other connections as illustrated.
- 3) Turn up your mixer first, then the stereo power amplifier.
- 4) Turn up the volume controls of your amplifier to about 70%.
- 5) Use PFL function to get the proper input level for the mixer, and adjust the Main Mix Level control to manipulate the output level.
- 6) After using, turn off your stereo power amplifier first, then the mixer.



System Connection Plate

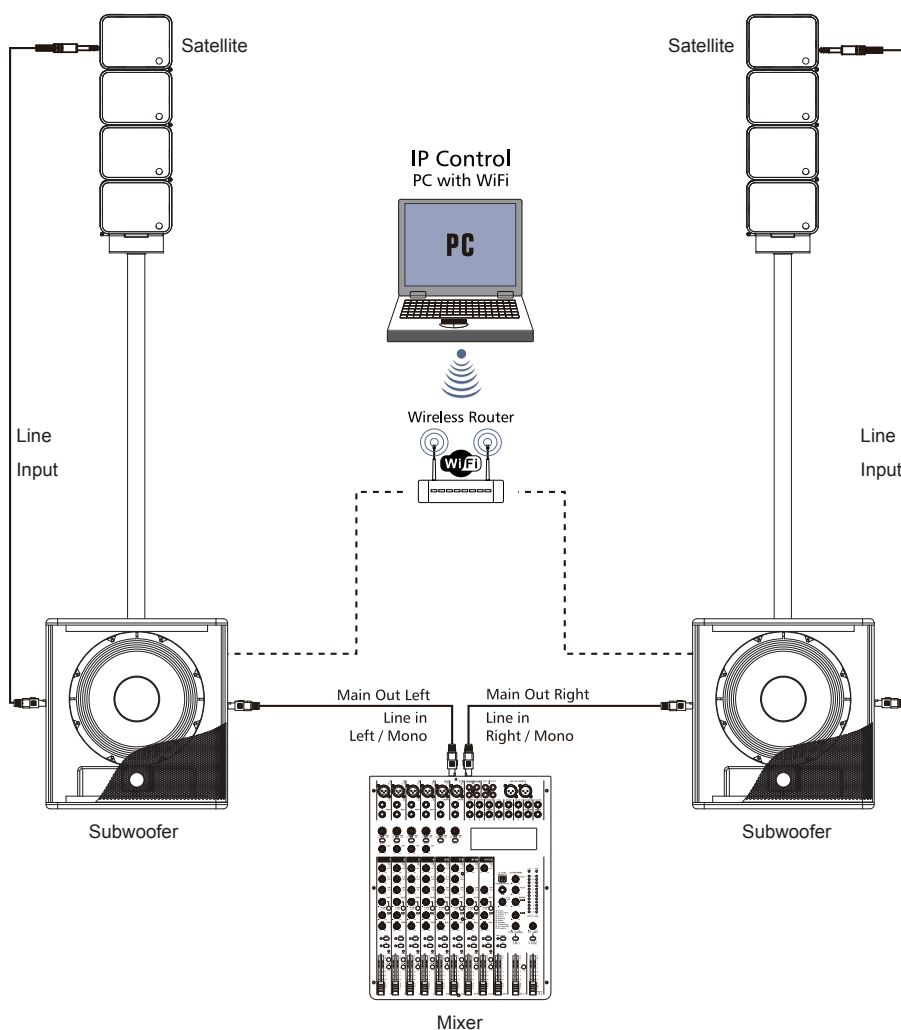


System Connection Plate

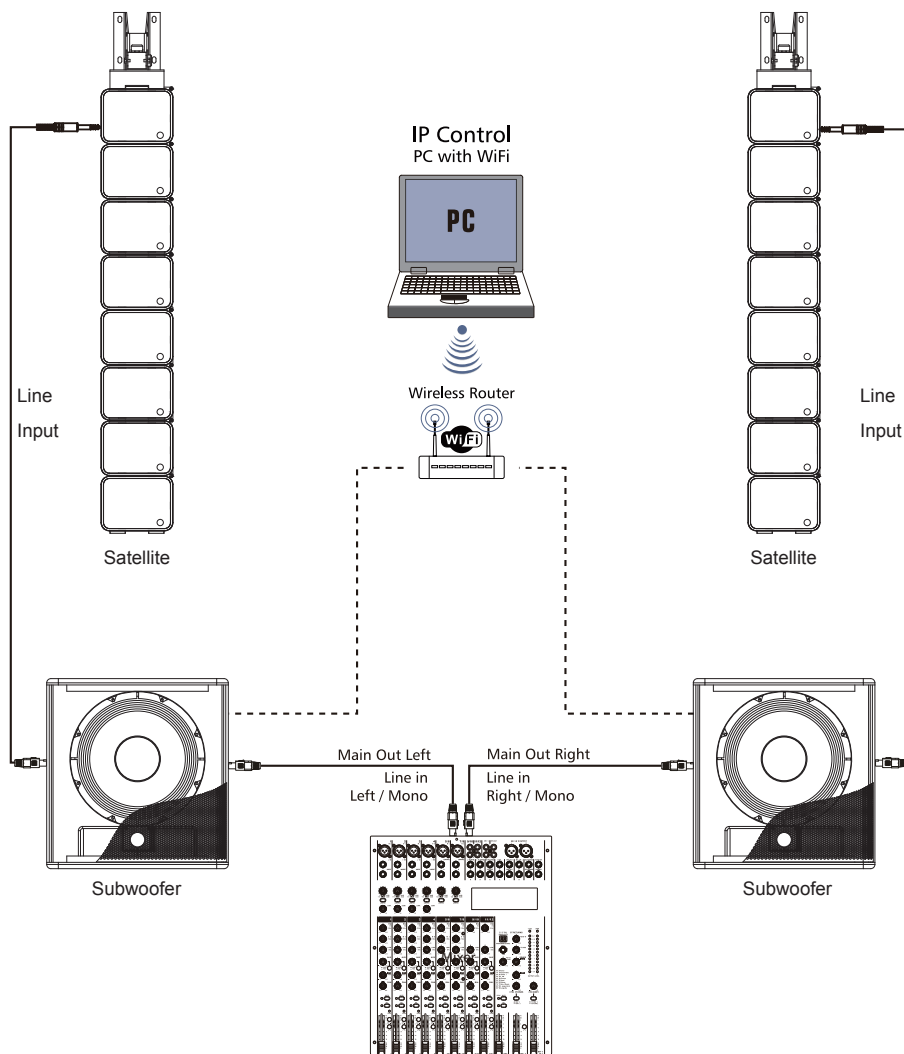
Make your initial connections with all the equipment powered off, and ensure that all the main volume controls are turned completely down.

Two Active Subwoofers & Two Passive Satellite Speakers

- 1) Connect one side of the signal cable to the output of your mixer (left / right) with a TRS or XLR connector and the other side of the cable to the line input (combo) in the active subwoofer (with a TRS to XLR connector). Then connect the speakon cable from the output of power in the Subwoofer to the satellites input.
- 2) Complete other connections as illustrated.
- 3) Turn on your mixer first, then the stereo power amplifier.
- 4) Turn up the volume controls of your amplifier to about 70%.
- 5) Use PFL function to get the proper input level for the mixer, and adjust the Main Mix Level control to manipulate the output level.
- 6) After using, turn off your stereo power amplifier first, then the mixer.



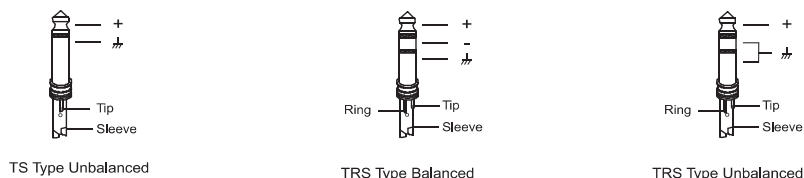
System Connection Plate



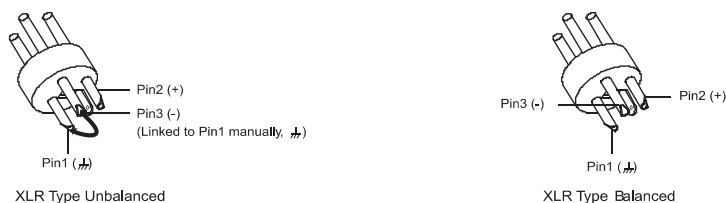
Wire Connections

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:

For 1/4" Phone jack



For XLR connector

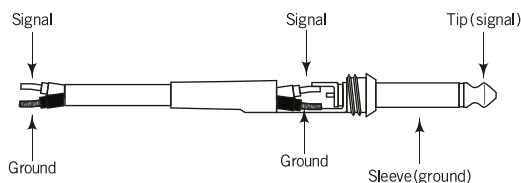


The series speaker connections are made via the rear panel 1/4" and/or Speakon connectors for easy interface with industry standard cables. Standard, unshielded speaker wire (available at your local pro audio or music store), with either 1/4" phone or Speakon connectors and wire gauge of 12-14 AWG is recommended.

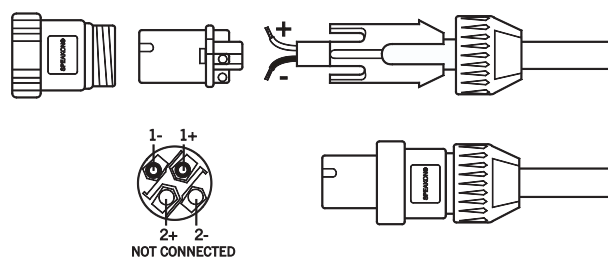
If your amplifier uses binding posts you can use speaker cables with banana connectors, but be sure to pay attention to the +/- polarity when making the connections. Make sure that the + terminal of the speaker, or banana connector, is connected to the + terminal of the power amplifier, and that the - terminal of the speaker, or banana connector, is connected to the - terminal of the power amplifier. It is important that your PA system is connected in-phase, otherwise you will not have the proper low-end response and stereo image.

Use the following diagrams below to ensure proper connections when wiring your system:

Unbalanced 1/4" Connector



Speakon® Wiring Guide



EN *The information contained in this manual have been carefully drawn up and checked. However no responsibility will be assumed for any incorrectness. This manual cannot cover all the possible contingencies which may arise during the product installation and use. Should further information be desired, please contact us or our local distributor. Eletttronica Montarbo srl can not be considered responsible for damages which may be caused to people and things when using this product. Specifications and features are subject to change without prior notice.*