AUDIOCENTER

Dynamic Audio Solutions

TS/TS-SW Series

User's Manual
TS08,TS10,TS12,TS12P,TS15,
TS-112SW,TS-118SW,TS-212SW

Contents

◆ Product Introduction

Thank you for purchasing TS full range active speaker system and TS-SW series active subwoofer from Audiocenter. They have integrated technologies of switch mode power supply, big power digital amplifier and DSP control, as well as speakers made of new materials. It is the result of years of R&D effort. We hope that you can use with pleasure, just as how we designed it.

Please finish reading the manual before usage, to make sure the best performance of TS/TS-SW series. Please keep the manual for future reference.

◆ Safety precautions ⚠

When you set up,install and use the TS/TS-SW,please follow the following safety measures strictly:

- There can be danger in any step during hanging installation. Everyone should pay attention to personal safety. All purchasers of Audiocenter should be professional people qualified to conduct the work related to such equipments.
- We strongly suggest the users pay full attention to local rules, regulations and laws. Installers have the responsibility to make sure the speaker installations are subject to local rules, regulations, and laws.
- If any danger or defect is detected, measures should be taken immediately to correct it.
- In touring application, please choose the installation hardware and occasion that can sustain the weight of the equipments.
- Please do not try to hang speakers over the design standard.
- When connecting the cables of the products, please use cable tie to fix the cables, to avoid actors, workers, and audience falling on the wire or brackets and affecting the speaker system.
- Please do not place the speakers near equipments sensitive to magnet fields, such as CRT displayer, TV or data saving materials.
- Please do not place the power cable near heating source. Do not over bend or damage the power cables. Do not place heavy things on it. Please do not place the cables that may be pressed or cause stumbling.
- Only the specified rated voltage should be used for this product. Please refer to the back panel of the product for the specified voltage.
- Only the supplied power cable or plug should be used. (If you need to use the product in a place different from the purchase place, please consult your local Audiocenter distributor..)
- Please check the power cable or plug regularly.
- Please make sure to connect to proper power socket with protection grounding connection. Wrong grounding may cause short circuits.
- The product inside does not include any component that can be repaired by users. In case of abnormal operation, please stop using immediately, and contact qualified Audiocenter maintenance worker to repair.
- Please do not use the product in the rain, or near water, or in humid environment, to avoid liquid spilling to any opening.

- When any of the following situations occurs, please cut the power immediately, and pull out the power plug from the socket, and ask qualified Audiocenter maintenance worker to repair.

    -- Wear or damage of the power cable or plug.

    -- Abnormal smell or smoking

    --Some substance falls into the product

    --Sound stops suddenly when using the product .

- If the product falls or damages, please turn off the power switch immediately. Pull out the power plug from the socket, and ask qualified Audiocenter maintenance worker to repair.

- When pulling out the power plug from the power socket or the product, please make sure to grab the plug instead of the power cable. Pulling the power cable directly may cause damage.

- If the product is not used for long time, or there is thunder storm, please pull out the plug from the socket.

- Please do not place the product in any uneven position. Otherwise, it may cause falling off suddenly.

- If the product is not fixed safely, please do not place it in a position that may cause easy falling.

- Please do not block the air hole. The product has air hole at the back to avoid internal temperature too high. Bad ventilation may cause damage to the product or even fire.

- Please do not hang or install any other component to the handle of the speaker. It may cause damage or injure.

- Please do not press the back panel of the product to the wall. Otherwise the plug may touch the wall and separate from the cable, and cause short circuits, malfunction, or even fire.

- Before connecting the product to other equipment, please turn off the power switch of all equipments. Before turning on or off the power switch of all equipments, please turn down the volume to the minimum.

- Please do not use the product in a very high or uncomfortable volume. Otherwise, it may cause permanent damage to your ear.

- In case of sound distortion, please do not use the product. To Continue using the product in such status may cause fire.

- Using mobile phones near the speaker may cause noise. In case of noise, please use themobile phone far from the speaker.

- If you need service, please contact Audiocenter service center, agent, or distributor in your area.

⚠ **In order to avoid to cause you or others body injury and loss on equipment or property, please make sure to follow above basic items.**

◆ **Warranty**

We ensure all the Audiocenter products are high-quality and professional goods, no matter for the performance or for the craftwork. Before delivery, each single piece of products is checked by us for outlook and also automatically tested by equipment for

high standard sound quality, then QC passed.

From the date you buy our goods, you will own the service in free of charge for 6 years.

Product warranty items and Guarantee (China Mainland only)

1、Products warranty period is 6years (starting from the date buying the products). During warranty period, if any damage or fault in our goods, after Audiocenter technician verified the issue was not caused by wrong operation and usage or unexpected damage during the transportation, Audiocenter will repair the products and exchange the spare parts in free of charge.

2、Because of long distance for oversea transportation and other changeable factors, warranty 6years is for China mainland only.

3、If under below conditions, Audiocenter distributor and dealers will reserve the right to reject any repair.

a) Products were not buy from Audiocenter dealers or distributors, or it is fakery.

b) Factory serial number is invalid, damaged already, obliterated, removed or no any sale record.

4、Under below-mentioned conditions, information in warranty card or website will be invalid.

1) The issue was caused by the intentionally wrong operation.

2) Problem or fault caused by wrong handling,incorrect operation,unexpected damage

3) The issue caused by inefficient outer conditions,such as oversize input voltage and huge humidity.

4) The damage caused by the accident or natural hazard.

5) Products were repaired by other people, not by Audiocenter technicians.

6) Installation of the products in the wrong way.

5、Warranty and maintenance of the goods are only for Audiocenter service center or appointed distributors.

6、If products damaged directly or indirectly due to the equipment defective, Audiocenter won't take any responsibility.

7、If Audiocenter products are out of warranty period, reasonable fee will be charged for repair.

8、Audiocenter reserve the right for explaining of above items. If any change, we will keep you informed.

If any query, please contact us by phone: support@ac-pro.net or visit our website: www.ac-pro.net.

Product Warranty Registration.

● Users fill one warranty card in duplicate, (Packed with user manual inside the bag, content is as below drawing.). Then send one of the parts to Audiocenter distributors within 30days.

● User also can login into Audiocenter official website www.ac-pro.net to register the effective warranty serial number. (Route: Home/product center/ product warranty register).

● If need to repair the goods, you are required to show out the Invoice and warranty card.

● Related information of goods in official website will be the support for the service.

Package accessories:

- Power cable
- User's manual
- Warranty card and quality certificate
- Rubber feet (for TS12/15，TS-12P only)

  Please check above items carefully. If any questions, please advise Audiocenter representative, dealers, distributors, or contact by email box: support@ac-pro.net.

Optional accessories:

- U horizontal bracket
- U vertical bracket
- Joint bracket
- Flight case
- Cover bag
- Stand
- Coupling bar

◆ **TS / TS-SW Technical Features**

- **TS Series:**
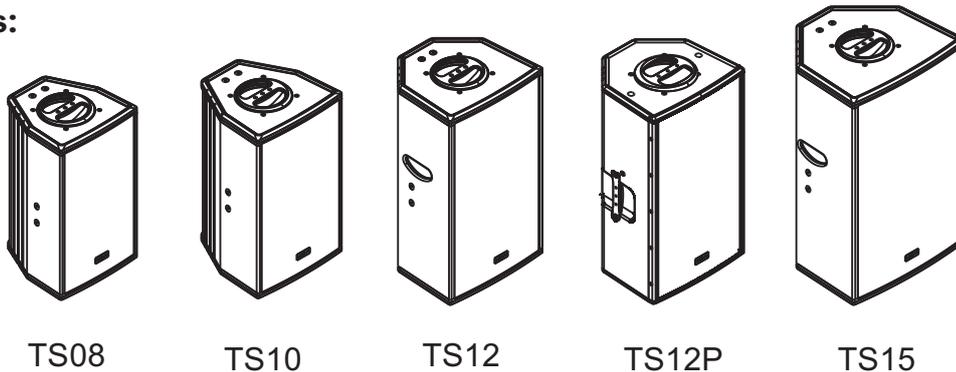
TS08　　TS10　　TS12　　TS12P　　TS15

- **TS-SW Series:**
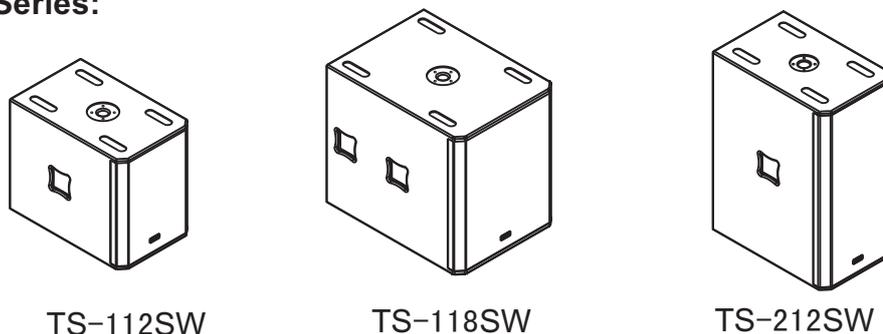
TS-112SW　　TS-118SW　　TS-212SW

- **Features:**

1、 Integrated with big power Class D amplifier technology, switch mode power supply technology and DSP control technology.

2、 With built-in DSP control technology, all functions like EQ adjustment, phase correction, delay, limiter, etc, can be realized easily.

3、 High efficiency Class D amplifier technology, light weight and more compact.

4、With 5 presets of TS Series, users can recall different presets for different applications to get the right sound performance.

5、Efficient protection system

6、Advanced 2 channel DSP board

7、Advanced AD/DA converter. 96KHz signal sampling frequency and 56- bit precision device to ensure the most clear sound

8、LCD at the back panel for easy display, and for users to touch and play different functions.

9、Input A and Input B can either input signal individually, or input.

◆ Presets for TS series and TS-SW series

There are 5 presets in TS series speakers for users to recall for usage in different applications.

1st preset- **AC**

2nd preset-Linear

3rd preset-**Boost**

4th preset-**Vocal**

5th preset-**W/Sub**

Presets for TS series are set up by factory before shipment. Users can only recall the presets for usage in different applications, but can't change or delete the presets.

● **1st preset**- **AC**

This is the default preset in TS when users operate TS for the first time or reset the preset. AC preset is with Audiocenter sound taste for smooth and natural sound.

● **2nd preset-Linear**

With this preset, the frequency response of the TS between 80Hz-18KHz is special linear response. The HF and LF are in a balance. It is the balance between high frequency and low frequency. With Equalizer or external DSP, users can simply adjust the frequency response of the speakers to satisfy some special application demand, such as defective architectural space acoustics, strange sound source or personal taste sound.

● **3rd preset**-**Boost**

With this preset, more LF energy will be created when the gain of LF is pushed more. In contrary, the energy of MF mid will be decreased accordingly. At the same time, the energy of super HF will be more.

● **4th preset**-**Vocal**

This preset can improve the clarity of human voice. Vocal preset is mainly used on the applications of company activities, fair, and public speech.

● **5th preset**-**W/Sub**

This preset is made to match TS with subwoofer. To work together with subwoofers, TS can have much better sound dynamic.

Audiocenter subwoofers or subwoofers of other brands are recommended to work with TS.

To match with Audiocenter TS series or third party 2-way speaker systems, TS-SW series are designed with 3 different kinds of presets:80Hz,100Hz and 120Hz. .

The polarity of TS-SW :

Polarity, also called as phase sometimes, means that the input voltage is positive or negative in specific time. In most cases, the positive will drive thediaphragm of the speaker to move forward,and the negative will drive it backward. When a specific frequency signal or similar signal repeats, the polarity must be the same, so that the input efficiency will be the highest. For subwoofer system, this is very important. Wrong connection or usage will change the polarity, and lower the system's efficiency.

TS-SW series polarity can be changed according to different using conditions.

When full range speakers system and subwoofer speaker system are combined, please change the phase according to their distance to get the best sound performance.

◆ TS series back panel control and function
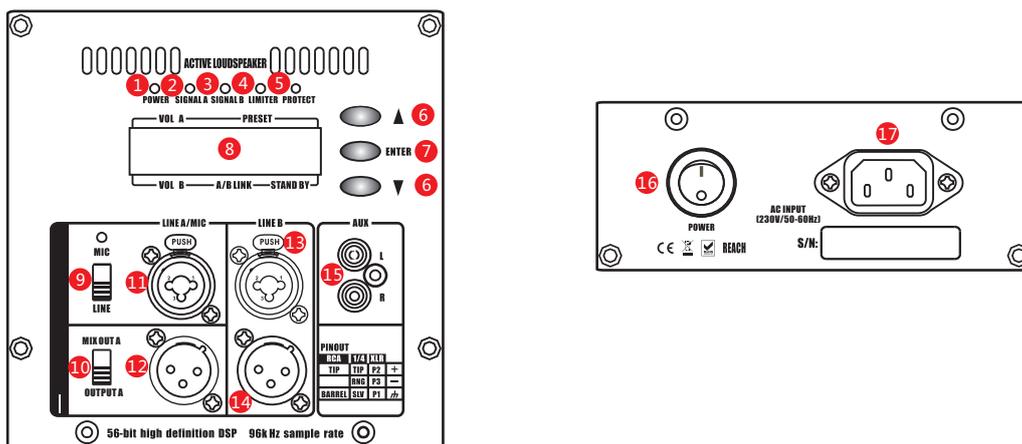
① **power indicator**
When speaker connected to power, the LED is on.

② **Channel A signal indicator**
When decting Line A/MIC channel has input signal, the LED is on.

③ **Channel B signal indicator**
When decting Line B/AUX channel has input signal, the LED is on.

④ **Limiter indicator**
When output limiter is activated, the LED is on. If the output voltage of the amplifier is over the maximum value, the output limiter will operate to damp the output signal of amplifier.

⑤ **Protect Indicator**
When the protection system is activated, the LED is on. The protection system will operate in the following situations:

the amplifier over heated
DC output
overload currency
power activation voltage too high or too low
the amplifier in stand-by mode

Then the Speaker output is mute, and power supply is cut off, LCD display will be off.

When the power is turned on:

The LED is on for 3 seconds with power supply. After normal power supply, the LED is off.

When the power is turned off:

When the power is switched off, or the power is cut accidently, the protection system will turn off the equipment to avoid noise.

If the protection system operates when detecting problem, please wait to turn it on after the amplifier cool down or the power is off, then the speaker will be normal again. If the equipment can not work normal, please consult your distributor.

6 Menu navigation key

This is to shift among different functions and change the parameters of each different function. Whenever there is an underline on either of the functions, users can press the key to shift to another function. Whenever there is flash on either of the functions, users can press the key to change the parameters of this function.

7 Enter key

This key is to select and confirm the functions. When the function item is underlined, press this key, then the function item flashes, you can modify the parameters. When you press this key again, the changed parameters are confirmed and you will exit.

8 LCD Display

Show the setting status of the speaker: volume/preset/LINEA B link/ stand-by.

9 Line/Mic Switch

According to the electric level of the input signal, set Line/Mic Switch to Mic or Line position. For low electric level signal(such as Microphone) set the switch to Mic position. For high electric level signal (such as electric musical instrument and audio equipment), please set the switch position to Line position.

10 MIX OUT A/OUTPUT A Switch

According to on site application, set Mix out A/Output A to Mix out A or Output A. Set the switch to MIX OUT A position, OUTPUT Singnal of INPUT A & INPUT B offer mixing.Set the switch to OUTPUT A position,OUTPUTS socket (12) and Inputs socket (11) in parallel, and input signal will be by pass, without influence.

11 Input Socket(Line A/Mic)

Balanced XLR and phone type multi-function input socket.

12 Output socket(MIX OUT A/OUTPUT A)

This is balanced XLR output socket. Select "MIX OUT A", balanced output mixed signal.

Select "OUTPUT A", output socket in parallel with input socket (LINE A/MIC).

13 **Inputs socket (LINE B)**

Balanced XLR and phone type multi-function input socket.

14 **OUTPUTS Socket (LINE B)**

This is balanced XLR output socket. Parallel to INPUT socket (Line B), input signal can be bypass, without influence.

**15** **INPUTS Socket (AUX)**

Unbalanced RCA input socket.

16 **Power switch**

Turn on or off power. Slide the switch up to (1) position to turn on the power.Slide the switch down to (0) position to turn off the power.

17 **AC input socket**

Connect the power cable here.First connect on end of the power cable to the product and then connect the other end of the power cable to AC socket.

◆ **TS-SW series back panel control and functions**
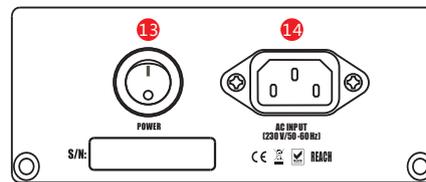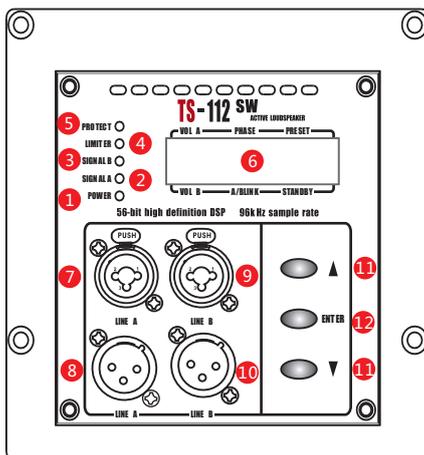
1 **Power LED**

When connected to power, the LED is on.

2 **Signal A LED**

When there is audio input signal in Line A/Mic channel, the LED is on.

3 **Signal B LED**

When there is audio input signal in LineB/AUX, the LED is on.

4 **Limiter LED**

When output limiter is used, the LED is on. If the output voltage of the amplifier is over the maximum value, the output limiter will operate, damping the output signal of the amplifer.

5 **Protect LED**

When system protection is activated,the LED is on.The Protection System will be activated in following situations:

the amplifier over heated

DC output

overload currency
power activation voltage too high or too low
the amplifier in stand-by mode
Then the Speaker output is mute,and power supply is cut off,LCD display will be off.
When the power is turned on:
The LED is on for 3 second. with power supply.After normal power supply,The LED is off.
When the power is turned off:
When the power is switched off,or the power is cut accidently,the protection system will turn off the equipment to avoid noise.
If the protection system operates when detecting problem, please wait to turn it on after the amplifier cool down or the power is off, then the speaker will be normal again. If the equipment can not work normal, please consult your distributor.

⑥ LCD Display
Setting status of speaker: valume/phase/preset/LineA B linkage/standby", etc...

⑦ INPUTS connector (Line A)
Balance XLR input connector

⑧ OUTPUTS connector (Line A)
Balance XLR output connector. Due to parallel connection to INPUTS connector(Line A), the input signal can bypass, without influence.

⑨ INPUTS connector (Line B)
Balance XLR input connector.

⑩ OUTPUTS connector(Line B)
Balance XLR output connector. Due to parallel connection to INPUTS connector(Line B), the input signal can bypass, without influence.

⑪ Menu navigation key
This is to shift among different functions and change the parameters of each different function. Whenever there is an underline on either of the functions, users can press the key to shift to another function. Whenever there is flash on either of the functions, users can press the key to change the parameters of this function.

⑫ Enter key
This key is to select and confirm the functions. When the function item is underlined, press this key, then the function item flashes, you can modify the parameters. When you press this key again, the changed parameters are confirmed and you will exit.

⑬ Power switch
Turn on or off power. Slide the switch up to (1) position to turn on the power.Slide the switch down to (0) position to turn off the power.

⑭ AC input socket
Connect the power cable here. First connect on end of the power cable to the product and then connect the other end of the power cable to AC socket.

◆ **TS Series Operation Instruction**
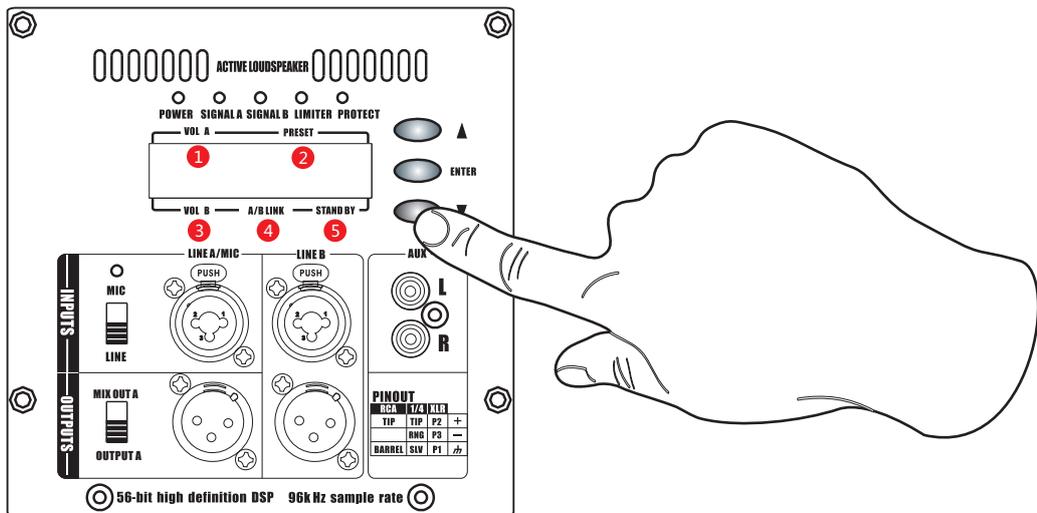

Full range speaker:

① VOL A

When selecting from menu navigation key, there is an underline below the content. Choose it by pressing the Enter key, and the content will flash. Now you can change its volume by navigation key. The change is in time. Finally, you can exit by pressin Enter key.

② PRESET

When selecting from menu navigation key, there is an underline below the content. Choose it by pressing the Enter key, and the content will flash. Now you can select the preset by navigation key. When you chose the preset, press Enter key, a small window will pop up to ask you if you need to download this preset,You can select No/Yes to check,if you select Yes and press Enter key it means you choose this perset;If you select No,it means you give up this preset.

③ VOL B

When selecting from menu navigation key, there is an underline below the content. Choose it by pressing the Enter key, and the content will flash. Now you can change its volume by navigation key. The change is in time. Finally, you can exit by pressing Enter key.

④ A/B LINK

When selecting from menu navigation key, there is an underline below the content. Chooseit by pressing the Enter key, and the content will flash. Now you can select the linkage status by navigation key. If YES, A.B channel will input volume gain will be adjusted at the same time. If NO, A B channel will input volume gain will be adjusted individually. Finally, you can exit by pressing Enter key.

⑤ Standby

When selecting from menu navigation key, there is an underline below the content. Choose it by pressing the Enter key, and the content will flash. Now you can select the

standby time by navigation key. For example, 5' means standby after 5 minutes. Off means no standby. Finally, you can exit by pressing Enter key.

◆ TS-SW Series Operation Instruction
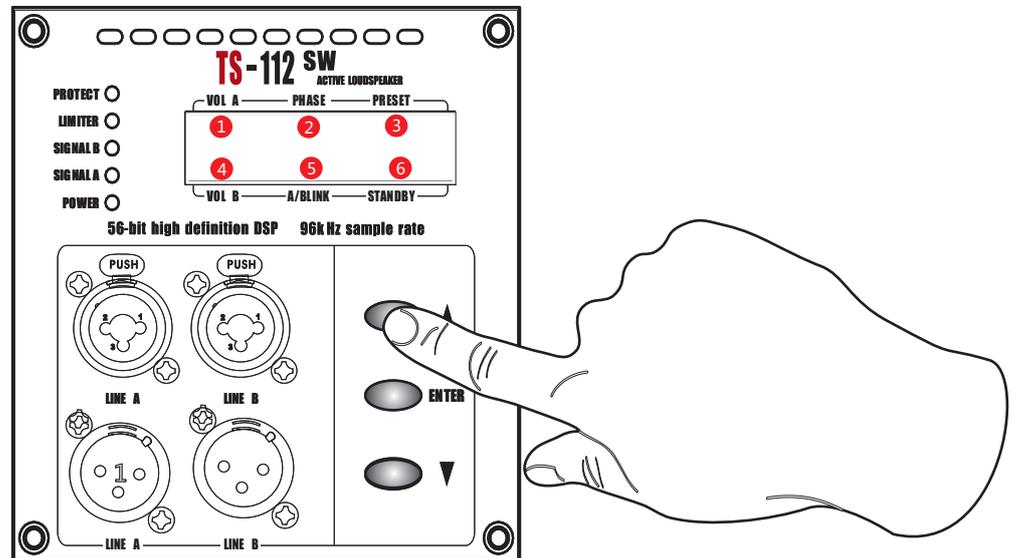
Subwoofer:

① VOL A

When selecting from menu navigation key, there is an underline below the content. Choose it by pressing the Enter key, and the content will flash. Then change the volume by navigation key. The change is in time. Finally, you can exit by pressing Enter key again.

② PHASE

When selecting from menu navigation key, there is an underline below the content. Choose it by pressing the Enter key, and the content will flash. Then change the phase content by navigation key. NORM is in phase, NIVT is out of phase. The change is in time. Finally, you can exit by pressing Enter key again.

③ PRESET

When selecting from menu navigation key, there is an underline below the content. Choose it by pressing the Enter key, and the content will flash. Then select the preset by navigation key. When you chose the preset, press Enter key, a small window will pop up to ask you if you need to download this preset, You can select No/Yes to check,if you select Yes and press Enter key it means you choose this perset;If you select No,it means you give up this preset.

④ VOL B

When selecting from menu navigation key, there is an underline below the content. Choose it by pressing the Enter key, and the content will flash. Now you can change its volume by navigation key. The change is in time. Finally, you can exit by pressing Enter key.

⑤ A/B LINK

When selecting from menu navigation key there is an underline below the content. Choose it by pressing the Enter key, and the content will flash. Then select the linkage status by navigation key If YES, input gain of Channel A and B can be adjusted at the same time. If NO, input gain of Channel A and B can be adjusted individually Finally you can exit by pressing Enter key again..

⑥ Standby

When selecting from menu navigation key there is an underline below the content Choose it by pressing the Enter key and the content will flash. Then select the standby time by navigation key For example, 5' means standby after minutes Off means no standby Finally you can exit by pressing Enter key again..

◆ Product Application Samples of TS/ TS-SW series

1. **Basic system application**

   Below is the basic system application with 2pcs of TS series full range speakers. This system is ideal for small size touring performance restaurant and rehearsal etc.. 。

-1   -2
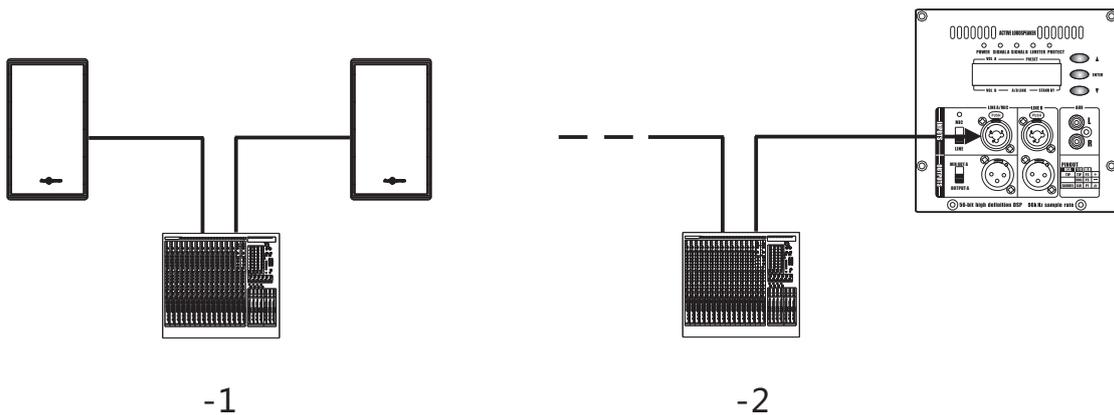
2. **Basic system with subwoofer:**

   Below is the basic system with 2pcs of TS series full range speakers and 2pcs of subwoofers with coupling bars. This system is ideal for small size touring performance church and small stadium,etc..

-3   -4
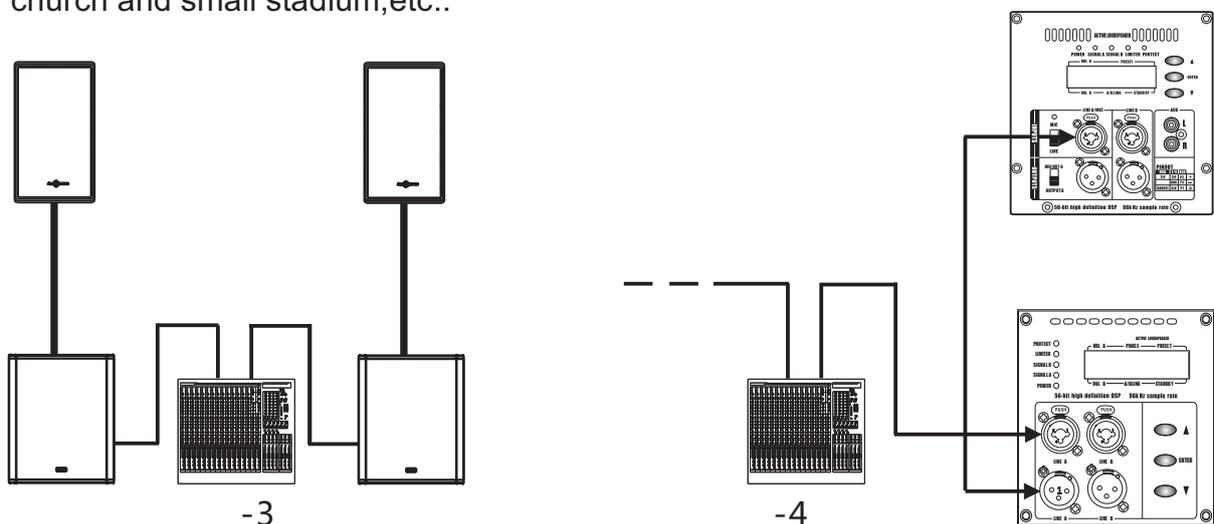
3. **System for medium scale application:**

Below is the system for medium scale application with pcs of TS series full range speakers and pcs of subwoofers,This system is ideal for medium size touring performance, church, etc.


-5   -6
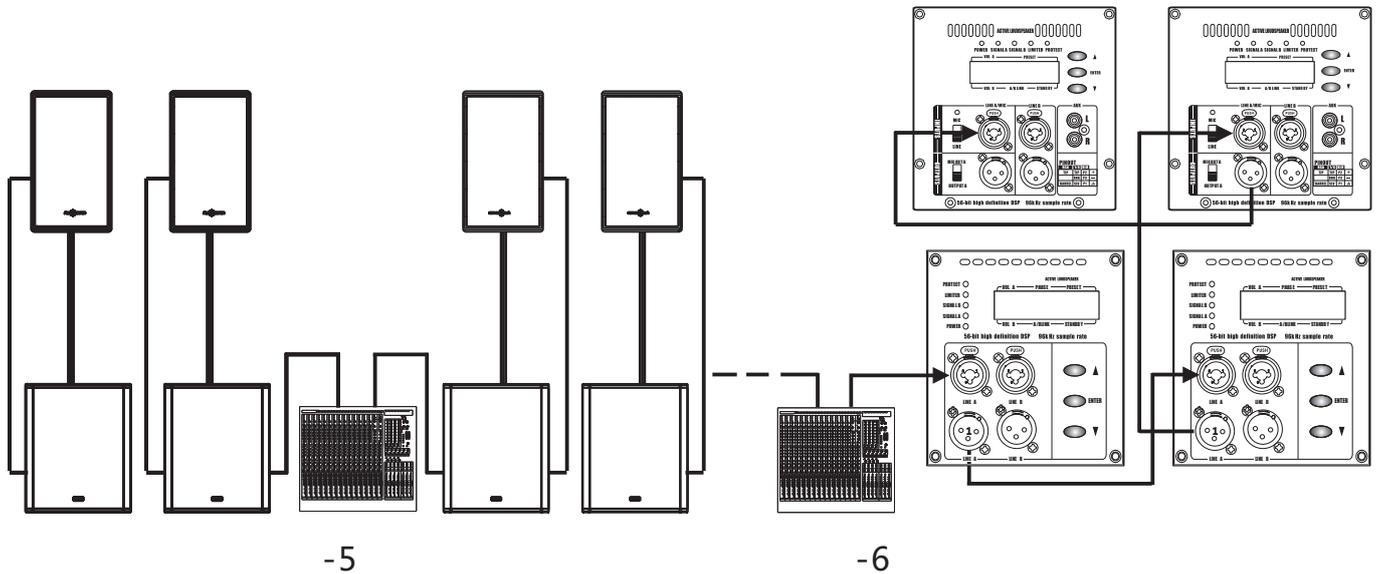
4、 **Monitor System :**

Below is the application of TS12/TS15 or TS12 P as stage monitor.


next

-7   -8
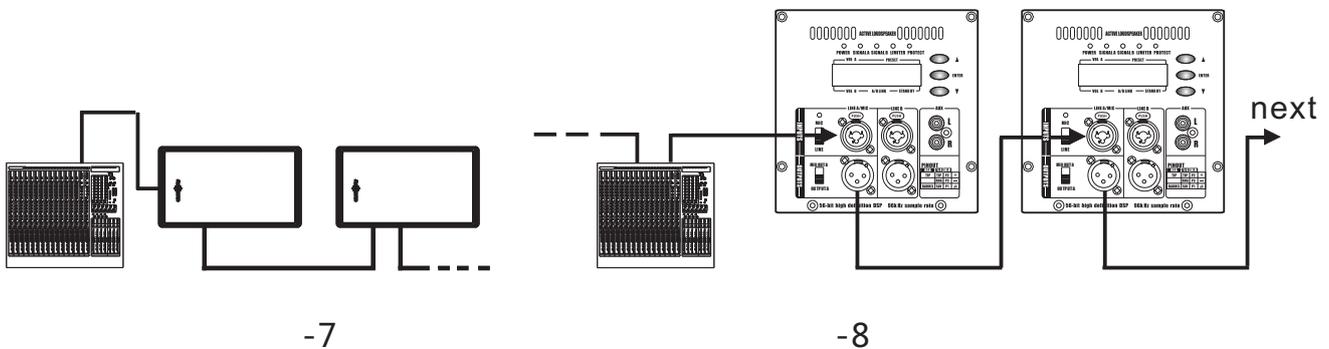
5、 **System with Microphone :**

Below is the application of TS Series speakers with one microphone. In this situation, please recall the "Vocal" preset, and set the switch at "MIX" position. This system is ideal for seminar, product launch, etc.

-9   -10
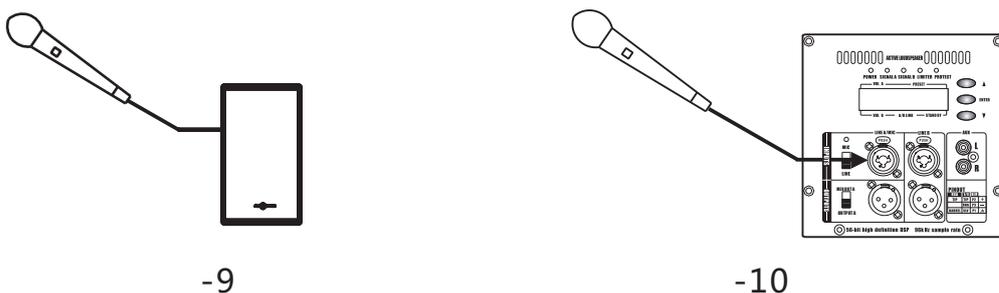
◆ **Dimension of TS and TS-SW series**

295mm

292mm

517mm

TS08

325mm

322mm

545mm

TS10

TS12

TS12P

358mm

326mm

633mm

355mm

326mm

626mm

430mm

386mm

693mm

TS15

372mm

586mm

500mm

TS-112SW

TS-118SW

TS-212SW

510mm

694mm

625mm

372mm

586mm

810mm
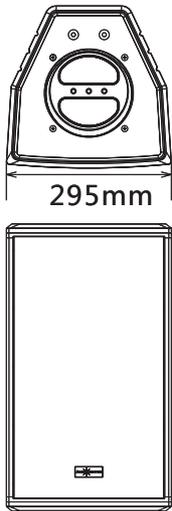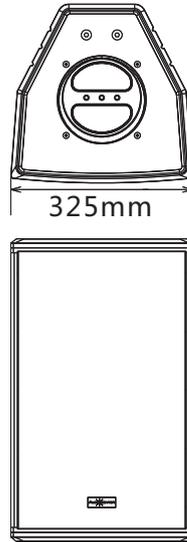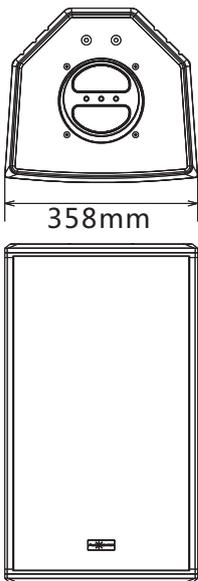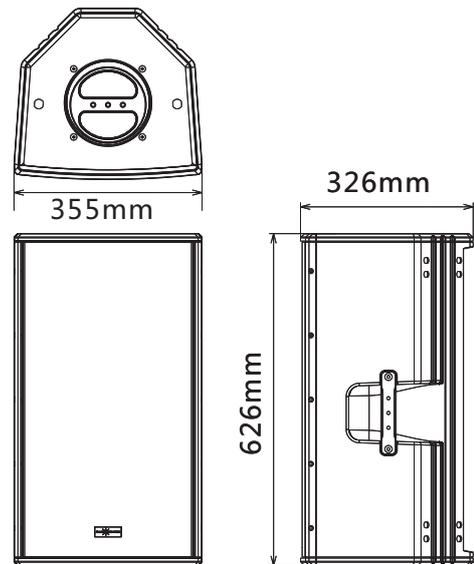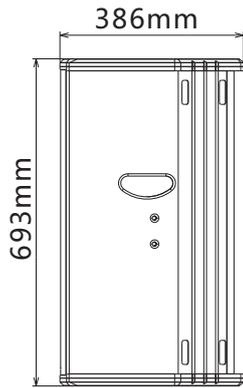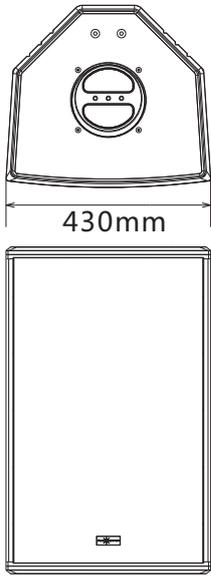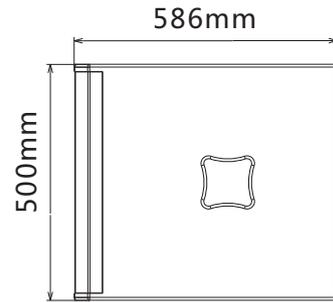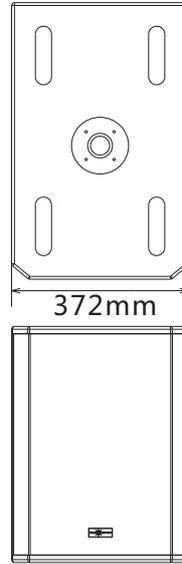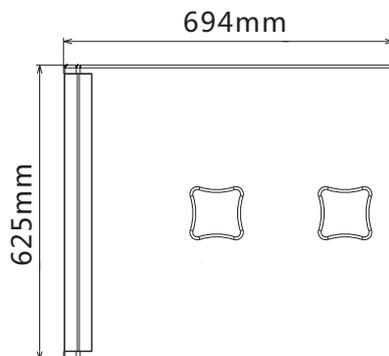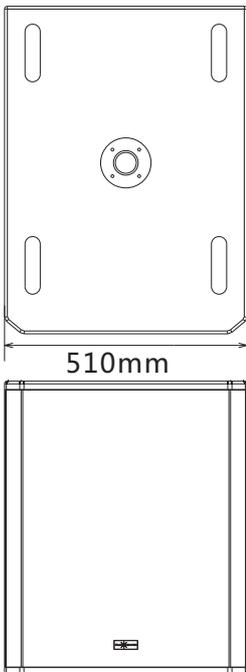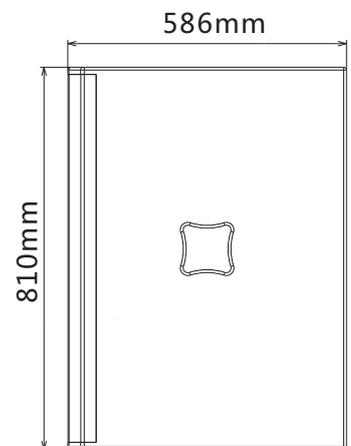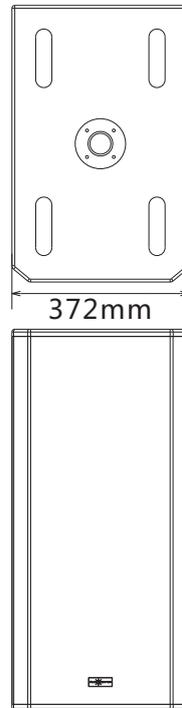
◆ **Installation guidance for TS and TS-SW series**
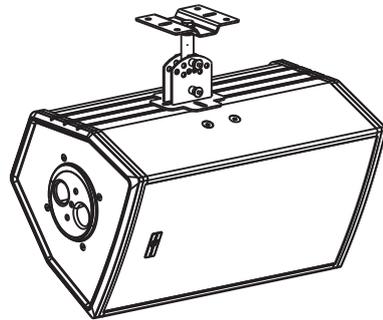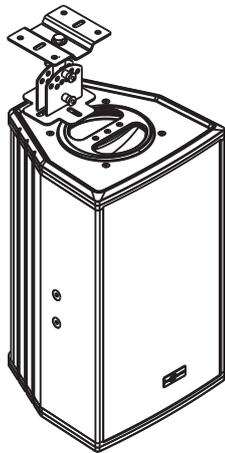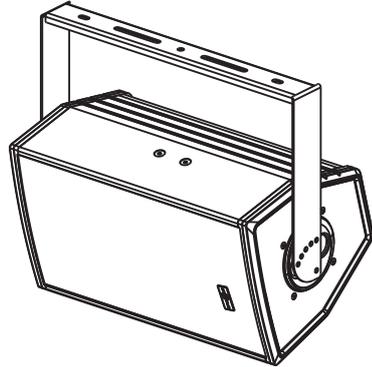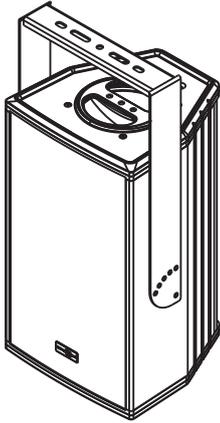
Accessories inside package: rubber feet (only for TS12, TS15, TS12P)
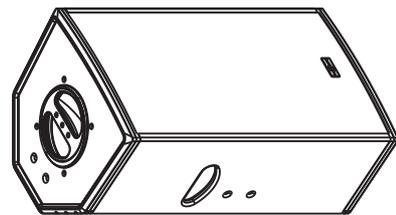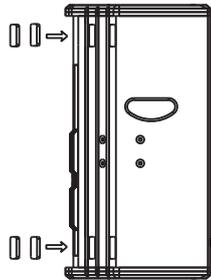
0 degree -10 degree adjustable according to different applications.
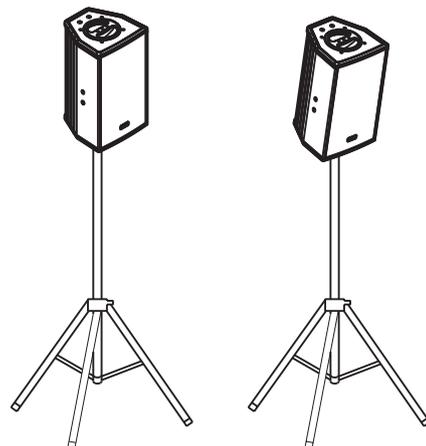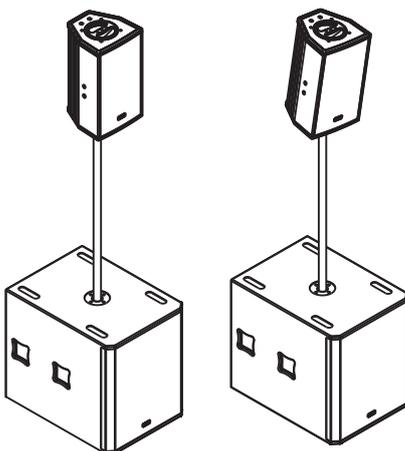
◆ TS series specification
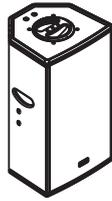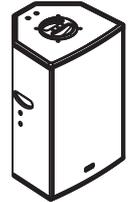
TS08 TS10 TS12 TS12P TS15

| Specifications		TS08	TS10	TS12	TS12P	TS15
Frequency Response (-6dB anechoic chamber)		60Hz-20KHz	55Hz-20KHz	45Hz-20KHz	45Hz-20KHz	40Hz-20KHz
Driver	HF	Customized Beyma HF driver , ferrtie,1"exit , 1.7"voice coil				
	LF	Customized Beyma LF driver , ferrtie, 2"voice coil	Customized Faital LF driver , ferrtie, 2"voice coil	Customized Beyma LF driver , ferrtie,3"voice coil		
Directivity (-6dB) (H° xV°)		90° x60°				
Maximum Calculated SPL/1M	Continuous	121dB	123dB	125dB	125dB	127dB
	Program	124dB	126dB	128dB	128dB	130dB
	Peak	127dB	129dB	131dB	131dB	133dB
Anerage H2 Distortion (200Hz-10KHz)		<2% at 1W				
Anerage H3 Distortion (200Hz-10KHz)		<0.5% at 1W				
Consistency		±1.5dB(150Hz-10KHz)				

DSP

Processor	96KHz signal sampling frequency , 56-bit precision

Amplifier

Amplifier Circuitry		HF : Class AB LF : Class D
Rated Power		1200W
Freque ncy Resp onse(1W 8Ω 2ch)		20Hz-20KHz(±1dB)
Intermodulation Distortion		<0.1%
Cooling System		Heatsink air-flow
Protection	DC protection	±5V
	Short circuit Protection	√
	Overtheat Protection	Reduced output by half at 60℃ and shut off AMP at 80℃
	Output overload protection	√
	Soft startup Protection	Around 1s
	Overvoltage protection	Overvoltage protection activated when over 10% of AC rated voltage
	Undervoltage protection	Undervoltage protection activated when less than 10% of AC rated voltage
Crossover	Low pass	By DSP
	High Pass	By DSP

箱体部分

Dimensions (WxHxD）	295x517x292mm	325x545x322mm	358x633x326mm	355x626x326mm	430x693x386mm
Net Weight	14.9kg	15.9kg	18.3kg	23.5kg	26.9kg
Cabinet	CNC made cabinet(once shaping PP enclosure for TS12P)				
Base Mount	2 base holes Φ35mm at the bottom				
Optional Accessories	Single point mounting bracket,"U"Bracke,Coupling bar,Flight case, Durable cover bag				
Technical Support and After-sales Service	Global applcation support team, EASE GLL files available				

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◆ **TS-SW series specification**
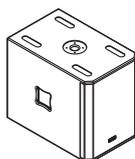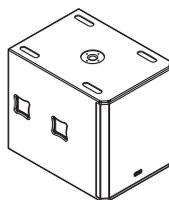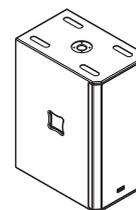
TS-112SW   TS-118SW   TS-212SW

Specifications	TS-112SW	TS-212SW	TS-118SW
Frequency Response (-6dB anechoic chamber)	45Hz-500Hz	42Hz-500Hz	35Hz-500Hz
Driver — LF Tvansducer	Customized Audiocenter LF driver, ferrite,3.5" voice coil		Customized Audiocenter LF driver, ferrite,4" voice coil
Directivity (-6dB) (H° xV°)	/		
Maximum Calculated SPL/1M — Continuous	124dB	130dB	128dB
Maximum Calculated SPL/1M — Program	127dB	133dB	131dB
Maximum Calculated SPL/1M — Peak	130dB	136dB	134dB
Anerage H2 Distortion (200Hz-10KHz)	<2% at 1W		
Anerage H3 Distortion (200Hz-10KHz)	<0.5% at 1W		
Consistency	±1.5dB(40Hz-150Hz)		

DSP	
Processor	96KHz signal sampling frequency , 56-bit precision

| Amplifiter			
Amplifier Circuitry	Class D		
Rated Power	1200W	1800W	1200W
Freque ncy Resp onse(1W 8Ω 2ch)	20Hz-6KHz(±1dB)		
Intermodulation Distortion	<0.1%		
Cooling System	Heatsink air-flow		
Protection — DC protection	±5V		
Protection — Short circuit Protection	√		
Protection — Overtheat Protection	Reduced output by half at 60℃ and shut off AMP at 80℃		
Protection — Output overload protection	√		
Protection — Soft startup Protection	Around 1s		
Protection — Overvoltage protection	Overvoltage protection activated when over 10% of AC rated voltage		
Protection — Undervoltage protection	Undervoltage protection activated when less than 10% of AC rated voltage		
Crossover — Low pass	By DSP		
Crossover — High Pass	By DSP		

	TS-112SW	TS-212SW	TS-118SW
Dimensions (WxHxD)	372x500x586mm	372x810x586mm	510x625x694mm
Net Weight	32.0kg	46.7kg	51.0kg
Cabinet	CNC made cabinet(once shaping PP enclosure for TS12P)		
Base Mount	1 base holes Φ35mm on the top		
Optional Accessories	Coupling bar,Flight case, waterproof cover bag		
Technical Support and After-sales Service	Global applcation support team, EASE GLL files for free		

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◆ **Trouble Shooting**

Symptom	Possible reasons	Solution
Power LED not light	Cable not connected correctly	Connect the cable correctly
No sound	Cable not connected correctly. Or too small gain.	Connect with input socket correctly. Adjust speaker output gain input bigger.
Feedback in the sound	Microphone is toward to speaker Sound is too high. Wrong preset used.	Keep speakers out of the microphone response area. Lower the output gain, make microphone close to the sound source. If feedback for the LF, don't use Boost preset.
Sound Discrepancy from different speakers .	Different gain for different speakers Different presets for different speakers Subwoofers are out phase	Put the same gain for different speakers. Use the same presets for different speakers. Make the subs in phase
Sound distortion	Input volume is too big Output volume too big	Reduce the input volume of the equipments Reduce the output gain of the speakers, make the Limiter LED lighted a bit If the sound still distorted while the volume is set to minimum, make the MIC/LINK switch to be Link.
Microphone volume is too small	MIC/LINK switch is set at LINK	Sep the MIC/LINK at MIC
Not enough SPL while full range speakers used together with subs	Subs might be out of phase	Adjust the phase of subs
TS /TS-SW series speaker power LED shows blue when no signal	Standby time is not set for TS/TS-SW speakers.	Adjust TS/TS-SW speaker standby time.

★ **Please consult distributor if there are still problems**

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