

Studiomaster

VORTEX10A/12A/15A/15SA/18SA



**USER
GUIDE**

Introduction:

The VORTEX series were designed by Studiomaster with its own innovation. The VORTEX series consists of three full-range active coaxial speakers: VORTEX10A / VORTEX12A / VORTEX15A , and two subwoofers: VORTEX15SA and VORTEX18SA, which feature lightweight, high-quality imported components, ergonomic structural design, and a elegant appearance.

This series of speakers incorporates the latest electro-acoustic and electronic design . Using the company's proprietary coaxial drive technology, effectively improve the clarity of the sound,the precision of sound image and the uniformity of sound coverage.The HF and LF transducers are designed with high efficiency ferrite magnetic circuit which makes them have high sensitivity, low distortion and high power.

The VORTEX series has a built-in high-power digital amplifier which has DSP with comprehensive audio adjustment and design functions , and a built-in LCD screen to make parameter adiustment more intuitive and convenient.The dual amplifier circuit design greatly improve the sound quality and stability of the speakers. Combined with the same range of subwoofers to form a full-range system for a wider range of applications.

Feature:

1. Made of reinforced injection moulded polypropylene plastic
2. Woofer and tweeter are designed with ferrite magnetic circuit, ensuring high sensitivity, low distortion, high power and high efficiency.
3. Dual amplifier circuit, Class D @300W for MF/LF and Class AB @50W for HF. universal power supply design for global use.
4. 24bit 48kHz DSP processor with LCD display for adjusting sound effects, 3-band equalization, low cut, voltage limit, delay, volume control and other functions.
5. 2 handles, more convenient to carry, light weight, noble and elegant appearance .
6. 45 degree wedge design, can also be used as a monitor speaker.
7. Fixed installation (35mm support hole), double-hole tray, 0° and 7.5°
8. Hanging installation (5*M10 flying points).

Application:

Ideal for large, medium and small conference rooms, classrooms, stations, shopping malls, etc.

SAFETY INSTRUCTIONS

READ THIS BEFORE YOU USE THIS PRODUCT

1. Before connecting the A.C. power cord make sure the Voltage Selector is set for your local A.C. supply voltage.
2. Only use the A.C. power cord / mains lead supplied with this product. Replace if it becomes damaged in any way.
3. Never operate without, or remove the safety ground (earth) from the A.C. Power cord/mains lead.
4. Do not attempt to remove any screws or panels. There are no user serviceable parts inside.
5. Do not operate the unit next to heat sources such as radiators.
6. The unit should not be operated or stored near rain or moisture.
7. This equipment must not be exposed to dripping or splashing and no objects filled with liquids should be placed on top of it.
8. Write the serial number in the box provided in the Warranty section for future reference.
9. If the unit gets damaged, has been dropped or appears to have developed a fault refer to the Service Information section for details.

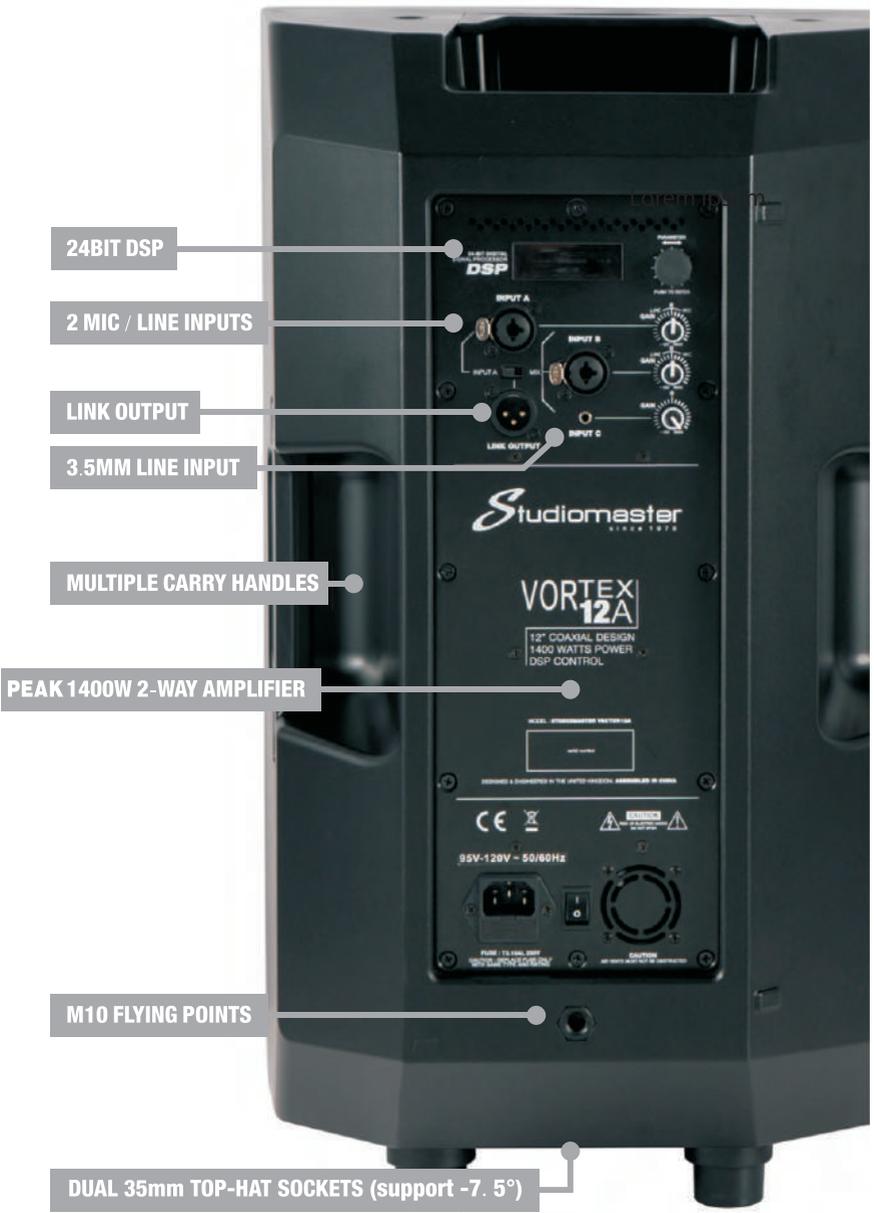
WARNING: THIS APPARATUS MUST BE EARTHED (GROUNDED)



WEEE Mark

If you want to dispose of this product, do not mix with general household waste. There are separate collection systems for used electronic products in accordance with legislation under the WEEE Directive (Directive 2002/96/EC) and is effective only within the European Union.

Active panel(Fig2)



24BIT DSP

2 MIC / LINE INPUTS

LINK OUTPUT

3.5MM LINE INPUT

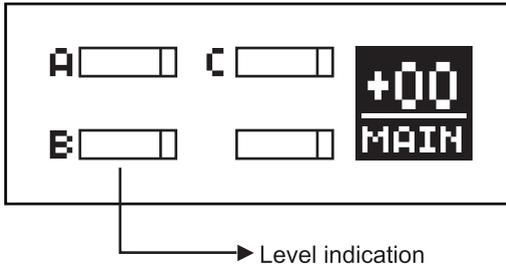
MULTIPLE CARRY HANDLES

PEAK 1400W 2-WAY AMPLIFIER

M10 FLYING POINTS

DUAL 35mm TOP-HAT SOCKETS (support -7.5°)

VORTEX10A/12A/15A LCD menu section



Steps:

1. total adjustable volume range - 60 dB -- 0dB.(refer to the above picture)
2. When there is signal going into channel , LCD screen will display level status; (refer to the above picture)
3. When Bluetooth is activated, the blue indicator will lit up.

AUDIO SETTINGS

Press and rotate - Press the encoder to enter the main menu, and then rotate the encoder to select the AUDIO menu item (dark background). Press the encoder again to access the submenu, and then rotate the encoder to select the submenu item. Press the encoder to confirm the option.



HI EQ:	+00 dB
MID EQ:	+00 dB
LOW EQ:	+00 dB

For submenu and related setting options, please refer to the table below.

Setting options	
RETURN	Return to the main menu
PRESET	Speaker preset, options:MUSIC,SPEECH,LIVE,DJ,MONITOR
DELAY	Time delay of audio signal (0~10ms = off, displayed in milliseconds)
HI EQ	-12dB ~ +12dB
MID EQ	-12dB ~ +12dB
LOW EQ	-12dB ~ +12dB
LOW CUT	Low cut filter settings, options:OFF, 80Hz,100Hz,120Hz,150Hz
BLUETOOTH	Options: OFF, ON, TWS (optional)

Select RETURN in the submenu, then press the encoder to return to the main menu. Select RETURN in the main menu, then press the encoder to confirm the selection and return to standby status. Or after about 20 seconds of no operation, standby will be automatically restored.

SYSTEM SETTINGS

Press and rotate - Press the encoder to enter the main menu, and then rotate the encoder to select the SETTINGS menu item (dark background). Press the encoder again to access the submenu, and then rotate the encoder to select the submenu item. Press the encoder to confirm the option.



For submenu and related setting options, please refer to the table below.

Settings options				
RETURN	Return to the main menu			
LCD DIM	The display dimmed automatically	ON	The display dim after about 15 seconds of no operation	
		OFF	The automatic display dimming function has been turned off	
BRIGHT	Display brightness settings(1-10)			
CONTRAST	Display contrast settings(1-10)			
INFO	Display software version			
DEFAULT	Factory data reset (AUDIO + SETTINGS)	CANCEL	Cancel reset	
		RESET	CANCEL	Cancel reset
			YES	to factory settings reset

Select RETURN in the submenu, then press the encoder to return to the main menu. Select RETURN in the main menu, then press the encoder to confirm the selection and return to standby status. Or after about 20 seconds of no operation, standby will be automatically restored.

VORTEX 15SA/18SA LCD menu section

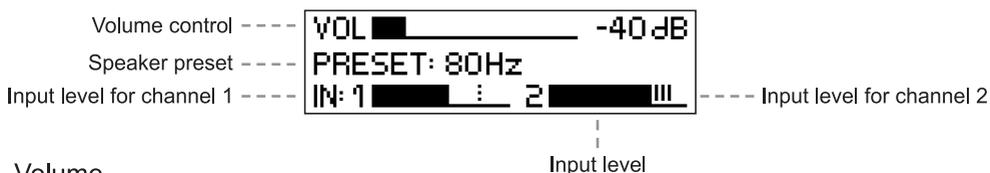
Operation

Note:

Once the speaker is properly connected to the power supply and turned on. All Settings, such as presets and delay, are restored to the state before the speaker was turned off. When this process is complete, the speaker will be ready.

Main menu display

In powered standby status, the main display is enabled. It displays master volume settings, enabled speaker presets, and the input levels of channel 1 and channel 2 (see figure) If the display of input signal is too high, reduce the output level of the upper level (such as the mixer).



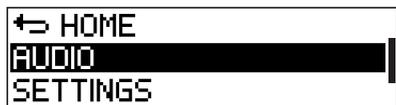
Volume

In the main menu, the volume can be adjusted by turning the rotating-press encoder (volume/press menu), which ranges from -60 dB to +10 dB. When you turn the encoder, the display automatically changes to the corresponding symbol (see the figure below). After about 20 seconds of no operation, the main menu will automatically display again. Press the encoder to switch to the main menu.



AUDIO Settings (AUDIO)

Press Rotate - Press the encoder to enter the main menu, then rotate the encoder to select the "AUDIO" menu item (dark background). Press the encoder again to access the submenu, then rotate the encoder to select the submenu item. Press the encoder to confirm the selection.



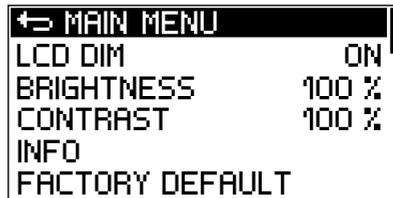
For submenu and related setting options, please refer to the table below.

Settings options			
↵MAIN MENU	Return to the main menu		
PRESET	Speaker preset options	100 Hz	The low-pass filter is set to 100 Hz.
		80 Hz	Low pass filter set to 80 Hz.
		120 Hz	Low pass filter set to 120 Hz.
		150 Hz	Low pass filter set to 150 Hz.
DELAY	Time delay of audio signal (0 -10m=off, displayed in meters and feet)		
POLARITY	Polarity settings	NORMAL	Normal polarity
		INVERT-ED	Inverted polarity

Select Main MENU in the submenu, then press the encoder to return to the main menu. Select HOME in the main menu, then press the encoder to confirm the selection and return to the main . After about 20 seconds of no operation, the main menu will automatically display again.

SETTINGS

Press and rotate - The press encoder can access the main menu, and then rotate the encoder to select the SETTING (dark background). Press the encoder again to access the submenu, and then rotate the encoder to select the submenu. Press the encoder to confirm the option.



For submenu and related settings, please refer to the following table:

Setting options			
↵MAIN MENU	Return to the main menu		
LCD DIM	The display dimmed automatically	ON	The display dim after about 15 seconds of no operation
		OFF	The display will be always ON.
BRIGHTNESS	Display brightness settings (0-100%)		
CONTRAST	Display contrast settings (0-100%)		
INFO	Display software version		
FACTORY DEFAULT	Reset to the original factory default (AUDIO + SETTINGS)	CANCEL	Cancel reset
		RESET	SURE?YES Reset
		CANCEL	Cancel reset

In the submenu, select MAIN MENU and press the encoder to return to the main menu. In the main menu, select HOME and press the encoder to confirm the option and return to the main menu. The main menu will automatically display after about 20 seconds of no operation.

Specification

model	VORTEX10A
type	10" 2-way active coaxial plastic speaker
frequency response (-10dB)	60Hz--20kHz
Line Input Sensitivity	0 dBu
Mic Input Sensitivity	-32dBu
max. SPL (dB)	124.5dB
AMP power peak	1400W
LF unit	10" woofer
HF unit	34-core compression driver/1" throat/30W
coverage (V*H)	80°x80°
crossover frequency	2.2 kHz
input connection	2×JACK、XLR+JACK-3.5
DSP	5 modes (music/speech/live/DJ/monitor) , 3-band EQ, low-cut, delay, volume control,etc.
Bluetooth	Yes ,TWS
input voltage	100V-240V universal voltage
support mount	35mm hole, with 0° and -7.5°optional
hanging mount	5×M10
dimension (W*H*D)	310×515×280 (mm)
weight	12.8 kg

model	VORTEX12A
type	12" 2-way active coaxial plastic speaker
frequency response (-10dB)	55Hz--20 kHz
Line Input Sensitivity	0 dBu
Mic Input Sensitivity	-32dBu
max. SPL (dB)	126.5dB
AMP power peak	1400W
LF unit	12" woofer
HF unit	34-core compression driver/1" throat/30W
coverage (V*H)	80°x80°
crossover frequency	2.2 kHz
input connection	2×JACK、XLR+JACK-3.5
DSP	5 modes (music/speech/live/DJ/monitor) , 3-band EQ, low-cut, delay, volume control,etc.
Bluetooth	Yes ,TWS
input voltage	100V-240V universal voltage
support mount	35mm hole, with 0° and -7.5°optional
hanging mount	5×M10
dimension (W*H*D)	360×585×310 (mm)
weight	15.3kg

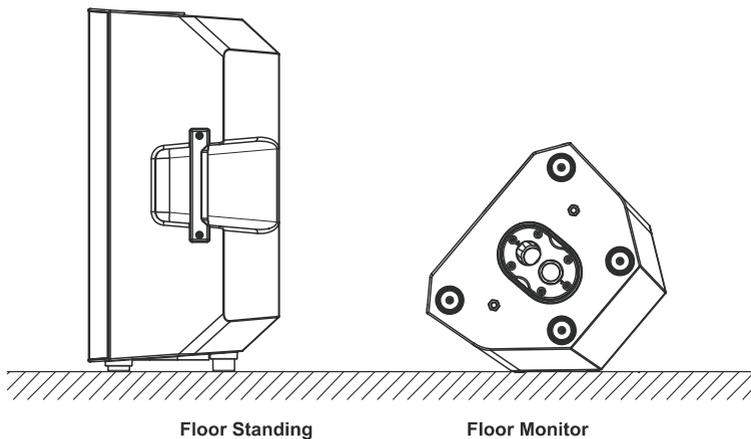
model	VORTEX15A
type	15" 2-way active coaxial plastic speaker
frequency response (-10dB)	50Hz-20 kHz
Line Input Sensitivity	0 dBu
Mic Input Sensitivity	-32dBu
max. SPL (dB)	128dB
AMP power peak	1400W
LF unit	15"woofer
HF unit	34-core compression driver/1" throat/30W
coverage (V*H)	80°x80°
crossover frequency	2.2 kHz
input connection	2×JACK、XLR+JACK-3.5
DSP	5 modes (music/speech/live/DJ/monitor) , 3-band EQ, low-cut, delay, volume control,etc.
Bluetooth	Yes ,TWS
input voltage	100V-240(Wide range power supply) universal voltage
support mount	35mm hole , with 0° and -7.5°optional
hanging mount	5xM10
dimension (W*H*D)	410*660*350(mm)
weight	19kg

model	VORTEX15SA
type	15" Active subwoofer
frequency response (-10dB)	43Hz-150Hz
Line Input Sensitivity	0 dBu
max. SPL (dB)	132dB
AMP power peak	2400W
LF unit	15"woofer
crossover frequency	120Hz
input connection	2 Balanced XLR in and 2 Balanced XLR out
DSP	Low-cut, delay, volume control, etc.
input voltage	100V-240V universal voltage
support mount	35mm hole
dimension (W*H*D)	490x580x560(mm)
weight	32kg

model	VORTEX18SA
type	18" Active subwoofer
frequency response (-10dB)	38Hz-150Hz
Line Input Sensitivity	0 dBu
max. SPL (dB)	134dB
AMP power peak	2400W
LF unit	18"woofer
crossover frequency	120kHz
input connection	2 Balanced XLR in and 2 Balanced XLR out
DSP	Low-cut, delay, volume control, etc.
input voltage	100V-240V universal voltage
support mount	35mm hole
dimension (W*H*D)	540x650x610(mm)
weight	37kg

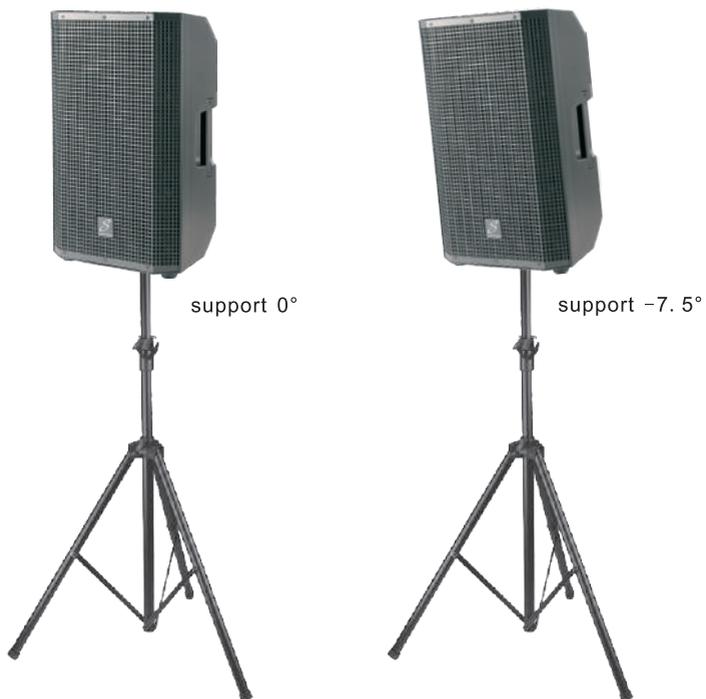
VORTEX speaker system



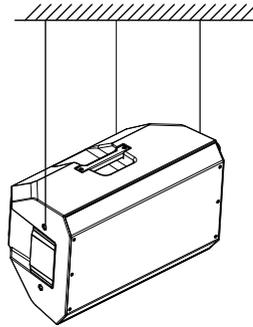
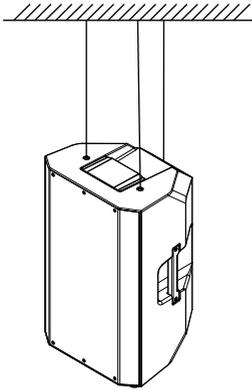


Accessories:

Studiomaster also produces some optional accessories to match your system.
More detailed information, please see our website: www.studiomaster.com.



Hanging mode

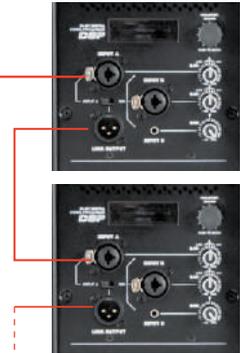


Connection Examples

VORTEX 10A/12A/15A

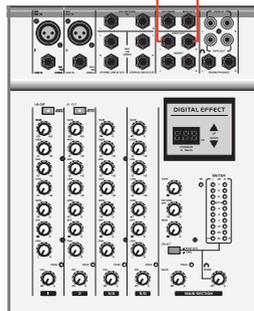


VORTEX 10A/12A/15A



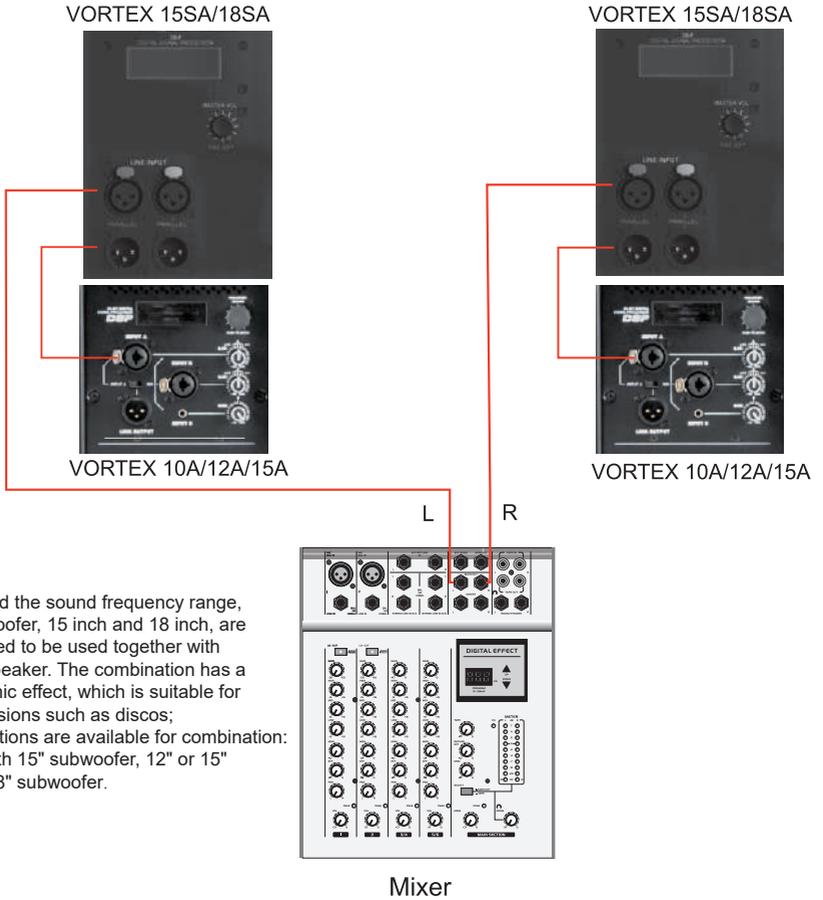
L R

Configuration of multiple 2 × 10"/12"/15" 2-way through the XLR output socket "LINK OUTPUT" in parallel (link) with the XLR "INPUT" socket



Mixer

Combination and connection diagram



In order to extend the sound frequency range, two active subwoofer, 15 inch and 18 inch, are specially designed to be used together with full-range loudspeaker. The combination has a great and dynamic effect, which is suitable for loud music occasions such as discos; The following options are available for combination: 10" full-range with 15" subwoofer, 12" or 15" full-range with 18" subwoofer.

SERVICE INFORMATION

If you have a problem with your Studiomaster product or think it has developed a fault you should first carefully check the Trouble Shooting section in this guide. If this does not solve the problem or if the product is physically damaged, contact your local dealer or distributor for service details.

Should it be recommended you return the product to your nearest Studiomaster Service Centre you must first contact them.

You will be asked for the product type and serial number. You will then be given a returns Authorisation (RA) number.

Pack the unit in its original carton to protect it from shipping damage.

You must have the Returns Authorisation number clearly marked on the outside of the carton or we may refuse the delivery.

Studiomaster cannot be held responsible for damage resulting from the equipment being packed incorrectly.

Label the equipment clearly with your name and address and include a clear description of the fault. The more information you supply helps the service engineer, minimising repair cost when out of warranty.

Please write your serial number here for future reference.

Trouble shooting

Problem	Reason
Power LED does not light up	Check if the power cord is connected well? If power supply is ok? If the power switch is set to ON?
No sound	If the system is connected well?if power supply is turned on? if signal input is ok?
Distortion	If the signal level is too high?If PEAK LED lights up? if the switch is released?
Abnormal tone	If system is connected well?if signal input is ok?if ground switch is released?
Insufficient SPL	If system is connected well?if volume knob(LEVEL/GAIN) is set well?

If you can not solve the problem, please contact our distributor.

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