

AUDICENTER

Dynamic Audio Solutions

BrainCore™
Technology Inside

User's Manual

L SERIES

Compact Portable Active Column System



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Thank you for purchasing L series Compact Portable Active Column System and active subwoofer from Audiocenter. They have integrated technologies of, big power digital amplifier and DSP control, as well as speakers made of new materials.

Please finish reading the manual before usage, to make sure the best performance of L Series. Please keep the manual for reference in the future.

◆ Safety precautions

When you set up, install and use the L Series, please follow the following safety measures strictly:

- There can be danger in any step during hanging installation. Everyone should check whether there is any damage on all hardware devices and 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.
- Please do not place the power cable near heating source. Do not over bend or damage the powercables. Do not place heavy things on it. Please do not place the cables that may be pressed or cause stumbling
- Please do not place the speakers near equipments sensitive to magnet fields, such as CRTdisplayer, TV or data saving materials.
- 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 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 liquidspilling 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.
 - This equipment is fell or damaged.
 - 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.
- Regularly check the power cord and plug.
- 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 vents. The product has air hole vents 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 the mobile phone far from the speaker. If you need service, please contact Audiocenter service center, agent, or distributor in your area.



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

Package accessories:

Power cable

User's manual

Quality Certificate

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:

-Flightcase

-Protective bag

-Stand

-Coupling bar

-Handbag

-Dolly

◆ **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	Correct with input socket correctly Adjust speaker output gain input bigger
Feedback in the sound	Microphone is toward the speaker Sound is too high	Speaker should be far away from the microphone sound .pick up area to reduce the output gain, making the microphone closeto the sound source
Sound discrepancy from different speakers	Different preset for different speakers Subwoofers are out phase	Put the same gain for different speakers
Sound distortion	Input volume is too big Output volume is 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/LINE switch to be LINE
Microphone volume is too small	MIC/LINE switch is set at LINE	Sep the MIC/LINE at MIC
No bass	SUB volume is small	SUB volume knob opens
The light signal is on, there is a signal output, but the speaker does not sound	Maybe the volume knobis set to the minimum, Closing the volume	Set the back panel "FRONT L ED" button correctly
Can't search to the speaker Speaker Bluetooth	Speaker Bluetooth not in pairing Bluetooth mode	Press "BLUETOOTH PAIR"3 seconds, into pairing mode, the Bluetooth light will be on in the paring mode

★ Please consult distributor if there are still problems.

◆ **Technical Features**



L65+L65A

L65+L65S

L83+L65S

L43+L83S

L83+L83S

● **Features:**

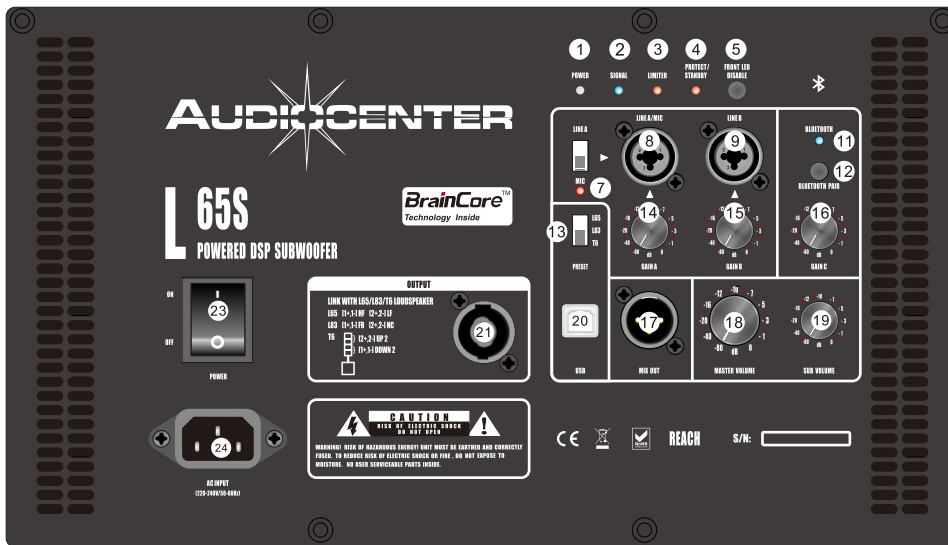
1. Integrate high power digital amplifier, switching power supply and DSP digital control
2. With built-in DSP audio specialization technology, all functions such as EQ, phase correction, delay and limiter are intuitively designed for ease of usage.
3. Class D power amplifiers are utilized for high efficiency, light weight and compact circuit structure.
4. Strong protection are implemented with built-in DSP processing circuit to ensure system integrity to the HF & LF components separately.
5. Advanced AD/DA converter, 96 KHz sampling frequency and 24 bit precision along with optimized DSP algorithm to ensure the crisp and clean sound output.
6. L series speakers (except L65A) play music through bluetooth audio devices and have the ability to connect two speakers at the same time.

● **L series standby function**

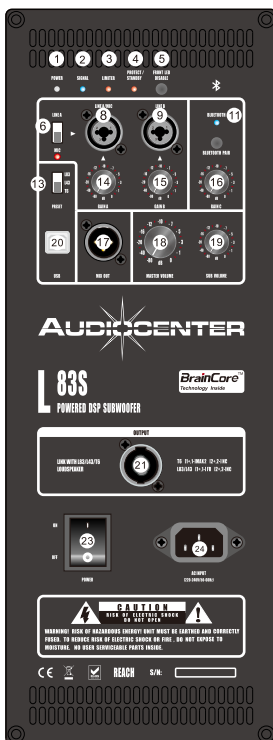
All L series speakers are equipped with automatic standby function to save energy when not in use.

If L series input terminal does not have an audio signal for 15 minutes (or the volume is minimal), the device will be in standby mode, and the indicator light in front of the speaker will change from blue (working) to red (standby). When the device is in standby mode, if an audio signal appears, the indicator light in front of the speaker will change from red (standby mode) to blue (working mode). When the amplifier is in standby mode, a small amount of current continues to flow in order to awaken the amplifier. It takes about 2 seconds to go from standby to full operation without any sound.

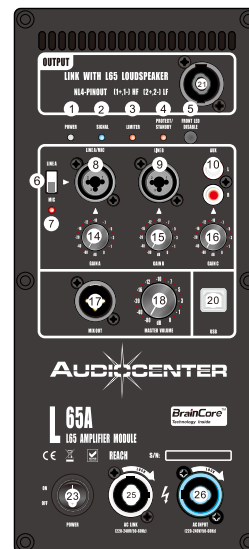
◆ Back panel control and functions



L65S back panel



L83S back panel



L65A back panel

- 1 **POWER Indicator**
When speaker connected to power, the LED is on.
- 2 **SIGNAL Indicator**
When input signal is detected, the LED will turn on.
- 3 **LIMITER Indicator**
The LED will turn on when output limiter is activated. If the output of an amplifier exceeds the maximum value, the output limiter will be activated and become active, thus damping the output signal.
- 4 **PROTECT /STANDBY Indicator**
The front panel LED light will not illuminate when the pressing the switch. (This setting is recommended when the LED is to blinding) Pop-up switch, the front panel LED light will be on. (working state: blue light; Standby: red light)

5 FRONT LED button switch

Press the switch and the LED indicator light on the front panel is not bright (this setting is recommended when the LED indicator light on the front panel is dazzling). Switch on and off, LED indicator light on the front panel is bright (Working: blue light; Standby: red.)

6 LINEA/MIC switch

Set the LINEA/MIC switch to LINEA or MIC based on the level of the input signal. For low level signals (such as microphone), pull the switch to the MIC position; For high level signals (such as acoustic instruments and audio equipment), unplug the switch to the LINEA position.

7 MIC Indicator

The indicator lights up when the LINEA/MIC switch is pulled to the MIC position. (Remind users that they are currently in MIC mode, the gain is very large) INPUTS jack (LINE A/ MIC)

8 INPUTS socket(LINE A/ MIC)

Balance the XLR and PHONE type multi-purpose input pin. (LINE A/MIC))

9 INPUTS socket(LINE B)

Balanced 1/4 Phone plug-in input pin. (LINE B)

10 INPUTS socket(AUX)

Non-equilibrium RCA input pin. (AUX)

11 BLUETOOTH Indicator light

When the light is off, no connection between speaker and bluetooth devices (such as mobilephone); When the light is on, means connecting that indicates successfully the connection between speakers and bluetooth devices are established (such as mobile phones, tablets); When the lights shine flash at reoccurrence rate of 1 time per second, speaker bluetooth is in pairing mode, and can be match the connection with Bluetooth enabled devices; The lights flashing flash at reoccurrence rate of 3 times per second, speaker Bluetooth is in "pair-box" mode Note: "pair-box" means one blue tooth devices (such as mobile phones) can connect two L Series speakers at the same time to play music.

12 BLUETOOTH PAIR

If you want to connect the BLUETOOTH to play music for audio input, press and hold the "BLUETOOTH PAIR" 3 seconds (BLUETOOTH indicator light flashing 1 second 1 time), then select "AC-L" in the Bluetooth enabled devices to pair. If you want to play "pair-box" mode, the first is to pair between two speakers, press and hold the "BLUETOOTH PAIR" for 5 seconds when pairing for the first time (BLUETOOTH indicator light flashing 3 times 1 second), then the two speakers will pair automatically.

13 Presets for L Series

There are 3 presets in L Series speakers for users to recall for usage in different applications.

14 GAIN A (GAIN control knob)

Use GAIN A knob to control Gain of input signal on LINE A/MIC. This control can adjust the sensitivity and thus to control the amount of semaphore sent to the amplifier and then to the speakers.

15 GAIN B (GAIN control knob)

Use GAIN B knob to control Gain of input signal on LINE B/AUX. This control can adjust the sensitivity and thus to control the amount of semaphore sent to the amplifier and then to the speakers.

16 GAIN C (GAIN control knob)

Use GAIN C knob to control Gain of input signal on AUX (or BLUETOOTH). This control can adjust the sensitivity and thus to control the amount of semaphore sent to the amplifier and then to the speakers.

17 OUTPUTS pins(MIX OUT)

Balance XLR output pin. Equilibrium output mixing signal (Mixed the signal of all channels as a whole).

18 MASTER VOLUME control knob

MASTER VOLUME knob controls the gain input signal of all the channels. This control can adjust the sensitivity, so as to control the amount of semaphore sent to the power amplifier and then to the speakers.

19 SUB VOLUME Subwoofer volume control knob

Use the SUB VOLUME knob to individually control the gain of the subwoofer input signal.

20 USB port

USB interface is not open to end-user. It is just for DSP debugging from factory.

21 OUTPUT output wiring connection terminal

This is the output end of the built-in power amplifier, which is connected to L65 through the specially equipped speaker cable of the accessories, and to drive L65. (Note: This output terminal can only be connected to L65 and cannot be used with other models.)

22 OUTPUT output wiring connection terminal

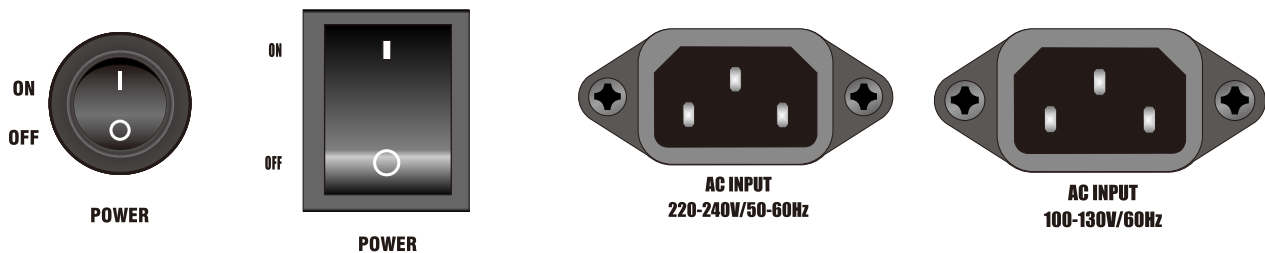
This is the output end of the built-in power amplifier, which is connected to L83 through the specially equipped speaker cable of the accessories, and to drive L83. (Note: This output terminal can only be connected to L83 and cannot be used with other models.)

23 Power switch

Turn the power ON or OFF, pull the switch up to position (1) to turn ON the power, and pull the switch down to the position (0) to turn OFF the power.

24 AC INPUT socket

Connect the cable to the slot. Connect the power wire to the device first and then connect the cable to the AC socket.



25 Connect power transfer

The L65A function has a loop-through power connector system. With four powercon® power extensions and a powerCON AC power cord, you can power up to five L65 speakers in a single 16amp/120V (8amp/240V) circuit. The loop-through connectors are color-coded (blue = AC INPUT, white = AC LINK) and have different buckles to ensure proper connection.

26

Warning! : the amplifier switch does not disconnect the power supply from the switching connection of the AC power supply. If the AC power source is connected to an L65A, all connected power extension cords are powered.

1. Make sure all ac POWER switches are off.
 2. Make sure the AC power cord is not connected.
- Ac power is the last power connection in this sequence.

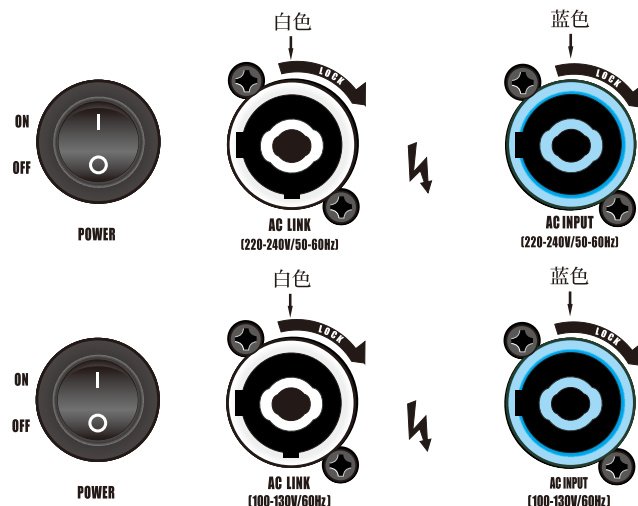
Warning! : When using a power adapter cable (four power adapter cables, one power cord), you can only connect up to five L65A speakers together. If you are using a power adapter cable, make all loop-through connections before connecting to AC power.

1. Turn the input level of the mixer (or other source) that inputs the speakers to the lowest value.
2. Turn on all audio equipment (CD player, mixer, instrument).
3. Plug the white powercon® connector on the power adapter cable fully into the white AC LINK connector on the amplifier.
4. Turn the powercon® connector clockwise until it locks into place.
5. Fully plug the blue powercon® connector into the blue AC INPUT connector on the next amplifier to be energized.
6. Turn the powercon® connector clockwise until it locks into place.
7. Repeat this step until all the speakers in the array are properly connected (the number of speakers switched cannot be greater than the number of warnings).
8. Completely insert the blue powercon® connector on the AC power cord into the blue AC INPUT connector on the first amplifier in the signal chain.
9. Turn the powercon® cable connector clockwise until it locks into place.
10. Plug the other end of the power cord into the appropriate AC power supply.
11. Now you can turn on the AC power switch using the power-on procedure in this document.

Power-on sequence :

1. Adjust the input voltage of the mixer (or other audio source) to the lowest value.
2. Open all sound source devices (CD player, mixer, instrument).

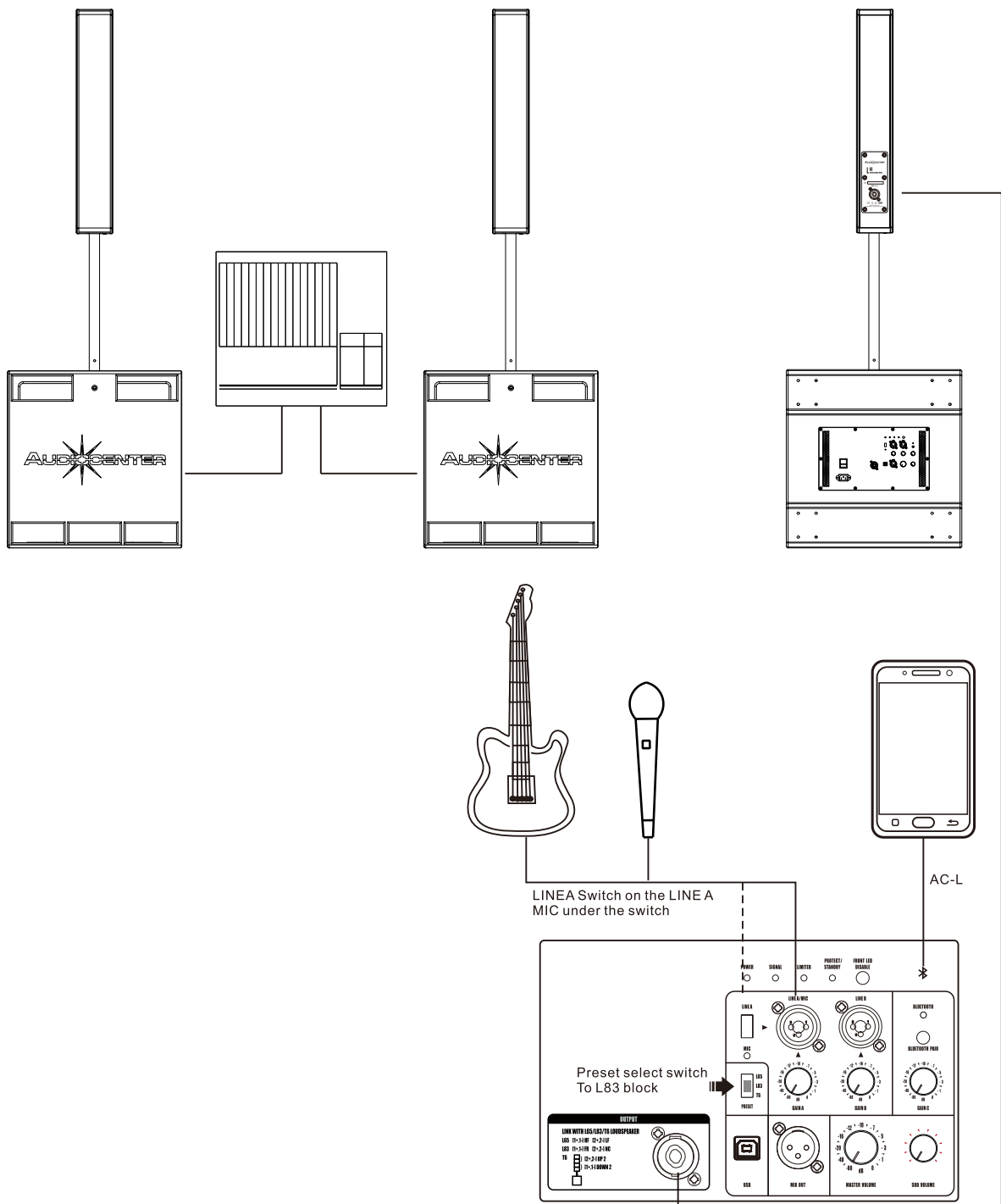
Note: L series speakers have two different power inputs for customers in different regions, 110-130Vac (60Hz), 220-240Vac (50/60Hz), Please only use the products corresponding to the power supply applicable to your region.



◆ Product Application

1. Basic system application

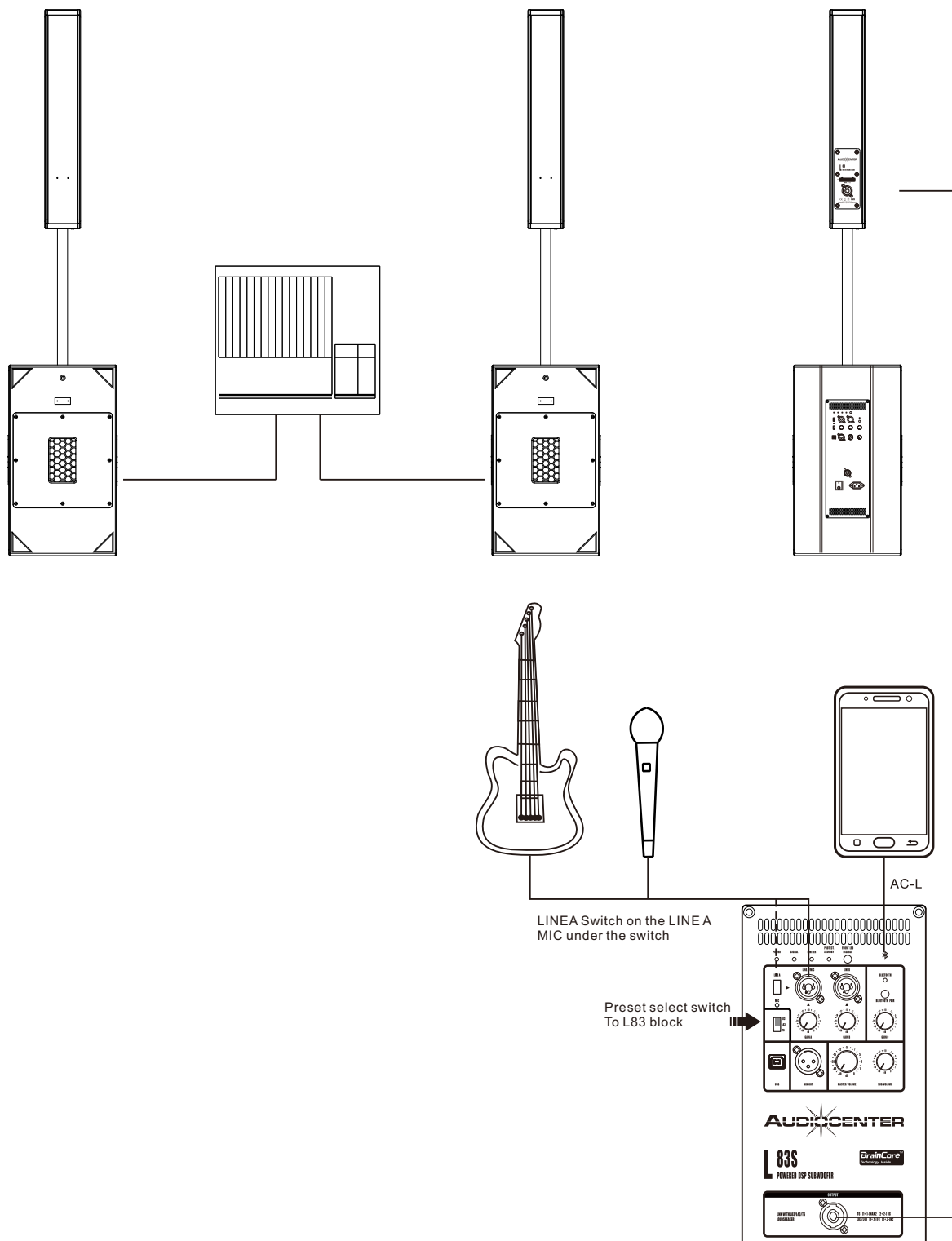
Below is the basic system with 2pcs L83 passive full-frequency column speaker and 2 pcs of L65S active DSP compact subwoofer . This system is ideal for small size touring performance, church and small stadium, etc. .



◆ **Product Application**

1. Basic system application

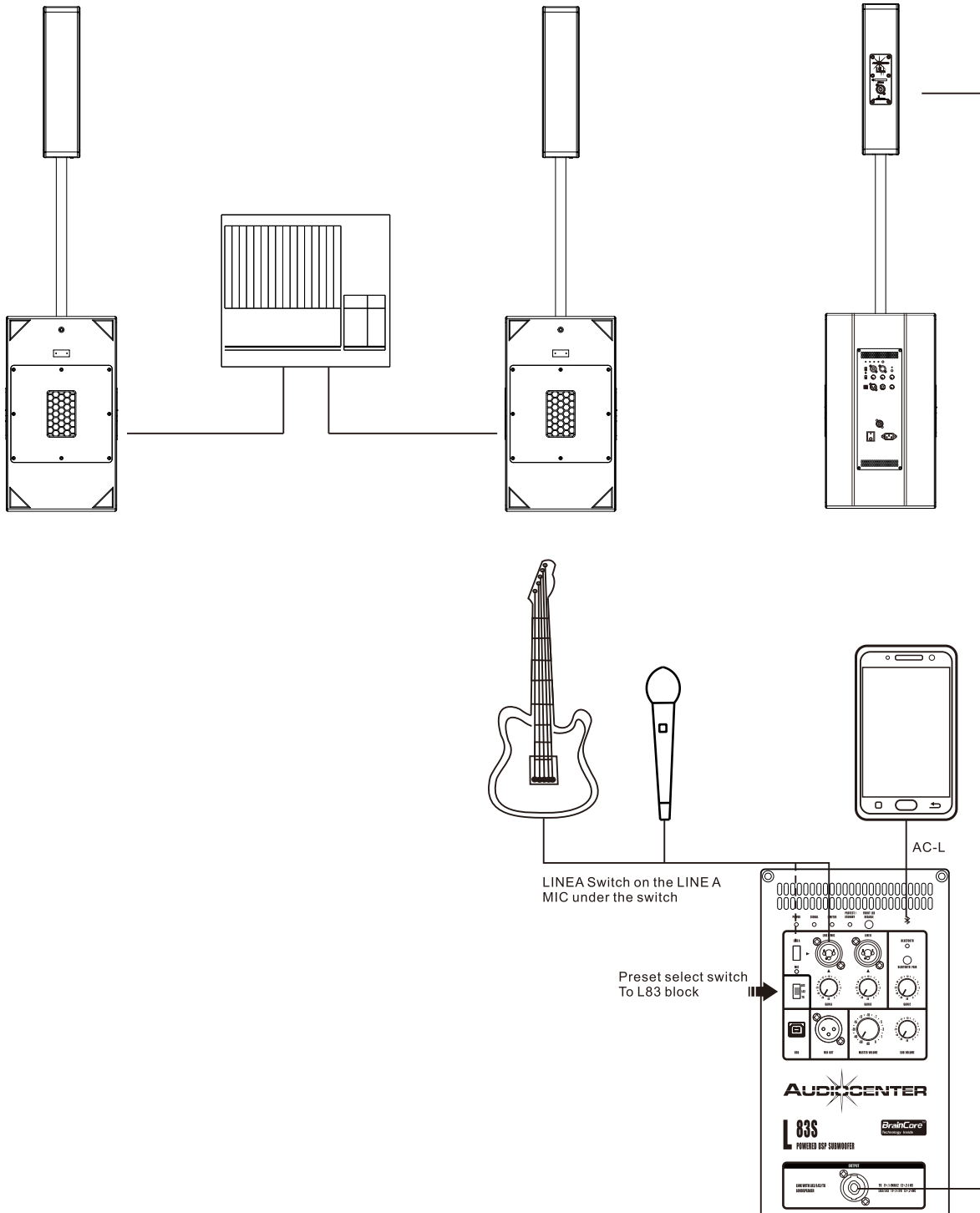
Below is the basic system with 2pcs L83 passive full-frequency column speaker and 2 pcs of L83S active DSP compact subwoofer . This system is ideal for small size touring performance, church and small stadium, etc. .



◆ **Product Application**

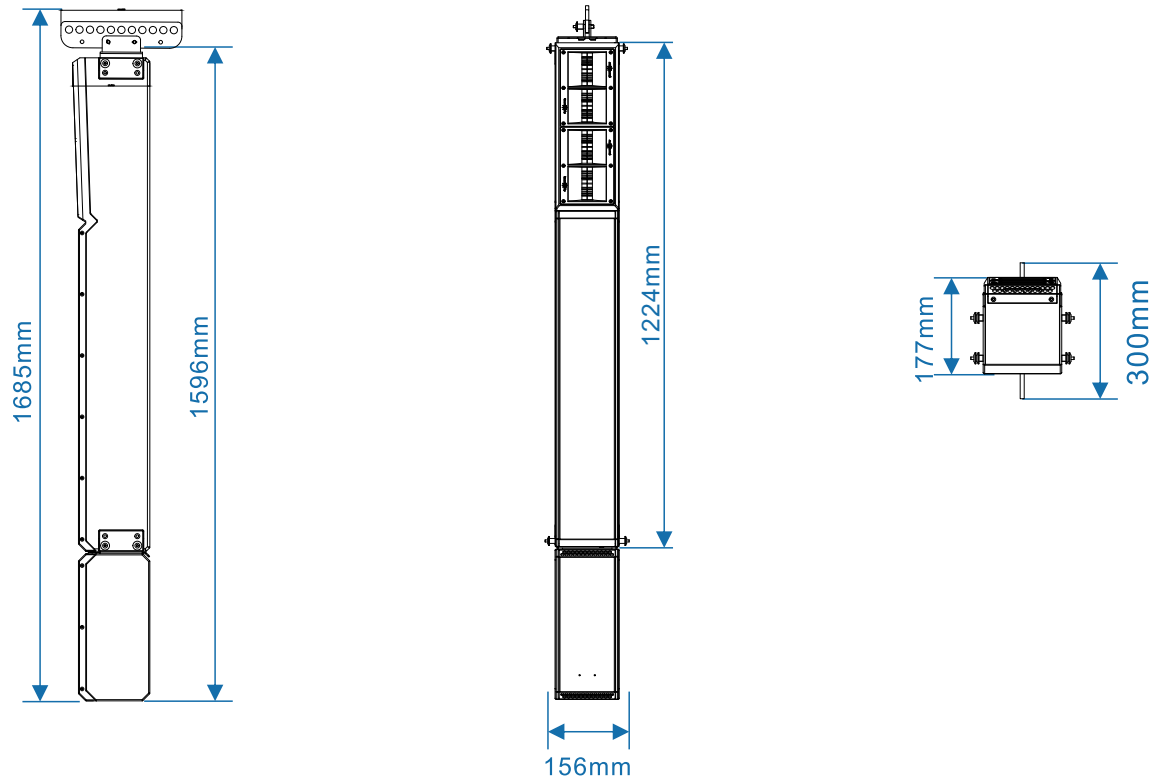
1. Basic system application

Below is the basic system with 2pcs L43 passive full-frequency column speaker and 2 pcs of L83S active DSP compact subwoofer . This system is ideal for small size touring performance, church and small stadium, etc. .

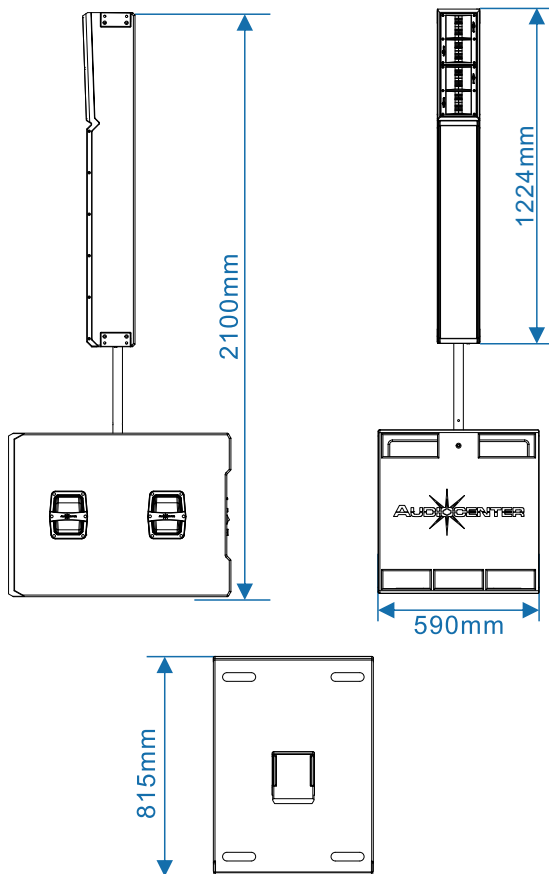


◆ Dimension

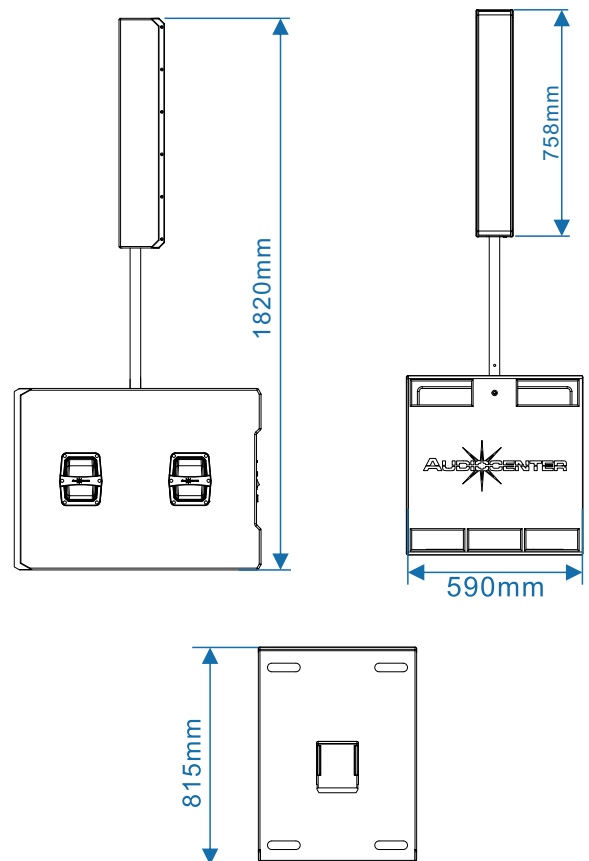
L65+L65A



L65+L65S

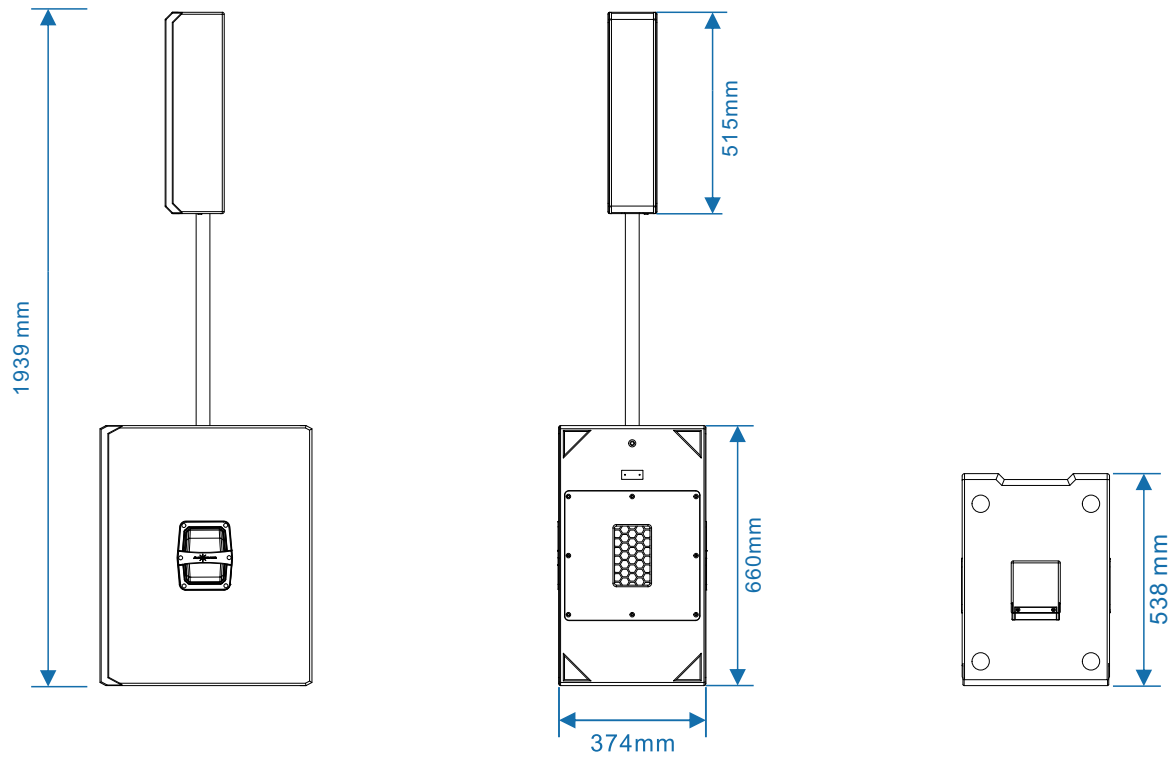


L83+L65S

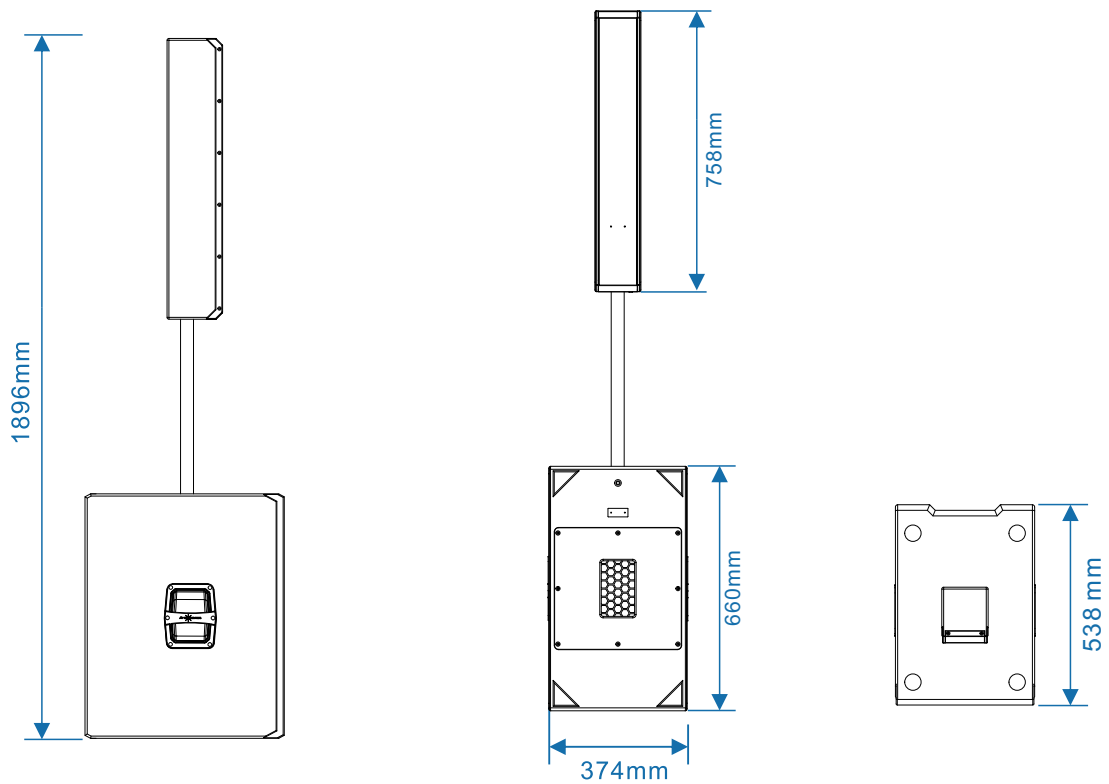


◆ Dimension

L43+L83S



L83+L83S



◆ Specification

SPECIFICATIONS		L65+L65A Column System	L65+L65S Column System	L83+L65S Column System	L43+L83S Column System	L83+L83S Column System
Type	Active DSP-controlled Column Speaker System					
Frequency Response (-8dB anechoic chamber)	75Hz-20KHz	40Hz-20KHz	42Hz-20KHz	42Hz-20KHz	42Hz-20KHz	
Horizontal Coverage Angle (Symmetrical)	110°	110°	100°	100°	100°	
Vertical Coverage Angle (Symmetrical)	10°	10°	20°	20°	20°	
Maximum Calculated SPL/1M	Continuous	128dB	128dB	126dB	122dB	125dB
	Program	131dB	131dB	129dB	125dB	128dB
	Peak	134dB	134dB	132dB	128dB	131dB
Drivers	HF	Customized Beyma ferrite driver, 4pcs 1" drivers		/	/	/
	Mid-high	/	/	Customized Audiocenter Neodymium full-range driver, 8pcs 3" drivers	Customized Audiocenter Neodymium full-range driver, 4pcs 3" drivers	Customized Audiocenter Neodymium full-range driver, 8pcs 3" drivers
	LF	Customized Audiocenter ferrite driver, 6pcs 5" drivers		/		
	Subwoofer	/	Customized Audiocenter ferrite driver, 1pcs 18" drivers		Customized Audiocenter ferrite driver, 2pcs 12" drivers	
Signal Input Connector	2×Combo NEUTRIK® (female XLR & Mono jack 6.35), 1×RCA		2×Combo NEUTRIK® (female XLR & Mono jack 6.35), 1×Bluetooth			
Signal Output Connector	1×NEUTRIK® male XLR					
Power Input Connector	Power connector	3 pin power socket				
Power Output Connector	Power connector	/				
Working Voltage	100V-130V/60Hz or 220V-240V/50Hz					

DSP

Processor	96KHz signal sampling frequency, 24bit precision
Crossover and Slope	Controlled by DSP

AMPLIFIER

Amplifier	Class D					
Peak Power	1400W	3600W	3000W	2500W	2500W	
Frequency Response (1W/8Ω/1ch)	20Hz-20KHz(±0.5dB)					
Intermodulation Distortion	<0.05%					
Total Harmonic Distortion (20Hz-20KHz, half power)	<0.05%					
Cooling	Fans + air convection					
Protection	DC protection / Short circuit protection / Overheat protection / Output overload protection / Soft startup protection / Overvoltage protection / Undervoltage protection					

CABINET

Cabinet	CNC made of excellent wood					
Pole Mount	/	Column speaker with Φ 35 mm (0/10 ° adjustable), subwoofer with M20 pole mount Φ 35 mm				
Optional Accessories	Flying kit,pole,Hand bag,Protection bag,Flightcase,Wheel package,Dolly					
Dimensions (W×H×D)	Column speaker	156×1224×177mm	156×1224×177mm	125×758×150mm	125×515×150mm	125×758×150mm
	L65A	156×365×177mm	/	/	/	/
	Subwoofer	/	590×599×815mm	590×599×815mm	374×660×538mm	374×660×538mm
	Height for whole system set up	1596mm	2100mm	1820mm	1939mm	1896mm
Net Weight	L65 18Kg / L65A 5Kg	L65 18Kg / L65S 54Kg	L83 5Kg / L65S 54Kg	L43 3.5Kg / L83S 32Kg	L83 5Kg / L83S 32Kg	
Technical Support and After-sales Service	Global application support team					

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