

Christie Vive Audio S215 Sub-woofer

User Manual

020-101266-03

CHRISTIE[®]

NOTICES

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Products are warranted under Christie's standard limited warranty, the complete details of which are available by contacting your Christie dealer or Christie. In addition to the other limitations that may be specified in Christie's standard limited warranty and, to the extent relevant or applicable to your product, the warranty does not cover:

- a. Problems or damage occurring during shipment, in either direction.
- b. Projector lamps (See Christie's separate lamp program policy).
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- e. Problems or damage caused by the use of any lamp, replacement part or component purchased or obtained from an unauthorized distributor of Christie lamps, replacement parts or components including, without limitation, any distributor offering Christie lamps, replacement parts or components through the internet (confirmation of authorized distributors may be obtained from Christie).
- f. Problems or damage caused by misuse, improper power source, accident, fire, flood, lightning, earthquake or other natural disaster.
- g. Problems or damage caused by improper installation/alignment, or by equipment modification, if by other than Christie service personnel or a Christie authorized repair service provider.
- h. Problems or damage caused by use of a product on a motion platform or other movable device where such product has not been designed, modified or approved by Christie for such use.
- i. Problems or damage caused by use of a projector in the presence of an oil-based fog machine or laser-based lighting that is unrelated to the projector.
- j. For LCD projectors, the warranty period specified in the warranty applies only where the LCD projector is in "normal use" which means the LCD projector is not used more than 8 hours a day, 5 days a week.
- k. Except where the product is designed for outdoor use, problems or damage caused by use of the product outdoors unless such product is protected from precipitation or other adverse weather or environmental conditions and the ambient temperature is within the recommended ambient temperature set forth in the specifications for such product.
- l. Image retention on LCD flat panels.
- m. Defects caused by normal wear and tear or otherwise due to normal aging of a product.

The warranty does not apply to any product where the serial number has been removed or obliterated. The warranty also does not apply to any product sold by a reseller to an end user outside of the country where the reseller is located unless (i) Christie has an office in the country where the end user is located or (ii) the required international warranty fee has been paid.

The warranty does not obligate Christie to provide any on site warranty service at the product site location.

PREVENTATIVE MAINTENANCE

Preventative maintenance is an important part of the continued and proper operation of your product. Please see the Maintenance section for specific maintenance items as they relate to your product. Failure to perform maintenance as required, and in accordance with the maintenance schedule specified by Christie, will void the warranty.

Environmental


The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol  means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in!

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Safety Information

- Read this information thoroughly before installing or operating a speaker.
- Read these instructions.
- Keep these instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat.
- Do not use this apparatus near water.
- Do not install the speaker near water where the electrical components can be exposed to moisture. Do not place objects containing liquids, such as vases, on the product.
- Clean only with a dry cloth.
- Do not overpower or underpower speaker systems.
- Use only in accordance with manufacturer's specifications and installation guidelines.
- Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in their susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time. These are the permissible noise level exposures specified by the United States Occupational Safety and Health Administration (OSHA):

Duration (Consecutive)	Sound Pressure Level (dbA), Slow Responses
8 hrs	90
6 hrs	92
4 hrs	95
3 hrs	97
2 hrs	100
1.5 hrs	102
1 hr	105
30 min	110

Duration (Consecutive)	Sound Pressure Level (dbA), Slow Responses
≤15 min	115

- According to the OSHA, any exposure in excess of the above permissible limits could result in some hearing loss. Earplugs or protectors to the ear canals or over the ears must be worn when operating this amplification system to prevent permanent hearing loss, if exposure is in excess of the described limits.
- Two people are required to safely lift and install the speaker.
- Speakers and speakers mounted to brackets must be affixed to a suitable structure following all local safety standards and regulations.
- Always install all legally required additional redundant safety straps or cables.
- Install the minimum number of rigging wires (refer to [Installation](#) for more details) that are required to suspend the speaker. Observe load ratings and all applicable local safety codes.
- Only use attachments or accessories specified by Christie.
- To reduce the risk of system damage, turn off the power amplifier and then disconnect the speaker wire before performing a repair or maintenance.
- All servicing must be completed by qualified service personnel. Servicing is required when the apparatus has been damaged in any way. For example, liquid has been spilled or objects have fallen onto the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Changes or modifications to the product not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Technical support

Technical support for Christie products is available at:

- North and South America: +1-800-221-8025 or Support.Americas@christiedigital.com Europe, Middle East, and Africa: +44 (0) 1189 778111 or Support.EMEA@christiedigital.com
- Asia Pacific: +65 6877-8737 or Support.APAC@christiedigital.com
- Coolux: +49 221 99 512 300 or Support.PandorasBox@christiedigital.com
- Christie Managed Services: +1-800-550-3061 or NOC@christiedigital.com

Introduction

This user manual provides subwoofer installation, troubleshooting, and specification information.

Speaker overview

The S215 subwoofer is designed for use as part of a screen channel in auditoriums with approximately 150 to 500 or more seats, or for use as a corner surround speaker when paired with the LA2, LA3, LA4, or LA5 line array speakers and bi-amped or tri-amped.

Multiple hardware attachment points on the speaker allow for multiple installation options.

What's in the box?

This table lists the components that are shipped with the S215.

Quantity	Description	Part number
1	Christie S215 subwoofer or Christie S215 subwoofer with grill	145-103105-XX or 145-127101-XX

Installation



Warning! Failure to comply with the following could result in death or serious injury.

- Before installation, inspect all components for cracks, deformations, corrosion, and missing or damaged parts that could reduce their installation strength.
- A minimum of two people are required to safely lift and install the speaker.
- Speakers must be affixed to a suitable structure following all local safety standards and regulations.
- Only use attachments or accessories specified by the manufacturer.



Notice. Failure to comply with the following may result in property damage.

- Allow speakers exposed to extremely low temperatures to warm for a minimum of one hour before playing them at typical application levels. Failure to comply may result in equipment or property damage.
- Speaker wire affects sound quality. Make sure the speaker wire quality and gauge are appropriate for your application.
- The high-pass filter must be set to one of the following to avoid damaging the subwoofer. Bi-amped: 4th order 24dB/octave Butterworth at 25Hz. Tri-amped: 24dB/octave Butterworth at 25Hz.

Complete the following procedures to install the speaker.

Connect the speaker wire

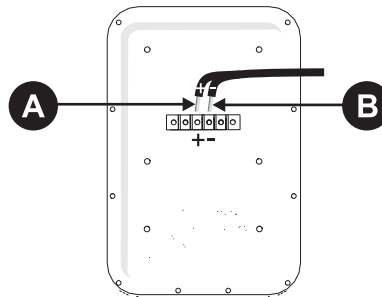


Notice. Failure to comply with the following may result in property damage.

- The amplifier must be turned off and unplugged before you start this procedure.

1. Install the speaker according to the mounting instructions provided in this manual.
2. Connect the speaker wire to the positive (A) and negative (B) terminals on the back of the speaker.

Use a #8 spade lug (part number: 145-159106-XX) if you are creating crimped spade lug terminations.



A	Positive (+) connection
B	Negative (-) connection

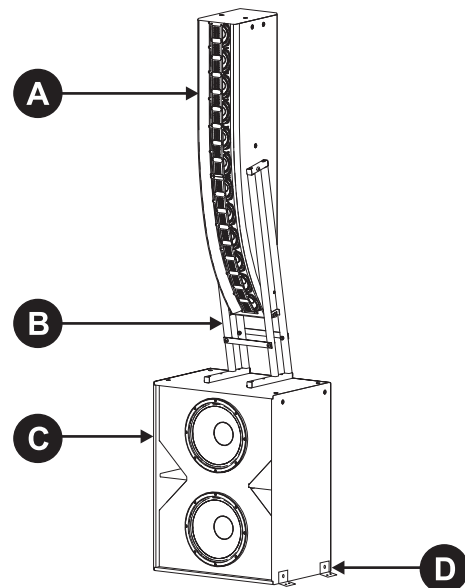
3. Connect the negative and positive speaker wires from the speaker to the corresponding terminals on the amplifier.
4. Turn on the amplifier and verify that the speaker is receiving power (listen for the hum).

Platform mount the S215 subwoofer with an LA line array speaker

Use the BKT-LAx and BKS-SUB brackets to platform mount a S215 subwoofer and an LA2, LA3, LA4, or LA5 line array speaker.

For mounting instructions, see the appropriate Christie Vive Audio BKT-LAx Bracket User Manual and the *Christie Vive Audio BKS-SUB User Manual*.

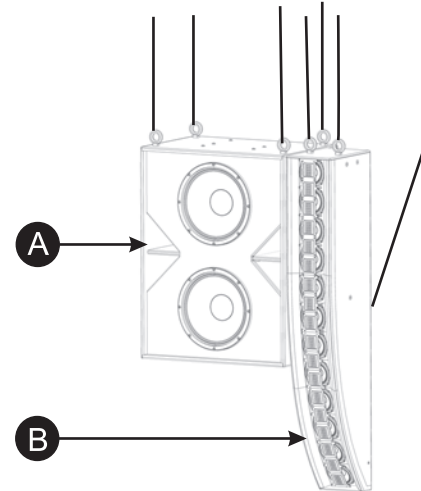
A	Screen channel speaker
B	BKT-LAx bracket
C	S215 subwoofer
D	BKS-SUB brackets (1 of 4)



Fly the S215 subwoofer beside an LA line array speaker

The LA2, LA3, LA4, or LA5 line array speaker and the S215 subwoofer are independently flown, according to installer best practices, using seven rigging wires and any legally required redundant safety cables.

A	S215 subwoofer
B	Line array speaker

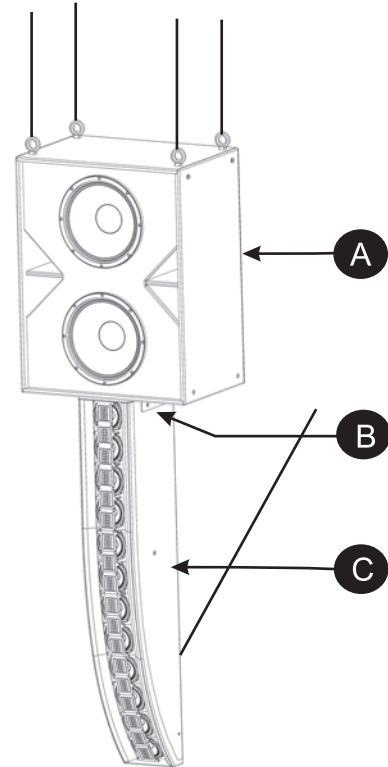


Fly the S215 subwoofer with an LA line array speaker below

The S215 subwoofer is flown, according to installer best practices, using four rigging wires and any legally required redundant safety cables. The LA2, LA3, LA4, or LA5 line array speaker is mounted below the S215 subwoofer with the corresponding BKL-LAx bracket kit (for example BKL-LA3).

For mounting instructions, see the appropriate Christie Vive Audio BKL-LAx Bracket User Manual.

A	S215 subwoofer
B	BKL-LAx bracket (1 of 2)
C	line array speaker



Troubleshooting



Caution! Failure to comply with the following could result in minor or moderate injury or damage.

- Do not service the speaker. All servicing must be completed by qualified service personnel.

The speaker does not function

The speaker is connected to the amplifier, but is not producing any sound.

Resolution

- Verify that the speaker is receiving power from the amplifier.
- Verify that the circuit breaker for the main circuit to the amplifier is closed.
- Reset the circuit breaker. If the AC mains breaker continues to open, check the voltage and amperage of the circuit.
- Verify that the negative and positive speaker wires from the speaker are correctly connected to the terminals on the amplifier.

The speaker sound is degraded

The speaker is powered on and sound is being produced, but it is distorted.

Resolution

- Visually inspect the speaker for deterioration or holes.
- Reduce the output level of the source.
- Verify that the negative and positive speaker wires from the speaker are securely connected to the terminals on the amplifier.
- Verify that there are no missing screws. Replace all screws that you removed during installation.

- Have an authorized dealer complete an audio test (for example, pink noise, frequency sweeps, and content and program material).

There is speaker noise or hiss

The speaker is producing static noise or hiss when powered.

Resolution

- Mute channels, one at a time, to isolate the problem.
- Verify that the cables are in good working condition.
- Reroute audio cables away from AC power and lighting cables.
- Verify correct gain structuring of B Chain and input and output levels of source devices and amplifiers.
- Check the polarity.

Specifications

Audio

Specification	Description
System type	Subwoofer, vented enclosure, with extended bass shelf tuning
Driver components	Two 15 in. low frequency drivers, each with dual 4 in. voice coil and long linear excursion
Recommended crossover	External active electronic crossover/filter High pass filter: Butterworth 24dB/octave @ 25Hz Screen channel or corner surround low pass filter: Bessel 24dB/octave @ 209Hz Surround bass management low pass filter: L-R 24dB/octave @ 80Hz
Frequency response ^a	27-300 Hz at -10 dB, 30-250 Hz at -6 dB
Maximum sound pressure level (SPL) ^b	131 dB, continuous, 143 dB, peak
Sensitivity ^a , 1 W/1 m	100 dB (40-150 Hz)
Recommended amplifier power	830 W - 1500 W (FTC) at 4 Ohms / Christie CDA3 or Christie CDA5 (depending on application)
Rated impedance	4 Ohms

^aMeasured at 2 m, ground plane conditions.

^bAES refers to AES2-2012 standard. Pink noise with 6 dB crest factor at 1 m. Maximum continuous SPL is calculated based on sensitivity and AES power handling. IEC refers to IEC 60268-5 standard. IEC pink noise with 9dB peak factor. Maximum peak SPL is calculated using peak voltage during IEC short-term power test.

Connections

Specification	Description
Inputs	Screw terminal barrier strip

Power

Specification	Description
Power handling ^b	1200 W (AES) continuous, 2400 W (IEC) short-term

Physical

Specification	Description
Enclosure	Extended Bass Shelf vented enclosure 18 mm marine plywood Heavily damped and braced
Dimensions (H x W x D)	99 cm x 76.8 cm x 50.8 cm (39 in.) x (30.2 in.) x (20 in.)
Weight (net)	56 kg (124 lb)

Parts

Specification	Part Number
15 in. cone driver	003-120883-XX

Accessories

Specification	Part Number
Christie Vive Audio LA2, LA3, LA4, or LA5 speaker (depending on application)	LA2: 145-118101-XX LA2 with grill: 145-119102-XX LA3: 145-102104-XX LA3 with grill: 145-125109-XX LA4: 145-120104-XX LA4 with grill: 145-121105-XX LA5: 145-122106-XX LA5 with grill: 145-123107-XX
BKT-LAX tilt bracket (for mounting an LA3, LA4, or LA5 speaker on the S215)	BKT-LA3: 145-105107-XX BKT-LA4: 145-146102-XX BKT-LA5: 145-136101-XX
BKL-LAX L bracket (for flying an LA3, LA4, LA5, speaker under the S215)	BKL-LA3: 145-109101-XX BKL-LA4: 145-147103-XX BKL-LA5: 145-137102-XX
BKS-SUB bracket (for platform mounting)	145-110103-XX
4x fly cables and hardware	111-685201-XX
1x fly cables and hardware	111-686202-XX
SpeakON Connector (for amplifier output to speaker)	145-158105-XX
#8 Spade Lug (for speaker input from amplifier)	145-159106-XX

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