

Christie Vive Audio LA4C Speaker

User Manual

020-101275-01

Christie Vive Audio LA4C Speaker

User Manual

020-101275-01

NOTICES

COPYRIGHT AND TRADEMARKS

© 2015 Christie Digital Systems USA Inc. All rights reserved.

All brand names and product names are trademarks, registered trademarks or trade names of their respective holders.

GENERAL

Every effort has been made to ensure accuracy, however in some cases changes in the products or availability could occur which may not be reflected in this document. Christie reserves the right to make changes to specifications at any time without notice.

Performance specifications are typical, but may vary depending on conditions beyond Christie's control such as maintenance of the product in proper working conditions. Performance specifications are based on information available at the time of printing. Christie makes no warranty of any kind with regard to this material, including, but not limited to, implied warranties of fitness for a particular purpose. Christie will not be liable for errors contained herein or for incidental or consequential damages in connection with the performance or use of this material. Canadian manufacturing facility is ISO 9001 and 14001 certified.

WARRANTY

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).
- c. Problems or damage caused by use of a projector lamp beyond the recommended lamp life, or use of a lamp other than a Christie lamp supplied by Christie or an authorized distributor of Christie lamps.
- d. Problems or damage caused by combination of a product with non-Christie equipment, such as distribution systems, cameras, DVD players, etc., or use of a product with any non-Christie interface device.
- 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!

Addendum

Translated copies of this document are provided on the CD in the back of this document. The CD may also contain additional product documentation. Read all instructions before using or servicing this product.

本文档的翻译副本在本文档背面的 CD 上提供。该 CD 中还可能包含其他产品文档。使用或维修本产品之前请务必阅读所有说明。

文件背面的光碟提供了本文件的翻譯副本。這張光碟可能另外包含其他產品文件。請先閱讀所有指示再使用或送修本產品。

Le CD au dos de ce document contient des traductions de celui-ci dans différentes langues. Ce CD peut également contenir de la documentation supplémentaire sur le produit. Lisez toutes les instructions avant d'utiliser ou d'entretenir ce produit.

Übersetzte Versionen dieses Dokuments werden auf der CD auf dem Vorsatzblatt dieses Dokuments bereitgestellt. Die CD kann auch zusätzliche Produktdokumentation enthalten. Bitte lesen Sie diese Anweisungen vor der Verwendung dieses Produkts oder vor der Ausführung von Wartungsarbeiten am Produkt.

Le copie tradotte di questo documento sono fornite sul CD, sul retro di questo documento. Il CD potrebbe anche contenere altra documentazione sul prodotto. Si prega di leggere tutte le istruzioni prima di utilizzare questo prodotto o sottoporlo a manutenzione.

このドキュメントの翻訳版がこのドキュメントの裏面の CD で提供されています。CD には追加の製品マニュアルも収められています。この製品を使用したり、機能させたりする前に、すべての指示をお読みください。

이 문서의 번역된 사본이 이 문서 후면의 CD 에서 제공됩니다. 이 CD 에는 추가 제품 설명서가 포함되어 있을 수 있습니다. 이 제품을 사용하거나 수리하기 전에 모든 지침을 확인하십시오.

Copias traduzidas deste documento são fornecida no CD contido na parte de trás deste documento. O CD pode conter documentação adicional do produto. Leia todas as instruções antes de usar ou prestar serviço com este produto.

Перевод данного документа представлен на компакт-диске на оборотной стороне документа. Компакт-диск может также содержать дополнительную документацию по продукту. Перед использованием или обслуживанием продукта ознакомьтесь со всеми инструкциями.

Las copias traducidas de este documento se proporcionan en el CD que se encuentra en la parte trasera. En el CD también puede encontrar documentación adicional del producto. Lea todas las instrucciones antes de utilizar o realizar el mantenimiento de este producto.

Перекладені екземпляри цього документа містяться на компакт-диску, який додано до цього документа. На компакт-диску може також бути додаткова документація до виробу. Перш ніж користуватися виробом або його обслуговувати, прочитайте всі інструкції.

Table of Contents

Safety Information 7

 Technical support 8

Introduction 10

 Overview 10

 What's in the box? 10

Installation 11

 Connect the speaker wire 11

 Fly the LA4C 12

 Ceiling mount the LA4C 13

Troubleshooting 14

Specifications 15

 Audio 15

 Connections 16

 Power 16

 Physical 16

 Parts 16

 Accessories 17

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 Level (dB), 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
≤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

Contact your dealer or technical support for questions relating to unclear information, malfunctions, or product repairs.

Americas

Email: tech-support@christiedigital.com

Phone:

- Canada and USA: +1-800-221-8025
- Chile: 519-744-8005

Europe, Middle East, and Africa

Email: techsupport-emea@christiedigital.com

Phone:

- Russia: +7 (495) 930 8961
- Eastern Europe: +36 (0)1 47 48 100
- France: +33 (0) 1 41 21 44 10
- Germany: +49 2161 56620 22
- Italy: +39 (0) 2 9902 1161
- Africa: +27 (0) 11 510 0094
- Spain: +34 91 633 9990
- Middle East: +971 (0) 4 320 6688
- United Kingdom: +44(0) 118 977 8111

Asia Pacific

Email: *tech-asia@christiedigital.com*

Phone:

- Australia: +61 (0) 7 3624 48888
- China: +86 10 6561 0240
- India: +91 (080) 6708 9999
- Japan: 81-3-3599-7481
- South Korea: +82 2 702 1601
- Singapore: +65 6877-8737

Introduction

This user manual provides ceiling surround speaker installation, troubleshooting, and specification information.

Overview

The LA4C line array ceiling surround speaker is designed for auditoriums with approximately 350 to 500 seats. It may also be paired with S115 or S215 subwoofers and bi-amped to create a surround system with bass management.

It may also be used for a range of other applications, where vertical coverage and maximum throw distance are appropriate.

The speaker contains an internal passive crossover, allowing it to operate with a single channel amplifier. 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 LA4C

Quantity	Description	Part number
1	Christie LA4C line array surround speaker or Christie LA4C line array surround speaker with grill	145-144100-XX or 145-145101-XX

Installation

⚠ WARNING

- 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.

Failure to comply could result in death or serious injury.

NOTICE

- 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.

Complete the following procedures to install the speaker.

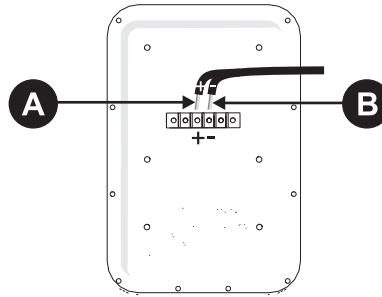
Connect the speaker wire

NOTICE

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.

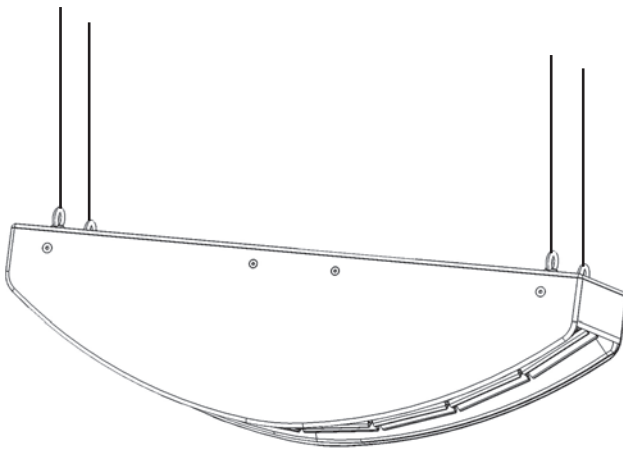


A	Positive (+) connection
B	Negative (-) connection

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.

Fly the LA4C

The LA4C is flown, according to installer best practices, using four rigging wires and any legally required redundant safety cables.

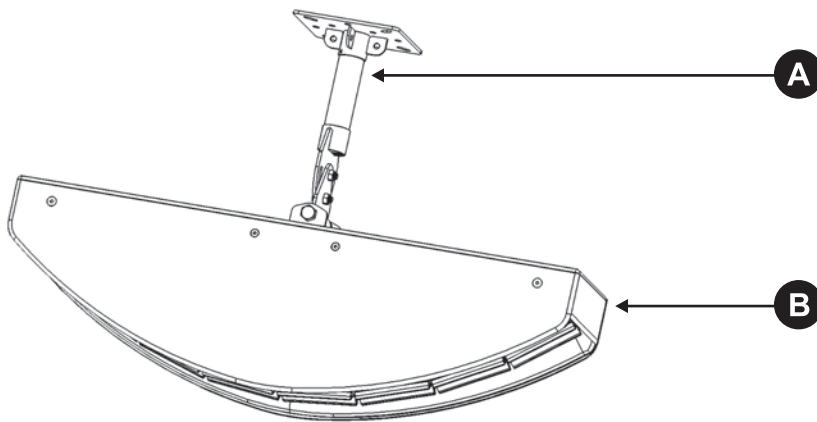


Ceiling mount the LA4C

1. Remove the four pre-installed M8 button head screws on the back of the speaker.
2. Attach the following bracket to the back of the speaker using the four M8 button head screws.

Description	Part number
Ceiling mount (MM-3RDX-120)	111-684200-XX

3. Mount the speaker to the ceiling using the manufacturer documentation provided with the bracket.



A	Ceiling mount bracket
B	LA4C speaker

Troubleshooting



Do not service the speaker. All servicing must be completed by qualified service personnel. Failure to comply could result in minor or moderate injury.

Problem	Resolution
The speaker does not function	<ul style="list-style-type: none">• Verify that the speaker is receiving power from the amplifier.• Verify that the circuit breaker for the main circuit to the amplifier is open.• 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	<ul style="list-style-type: none">• 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 correctly 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	<ul style="list-style-type: none">• 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	Coaxial articulated, ribbon driver, parabolic line array, two-way, passive, single ported enclosure.
Driver components	Eight 6 in. ribbon drivers with Kapton diaphragms and neodymium magnets and eight 6.5 in. paper/Kevlar composite mid-bass drivers.
Crossover	Linear phase, passive, symmetric, at 1.5 kHz, 24 dB/octave
Frequency response ^a	60 Hz - 20 kHz at -6 dB
Maximum sound pressure level (SPL) ^b	130 dB (AES), continuous, 142 dB, peak
System coverage ^c	120° horizontal dispersion, 100° vertical dispersion
Sensitivity ^a , 1 W/1 m	100 dB
Recommended amplifier power	735 W - 1330 W (FTC) at 5 Ohms / Christie CDA2, Christie CDA3, Christie CDA5, or Christie CDA7.5 (depending on application)
Rated impedance	5 Ohms

^aMeasured at distances of 4 m and 8 m, in free field and on ground plane. Sensitivity is calculated based on the measured SPL response averaged in the 200 Hz-3 kHz range and scaled back to 1 m.

^bAES refers to AES2-2012 standard. IEC refers to IEC 60268-5 standard. Maximum continuous SPL is calculated based on sensitivity and AES power handling. IEC short-term power is tested using IEC pink noise with a 9 dB crest factor. The crest factor was specifically increased to reflect real life parameters of digital cinema soundtracks. Maximum peak SPL is calculated using peak voltage during the IEC short-term power test.

^cAveraged in the 500 Hz -16 kHz range at -6 dB.

Connections

Specification	Description
Inputs	Screw terminal barrier strip

Power

Specification	Description
Power handling ^b	1000 W (AES) continuous, 2000 W (IEC) short-term

Physical

Specification	Description
Enclosure	Vented box alignment 18mm marine plywood Heavily damped and braced Rated for overhead applications
Dimensions (H x W x D)	35.8 cm x 121.8 cm x 26.8 cm (14.1 in.) x (48.0 in.) x (10.6 in.)
Weight (net)	41 kg (90 lb)

Parts

Specification	Part Number
6.5 in. woofer	003-121022-XX
6 in. ribbon driver	003-121021-XX

Accessories

Specification	Part Number
Ceiling mount (MM-3RDX-120)	111-684200-XX
4x fly cables and hardware	111-685201-XX
Adapter channel 1.5 in. extension tube	111-688204-XX
Ceiling mount 1.5 in. extension tube	111-690207-XX
SpeakON Connector (for amplifier output to speaker)	145-158105-XX
#8 Spade Lug (for speaker input from amplifier)	145-159106-XX



ASSY TECH DOCS VIVE LA4C

Corporate offices

USA – Cypress
ph: 714-236-8610

Canada – Kitchener
ph: 519-744-8005

Consultant offices

Italy
ph: +39 (0) 2 9902 1161

Worldwide offices

Australia
ph: +61 (0) 7 3624 4888

Brazil
ph: +55 (11) 2548 4753

China (Beijing)
ph: +86 10 6561 0240

China (Shanghai)
ph: +86 21 6278 7708

Eastern Europe and
Russian Federation
ph: +36 (0) 1 47 48 100

France
ph: +33 (0) 1 41 21 44 04

Germany
ph: +49 2161 664540

India
ph: +91 (080) 6708 9999

Japan (Tokyo)
ph: 81 3 3599 7481

Korea (Seoul)
ph: +82 2 702 1601

Republic of South Africa
ph: +27 (0)11 510 0094

Singapore
ph: +65 6877-8737

Spain
ph: + 34 91 633 9990

United Arab Emirates
ph: +971 4 3206688

United Kingdom
ph: +44 (0) 118 977 8000

