

 **CHANNEL VISION™**  
**2 Year Limited Warranty**

Channel Vision Technology will repair or replace any defect in material or workmanship which occurs during normal use of this product with new or rebuilt parts, free of charge in the USA, for two years from the date of original purchase. This is a no hassle warranty with no mail in warranty card needed. This warranty does not cover damages in shipment, failures caused by other products not supplied by Channel Vision Technology, or failures due to accident, misuse, abuse, or alteration of the equipment. This warranty is extended only to the original purchaser, and a purchase receipt, invoice, or other proof of original purchase date will be required before warranty repairs are provided.

Mail in service can be obtained during the warranty period by calling (800) 840-0288 toll free. A Return Authorization number must be obtained in advance and can be marked on the outside of the shipping carton.

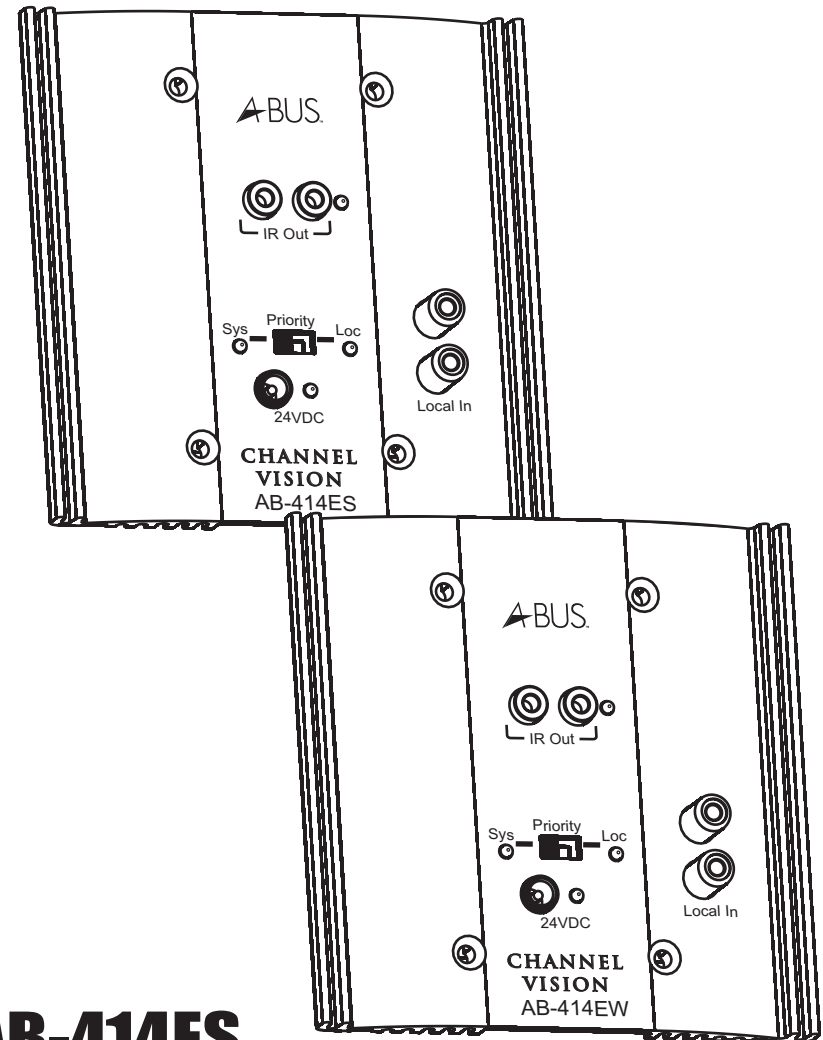
This warranty gives you specific legal rights and you may have other rights (which vary from state to state). If a problem with this product develops during or after the warranty period, please contact Channel Vision Technology, your dealer or any factory-authorized service center.

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500-115 rev C

# INSTRUCTIONS



## AB-414ES

## AB-414EW

### In-wall A-BUS™ Distribution Module

 **CHANNEL VISION™**

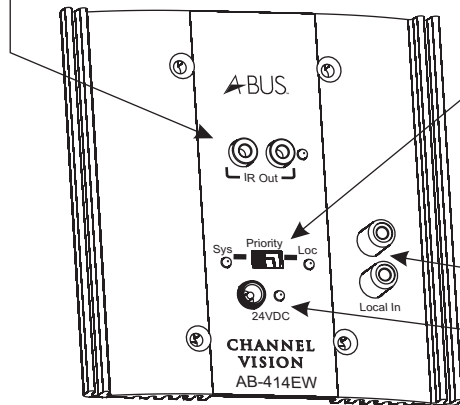
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The **AB-414ES** (silver) and **AB-414EW** (white) function as the heart of your A-BUS™ system. They are 1x4 distribution modules that deliver power and audio signals to 4 amplified keypads (model AB-114). 2 emitter outputs on the AB-414 allow IR signals detected by the AB-114 to control source devices such as CD players and AM/FM tuners. (Note: this manual uses the term AB-414 to describe features common to both color variations).

**Features:**

- Fits into a standard 2-gang low voltage ring
- Integrated single source audio input
- 2 common IR emitter outputs
- Extruded aluminum faceplate available in silver (AB-414ES) or white (AB-414EW)

IR emitters will flash when any keypad in the system detects an IR signal. Multi-head emitters allow up to 6 emitters.



Front panel connections

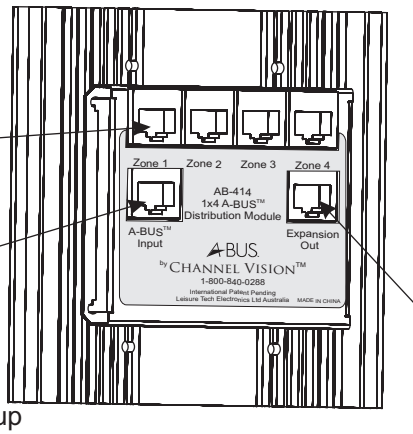
(AB-414EW shown for reference. AB-414ES contains same features)

The priority switch determines which input will be heard (either A-BUS™ or Local) when audio is sensed from both.

Local Input

24VDC power supply connection (included).

**Rear panel connections**



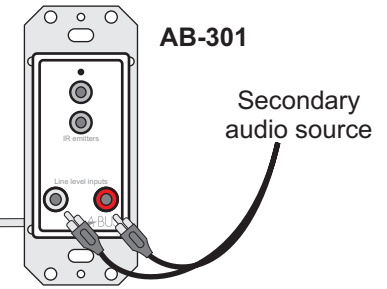
Zone outputs for keypad connections.

A-BUS™ Input from model AB-301, AB-202, or Expansion output.

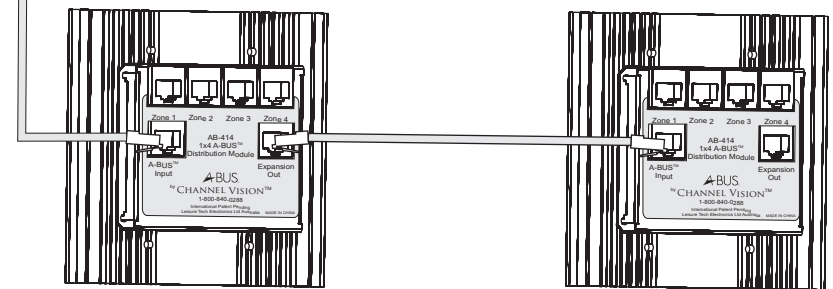
Expansion connector is used to hook up additional units for more A-BUS outputs.

**Expanding inputs and outputs**

**Option ...** The AB-301 can be used to provide a secondary input to the AB-414. Use the priority switch on the AB-414 to assign priority to the either the signal from the AB-301 or the signal from the local inputs on the AB-414.



**Option ...** To add more zones, connect slave AB-404s as shown. Each AB-414 requires a separate power supply (included) and will support another four keypads. You may have up to four AB-414s in a system.



AB-414

AB-414 (slave)

**Trouble?**

- 1) Be sure you have connected the CAT-5 cable correctly. Note that the stripe/solid pattern should match the labels on the product. Miss-wiring can cause distorted sound or prevent the system from working at all!
- 2) Be sure you have connected the speakers in phase. Follow the label on the product. Out of phase speakers can rob the system of its bass. Especially when driving dual-voice-coil speakers.
- 3) Be sure IR emitters are directly over the IR receiver for all devices you wish to control.

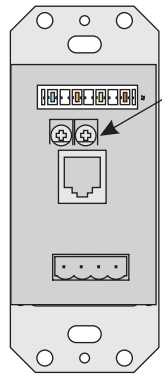
**Specifications:** (typical @25° C)

<b>Operating Voltage :</b>	24±.5VDC
<b>Cable requirements:</b>	CAT-5 or better
<b>Speaker impedance:</b>	6-8 ohm
<b>IR repeating:</b>	38-56kHz
<b>IR sensor range (AB-114):</b>	40'@40kHz 25'@56kHz
<b>Operating Temperature:</b>	-10°C to +50°C

Specifications subject to change without notice.

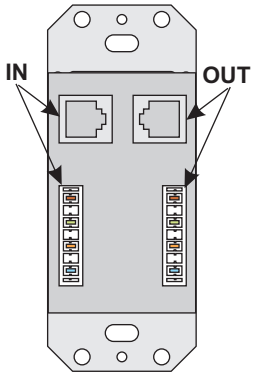
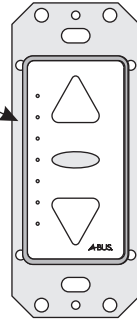
A-BUS is a register trademark of LeisureTech Electronics Pty Ltd

## Details and Options



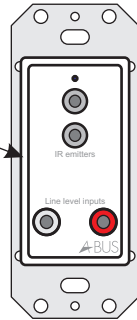
**Balance** ... The two potentiometers on the AB-114 adjust the volume levels of each speaker channel. Use these to adjust the speaker balance in this zone.

**Gasket** ... The AB-114 is shipped with a gasket. This allows you to adjust the height and fit of a Decora™ plate. Leave the gasket as is for a flush fit. Remove the gasket to have the AB-114 stand above the plate.

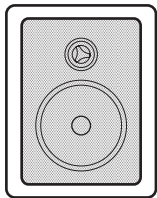


**Input/Output** ... To simplify installation, the AB-301 has both 110 and RJ-45 inputs and outputs. Only one of the inputs and one of the outputs should be used at a time.

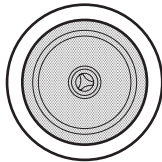
**Gasket** ... The AB-301 is shipped with a gasket. This allows you to adjust the height and fit of a Decora™ plate. Leave the gasket as is for a flush fit. Remove the gasket to have the AB-301 stand above the plate.



## Suitable speakers

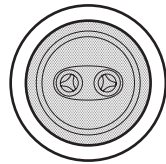


**IW601**  
In-wall *Soprano* series  
6.5" speaker



**IC602**  
In-ceiling *Soprano* series  
6.5" speaker

Channel Vision offers a variety of multi-room speakers.

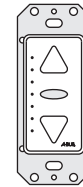


**ID652**  
In-ceiling dual voice coil speaker  
Both stereo channels from a single speaker. Steerable tweeters maintain the stereo image. Use in small rooms, bathrooms or hallways.

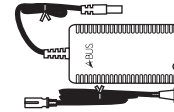
## What is A-BUS™ ?

A-BUS™ is an audio distribution technology that uses Category 5 cable to distribute power, audio, and IR control signals. Power and line-level audio signals are delivered to the keypads which amplify the signal and distribute it to a pair of speakers. The keypads have IR sensors that detect signals from standard hand held remote controls. These IR signals are then transmitted through the Cat5 wire back to an input module where they activate IR emitters control the source devices. IR emitters attach directly to the front of the source devices and recreate the IR signals that were produced by the remote control.

## Required components



**AB-114 amplified keypad** ... 1 per speaker pair. Drives the speakers, controls volume and relays IR information. Mount the AB-114 in single gang low-voltage ring or deep J-box (if required by code). Blue LEDs show volume level. Keypad completely mutes when bottom LED is off. (No amplifier hiss like some other non-A-BUS™ systems.)



**AB-T2454** ... Power supply. 1 per every AB-414. 120-240VAC (included with the AB-414)

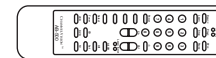
## Optional components



**AB-202** ... Single source module. 1 per system. Interfaces sources to the system. Mount near audio components (CD player, receiver etc.)



**AB-301** ... Universal input module. Can be used to provide local source input in any room and/or to replace the AB-202 as the system input. The AB-301 is a great way to enable simple connection of local sources into the zone - TV's, MP3 players, computer sources, etc.



**AB-500** ... Universal remote control. Comes pre-programmed to control the volume of the AB-114. Learns IR codes for up to 6 sources.



**IR-3002 & IR-3003** ... Single and dual head IR flashers. Use one head per source to control from the remote room. If you need more emitter outputs than you have, use the IR-3003 which provides an expansion port allowing you to daisy chain multiple emitters to one port.

# Basic system

## In this system

Four rooms listen to the same audio program. Each room has independent volume controls.

Using the IR option, you can control the components from any room. You can change the system input from FM to the CD player, select another satellite radio station, or pause the CD.

Using the status option, the systems mutes and conserves power when the receiver is off. When the receiver is turned back on, all amplified keypads return to the last volume level.

(See corresponding numbers on opposite page)

- 1 **Expansion Output** ... Use this to expand to an additional A-BUS™ distribution hub. This connector only provides audio signals to an additional AB-414. It cannot be used to directly connect a 5th AB-114 to the system.
- 2 **Cat-5 cables** ... Use RJ-45 connectors that are wired for the TIA568A standard. (Using the TIA568B wiring configuration will work, but the left and right audio information will be reversed).
- 3 **Volume indicators**... The LEDs indicate the volume level. If the Status is <off>, the LEDs will be dark. Pressing the UP/DOWN keys will light the LEDs for a short period to show the stored volume level.

**Single zone system** ... This is a single zone system. All speakers play the same audio. Easy to use, single zone systems are ideal for all public spaces (kitchen, entry, family room, patio). Imagine walking from room to room and your music follows. If music is part of your life, the Channel Vision A-BUS system will make music a part of your house.

