

## 1 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 one year 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 when purchased through an authorized reseller. 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 (714) 424-6500. A Return Authorization number must be obtained in advance and can be marked on the outside of the shipping carton.

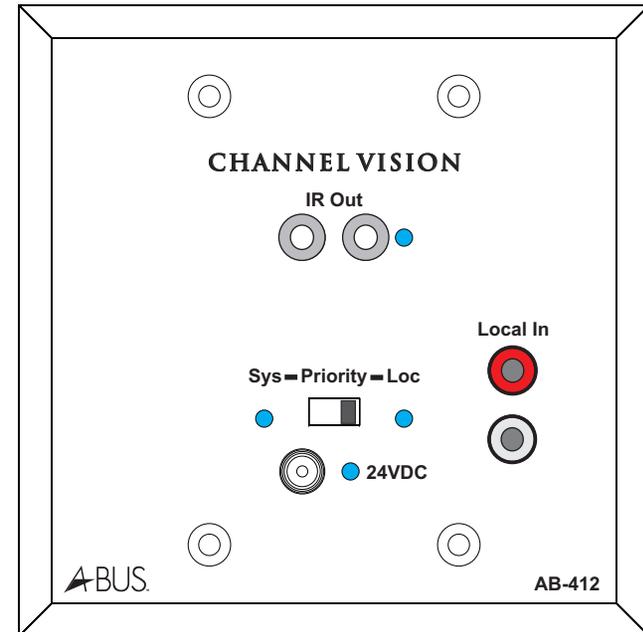
This warranty gives you specific legal rights and you may have other rights (which vary from state to state). If a problem with this product develops during or after the warranty period, please contact Channel Vision Technology, your dealer or any factory-authorized service center.

Channel Vision products are not intended for use in medical, lifesaving, life sustaining or critical environment applications. Channel Vision customers using or selling Channel Vision products for use in such applications do so at their own risk and agree to fully indemnify Channel Vision for any damages resulting from such improper use or sale.

**Specifications:** (typical @25° C)

<b>Operating Voltage :</b>	24VDC 1000mA
<b>Cable requirements:</b>	CAT-5 or better
<b>Speaker impedance:</b>	6-8 ohm
<b>Operating Temperature:</b>	-10°C to +50°C

Specifications subject to change without notice.



## AB-412

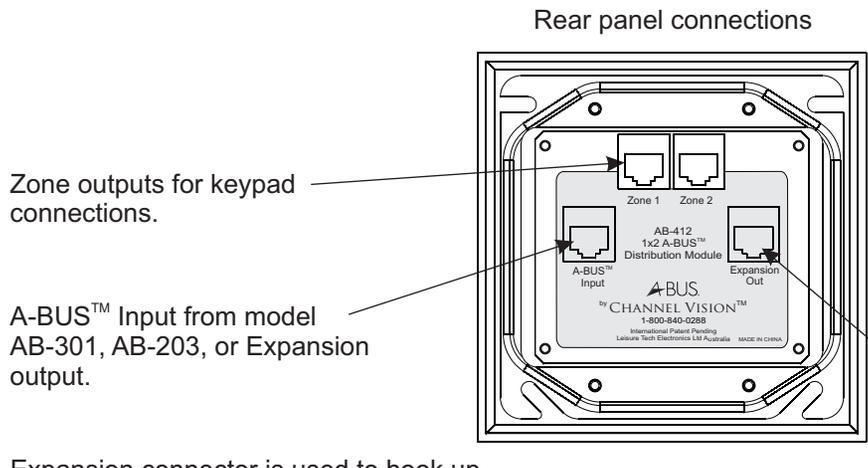
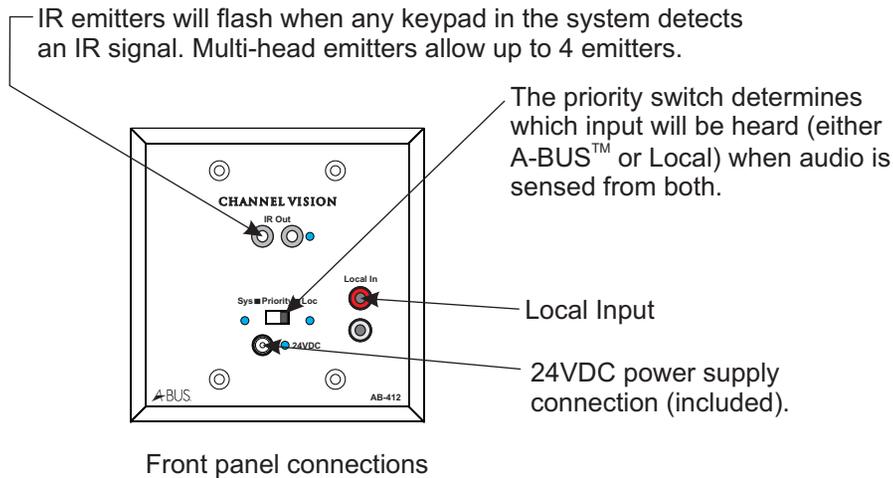
### Two Zone A-BUS™ Distribution Module W/Local Audio Input

## Model: AB-412

The **AB-412** functions as the heart of your A-BUS™ system. It is a 1x2 distribution module that deliver power and audio signals to 2 amplified keypads (model AB-134). 2 emitter outputs on the AB-412 allow IR signals detected by the AB-134 to control source devices such as audio receivers and cable boxes.

### Features:

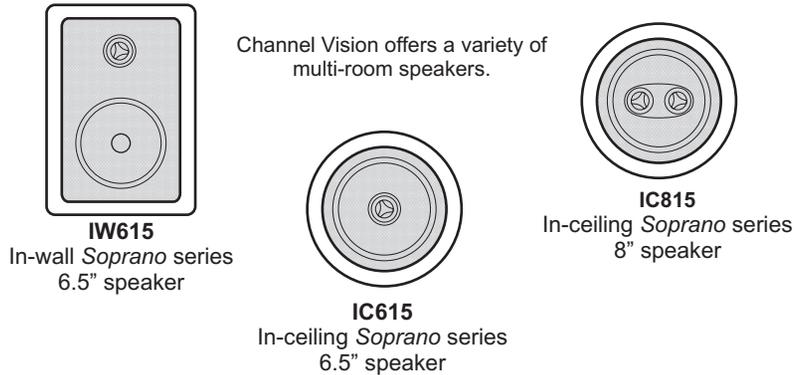
- Fits into a standard 2-gang low voltage ring (not included)
- Integrated single source audio input
- 2 common IR emitter outputs
- A-Bus input from remote room



## Troubleshooting

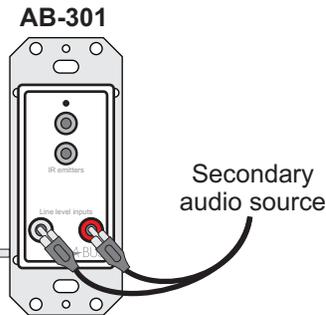
Symptom	Troubleshooting Steps
System lights not lighting up?	<ol style="list-style-type: none"> <li>1. Verify power supply is 24vDC with a volt meter.</li> <li>2. With power removed, disconnect all keypads.</li> <li>3. Plug the power supply in with no keypads connected to the AB-412.</li> </ol>
Audio Issues?	<ol style="list-style-type: none"> <li>1. Check to make sure that the audio source is playing, then press the power button on the AB-134 to make sure it is turned on.</li> <li>2. Check the jumpers on the keypad. If the status jumper is on pins 1 &amp; 2, the AB-134 will turn off if there is no audio present for more than 2 minutes. For most applications, place the status jumper on pins 2 &amp; 3 so that the AB-134 will revert back to its previous condition (either on or off) when music is played after a long pause.</li> <li>3. Check power supply and voltage. The AB-412 is powered by 24vDC. The solid brown wire is +, and the striped brown wire is -. If proper voltage is not fed to each amplified keypad, the system will not function normally.</li> <li>4. Try a different audio source.</li> <li>5. If the issue is just in a single zone, bypass that CAT5/6 cable. If the issues goes away, try re-terminating the RJ-45 connector.</li> <li>6. Verify you have connected the CAT5 cable correctly. Follow the TIA-568A standard at both ends. Mis-wiring can cause distorted sound, prevent the system from functioning, or possibly cause damage to the components in the system.</li> <li>7. Observe wiring distance specifications. The maximum recommended wire length between the audio hub output and AB-134 is 150 feet. Although the AB-134 can work at greater distances, extreme distances are not recommended. Erratic performance may result due to the power loss caused by the CAT5 wire.</li> <li>8. Verify you have connected the speakers in phase. Follow the label on the product. Out of phase speakers can rob the system of its bass.</li> </ol>
Trouble with IR control?	<ol style="list-style-type: none"> <li>1. Verify you are using the correct remote control. The AB-134 will respond to IR signals from the A0505. The A0505 can provide both volume control and source selection commands. Other 3rd party remote controls that are capable of learning the IR codes from the A0505 can also be used.</li> <li>2. Check the blue wire. The IR passes on the solid blue conductor.</li> <li>3. The top LED on the AB-134 acts as an IR receiver feedback LED that flashes whenever IR signals are received. Check to make sure the LED flashes whenever you press buttons on your remote control. If you don't see the feedback LED, try replacing the batteries in your remote control.</li> <li>4. Verify IR emitters are placed directly over the sensor on the device you are trying to control.</li> </ol>

## Suitable Speakers

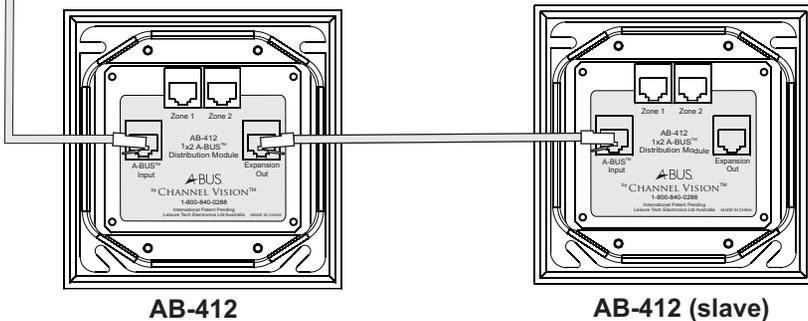


## Expanding Inputs & Outputs

The AB-301 can be used to provide a secondary input to the AB-412. Use the priority switch on the AB-412 to assign priority to either the signal from the AB-301 A-Bus input or the signal from the local RCA inputs on front of the AB-412.



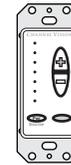
To add more zones, connect slave AB-412s as shown. Each AB-412 requires a separate power supply (included) and will support another two keypads. You may have up to four AB-412s in a system.



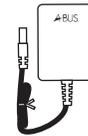
## What is A-BUS™?

A-BUS™ is an audio distribution technology that uses Category 5/6 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. There, they activate IR emitters to 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

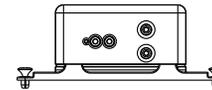


**AB-134 amplified keypad:** 1 per speaker pair. Drives the speakers, controls volume and relays IR information. Mount the AB-134 in a single gang low-voltage ring or deep J-box (if required by code). Blue LEDs show volume level. Keypad completely mutes when bottom LED is off.

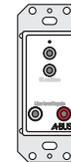


**Power supply:** 1 per every AB-412. 120VAC input, 24vDC 1000mA output (included with the AB-412)

## Optional components



**AB-203:** 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-203 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.

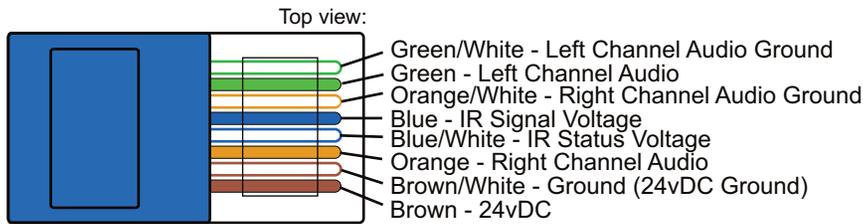


**A0505:** Remote control. Designed to control the AB-134 as well as Channel Vision's popular iBus® wall docks.



**IR-3001 & IR-3002:** Single and dual head IR flashers. Use one head per source to control from the remote room. (IR-3002 shown).

## Wiring Configuration



## Basic system

### In this system:

Two 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 AB-412. This connector only provides audio signals to an additional AB-412. It cannot be used to directly connect a 5th AB-134 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

## Basic system cont.

