P-2044
4-Source/4-Zone CAT5 Audio Matrix

CHANNEL VISION™

The **P-2044** is a 4-source, 4-zone matrix switcher for Channel Vision's CAT5 audio system. It allows up to four different sources to be played in four different zones simultaneously, making it perfect for families with a variety of listening interests. Controlling your music is easy with the P-2044's source specific IR repeating which allows independent control of identical source components. For example, two identical CD players can be controlled independently.

Features:
• LED status indicators
• Source specific IR routing
• Input connections: RJ-45 or RCA
• Output connections: RJ-45 or 110 punchdown
• Compatible with Channel Vision's A0125 keypad

4 Zone Outputs
Allows connection of A0125 keypads
Provides for either 110 or RJ-45 (see note under LED Indicators)

LED Indicators
Blue LED indicates that the zone is active.
Red LED indicates which connector is being used.
Note: Each zone will only support 1 keypad.
If keypads are connected to both the RJ-45 and 110 connectors, only the keypad connected to the RJ-45 will be active and the red LED near the RJ-45 connector will be illuminated.
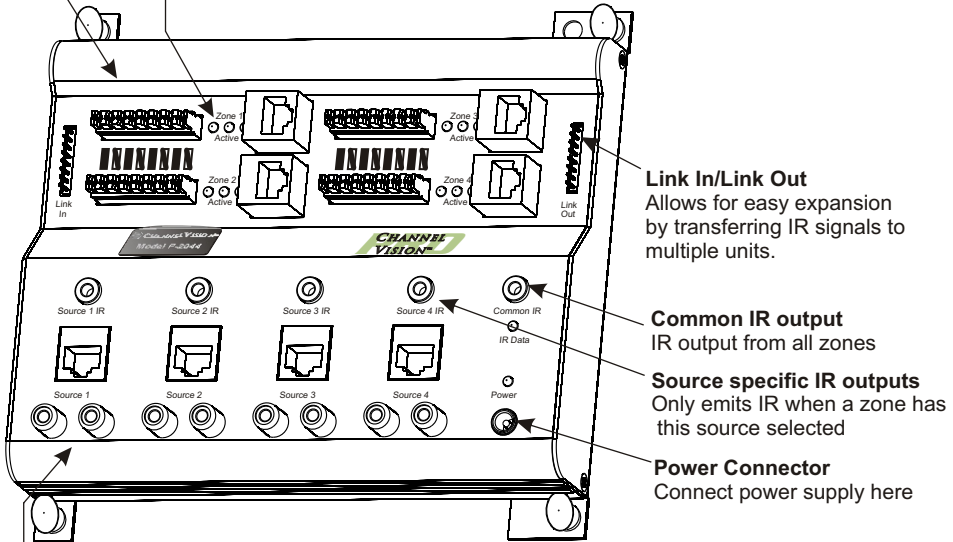
Link In/Link Out
Allows for easy expansion by transferring IR signals to multiple units.

Common IR output
IR output from all zones

Source specific IR outputs
Only emits IR when a zone has this source selected

Power Connector
Connect power supply here

Audio Source inputs
Use RCA inputs to connect conventional audio sources.
Use RJ-45 inputs to connect input modules such as A0301 and A0313.

How it Works

The P-2044 is a matrix switcher for Channel Vision's CAT5 audio system. Any zone can independently select and listen to any source at any time. Source selection can be done either from an A0125 volume control keypad or by using the A0501, A0502, or A0505 remote controls. For details on the A0505 remote control, please refer to the section of this manual titled "Using the A0505 Remote Control." The basic operation of the A0125 is described below.

Using the A0125 Volume Control Keypad...
The Pwr (power) button located at the lower left of the keypad is also used for source selection. When the A0125 is powered on, press and release the power button to scroll through the input sources. As you change sources, you'll notice that the top 4 LEDs illuminate corresponding to the source you have selected. When source one is selected, the first LED is illuminated, when source two is selected, the second LED is illuminated, and so on.

After a source is selected the LED will stay lit for 5 seconds, then it will return to showing the current volume level.
Volume adjustments can be made using the up/down buttons to the right hand side of the keypad. The keypad can be controlled from the A0505 remote control (see the section titled: Using the A0505 remote control for more details).
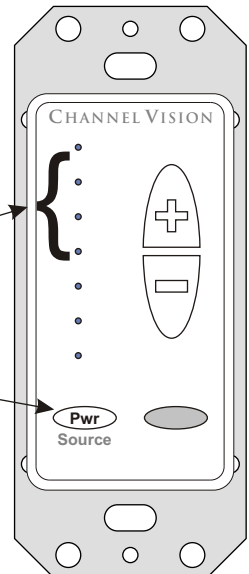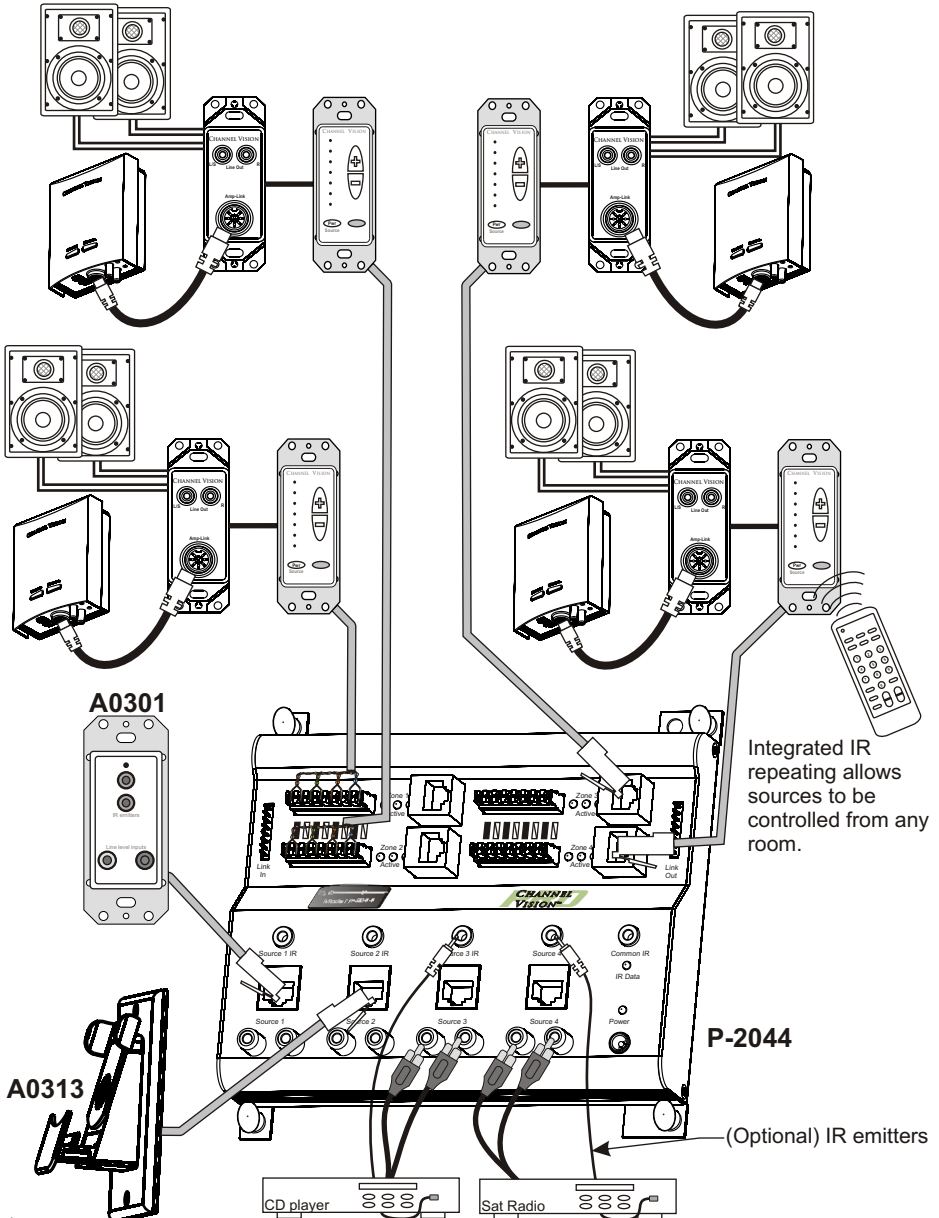

These four LEDs illuminate to indicate which source input is selected.

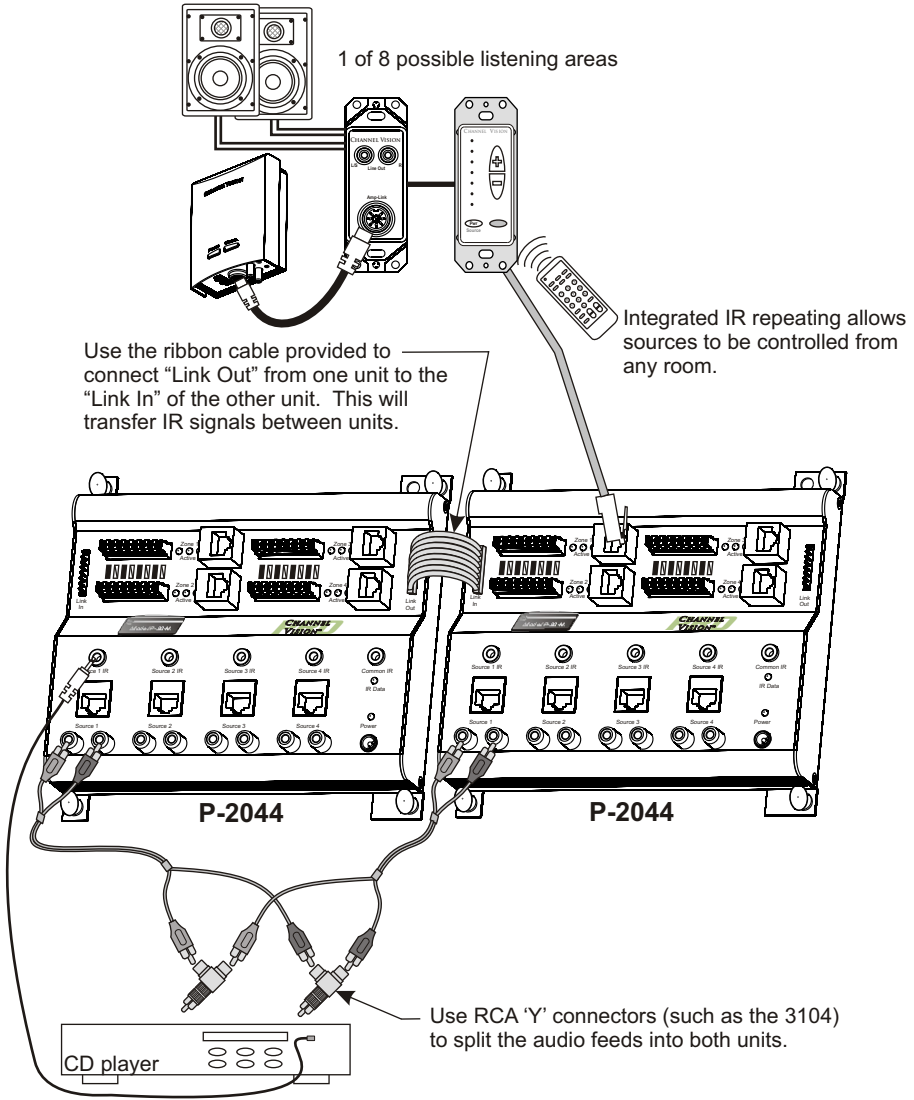The Pwr button is used for source selection.

Basic Application

A basic system can be created with four volume control keypads (model A0125), four pairs of speakers, four A0240 amplifiers, and four A0302 speaker to line-level interface modules. The source components can be controlled by pointing their remote control at the IR sensor in the A0125 keypad.

A0301

Integrated IR repeating allows sources to be controlled from any room.

P-2044

A0313

(Optional) IR emitters

CD player

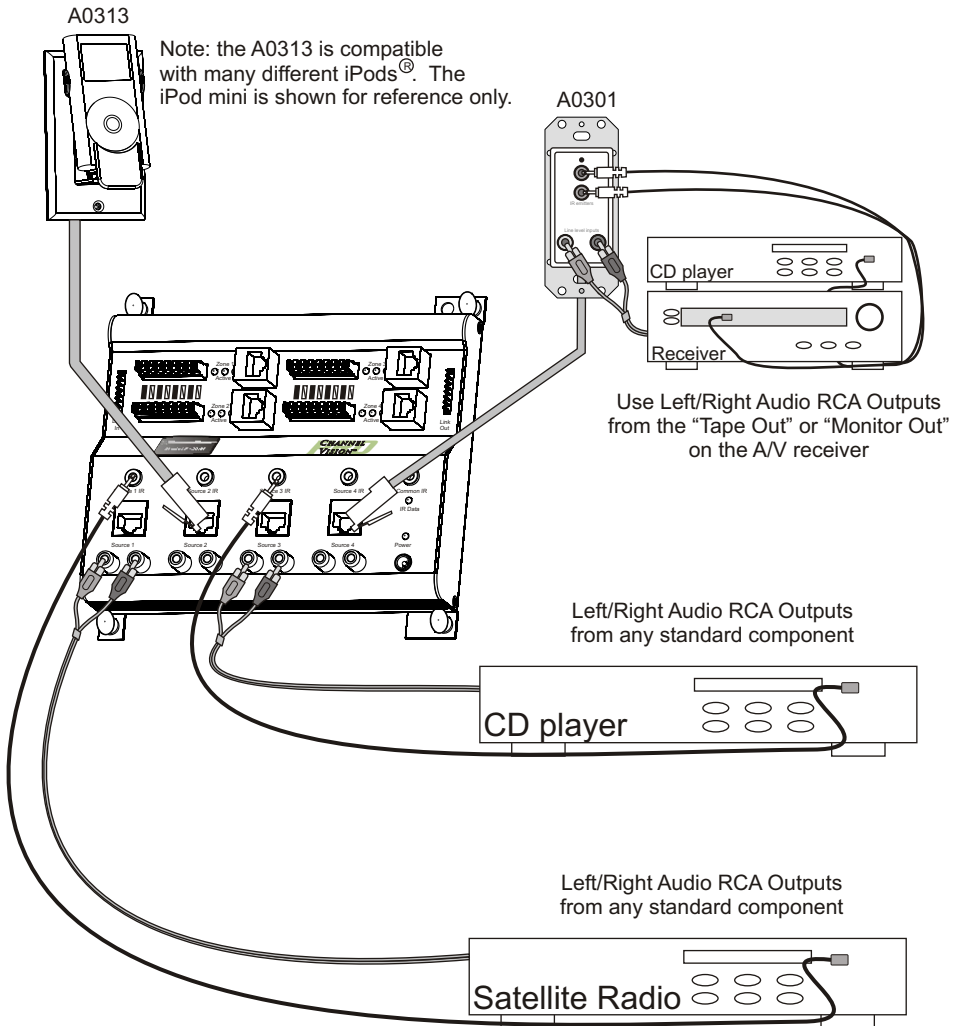Sat Radio

Expanding The System

Larger systems consisting of more than 4 zones can be created by adding a second P-2044. Use RCA 'Y' connectors to split the audio sources into both units. Use the provided ribbon cable to connect the "Link" terminals. This will allow IR signals received through one P-2044 to be transmitted to the other P-2044.

1 of 8 possible listening areas

Integrated IR repeating allows sources to be controlled from any room.

Use the ribbon cable provided to connect "Link Out" from one unit to the "Link In" of the other unit. This will transfer IR signals between units.

P-2044   **P-2044**

Use RCA 'Y' connectors (such as the 3104) to split the audio feeds into both units.

CD player

1 of 4 possible source devices.

Note: both units shown above must be use their own power supply.
These power supplies are not shown in the diagram above.

Using Different Input Devices

The P-2044 can accept signals from either a standard analog audio output (via RCA inputs) or a CAT5 audio output from one of Channel Vision's CAT5 audio input modules.

A0313

Note: the A0313 is compatible with many different iPods®. The iPod mini is shown for reference only.

A0301

CD player

Receiver

Use Left/Right Audio RCA Outputs from the "Tape Out" or "Monitor Out" on the A/V receiver

Left/Right Audio RCA Outputs from any standard component

CD player

Left/Right Audio RCA Outputs from any standard component

Satellite Radio

Creating Sub-Zones

The single-source CAT5 audio hub (model P-2014) can be integrated together with the multi-source CAT5 audio matrix (model P-2044). The keypads connected to the P-2014 will act as sub-zones to the P-2044. These sub-zones will all play the same audio which is perfect for common areas such as hallways, bathrooms, kitchen, or dinning room. For this kind of system, all of the A0125 keypads should be configured for multi-mode.
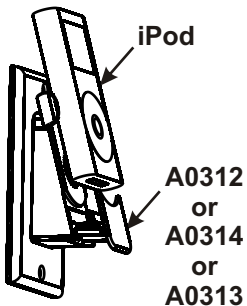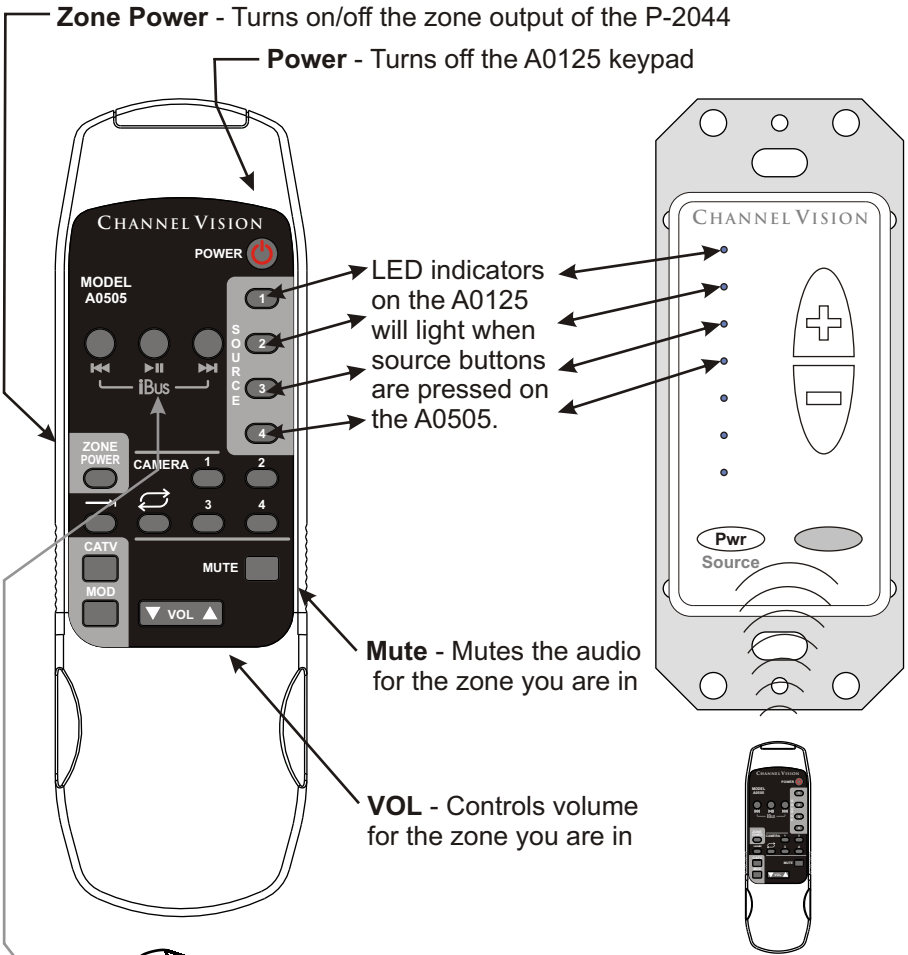
Dining Room

Bathroom   Kitchen

Hallway
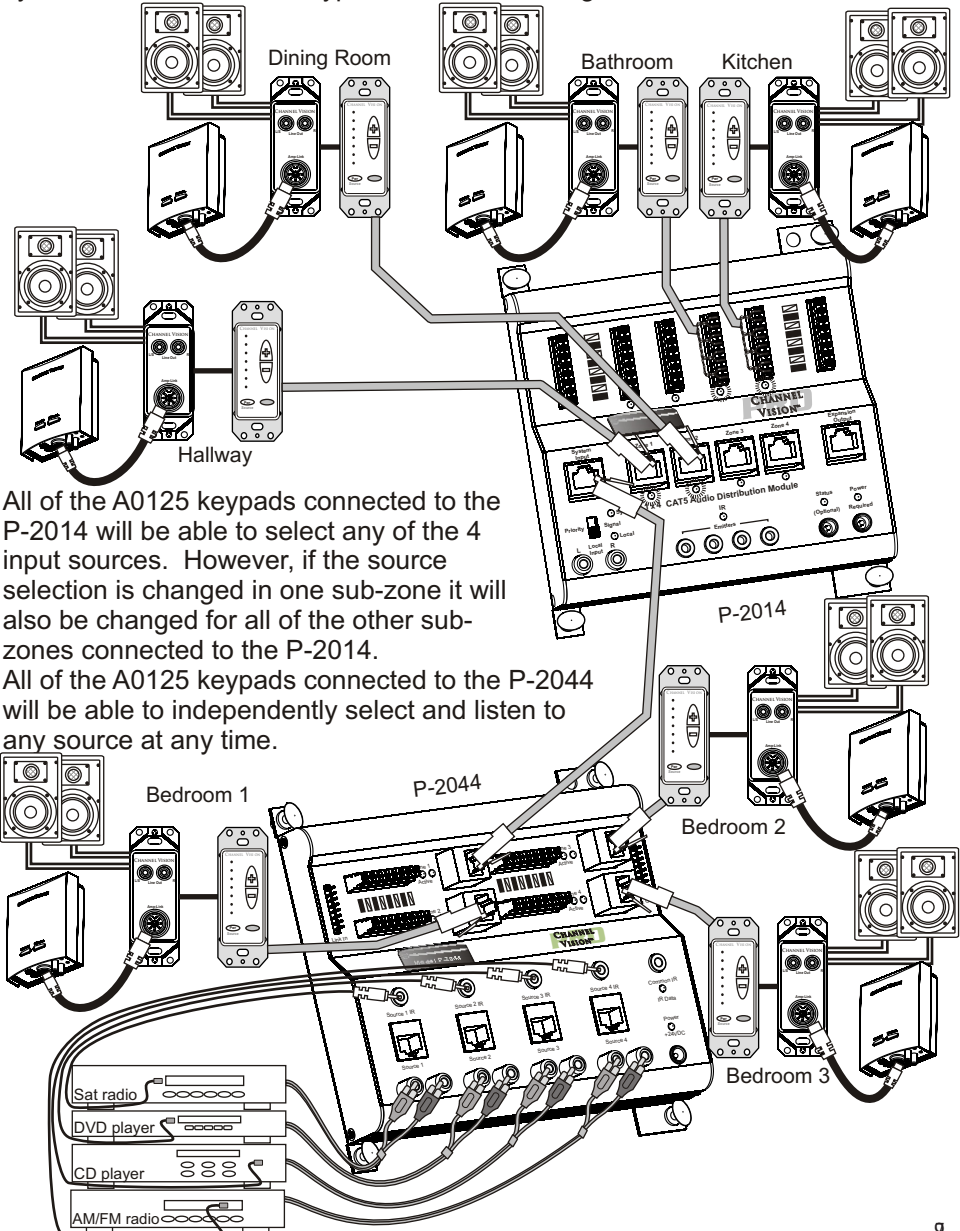
All of the A0125 keypads connected to the P-2014 will be able to select any of the 4 input sources. However, if the source selection is changed in one sub-zone it will also be changed for all of the other sub-zones connected to the P-2014.

All of the A0125 keypads connected to the P-2044 will be able to independently select and listen to any source at any time.

P-2014

P-2044

Bedroom 1

Bedroom 2

Bedroom 3

Sat radio

DVD player

CD player

AM/FM radio

Using the A0505 Remote Control

Using the A0505 remote control...
The A0505 is designed to allow you to control your P-2044 without having to touch the buttons on the A0125. Simply point the A0505 remote control at the IR sensor located at the bottom of the A0125 and press the desired button.

Zone Power - Turns on/off the zone output of the P-2044

Power - Turns off the A0125 keypad

LED indicators on the A0125 will light when source buttons are pressed on the A0505.

Mute - Mutes the audio for the zone you are in

VOL - Controls volume for the zone you are in

iPod

A0312 or A0314 or A0313

Using the A0505 remote with iBus...
Your iPod's shuttle controls can be operated from the A0505 when it is docked in a compatible iBus wall station.

Mounting Options

The **P-1300** from Channel Vision's Pro-series product line is the perfect home for the P-2044. The P-1300 is a hinged plate designed to fit into a standard 19" rack.
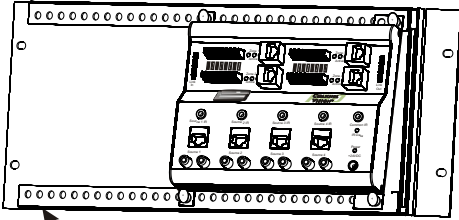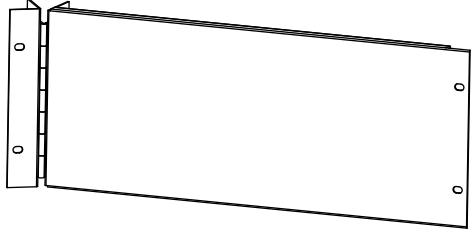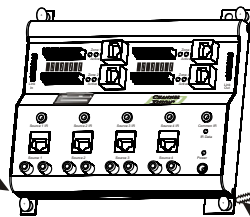
The **P-1300** hinges open to maintain a clean look and provide easy access for servicing equipment.

The P-2044 can also be mounted in a standard structured wiring enclosure or screwed to a wall or flat surface as shown below.
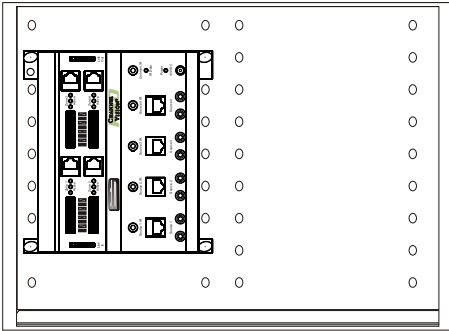
For wall mounting: Cut or remove the nylon snap pins.

Install screws in empty holes.

Connection Tips and Troubleshooting

1) Be sure you have connected the CAT5 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 sensor for all devices you wish to control.

4) If no audio is heard in a zone... inspect the status LEDs for that zone. The red LED next to the output you are using should be illuminated and so should the blue LED labeled "Active". Note that there are two red LEDs for each zone output, one for RJ-45 connector and one for the 110 connector. These red LEDs indicate which output connector is being used (only one can be used at a time). If you connect keypads to both of these connectors simultaneously, only the RJ-45 output will be activated.

5) If no audio is heard and the blue LED labeled "Active" is not lit... Make sure that audio is playing (it must be playing for the Active light to come on). If music is playing, re-issue the source command (i.e. re-select the source using the remote or keypad).

6) If a CAT5 wire is connected to the P-2044, make sure the other end is terminated with a keypad. If the CAT5 wire is left un-terminated while the other end is attached to the P-2044, it may be possible for the conductors in the rough end of the CAT5 to short together and cause problems for the system.

7) If one of the source inputs is not working try connecting that source into one of the working source inputs. If the problem persists check the cabling between the source and the P-2044.
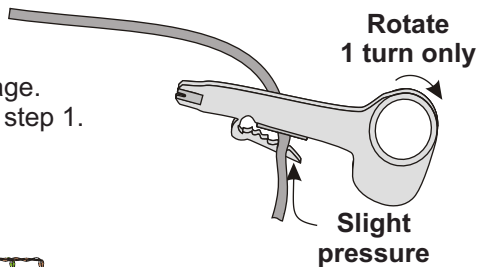
Stripping and Connecting CAT5 Wire

CAT5 cable should be stripped with a proper stripping tool, such as Channel Vision's J-110 tool.

1. Place the CAT5 between the blade and the first notch of the J-110 tool.

Blade

CAT5
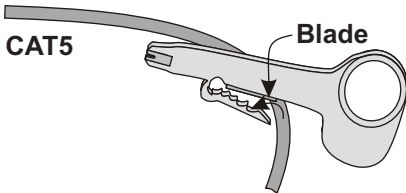
2. Rotate the tool only once. Multiple turns will cause you to cut into the inner wires.

**Rotate
1 turn only**

3. Inspect the inner wires for damage. If any wires are cut start over at step 1.

**Slight
pressure**

Check for damage

TIA-568A RJ-45 Modular Plug

Side view:

Top view:

Green/White
Green
Orange/White
Blue
Blue/White
Orange
Brown/White
Brown
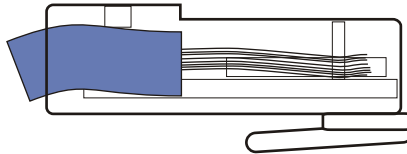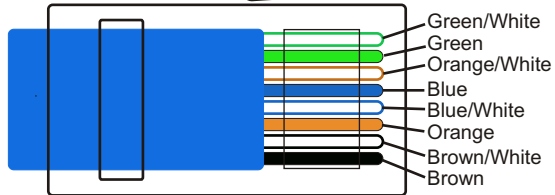
Specifications: (typical @25º C)

Operating Voltage :	18VDC
Cable requirements:	CAT5 or better
Speaker impedance (A0240):	6-8 ohm
IR repeating:	30-60kHz
IR sensor range (A0125):	40'@40kHz, 25'@56kHz
Operating Temperature:	-10ºC to +50ºC

Specifications subject to change without notice.

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⬤ 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.