LEVITON

Hi-Fi™ 2

Expansion Kit

Installation Manual

WEB VERSION

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DI-000-95A12-05C

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WARNINGS AND CAUTIONS

- **TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER** at circuit breaker or fuse and test that power is off before wiring!
- If you are unsure about any part of these instructions, consult an electrician.
- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- Use this device with **copper or copper-clad wire only.**
- For indoor use only.
- SAVE THESE INSTRUCTIONS.

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Introduction

This kit expands the Leviton Hi-Fi™ 2 Whole Home Audio Distribution System from an 8 Audio Zone system to a 16 Audio Zone system.

Features

- Adds 8 zones of audio amplification
- Equipped with 2 variable outputs for additional amplification
- Built-in universal power supply
- Volume-Source Control (VSC) keypads connect using Standard Category 5 Wiring

Includes

- Expansion Assembly with built-in power supply
- 8 Volume and Source-Control (VSC) keypads
- Power Cord
- Expansion Cable
- Manual

Installation

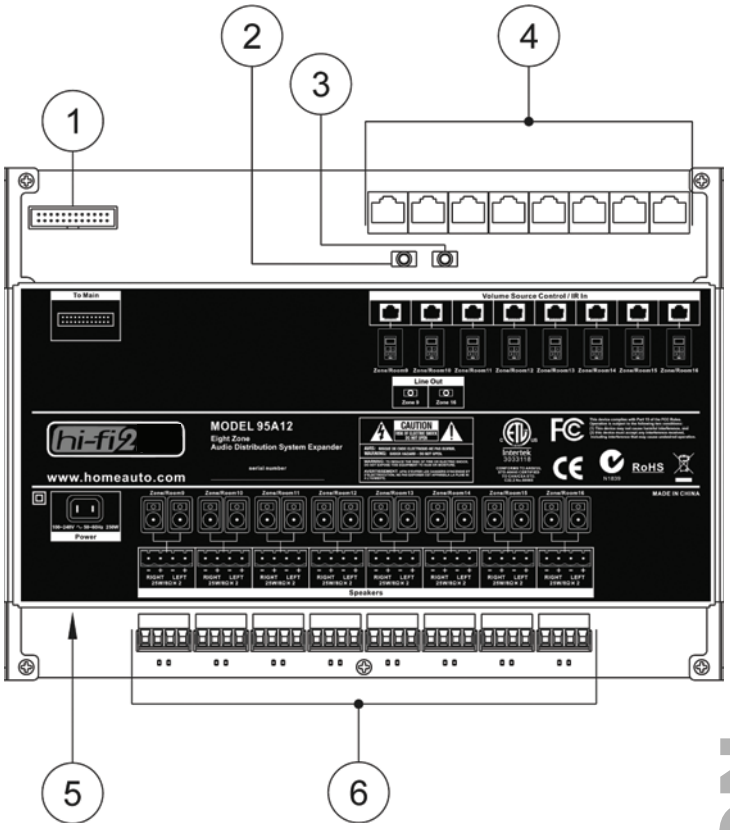
The *Hi-Fi 2* Expansion Assembly houses the power supply and amplifiers for the additional 8 audio zones. It is also the termination point for zone speakers and Volume-Source Control (VSC) keypads.

The *Hi-Fi 2* Expansion Assembly can be installed in a Vented Enclosure (Leviton Part Number: 95A09-1) that can be tucked away in a closet or basement or can be installed in a Leviton, OnQ, Channel Vision, Siemon, or other "open house" type structured wiring enclosure using an Leviton Universal Mounting Plate (Leviton Part Number: 20A07-2).

The *Hi-Fi 2* Expansion Assembly must be mounted below the *Hi-Fi 2* Main Assembly, within 6 inches. It should be mounted in a location that is protected from high humidity levels and temperature extremes. An AC power outlet should be located within 5 feet.

Hi-Fi 2 Expander Inputs and Outputs

The *Hi-Fi 2* Expander is equipped with the following inputs and outputs:



1. Expander Connector	This connector is used to connect the Expansion Assembly to the Hi-Fi Main Assembly.
2. Variable Output for Zone 9	This is a variable audio output used for attaching additional amplification to Zone 9.
3. Variable Output for Zone 16	This is a variable audio output used for attaching additional amplification to Zone 16.
4. Zone Control / IR Inputs	These jacks are where Volume-Source Control (VSC) keypads are connected using a network cable.
5. Power Supply Input	This is where the supplied power cable connects to the power supply.
6. Speaker Connectors	These terminals are where all zone speakers are connected.

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Connecting the Expansion Assembly to the Hi-Fi™ 2 Main Assembly

To connect the Expander, insert the supplied ribbon cable into the Expander connector under the section labeled “To Expander” on the *Hi-Fi 2* Main Assembly.

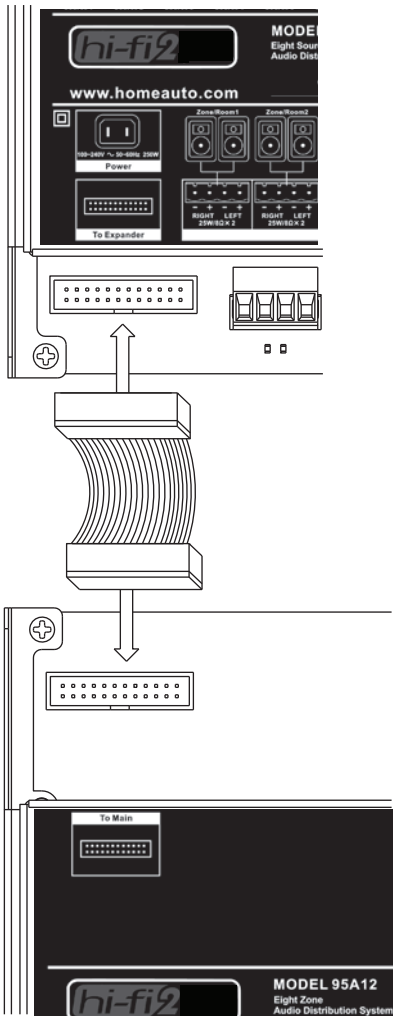
Connect the other end of the ribbon cable to the connector on the *Hi-Fi 2* Expansion Assembly under the section labeled “To Main”.

Installing Volume-Source Control (VSC) Keypads

The audio sources can be selected and controlled by any Volume-Source Control (VSC). Additionally, each VSC includes an IR receiver that allows you to remotely control the *Hi-Fi 2* system and/or audio sources from any audio zone in the house. Volume-Source Control (VSC) Keypads connect directly to the *Hi-Fi 2* Expansion Assembly using Cat 5, unshielded, twisted pair (UTP) for communications. Each end of the wire is terminated with an RJ45 connector. The correct wiring scheme for the Cat 5 cable is standard EIA/TIA 568A. Properly terminating the Cat 5 cable is crucial for the operation of the system.

The total distance of Cat 5 between the *Hi-Fi 2* Expansion Assembly and the VSC units must not exceed 2000 feet. It is best that no single run of Cat 5 exceeds 250 feet.

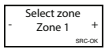
Insert the RJ45 connector on one end of the cable to audio zone input jack (1-8) under “Volume Source Control / IR In” on the *Hi-Fi 2* Expansion Assembly. Insert the RJ45 connector on the other end of the cable to the jack labeled “Zone Control” on the VSC.



Turning a VSC on for the First Time

When you turn a VSC on for the first time, you will need to configure which audio zone the VSC will control. The following screen is displayed:

To configure the audio zone that the VSC will control, press the src button on the VSC.



To select the audio zone that the VSC will control, press the + button to increase the zone number and press the – button to decrease the zone number.
Audio zone settings range from 1 to 16.

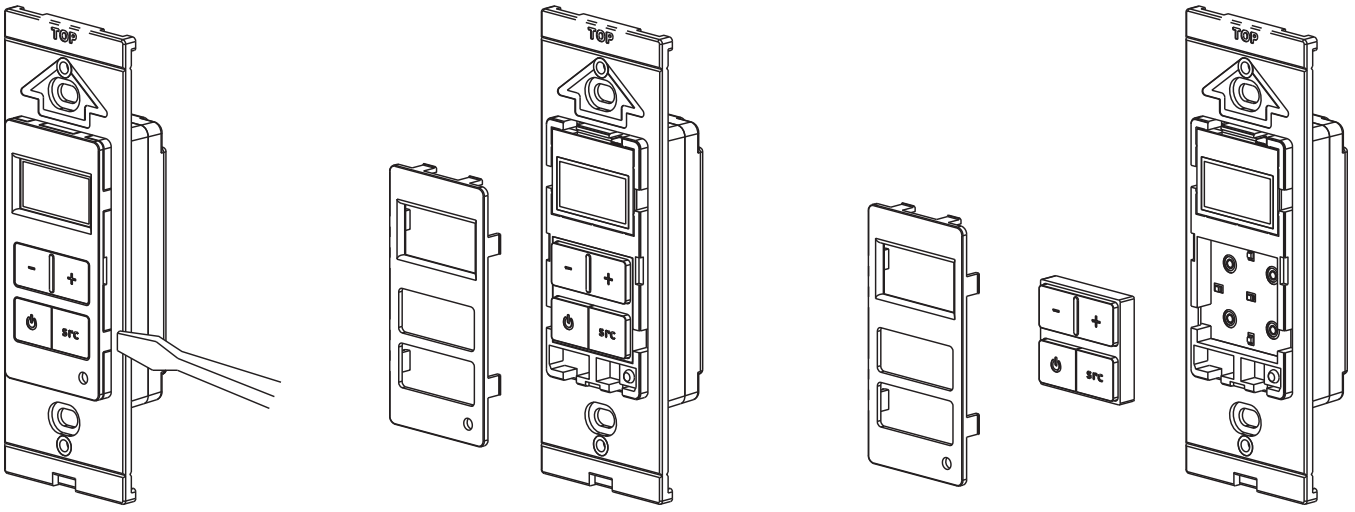
If space is available, more than one VSC can be configured to a given audio zone. This is useful if multiple VSC keypads are installed in a large room to control a single audio zone. When multiple VSC keypads are configured to an audio zone, all VSC keypads will mimic one another.

A maximum number of 16 VSC keypads can be installed on a *Hi-Fi 2* system.

Changing the Color of the VSC

The color of the VSC may be changed to complement the interior décor. The VSC is supplied with a white faceplate, rubber keypad, and insert. Additional colors are available; contact your Leviton distributor for more information. Change the color of the RIM as follows:

1. Remove the faceplate.
2. The insert attaches to the VSC with two latches on the right and two on the left. Using a small-blade screwdriver, gently depress each latch on one side while lifting up on the insert. Once the latches are released on one side, remove the insert from the other side.
3. Remove the rubber keypad.
4. Insert the new rubber keypad. Align the latches of the new insert to the openings on the VSC and gently snap into place.
5. Attach the new faceplate.



Speaker Wiring

When running the cables for speakers, use 16-gauge two-conductor or four-conductor (four-conductor stranded is recommended for neater installation) speaker wire. Speaker cable is homerun from the speaker location to the location of the *Hi-Fi 2* Expansion Assembly.

The *Hi-Fi 2* System is designed to work with one pair of 8-ohm speakers per audio zone. If additional speakers are required in an audio zone, Leviton recommends: a) use the Zone Grouping feature of *Hi-Fi 2* where two or more audio zones control the same source, volume, and/or power state so that any or all of these items are controlled together; or b) use the variable output(s) and an external power amplifier.

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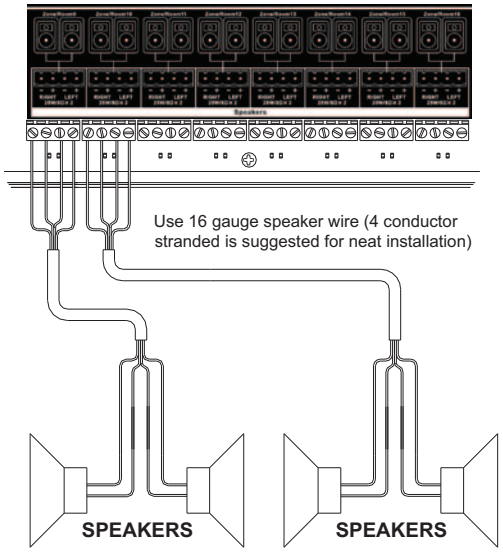
Terminating Speaker Wires

Always observe proper orientation of the positive and negative signal for each speaker connection.

Typically, when using two-conductor speaker wire, the red wire indicates positive (+) and black wire indicates negative (-). Another indication of positive is a dark line running through the insulation.

Four-conductor wire can also be used and makes for a neater installation. Four-conductor wire has four separate wires in one outer jacket, making it possible to run a single speaker wire for a pair of zone speakers. This type of wire typically uses red and black for one speaker and white as positive and green as negative for the second speaker.



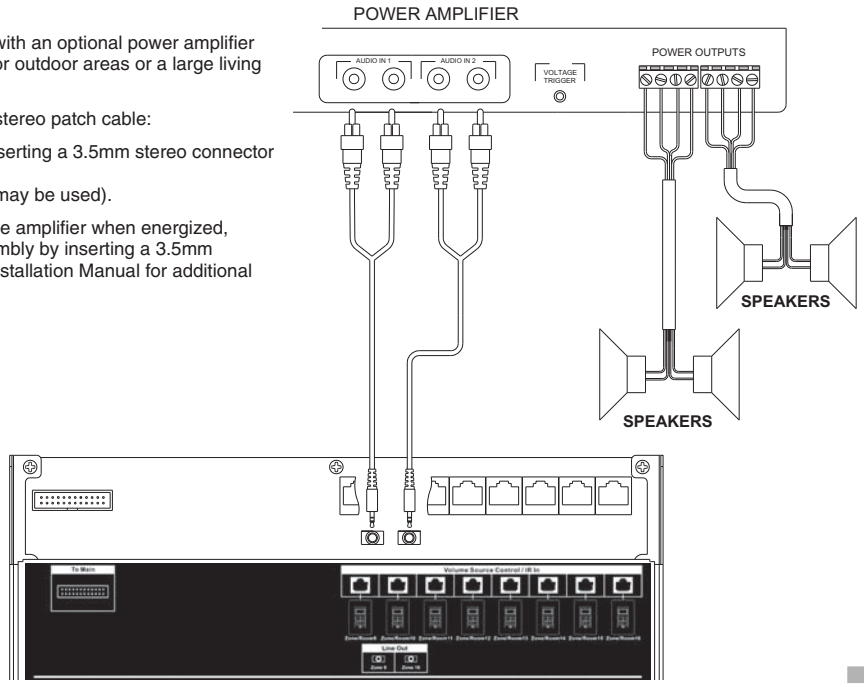
Variable Outputs

Zone 9 and Zone 16 are equipped with a pre-amp variable output for use with an optional power amplifier that allows you to deliver more power to the zone speakers. This is ideal for outdoor areas or a large living room where more power and/or additional speakers are desirable.

To connect Zone 9 and/or Zone 16 to an optional power amplifier using a stereo patch cable:

1. Connect the power amplifier to the Hi-Fi™ 2 Expansion Assembly by inserting a 3.5mm stereo connector into the 3.5mm jack labeled “Line Out Zone 9” or “Line Out Zone 16” (Leviton 62A14-1, 3.5mm male to 2 RCA male retractable patch cable may be used).

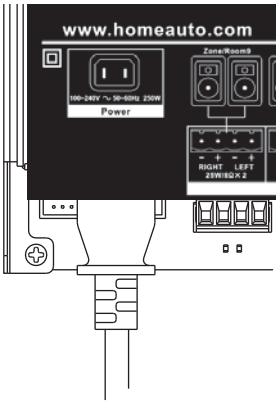
If your power amplifier is equipped with a voltage trigger that will turn on the amplifier when energized, connect the voltage trigger of the power amplifier to the *Hi-Fi 2* Main Assembly by inserting a 3.5mm mono connector into the jack labeled “System Sys. On”. Refer to *Hi-Fi 2* Installation Manual for additional information and wiring diagram.



POWERING THE EXPANSION ASSEMBLY

The built-in power supply powers the entire *Hi-Fi 2* Expansion Assembly which includes zone amplifiers and Volume-Source Control keypads.

1. Insert the supplied IEC Power Cord into the power jack (the the left of Zone 9) under the section labeled “Power” on the *Hi-Fi 2* Expansion Assembly.
2. Plug the power cord into a 120 VAC outlet. Follow the instructions in the *Hi-Fi 2* User’s Guide for operation.



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SPECIFICATIONS

Zones 1-8 Power Amplifier Outputs

Continuous Average Output Power:	50W (25W x 2) Two channels driven 20-20kHz @1% THD
Rated Distortion (1/2 power):	0.20%
Rated Impedance:	8 Ohms
Damping Factor:	50+
Frequency Response (20-20kHz):	±1dB

Preamplifier Section

Variable output:	0-600mV
Impedance:	100 Ohms

Power

Power Input:	DC25V ⎓ 3.0A Each

Power Supply

Power Supply Input:	100-240VAC, 50/60Hz, 120W

Power Consumption

All channels driven to full-rated power:	400W
Average operating conditions:	50W
No signal:	Less than 10W

Physical Specifications

Unit Size (in enclosure):	13” W x 13” H x 4.5” D
Unit Size (on mounting plate):	13.25” W x 8.5” H x 3.75” D
Unit Weight (in enclosure):	14 lb.
Unit Weight (on mounting plate):	8 lb.

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FCC COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at **Leviton Manufacturing of Canada Ltd to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9** or by telephone at **1 800 405-5320.**

LEVITON LIMITED WARRANTY

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that products manufactured by Leviton under the Leviton brand name ("Product") will be free from defects in material and workmanship for the time periods indicated below, whichever is shorter: **• OmniPro II and Lumina Pro:** three (3) years from installation or 42 months from manufacture date. **• OmniLT, Omni IIe, and Lumina:** two (2) years from installation or 30 months from manufacture date. **• Thermostats, Accessories:** two (2) years from installation or 30 months from manufacture date. **• Batteries:** Rechargeable batteries in products are warranted for ninety (90) days from date of purchase. **Note:** Primary (non-rechargeable) batteries shipped in products are not warranted. **Products with Windows® Operating Systems:** During the warranty period, Leviton will restore corrupted operating systems to factory default at no charge, provided that the product has been used as originally intended. Installation of non-Leviton software or modification of the operating system voids this warranty. Leviton's obligation under this Limited Warranty is limited to the repair or replacement, at Leviton's option, of Product that fails due to defect in material or workmanship. Leviton reserves the right to replace product under this Limited Warranty with new or remanufactured product. **Leviton will not be responsible for labor costs of removal or reinstallation of Product**. The repaired or replaced product is then warranted under the terms of this Limited Warranty for the remainder of the Limited Warranty time period or ninety (90) days, whichever is longer. This Limited Warranty does not cover PC-based software products. **Leviton is not responsible for conditions or applications beyond Leviton's control**. **Leviton is not responsible for issues related to improper installation, including failure to follow written Installation and operation instructions, normal wear and tear, catastrophe, fault or negligence of the user or other problems external to the Product**. To view complete warranty and instructions for returning product, please visit us at **www.leviton.com**.

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