

# SAVANT

## Savant® IP Audio 50 with Savant Music (PAV-SIPA50SM / PAV-SIPA50SMV2)

### Quick Reference Guide

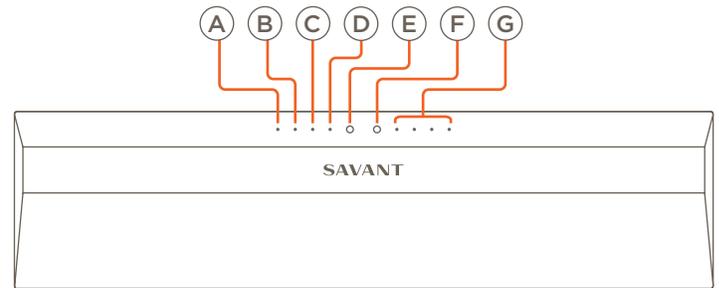
#### Box Contents

- (1) Savant IP Audio 50 (PAV-SIPA50SM-xx / PAV-SIPA50SMV2-xx)
- (2) Enclosure Bracket (071-1103-xx)
- (1) 2U Rack Bracket (071-1102-xx)
- (1) Power Cord (064-0079-xx)
- (4) #10x½ Screw (039-0405-xx)
- (4) Push Rivet (039-0406-xx)
- (6) M4 Screw (039-0403-xx)
- (4) 4-pin Speaker Connector (028-0702-xx)
- (2) 4-pin IR Connector (028-0703-xx)
- (4) Rubber Feet (074-0655-xx)
- (4) M3 Feet Screw (039-0407-xx)
- (1) Product Regulatory Statement (009-1950-xx)

#### Specifications

Environmental					
Temperature	32° to 104° F (0° to 40° C)				
Humidity	10% to 80% Relative Humidity (non-condensing)				
Maximum BTU	750 BTU/HR				
Dimensions					
	Height	Width	Depth	Weight	
Device	3.03 in (7.69 cm)	12.00 in (30.5 cm)	14.17 in (36.0 cm)	10.6 lb (4.81 kg)	
Shipping	8.27 in (21.0 cm)	15.55 in (39.5 cm)	19.41 in (49.3 cm)	15.1 lb (6.83 kg)	
Rack Space	2U				
Power					
Input Power	100/240V AC (50/60 Hz) 3.6A				
Maximum Power	225W				
Operating Parameters					
Rated Power (Speaker Output)	50 WPC at 8 ohms (THD+N < 0.1%) 70 WPC at 8 ohms (THD+N < 1.0%)				
Frequency Response	20 Hz - 20 kHz +/- 0.5 dB, speaker output				
Signal-to-Noise Ratio (SNR)	>95 dB, speaker output				
Supported Digital Input Formats	44.1 kHz / 48 kHz / 96 kHz at 16-bit / 20-bit / 24-bit resolution				
Networking					
Supported Standard	IEEE 802.1 AVB/TSN switches IEEE 802.3 Ethernet				
Regulatory					
Safety and Emissions	FCC Part 15B 	CE Mark 	C-Tick 	UL 	UKCA 
RoHS	Compliant				
Supported Releases					
PAV-SIPA50SM-xx	da Vinci 8.8 and higher				
PAV-SIPA50SMV2-xx	da Vinci 9.4.2 and higher				
Music Streaming					
The Savant IP Audio 50 has a built-in single stream of Savant Music for easy access to popular music streaming services. (Streaming service fees may apply.)					

#### Front Panel



- Green:** System has power and is operating normally.  
**Red:** System is in standby mode and most of the controller circuitry is powered down.  
**Off:** System is not receiving power.
- A** Power LED
- B** Status LED

**Green Blinking:** Embedded system is ready, but no communication has been established with the host.  
**Green:** Host has established communications with the embedded system.  
**Red Blinking:** Embedded firmware is running, but has not received a DHCP IP Address.  
**Red:** Host has determined the firmware needs to be updated, but a problem occurred during the process that will initiate a reset.  
**Amber Blinking:** Embedded system has a valid link local IP Address and is connecting to the host.  
**Amber:** Host is updating the embedded firmware.  
**Off:** Embedded processor is resetting, or is powered up, and is booting the embedded firmware.  
**Hardware Failure:** If a hardware failure occurs, the status LED indication will be interrupted every three seconds with a solid red indication. For example, if the LED is blinking green when a hardware failure occurs, the LED will alternate between blinking green and solid red at three-second intervals.
- C** RS232 LED

**Green:** RS-232 serial port activity.  
**Off:** No RS-232 serial port activity.
- D** IR LED

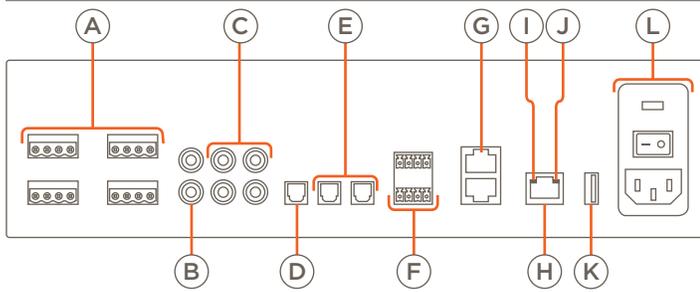
**Green:** IR port signal activity.  
**Off:** No IR port activity.

**On:** Fully enables all internal power rails and processor.  
**Off:** Disables most internal power rails and processor, but not internal AC/DC power supply. Hold On/Off button for about 5 seconds to place into standby mode. The Power LED turns red. Hold On/Off button for about 1 second to take system out of standby mode. The I/O power switch on the back of unit must be On (I) to enable this function. To turn the power off for the entire system, press the I/O power switch on the rear panel to Off [O].
- E** On/Off Button
- F** Reset Button

Resets the network.  
 Hold Reset Button for 5 seconds while powered On to clear network settings. Status LED will rapidly blink red when reset is complete.
- G** Zone Protection

**Red:** Protection mode has been enabled to protect a zone/channel; typically indicates thermal protection, clipping or over current.  
**Off:** Zone is off and protection mode has not been enabled.

## Rear Panel



<b>A</b> Speaker Connections	(4) Speaker output zones Uses 4-pin Speaker Connectors. <b>NOTE:</b> Compatible with 8 ohm or 4 ohm speakers.
<b>B</b> Analog Preamp Output	(1) Analog stereo line output (Left & Right) Direct Line Level 2.1- $V_{RMS}$ Output.
<b>C</b> Analog Input	(2) Analog stereo inputs (Left & Right) RCA line-level inputs; 22 k $\Omega$ input impedance.
<b>D</b> Digital Audio Out	(1) Digital optical preamp output (TOSLINK), line-level 96kHz/24-bit output, fixed volume.
<b>E</b> Digital Audio In	(2) Digital optical audio inputs (TOSLINK) Supports up to 96kHz/24-bit digital audio in; PCM stereo format only.
<b>F</b> IR	(4) IR Ports Uses 4-pin IR Connectors to send IR signals to control devices with an IR input or IR receiver via an IR flasher (5V tolerant only). See the IR Wiring section for important precautions regarding IR functionality before making any connections.
<b>G</b> RS-232	8-pin RJ-45 port used to transmit and receive serial binary data to and from serial controllable devices. CTS/RTS handshaking availability based on component profile. See the RS-232 Connections section for pin-outs.
<b>H</b> Ethernet	8-pin RJ-45 port 100 Base-T auto-negotiating port. Supports Audio Video Bridging (AVB).
<b>I</b> Ethernet Activity LED	<b>Green Blinking:</b> Activity (Rx/Tx) <b>Off:</b> No Activity
<b>J</b> Ethernet Link LED	<b>Green Solid:</b> Ethernet Link is established (any speed). <b>Off:</b> Ethernet link is not established.
<b>K</b> USB	USB 2.0 Type A (reserved for future use)
<b>L</b> Power Input	100/240V AC (50/60 Hz) 3.6A <b>Fuse:</b> 250V 3.0A slow blow fuse; field replaceable <b>I/O (power switch):</b> I (On): Powers On the chassis. O (Off): Powers Off the chassis.

## Network Requirements

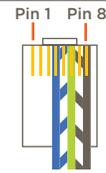
For information on network requirements, refer to the [Savant Device Networking Guidelines](#) on the Savant Community.

## Expansion

Up to sixteen Savant IP Audio devices can be connected in a single system, providing a virtual audio switch that can be configured to suit almost any need.

## RS-232 Connections

Pins 7 and 8 are only required for CTS/RTS handshaking.



RJ-45 Connector (Gold pins face up)

Pin 1	No Connection
Pin 2	No Connection
Pin 3	No Connection
Pin 4	Ground (GND)
Pin 5	Receive (RXD)
Pin 6	Transmit (TXD)
Pin 7	Clear to Send (CTS)
Pin 8	Request to Send (RTS)

**IMPORTANT:** When wiring to this port, do not connect any wires within the cable that are not required for communication.

### NOTES:

- CTS/RTS handshaking is supported for flow control based on the profile used in the configuration.
- Wire coloring is included to identify the pins used for this connection. Colors shown do not represent any wiring standard.
- The IP Audio 125 does not support RS-422/485.

**RJ-45 to DB9 Adapter:** Savant offers RJ-45 to DB9 adapters in a variety of configurations that can be used for RS-232 control. Refer to the [RS-232 Conversion to DB9 and Pinout Application Note](#) located on the Savant Customer Community for more information on RJ-45 to DB9 adapters.

## IR Wiring

IR connections are made using 4-pin IR Connectors supplied with the device. The wire slips into the hole and locks with a screw located at the top of the connector.



Pin 1	IR 1 -
Pin 2	IR 1 +
Pin 3	IR 2 -
Pin 4	IR 2 +

Use white stripe for positive (+)

### IMPORTANT: IR Wiring Precautions

Ensure that all IR emitters are within 15 feet (4.6 meters) from the controller's location.

Use of 3rd party blinking IR emitters with Talk Back is not recommended. These types of emitters can draw voltage away from the IR signal that can degrade IR performance.

**NOTE:** While not shown in the diagram above, IR connections 3 to 4 follow the same wiring as 1 to 2.

## Speaker Connections

Speaker wiring connections are made using 4-pin Speaker Connectors supplied with the device. The wire slips into the hole and locks with a screw located at the top of the connector. Speaker connectors accept up to 12AWG speaker cable.



Pin 1	Right -
Pin 2	Right +
Pin 3	Left -
Pin 4	Left +

Use white stripe for positive (+)

### NOTES:

- Wire order shown does not represent any wiring standard. It may be different than other models.
- While not shown in the diagram above, Zones 2 to 4 follow the same wiring as Zone 1.

## Replace the Fuse

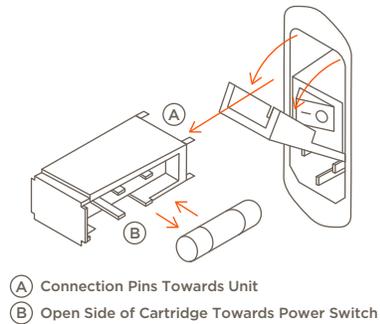
**ELECTRIC SHOCK HAZARD:** Disconnect the unit from AC power by removing the power cord from the AC outlet and the unit before replacing the fuse.

**IMPORTANT:** The orientation of the cartridge within the unit and location of the fuse within the cartridge are crucial to proper operation. Make note of the orientation of the cartridge and the fuse location within the cartridge before removing.

1. Disconnect the unit from AC power by removing the power cord.
2. Open the fuse cover on the AC power input using a flat head screwdriver or similar thin flat head tool. This will allow access to the fuse cartridges.
3. Using a flat head screwdriver or similar thin flat head tool, gently loosen the cartridge and pull both cartridges out of the unit slowly. As each cartridge is removed, make note of the orientation, as it is important to proper operation.

**TIP:** Mark the chassis and fuse holder with a marker in order to align when replacing.

4. Inspect both fuses and remove either or both if damage is suspected.
5. Gently place the new fuse(s) in the cartridge and place the cartridge part way into the receptacle aligning it as defined in the diagram.
6. Gently press on the cartridge the rest of the way until it seats into the terminals at the rear of the slot.

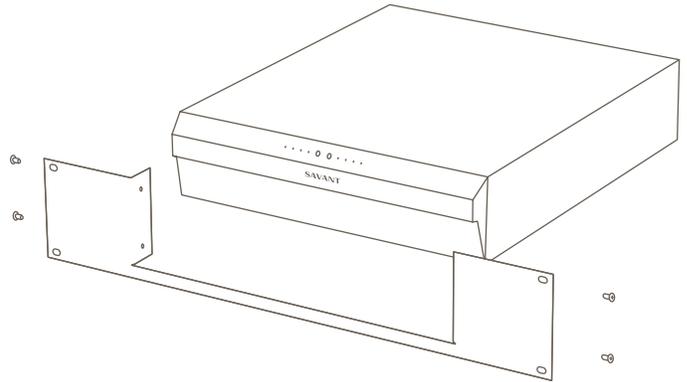


**NOTE:** If any resistance is encountered during seating the cartridge, DO NOT apply more pressure. Stop pressing on the cartridge, remove it, verify the orientation, and repeat step.

## Installation

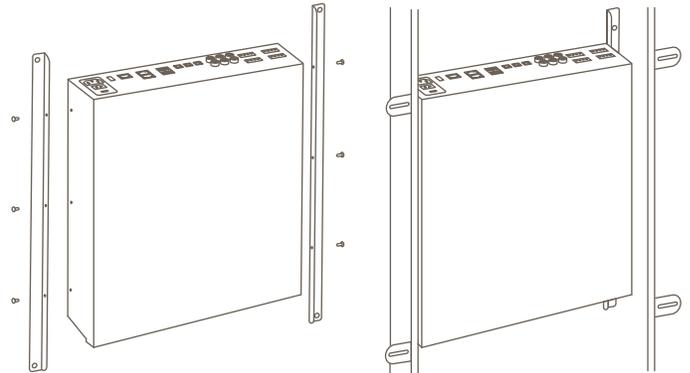
### Rack Installation

The Savant IP Audio 50 device can be mounted in a 2U rack style enclosure and is compatible with all standard 19-inch National Electrical Manufacturers Association (NEMA) rack mounts. The 2U Rack Bracket needs to be attached prior to mounting. See [Savant IP Audio Deployment Guide](#) for more information.



### Enclosure Installation

The Savant IP Audio 50 device can be mounted to a Structured Media Enclosure. The Enclosure Brackets need to be attached prior to mounting. For proper ventilation, louvered enclosure doors are recommended. See the [Savant IP Audio Deployment Guide](#) for more information.



## Additional Documentation

Refer to the following documents located on the [Savant Customer Community](#) for additional information.

- Savant IP Audio Deployment Guide (009-1571-xx)
- Savant Media Server/Savant Music Supported Streaming Services Application Note

The Spotify Software is subject to third party licenses found here: <https://www.spotify.com/connect/third-party-licenses>.