Important Safety Information - Read First

Before installing, configuring, and operating Savant equipment and other vendor equipment, Savant recommends that each dealer, integrator, installer, etc. access and read all the required technical documentation. Savant technical documentation can be located by visiting Savant.com. Vendor documentation is supplied with the equipment.

Read and understand all safety instructions, cautions, and warnings in this document and the labels on the equipment.

Safety Statements

Follow all of the safety instructions listed below and apply where applicable. Additional safety information will be included where applicable.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. To completely disconnect this equipment from the AC mains, disconnect the power supply cord plug from the AC receptacle.
16. Use the included power cord with the grounding prong intact to insure proper grounding of the device.

Informations importantes sur la sécurité - Lire d'abord

Avant d'installer, de configurer et d'utiliser des équipements Savant et d'autres équipements fournisseurs, Savant recommande à chaque revendeur, intégrateur, installateur, etc. d'accéder et de lire toute la documentation technique requise. La documentation technique de Savant peut être localisée en visitant Savant.com. La documentation du fournisseur est fournie avec l'équipement.

Lisez et comprenez toutes les consignes de sécurité, les mises en garde et les avertissements dans ce document et les étiquettes sur l'équipement.

Déclarations de sécurité

Suivez toutes les consignes de sécurité ci-dessous et appliquez le cas échéant. Des informations de sécurité supplémentaires seront incluses, le cas échéant.

1. Lisez ces instructions.
2. Gardez ces instructions.
3. Suivez tous les avertissements.
4. Suivez toutes les instructions.
5. Ne pas utiliser cet appareil près de l'eau.
6. Nettoyer uniquement avec un chiffon sec.
7. Ne bloquez aucune bouche d'aération. Installez conformément aux instructions du fabricant.
8. Ne pas installer à proximité de sources de chaleur telles que des radiateurs, des registres de chaleur, des poêles ou d'autres appareils (y compris les amplificateurs) qui produisent de la chaleur.
9. Ne débrouillez pas le but de sécurité de la fiche polarisée ou de mise à la terre. Une fiche polarisée comporte deux pales dont une plus large que l'autre. Une fiche de type à la terre comporte deux lames et une troisième broche de mise à la terre. La lame large ou la troisième broche est fournie pour votre sécurité. Si la fiche fournie ne rentre pas dans votre prise, consultez un électricien pour le remplacement de la sortie obsolète.
10. Protégez le cordon d'alimentation avant d'être piétiné ou pincé en particulier sur les bouchons, les prises de courant et le point où ils sortent de l'appareil.
11. Utilisez uniquement les pièces jointes / accessoires spécifiées par le fabricant.
12. Utilisez uniquement le chariot, le support, le trépied, le support ou la table spécifiés par le fabricant ou vendus avec l'appareil. Lorsqu'un chariot est utilisé, faites preuve de prudence lorsque vous déplacez la combinaison panier / appareil pour éviter les blessures par dépassement.
13. Débranchez cet appareil pendant les orages ou lorsqu'il n'est pas utilisé pendant de longues périodes.
14. Renvoyez tous les services au personnel qualifié. Un entretien est nécessaire lorsque l'appareil a été endommagé de quelque façon que ce soit, comme le cordon d'alimentation ou la fiche est endommagé, le liquide a été renversé ou les objets sont tombés dans l'appareil, l'appareil a été exposé à la pluie ou à l'humidité, ne fonctionne pas normalement, Ou a été abandonné.
15. Pour débrancher complètement cet équipement du secteur, débranchez la fiche du cordon d'alimentation de la prise secteur.
16. Utilisez le cordon d'alimentation inclus avec la broche de mise à la terre intacte pour assurer une mise à la terre correcte de l'appareil.

SAVANT

Savant® IP Audio 125 (PAV-SIPA125-00)
Quick Reference Guide

Box Contents
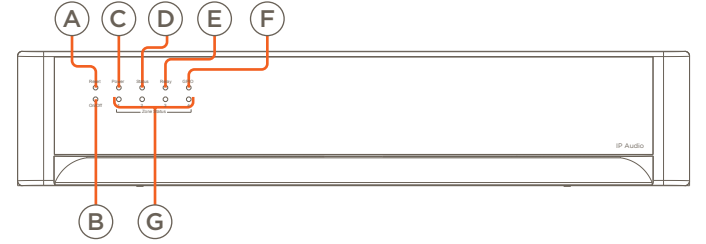
(1) IP Audio 125 (PAV-SIPA125-00)
(1) Install Kit (075-0202-xx)
  (1) Power Cord (064-0431-xx)
  (2) 2U Chassis mounting ears (071-0113-xx)
  (4) M5X12mm Screws (039-0034-xx)
  (4) 4-pin Speaker connector (028-0702-xx)
  (2) 6-pin Control connector (008-0664-xx)
  (2) 3-pin Control connector (028-0665-xx)
(1) Quick Reference Guide (this document)

Specifications

Environmental	
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 90% Relative Humidity (non-condensing)
Maximum BTU	1750 BTU/HR

Dimensions	
Height	3.46 in (87.9 mm)
Width	17.30 in (439.4 mm)
Depth	14.24 in (361.8 mm)
Weight	14.3 lb (6.5 kg)
Rack Space	2U

Power	
Input Power	100/240V AC (50/60 Hz) 5.7A
Maximum Power	515W

Operating Parameters	
Rated Power (Speaker Output)	125 WPC at 8 ohms (THD+N < 0.1%)
Frequency Response	20 Hz - 20 kHz +/- 0.5 dB, speaker output
Signal-to-Noise Ratio (SNR)	>100 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
RoHS	Compliant

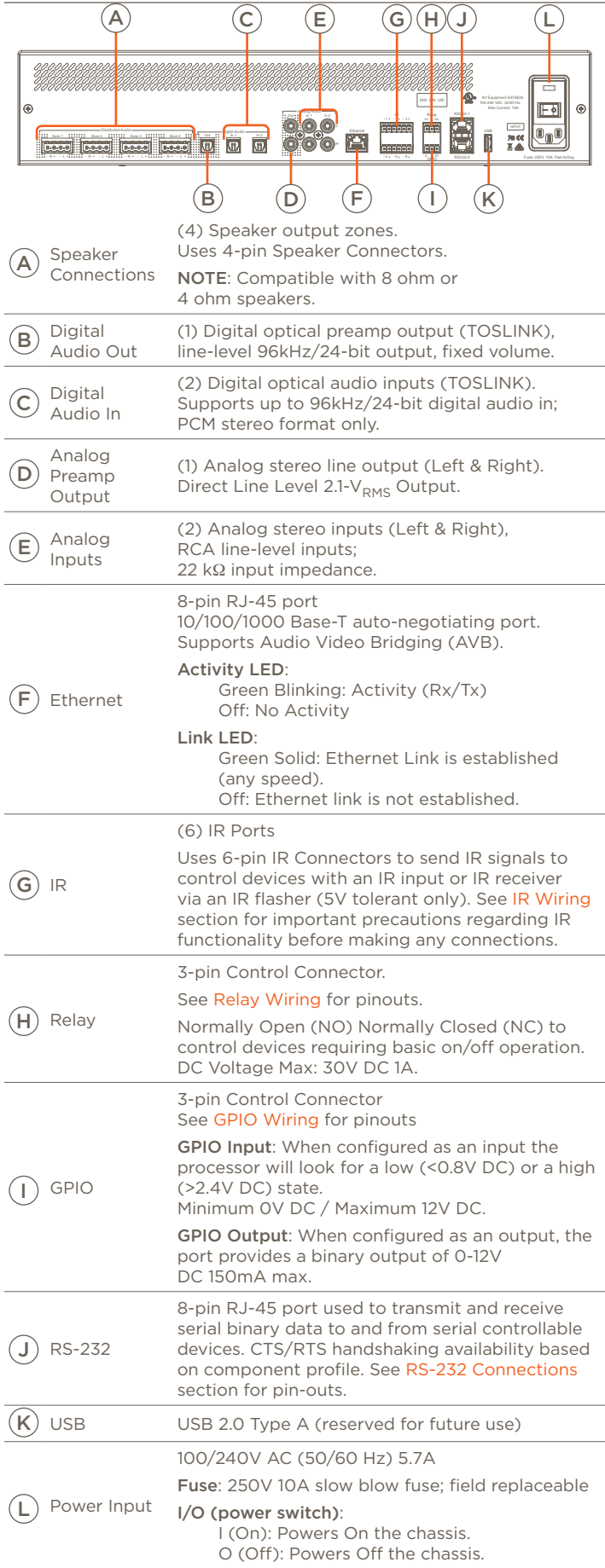| Minimum Support Requirements	
Software Release	da Vinci 8.7
Hardware	Savant Host (Pro or Smart)

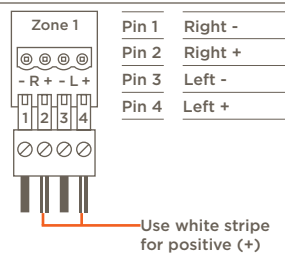| Music Streaming	
The Savant IP Audio has a built-in single stream of Savant Music for easy access to popular music streaming services. (Streaming service fees may apply.)	

Front Panel

A	Reset	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.
B	On/Off	**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].
C	Power LED	**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.
D	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.
E	Relay LED	**Green**: Relay port activity. **Off**: No Relay port activity.
F	GPIO LED	**Green**: GPIO port activity. **Off**: No GPIO port activity.
G	Zone Status	**Green**: Zone in use. **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

(A)	Speaker Connections	(4) Speaker output zones. Uses 4-pin Speaker Connectors. **NOTE**: Compatible with 8 ohm or 4 ohm speakers.
(B)	Digital Audio Out	(1) Digital optical preamp output (TOSLINK), line-level 96kHz/24-bit output, fixed volume.
(C)	Digital Audio In	(2) Digital optical audio inputs (TOSLINK). Supports up to 96kHz/24-bit digital audio in; PCM stereo format only.
(D)	Analog Preamp Output	(1) Analog stereo line output (Left & Right). Direct Line Level 2.1-V$_{RMS}$ Output.
(E)	Analog Inputs	(2) Analog stereo inputs (Left & Right), RCA line-level inputs; 22 kΩ input impedance.
(F)	Ethernet	8-pin RJ-45 port 10/100/1000 Base-T auto-negotiating port. Supports Audio Video Bridging (AVB). **Activity LED**: Green Blinking: Activity (Rx/Tx) Off: No Activity **Link LED**: Green Solid: Ethernet Link is established (any speed). Off: Ethernet link is not established.
(G)	IR	(6) IR Ports Uses 6-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 IR Wiring section for important precautions regarding IR functionality before making any connections.
(H)	Relay	3-pin Control Connector. See Relay Wiring for pinouts. Normally Open (NO) Normally Closed (NC) to control devices requiring basic on/off operation. DC Voltage Max: 30V DC 1A.
(I)	GPIO	3-pin Control Connector See GPIO Wiring for pinouts **GPIO Input**: When configured as an input the processor will look for a low (<0.8V DC) or a high (>2.4V DC) state. Minimum 0V DC / Maximum 12V DC. **GPIO Output**: When configured as an output, the port provides a binary output of 0-12V DC 150mA max.
(J)	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 RS-232 Connections section for pin-outs.
(K)	USB	USB 2.0 Type A (reserved for future use)
(L)	Power Input	100/240V AC (50/60 Hz) 5.7A **Fuse**: 250V 10A slow blow fuse; field replaceable **I/O (power switch)**: I (On): Powers On the chassis. O (Off): Powers Off the chassis.

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
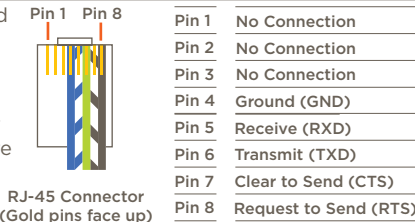

Zone 1		
	Pin 1	Right -
	Pin 2	Right +
	Pin 3	Left -
	Pin 4	Left +

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.

RS-232 Connections

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

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

RJ-45 Connector (Gold pins face up)

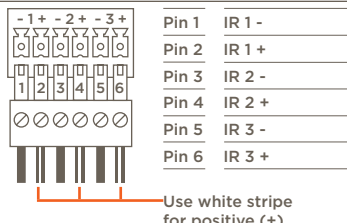|	
Pin 1	No Connection
Pin 2	No Connection
Pin 3	No Connection
Pin 4	Ground (GND)
Pin 5	Receive (RXD)
Pin 6	Transmit (TXD)
Pin 7	Clear to Send (CTS)
Pin 8	Request to Send (RTS)

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 6-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 +
Pin 5	IR 3 -
Pin 6	IR 3 +

Use white stripe for positive (+)

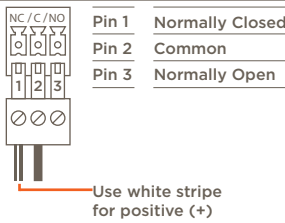**IMPORTANT: IR Wiring Precautions**
Ensure that all IR emitters are within 15 feet (4.6 meters) from the controller's location.

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 4 to 6 follow the same wiring as 1 to 3.
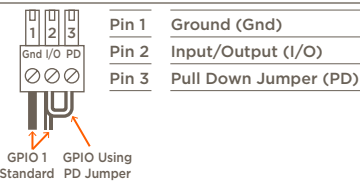
Relay Wiring

Relay ports are used when a device is controlled via a normally open (NO) or normally closed (NC) relay.

Pin 1	Normally Closed
Pin 2	Common
Pin 3	Normally Open

Use white stripe for positive (+)

GPIO Wiring

General Purpose Input/Outputs (GPIO) are binary I/O ports used on Savant controllers to trigger an action within the system. Events can control a device, such as turning on an amplifier (output) or detecting a state change for a device (input) to perform a workflow. Pin 2 is used for input or output depending on configuration.

Pin 1	Ground (Gnd)
Pin 2	Input/Output (I/O)
Pin 3	Pull Down Jumper (PD)

GPIO 1 Standard   GPIO Using PD Jumper

GPIO Pull Down Resistor (PD) Usage

GPIO pins are configured as inputs and are pulled high to 12V while the host is booting up. To make the GPIO signal low during a host reboot and/or a power cycle, attach the GPIO 1 pin to the PD pin. The PD pin is a 1K ohm pull down resistor (to signal ground) which keeps the GPIO output below 0.8V during processor boot times.
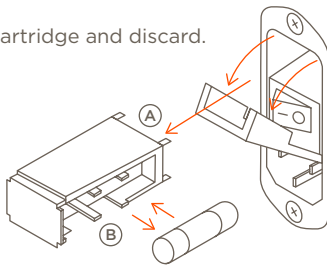
Replace the Fuse

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 cartridge.
3. Using a flat head screwdriver or similar thin flat head tool, gently loosen the cartridge and pull the cartridge out of the unit slowly. As the 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. Remove the old fuse from the cartridge and discard.
5. Gently place the new fuse in the cartridge and place the cartridge part way into the receptacle aligning it as defined in the diagram.

(A) Connection Pins Towards Unt
(B) Open Side of Cartridge Towards Power Switch

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.

Network Requirements

Connect all Savant devices to the same local area network (LAN) or subnet as the host. Savant recommends not implementing any type of traffic or packet shaping in your network topology for the Savant devices as this may interfere with performance.

Network Configuration

To ensure that the IP Address will not change due to a power outage, a static IP Address or DHCP reservation should be configured. Savant recommends using DHCP reservation within the router. By using this method, static IP Addresses for all devices can be managed from a single UI, avoiding the need to access devices individually.

Setting DHCP reservation varies from router to router. Refer to the documentation for the router to configure DHCP reservation. Refer to the Savant IP Audio Deployment Guide (009-1571-xx) located on the **Savant Customer Community** for more information.

Expansion

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

Regulatory Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

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

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