The Savant SmartAudio (SSA-4000-00) Quick Reference Guide provides all the steps necessary to install the SSA-4000 controller.

Box Contents
(1) SmartAudio (SSA-4000)
(1) Installation Kit (075-0144-xx)
- (2) 1U Rack Mounting Brackets (071-0603-xx)
- (4) Phillips Screws for Brackets (M3 x 8MM Flat) (039-0017-xx)
- (2) 6-Pin Screw Down Plug in Connector (028-9352-xx)
- (1) HDMI Locking Cable (3 feet) (CBL-3LHDMI-xx)
- (1) Power cord C13, (6 feet) (N. America) (064-0079-xx) or appropriate international power cord
(1) Quick Reference Guide (this document)

Required System Component
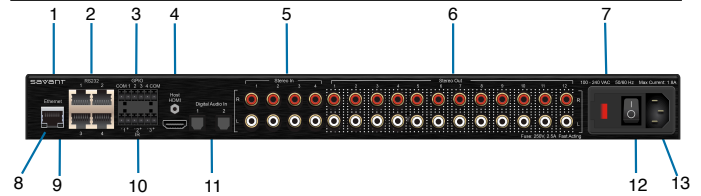(1) Savant Host (HST-XXXX or SVR-XXXX)

Specifications

Environmental	
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 90% Relative Humidity (non-condensing)
Cooling	3 cubic feet per minute (CFM) recommended.
Maximum BTUs	61 BTUs per hour
Dimensions and Weight	
Height	1.71 in/4.34 cm
Width	17.30 in/43.94 cm
Depth	8.69 in/22.08 cm
Weight	5.25 lb/2.38 kg (net weight) 7.8 lb/3.54 (shipping weight)
Rack Space	1U
Power	
Input Power	100-240V AC, 50/60 Hz, (1.8 Amp maximum)
Nominal Power	12 watt
Maximum Power	18 watt
Compliance	
Safety and Emissions	FCC Part 15 | S Mark | CE Mark | C-Tick
RoHS	Compliant

Front View of SSA-4000

1	Reset button (hole)	Resets Static IP address. Press and hold.
2	Power Bi-color LED	**Green** indicates the system has adequate power and is operating normally. **Red** indicates the system is in stand-by mode. In standby most of the Controller circuitry is powered down. **Off** indicates that the system is getting no power.
3	Status Bi-color LED	**Green** indicates the Host has established communications with the embedded system. **Green flashing** indicates the embedded system is ready (running with DHCP IP address), but the Host has not established communications with the embedded system. **Off** indicates the embedded processor is resetting or is powered up; and is booting the embedded firmware. **Red** indicates the Host has determined the firmware needs to be updated, but a problem occurred during the process that will initiate a reset. **Red flashing** indicates the embedded firmware is running, but has not received a DHCP IP Address. **Amber** indicates the Host is currently updating the embedded firmware. **Amber flashing** indicates the embedded system has a valid link-local IP Address and is waiting to connect to the Host. **Hardware Failure** If the Controller has a hardware failure, the Status LED indication will be interrupted every 3-seconds with a solid red indication. For example, if the LED is flashing green when a hardware failure occurs, the LED, in 3-second intervals, will flash green, solid red, etc.
4	RS-232 LED	**Green** indicates RS-232 serial port data activity. **Off** indicates no RS-232 serial port activity.
5	GPIO LED	**Green** indicates GPIO port signal activity. **Off** indicates no GPIO port activity.
6	On/Off button (hole)	Insert pin into hole for about 5 seconds to place in standby mode. The Power LED turns red. Insert the pin again for about 1 second to take system out of standby mode. The **I/O** power switch on the back of Controller must be On (**I**) to enable this function. To turn the power off for the entire system, use the switch on the rear panel.

7	HDMI LED	HDMI Link between the Host and the SSA-4000. **Green** indicates the external host is connected to the Host HDMI port. **Off** indicates the external host is not connected to the Host HDMI port.
8	IR LED	**Green** indicates IR port signal activity. **Off** indicates no IR port activity.

Rear View of SSA-4000

| 1	Ethernet	RJ-45 10/100 Base-T, auto-negotiating port with Link/Activity and Speed LEDs.
2	RS232/422/485 (1-4)	RJ-45 ports used to transmit and receive serial binary data transmission. input
3	GPIO (1-4)	General Purpose Input and Output ports. Uses 6-pin screw-down connector. The digital GPIO ports are binary I/O ports used for contact closure, trigger (output), or detect (input). The COM pin is used for common ground. Pin 1 - 4 is used for input or output.
3	GPIO Input	When configured as an input, the port detects a voltage present (GPIO input). GPIO inputs can safely detect the presence of a voltage 0-30V DC with a threshold of approximately 2.4V DC.
3	GPIO Output	When configured as an output, a GPIO port outputs a voltage below 12V DC. The maximum current per port is 150 milliamps. The combined maximum current for all GPIO outputs is 550 milliamps. An overcurrent condition shuts down the output if that number is exceeded.
4	Host HDMI (1)	HDMI Host Audio Input port with locking HDMI connector.Used for receiving up to 4 PCM streams (iTunes®) from the Host (such as HST-4501).
5	Stereo In	4 Analog Audio Inputs (4 Right and Four Left)
6	Stereo Out	12 Stereo line-level audio outputs (12 Right and 12 Left RCA jacks)
7	Fuse	100-240V, 2.5A—Fast acting fuse. This is field-replaceable.
8	Link/Activity LED	**Green** indicates an Ethernet link has been established. **Green flashing** indicates Ethernet activity. **Off** indicates an Ethernet link has not been established.
9	Ethernet Speed LED	**Green** indicates an Ethernet speed of 100 Mb.
10	IR (1-3)	Infrared transmitter ports. Uses 6-pin screw down connector. (3.81mm each).
11	Digital Audio In	Receives stereo PCM signal from TosLink digital audio connection.
12	I/O	On/Off switch - I is used to power the controller to the On state. O is used to power the controller to the Off state.
13	Input Power	100-240V AC, 50/60 Hz, 1.8 Amp

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Document based upon target specifications. Specifications subject to change prior to final product release.

Wiring and Connectors
RS-232 Wiring
Controller RJ-45 (RS-232) Plug Pinouts
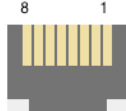
1 (Not Used for RS-232)	5 RXD (RS-232)
2 (Not Used for RS-232)	6 TX - (RS-232) (jumper)-Select TDX for RS-232
3 TX+ (RS-232)	7 CTS (RS-232)
4 GND (RS-232)	8 RTS (RS-232)
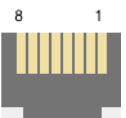
RS-422/RS-485 Pinouts
Controller RJ-45 (RS-422/RS-485) Plug Pinouts

1 (RS+ (RS-422/485)	5 (Not used for RS-422/485)
2 RS- (RS-422/485)	6 TX- (RS-422/485)
3 TX+ (RS-422/485)	7 (Not used for RS-422/485)
4 GND (RS-422/485)	8 (Not used for RS-422/485)

Important
If you are using RJ-45 to DB-9 adapters not supplied by Savant, be sure to terminate any wires required for communication/control within the adapter. Ensure that all wires required for communication/control are not terminated in the connecter. Also, ensure that the unused wires in the connecter are cut to prevent them shorting out, as they are still terminated in the RJ-45 connector on the controller side

For more details on RS-232, RS-422 and RS-485 connectors, additional documentation is available at: **dealers.SavantSystems.com**
Knowledge Base > Savant Hardware > SmartSystem Controllers > App Note RS-232 Conversion to DB-9 and RS-422/485 Pinout Application Note

GPIO Pinouts

GPIO Port Layout and Pinouts					
COM	1	2	3	4	COM

IR Port Layout and Pinouts

IR Port Layout and Pinouts		
- 1 +	- 2 +	- 3 +

Interconnect the Network
The SSA-4000 requires business class/commercial grade network equipment in order to handle the IP traffic between Savant SmartSystems™ network equipment. When configuring the network ensure that all of the connected Savant units (including SSA-4000, HST-series and SVR-series) are on the same local area network (subnet or LAN). When on the same network, Savant units locate each other using the Bonjour® network protocol.

Network Changes Require Rebooting the SSA-4000
The embedded processor used in the Smart Controller needs to be rebooted after switching to a new network with a new IP address range. If you do not reboot, the Controller will not sense the network and IP address changes. The **Status** LED on the front panel of the Controller will start to flash and log reports in System Monitor.

Replacing or Checking Fuse
To replace or check the fuse on the SSA-4000, do the following:
1. On the input power block, open the cover (hinged) to access the fuse cartridge. Refer to the illustrations below.
2. Using a thin, flat tool remove the red cartridge.

⚠️ **Important**: Before removing the fuse, note how and where the fuse is mounted in the cartridge. The fuse must be replaced at the same location. Refer to the illustration below.

3. Remove the existing fuse and replace with a new one.
4. Re-install the cartridge. Note that the cartridge fits in only one direction.

Horizontal Mounting	Vertical Mounting
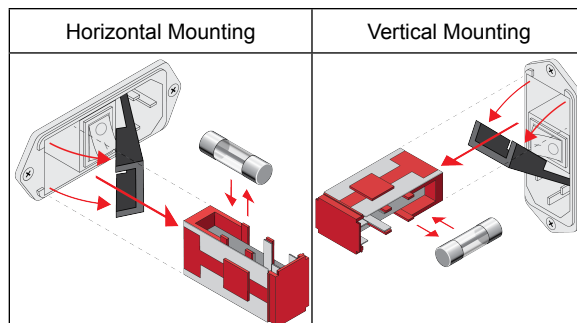
⚠️ **ELECTRIC SHOCK**: The 100-240V AC, 50-60 Hz source power poses an electric shock hazard that has the potential to cause serious injury to installers and end-users.

Additional Documentation

Additional Documentation is available at: **dealers.SavantSystems.com**
Knowledge Base > Savant Hardware > SSA-4000

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