

The Savant SmartAudio (SSA-3000) Quick Reference Guide provides all the steps necessary to install the SSA-3000 controller.

Box Contents

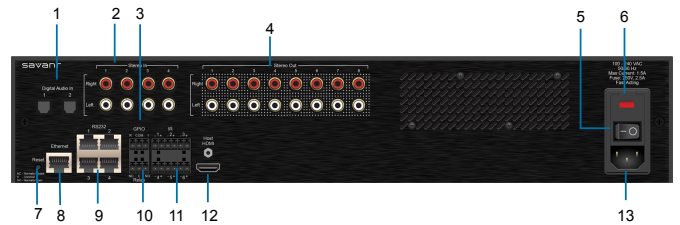
- (1) SmartAudio (SSA-3000)
- (1) Installation Kit (075-0075-xx)
 - (4) Phillips Screws for Brackets (M5 x 12MM Flat) (039-0034-xx)
 - (2) 2U Rack Mounting Brackets (071-0113-xx)
 - (2) 3-Pin Screw Down Plug in Connector (028-9351-xx)
 - (2) 6-Pin Screw Down Plug in Connector (028-9352-xx)
 - (1) HDMI 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) Host Controller (HST-4001, HST-4002 or SVR-4100)

Specifications

Environmental	
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 80% Relative Humidity (non-condensing)
Cooling	5 cubic feet per minute (CFM) recommended.
Maximum BTUs	105 BTUs per hour
Dimensions and Weight	
Height	3.46 in/8.79 cm
Width	17.30 in/43.94 cm
Depth	12.94 in/32.88 cm
Weight	14.25 lb/6.5 kg
Rack Space	2U
Power	
Input Power	100-240V AC, 50/60 Hz
Nominal Power	20 watts (40 VA) for 120V AC, 60Hz (N. America) 20 watts (50 VA) for 230V AC, 50Hz (Europe)
Maximum Power	30 watts (60 VA) for 120V AC, 60Hz (N. America) 30 watts (70 VA) for 230V AC, 50Hz (Europe)
Compliance	
Safety and Emissions	FCC Part 15 S Mark CE Mark C-Tick
RoHS	Compliant

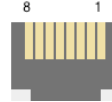


1	Digital Audio In	TosLink input
2	Stereo In	Four Analog Audio Inputs
3	GPIO	General Purpose Input and Output ports—uses 3-pin screw-down connector The digital GPIO ports are binary I/O ports used for contact closure, trigger (output), or detect (input). R is reserved (not used). The COM pin is used for common ground. Pin 1 is used for input or output.
	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 below 30V DC with a high/low threshold of approximately 2.4V DC.
	GPIO Output	When configured as an output, a GPIO port outputs a voltage below 12V DC. The maximum current per port is 150 milliamperes. An overcurrent condition shuts down the output until that condition is removed.
4	Stereo Out	Eight Stereo line-level audio outputs (8 Right and 8 Left RCA jacks) with 1 - 4 support audio time-delay
5	I/O	On/Off button - I is used to power the controller to the On state. O is used to power the controller to the Off state.
6	Fuse	250V, 2.5A—Fast acting fuse. This is replaceable.
7	Reset Button	Resets the SSA-3000.
8	Ethernet	RJ-45 10/100 Base-T, auto-negotiating port
9	RS-232 (1-4)	RJ-45 ports used to transmit and receive serial binary data transmission.
10	Relay 1-3 NC/C/NO (Normally Closed/ Common Normally Open)	These ports provide dry contacts (open/closed) to control devices requiring basic on/off operation. A single relay port can carry a maximum of 30V DC with a maximum current of 1.0 amps. Input from a device to the Savant Controller is not supported through a relay. (Uses a 3-pin screw-down connector (3.81 mm).)
11	IR (1-6)	Infrared transmitter ports. (Uses 6-pin screw down connectors (3.81mm each).)
12	Host HDMI	HDMI input ports used to receive digital audio (iTunes®) from host (such as HST-4001) —locking HDMI connector
13	Input Power	100-240V AC, 50/60 Hz

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)



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 connector. Also, ensure that the unused wires in the connector are cut to prevent them shorting out, as they are still terminated in the RJ-45 connector on the controller side

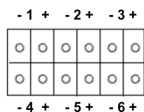
For more details on RS-232, RS-422 and RS-485 connectors, go to SavantSystems.com >

Dealer Login > Knowledge Base > Products

- Refer to the [RS-232 Conversion to DB-9](#) and [RS-422/485 Pinout Application Note](#)

1	On/Off button (hole)	Insert pin into hole for about 10 seconds to place in standby mode. The power button turns red. Insert the pin again for about 1 second to take system out of standby mode. the power button turns green. The 1/0 power switch on the back of Controller must be On (1) to enable this function. To turn the power off for the entire system, use the switch on the rear panel.
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. Over Temperature or Hardware Failure If the Controller over heats or 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 an over temperature or 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	IR LED	Green indicates IR port signal activity. Off indicates no IR port activity.
7	Relay LED	Green indicates Relay port signal activity. Off indicates no Relay port activity.

IR Port Layout and Pinouts



GPIO and Relay Pinouts

GPIO	Relay
Pin #	Pin #
R, COM, 1	NC, C, NO

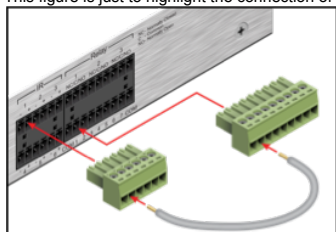
Restoring System Defaults

This procedure will clear a static IP address that has been set up by the installer using the embedded scanner, RPMembsscanner—a Savant specific program located in the RacePointMedia folder and installed when you load RacePoint Blueprint™ on your computer.

To restore the default state of the SSA-3000, do the following.

- Using a wire (for example, a strand from a Cat 5 cable), to connect IR 1+ to GPIO 1. See the next figure.

This figure is just to highlight the connection of the IR 1+ and GPIO 1 connection.



- Power up or rest the system.
- The status LED will blink green briefly while the firmware clears the static IP address.
- The system will then reboot and come back up with the status LED blinking green, if the system received an IP address from the DHCP server. If the system has a self-assigned address, the LED is blinking amber.

You can confirm your embedded processor has an IP address by opening the **Embedded Scanner** window from RacePoint Blueprint by entering **rpmembsscanner** in Spotlight. For more information on the embedded scanner, access the dealer portal at: SavantSystems.com

Setting a Static IP Address on a Savant Controller

- On the Savant Development Environment (SDE), go to the Apple OS X menu bar and locate Spotlight in the top right corner.



- Enter **rpmembsscanner**



- The Embedded Scanner window will open and populate with the Savant IDs (UID) and associated IP addresses of all Savant controllers that reside on the same subnet as the SDE.

Note: The SDE must be connected to the same network as the Savant System.

- Select the controller UID from the list and click Edit.
- A settings drawer will open to the side allowing you to enter the settings for this controller.
- Change the Configure option to Manually and enter the IP address. The Subnet Mask information will automatically complete. From the Router option, enter the Router IP Address.
- Select Save & Reboot. After a short period of time, the controller will come back online with the new IP Address.

Note: When you need to ensure that a Savant controller's IP Address is static we recommend setting this by making a DHCP Reservation on your router. The method of setting the reservation may be different depending on the model of router on your network.

Interconnect the Network

The SSA-3000 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-3000 and HST-3001) 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-3000

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

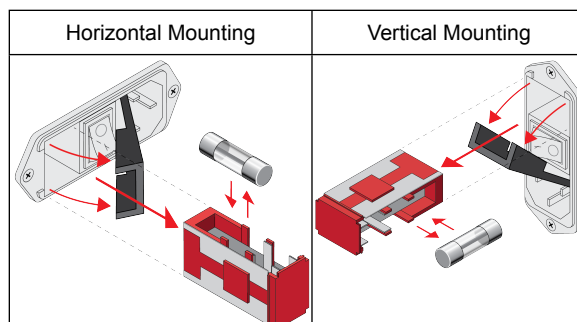
To replace or check the fuse on the SSA-3000, do the following:

- On the input power block, open the cover (hinged) to access the fuse cartridge. REfer to the illustrations below.
- 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.

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



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: SavantSystems.com > Dealer Login > Knowledge Base > Dealer Login > Knowledge Base

- Refer to **Products > GPIO Hardware Setup Guide**
- Click link: **RacePoint Blueprint**