

- Increase sensitivity by turning SENSE clockwise (see *Adjusting the SI* section).

SI does not return to stereo

- Turn the television off.

- Check for improper adjustment of the delay and sense (see *Adjusting the SI* section).

- Noise may be coupling into the B amplifier lines. This can be filtered by placing a 1k ohm resistor between the positive and negative amplifier leads for both the right and left channel inputs. This is only required on the Amplifier B inputs.

SI switches erratically

- Check to ensure that the input signal wires are at least 3 inches from any power line or electrical cord. The SI can pick up the 60 Hz frequency in these lines and will think they are a signal to the speakers. If they signal wires cannot be moved, adjust the sensitivity to filter out the 60 Hz signal.

SI Specifications

Power Requirements
 12 VDC, 100 mA
 (110 VAC wall adapter supplied)
 (International adapters available)

Maximum Switching
 SI-2 : 120 watts per channel
 SI-3 : 450 watts per channel

Line Resistance Added
 0.05 ohms maximum

Sensing Impedance
 50,000 ohms minimum

Signal Sensitivity
TV
 Adjustable to allow for system noise

Switching Time - Stereo to TV
 0.1 seconds

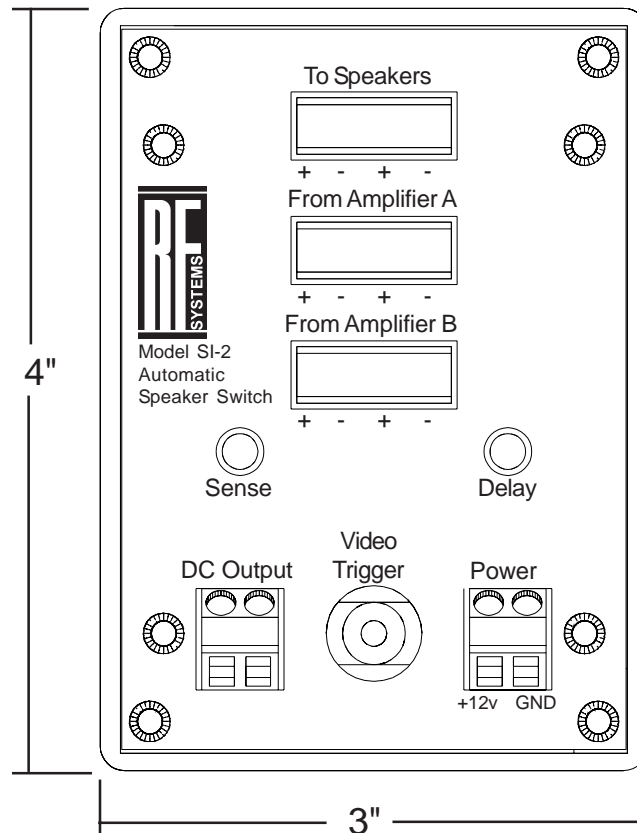
Return Time - TV to Stereo
 Adjustable from 2 to 35 seconds

Priority
 A signal on the TELEVISION terminal will always override a signal on the STEREO terminal.

terminal.

Specifications subject to change without notice.

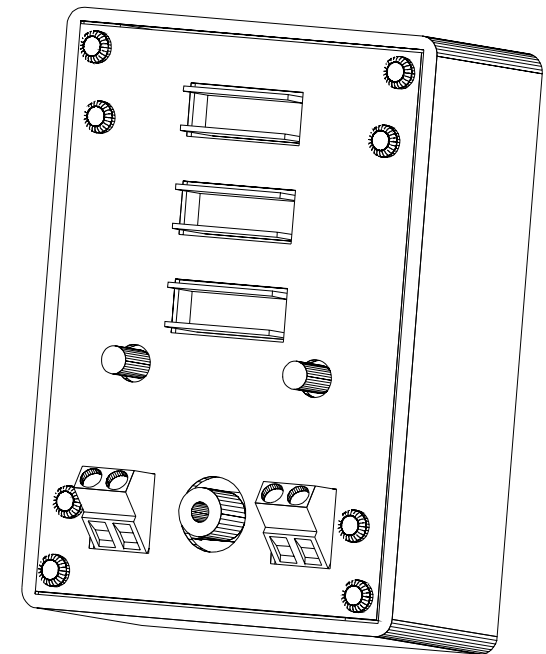
NOTE:
 Any modification of the unit will void the warranty.



Installation Instructions

for

SI-2 Automatic Speaker Switch



R.F. Systems, Inc.

Precautions

- Operate the unit only on 120 Vac, 60 Hz.
(see *DC Operation of SI-2* section for 12 Vdc installations)
- Should any liquid fall into the cabinet, unplug the unit and dry thoroughly before operating again. Failure to dry the unit thoroughly may result in electrical shock.
- Unplug the SI-2 if it is not to be used for an extended period of time (such as six months).
- Before making any connections, be sure to unplug the SI and make sure the input devices are not powered.

A Word About SI Operation

The SI is an automatic A-B switch that allows two different audio amplifiers to be switched to a single pair of speakers. The amplifier connected to the AMPLIFIER A terminals is considered a default and the amplifier on the AMPLIFIER B terminals is considered the priority. When there is not a signal coming from the amplifier on the AMPLIFIER B terminals, the SI will connect the AMPLIFIER A terminals to the SPEAKER terminals. When a signal is detected on the right channel of the AMPLIFIER B terminals, the SI will disconnect the AMPLIFIER A terminals and connect the AMPLIFIER B terminals to the SPEAKER terminals. When the signal on the AMPLIFIER B terminals disappears, the SI will switch back to its default position.

Installation Notes

- The power cord should be the last item connected.
- The SI-2 is designed for maximum switching of 120 watts per speaker. Exceeding this limit may permanently damage the unit.
- The SI-2 has a delay and sensitivity adjustment that can be set for your particular installation. Please read *Adjusting the SI* section for more information.
- The SI-2 includes an RCA connector which allows the SI to be triggered by a video signal. This input has a 1.5k impedance. Do not try to Y a video signal into the trigger connector as the impedance level will reduce the video signal quality considerably.
- It is important to maintain a minimum of 6 inches between the input speaker lines and any power lines. The SI-2 will detect the presence of the 60 Hz line and cause erratic switching if this distance is not maintained. If this distance cannot be maintained, call R.F. Systems for a solution which will allow more reliable operation in this particular condition.

Connecting Speakers to the SI-2

Connect each speaker to the corresponding terminal labeled SPEAKERS on the SI (i.e. right speakers to the [R] speaker terminals and the left speakers to the [L] speaker terminals).

- 1) Strip approximately 3/8" of outer covering from the speaker cord (maximum cord size is 14 AWG).
- 2) Using a small screwdriver, loosen the connections on the terminal blocks.
- 3) Twist the wire ends tightly for easy insertion.

- 4) Insert the wires into the correct terminal block opening and tighten the terminals.
- 5) After these procedures are completed, pull on the speaker cord lightly to see if the connection is secure.
- 6) Insert the terminal block into the SI-2.

Speaker Phasing

Correct + - connection of paired speakers insures proper in-phase operation. If the speaker system is out-of-phase, the bass tones seem to be missing and the position of the instruments becomes obscure.

Connecting Amplifiers to the SI-2

Following the same wiring precautions as for the speakers, connect the amplifier outputs to the terminals labeled AMPLIFIER A and AMPLIFIER B on the SI-2.

NOTE:

Care must be taken to ensure that both the left and right terminals labeled AMPLIFIER A and AMPLIFIER B on the SI-2 go to the corresponding amplifier. Failure to check this could result in damage to both amplifiers. Do not turn on either component until this is checked completely.

Using the Video Trigger

The VIDEO TRIGGER connector allows the SI-2 to be triggered by a video signal. The center pin is the signal, the outer shell is the ground.

NOTE:

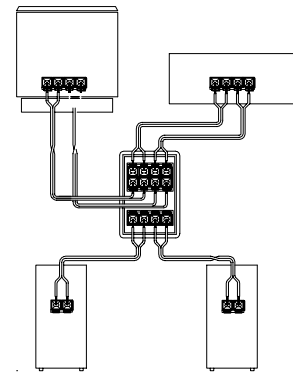
A video signal is a much better trigger signal than trying to sense the audio input. Although the SI-2 is setup to reliably sense the incoming audio signal, care must be taken to properly adjust the SENSE and DELAY adjustments. When using a video signal as the trigger, the SI-2 can be adjusted for shorter delays and lower signal sensing.

Adjusting the SI

The DELAY and SENSE adjustments on the SI-2 allow the unit to be set for maximum performance even in noisy installations. This noise can be caused by many electrical conditions from poor wire to lightning storms.

Adjusting the Sensitivity

The SI-2 is very sensitive to a signal on the sensing terminals. A small noise signal can cause the unit to erratically switch between inputs for no apparent reason. The SENSE adjustment allows the SI to be set so it will not switch on noise but only on a signal from the amplifier. When the unit arrives it will be set for middle sensitivity. If the SI-2 switches erratically, adjust the SENSE counter-clockwise to decrease and clockwise to increase. Only adjust the unit to the point necessary. If you decrease sensitivity too much, the unit may require a stronger signal from the amplifier to activate.



Adjusting the Delay

The Delay adjustment allows a delay on the return time from when a signal has been removed from the AMPLIFIER B terminal and when the SI-2 returns to the default input. The delay adjustment allows the SI-2 to be adjusted for the type of audio to be switched. A PA system requires that the announcement override the background music and return to the default quickly. A home music system requires the SI-2 to delay its return time due to silent passages between tracks and in the music. When the unit arrives, the DELAY will be set for approximately 10 seconds. To adjust, turn the DELAY counter-clockwise to decrease the time and clockwise to increase the time.

NOTE:

Although the SI-2 has independent DELAY and SENSE adjustments, the two adjustments are not completely independent in their operation. When the signal being sensed is lower, the delay must be longer to prevent the SI-2 from toggling between amplifier A and B. If the unit cannot detect the input signal, the delay timer will start its countdown. If no signal is sensed before the timer expires, the SI-2 will return to the default input.

Trouble Checks

Amplifiers A or B shut down without reason

- Check wiring to ensure that the television and stereo outputs are not wired together.
- Check wiring to ensure that the AMPLIFIER A and B terminals go only to the appropriate amplifier outputs.

No sound through speakers

- Check connection of the speaker wires at all component's terminals.
- Check power to amplifiers.
- Turn up the volume.

SI does not switch to AMPLIFIER B

- Check power to the SI-2.
- Check connection of the left right speaker wire on the AMPLIFIER B terminals. These are the sensing terminals.
- Check power to the television.
- Turn up the volume on the television.