

MODEL  
SVL-4AB



# SVL-4AB

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SPEAKER SELECTION/VOLUME CONTROL SYSTEM  
WITH A/B AMPLIFIER INPUTS



INSTALLATION & OPERATION GUIDE

# SVL-4AB

Speaker Selection/  
Volume Control  
System with A/B  
Amplifier Inputs

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## Introduction

The SVL-4AB is a combination speaker selector and volume controller. The unit allows you to connect up to four pairs of speakers to your stereo receiver or amplifier and adjust the volume of each pair independently. You can choose to listen to any one pair, any combination of pairs, or all pairs at once. Additionally, you can connect two different stereo receivers to the SVL-4AB by using its A and B amplifier inputs.

You don't have to worry about overloading either amplifier. The SVL-4AB has individual protection circuits that keep both of your amplifiers running safely, with any combination of speakers and amplifiers.

A perfect application for the SVL-4AB is individually controlling speaker "ON/OFF" and volume adjustment for four pairs of speakers connected to two receivers. Different family members can simultaneously listen to different musical selections through any of the four pairs of speakers.

The SVL-4AB adjusts the amplifiers signal with volume controls that use autoformers, not L-pads. The autoformers assures that virtually no power will be wasted as heat by the volume control.

## Features and Benefits

The SVL-4AB offers a number of improvements over other speaker selector/volume controllers:

- **Amplifier A/B Switching**—The SVL-4AB provides amplifier switching for each pair of speakers. The switches are “break-before-make” and simultaneously switch both grounds and hots. This allows any two amplifiers to safely and reliably operate simultaneously.
- The SVL-4AB uses 12-position POP-FREE volume controls which are superior to 10-position designs. You get a broader range of adjustment—there are 10 steps of attenuation instead of 8. Steps 11-6 attenuate -3 dB per step; steps 5-2 are 6 dB per step. Step 12 is “full-on” and step 1 is “full-off”.
- **Greater dynamic range**—you get 42 dB of total attenuation instead of the usual 20 or 30 dB.
- **Pre-printed Room Labels** are included for easy identification of speaker ON/OFF buttons.
- **Isolated left and right channel ground returns** make the SVL-4AB compatible with all types of amplifiers.

### TECH SUPPORT HOTLINE

If you have questions regarding the operation of the Niles SVL-4AB, contact your local Niles dealer or Niles Customer Service at 1-800-289-4434.

- Rear panel switches for constant or selectable impedance protection for each amplifier. You can use constant protection on one of your two amplifiers and manual protection for the other.
- Self-cleaning, silver-plated switch contacts assure many years of trouble free use.
- Printed circuit board design assures high reliability.
- Two-piece removable connectors greatly simplify installation and hookup. All wiring can be attached directly to the connectors before installing them in the SVL-4AB.
- 100% tested, electronically and acoustically, for frequency response, distortion and power handling.
- Standard 17" width allows the SVL-4AB to stack neatly with other standard size components.
- May be used with 4, 6, or 8-ohm speaker systems.
- Ideal for both home and commercial sound installations.
- Power handling: 100 watts/channel continuous music power.
- Frequency response: 20 Hz to 20 kHz +/-1.2 dB.
- Ten year parts and labor warranty.
- Proudly made in the USA.

## Installation Considerations

### SVL-4AB Power Handling

The SVL-4AB is designed for use with receivers or amplifiers having a maximum power output of 100 watts per channel at 8 ohms. Damage caused by the use of higher-power receivers or amplifiers will void the warranty. Consult your Niles dealer or receiver/amplifier manufacturer if you are uncertain about the power rating of your receivers or amplifiers.

**IMPORTANT: DO NOT USE THE SVL-4AB WITH AMPS OR RECEIVERS RATED AT MORE THAN 100 WATTS PER CHANNEL RMS AT 8 OHMS.**

### Amplifier Impedance Load

As more pairs of speakers are parallel connected to a receiver or amplifier, the overall system impedance becomes lower. For example, if two pairs of 8-ohm speakers are connected in parallel, the impedance will be 4 ohms; two pairs of 4-ohm speakers in parallel become 2 ohms, and so on.

Most receivers or amplifiers are not rated for use below a 4 ohm load. Most manufacturers do not recommend connecting more than two pairs of speakers without using some form of impedance correction.

### TOOLS REQUIRED

- 1/8" Standard Slotted Screwdriver
- Wire Stripper

### IMPORTANT

**DO NOT** use the SVL-4AB with amps or receivers rated at more than 100 watts per channel RMS at 8 ohms.

The SVL-4AB includes impedance correction circuitry which protects each of your receivers or amplifiers from low impedance loads. The circuitry assures that both of your receivers or amplifiers will recognize a safe operating load, even when one amplifier is playing all four speaker pairs at the same time.

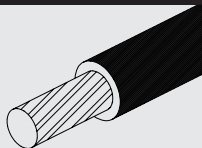
The actual impedance load the SVL-4AB presents to each of your receivers or amplifiers will vary, depending on how many speaker pairs are playing, and the impedance rating of each speaker. If you have four pairs of 8-ohm speakers playing from one of your receivers/amplifiers, the SVL-4AB will present a 4.5 ohm impedance load to it. With four pairs of 4-ohm speakers playing, the load drops to slightly under 4 ohms.

It is recommended that you use the SVL-4AB with receivers or amplifiers that are capable of driving a 4-ohm load. Consult your Niles dealer, or the receiver/amplifier manufacturer, if you are uncertain about the capabilities of the receiver/amplifier.

### Type of Speaker Wire

For most applications, we recommend you use 16 or 18 gauge stranded copper speaker wire for the SVL-4AB connections. For wiring runs longer than 80 feet, 14 gauge wire is recommended. Using speaker wire larger than 14 gauge for the SVL-4AB connections is not recommended—the wire

#### "TECH TIP"



Wire size is expressed by its AWG (American Wire Gauge) number. The lower the AWG number, the larger the wire, i.e., 12 AWG wire is physically larger

may not fit into the connectors. Never use solid-core, aluminum, or "Romex" type wire with the SVL-4AB. When running speaker wires inside walls, most states and municipalities in the U.S. specify that you must use a special type of speaker wire. Usually, the requirement is that the wire has a specific "CL" fire rating, such as "CL-2" or "CL-3". Consult your Niles dealer, building contractor, or local building and inspection department if unsure about which type of wire is best for your application.

### **Avoiding Interference**

Speaker wires can act as an antenna for electrical noise. Locating speaker wires too close to a light dimmer or switch may cause a "buzzing" or "popping" sound to be heard though the speakers. If you must locate the SVL-4AB wiring near electrical devices, route the speaker wires several feet away from the electrical wiring.

### **Using the SVL-4AB with Tube-Type Amplifiers**

Virtually all tube amplifiers must have a load connected at all times. If one of the amplifiers to be connected to the SVL-4AB is a tube amplifier, be sure to always have at least one pair of speakers switched on at all times. An alternative is to permanently connect a 150 ohm, 5 watt resistor across the tube amplifier's output in parallel with the SVL-4AB. See **(Figure 1)** on next page for a hookup diagram.

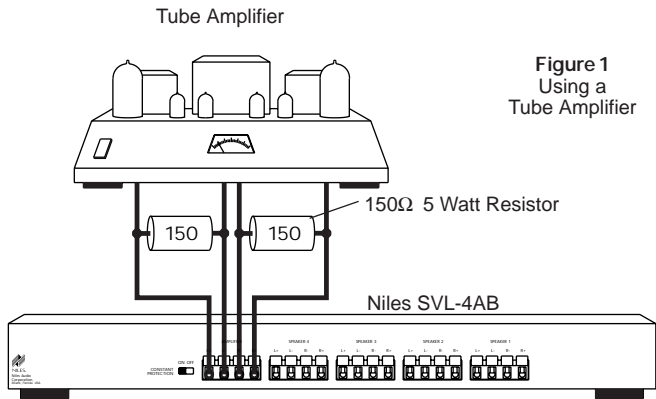


Figure 1  
Using a  
Tube Amplifier

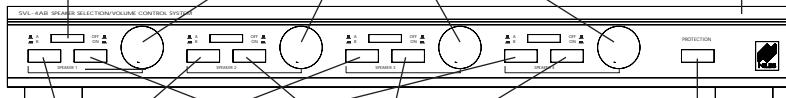


# SPEAKER SELECTION / VOLUME CONTROL SYSTEM

Recessed areas for custom room labels.

12 position volume control provides greater attenuation than conventional 10 position designs.

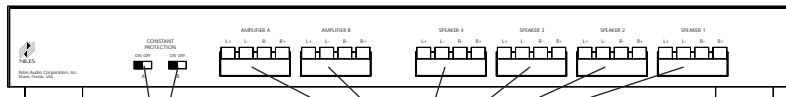
Attractive low-profile design.



Each speaker pair can individually select one of two source amplifiers with a dedicated push-button A/B switch.

Each speaker pair is independently activated with a simple pushbutton On/Off switch.

Protection switch safeguards both of your receivers or amplifiers even with one amplifier playing all 4 pairs of speakers.

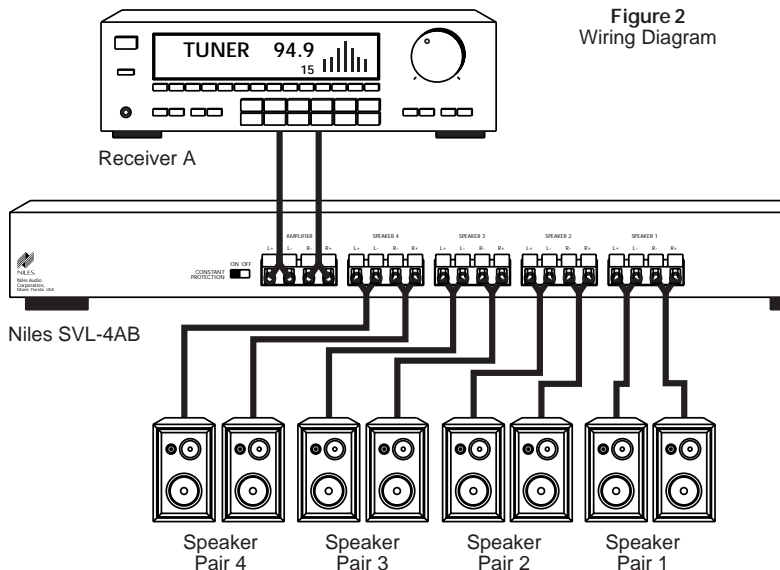


Constant Impedance Protection Switches for each amplifier.

Two-piece removable connectors.

## Installation

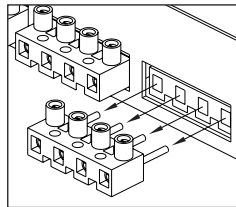
1. Select a convenient location for the SVL-4AB.
2. Run all the necessary wiring to the SVL-4AB. Label the wires for future reference. See **(Figure 2)**.



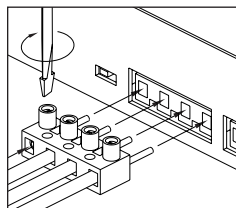
**Figure 2**  
Wiring Diagram

3. Make the connections to the SVL-4AB. The amplifier/speaker connectors on the SVL-4AB are removable. If you wish, you may remove the SVL-4AB's connectors to facilitate installation [see (Figure 3)]. Strip 3/8" of insulation from the end of each wire. Tightly twist the end of each wire until there are no frayed ends. Insert each wire into the appropriate hole on the connector terminals. Be certain that proper "phasing" is observed. To achieve proper phasing, connect the positive terminals on the SVL-4AB to the positive terminals on the amplifiers and speakers and the negative terminals on the SVL-4AB to the negative terminals on the amplifiers and speakers. If you are using only one amplifier it should be connected to the "Amplifier A" connector and the pushbutton switches marked "A/B" should be left out or in the "A" position. If you will be using two amplifiers, connect the second amplifier to the "Amplifier B" connector on the SVL-4AB. Re-install the connectors if they were removed. See (Figure 4).

4. Locate the pre-printed Room Labels. Affix the appropriate label to the recessed area over each ON/OFF selector button.



**Figure 3**  
Removing the  
Connectors



**Figure 4**  
Installing the Connectors

## Operation

### "TECH TIP"

If your amplifier or receiver has "A" and "B" speaker-pair outputs, connect the SVL-4AB to the "A" outputs. Do not connect anything to "B". This will prevent the amplifier or receiver from driving an unusually low impedance load.

There are two ways to use the SVL-4AB. You may play and adjust the volume of one pair of speakers at a time, or play multiple pairs simultaneously.

If you intend to play more than one pair of speakers at the same time, you will need to become familiar with the operation of the SVL-4AB's PROTECTION button.

### Playing One Pair of Speakers At a Time

1. Make sure the amplifier or receiver power is OFF and set the volume to minimum.
2. Set the SVL-4AB volume control for the speaker pair you wish to play to maximum (fully clockwise).
3. Locate the ON/OFF button on the SVL-4AB which corresponds to the speaker pair you wish to play. Set it to the ON position.
4. Adjacent to the ON/OFF button is the amplifier A/B button. Choose an amplifier for the active speaker pair by pressing the A/B button in for "B" and out for "A".
5. Turn on the amplifier or receiver and select a source, such as the tuner or CD player.
6. Slowly turn up the amplifier or receiver volume and set it to a comfortable (not maximum) listening level. Be careful

not to overdrive or "clip" your amplifier. If the sound becomes muddy or distorted, you have reached the limit of your amplifier's volume capability and should quickly reduce the volume to avoid damaging your speakers.

7. Using the appropriate volume control on the front of the SVL-4AB, adjust the volume of the speakers to the desired listening level.

8. You can turn off the speakers by turning the appropriate volume control on the SVL-4AB fully counter-clockwise or by pressing the ON/OFF button.

9. You can switch to the other amplifier by pressing the amplifier A/B button.

### Playing Two or More Speaker Pairs Simultaneously

1. Make sure both of the amplifiers are OFF and set the volume controls to minimum.

2. On the right side of the SVL-4AB's front panel is a button labeled PROTECTION. This button activates the SVL-4AB's impedance correction circuitry. The circuitry assures that both of your receivers or amplifiers will see a safe operating load when playing multiple speaker pairs simultaneously. Since most receivers and amplifiers are not rated for use below a 4 ohm load, you will need to activate the PROTECTION button whenever the overall system impedance might fall below 4 ohms. Use the following chart as a guide.

#### "TECH TIP"

You will need to activate the SVL-4AB's PROTECTION button whenever the overall system impedance might fall below

| When playing the following speakers:    | The Protection button should be: |
|---|----------------------------------|
| 1 or 2 pair of 8-ohm speakers           | OFF                              |
| 3 or 4 pairs of 8-ohm speakers          | ON                               |
| 1 pair of 4-ohm speakers                | OFF                              |
| 2, 3, or 4 pairs of 4-ohm speakers      | ON                               |
| Any combination of 4 and 8 ohm speakers | ON                               |

Set the PROTECTION button to the correct position using the chart shown above.

### "TECH TIP"

The volume control of your amplifier or receiver acts as the master volume for all of your speaker pairs. Set this control to a comfortable (not maximum) listening level. Be careful not to overdrive or "clip" your amplifier. If you hear distortion from your speakers reduce the volume of your amplifier to avoid damaging your speakers.

- Set the SVL-4AB volume controls which correspond to the speaker pairs you wish to play to maximum (fully clockwise).
- Locate the appropriate ON/OFF buttons on the SVL-4AB. Set them to the ON position.
- Adjacent to the ON/OFF buttons are the amplifier A/B buttons. Choose an amplifier for each active speaker pair by pressing the A/B button in for "B" and out for "A".
- Turn on the amplifiers or receivers and select a source, such as the tuner or CD player.
- Slowly turn up each of the amplifiers or receivers volume and set it to a comfortable (not maximum) listening level. Be careful not to overdrive or "clip" your amplifier. If the sound becomes muddy or distorted, you have reached the limit of your amplifier's volume capability and should quickly reduce the volume to avoid damaging your speakers.
- Using the appropriate volume controls on the front of the SVL-4AB, adjust the volume of the speakers to the desired listening level. The volume control of your receiver or amplifier acts as the master volume for all of your speaker pairs.

9. You can turn off the speakers by turning the corresponding volume controls on the SVL-4AB fully counter-clockwise, or by pressing the appropriate ON/OFF button. Refer to the Protection Chart located on page 13 for the correct setting of the PROTECTION button.

10. At any time, you may choose to switch any of the active speaker pairs to one or the other of the amplifiers by pressing the corresponding amplifier A/B button.

### Constant Protection Switches

The SVL-4AB is equipped with rear panel overrides of the protection circuits that enables you to maintain constant impedance protection regardless of the position of the front panel switch. This will safeguard either or both of your amplifiers from being overdriven due to accidental or improper use by anyone unfamiliar with the equipment.

To engage one or both of these overrides, move the rear panel "CONSTANT PROTECTION" switches to the "ON" position. Constant impedance protection will be maintained until the switches are turned to "OFF".

### SPECIFICATIONS

#### Audio Power Handling

100 watts/channel  
continuous music power

#### Frequency Response

+/- 1.2 dB from 20 Hz to 20 kHz

#### Mounting

Table-Top component

#### Wiring Requirements

Individual runs of 2-conductor speaker wire. Connectors accommodate wire sizes 14-22 gauge (16 gauge recommended)

#### Overall Dimensions

17" (432mm) wide x  
2" (51mm) high x  
9 1/4" (235mm) deep

#### Weight

7 1/2 lbs. (3.4 kg).



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