

MODEL
ABA-1D



ABA-1D

AMPLIFIER A OR B SELECTOR



INSTALLATION & OPERATION GUIDE

ABA-1D

Speaker/Amplifier
Selector

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Introduction

The ABA-1D is a wall-mount, Decora® style A-B selector that enables you to play either of two amplifiers through a shared pair of loudspeakers. Conversely, the unit may be used to play a single amplifier into either of two pairs of loudspeakers.

Features and Benefits

The ABA-1D offers a number of improvements over other A-B selectors.

- Interchangeable Decora inserts for fast, easy color change. Inserts and buttons (sold separately) are available in a variety of colors.
- Self-cleaning, silver-plated switch contacts assure many years of trouble-free use.
- Printed circuit board design uses no hand wiring, assuring high reliability.
- The circuit board connectors can accommodate up to 14 gauge wire, making the ABA-1D compatible with most "high definition" speaker cables.

S P E A K E R / A M P L I F I E R S E L E C T O R

- 100% tested, electronically and acoustically, for frequency response, distortion and power handling.
- Isolated left and right channel grounds make it safe for use with any amplifier.
- May be used with 4, 6, or 8 ohm speaker systems.
- Ideal for both home and commercial sound installations.
- Only screwdriver and wire stripper required for installation.
- Power handling: 350 watts/channel continuous power (RMS).
- Frequency response: Flat from 20 Hz to 20 kHz.
- Available colors: White, Bone, Almond, or Black.
- Ten year parts and labor warranty.
- Proudly made in the USA.

**TOOLS
REQUIRED**

- No. 2 Phillips Screwdriver
- 1/8" Standard Slotted Screwdriver
- 1/4" Standard Slotted Screwdriver
- Wire Stripper

Installation Considerations

The ABA-1D is a Decora-style module and is designed to use standard Decora-style cover plates and mounting hardware. Decora cover plates (up to 6-gang) with color-matched plate screws are available from your Niles dealer.

P-Rings and Electrical Boxes

The mounting depth of the ABA-1D is 2 1/2". When installed, the unit extends 2" behind the sheetrock wall (assuming 1/2" sheetrock). For installation, you must choose between a standard light switch plaster ring (p-ring) or a standard 18 cu. in. (or larger) electrical box. Suitable p-rings and electrical boxes are available from your Niles dealer or local electrical supply company. Using the p-ring is best because it gives you unobstructed access to the full depth of the wall. In some instances, the use of a p-ring may be inappropriate, such as in a retro-fit (existing) installation, or when building codes require that wall devices be enclosed in electrical boxes. Contact your local building code and inspection department if unsure.

Type of Speaker Wire

For most applications, we recommend you use 16 or 18 gauge, stranded copper speaker wire for the ABA-1D connections. For wiring runs longer than 80 feet, 14 gauge wire is

recommended. Using speaker wire larger than 14 gauge for the ABA-1D connections is not recommended—the wire may not fit into the connectors. Never use solid-core, aluminum, or "Romex" type wire with the ABA-1D. 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.

ABA-1D Mounting Location

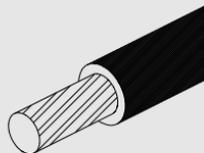
Convenient mounting locations for the ABA-1D are:

- Near entry-ways or exits
- Near a desk
- At your bedside
- Close to a telephone
- Near other wall controls (see caution below)

DO NOT INSTALL THE ABA-1D INTO ELECTRICAL BOXES WITH 110 VOLT DEVICES.

Some states or municipalities allow devices such as the ABA-1D to be installed into the same electrical box as 110 volt

"TECH TIP"



Wire size is expressed by it's AWG (American Wire Gauge) number. The lower the AWG number, the larger the wire, i.e., 12 AWG wire is physically larger than 14 AWG.

devices, provided a "low-voltage partition" is used between the devices. We do not recommend this. Speaker wires can act as an "antenna" for electrical noise. Locating speaker wires too close to a light switch or dimmer may cause a "popping" or "buzzing" sound to be heard through the speakers. If you must locate the ABA-1D near electrical devices, install it in a separate metal electrical box, ground the box to the electrical system ground, and route the speaker wires several feet away from the electrical wiring.

Changing the Color of the ABA-1D

The Decora insert and button on the ABA-1D are removable, allowing fast and easy color changes as needed. Inserts and buttons are available in a variety of colors.

If you need to change the color of the ABA-1D:

1. Obtain the ABA-1D Decora insert and button in the desired color from your Niles dealer.
2. Holding the ABA-1D as shown in **(Figure 1)**, locate the two plastic mounting tabs at the top rear of the Decora insert. Using two fingers, simultaneously press both tabs down (towards the center of the insert) and forward (away from you) until the insert pops free from its mounting slots.
3. Hold the ABA-1D as shown in **(Figure 2)**. Remove the

button from the switch using your fingers. DO NOT use pliers or other tools as these may damage the button.

4. Locate the new Decora insert. Hold the ABA-1D so that it is facing you. Insert the two bottom tabs into the bottom slots first, followed by the two tabs on the top. Snap the insert in place by carefully pressing on the front of the insert.

5. Locate the new button. Secure the button to the switch by gently pressing it into place.

"TECH TIP"

Do not exert
excessive pressure
on the plastic
mounting tabs.

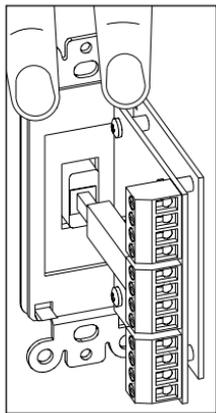


Figure 1
Removing the
Decora-style Insert

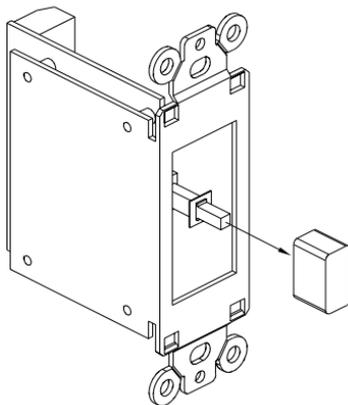
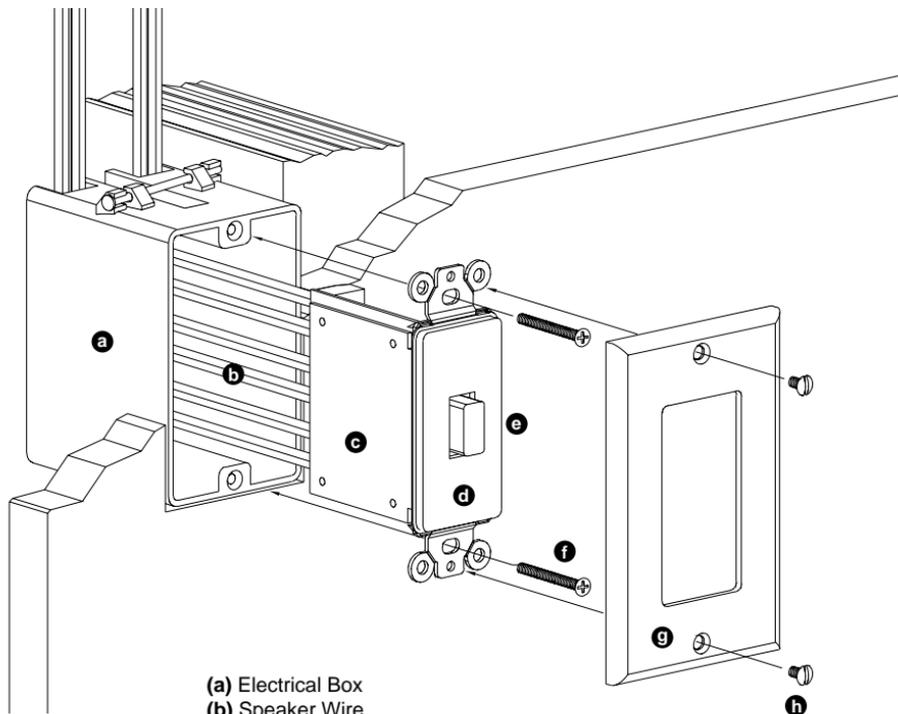


Figure 2
Removing the
Button

S P E A K E R / A M P L I F I E R S E L E C T O R



- (a)** Electrical Box
- (b)** Speaker Wire
- (c)** ABA-1D Speaker Selector (supplied)
- (d)** Snap-on Color Insert (supplied)
- (e)** Button (supplied)
- (f)** Device Screws (2 supplied)
- (g)** Decora Faceplate (supplied)
- (h)** Faceplate Screws (2 supplied)

Installation

If you are installing the ABA-1D into an existing wall, take time to consider any possible obstructions which may be hidden inside the wall, such as wood and metal studs; electrical, telephone or other types of wiring; plumbing; conduit; old wall safes; etc.

1. Install the electrical box or p-ring in the usual manner.

2. Run all the necessary wiring to the ABA-1D. Label the wires for future reference.

3. Make the connections to the ABA-1D. Strip $\frac{1}{4}$ " 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 blocks; secure the wiring to the connectors by tightening the small connector screws. Be certain that proper phasing is observed—connect the positive terminals on the ABA-1D to the positive terminals on the amplifiers and speakers and the negative terminals on the ABA-1D to the negative terminals on the amplifier and speakers. See (Figure 3).

4. Secure the ABA-1D to the electrical box or p-ring. Insert the $1\frac{1}{4}$ " long device screws into the oblong-shaped screw holes on the top and bottom of the ABA-1D. Note that the oblong

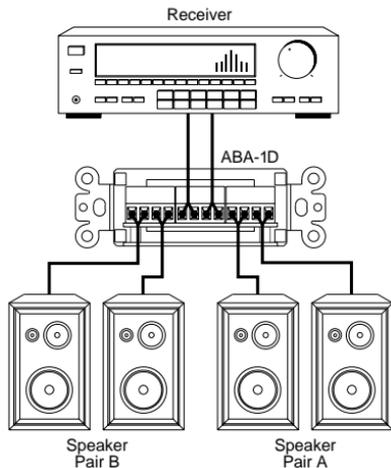


Figure 3
Wiring Diagram

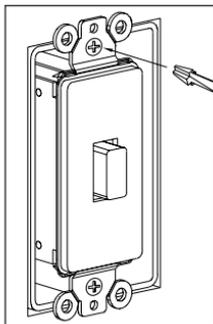


Figure 4
Loosening the Screws
for a Flush Fit

shape of the screw holes allow you to position the ABA-1D so that it is vertical. Position the ABA-1D so that the screws are aligned with the threaded holes in the electrical box or p-ring. Tighten the screws using a phillips screwdriver. **DO NOT OVER-TIGHTEN.** In some instances, you may need to loosen these screws several turns to allow the ABA-1D to fit flush with the Decora cover plate. See **(Figure 4)**.

5. Use the shorter plate screws to fasten the Decora cover plate to the ABA-1D. **DO NOT OVER-TIGHTEN THE PLATE SCREWS OR YOU MAY DAMAGE THE COVER PLATE.** Line up all the screws in the same direction for a finished look.

NOTE: Certain "old work" or "retro-fit" boxes, such as the Carlon B225R, have a plastic "lip" which interferes with the Decora plate screws. This lip prevents you from being able to tighten these screws completely. To make the clearance necessary for these screws, you must remove the parts of the lip causing the interference. There are two ways to accomplish this:

1. Drill through the lip of the box at the screw points.
2. Cut notches into the lip with a pair of diagonal cutters.

Operation

1. Make sure the power is OFF on the amplifier(s) or receiver(s) and set the volume(s) to minimum.
 2. If you are using a Niles speaker selection system in conjunction with the ABA-1D, locate the ON/OFF button which corresponds to the ABA-1D. Set it to the ON position.
 3. Turn on the amplifier(s) or receiver(s) and select a source, such as the tuner or CD player.
 4. Using the A-B selector button on the ABA-1D, select the speaker pair (or amplifier) you wish to play.
 5. 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.
- Note:** If the speaker pairs connected to the ABA-1D are equipped with Niles volume controls, adjust the volume of the speakers to the desired listening level using the Niles controls. If all the speaker pairs in your system are equipped with Niles volume controls, you can leave the amplifier or receiver volume(s) set at one position and use the Niles controls exclusively.
6. You can select either speaker pair (or amplifier) by simply pressing the A-B button on the ABA-1D.

SPECIFICATIONS

Audio Power

Handling

350 Watts/channel
continuous power
(RMS)

Mounting

In-wall, requires single-gang electrical box at least 2 1/2" deep, Decora-style face plate

Wiring Requirements

Individual runs of 2-conductor speaker wire, 14-22 gauge

Unit Dimensions

1 1/16" wide x 2 5/8" high

Face Plate Dimensions

Decora wall plate;
2 3/4" wide x 4 1/2" high

Depth Behind Plate

2 1/2"



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