

## *Allows an Isolated Audio Connection Between Two Devices*

The Viking Model **AIB-1** is a 1:1 isolation transformer designed to enable coupling between audio circuits. The transformer is mounted on a printed circuit board which is easily wall mounted with included foam tape and screws. Speaker Level, Line Level, and Telecom Station inputs are available on screw terminals, an RCA jack, and a modular jack. The Line Level output is available on screw terminals and an RCA jack.

Uses include: elimination of ground loop hum, interfacing select Viking products to a phone line, interfacing an Avaya IP office "Paging Speaker" extension to a paging system, summing two different audio



sources into one audio input, injecting audio into a phone line, and converting a speaker level signal down to a line level signal.

### Features

- Low cost solution
- Inputs available on screw terminals, RCA Jack, and modular jack
- Outputs available on screw terminals and RCA Jack
- Line Level, Speaker Level, or Telecom Station inputs
- Line Level output
- Wall mountable with foam tape and screws
- Excellent sound quality

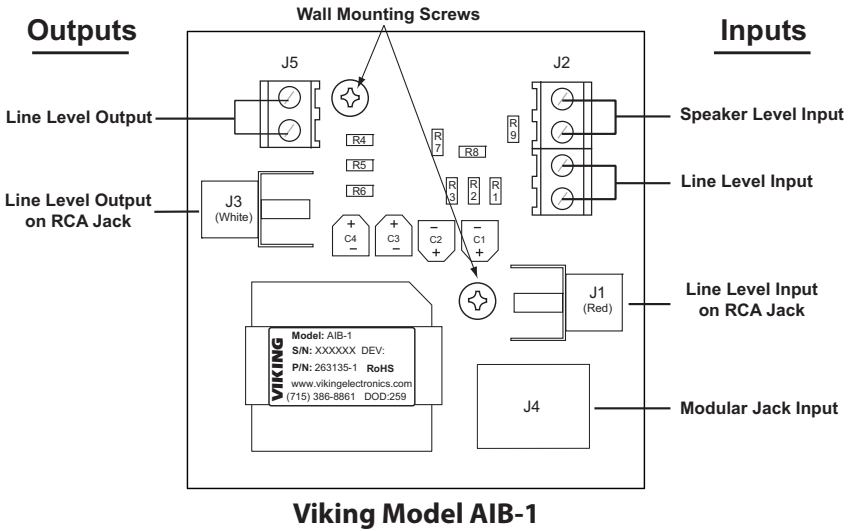
### Applications

- Eliminating ground loop hum in paging systems
- Paging or mass notification sounds on a phone line
- Strip off talk battery voltage from paging station
- Consolidating two audio sources into one
- Daisy chain a paging system speaker output into a second power amplifier's input

### Specifications

**Frequency Response  $\pm$ 3dB:** 50Hz to 20kHz  
**Insertion loss w/ 600 Ohm Load:** -2dB  
**Winding Ratio:** 1:1  
**Input Impedance:** 600 Ohms  
**Output Impedance:** 600 Ohms  
**Dimensions:** 2.7" x 2.7" x 1" (69mm x 69mm x 26mm)  
**Shipping Weight:** 0.4 lbs (0.18 Kg)  
**Environmental:** 32° F to 90° F (0° C to 32° C) with 5% to 95% non-condensing humidity  
**Connections:** (1) RJ-11 Modular Jack, (2) RCA Jacks, (6) Screw Terminals

## Features Overview

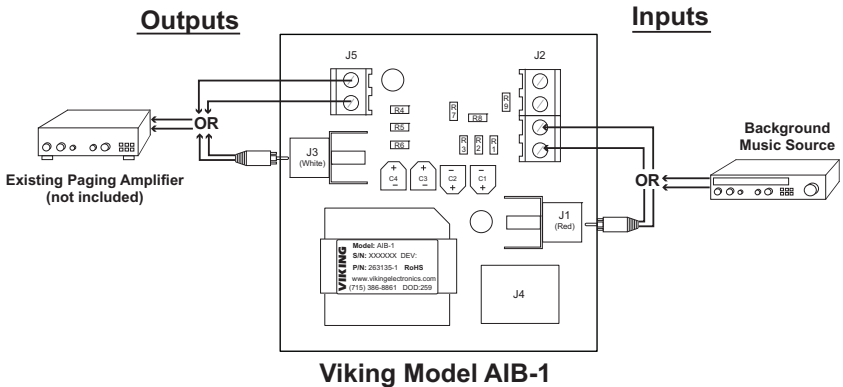


## Installation and Wiring

### A. Eliminating Ground Loop Hum

If hum is observed between any two audio components that are tied together with line level connections, the source of the problem can be either a lack of cable shielding or a ground loop. The **AIB-1** eliminates ground loop hum by magnetically coupling, but electrically isolating the audio signal.

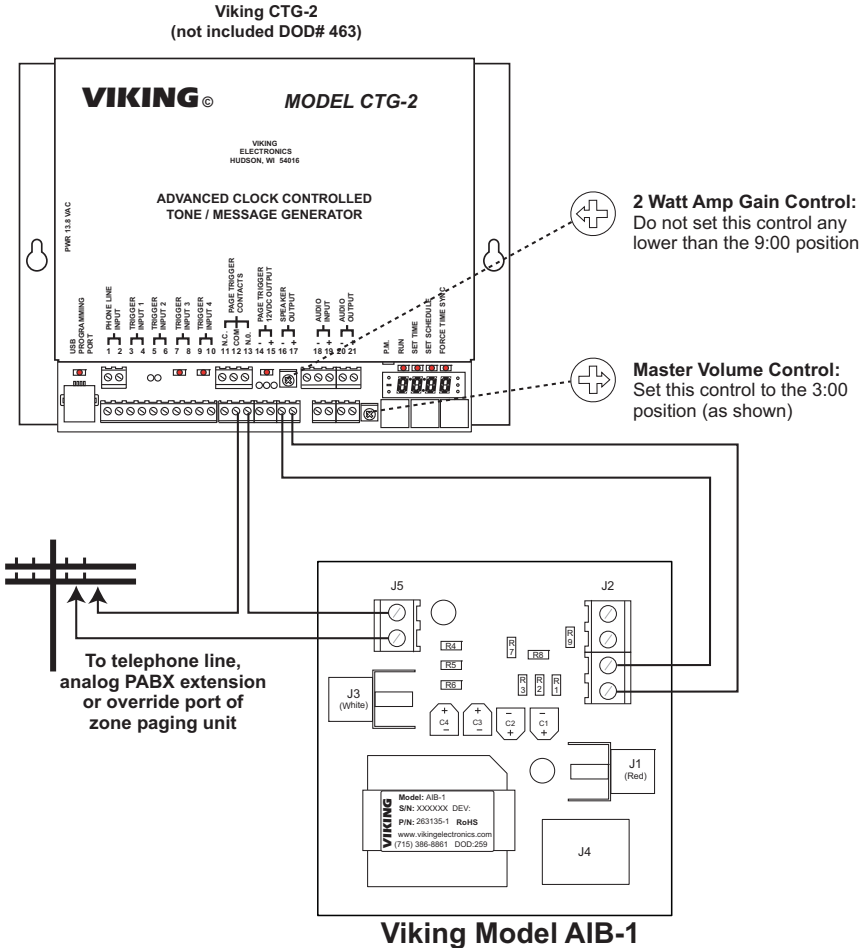
|                |   |
|----------------|---|
| <b>Step 1.</b> | Connect the audio source to the input side of the <b>AIB-1</b> .      |
| <b>Step 2.</b> | Connect the output side of the <b>AIB-1</b> to the amplifier's input. |



## B. Interface Viking Products to an Analog Line

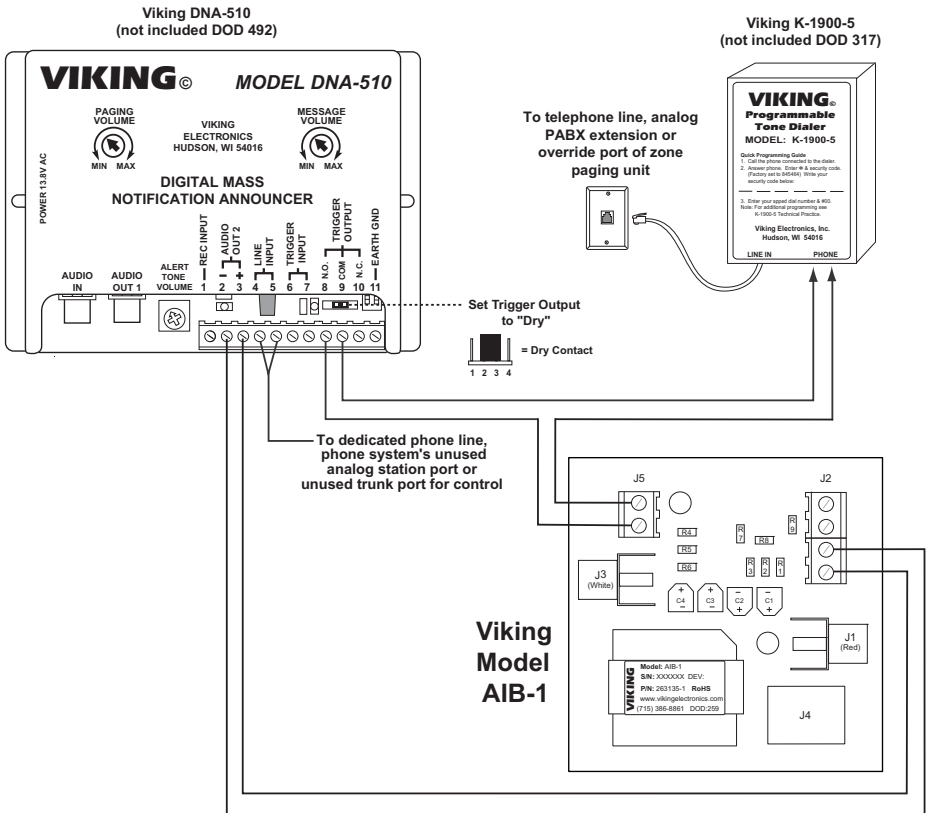
### 1. CTG-2 That Dials then Plays a Wave File

In most applications, the **CTG-2** is connected to the paging amplifier and plays its wave files to an input of the amplifier. By adding the **AIB-1** isolation transformer, the **CTG-2** can seize a telephone line or PABX extension and dial a touch tone string before playing a wave file. Useful for dial access paging systems or when **CTG-2** wave files must be played only to certain zones of a multi zone paging system. Another application is connecting the **CTG-2** to the override port of a multi zone page controller, so the **CTG-2** wave files have a higher priority than a voice page. Touch tones can be added to the wave file using Audacity's® free software download. Connect as shown below. See DOD# 898 for complete details.



## 2. DNA-510 Dials then Provides Mass Notification Messages or Alert Tones

In most applications, the **DNA-510** plays its mass notification messages or alert tones to an input of the paging amplifier. By adding a Viking **K-1900-5** dialer and the **AIB-1** isolation transformer, the **DNA-510** can seize a telephone line or PBX extension and dial a number before playing the messages or tones. Use for dial access paging systems or when **DNA-510** messages and tones must be played only to certain zones of a multi zone paging system. Another application is to connect the **DNA-510** to the override port of a multi zone page controller, so the **DNA-510** messages and tones have a higher priority than a voice page. Connect as shown below.



### NOTE:

The **DNA-510**'s "March Time Horn" alert tone can not be used in this application.

## C. Voice Page with an Avaya IP Office System

An Avaya IP Office analog station port can be programmed as a “Paging Speaker” to act as a paging port, but relatively few paging amplifiers are compatible with its operation. Only paging amplifiers (or paging equipment) that “Load” the station port with a 600 ohm termination AND allow DC current to flow through the termination are compatible. Amplifiers with high input impedance or that block DC current from flowing through the input are not compatible. The **AIB-1** can solve this problem. It will allow DC current to flow from the Avaya IP Office analog station port, while passing all the paging audio through to the amplifier.

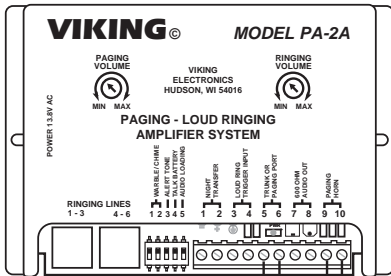
Viking products that require the **AIB-1** to connect with an Avaya IP Office analog station port are:

| Model         | Description                          | DOD |
|---------------|--------------------------------------|-----|
| <b>FBI-1A</b> | Anti-feedback Paging Interface       | 465 |
| <b>HF-3W</b>  | Handsfree Talkback Amplifier         | 470 |
| <b>M2W</b>    | Paging Power Amplifier               | 480 |
| <b>MTG-10</b> | Multi-Tone Generator                 | 482 |
| <b>PA-2A</b>  | Paging Amplifier Loud Ringer         | 485 |
| <b>PA-30</b>  | 30 Watt Paging Amp with Loud Ringing | 489 |
| <b>PA-60</b>  | 60 Watt / 2 Zone Power Amplifier     | 493 |
| <b>ZPI-4</b>  | 4 Zone Paging Interface              | 499 |

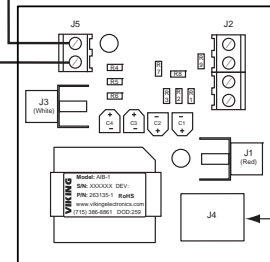
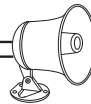
Viking products that can be directly connected to an Avaya IP Office analog station port are:

| Model        | Description   | DOD |
|--------------|---|-----|
| <b>FXI-1</b> | FXO / FXS / Telecom Smart Paging Interface                | 494 |
| <b>PI-1A</b> | Telecom Paging Interface                                  | 491 |
| <b>PA-15</b> | 15 Watt Paging Amp with Background Music and Loud Ringing | 486 |

**Viking PA-2A**  
(not included DOD 485)



**Viking 25AE Paging Horn**  
(not included, DOD 498)



**Viking Model AIB-1**

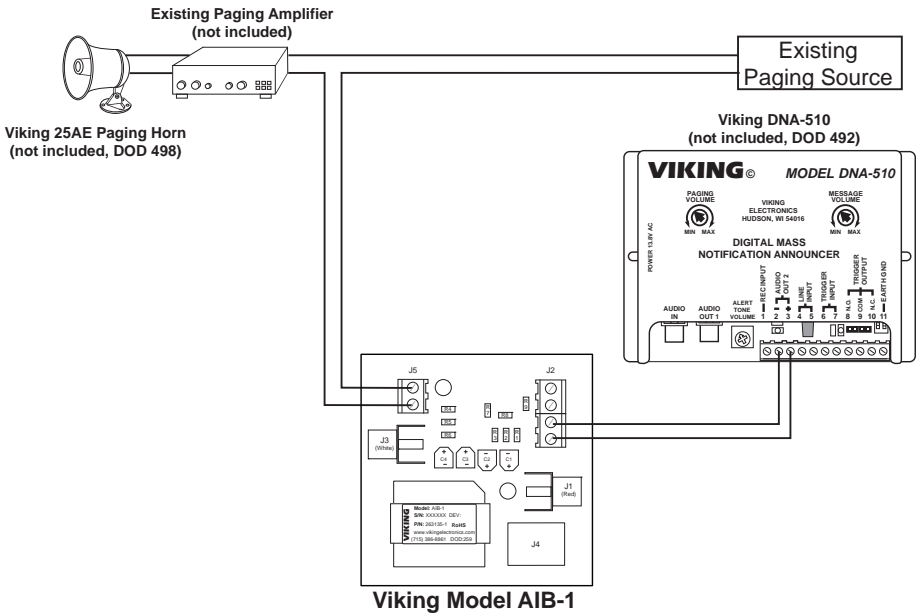
Analog Port  
programmed as  
“paging speaker”

DC current can flow

Avaya IP  
Office  
Phone  
Systems

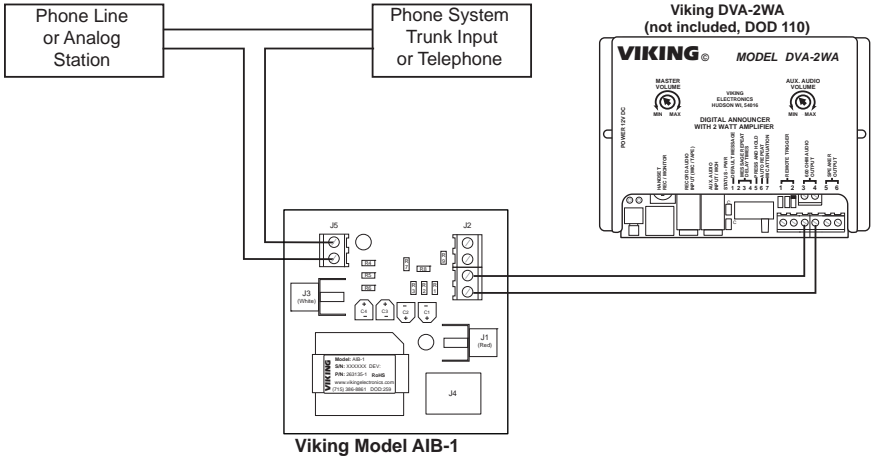
## D. Consolidating Two Audio Sources into One

The **AIB-1** can be used to add a second audio source to an existing source before going into a single input of an amplifier. For example the **AIB-1** can be used to add a clock controlled tone generator, or a mass notification / evacuation announcer such as the Viking models **CTG-2A** or **DNA-510**. The second audio source is connected to the input of the **AIB-1** and its output is connected in series with the existing audio source. See example below.



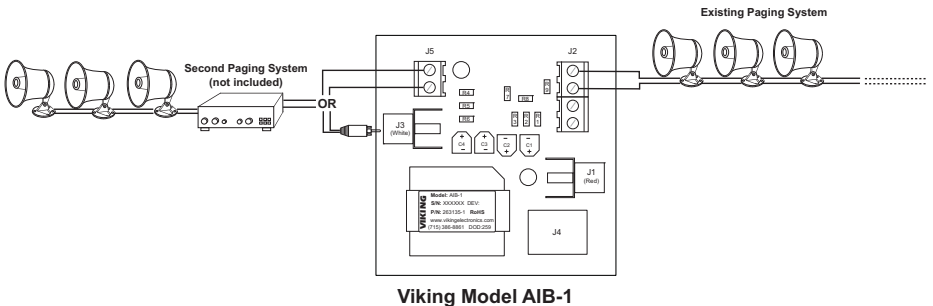
## E. Injecting Audio into a Phone Line

The **AIB-1** can be used to inject audio from an audio source such as the Viking model **DVA-2WA** into an analog phone line or analog station of a phone system. The audio source is connected to the input of the **AIB-1** and its output is connected in series with either Tip or Ring of the phone line. See example below.



## F. Daisy Chain a Paging System Speaker Output into a Second Power Amplifier

The **AIB-1** can be used to connect the speaker output of one paging system into the input of another paging system. This can prove useful when a paging system has reached the limits of its capabilities, and additional paging speakers need to be added further out on that run. The first paging system's speaker output is connected to the **AIB-1** speaker input. The **AIB-1** output is then connected to the input of a second paging system. See example below.



## Warranty

### IF YOU HAVE A PROBLEM WITH A VIKING PRODUCT, CONTACT: VIKING TECHNICAL SUPPORT AT 715-386-8666

Our Technical Support Department is available for assistance Monday through Friday 8:00am - 5:00pm central time. So that we can give you better service, before you call please:

1. Know the model number, the serial number and what software version you have (see serial label).
2. Have your Product Manual in front of you.
3. It is best if you are on site.

### RETURNING PRODUCT FOR REPAIR

The following procedure is for equipment that needs repair:

1. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (RA) number. The customer MUST have a complete description of the problem, with all pertinent information regarding the defect, such as options set, conditions, symptoms, methods to duplicate problem, frequency of failure, etc.
2. Packing: Return equipment in original box or in proper packing so that damage will not occur while in transit. Static sensitive equipment such as a circuit board should be in an anti-static bag, sandwiched between foam and individually boxed. All equipment should be wrapped to avoid packing material lodging in or sticking to the equipment. Include ALL parts of the equipment. C.O.D. or freight collect shipments cannot be accepted. Ship cartons prepaid to: **Viking Electronics, 1531 Industrial Street, Hudson, WI 54016**
3. Return shipping address: Be sure to include your return shipping address inside the box. We cannot ship to a PO Box.
4. RA number on carton: In large printing, write the R.A. number on the outside of each carton being returned.

### RETURNING PRODUCT FOR EXCHANGE

The following procedure is for equipment that has failed out-of-box (within 10 days of purchase):

1. Customer must contact Viking's Technical Support at 715-386-8666 to determine possible causes for the problem. The customer MUST be able to step through recommended tests for diagnosis.
2. If the Technical Support Product Specialist determines that the equipment is defective based on the customer's input and troubleshooting, a Return Authorization (R.A.) number will be issued. This number is valid for fourteen (14) calendar days from the date of issue.
3. After obtaining the R.A. number, return the approved equipment to your distributor, referencing the R.A. number. Your distributor will then replace the Viking product using the same R.A. number.
4. **The distributor will NOT exchange this product without first obtaining the R.A. number from you. If you haven't followed the steps listed in 1, 2 and 3, be aware that you will have to pay a restocking charge.**

### TWO YEAR LIMITED WARRANTY

Viking warrants its products to be free from defects in the workmanship or materials, under normal use and service, for a period of two years from the date of purchase from any authorized Viking distributor. If at any time during the warranty period, the product is deemed defective or malfunctions, return the product to Viking Electronics, Inc., 1531 Industrial Street, Hudson, WI., 54016. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (R.A.) number.

This warranty does not cover any damage to the product due to lightning, over voltage, under voltage, accident, misuse, abuse, negligence or any damage caused by use of the product by the purchaser or others. This warranty does not cover non-EWP products that have been exposed to wet or corrosive environments. This warranty does not cover stainless steel surfaces that have not been properly maintained.

NO OTHER WARRANTIES. VIKING MAKES NO WARRANTIES RELATING TO ITS PRODUCTS OTHER THAN AS DESCRIBED ABOVE AND DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

EXCLUSION OF CONSEQUENTIAL DAMAGES. VIKING SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE TO PURCHASER, OR ANY OTHER PARTY, FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR EXEMPLARY DAMAGES ARISING OUT OF OR RELATED TO THE SALE OR USE OF THE PRODUCT SOLD HEREUNDER.

EXCLUSIVE REMEDY AND LIMITATION OF LIABILITY. WHETHER IN AN ACTION BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE OR STRICT LIABILITY) OR ANY OTHER LEGAL THEORY, ANY LIABILITY OF VIKING SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT, OR AT VIKING'S OPTION, REFUND OF THE PURCHASE PRICE AS THE EXCLUSIVE REMEDY AND ANY LIABILITY OF VIKING SHALL BE SO LIMITED.

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**Product Support: 715-386-8666**

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