

# TECHNICAL Practice

TELECOM SOLUTIONS FOR THE 21ST CENTURY

**FBI-1A**  
**Anti-Feedback**  
**Paging Interface**  
 March 12, 2012

## Totally Eliminate Paging Feedback



Even the best designed paging systems can experience feedback. Now you can eliminate annoying feedback over your paging speakers with Viking's model **FBI-1A** digital anti-feedback paging interface.

The **FBI-1A** utilizes state of the art digital recording technology to record the "live" page from a phone system's paging port output or unused trunk port. The **FBI-1A** then immediately plays back the recorded page once or twice (selectable) over the paging system.

Pages of up to 32 seconds can be stored and the **FBI-1A** automatically adjusts to the page length for faster processing. In addition, the **FBI-1A** can be programmed to provide pre-page and post-page alert tones.

## Features

- High quality (80K/40K) digital message storage
- High output - 2V RMS into 600 ohms
- 16 or 32 second record time (DIP switch selectable)
- Compatible with Paging ports or Trunk ports
- Activate recording from VOX detection, contact closure or loop detect (Trunk mode only)
- VOX sensitivity adjustment
- Cancel page feature
- Selectable page repeat
- Selectable pre-page alert tone
- Selectable post-page alert tone
- Adjustable alert tone volume
- N.O./N.C. relay contacts control paging system
- Record/Playback LED indicator
- Compatible with virtually all paging and telephone systems

<http://www.vikingelectronics.com>

## Applications

### Eliminate Paging Feedback in:

- Warehouses, Factories, Offices
- Retail Stores, Hotels, Airports
- Stadiums, School Gymnasiums, Pools
- Casinos, Bingo Halls, Dining Establishments
- Other large noisy areas

*Phone...715.386.8861*  
*info@vikingelectronics.com*

## Specifications

**Power:** 120V AC/13.8V AC 1.25A, UL listed adapter provided  
**Dimensions:** 133mm x 89mm x 44mm (5.25" x 3.5" x 1.75")  
**Shipping Weight:** 0.73 kg (1.6 lbs)  
**Environmental:** 0°C to 32°C (32°F to 90°F) with 5% to 95% noncondensing humidity  
**Sampling Rate:** 80K/40K (equivalent)  
**Maximum Page Length:** 16/32 seconds (DIP switch selectable)  
**Output Impedance:** 600 ohm  
**Maximum Audio Output:** 2V RMS (driving a 600 ohm load)  
**Talk Battery:** 24V DC (Trunk mode only)  
**Connections:** 13 cage clamp screw terminals

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

Our Technical Support Department is available for assistance Monday 8am - 4pm and Tuesday through Friday 8am - 5pm 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 Technical Practice 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 product over the counter at no charge. The distributor will then return the product to Viking 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.**

### 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 one year from the date of purchase from any authorized Viking distributor or 18 months from the date manufactured, whichever is greater. 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.

**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.

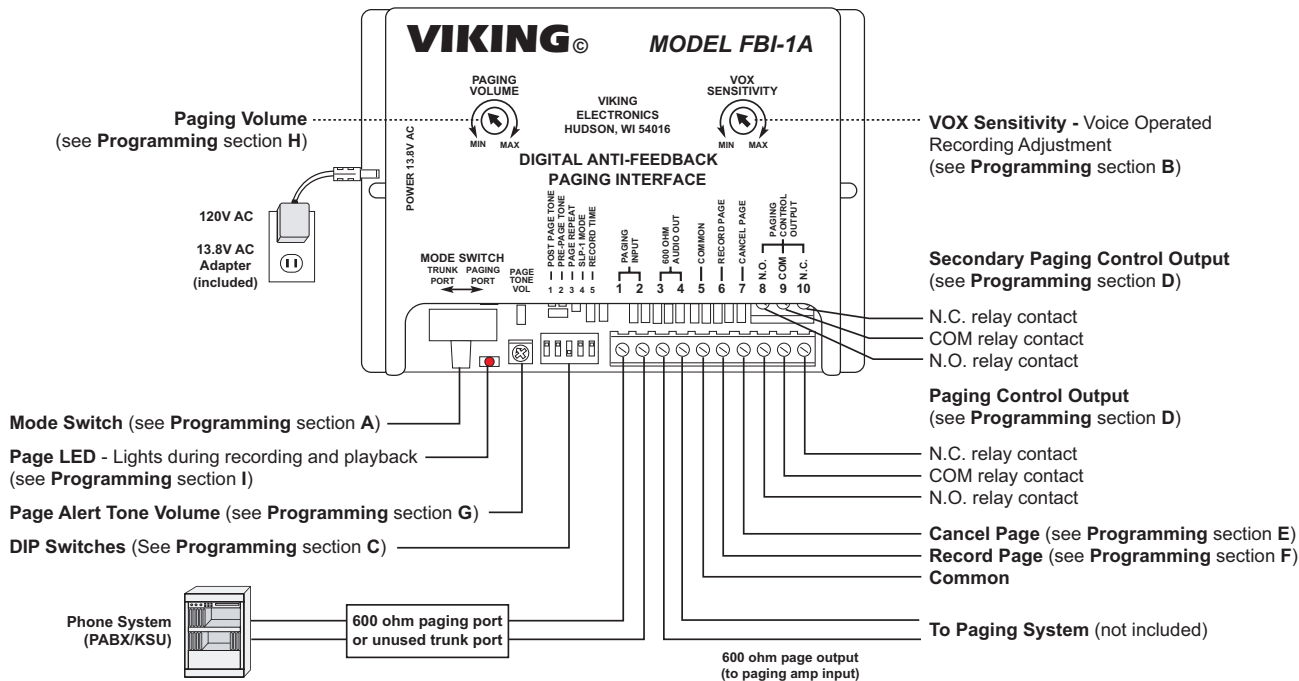
**EXCLUSIVE REMEDY AND LIMITATION OF LIABILITY.** WHETHER IN AN ACTION BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE OR STRICT LIABILITY) OR ANY OTHER LEGAL THEORY, ANY LIABILITY OF VIKING SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT, OR AT VIKING'S OPTION, REFUND OF THE PURCHASE PRICE AS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

IT IS EXPRESSLY UNDERSTOOD AND AGREED THAT EACH AND EVERY PROVISION OF THIS AGREEMENT WHICH PROVIDES FOR DISCLAIMER OF WARRANTIES, EXCLUSION OF CONSEQUENTIAL DAMAGES, AND EXCLUSIVE REMEDY AND LIMITATION OF LIABILITY, ARE SEVERABLE FROM ANY OTHER PROVISION AND EACH PROVISION IS A SEPARABLE AND INDEPENDENT ELEMENT OF RISK ALLOCATION AND IS INTENDED TO BE ENFORCED AS SUCH.

## Installation



**IMPORTANT:** Electronic devices are susceptible to lightning and power station electrical surges from both the AC outlet and the telephone line. It is recommended that a surge protector be installed to protect against such surges.



## Programming

### A. Mode Switch

In the Trunk Port position, 24V talk battery is supplied for connecting the **FBI-1A** paging input to a phone system's unused trunk port. In the Paging Port position, a 600 ohm audio input is supplied for connecting to a phone system's paging port output.

### B. VOX Sensitivity

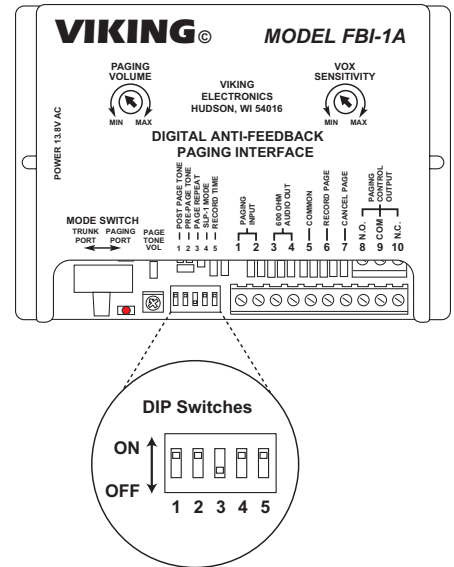
If the **FBI-1A** is installed on a phone system's paging port that does not supply a page control contact (normally open relay contact that closes while the paging port is activated) the VOX (Voice Operated Recording) feature may be used. The VOX sensitivity may require adjustment. Rotate the POT clockwise to increase the sensitivity for low level input signals (see Programming section I).

**Note:** The VOX (Voice Operated Recording) feature is not used in the trunk mode or when a page control contact is connected to the record page input of the **FBI-1A** to trigger the recording. In these applications, set the VOX sensitivity to the minimum level.

## C. DIP Switch Programming

Switch	Position	Description
1	ON	Enables the post page tone - a high tone after the page
1	OFF	Disables the post page tone
2	ON	Enables the pre-page tone - a low tone before the page
2	OFF	Disables the pre-page tone
3	ON	Enables page repeat - the message is played twice
3	OFF	Disables page repeat
4	ON	Enables <b>SLP-1</b> mode - the paging control outputs activate during record and playback
4	OFF	Disables <b>SLP-1</b> mode - the paging control outputs activate during playback only
5	ON	Standard record time - 16 seconds (high quality/80K)
5	OFF	Extended record time - 32 seconds (low quality/40K)

**Note:** DIP Switches are shown in the factory default positions.



## D. Paging Control Output

If required, these optional relay contacts can control your paging system. The contacts can be set to activate during page playback or during recording and playback (see **Programming** section C).

## E. Cancel Page Input

The **FBI-1A** is capable of cancelling a page in progress. Connect the **Cancel Page Input** to a normally open remote switch or button at the receptionist's desk. Momentarily pressing the button will cancel the page in progress (during recording or playback).

## F. Record Page Input

Connect the **Record Page Input** to the normally open paging control contact of your phone system. Place the VOX sensitivity POT in the "MIN" position. The **FBI-1A** will record the page while the contact closure is maintained. **Note:** Using the Record Page Input is preferred over using the VOX circuit to control recording.

## G. Page Alert Tone Volume

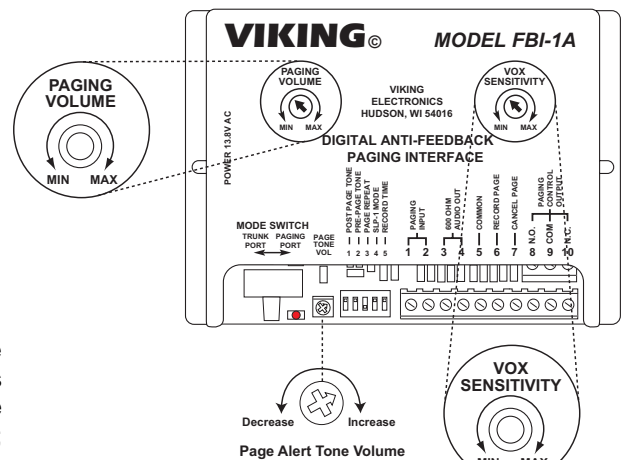
The **FBI-1A** has a POT for adjusting pre-page and post-page alert tone levels (see diagram, right).

## H. Paging Volume

Rotate the **Paging Volume** POT clockwise to increase the paging volume and counter-clockwise to decrease the paging volume (see diagram, right).

## I. Page LED

This is a recording and playback indicator. When recording in the **Trunk Port** mode, the LED will light steady while the phone system's trunk port is accessed. When recording in the **Paging Port** mode, the LED can be used as a maximum VOX sensitivity adjustment indicator; the LED should flash only when the paging port is accessed and paging audio is present, if the LED lights steady when the paging port is not accessed, the VOX sensitivity is set too high and should be decreased until the LED turns off (see **Programming** section B). During playback in either mode, the LED will light steady for the entire duration of the message playback.



# Operation

## A. Trunk Port Mode

**Important:** The **MODE SWITCH** must be in the **TRUNK PORT** position.

1. Access the phone system's trunk port that is interfaced to the **FBI-1A**.
2. Announce the page.
3. Hang-up.

**Note:** The **FBI-1A** will record the entire time the trunk port is off hook. It is important that you hang-up immediately after announcing the page to avoid recording silence.

## B. Paging Port Mode

**Important:** The **MODE SWITCH** must be in the **PAGING PORT** position.

1. Access the phone system's paging port.
2. Announce the page.
3. Hang-up.

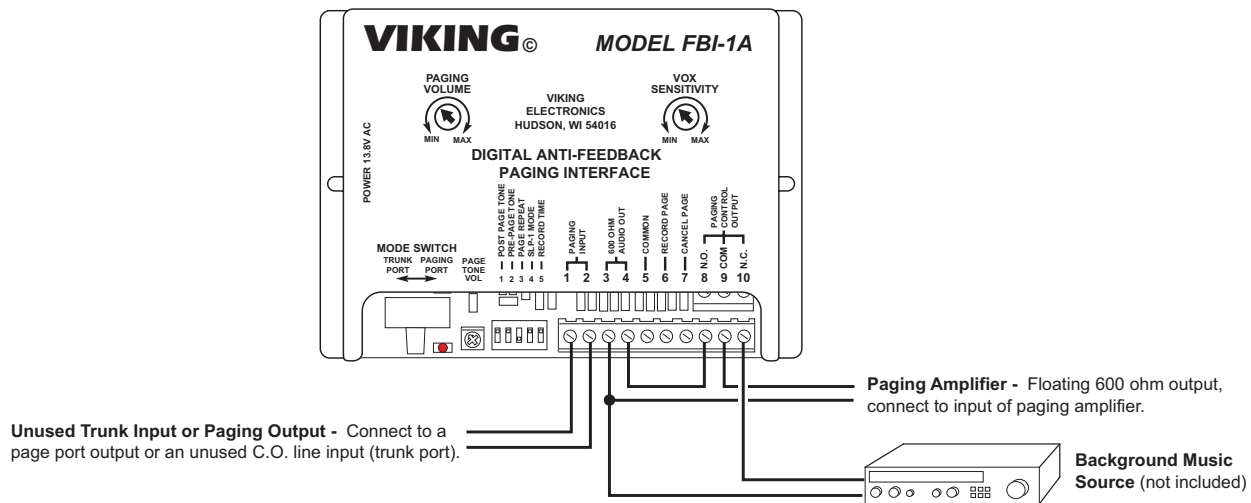
If you are using the **Record Page Input** (see **Programming** section F), the **FBI-1A** will record the entire time you are off hook on the paging port. It is important to hang-up immediately after announcing the page to avoid recording silence.

If you are NOT using the **Record Page Input**, the **FBI-1A's** VOX (voice activated recording) circuit will sense the paging audio and automatically begin recording the page. The **FBI-1A** will continue to record until 2 seconds of silence is detected. The **FBI-1A** will then playback the recorded page. In this mode, the VOX sensitivity may require adjustment (see **Programming** section B).

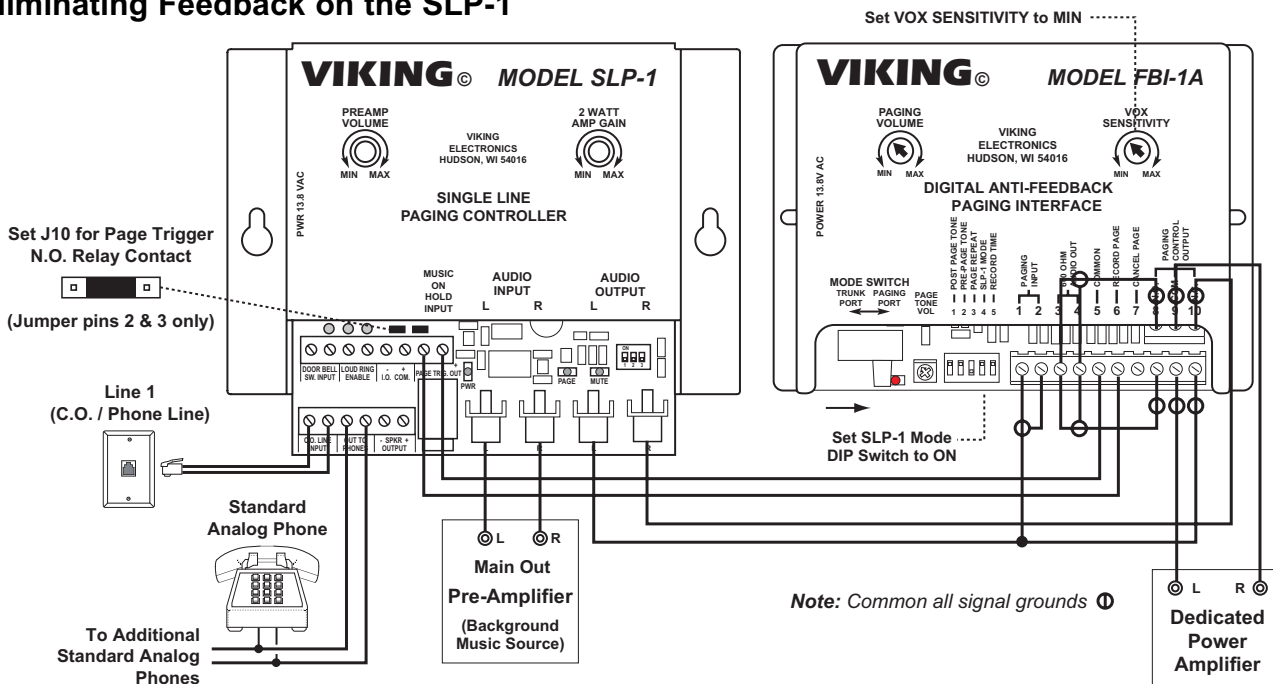
**Note:** For both modes, if the page exceeds the recording time, you will hear two error beeps in the handset before the page is played. On systems that do not use the paging control output (see **Programming** section D), the error beeps will play over the paging system before the page.

# Application

## A. Sharing an Amplifier Input with Background Music



## B. Eliminating Feedback on the SLP-1



Due to the dynamic nature of the product design, the information contained in this document is subject to change without notice. Viking Electronics, and its affiliates and/or subsidiaries assume no responsibility for errors and omissions contained in this information. Revisions of this document or new editions of it may be issued to incorporate such changes.