Designed, Manufactured and Supported in the USA

VIKING
SECURITY & COMMUNICATION

PRODUCT MANUAL

PB-100
Polling Bridge and Phone Line Interface
March 17, 2023

Multi-Purposed PC to Phone Line Bridge with Application Software

The **PB-100** is used to provide status polling of Viking **1600A** Series Emergency Phones or remote programming of **AES-2000** Entry Systems. The **PB-100** can connect to an unused serial port on your PC or use the included RS-232 to USB converter cable to connected to a USB port. Downloadable software is available with these two applications along with software for programming other Viking products.

When used to poll **1600A** Series Emergency Phones, the application software allows the user to set up a list of phones to call along with a scheduled time for calling. Through the **PB-100**, each phone can be called, its ID code verified and it's mic and speaker tested. When finished, the application software logs the time of the call and the results.

When programming an **AES-2000,** the application software allows the user to manage multiple units with resident's phone numbers and access codes. By using a standard telephone connected to the **PB-100**, the recording of each tenant's name can be done. The software also supports delayed uploading the downloaded statistics.

Note: The PB-100 utilizes an internal modem for programming. This requires an analog phone line or VoIP line with a high quality network connection and non-compressing codec, see page 3.

Features

- Compatible with Windows XP and up
- USB to RS-232 cable provided
- Audio out jack for monitoring

Applications

Software Provided for:

- **1600A Series** Emergency Phone Polling

- Remotely program the **AES-2000** (DOD 202) and **AES-2005** (DOD 204) Accessible Entry Systems

- Hotel / Motel Wake Up Calling

Specifications

Power: 120V AC/12V DC 500mA, UL listed adapter provided
Dimensions: 5" x 5" x 1.5" (127mm x 127mm x 25mm)
Weight: 3 lbs (1.36 kg)
Environmental: 32°F to 90°F (0°C to 32°C) with 5% to 95% non-condensing humidity
**PC Interface:** 9-pin RS-232 or USB port (cable included)
Software/Hardware Requirements:
- IBM Compatible personal computer with an available serial port
- Windows: XP and up

www.VikingElectronics.com
Information: 715-386-8861

Hardware Installation

The **PB-100** comes complete with a telco cord, USB to RS-232 converter cable, audio cables, and a 12V DC power adapter.

Step 1	Using the telco cord, connect a phone line to the rear panel jack labeled "**LINE**". If the **PB-100** is to be used to make AES-2000 audio recordings a standard phone can be plugged into the "**PHONE**" jack.
Step 2	Connect one end of a 9 pin serial cable (not included) into the jack labeled "**SERIAL DATA**" and the other end into an open serial port of the PC. If a serial port or serial cable is not available, use the included RS-232 to USB cable to connect to a USB port. Do not plug in the USB TO RS-232 Cable until the USB driver is installed. See the Software and Installation section.
Step 3	If audio is to be used through the **PB-100**, connect the "Audio In" or "Mic In" of the sound card to the "**AUDIO OUT**" port of the **PB-100**.
Step 4	Plug the 12V DC power adapter (included) into the rear panel power jack.
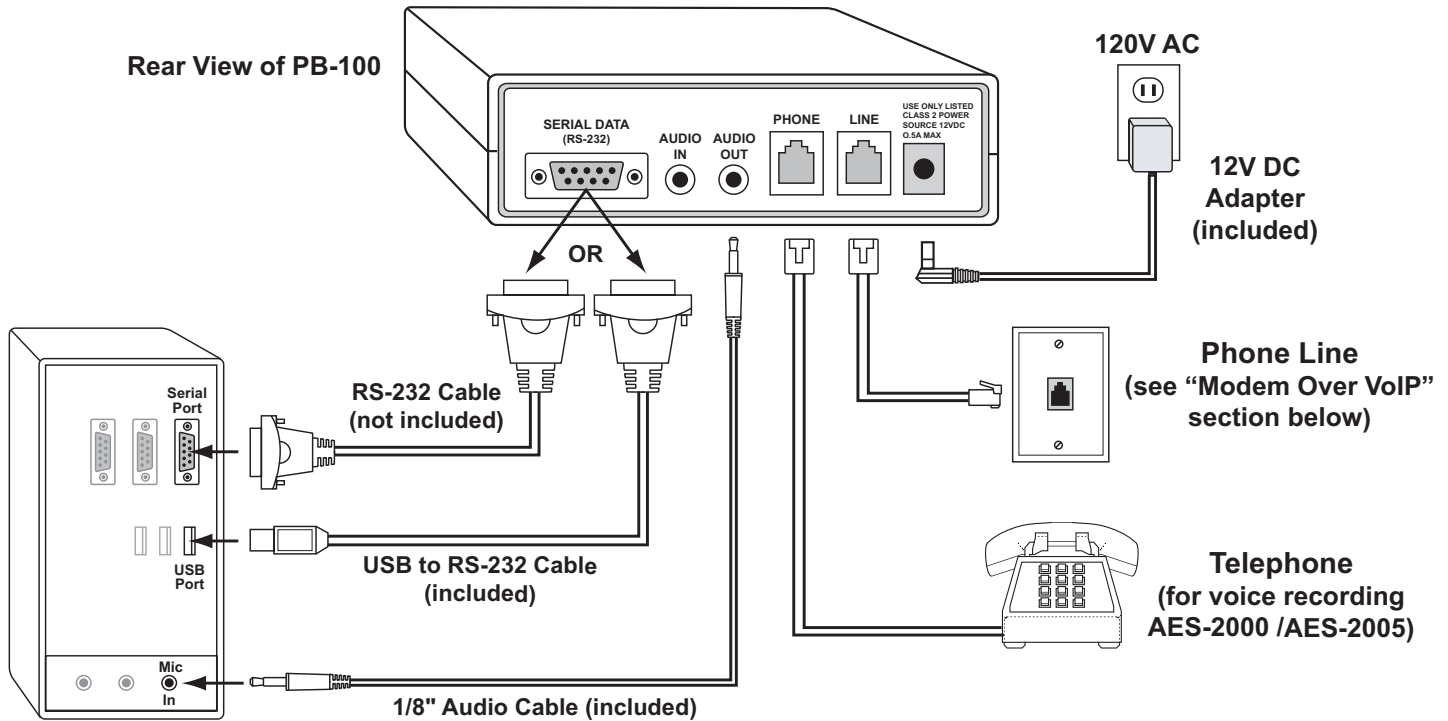
Modem Over VoIP

If you are replacing an analog PSTN (Public Switched Telephone Network) or POTS (Plain Old Telephone Service) line with VoIP service, be aware that the following Viking models utilize internal modems for programming: **AES-2000**, **AES-2005**, **PB-100** and **CTG-2**.

The problem is that the codecs used by VoIP ATA's (Analogue Terminal Adapter) are designed to compress voice, not the analog signals sent and received by modems. A second problem is if a non-compressing codec is used, the transmission will be very sensitive to network QoS (Quality of Service), i.e. packet loss, jitter, and latency will be issues. To successfully use data modems over a VoIP connection you will need a minimum of:

- A non-compressing codec such as ITU G.711
- A high quality network connection

Software and Installation

A. USB to RS-232 Converter Cable Driver Installation

Before plugging the RS-232 Converter Cable into your PC, a USB Software Driver must be installed. Locate the CD ROM that was supplied with the **PB-100** and insert it into your PC's CD ROM drive. Follow the instructions on the screen. Once the driver is installed, the USB to RS-232 Cable can be plugged into an unused USB port on your PC.

B. Downloadable Software (go to www.VikingElectronics.com/products/PB-100)

The **PB-100** hardware can runs several different applications. The following is a brief description of the software.

1. 1600A Series Polling Software

This software will automatically test the functionality of **1600A Series** emergency telephones on a repeating schedule. It can use up to (10) **PB-100**'s at once to dial each phone and test it for ID codes and microphone/speaker function, keeping a time-stamped log of all results. The software can also be used to automatically program units in the field.

2. AES-2000 Programming Software

The **AES-2000** Accessible Entry System can be programmed remotely using the **PB-100** and the **AES-2000** Programming Software. Both data and audio can be uploaded to the **AES-2000** including names, phone numbers, audio queues and other required programming variables. For more information, see **DOD 202**.

3. Smart Terminal Diagnostic Software

Smart Terminal is diagnostic program that allows the user to send and receive data directly to a COM port of your PC. ASCII, Hex and Decimal data can be entered, decoded and sent out the selected ports. Two separate display areas allow the user to view data coming in on either port. This utility is useful for troubleshooting the connection between the **PB-100** and your PC. If an "H" followed by Enter is received by the **PB-100**, it will send back a "K" and a carriage return. Do this to assure you have the correct com port configured for the **PB-100**.

4. Wake Up Caller Software

This software allows a small hotel or motel to use the **PB-100** to make scheduled wake up calls to any phone number. Set up alarms to repeat on certain days, announce the time and play a message.

C. Hardware Requirements

- IBM compatible personal computer with Windows XP and up
- **PB-100** hardware
- Male sub-D 9 pin cable or USB to RS-232 converter cable (provided with **PB-100** hardware)

- Available RS-232 serial port or USB port
- Windows compatible sound card
- 5MB minimum free hard drive space for each installation
- 8MB of free physical RAM for each **Viking** application running

D. Installing Viking PB-100 Software

| Step 1	On your PC go to: **www.vikingelectronics.com/products/pb-100/**
Step 2	On the right side of the page under **SOFTWARE & DOWNLOADS**, click the desired application.
Step 3	Once downloaded onto your PC, double-click the file to install and follow the directions.

Important: The steps listed above are a general guideline for installing Viking software on Windows 10 systems. Installing software on your PC may be performed differently than shown.

E. Uninstalling Viking PB-100 Software

Step 1	On your PC go to "**Control Panel**", then select "**Programs and Features**".
Step 2	Select the **Viking** software you want to remove.
Step 3	Click "**Uninstall**".

Important: The steps listed above are a general guideline for uninstalling Viking software on Windows 10 systems. Uninstalling software on your PC may be performed differently than shown.

Programming
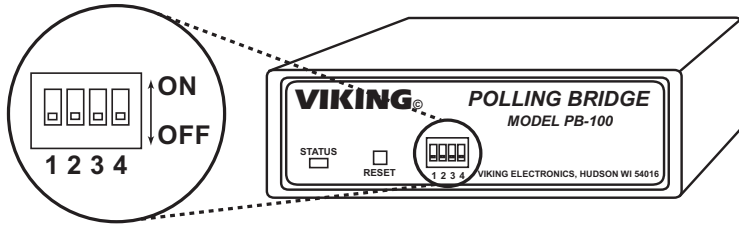
Switch	Position	Description
1	OFF	**1600A Series** polling mode enabled
1	ON	**1600A Series** polling mode disabled
2	OFF	**AES-2000** programming disabled
2	ON	**AES-2000** programming enabled
3	OFF	**1600A Series** mic/speaker test disabled
3	ON	**1600A Series** mic/speaker test enabled
4	OFF	Audio attenuation disabled
4	ON	Audio attenuation enabled

A. 1600A Series Polling

For polling **1600A Series** products, set dip switches 1 and 3 to ON, 2 and 4 to OFF.

B. AES-2000 / AES-2005 Programming

Using the **PB-100** is the only way to program the **AES-2000** and **AES-2005**. The **PB-100** provides the modem for data transmission as well as a phone connection for recording the audio directory. Dip switches 1 and 2 must be in the ON position 3 and 4 OFF. On some phone lines, there may be excessive noise and the **AES-2000** may have trouble receiving the data from the **PB-100**. If this happens, set dip Switch 4 to the ON position to attenuate the unwanted noise.

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 to Friday 8:00am - 5:00pm central time. So 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 the 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. The original product boxes are not designed for shipping - an overpack box is required to prevent damage 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 RA 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 (RA) number will be issued. This number is valid for fourteen (14) calendar days from the date of issue.

3. After obtaining the RA number, return the approved equipment to your distributor. Please reference the RA number on the paperwork being shipped back with the unit(s), and also the outside of the shipping box. The original product boxes are not designed for shipping - an overpack box is required to prevent damage in transit. Once your distributor receives the package, they will replace the product over the counter at no charge. The distributor will then return the product to Viking using the same RA number.

4. The distributor will NOT exchange this product without first obtaining the RA 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.

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Product Support: 715-386-8666

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