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 connect 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 its 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
• Remote programming of AES-2000 and AES-2005 Accessible Entry Systems (DOD 202, 204)
• 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

Phone: 715-386-8861
info@vikingelectronics.com
www.VikingElectronics.com
**Warranty**

**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 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 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. Pack: 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 individual-ly 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.

**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.

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 SEPARATE AND INDEPENDENT ELEMENT OF RISK ALLOCATION AND IS INTENDED TO BE ENFORCED AS SUCH.

**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.
A. 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 programs.

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. System Requirements

1. Hardware Requirements
   - IBM Compatible personal computer with: Windows XP and up
   - PB-100 hardware
   - Available RS-232 serial port or USB port
   - Male sub-D 9 pin cable or USB to RS-232 converter cable (provided with PB-100 hardware)
   - 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 Software

| Enter PB-100 in the search box at the top of the page |
| Under Products and News click on the PB-100 product |
| On the PB-100 product page scroll down to downloads section |
| Click on the desired application |
| Once loaded onto your PC, click on the installation |
| Follow the directions on the screen. |

E. Un-Installing Software

| Step 1. Go to "Control Panel", then select "Add/Remove Programs". |
| Select the Viking software you want to remove. |
| Click "Remove". |

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### Programming

<table>
<thead>
<tr>
<th>Switch</th>
<th>ON/OFF</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>OFF</td>
<td>1600A Series Polling mode enabled</td>
</tr>
<tr>
<td>1</td>
<td>ON</td>
<td>1600A Series Polling mode disabled</td>
</tr>
<tr>
<td>2</td>
<td>OFF</td>
<td>AES-2000 programming disabled</td>
</tr>
<tr>
<td>2</td>
<td>ON</td>
<td>AES-2000 programming enabled</td>
</tr>
<tr>
<td>3</td>
<td>OFF</td>
<td>1600A Series mic/speaker test disabled</td>
</tr>
<tr>
<td>3</td>
<td>ON</td>
<td>1600A Series mic/speaker test enabled</td>
</tr>
<tr>
<td>4</td>
<td>OFF</td>
<td>Audio attenuation disabled</td>
</tr>
<tr>
<td>4</td>
<td>ON</td>
<td>Audio attenuation enabled</td>
</tr>
</tbody>
</table>

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 Programming

Using the PB-100 is the only way to program the AES-2000. 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.

Product Support: 715-386-8666  Fax Back: 715-386-4345

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