VIKING

APPLICATION
Note

TELECOM SOLUTIONS FOR THE 21ST CENTURY

Provide Diagnostics and Polling to your ADA Compliant Emergency Phone Customers

The **PB-100** provides centralized polling and diagnostics of all Viking **1600** and **1600A** series emergency phones through a standard Windows 9x/NT P.C. In addition, any device or person capable of returning DTMF Touch Tones can be automatically polled.

Up to 500 individual phones can be polled, at timed intervals, for the diagnosis of basic operation. The included software provides storage of complete contact/location records associated with the phones ID.

Devices that are polled successfully are stored in a "success" log while devices that returned any kind of error are stored in a "failure" log for follow up at a later time.

Phone...715.386.8861

Features

- Compatible with Windows 95, 98, ME, NT 4.0, and 2000

- Non-volatile E² memory (no batteries required)

- Programmable polling date/time intervals

- Complete contact record storage up to 500 records

- Stores "Success" and "Failure" logs in ASCII text mole files

- 9-pin RS-232 cable included

- RS-232 ASCII command capabilities

- 20 digit Touch Tone buffer

- Dials Touch Tones **0-9**, **✳**, **#** and two second pauses

- Automatic line seizure

- One year limited warranty

info@vikingelectronics.com

http://www.vikingelectronics.com

Applications

- Polling emergency phones in...

  Elevators
  "Area of Refuge" sites
  Parking ramps
  Automated Tellers (ATM)
  Entryways
  Campus security sites
  Roadside emergency sites
  Stairwells in public buildings

- Polling any device that can return DTMF Touch Tones

- Polling security guards on rounds

Specifications

Power: 120V AC/12V DC 500mA, UL listed adapter provided
Dimensions: 127mm x 127mm x 25mm (5" x 5" x 1.5")
Weight: 1.36 kg (3 lbs.)
Environmental: 0°C to 32°C (32°F to 90°F) with 5% to 95% non-condensing humidity
P.C. Interface: 9-pin RS-232 (cable included)
Software/Hardware Requirements:
- IBM Compatible personal computer with an available serial port CD-rom drive, and Windows compatible sound card
- Windows: 95 or 98 (with OLE32 updates), NT 4.0 (service pack 6 or higher), 2000 (service pack 2 or higher)
- 5MB of hard drive space
- 8MB of free physical RAM

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Hardware Installation

The **PB-100** comes complete with a telco cord, serial 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 in series with another piece of equipment, the telecom device can be plugged into the "**PHONE**" jack.
Step 2.	Connect one end of the 9 pin serial cable into the jack labeled "**SERIAL DATA**" and the other end into an open serial port of the P.C.
Step 3.	If audio is to be used through the **PB-100**, connect the "Audio Out" port of the sound card to the "**AUDIO IN**" port of the **PB-100**, and "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.
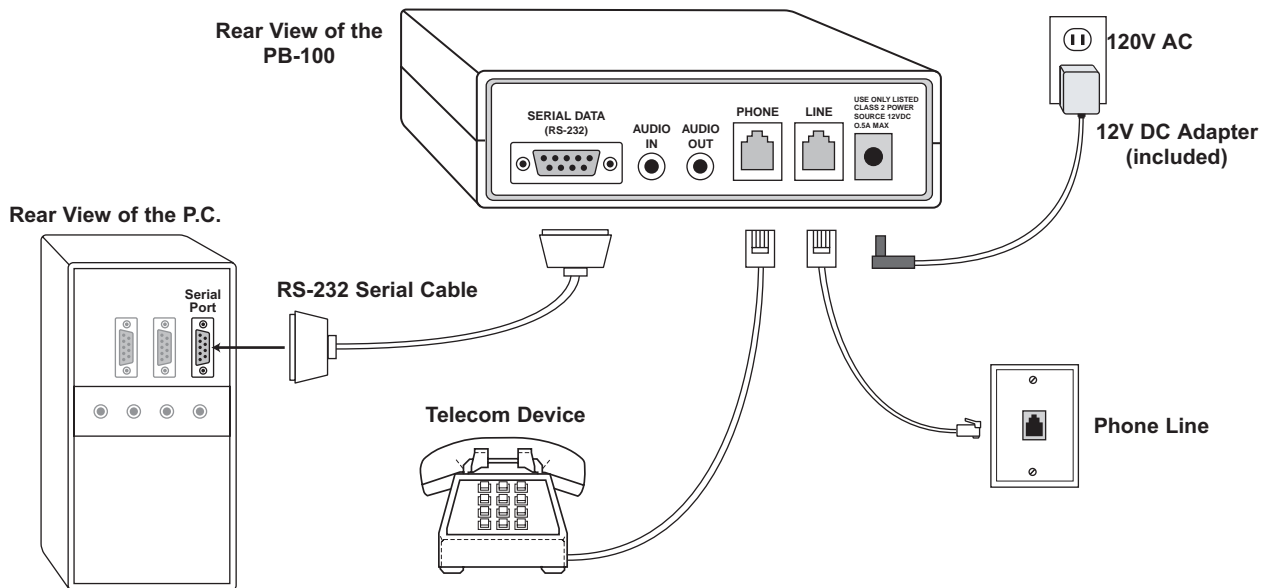
Software and Installation

A. About the Software

This software package was developed for use in conjunction with the Viking Electronics **PB-100** polling box. The **PB-100** is a multipurpose device capable of performing a large variety of equipment and personnel polling duties. The **PB-100** polling software directly supports the polling of any telecom device capable of returning DTMF Touch Tones, specifically the **1600A** Series Emergency Phones.

Each **PB-100** data file has the capacity to store information for up to 500 unique devices, any or all of which may be scheduled for polling on a timed basis. Since you may have multiple data files, the total number of polled devices is essentially unlimited.

Important: *Limitations are introduced by the logistics of dialing a number of devices at a particular time.* For example: if 15 different devices are scheduled for polling at 3:00pm, devices 2-15 device will naturally receive polling some time later than 3:00pm. If each polling event takes an average of 1 minute, device 15 will be polled sometime around 3:15pm. If new polling events are scheduled for 3:15pm, the new events will be integrated and polled with the 3:00pm group, already in progress. It is important to keep these practical limits in mind when setting up your polling schedule(s).

Note: The Polling Software will ONLY install and/or run on the Windows 95, 98, ME, NT 4.0, or 2000 platforms with the PB-100 hardware attached.

B. System Requirements

1. Hardware Requirements

- IBM Compatible personal computer with: Windows 95, 98 or ME (with OLE32 updates), Windows NT 4.0 (service pack 6 or higher), Windows 2000 (service pack 2 or higher).
- **PB-100** hardware.
- Available RS-232 serial port.
- Male sub-D 9 pin 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.

2. Software Requirements

- Internet Explorer or Netscape Navigator Version 4 or newer to navigate CD contents.
- Windows: 95 or 98 (with OLE32 updates), NT 4.0 (service pack 6 or higher), 2000 (service pack 2 or higher).
- Adobe Acrobat Reader® version 4.x or newer to view Product and Software Documentation.

C. Installing Software

|	
Step 1.	Connect the hardware as shown in "Hardware Installation".
Step 2.	Insert the **Viking** master CD to start the program.
Step 3.	Follow the instructions on the CD.

Note: If you have disabled the "Auto-Run" feature on your computer and the CD does not automatically start, double click the setup.htm file in the root directory of your CD-Rom drive.

D. Un-Installing Software

Step 1.	Go to "**Control Panel**", then select "**Add/Remove Programs**".
Step 2.	Select the **Viking** software you want to remove.
Step 3.	Click "**Remove**".

Programming

Switch	ON/OFF	Description
1	OFF	**1600A Series** polling mode enabled
1	ON	**1600A Series** polling mode disabled
2	-	(for future use)
3	-	(for future use)
4	-	(for future use)
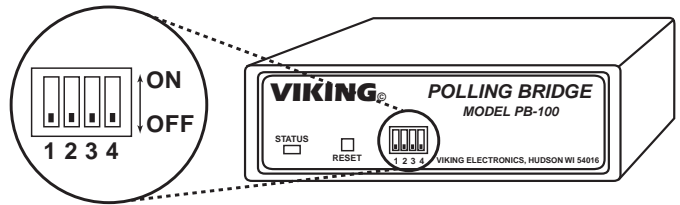
Software Programming

Important: New records entered and changes made to existing records are temporary until the "Apply" button is pressed and the file is saved to a drive. To avoid losing data, please "Save" your work often and always save before the program is terminated.

A. Serial Port Configuration (see Diagram A)

Serial communication with the **PB-100** is set to a fixed standard of 9600,n,8,1 and cannot be changed. Set your COM port setting in the Control Panel to match these configurations. The "COM Port Select" designation (1-4) is set on the "Utility" tab by selecting one of four radio buttons corresponding to the PC's COM ports. On most standard PCs, this will be either **COM1** or **COM2**. Refer to your P.C. hardware documentation if you are unable to determine which port to use for communicating with the **PB-100**.

Provided on the "Utility" tab window is a diagnostic tool for testing and verifying communications between the PC and the **PB-100**. To verify that communication with the **PB-100** is working, simply enter in the letter "A" in the "COM Port Send" window and then click the "Send" button. The "COM Port Receive" window should display a "K" if the **PB-100** is on-line. If this test fails, check your COM Port selection and serial cabling. Finally, verify that the **PB-100** has power.

Diagram A

B. Creating a New Data File (see Diagram A)

Select the "New" option under the "File" menu, and the user will be prompted to select a filename and location for the new data file. New **PB-100** data files are given the extension .pb1 by default. While the user may use any legal filename and/or extension for a **PB-100** data file, we recommend using the .pb1 extension to minimize confusion or possible conflicts with registered file types.

C. Opening a Device Record (see Diagram A)

If a device record already exists, it can be loaded by selecting the "File" menu and selecting "Open". The user may then browse directories and files on the system, and locate the **PB-100** data file (*.pb1) to load.
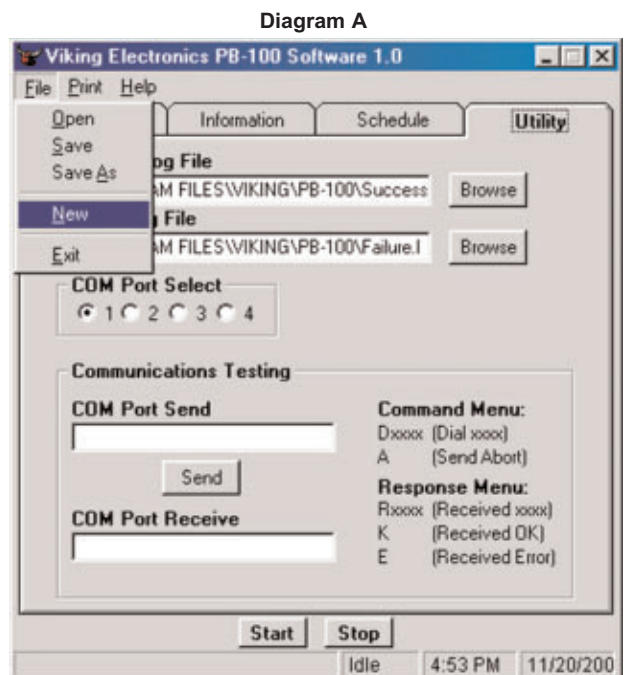
D. Entering Information for a Device (see Diagram B)

The **PB-100** Software allows a maximum of up to 500 individual device records to be entered into a single data file.

To enter an individual device record select the "Information" tab and click on the "New" command button (each additional device record is added by selecting "New").

Device ID Code (required) - Fill in the "Device ID Code" - all device records must have a ID number to be recognized by the software. This ID number corresponds to the touchtone string the called device must send in order to receive a successful response. The "Device ID Code" may contain digits **"0-9"**, **"#"**, or **"✱"**. While "Device ID Codes" need not be unique, we recommend using unique codes as standard practice.

Phone Number (required) - Next fill in the "Phone Number" that will be dialed for this device. For any polling to take place a Phone Number must be entered. The digits for the phone number can be **"(", ")"**, **"0-9"**, **"#"**, **"✱"**, **"-"** or **","** for a 2 second pause.

All other fields on the Information tab are for reference only and are not required, though they should be filled out to create a complete device record. These include "Company," "Street," City, State Zip," and "Device Notes."

Diagram B

E. The Success and Failure Logs

The "Success Log" and "Failure Log" files contain the accumulated response data for all completed polling events. When a polled device responds with the correct "Device ID Code," the information is logged into the "Success log," and then displayed in the corresponding window with the message "Received ID". In the event that a polled device fails to respond, or returns an incorrect response, the information is logged to the "Failure

Diagram C

Diagram D

Log," and then displayed in its corresponding window along with one of the following error messages: "No Response", "User Cancelled", "No Phone Number", "PB-100 error" or "Invalid ID". The location and names of these two files are set on the "Utility" tab and the files are saved as an ASCII text file. The default file names are success.log and failure.log respectively. If required, the user may change the name or location of either log file by using the "Browse" command button(s) to specify a location.

## F. Setting the Schedule for a Device (see Diagram E)

After the information for a device has been entered, a schedule for the polling process can be set up. To enter a schedule for a device click on the "Schedule" tab.

Response Timer - This timer controls how long the **PB-100** will wait (after dialing is completed) for the "Device ID Code" to be returned. Clicking on the up/down arrows will change the response time in 5 second increments, from 15 to 90 seconds.

Retry Count - This counter sets the number of times the **PB-100** will re-dial a device if there is no initial response (the Response Timer has elapsed). Clicking on the up/down arrows will change the retry count from 1 to 9 counts.

Poll Device - A device can be scheduled to be polled weekly on specified days of the week, or monthly on a particular date. The polling for a particular device may also be disabled. If "Weekly" is selected, check off any or all boxes for the day of the week the device should be polled. If "Monthly" is selected, enter the date for the polling to take place by clicking on the up/down arrows for this selection.

Poll Time - The time of day that polling should take place for a device is entered here. To change the polling time click on the up/down arrows to set the polling time, adjustable in 15-minute increments.
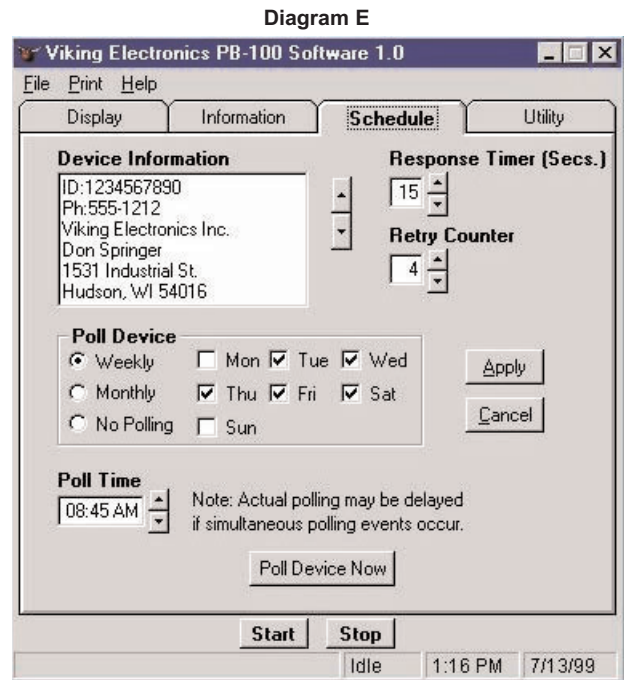
Diagram E

G. Accessing Other Device Records in a Data File (see Diagram E and F)

Using the up/down arrows in the middle of the "Information" or "Schedule" tabs, the user can click to select the next device record, or the previous device record in the currently loaded data file.

The user can sort the current data file by one of four criteria using the pull down menu on the "Information" tab. The records may be sorted by "Device ID Code", "Phone Number," "Company" or "Name." If required, sort the device record and re-save it to maintain the record in an order which suits your individual needs. After sorting by one of the four listed criteria, a specific record can be found by entering a search string in the "Find" window on the "Information" tab.

H. Modifying a Device Record (see Diagram E and F)

An individual device record can be modified at any time by selecting a particular field in the "Information" or "Schedule" tabs and altering the data. The changes are only temporary until the "Apply" command button is clicked on the "Information" or "Schedule" tab. Furthermore, unless the device record is then saved, the information will be lost once the program has been terminated.

Diagram F

## I. Deleting a Device Record (see Diagram F)

An individual device record can be deleted by clicking on the "Delete" button on the "Information" tab.

J. Cancelling a Change to a Device Record

(see Diagram F) If a field for a device record is modified by mistake, simply click on the "Cancel" command button on the "Information" or "Schedule" tab. *Note: The Cancel button cannot undo changes once a record has been saved.*

K. Saving a Device Record (see Diagram F)

New records entered and changes made to existing records are temporary unit the "Apply" button is pressed and the file is saved to a drive. To avoid losing data, please "Save" your work often and always save before the program is terminated. To save a device record(s) simply select the "File" menu item and select "Save" if the file exists already, or "Save As" if a new record is being created. **PB-100** data files are saved with a .pb1 extension by default.
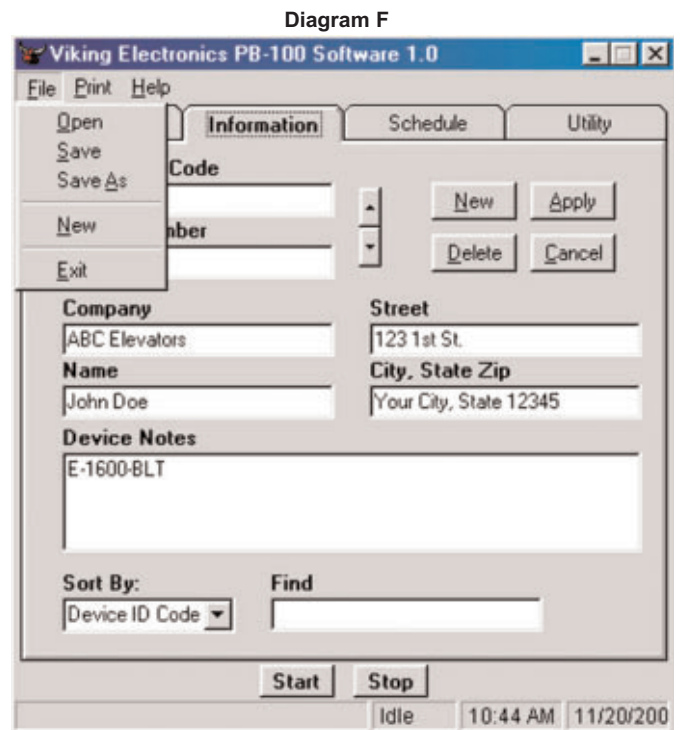
Operation

A. Start, Stop and Clear Buttons (see Diagram G)

Clicking the "Start" command button at the bottom of any **PB-100** tab starts the polling process with the current data record. The software initially checks to see if a **PB-100** is connected. If a **PB-100** is found, the polling software checks (starting from the first record) if the PC clock is greater than the assigned polling time. If so, the Polling software automatically dials the phone number associated with the device to be polled and then waits for a response. If a valid "Device ID Code" is received the information is logged to the "Success Log" with the message "ID Received". If the polled device fails to respond within the time allotted by the "Response Timer" setting, then the polling software will either log "No Response" to the "Failure Log", or try to poll again if the "Retry Counter" is set to greater than one. If the polled device responds with an "Invalid ID", the "Error Log" will receive "Invalid ID:" followed by the actual ID received. Other possible Failure log errors are "User Cancelled", "No Phone Number", or "PB-100 error".

The user may interrupt the polling process at any time by clicking the "Stop" button. When polling is manually stopped, the information for the device currently being polled will be logged to the "Failure Log" with the message "User Cancelled".

If polling is not currently in progress, the user may clear the "Success Log" or "Failure Log" displays by clicking the appropriate "Clear" button on the "Display" tab. It is worth noting that this action does not clear the success.log and failure.log files. To clear these files, browse to their locations and manually delete them. New success.log and failure.log files will be created the next time the **PB-100** software is used.

Diagram G

B. The Display Window (see Diagram G)

The "Display" window shows the current polling activity in LIFO (Last In, First Out) fashion. Thus, the device record response at the top of the display is always the most recent response received. If the polling activity is stopped, the display logs can be scrolled through using their scroll bars and buttons. In addition, if more information is required on a specific device record, double click the "Device ID Code" (ID:) or a telephone number (Ph:) in the record in either display window. This action brings up the "Information" tab, which will then display the full record for that device.

C. Poll Now (see Diagram H)

The user can select a particular device record by any of the previously described methods, and then switch to the Schedule tab to poll the device manually. Clicking on the "Poll Device Now" button will immediately perform polling for the selected device. Clicking "Poll Device Now" polls only the device record listed and then halts. The "Poll Device Now" feature is a valuable tool to verify that a new or modified device record contains the correct telephone number and "Device ID Code."

Diagram H

D. Printing Records (see Diagram H)

By selecting the "Print" menu item the "Current Record," "Success Log," or "Failure Log" may be output to a printer. Printing the "Current Record" prints only the single record listed on the Information tab, while printing the "Success" or "Failure" Logs prints only the response records currently shown in the "Display" tab.

Note: *The Print menu option does not allow you to print the contents of the success.log or failure.log to the printer. To print out the entire log files simply use a text editor program such as Notepad or Microsoft Word to open the success.log or failure.log file and print them from within the text editor program.*
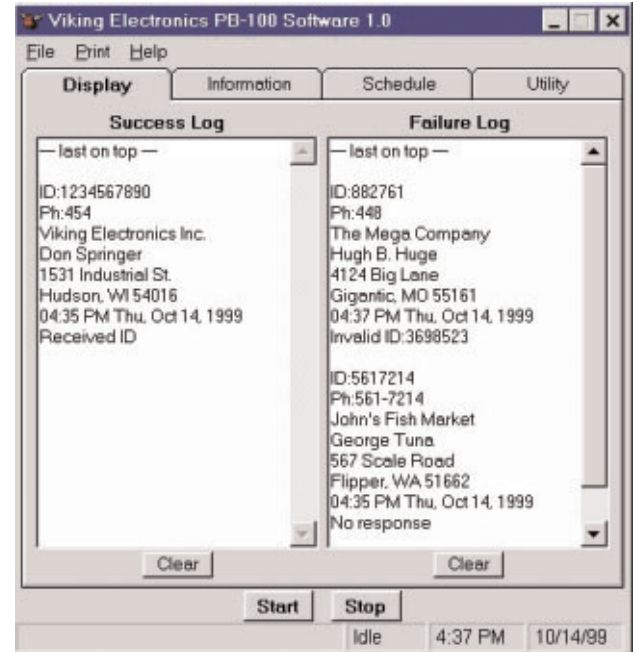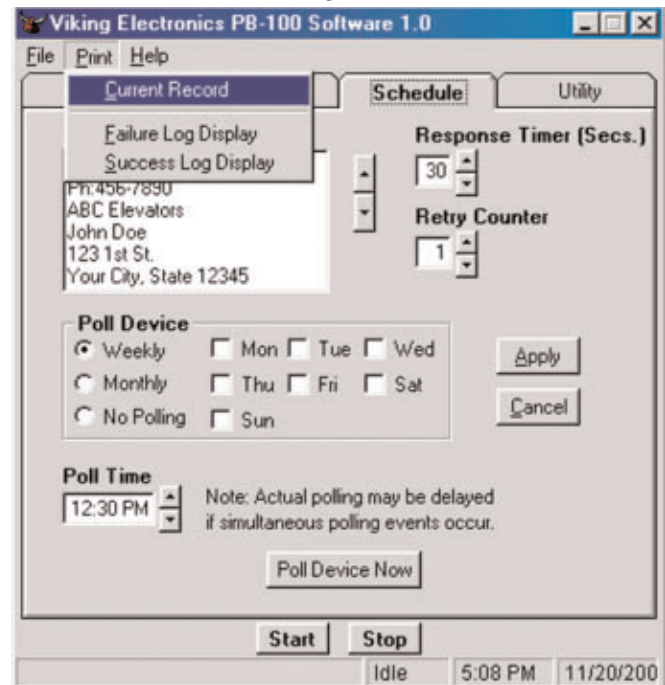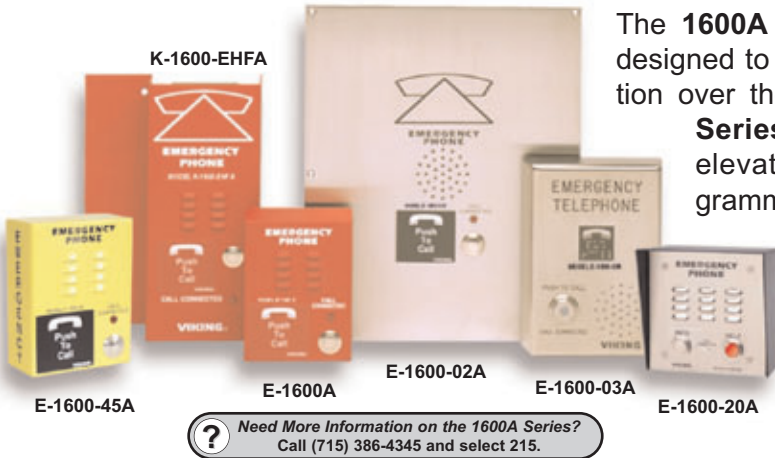
E. Getting Help

There are three selections under the Help menu. **'Help File'** loads the Adobe Acrobat version of this document, while **'About'** brings up a box providing information about the software development, and the current revision level of the software. The **'Viking Tech Support'** selection activates an HTML hyperlink to the Viking Electronics Technical Support website at http://www.vikingelectronics.com/techsupport/support.html. Limited support will be provided.

ADA Compliant Phones

K-1600-EHFA

E-1600-45A

E-1600A

E-1600-02A

E-1600-03A

E-1600-20A

The **1600A Series** ADA Compliant Emergency Phones are designed to provide quick and reliable handsfree communication over the public switched telephone network. All **1600A Series** phones meet ADA requirements for elevator/emergency telephones, and can be programmed from any Touch Tone phone. The phones can dial up to 5 programmable emergency numbers, as well as 2 central station numbers. In addition, the **E-1600-20A** features an **"Info"** button that will dial up to 3 non-emergency numbers.

? *Need More Information on the 1600A Series?*
Call (715) 386-4345 and select 215.

The **1600A Series** phones can be programmed to automatically deliver a digital announcement to identify the location of the emergency call and then initiate the call connected LED light. Alternatively, a DTMF Touch Tone code may also be delivered. All programming parameters, including phone numbers and location numbers, are stored in non-volatile E^2 memory. All units are phone line powered, requiring no batteries or external power and are compatible with common Central Station Monitoring equipment.

For outdoor or harsh environments, select **1600A Series** phones are available with Enhanced Weather Protection (**EWP**). EWP products feature rubber gaskets and boots, hand soldered silicon sealed connections, gel filled tip and ring connectors, as well as urethane potted circuit boards with weather sealed, field-adjustable trim pots and DIP switches for easy on-site programming.

? *Need More Information on EWP?*
Call (715) 386-4345 and select 859.

Other PB-100 Software

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.

? *Need More Information on the AES-2000 Programming Software?*
Call (715) 386-4345 and select 202.

All Call Dialer/Announcer

The All Call Dialing program maintains a list of names and phone numbers in a Microsoft Access database. When started, the software calls each number stored in the database and plays a selected wave (.wav) file stored on your computer's hard drive.

? *Need More Information on the All Call Dialer/Announcer?*
Call (715) 386-4345 and select 861.

Multi-Message Information Provider Software

The Information Provider turns the **PB-100** and your PC into a multiple message ring trip announcer. The software allows you to organize messages into multiple menu levels (up to 10). The Information Provider software provides an easy to follow spread sheet like display for organizing the messages and transfer functions.

? *Need More Information on the Message Info Provider Software?*
Call (715) 386-4345 and select 862.

Smart Terminal Diagnostic Software

Smart Terminal is diagnostic program that allows the user to send and receive data directly to COM1 or COM2 of your PC. ASCII, Hex and Decimal data can be entered, decoded and sent out the selected ports. This utility is useful for troubleshooting the connection between the **PB-100** and your PC. Do this to assure you have the correct com port configured for the **PB-100**.

? *Need More Information on the Smart Terminal Software?*
Call (715) 386-4345 and select 863.

Product Support Line...715.386.8666   Fax Back Line...715.386.4345