The **E-10A** and **E-20B** are telephone line powered entry phones designed to provide two-way handsfree communication. Both function identically, but are available in two different housings to better suit the application. When the “Call” button is pressed, the **E-10A** or **E-20B** will come off-hook and will remain off-hook until a CPC signal is detected, the programmed timeout has elapsed, a busy signal is detected, or the call goes silent, making the unit automatically disconnect.

The **E-10A/20B** can be connected directly to a C.O. line or analog PABX/KSU station when programmed as a ringdown circuit, or used with a Viking Dialer. If a line or station is not available, Viking’s DLE-200B ring down circuit can be used. One to four **E-10A/20B** speaker phones can share an existing phone line in a house or small business when used with a Viking C-200, C-250 or C-2000B Entry Phone Controller.

The **E-10A-EWP** and **E-20A-EWP** shares all of the features of the **E-10A** and **E-20B** in addition to Enhanced Weather Protection (EWP) for outdoor installations where the unit is exposed to precipitation or condensation. EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards with internally sealed, field-adjustable trim pots and DIP switches for easy on-site programming. For more information, see DOD 859.

**Features**

- **E-10A/E-10A-EWP Features:**
  - Vandal resistant, black powder painted, aluminum face plate with heavy duty 316 stainless steel call button and mounting gasket
  - Flush mountable using included plastic rough-in box part number - 259576
  - Surface mount with optional VE-5x5 (DOD 424)
  - T-10 Torx Security Screws

- **E-20B/E-20B-EWP Features:**
  - Light gray colored, impact resistant, U.V. stable, plastic chassis
  - Surface mountable only

**Applications**

- **Door or gate communication, business delivery entrances**
- **Use with a Viking C-200 or C-250 to control an E-10A or E-20B on a single line**
- **Use with a Viking C-2000B to control 1 to 4 E-10A/20B’s and door/gate control on a single phone line**
- **Provide unique front and back door chimes and paging when used with a Viking SLP-1, SLP-4 and C-2000B**
- **Residential, commercial and industrial door security**
- **Use with a Viking K-1900-5 or K-1900-30 for automatic speed dialing on telephone lines or analog PABX/KSU station ports**
- **Use on any analog PABX station port with programmable ringdown capability**

**Specifications**

Power: Telephone line powered (18 VDC/20mA minimum)

Dimensions: **E-10A**: Overall: 5” x 5” x 2.25” (127mm x 127mm x 57.2mm). Rough-in box: 4” x 4” x 2.25” (102mm x 102mm x 57mm)

**E-20B**: 5.5” x 4.5” x 1.7” (140mm x 115mm x 43mm)

Shipping Weights: **E-10A**: 2 lbs (0.91 kg), **E-20B**: 1.5 lbs (.75 kg)

Standard **E-10A/E-20B Environment**: -30° F to 150° F (-34° C to 65° C) with 5% to 95% non-condensing humidity

**E-10A/E-20B-EWP Environment**: -30° F to 150° F (-34° C to 65° C) with up to 100% condensing humidity

Speaker Volume: Approximately 70db maximum @ 1m

Ring Voltage: 25V AC RMS minimum

CPC Disconnect Time: 300ms minimum

REN: 0.8A

Connections: (2) gel-filled butt connectors
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.

### A. Mounting the E-10A and E-10A-EWP

The E-10A and E-10A-EWP are designed to be flush mounted to the included 4" x 4" x 2" deep plastic rough in box or surface mounted using an optional Viking model VE-5x5. **Note:** The E-10A and E-10A-EWP will NOT mount to a standard double gang box. The plastic rough in box (part # 259576) may be purchased separately. Go to [www.vikingelectronics.com](http://www.vikingelectronics.com) and click on “Spare Parts”.

### B. Mounting the E-20B and E-20B-EWP

The E-20B and E-20B-EWP are designed to be surface mounted to a single gang box (not included), a standard 4" x 4" electrical junction box (not included), or directly to a wall or flat sided post. **Caution:** For rough surfaces (ie: brick, stucco, etc.) additional caulking may be required.

### C. Wiring

**Note:** When wires are routed from above, a “drip loop” is recommended to keep water away from the circuit board.

- **Wires from E-10A/E-10A-EWP E-20B/E-20B-EWP**
  - Red (Ring)
  - Green (Tip)

- **Gel-Filled Butt Connectors**

**Optional**

- Viking C-200 or C-250 Single Entry Phone Controller (not included)
- Viking C-200B 1-4 Entry Phone Controller (not included)

**C.O. Line or Analog PBX/KSU Station**

- Viking DLE-200B Two Way Ringdown Circuit (not included)

**Talk Battery Booster may be required, see DOD 632.**
A. Adjusting the Speaker Volume
The SPKR VOL pot can be adjusted to increase or decrease the speaker volume to the level desired as shown.

B. Adjusting the Microphone Volume
In certain noisy locations (background traffic, machinery or wind), the microphone volume may need to be decreased. A symptom of this is one-way talk path, in which the distant party cannot be heard over the speaker. A MIC VOL pot is provided for increasing or decreasing the microphone volume. Note: If the microphone volume is set too high or too low, one-way talk path may occur.

* Note: To increase surge protection, loosen the PCB mounting screw labeled (as shown) and fasten a wire with spade terminal (included) from the mounting screw to Earth Ground (grounding rod, water pipe, etc.)

C. DIP Switch Programming
1. Auto Answer Feature (DIP Switch 1)
DIP switch 1 is for turning the Auto Answer feature ON and OFF. The E-10A/E-20B is factory set to auto answer when an inbound call is detected.

2. Dial Tone Detection (DIP Switch 2)
With DIP switch 2 in the ON position, if the E-10A/E-20B detects more than 5 seconds of continued dial tone, the unit will automatically disconnect. If the E-10A/E-20B is installed on a continuously noisy line, it may detect the noise as dial tone and automatically disconnect. If this happens, turn the dial tone detection (DIP switch 2) OFF.

3. Programming Mode (DIP Switch 3)
With DIP switch 3 in the OFF position, the E-10A/E-20B is in the “Normal Operation Mode” (factory setting). By placing DIP switch 3 in the ON position, the E-10A/E-20B’s programming mode is enabled. The programming mode is used for adjusting the Call Length Timer, Silence Timer for automatic disconnect and the Talk/Listen delay (VOX switching speed). These features are set from the factory and normally do not need adjustment. If adjustment is necessary, see Programming sections D - I.

D. Accessing the Programming Mode
The E-10A/E-20B can be programmed from any Touch Tone phone using a telephone line, Viking model C-200 or C-2000A Entry Phone Controller, analog PABX/KSU station or a Viking model DLE-200B Line Simulator.

Step 1. Move DIP switch 1 to the ON position (sets unit to answer incoming calls - see section C).

Step 2. Move DIP switch 3 to ON (incoming calls automatically enter the programming mode - see section C).

Step 3. From a Touch Tone phone call the line attached to the E-10A/E-20B.

Step 4. When the E-10A/E-20B answers, 2 beeps will be heard and you will automatically enter the programming mode.

Step 5. When finished programming, enter “0000” to exit programming and move DIP switch 3 back to OFF (see section C).

E. Quick Programming Features

<table>
<thead>
<tr>
<th>Description</th>
<th>Select Feature</th>
<th>Wait for Beep(s)</th>
<th>Enter Time Value</th>
<th>Wait for 2 Beeps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call length time out (1-9 minutes), 10 = disabled (factory set to 11111 = 5 minutes)</td>
<td>0 beep</td>
<td>111... beep beep</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silence time out for disconnect (10-90 seconds), 10 = disabled (factory set to 1111 = 40 secs)</td>
<td>00 beep</td>
<td>111... beep beep</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talk/listen delay (VOX switching speed) 0.1 - 0.9 seconds (factory set to 111 = 0.3 secs)</td>
<td>0000 beep</td>
<td>111... beep beep</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forced hang-up command (used to exit programming and hang up)</td>
<td>0000 3 beeps</td>
<td>111... beep beep</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F. Programming Beeps
If a valid “Feature” is entered, a single beep will be heard. If an invalid “Feature” (five or more zeros) is entered, 3 beeps will be heard and the E-10A/E-20B will hang up. If a valid “Time” is entered 2 beeps will be heard. If an invalid “Time” is entered, 3 beeps will be heard and you will have 20 seconds to enter the next valid “Feature”.

G. Call Length Time Out
This feature selects the maximum length of time that calls can be connected. Programmable in increments of 1 minute up to a maximum of 9 minutes. Programming nothing in the time value location will disable the call length time out. With the call length disabled, the E-10A/E-20B phone must rely on CPC, busy, silence or return dial tone to hang-up. Use the chart at the right. * Note: The factory default is 5 minutes.
H. Silence Time Out

This feature selects the length of time that calls will remain connected without voice activity. Programmable in increments of 10 seconds up to a maximum of 90 seconds. To disable the silence time out, program nothing in the time value location. Use the chart on page 3. *Note: the factory default is 40 seconds.

I. Talk/Listen Delay (VOX Switching Speed)

This feature selects switching time between talk and listen modes (VOX switching time). Use the chart on page 3. *Note: the factory default is .3 seconds.

Operation

When the push button is pressed, the E-10A/E-20B phone goes off-hook, much like a standard speaker phone. In the event that the line is busy, the E-10A/E-20B will hang up. The E-10A/E-20B will also automatically hang up on CPC, silence, busy signal, return to dial tone or time out. If programmed to auto-answer (DIP switch 1 ON), the E-10A/E-20B will also answer any incoming call.

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 8am - 5pm Central Time.

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 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 option set, conditions, symptoms, methods to duplicate problem, frequency of failure, etc.

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. 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.

4. 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.

5. 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.

6. 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.

RETURNING PRODUCT FOR REPAIR

The following procedure is for equipment that is still under warranty (within 1 year of purchase):

1. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (RA) number.

2. The 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. The 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 of 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 AND INDEPENDENT EACH AND EVERY PROVISION AND THIS AGREEMENT IS A SEPARATE AND INDEPENDENT ELEMENT OF RISK ALLOCATION AND IS INTENDED TO BE ENFORCED AS SUCH.

FCC REQUIREMENTS

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the side of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

The REN is used to determine the number of devices that may be connected to a telephone line. Excess REN’s on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of the REN’s should not exceed five (5.0). To determine the number of devices that may be connected to a line, as determined by the total REN’s, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label. The telephone number to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. If your home has special wiring for alarm equipment connected to the telephone line, ensure the installation of this E-10A/E-20B does not disable your alarm equipment. If you have questions about what will disable alarm equipment, contact your telephone company or a qualified installer.

If the E-10A/E-20B causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice isn’t practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC. The telephone company will notify you if the equipment does not comply with FCC Part 68 and the rules and regulations of the ACTA. The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications to maintain uninterrupted service.

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