

TECHNICAL

Practice

TELECOM SOLUTIONS FOR THE 21ST CENTURY

E-30/E-30-EWP

Handsfree Speaker Phone with Dialer

June 22, 2010

Provide Reliable and Intelligent Handsfree Communication!



E-30/E-30-EWP

The **E-30** handsfree phone is designed to provide quick and reliable handsfree communication and can be connected directly to a C.O. line or analog PABX/KSU station.

The **E-30** features non-volatile memory, a built in dialer, and intelligent call progress detection for automatic hang-up when the call is completed.

The **E-30** can be programmed to dial up to 5 different numbers on ring no answer or busy and can be configured to dial these numbers until answered.

The **E-30-EWP** shares all of the features of the **E-30** in addition to Enhanced Weather Protection (EWP) for installation in harsh environments. EWP products feature rubber gaskets and boots, silicon sealed connections, gel-filled butt connectors, as well as urethane potted circuit boards with weather sealed, field-adjustable trim pots and DIP switches for easy on-site programming.



E-30 shown with optional VE-5x5

Features -

- · Handsfree operation
- · Phone line powered
- Vandal resistant, stainless steel faceplate with heavy-duty metal call button
- Non-volatile E² memory (no batteries required)
- · Touch Tone or pulse dialing
- Programmable to dial up to 5 numbers on busy or ring no answer
- Red off-hook LED indicator
- Hangs up on CPC, silence, busy signal, return to dial tone, time out or a Touch Tone command
- · Programmable to auto-answer on incoming calls
- Remotely programmable
- Extended temperature range (-15°F to 130°F)
- E-30-EWP has Enhanced Weather protection



Flush mountable using included plastic rough-in box

 Optional VE-5x5 surface mount back box



• E-30-EWP conforms to NEMA requirements

Applications

Non-ADA Hot-Line Phones for:

- Elevators
- Parking lots/ramps
- · ATM machines
- Stadiums
- · Convention centers
- to and Danie Fratric Diament for

Gate and Door Entry Phones for:

- · Business lobbies
- Residences
- Pedestrian gates

CAUTION - ¹ When installing on an analog extension of a phone system: Some phone systems do not conform to analog telecom standards and might not be compatible with the E-30 speaker phones. For a detailed description of the telephone line specifications required for any of the E-30 phones, retrieve Fax Back Document 869. ² In louder background noise environments, the push to talk version may be required (E-30-PT or E-30-PT-EWP).

Specifications

Power: Telephone line powered. Minimum 24V DC talk battery voltage, with a minimum loop current of 20mA loop. Loop current may be boosted on low current lines with a Viking Model **TBB-1B** talk battery booster (**Fax Back # 632**).

Minimum Ring Voltage: 25VAC RMS

REN #: 0.5A

Dimensions: Overall-127mm x 127mm x 57mm (5" x 5" x 2.25"), Plastic Electrical Box-102mm x 102mm x 54mm (4" x 4" x 2.12")

Shipping Weight: 1 Kg (2.2 lbs)

Operating Temperature: -26°C to 54°C (-15°F to 130°F)

Humidity - E-30: 5% to 95% non-condensing **Humidity - E-30-EWP:** Up to 100% condensing

Connections: Gel-filled butt connectors

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:

- 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):

- 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.
- 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, which ever 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.

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 FIT-

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.

FCC REQUIREMENTS

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. Inside the front panel 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. Excessive 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 be certain of 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:AAAEC##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 plug used 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 specially wired alarm equipment connected to the telephone line, ensure the installation of this E-30 does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

If the E-30 causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But 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 if you believe it is necessary.

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.

If trouble is experienced with the E-30, for repair or warranty information, please contact:

Viking Electronics, Inc., 1531 Industrial Street, Hudson, WI 54016 (715) 386-8666

If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to Party Line Service is subject to State Tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

WHEN PROGRAMMING EMERGENCY NUMBERS AND (OR) MAKING TEST CALLS TO EMERGENCY NUMBERS:

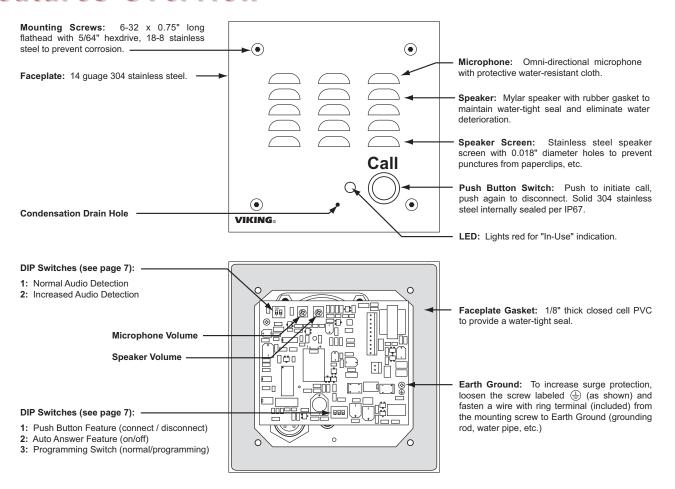
Remain on the line and briefly explain to the dispatcher the reason for the call. Perform such activities in the off-peak hours, such as early morning or late evenings.

It is recommended that the customer install an AC surge arrester in the AC outlet to which this device is connected. This is to avoid damaging the equipment caused by local lightning strikes and other electrical surges.

PART 15 LIMITATIONS

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Features Overview



Installation

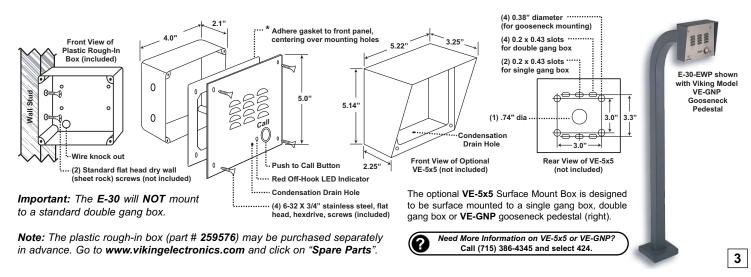
A. Mounting



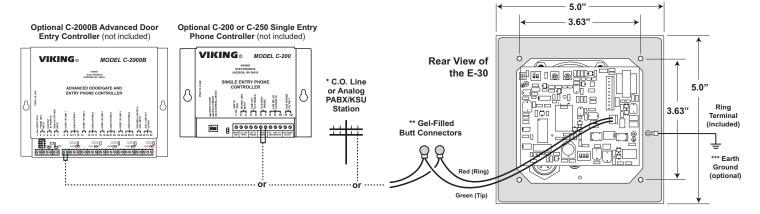
IMPORTANT: Electronic devices are susceptible to lightning and power station electrical surges from both the AC outlet and the telephone line. It is recommended that a surge protector be installed to protect against such surges. Contact Panamax at (800) 472-5555 or Electronic Specialists Inc. at (800) 225-4876.

Caution: When warm air comes in contact with cold surfaces, such as outside walls and conduits, it causes condensation. To prevent condensation from accumulating inside the **E-30** always bring conduit into the bottom of the unit. If this is not possible, drill a 1/4" diameter hole in the bottom of the gray plastic box.

*Note: Peel off paper liner and adhere gasket to the back of the faceplate, centering it over the four corner mounting holes. Be careful to position the modular jack inside the chassis as not to damage the components on the circuit board.



B. Wiring the E-30 Phone Board



^{*} Note: When installing a line powered phone on a low voltage and/or low loop current phone system extension, a TBB-1B Talk Battery Booster may be required, see DOD# 632.

Programming

A. Accessing the Programming Mode

The **E-30** phone can be programmed from any Touch Tone phone using a C.O. line, analog PABX/KSU station, or a **DLE-200B** Line Simulator.

Need More Information on the DLE-200B?
Call (715) 386-4345 and select 605.

1. Using the Security Code

Step 1.	Move DIP switch 2 to the ON position (sets unit to answer incoming calls - see section F).
Step 2.	From a Touch Tone phone call the line attached to the E-30 .
Step 3.	When the E-30 answers, enter the 6-digit security code (factory set to 845464 - see section C). A double beep should then be heard indicating you have entered the programming mode.

2. Without the Security Code

Step 1.	Move DIP switch 2 to the ON position (sets unit to answer incoming calls - see section F).
Step 2.	Move DIP switch 3 to OFF (incoming calls enter the programming mode without security code - see section F).
Step 3.	From a Touch Tone phone call the line attached to the E-30 .
Step 4.	When the E-30 answers, a double beep will be heard and you will automatically enter the programming mode.
Step 5.	When finished programming, move DIP switch 3 back to the ON position (see section F).

Note: If a valid memory position is entered, a double beep will be heard, four beeps indicate an error.

B. Quick Programming Features Enter Digits - then -**Enter Memory Location** #00 then #01 then #02 Third speed dial number0-20 digits then #03 Fourth speed dial number0-20 digits then #04 Fifth speed dial number0-20 digits then To add a * at any point in the dialing string** To add a # at any point in the dialing string*# To add a four second pause at any point in the dialing string** Toggle between Touch Tone and Pulse dialing*6 then #17 then #18 then #19 Exit programming and disconnect #7 Reset all programming to factory default settings###

^{**} **Note:** The gel-filled (water-tight) butt connectors are designed for insulation displacement on 19-26 gauge wire with a maximum insulation of 0.082 inches. Cut off bare wire ends prior to terminating.

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

C. Security Code (memory location #19)

The security code allows the user/installer to program the E-30 phone while DIP switch 3 is in the ON (normal) position. The factory set security code is 845464 (V-I-K-I-N-G). It is recommended that the factory set security code be changed. **Example:** To store 123456 as the security code:

Step 1.	Access programming as shown is Programming section A .
Step 2.	Enter 123456 #19
Step 3.	Hang-up.

Enter Your Security Code Here: #19

Note: The security code must be 6 digits and cannot include a * or a #.

D. Speed Dial Numbers (Memory Locations #00 - #04)

Note: Up to 20 digits can be stored in each dial position. Special features such as pause, mode change, Touch Tone * and # count as single digits.

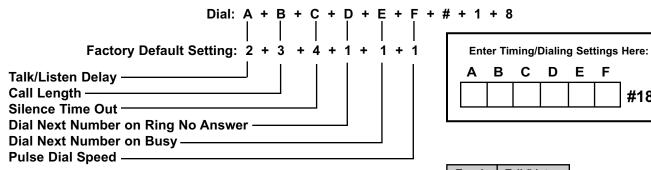
The speed dial number programmed in location #00 is the telephone or extension number that is dialed when the "Call" button is first pressed. Additional speed dial numbers will be dialed when there is no answer or a busy signal is detected and the next number redial features are activated. The E-30 will cycle through the programmed speed dial numbers until answered. To program, enter the desired speed dial number followed by the memory location number (#00 - #04).

To clear a speed dial location, simply enter the memory location (#00 - #04) alone. The **E-30** is factory set with no speed dial number programmed.

To Program:	Enter:		
*	**		
#	*#		
4 second pause	*7		
switch to pulse mode	*6		
0, 1, 29	0, 1, 29		

E. Timing/Dialing Options (Memory Location #18)

There are six positions in the timing/dialing options. To program these options, enter the six desired timing/dialing digits followed by #18. The six available timing/dialing options are defined as shown below.



Setting A - Talk/Listen Delay

This feature selects switching time between talk and listen modes (VOX switching time). Use chart at the right. * Note: The factory default is .2 seconds.

Touch Tone	Talk/Listen Delay
1	.1 sec
2	.2 sec *
3	.3 sec
4	.4 sec
5	.5 sec
6	.6 sec
7	.7 sec
8	.8 sec
9	.9 sec

Setting B - 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 (Touch Tones 1 - 9). Program 0 in this location to disable the call length time out. With the call length disabled, the E-30 phone must rely on CPC, busy, reorder, silence or return dialtone to hang-up. Use chart at the far right. *Note: The factory default is 3 minutes.

Touch Tone	Call Length Time Out
0	Disabled
1	1 min
2	2 min
3	3 min*
4	4 min
5	5 min
6	6 min
7	7 min
8	8 min
9	9 min

#18

Setting C - 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 (Touch Tones 1 - 9). To disable the silence time out, program 0 in this location. Use chart at the right.

Touch Tone	Silence Time Out
0	Disabled
1	10 sec
2	20 sec
3	30 sec
4	40 sec*
5	50 sec
6	60 sec
7	70 sec
8	80 sec
9	90 sec

Setting D - Dial Next Number on Ring No Answer

If enabled and a ring-no-answer is detected, the **E-30** phone will dial the next programmed speed dial number, and continue to cycle through the emergency

Touch Tone	Setting D
1 or 0	Disabled*
2, 3, 49	Dials second number after
	2, 3, 49 rings respectively

numbers until a call is completed. * Note: This feature is disabled in the factory default.

Setting E - Dial Next Number on Busy

If enabled and a busy is detected, the **E-30** phone will dial the next programmed speed dial number, and continue to cycle through the emergency numbers until a call is completed. * **Notes:** This feature is disabled in the factory default setting. If the busy signal is interrupted with a promotional message, contact your central office to have it removed.

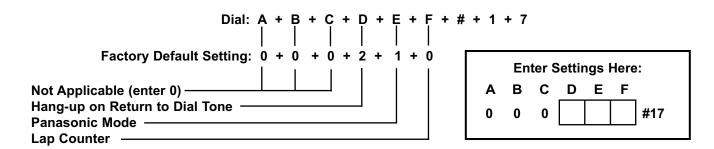
Touch Tone	Setting E
1	Disabled*
2	Enabled

Setting F - Pulse Dialing Rate (Pulses per Second)

The **E-30** phone is capable of different pulse dialing speeds. * **Note:** The factory default setting is 10pps (pulses per second).

Touch Tone	Setting F
1	10 pps*
2	20 pps

F. Miscellaneous Options (memory location #17)



Settings A / B / C - Not Applicable

Setting D - Hang Up on Return to Dial Tone

If enabled and a return dial tone is detected, the **E-30** will hang up.

Touch Tone	Setting D		
1	Disabled		
2	Enabled*		

Setting E - Panasonic Mode

The **E-30** can be programmed to recognize the double ring cadence that is typical of Panasonic phone systems. If the **E-30** is connected to a Panasonic extension, (or any other system that provides a double ring cadence) enable "Panasonic Mode" will allow for proper call progress detection.

* Note:	This	feature	is	disabled	in	the	factory	[,] default	setting.
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Touch Tone	Setting E	
1	Disabled*	
2	Enabled	

^{*} Note: The factory default is 40 seconds.

^{*} Note: The factory default setting is enabled.

Setting F - Lap Counter

With the lap counter disabled (factory setting), if the **E-30** is programmed to dial the next number on ring-no-answer and/or busy signal (see page 5 and 6), the **E-30** will continuously call its programmed phone numbers forever until the call is answered.

Touch Tone	Setting F
0	Disabled*
1-9	Lap count = 1-9 times

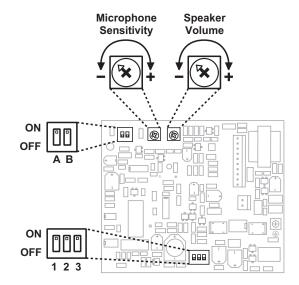
The lap counter is a programmable counter that determines how many times the **E-30** will cycle through its list of up to 5 emergency number (or up to 3 "Info" phone numbers), before it stops the dialing process and hangs up. When all of the programmed phone numbers have been dialed, the lap counter is incremented and the dialing process repeats. When the lap counter has been met, the dialing process stops and the **E-30** hangs up. * **Note:** This feature is disabled in the factory default setting.

G. DIP Switch Programming/Speaker and Microphone Adjustments

Two POTs are provided to increase or decrease speaker volume and microphone sensitivity. In certain noisy locations the microphone sensitivity may need to be decreased as shown below. *Caution:* Setting the microphone gain too high may cause distorted audio, prevent the distant party from breaking over and inhibit second number redialing.

Switch A	Switch B	Description	
ON	ON	Normal audio detection	
OFF	OFF	Increase audio detect sensitivity for low level lines. Useful in applications in which voice or busy signals have trouble breaking over to the speaker.	

DIP Switch	Position	Description	
1	ON	"CALL" button alternately connects and disconnects calls (factory default)	
1	OFF	"CALL" button connects calls only	
2	ON	Incoming calls answered (factory setting)	
2	OFF	Incoming calls are not answered	
3	ON	Normal operation mode (factory setting)	
3	OFF	Learn mode - Any incoming calls are automatically entered into the programming mode (no security code required). Use this option if you have forgotten your security code.	



H. Programming Examples

To Program the E-30 Phone	Step 1 - See Section A	Step 2 - Enter Digits:
to store 123456 as the security code	Enter Programming	123456#19
to store a Touch Tone 9, a four second pause and then a pulse dialed 333-4444 in the first speed dial position	Enter Programming	9 *7 *6 3 3 3 4 4 4 4 # 0 0
to store 555-1234 in the second speed dial position	Enter Programming	5 5 5 1 2 3 4 # 0 1

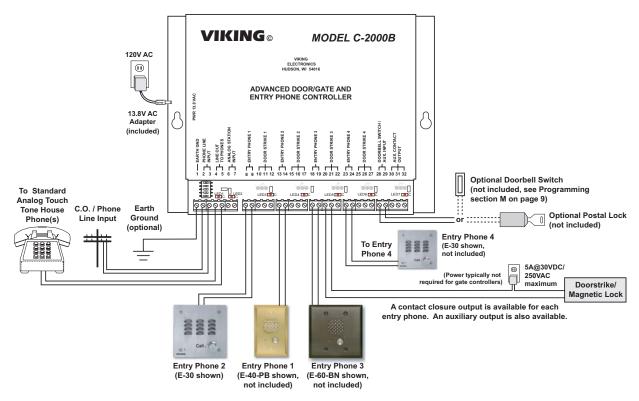
Operation

When the "Call" button is pressed, the E-30 phone goes off-hook, and dials a pre-programmed telephone number. The front panel LED will light any time the phone is off hook. In the event that the line is busy or there is a ring-no answer, the unit can be programmed to call additional phone numbers. The phone then cycles through up to 5 pre-programmed speed dial numbers until the call is answered. The E-30 will hang up on CPC, silence, busy signal, return to dial tone, time out or Touch Tone command (*#). If programmed to auto-answer, the E-30 will also answer any incoming call.

Applications

C-2000B Advanced Door/Gate and Entry Phone Controller

The **C-2000B** allows up to 4 entry phones to call into your existing residential or business phones or phone system. Tenants may answer the call, converse with the visitor and activate a contact closure to control electronic gates or door strikes. The **C-2000B** provides "Caller ID," "Call Waiting ID" and "Call Waiting" tone when the phone line is in use. Tenants may gain entry at each gate by entering a Touch Tone keyless entry code. Tenants may call out to each entry phone for monitoring purposes. An auxiliary input is also available for connecting a common garage door opener/receiver and auxiliary keyless entry keypads. See the **C-2000B** Technical Practice for complete installation instructions, **DOD# 156**.



Other Products

Add 1-4 Entry Phones and Doorstrike Control to an Existing Phone Line



8

The C-2000B now offers two operational modes for added flexibility.

In the Single Line Ring Through Mode, the **C-2000B** allows single line phones to share a phone line with 1 to 4 entry phones. Tenants may converse with visitors and activate a contact closure to control gates or strikes. The **C-2000B** provides entry phone "Caller ID" and "Call Waiting Caller ID" and a "Call Waiting" tone when the phone lines is in use. Tenants may gain entry at each location by entering a keyless entry code.

In the Analog Station Dial Through Mode, the **C-2000B** allows 1 to 4 entry phones to share one analog PABX extension or telephone line and place outgoing calls. When a remote party answers, they can converse with visitors and activate a con-

tact closure to control gates or strikes. Monitoring entry phones, forcing doorstrike relays to operate or remote programming of the **C-2000B** can be accomplished by calling the analog PABX extension or telephone line connected. Authorized personnel may gain entry at each location by entering a keyless entry code. For more information, see **DOD# 156**.

Product Support Line...715.386.8666

Fax Back Line...715.386.4345

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