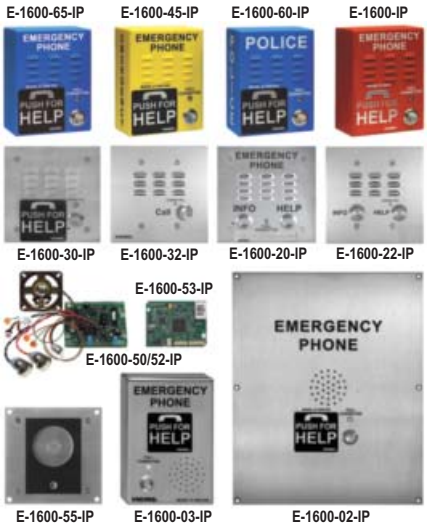
ADA Compliant VoIP Emergency Phones with Built-In Dialer and Digital Voice Announcer

The **1600-IP Series** ADA Compliant VoIP Emergency Phones are designed to provide quick and reliable handsfree communication for SIP VoIP phone systems with PoE. All **1600-IP Series** phones meet ADA requirements for elevator/ emergency telephones, and can be programmed from any Touch Tone phone or PC on the same LAN. The phones can dial up to 5 programmable emergency numbers. In addition, the **E-1600-20-IP** and **E-1600-52-IP** feature a second "**INFO**" button that will dial up to 5 non-emergency numbers.

The **1600-IP Series** phones can be programmed to automatically deliver a digital announcement to identify the location of the emergency call. Alternatively, a DTMF Touch Tone code may also be delivered. A "Call Connected" LED can be initiated manually or automatically. All programming parameters, including phone numbers and location numbers, are stored in non-volatile memory, requiring no batteries. All units are PoE powered.

For outdoor installations where the unit is exposed to precipitation or condensation, select **1600-IP Series** phones are available with Enhanced Weather Protection (**EWP**). EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards. For more information, see **DOD# 859**.



Features

- **Self diagnostic reports via email (testing com, mic, speaker & switch)**
- **Automatic polling and programming software included**
- **2 Amp relay contacts for door/gate or SL-2 strobe light control**
- **SIP compatible** (see pg 3 for list of compatible IP-PBX phone systems)
- **PoE powered (class 1, <4 watts)**
- **Automatic Noise Canceling (ANC) feature for proper operation in noisy environments**
- **Network downloadable firmware**
- Meets ADA requirements for Emergency Phones:
  - Automatically lights the "Call Connected" LED
  - Transmits a unique location I.D. code or voice announcement
  - Grade 2 Braille label for the visually impaired
- Non-volatile digital voice announcer with 28 seconds of voice memory
- Handsfree operation
- Marine grade 316 stainless steel prevents corrosion on the stainless steel models
- Dials up to 5 emergency numbers
- **E-1600-20-IP** and **E-1600-52-IP** dial up to 5 non-emergency "INFO" numbers
- Cycles through backup phone numbers on busy or no-answer
- Optional Enhanced Weather Protection (EWP), EWP products are designed to meet IP66 Ingress Protection Rating, see **DOD# 859**
- Hangs up on busy signal, time-out or touch tone command
- Remotely programmable
- Extended temperature range (-15°F to 130°F)
- 11 different chassis or board only available
- Available in 42" tower phone model **E-1600-BLTIPEWP** (**DOD# 217**)
- Optional **PB-100** Polling System available (**DOD# 232**)
- Optional **SL-2** or **BLK-4-EWP** strobe light kit available (**DOD# 242/653**)
- Optional **E-1600A-MK-GNP** Pedestal Mounting Kit (**DOD# 227**)

Applications

- Elevators
- Parking ramps/lots
- Emergency pool phones
- ATM machines
- Area of refuge locations
- Medical centers
- Lobbies
- Entryways
- Campus emergency stations
- Stadiums
- Convention centers
- Public access areas

** Americans with Disabilities Act of 1992 contains federal regulations regarding elevator telephones (Public Law 101-336).*

www.vikingelectronics.com
Information: (715) 386-8861

Specifications

Power: PoE class 1 (<4 watts)
Dimensions: See Installation and Specifications
Operating Temperature: -26° C to 54° C (-15°F to 130°F)
Humidity - Standard Products: 5% to 95% non-condensing
Humidity - EWP Products: Up to 100%
Connections: (1) RJ45 10/100 Base-T, (3) gel-filled butt connectors

Beta Units Available

Viking VoIP SIP System Compatibility List

NOTE: *Exclusion from this list means only that compatability has not been verified,* ***it does not mean incompatability****.*

Vendor	Infrastructure Class				
	Softswitch	PBX	Proxy	SBC (session border controller)	Service Provider
3COM VCX		X			
3CX		X			
Aastra		X			
Asterisk		X			
Atcom		X			
BlueBox		X			
Brekeke		X			
Cisco Unified Communications Manager (CUCM)	X	X			
Freeswitch		X			
iptel.org					X
Kamailio			X	X	
MetaSwitch				X	X
OfficeSIP		X			
OpenSIPS		X			
Samsung Communications Manager (SCM)	X	X			
Siemens Communications Server (SCS)		X			
SIP Express Router (SER)			X	X	
sip.antisip.com					X
Snom PBX		X			
Sonus				X	
Switchvox		X			X
Teksip			X		
VoIP.ms					X
Vonage					X

Overview of Chassis and Mounting Options

Model: E-1600-53-IP
Description: 1600-IP board (PCB) only kit. Can be used to convert any analog Viking 1600A-Series phone to a VoIP version

Model: E-1600-IP
HxWxD: 5.25 x 4.0 x 2.0
Mounting: Surface mount
Description: 16 gauge steel with textured red powder paint

Model: E-1600-45-IP
HxWxD: 5.25 x 4.0 x 2.0
Mounting: Surface mount
Description: 16 gauge steel with textured yellow powder paint

Model: E-1600-60-IP
HxWxD: 5.25 x 4.0 x 2.0
Mounting: Surface mount
Description: 16 gauge steel with textured blue powder paint and "POLICE" verbiage

Model: E-1600-65-IP
HxWxD: 5.25 x 4.0 x 2.0
Mounting: Surface mount
Description: 16 gauge steel with textured blue powder paint

Model: E-1600-55-IP
HxWxD: 5.0 x 5.0 x 2.0
Description: Universal emergency phone kit to install behind elevator panels or when a custom panel is used

Model: E-1600-20-IP
HxWxD: 5.0 x 5.0 x 2.25
Mounting: Flush mount with included rough-in box (will not fit in a double gang box), or surface mount with a **VE-5x5**
Description: Two button, 14 gauge marine grade 316 stainless steel, #4 brushed finish

Model: E-1600-22-IP
HxWxD: 5.0 x 5.0 x 2.25
Mounting: Flush mount in a double gang box or surface mount with a **VE-5x5**
Description: Two button, 14 gauge marine grade 316 stainless steel with #4 brushed finish

Model: E-1600-30-IP
HxWxD: 5.0 x 5.0 x 2.25
Mounting: Flush mount with included rough-in box (will not fit in a double gang box), or surface mount with a **VE-5x5**
Description: 14 gauge marine grade 316 stainless steel, #4 brushed finish

Model: E-1600-32-IP
HxWxD: 5.0 x 5.0 x 2.25
Mounting: Flush mount in a double gang box or surface mount with a **VE-5x5**
Description: 14 gauge marine grade 316 stainless steel, #4 brushed finish

Model: E-1600-50-IP
Description: Single button 1600-IP parts kit without chassis

Model: E-1600-52-IP
Description: Two button 1600-IP parts kit without chassis

Model: E-1600-03-IP
HxWxD: 7.22 x 5.36 x 1.55
Mounting: Surface mount
Description: 14 gauge marine grade 316 stainless steel with #4 brushed finish

Model: E-1600-02-IP
HxWxD: 13.0 x 10.5 x 2.0
Mounting: Flush mount
Description: 12 gauge marine grade 316 stainless steel with #4 brushed finish

Model: E-1600-TP-IP-EWP
HxWxD: 11.75 x 9.5 x 2.0
Mounting: Flush mount
Description: Direct physical replacement for Talk-A-Phone model ETP-400V

Model: E-1600-TP2-IP-EWP
HxWxD: 11.75 x 9.5 x 2.0
Mounting: Flush mount
Description: Direct physical replacement for Talk-A-Phone model ETP-400DV

Definitions

Client: A computer or device that makes use of a server. As an example, the client might request a particular file from the server.

DHCP: Dynamic Host Configuration Protocol. In this procedure the network server or router takes note of a client's MAC address and assigns an IP address to allow the client to communicate with other devices on the network.

DNS Server: A DNS (Domain Name System) server translates domain names (ie: www.vikingelectronics.com) into an IP address.

Ethernet: Ethernet is the most commonly used LAN technology. An ethernet Local Area Network typically uses twisted pair wires to achieve transmission speeds up to 1Gbps.

Host: A computer or device connected to a network.

Host Name: A host name is a label assigned to a device connected to a computer network that is used to identify the device in various forms of network communication.

Hosts File: A file stored in a computer that lists host names and their corresponding IP addresses with the purpose of mapping addresses to hosts or vice versa.

Internet: A worldwide system of computer networks running on IP protocol which can be accessed by individual computers or networks.

IP: Internet Protocol is the set of communications conventions that govern the way computers communicate on networks and on the Internet.

IP Address: This is the address that uniquely identifies a host on a network.

LAN: Local Area Network. A LAN is a network connecting computers and other devices within an office or building.

Lease: The amount of time a DHCP server reserves an address it has assigned. If the address isn't used by the host for a period of time, the lease can expire and the address can be assigned to another host.

MAC Address: MAC stands for Media Access Control. A MAC address, also called a hardware address or physical address, is a unique address assigned to a device at the factory. It resides in the device's memory and is used by routers to send network traffic to the correct IP address. You can find the MAC address of your **1600-IP Series** phone printed on a white label on the top surface of the PoE LAN port.

Router: A device that forwards data from one network to another. In order to send information to the right location, routers look at IP Address, MAC Address and Subnet Mask.

Server: A computer or device that fulfills requests from a client. This could involve the server sending a particular file requested by the client.

Session Initiation Protocol (SIP): Is a signaling communications protocol, widely used for controlling multimedia communication sessions such as voice and video calls over Internet Protocol (IP) networks. The protocol defines the messages that are sent between endpoints, which govern establishment, termination and other essential elements of a call.

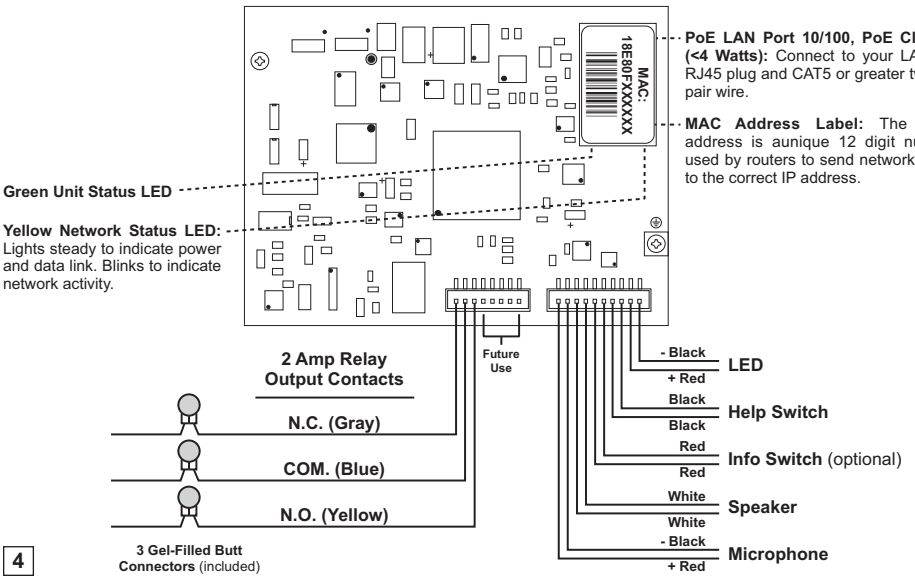
Static IP Address: A static IP Address has been assigned manually and is permanent until it is manually removed. It is not subject to the Lease limitations of a Dynamic IP Address assigned by the DHCP Server. The default static IP Address is: 192.168.154.1

WAN: Wide Area Network. A WAN is a network comprising a large geographical area like a state or country. The largest WAN is the Internet.

Features Overview

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.*

Rear (PCB) View of 1600-IP Series Emergency Phone



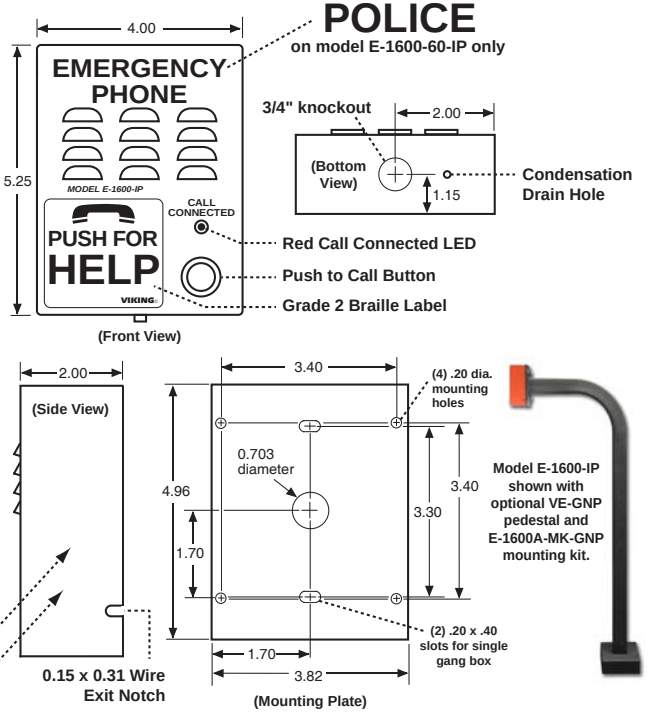
Installation and Specifications

The following sections show specifications and installation instructions for the different chassis in the 1600-IP Series.

E-1600-IP / E-1600-45-IP / E-1600-60-IP / E-1600-65-IP

*Optional Enhanced Weather Protection (EWP) Available**

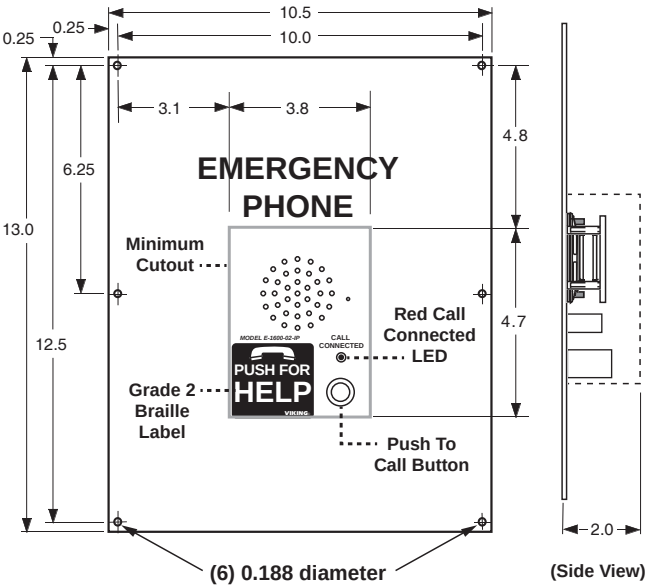
Dimensions: 133mm x 102mm x 51mm (5.25" x 4.0" x 2.0")
Shipping Weight: 1.13 kg (2.5 lbs.)
Material: .062" (16 gauge) steel
Finish: **E-1600-IP** - Red powder paint, **E-1600-45-IP** - Yellow powder paint, **E-1600-60/65-IP** - Blue powder paint
Connections: Gel-filled butt connectors
Mounting: Surface mount to walls, posts, single gang boxes or 4" x 4" electrical junction boxes or recess mount in elevator phone boxes.
***Optional Enhanced Weather Protection (EWP):** The optional EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards. See **DOD# 859**.
***Note:** For greater weather resistance, apply a bead of clear silicon caulking around the top edge and sides of the chassis.*
Optional Gooseneck Pedestal Mounting Kit: The **E-1600A-MK-GNP** Mounting Kit (**DOD# 227**) allows you to mount the **E-1600-IP**, **E-1600-45-IP**, **E-1600-60-IP** or **E-1600-65-IP** to a Viking **VE-GNP** Gooseneck Pedestal (**DOD# 424**).



E-1600-02-IP

*Optional Enhanced Weather Protection (EWP) Available**

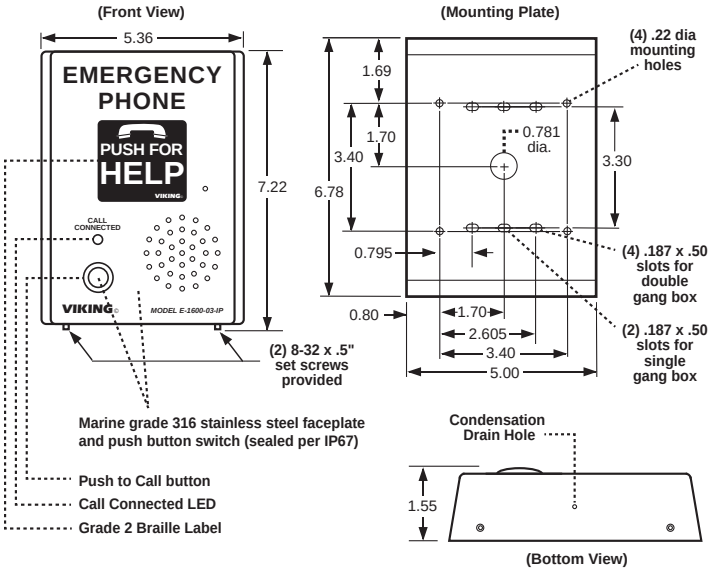
Dimensions: 330mm x 267mm x 51mm (13" x 10.5" x 2")
Shipping Weight: 3.18 kg (7 lbs.)
Connections: Gel-filled butt connectors
Material: .125" (11 gauge) brushed stainless steel
Mounting: Flush mount in elevator cabs, ATMs, stairwells, hallways, etc.
Suggested Hardware: (6) #8 x 3/4 flat head phillips sheet metal type A screws (not included)
***Optional Enhanced Weather Protection (EWP):** The optional EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards. See **DOD# 859**.
***Note:** When mounting outside to rough or uneven surfaces (brick, stucco, etc.) apply a bead of clear silicone caulking around the top edge and sides of faceplate or **VE-5x5**.*



E-1600-03-IP

Optional Enhanced Weather Protection (EWP) Available*

Dimensions: 183mm x 149mm x 39mm (7.22" x 5.36" x 1.55")
Material: 14 gauge Marine grade 316 brushed stainless steel panel
Shipping Weight: 1.36 kg (3 lbs.)
Connections: Gel-filled butt connectors
Mounting: Surface mount to walls, posts, single gang boxes, double gang boxes or 4" x 4" electrical junction boxes or recess mount in elevator phone boxes.
***Optional Enhanced Weather Protection (EWP):** The optional EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards. See **DOD# 859**.
***Note:** For greater weather resistance, apply a bead of clear silicon caulking around the top edge and sides of the chassis.*

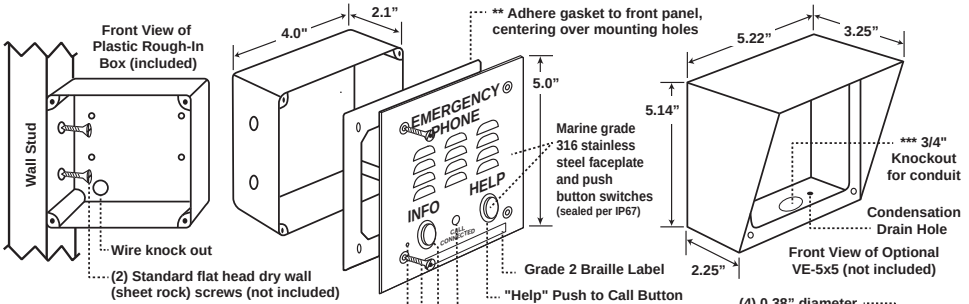


E-1600-20-IP

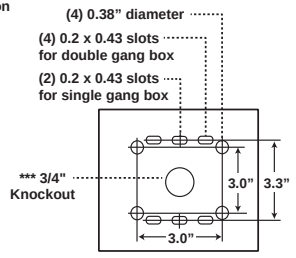
*Optional Enhanced Weather Protection (EWP) Available**

Dimensions: Overall - 127mm x 127 x 57mm (5.0" x 5.0" x 2.25"), Plastic Electrical Box - 102mm x 102mm x 54mm (4.0" x 4.0" x 2.14")
Shipping Weight: 1 kg (2.12 lbs.)
Front Panel Material: 14 gauge Marine grade 316 brushed stainless steel
Connections: Gel-filled butt connectors

***Optional Enhanced Weather Protection (EWP):** The optional EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards. See **DOD# 859**.
Mounting with Plastic Rough-In Box (included): Flush into walls, mounts to side of wall stud **Mounting with Optional VE-5x5:** Surface mount to walls, single gang boxes, double gang boxes, posts, or to a Viking **VE-GNP** Gooseneck pedestal (see **DOD# 424** for more information).
***Note:** When mounting outside to rough or uneven surfaces (brick, stucco, etc.) apply a bead of clear silicone caulking around the top edge and sides of faceplate or **VE-5x5**.*



The black plastic rough-in box (**part # 259576**) may be purchased separately (**Example:** Mounting boxes to studs before the walls are finished for flush installation). Go to **www.vikingelectronics.com** and click on "**Spare Parts**" to order these rough-in boxes.



***Important:** The **E-1600-20-IP** will **NOT** mount to a standard double gang box. If your applications requires a double gang box, see model **E-1600A-22-IP** on page 7.*

***** Note:** Peel off paper liner and adhere gasket to the back of the faceplate, centering it over the four corner mounting holes.*

****** 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-1600-20-IP** 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 black plastic box.*

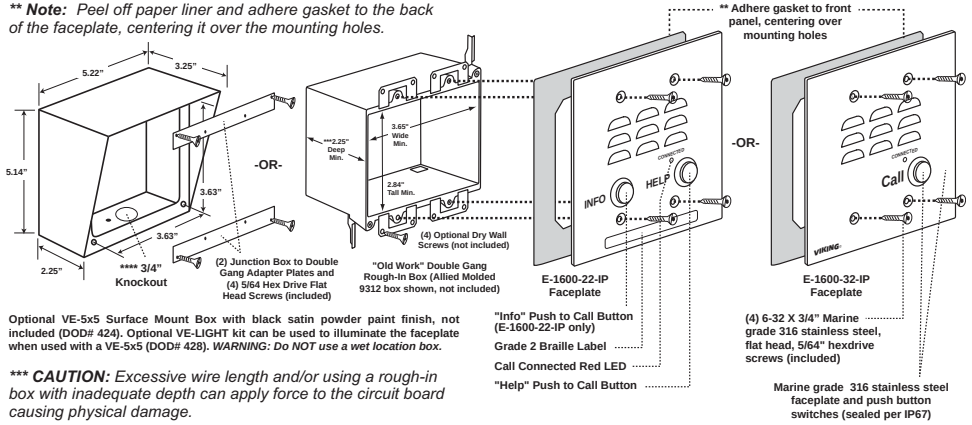
E-1600-22-IP / E-1600-32-IP

*Optional Enhanced Weather Protection (EWP) Available**

Dimensions: Overall - 127mm x 127 x 57mm (5.0” x 5.0” x 2.25”)
Shipping Weight: 1 kg (2.12 lbs.)
Front Panel Material: 14 gauge Marine grade 316 brushed stainless steel
Connections: Gel-filled butt connectors

***Optional Enhanced Weather Protection (EWP):** The optional EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards. See **DOD# 859**.
Mounting in a Double Gang Rough-In Box (not included): Flush into walls, mounts to side of wall studs, etc. **Mounting with Optional VE-5x5:** Surface mount to walls, single gang boxes, double gang boxes, posts, or to a Viking **VE-GNP** Gooseneck pedestal (see **DOD# 424** for more information).
***Note:** When mounting outside to rough or uneven surfaces (brick, stucco, etc.) apply a bead of clear silicone caulking around the top edge and sides of faceplate or **VE-5x5**.*

***** Note:** Peel off paper liner and adhere gasket to the back of the faceplate, centering it over the mounting holes.*



**** CAUTION:** Excessive wire length and/or using a rough-in box with inadequate depth can apply force to the circuit board causing physical damage.*

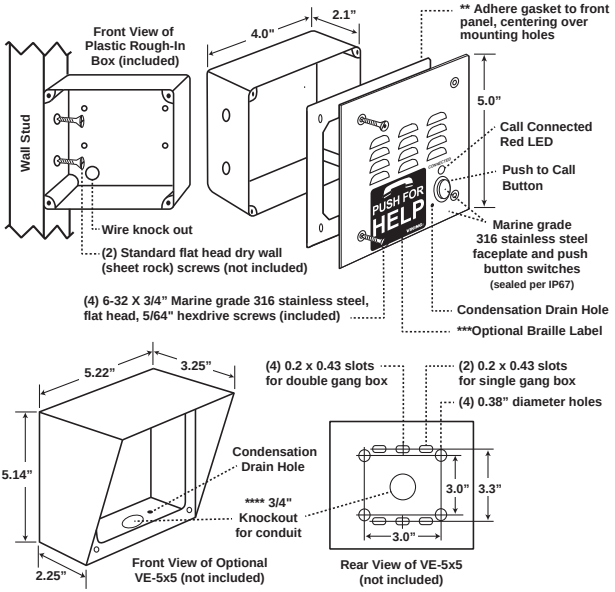
***** Caution:** When warm air comes in contact with cold surfaces, such as outside walls and conduits, it causes condensation. To prevent condensation from accumulating inside the **E-1600-22-IP** or **E-1600-32-IP** always bring conduit into the bottom of the unit. If this is not possible, drill a 1/4” diameter hole in the bottom of the black plastic box.*

E-1600-30-IP

*Optional Enhanced Weather Protection (EWP) Available**

Dimensions: Overall - 127mm x 127 x 57mm (5.0” x 5.0” x 2.25”), Plastic Electrical Box - 102mm x 102mm x 54mm (4.0” x 4.0” x 2.14”)
Shipping Weight: 1 kg (2.12 lbs.)
Front Panel Material: 14 gauge Marine grade 316 brushed stainless steel
Connections: Gel-filled butt connectors
***Optional Enhanced Weather Protection (EWP):** The optional EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards. See **DOD# 859**.
Mounting with Plastic Rough-In Box (included): Flush into walls, mounts to side of wall stud **Mounting with Optional VE-5x5:** Surface mount to walls, single gang boxes, double gang boxes, posts, or to a Viking **VE-GNP** Gooseneck pedestal.
***Note:** When mounting outside to rough or uneven surfaces (brick, stucco, etc.) apply a bead of clear silicone caulking around the top edge and sides of faceplate or **VE-5x5**.*

***Important:** The **E-1600-30-IP** will **NOT** mount to a standard double gang box. If your applications requires a double gang box, see model **E-1600A-32-IP** above.*



***** Note:** Peel off paper liner and adhere gasket to the back of the faceplate, centering it over the mounting holes.*

****** Important:** Optional Braille “Push for Help” label should be adhered to the faceplate in ADA applications. Clean surface with isopropyl alcohol, peel off backing and press firmly to the front panel in location as shown above.*

******* 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-1600-30-IP** 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 black plastic box.*

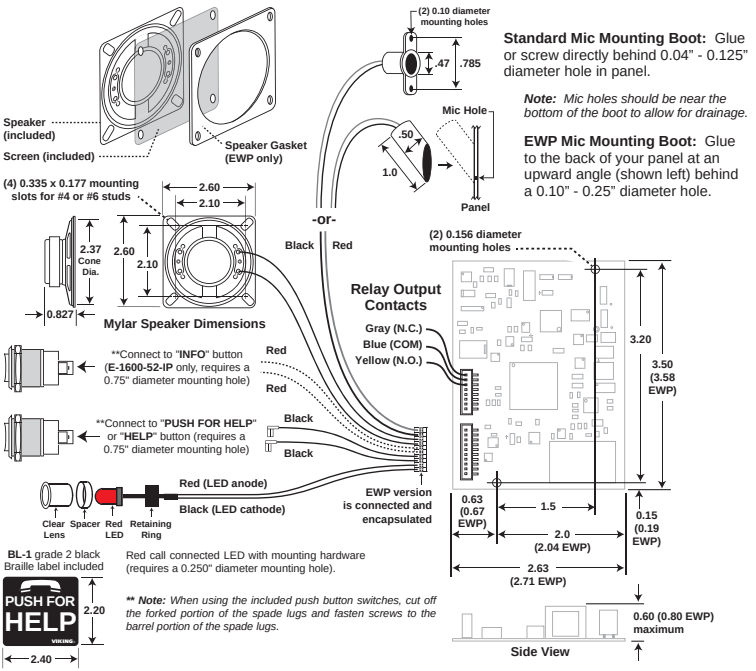
E-1600-50-IP / E-1600-52-IP

*Optional Enhanced Weather Protection (EWP) Available**

Note: *This is a **1600-IP** parts kit without chassis.*
Shipping Weight: .45 kg (1 lb)
Connections: Gel-filled butt connectors

***Optional Enhanced Weather Protection (EWP):** The optional EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards. See **DOD# 859**.

Important: *If installing the **EWP** version outdoors, apply a non-corrosive silicone to back side of LED after making all connections and testing.*



Standard Mic Mounting Boot: Glue or screw directly behind 0.04" - 0.125" diameter hole in panel.

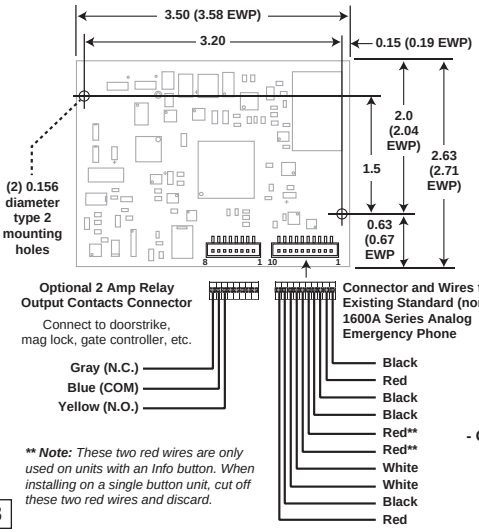
Note: *Mic holes should be near the bottom of the boot to allow for drainage.*

EWP Mic Mounting Boot: Glue to the back of your panel at an upward angle (shown left) behind a 0.10" - 0.25" diameter hole.

E-1600-53-IP

*Optional Enhanced Weather Protection (EWP) Available**

Note: *This is a **1600-IP** board (PCB) only kit. This kit can be used to convert any Viking 1600A Series analog emergency phone to a VoIP version. The kit can also be used to replace a damaged board in the field.*
Shipping Weight: .45 kg (1 lb)
Connections: (1) RJ45 10/100 Base-T, (3) optional gel-filled butt connectors, (10) additional gel-filled butt connectors included with EWP version only.

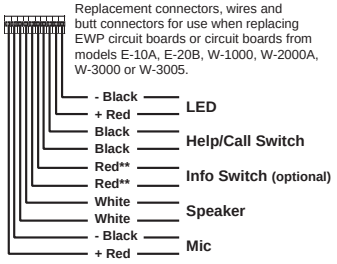


***Optional Enhanced Weather Protection (EWP):** The optional EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards. See **DOD# 859**.

Replacing Analog 1600A Series EWP Potted Circuit Boards:

Step 1.	Cut wires from J1 (10 pin connector) and J2 (2 pin connector).
Step 2.	Remove the two #6 phillips screws fastening the circuit board.
Step 3.	Cut off any stripped wire ends from the replacement cable.
Step 4.	Using the supplied gel-filled butt connectors, connect corresponding wires from replacement cable to the previously cut wires from the LED, Help/Call switch, optional Info switch, Speaker and Microphone. See **FIGURE 1** for wire color and polarity.

FIGURE 1
Replacement Cable Assembly (included)



E-1600-55-IP

Optional Enhanced Weather Protection (EWP) Available*

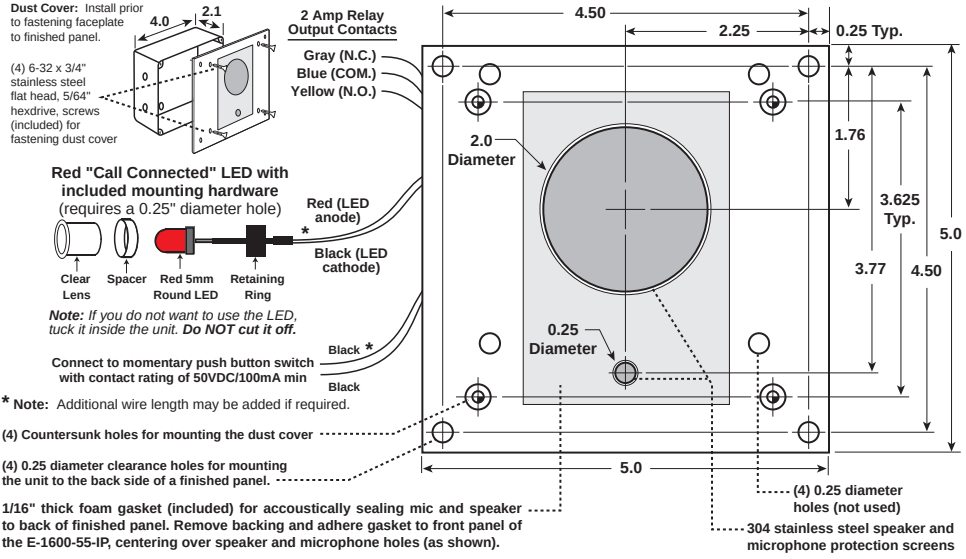
The **E-1600-55A-IP** is a universal emergency phone kit for installing behind elevator panels, or an installation requiring a custom panel. The finished panel should provide: (4) studs (#6 diameter minimum) for mounting plate, audio holes for speaker and microphone, a momentary SPST push button switch and a 0.25" diameter mounting hole for the LED. Alternatively, the LED can be cut off and the wires connected to a integral switch with LED (often found in elevators).

***Optional Enhanced Weather Protection (EWP):** The optional EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards. See **DOD# 859**.

Shipping Weight: .73 kg (1.6 lb)

Connections: (1) RJ45 10/100 Base-T, (5) gel-filled butt connectors

Material: 0.062" thick (16 gauge) zinc plated steel



E-1600-TP-IP-EWP / E-1600-TP2-IP-EWP

Dimensions: 241mm x 299mm x 51mm (9.5" x11.75" x2")

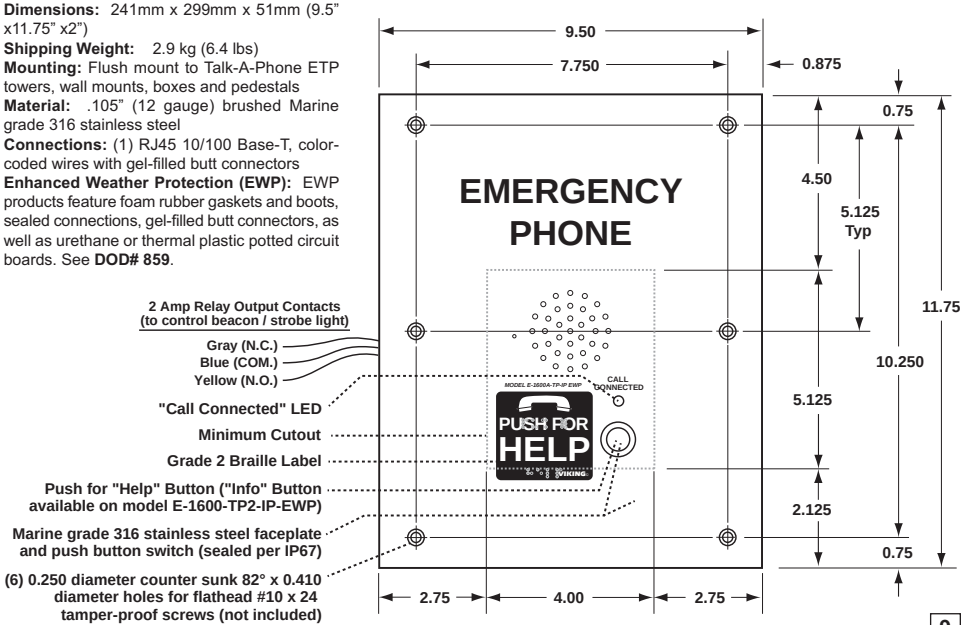
Shipping Weight: 2.9 kg (6.4 lbs)

Mounting: Flush mount to Talk-A-Phone ETP towers, wall mounts, boxes and pedestals

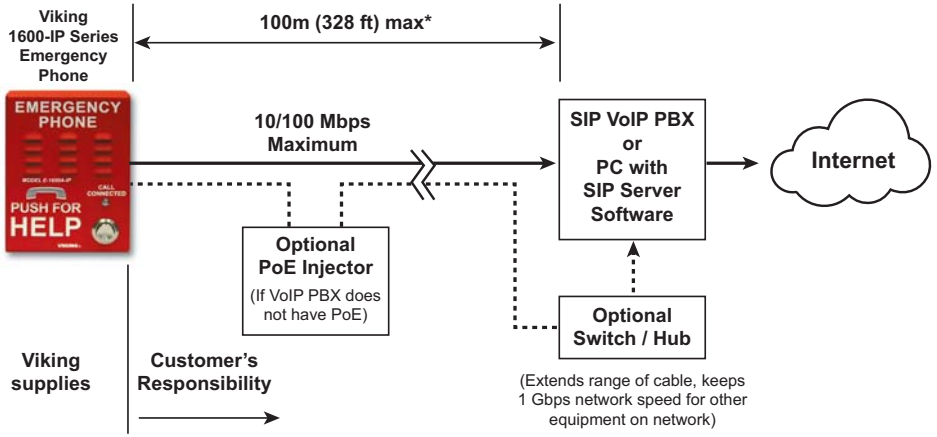
Material: .105" (12 gauge) brushed Marine grade 316 stainless steel

Connections: (1) RJ45 10/100 Base-T, color-coded wires with gel-filled butt connectors

Enhanced Weather Protection (EWP): EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards. See **DOD# 859**.



Typical Installation on SIP Based VoIP Phone System



***Note:** A PoE extender can be used for an additional 100 meters per extender. For longer runs (up to 2 km / 1.2 miles) a ethernet to fiber media converter can be used.*

PC Requirements

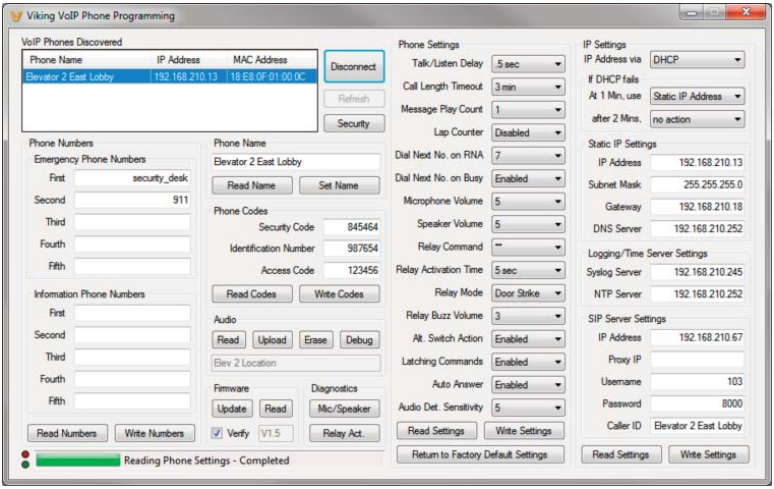
- **IBM** compatible personal computer with:
  Windows 2000 (service pack 4 or higher)
  Windows XP (service pack 2 or higher)
  Windows Vista (SP2 or newer), 32 or 64 bit versions
  Windows 7
  Windows 8
- Adobe Acrobat Reader 8 or higher
- **1600-IP Series** hardware
- Available LAN with PoE (class 1, <4 watts)
- Ethernet cable (CAT5 min.)
- 1 MB minimum free hard drive space for installation
- 16MB of free physical RAM

PC Programming

A CD is included with each **1600-IP Series** VoIP phone. The CD contains the application "**Viking VoIP Phone Programming**" used to program the unit using a PC running Windows 2000, XP, Vista, Windows 7, or Windows 8 (see System Requirements above). The PC must be connected to the same LAN as the **1600-IP** VoIP phone. Install the application on your PC by placing the CD into your PC's drive. Click "I Accept" on the bottom of the first screen, then select "Viking VoIP Phone Programming" and click the "Install" button. Follow the directions on the screen. If you are reinstalling the Viking VoIP Phone Programming software you must uninstall the original version first via "Add and Remove Programs". To start the Viking VoIP Phone Programming application, click on the Viking VoIP Phone Programming icon on your desk top. The Main screen will appear, allowing the user to program any **1600-IP** phone connected to that LAN.

A. Configuring the 1600-IP Series Network Settings

Step 1.	Open the "Viking VoIP Phone Programming" software on a windows PC that is connected to the same LAN as the **1600-IP** phone to be programmed. The default static IP Address is: 192.168.154.1
Step 2.	The window in the upper left corner of the menu will show you each **1600-IP** phone that is connected to that LAN. Select the unit with the same MAC address shown on the label located on the top of the Ethernet connector on the **1600-IP** phone.
Step 3.	Click the "Connect" button. If a pop up window appears, enter the unit's security code (factory set to **845464**) then click the "OK" button.
Step 4.	The program will then read and display the **1600-IP** phone's IP and programming settings.
Step 5.	After adjusting the IP and phones settings, click the "Write" button under each column of settings to send the programming commands to the connected unit.



B. Manually Resetting All Network Parameters to Factory Default

Step 1.	Power down the **1600-IP Series** phone by disconnecting the RJ45 plug.
Step 2.	Press and hold the HELP/CALL button, then reconnect the RJ45.
Step 3.	Continue to hold the button until you hear 2 beeps, (approximately 6 seconds). Continue to hold the button until you hear 4 more beeps, approximately 6 seconds later, then release the button. The "Call Connected" LED will remain off for the first 3 seconds, flash slowly for 3 seconds (2 beeps), fast flash for 6 seconds (4 beeps), then light steady indicating when to release button.
Step 4.	The unit should continue to output double beeps and slowly flash the LED indicating all Network Parameters are now reset to factory default. The default static IP Address is: 192.168.154.1
Step 5.	You must now power cycle the unit by momentarily disconnecting the RJ45.
Step 6.	You will be required to re-enter your initial network settings prior to any touch tone programming, see section A on page 9.

Touch Tone Programming

A. Accessing the Touch Tone Programming Mode

The **1600-IP Series** emergency phones can be programmed by calling the unit from any touch tone phone.

1. Using the Security Code to Enter Programming

Step 1.	From a touch tone phone call the **1600-IP Series** phone you would like to program.
Step 2.	When the **1600-IP Series** phone answers, enter the 6-digit security code (factory set to **845464**, see section **B**). A double beep should then be heard indicating you have entered the programming mode.
Step 3.	You can now touch tone program the **Quick Programming Features** listed on page 10.

2. Manually Resetting the Security Code to Enter Programming

Step 1.	Power down the **1600-IP Series** phone by disconnecting the RJ45 plug.
Step 2.	Press and hold the HELP/CALL button, then reconnect the RJ45.
Step 3.	Continue to hold the button until you hear 2 beeps, (approximately 6 seconds). Then release the button. The "Call Connected" LED will remain off for the first 3 seconds, flash slowly for 3 seconds then fast flash (after 2 beeps) indicating when to release button.
Step 4.	The security code is now reset to **845464** (factory default).
Step 5.	You can now enter touch tone programming by following the steps in section **1. Using the Security Code**, above.

B. Security Code (#19)

The security code allows the user/installer to program the **1600-IP Series** phone. The factory set security code is 845464 (V-I-K-I-N-G). It is recommended that the factory set security code be changed. ***Note:*** *The security code must be 6 digits and cannot include a ✳ or a* **#**.

Example: To store 123456 as the security code (shown right).

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

Quick Programming Features (after accessing the Programming Mode)

DESCRIPTION	ENTER DIGITS	+	MEMORY LOCATION
First emergency speed dial number	0-20 digits	+	**#00**
Second emergency speed dial number	0-20 digits	+	**#01**
Third emergency speed dial number	0-20 digits	+	**#02**
Fourth emergency speed dial number	0-20 digits	+	**#03**
Fifth emergency speed dial number	0-20 digits	+	**#04**
First “Info” speed dial number (E-1600-20/22/52/53-IP only)	0-20 digits	+	**#05**
Second “Info” speed dial number (E-1600-20/22/52/53-IP only)	0-20 digits	+	**#06**
Third “Info” speed dial number (E-1600-20/22/52/53-IP only)	0-20 digits	+	**#07**
Fourth “Info” speed dial number (E-1600-20/22/52/53-IP only)	0-20 digits	+	**#08**
Fifth “Info” speed dial number (E-1600-20/22/52/53-IP only)	0-20 digits	+	**#09**
To clear any speed dial number	(no digits)	+	**#00 - #09**
Talk/Listen Delay (.1 to .9 sec, factory set to .2 sec)	1 digit (1-9)	+	**#11**
Call Length Time Out (0 to 9 min, 0 = disabled, factory set to 3 min)	1 digit (0-9)	+	**#12**
Message Play Count (0 to 9, 0 = play every 8 sec, factory set to 1)	1 digit (0-9)	+	**#15**
Lap Counter (0 to 9, 0 = disabled, factory set to 0)	1 digit (0-9)	+	**#16**
Dial Next Number on Ring No Answer (0 or 1 = disabled, 2 - 9 = number of rings, factory set to 7)	1 digit (0-9)	+	**#17**
Dial Next Number on Busy (1 or 2, 1 = disabled, factory set to 2/enabled)	1 digit (1 or 2)	+	**#18**
Security code (factory set to 845464)	6 digits (0-9)	+	**#19**
Identification number (factory set to 987654)	6 digits (0-9)	+	**#20**
Access Code (six digits, factory set to 123456)	6 digits (0-9)	+	**#21**
Mic volume (0-9, 0 = ANC, factory set to 5)	1 digit (0-9)	+	**#22**
Speaker Volume (0-9, factory set to 5)	1 digit (0-9)	+	**#23**
Relay Activation Command (1 or 2 digits, ✻✻ = ✻, ✻✻✻✻ = ✻✻, 0-9 or 00-99, factory set to ✻✻) (Relay Mode must be set to 0 = Door Strike)	1 or 2 digits	+	**#24**
Relay Activation Time (2 digits, 00-99 sec, 00= 0.5 sec, factory set to 05)	2 digits (00-99)	+	**#25**
Relay Mode (0 = Door Strike, 1 = Phone Active, 2 = Door Bell, 3 = **LV-1K** Control, factory set to 0)	1 digit (0-3)	+	**#26**
Relay Activation Tone (Buzz) Volume (1 digit 0-3, 0 = off, factory set to 3)	1 digit (0-3)	+	**#27**

DESCRIPTION	ENTER DIGITS
Diagnostic tones (used to check mic and speaker operation)	**✻0**
Enable Alternate Switch Action (factory setting)	**✻1**
Disable Alternate switch Action	**✻2**
Erase Message	**✻3**
Record Message (enter # to stop recording)	**✻4**
Playback Message	**✻5**
Enable Latching Commands (factory setting)	**✻6**
Disable Latching Commands	**✻7**
Enable Auto Answer (Factory Setting)	**✻8**
Disable Auto Answer	**✻9**
To add a ✻ at any point in the dialing string	**✻✻**
To add a # at any point in the dialing string	**✻#**
Reset all **Quick Programming Features** to factory default settings	**###**
Exit programming and disconnect	**##7**

Programming Features

Note: *Up to 32 digits can be stored in each dial position via touch tone programming, up to 255 characters via PC programming. Touch tone ∗ and # count as single digits.*

A. Speed Dial Numbers (#00 - #09)

1. Emergency Speed Dial Numbers (memory locations #00 - #04)

The emergency speed dial number programmed in location **#00** is the number that is dialed when the "**HELP**" / "**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. To program, enter the desired speed dial number followed by the location number (**#00 - #04**). To clear a speed dial location, simply enter the memory location (**#00 - #04**) alone. The **1600-IP Series** phone is factory set with no speed dial number programmed.

To Program:	Enter:
∗	∗∗
#	∗#
0, 1, 2 9	0, 1, 2 9

2. "INFO" Speed Dial Numbers (E-1600-20/22/52/53-IP only) (memory locations #05 - #09)

The information speed dial number programmed in location **#05** is the telephone or extension number that is dialed when the "**INFO**" button is first pressed (**E-1600-20/22/52/53-IP**). Additional information speed dial numbers will be dialed when there is no answer and the next number redial feature is activated. The **1600-IP Series** phone will cycle through the programmed speed dial numbers until answered. To program, enter the desired speed dial number followed by the location number (**#05 - #09**). To clear a speed dial location, simply enter the location (**#05 - #09**) alone.

3. Speed Dial Programming Examples

To Program the 1600-IP Series Phone...	Step 1	Step 2
...to store 555-1234 as the first emergency speed dial number	**Enter Programming** (see A. Accessing the Touch Tone Programming Mode, page 10)	**Enter digits: 5 5 5 1 2 3 4 # 0 0**
...to clear the first emergency speed dial number	**Enter Programming** (see A. Accessing the Touch Tone Programming Mode, page 10)	**Enter digits: # 0 0**

B. Talk / Listen Delay (#11)

This feature selects switching time between talk and listen modes (VOX switching time). Use chart at the right.

* ***Note:*** *The factory default is .5 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

C. Call Length Time Out (#12)

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 **1600-IP Series** phone must rely on a CPC signal, busy signal, silence or return to dial tone to hang-up. Use chart at the 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

D. Repeat Announcement Option (#15)

The **1600-IP Series** phone can be programmed to play the announcement from 1-9 times, or to continuously repeat the announcement every 8 seconds until a Touch Tone ∗ is detected from the distant party. The call connected LED will turn on automatically after the announcement has stopped repeating.

**** Note:*** *The factory default for the **1600-IP Series** phone is to play the voice announcement one time.*

Touch Tone	Repeat Announcement
0	Repeat every 8 seconds
1	1 time*
2	2 time
3	3 time
4	4 time
5	5 time
6	6 time
7	7 time
8	8 time
9	9 time

E. Lap Counter (#16)

With the lap counter disabled (factory setting), if the **1600-IP Series** phone is programmed to dial the next number on ring-no-answer and/or busy signal (see section **F** and **G** below), the **1600-IP Series** phone will continuously call its programmed phone numbers forever until the call is answered.

The lap counter is a programmable counter that determines how many times the **1600-IP Series** phone will cycle through its list of up to 5 emergency numbers (or up to 5 "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 **1600-IP Series** phone hangs up.

**** Note:*** *This feature is disabled in the factory default setting.*

Touch Tone	Lap Counter
0	Disabled*
1	1 time
2	2 time
3	3 time
4	4 time
5	5 time
6	6 time
7	7 time
8	8 time
9	9 time

F. Dial Next Number on Ring No Answer (#17)

If enabled and a ring-no-answer is detected, the **1600-IP Series** phone will dial the next programmed speed dial number, and continue to cycle through the emergency numbers until a call is completed.

**** Note:*** *Factory set to redial if not answered after 7 rings.*

Touch Tone	Ring No Answer
0	Disabled
1	Disabled
2	2 rings
3	3 rings
4	4 rings
5	5 rings
6	6 rings
7	7 rings*
8	8 rings
9	9 rings

G. Dial Next Number on Busy (#18)

If enabled and a busy is detected, the **1600-IP Series** phone will dial the next programmed speed dial number, and continue to cycle through the numbers until a call is completed.

Touch Tone	Dial on Busy
1	Disabled
2	Enabled*

* ***Notes:*** *This feature is enabled in the factory default setting. If the busy signal is interrupted with a promotional message, contact your central office to have it removed.*

H. Identification Number (#20)

The Touch Tone I.D. number (up to 6 digits) is used by emergency personnel to identify the location of the caller and is given out when the receiving party presses a Touch Tone ∗. The security office can display the number using a Touch Tone decoder. To program the I.D. number, enter the desired number followed by **#20**. **Example:** To store 333 as the I.D. number, enter: **3 3 3 # 2 0**

I. Recording the Announcement

Step 1.	Call into the **1600-IP Series** phone with a Touch Tone phone and access programming.
Step 2.	Enter **∗4**, wait for the tone and then begin recording (28 seconds of record time is available).
Step 3.	Enter **#** to stop the recording. Playback is automatic.
Step 4.	Enter **∗5** to review the announcement again.
Step 5.	If you choose to not use a voice announcement, enter **∗3** to clear the recording.

Example: "Elevator number 1215, located in the Financial Building, needs assistance. Press the star (∗) key on your telephone to hear this announcement again."

Operation

A. "HELP" / "CALL" Button

When the "**HELP**" / "**CALL**" button is pressed, the **1600-IP Series** phone dials a pre-programmed telephone number. The Call Connected LED momentarily flashes during dialing. In the event 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 emergency numbers until the call is answered. When the call is answered, the digital voice announcer will automatically play to identify the location of the emergency call. The phones are factory programmed to play the announcement once, and then automatically light the "Call Connected" LED to show that handsfree communication to emergency personnel is established. The ∗ key will send the I.D. number (if programmed), and play the announcement again. The distant party will know the location of the emergency call by either the voice announcement or by decoding the Touch Tone I.D. number. Once the "Call Connected" LED is on, the # key can be used to force the phone to hang-up.

B. "INFO" Button (E-1600-20/22/52/53-IP)

When the "**INFO**" button is pressed (**E-1600-20/22/52/53-IP** only), the phone goes off-hook and dials the first "**INFO**" phone number programmed. If a busy signal is detected or the call goes unanswered, the phone will cycle through all five "**INFO**" phone numbers until the call is answered. When answered, handsfree communication is established. ***Note:*** *The voice announcement is for* ***Emergency/Help*** *calls only and will not play on a call initiated from the "****INFO****" button.*

C. Remote Access Operation Commands

Feature	Tone Tone Command	Description
Activate Relay	∗∗ or ___ ___	Momentarily activate relay (1 or 2 digits, factory set to ∗∗).
Un-Latch Relay	∗**0**	Un-latch* (deactivate) the relay.
Latch Relay	∗**1**	Latch* (continuously activate) the relay.
Disconnect	**#**	Disconnects or forces the emergency phone to hang up.
Send ID and Play Message	∗	Send I.D. number (if programmed) and plays the announcement.

**** Note:*** *Latching commands must be enabled (∗**6**) in programming.*

Related Products

Line Verification Panel with Key Switch

New ASME A17.1-2010 code requires that "the two-way communications means within the (elevator) car shall include a means to verify operability of the LAN connection". When your local municipality adopts this new ASME A17.1 code the **LV-1K** can be added to fulfill all requirements for visual and audible signaling when it is determined the telephone line is not functioning.

The **LV-1K** can be added to any new or existing Viking **1600-IP Series** elevator emergency as a single phone stand alone solution. The **LV-1K** continuously monitors for loss of PoE or communication with the server and will immediately provide an audible and visual indication when the LAN connection has been accidentally cut or disconnected.

For more information, see DOD# 246

In accordance to ASME A17.1, the **LV-1K** is labeled "ELEVATOR COMMUNICATION FAILURE" in ¼" high red letters, and will sound an audible signal every 30 seconds and flash a red light when a loss of connection is detected. Authorized personnel can silence the audible signal with the included key switch. The LED will remain flashing until the fault is corrected.

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 - 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:

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. 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):

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 Viking product 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 SEPARABLE AND INDEPENDENT ELEMENT OF RISK ALLOCATION AND IS INTENDED TO BE ENFORCED AS SUCH.

If trouble is experienced with the **1600-IP Series** phone, for repair or warranty information, please contact:

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

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.

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.

Product Support: (715) 386-8666