

## *SIP Audible Ringer with Visual Ring Indication and Remote Strobe Light Control*

The **SR-IP** is a SIP compliant PoE powered audio device for providing audible and visual ring indication for SIP VoIP phone systems. When registered with a SIP server, the **SR-IP** will ring in one of 4 programmable ring patterns and flash a bright red LED upon ring detection. During ring detection the units internal relay contacts will also activate providing a trigger for a Viking Model **SL-2** Strobe light or **LPL-1** visual ring indicator.

Equipped with a high efficiency Class D power amplifier and high quality loud speaker, the **SR-IP** is typically louder than a telephone speaker. The advanced features of the **SR-IP** include programmable Automatic Gain Control (AGC) technology which automatically increases ring volume to compensate for moderate background ambient noise. The AGC feature is ideal for



variable noise environments (offices, classrooms, restaurants, etc.), and ensures that ringing is heard but not unnecessarily loud.

**⚠ Installation requires the assistance of a Network Administrator / IT Technician.**

### Features

- **Programming software included**
- **2 Amp relay contacts for Viking LPL-1 or SL-2 strobe light control**
- **Bright red visual ring indicator LED**
- **SIP compliant** (see page 2 for list of compatible IP-PBX phone systems)
- **PoE powered (class 2, <6.5 watts)**
- **Automatic Gain Control (AGC) to automatically increase ring volume to compensate for ambient noise**
- **Network downloadable firmware**
- Surface mounts to a single gang or 4" x 4" electrical box or directly to a wall or post
- Remotely programmable
- Extended temperature range (-40°F to 140°F)
- Remotely adjust ringer volume
- Four programmable ring cadences: normal (2 sec ON / 4 sec OFF), double, short-short-long, short-long-short
- Optional **LPL-1** Remote Visual Ring Indicator (**DOD# 640**)
- Optional **SL-2** (**DOD# 242**) or **BLK-4-EWP** (**DOD# 654**) strobe light kits available

### Applications

- Ringer for variable noise environments (Offices, Classrooms, etc.)
- Visual Ring Indicator for quiet areas (Hospitals, Churches, Theaters, etc.)

**[www.vikingelectronics.com](http://www.vikingelectronics.com)**  
**Information: (715) 386-8861**

### Specifications

**Power:** PoE class 2 (<6.5 watts)  
**Maximum Sound Pressure:** 93 dB SPL @ 1m. *Note: For applications requiring louder ring, see Viking model PA-2A-IP.*  
**Relay Output:** SPDT contact, 2A @30VDC / 250VAC max  
**Dimensions:** 140mm x 115mm x 38mm (5.5" x 4.5" x 1.5")  
**Operating Temperature:** -40° C to 60° C (-40°F to 140°F)  
**Humidity:** 5% to 95% non-condensing  
**Audio Codecs:** G711u, G711a, G722  
**Network Compliance:** IEEE 802.3 af PoE, SIP 2.0 RFC3261, 100BASE-TX with auto cross over  
**Connections:** (1) RJ45 10/100 Base-T, (3) gel-filled butt connectors

## Viking VoIP SIP System Compatibility List

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

For detailed configuration instructions for certain vendors below, see **Configuring Viking VoIP Phone and SIP Servers, DOD# 944.**

Vendor	Infrastructure Class				
	Softswitch	PBX	Proxy	SBC (session border controller)	Service Provider
3COM VCX		X			
3CX		X			
Aastra		X			
Asterisk		X			
Atcom		X			
Avaya Aura Communication Manager	X				
Avaya IP Office		X			
BlueBox		X			
Brekeke		X			
Callcentric					X
Cisco Unified Communications Manager (CUCM)	X	X			
Cisco Unified Communications Manager Express (CUCME)	X	X			
Elastix		X			
Freeswitch		X			
Grandstream		X			
Interactive Intelligence	X	X			
iPECS (Ericsson-LG)		X			
iptel.org					X
Kamailio			X	X	
MetaSwitch				X	X
NEC		X			
OfficeSIP		X			
OpenSIPS		X			
Panasonic (with SIP Extension Card)		X			
Samsung Communications Manager (SCM)	X	X			
ShoreTel		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		
Toshiba		X			
VoIP.ms					X

**Known Incompatible System or Service Provider:** Ring Central (Requires Authorization ID and Proxy address).

## 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 **SR-IP** 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.

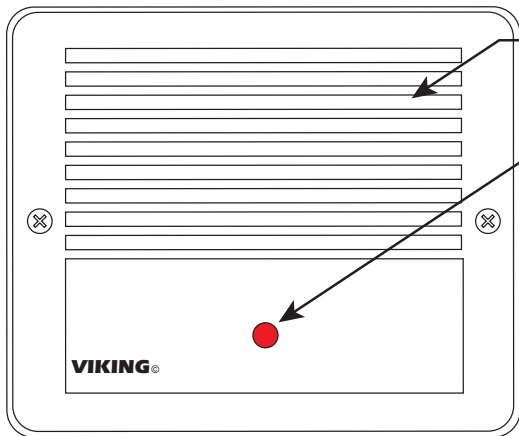
**Session Initiation Protocol (SIP):** Is a signaling communications protocol, widely used for controlling multimedia communication sessions such as voice and video calls over Internet Protocol (IP) networks. The protocol defines the messages that are sent between endpoints, which govern establishment,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

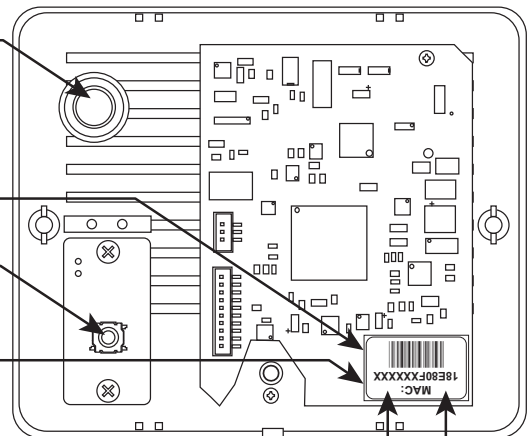
**WAN:** Wide Area Network. A WAN is a network comprising a large geographical area like a state or country. The largest WAN is the Internet.

# Features Overview

Front View of SR-IP



Internal View of SR-IP



Microphone for Automatic Gain Control (AGC)

LED Ring Indicator

Green Unit Status LED

Reset Switch

Yellow Network Status LED: Lights steady to indicate power and data link. Blinks to indicate network activity.

PoE LAN Port 10/100, PoE Class 2 (<6.5 Watts): Connect to your LAN via RJ45 plug and CAT5 or greater twisted pair wire.

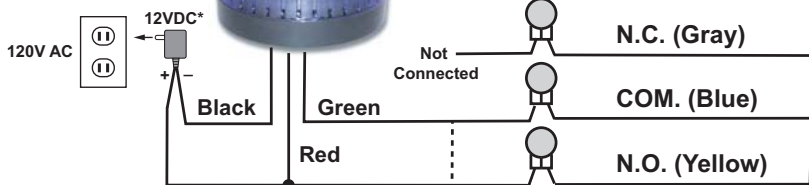
MAC Address Label: The MAC address is a unique 12 digit number used by routers to send network traffic to the correct IP address.

# Installation

## A. Wiring

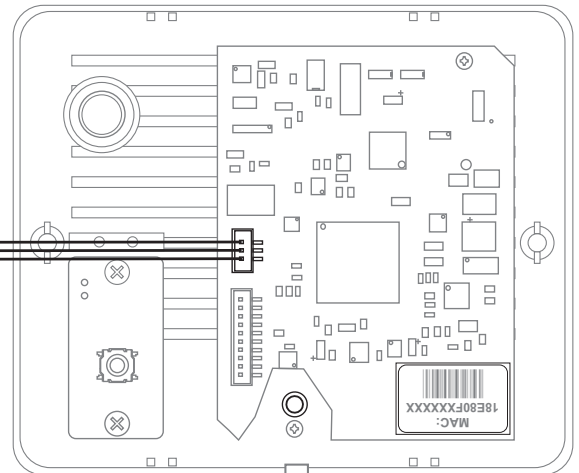
Connect to Optional Strobe Light, etc.

Viking model SL-2 with PS-2A\* 12 VDC power adapter (not included), see DOD# 242



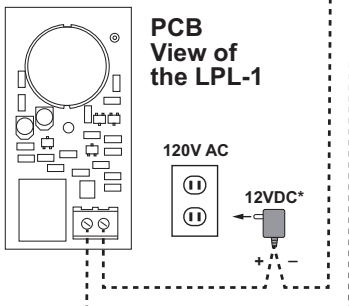
On-Board 2 Amp Relay Output Contacts (2A@30VDC/ 250VAC max)

Rear View of SR-IP



OR

Connect to Optional Remote Visual Ring Indicator



PCB View of the LPL-1

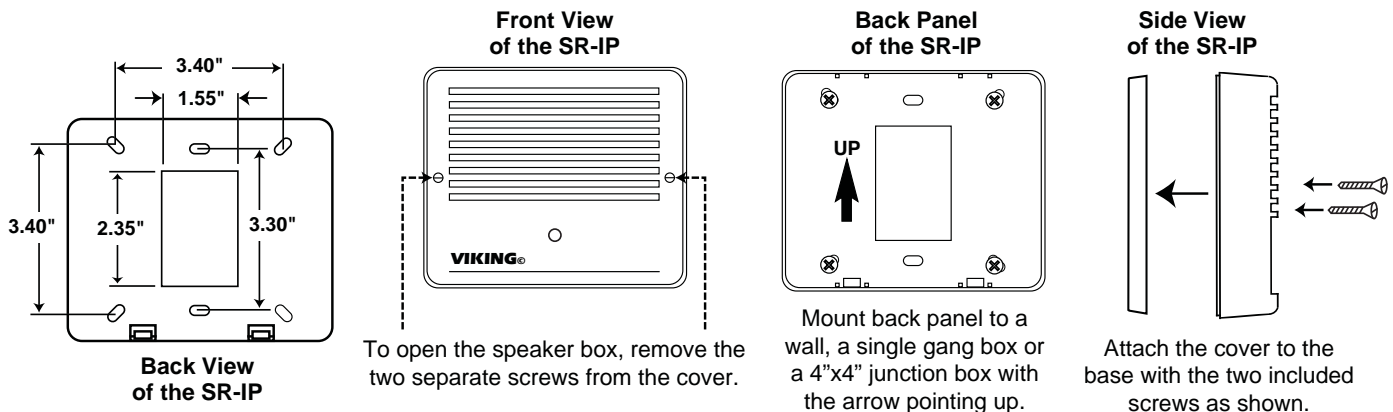
\* **Note:** To purchase the PS-2A power adapter (part # L120950), go to [www.vikingelectronics.com](http://www.vikingelectronics.com) and click on Spare Parts.

\*\* **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 stripped wire ends before terminating.

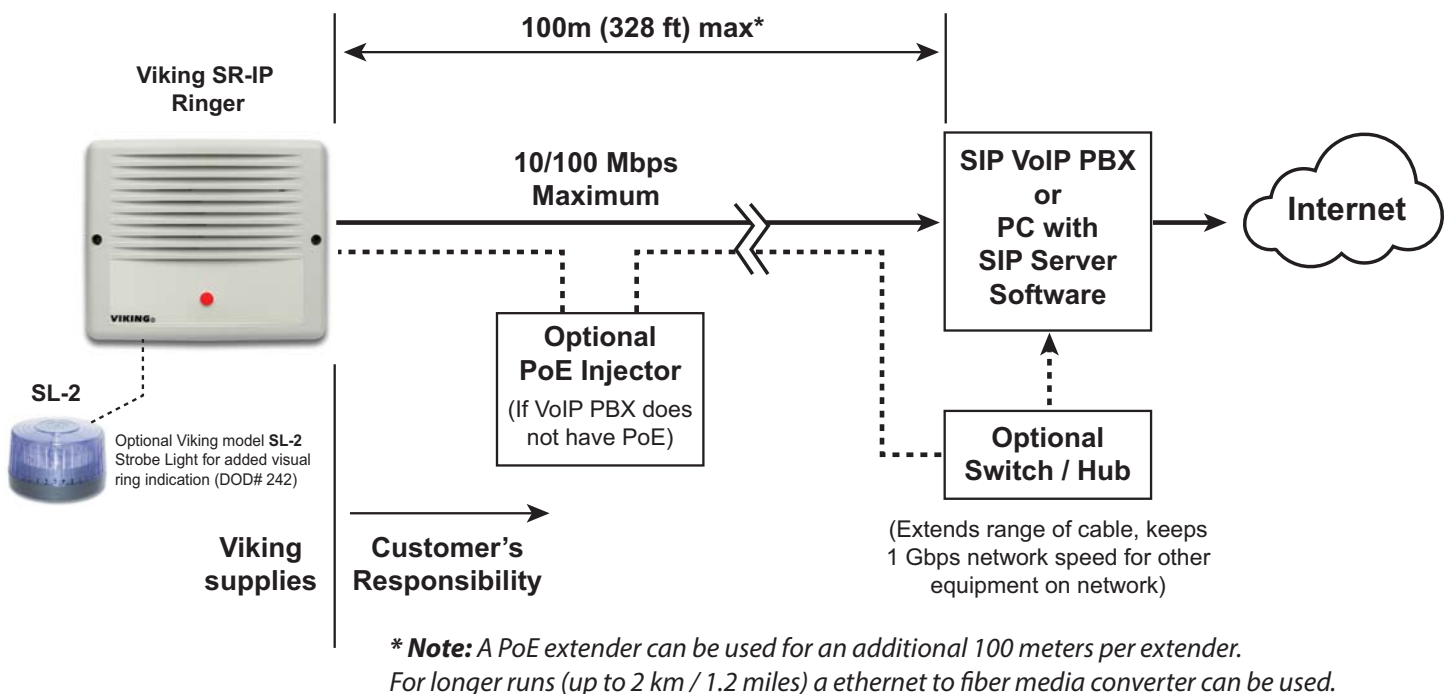
Viking model LPL-1 (DOD# 640) with Viking model PS-2A\* 12 VDC power adapter

## B. Mounting

The **SR-IP** is 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.



## Typical Installation on SIP Based VoIP Phone System



## 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
  - Windows 10
- Adobe Acrobat Reader 8 or higher
- **SR-IP** hardware
- Available LAN with PoE (class 2, <6.5 watts)
- Ethernet cable (CAT5 min.)
- 1 MB minimum free hard drive space for installation
- 16MB of free physical RAM

## PC Programming

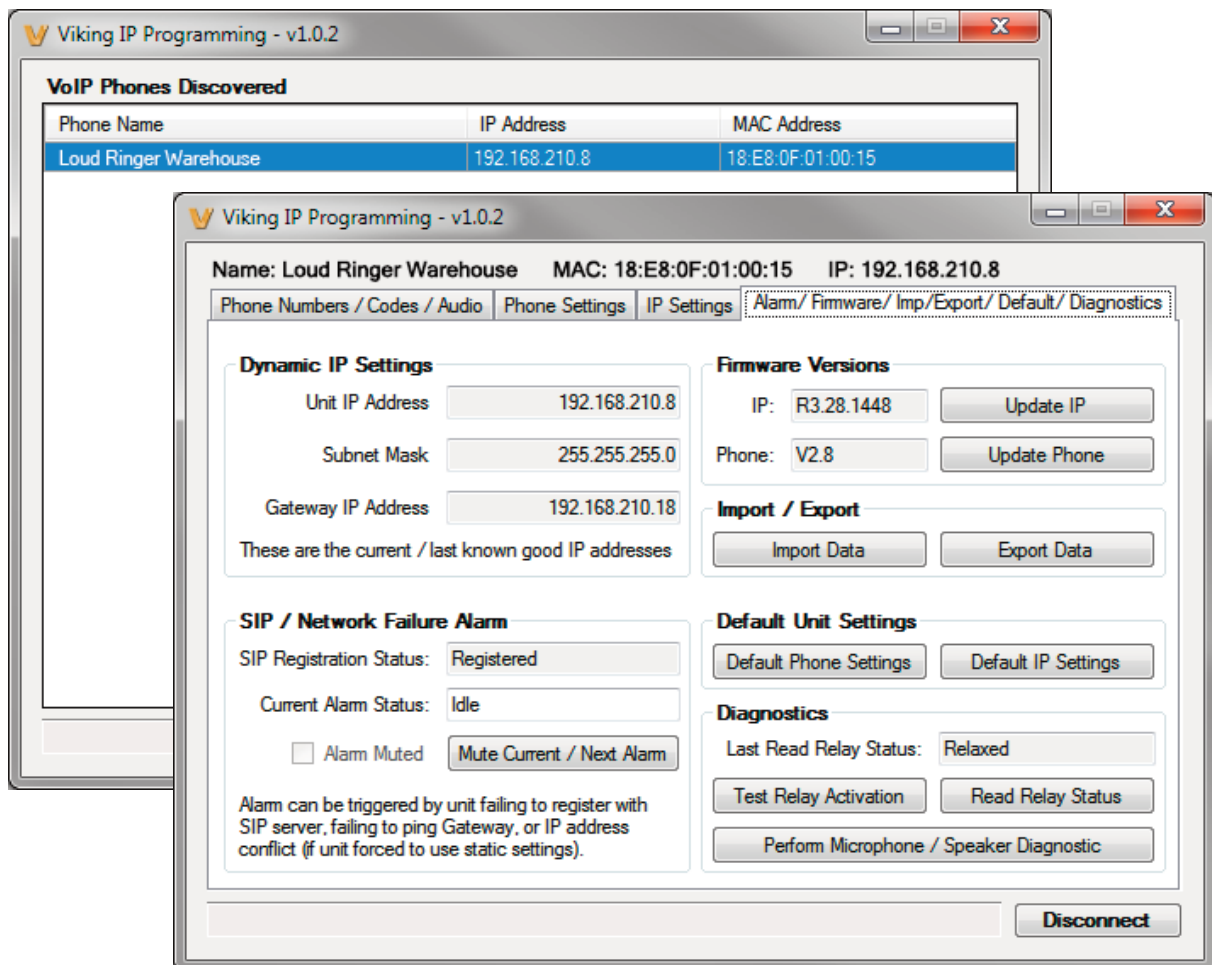
A DVD is included with each **SR-IP** SIP Ringer. The DVD contains the application “**Viking IP Programming**” used to program the unit using a PC running Windows 2000, XP, Vista, Windows 7, Windows 8, or Windows 10 (see System Requirements on page 5). The PC must be connected to the same LAN as the **SR-IP** VoIP Ringer. Install the application on your PC by placing the DVD into your PC’s drive. Click “I Accept” on the bottom of the first screen, then select “Viking IP Programming” and click the “Install” button. Follow the directions on the screen. To start the Viking IP Programming application, click on the Viking IP Programming icon on your desk top. The Main screen will appear, allowing the user to program any **SR-IP** Ringer connected to that LAN.

### A. Manually Muting SIP / Network Failure Alarm Beeps (3 beeps repeated every 30 seconds)

With the unit connected and powered (Green LED on and Yellow LED off or blinking) it will output 3 beeps every 30 seconds and turn the Red LED on and off once per second indicating a SIP registration failure, failure to receive an echo reply from pinged gateway or Ethernet connection failure. You can manually disable the beeps by pressing and holding the RESET Switch for 5 seconds (2 beeps will then be heard) or by clicking the “Mute Alarm Until Next Failure” tab in the Viking IP programming software. The LED will continue to flash allowing you to troubleshoot the failure.

### B. Configuring the SR-IP Network Settings

<b>Step 1.</b>	Open the “Viking IP Programming” software on a windows PC that is connected to the same LAN as the <b>SR-IP</b> to be programmed.
<b>Step 2.</b>	The window in the upper left corner of the menu will show you each <b>SR-IP</b> 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 <b>SR-IP</b> .
<b>Step 3.</b>	Click the “Connect” button. If a pop up window appears, enter the unit’s security code (factory set to <b>845464</b> ) then click the “OK” button.
<b>Step 4.</b>	The program will then read and display the <b>SR-IP</b> ’s IP and programming settings.
<b>Step 5.</b>	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.





## C. Manually Resetting All Network Parameters to Factory Default

<b>Step 1.</b>	Power down the <b>SR-IP</b> by disconnecting the RJ45 plug.
<b>Step 2.</b>	Press and hold the RESET switch, then reconnect the RJ45.
<b>Step 3.</b>	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 “Ring indicator” 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.
<b>Step 4.</b>	The unit should continue to output double beeps and slowly flash the LED indicating all Network Parameters are now reset to factory default.
<b>Step 5.</b>	You will be required to re-enter your initial network settings. See section A on page 5.

## D. Speaker Mode

The Speaker Mode can be set to one of the following two modes:

**OFF:** In the “OFF” mode the speaker is disabled at all times. This mode is useful when using the **SR-1** for visual ring indication only.

**ON (factory default):** In the “ON” mode the speaker is enabled.

## E. LED Mode

The LED Mode can be set to one of the following two modes:

**OFF:** In the “OFF” mode the LED is disabled at all times. This mode is useful when using the **SR-1** for audible ring indication only.

**ON (factory default):** In the “ON” mode the LED will flash while the extension is ringing.

## F. Relay Mode

The 2 amp relay contacts can be programmed to one of two different modes in programming:

**Ring Mode (factory default):** When programmed for Ring Mode the relay will continuously activate while the ringing extension is called. This mode is useful for activating a Viking model **SL-2** strobe light, etc.

**Ring Flash Mode:** When programmed for Ring Flash Mode the relay will momentarily turn on and off in a 400msec on/off cadence while the ringing extension is called. This mode is useful for activating a Viking model **LPL-1** remote visual ring indicator, etc.

# Programming Features

## A. Automatic Gain Control (AGC)

The **SR-IP**'s Automatic Gain Control technology automatically adjusts ring volume to compensate for background ambient noise. If AGC is enabled, the ring volume will get louder or quieter by the same dB level as the ambient noise measured just prior to the extension ringing.

For most applications using AGC, it is recommended to first set the minimum AGC ring volume to a level appropriate for a quiet environment. AGC will then adjust the volume upward when ambient noise levels increase. To finalize settings, make sure to test in a loud environment.

## B. Ring

The **SR-IP** can be programmed to Ring (factory default) or Ring with AGC. Ring is a fixed ring volume setting where as Ring with AGC will automatically increase or decrease the ring volume based on background ambient noise.

## C. Ring Cadence

The **SR-IP** can be programmed to ring/warble in one of 4 different distinctive ring patterns: Normal (factory default), Double, Short-Short-Long and Short-Long-Short.

# Connection/Operation

The **SR-IP** connects to an on-premise SIP VoIP phone system or hosted communication server in the same way as a SIP telephone. To register the **SR-IP** with the server requires the following information: **1.** IP address (e.g. 192.168.1.1) of the SIP Server **2.** User Name (e.g. SIP extension number) **3.** Password. When the Ringing extension is called the **SR-IP** will not answer. Instead it will warble in the selected ring pattern until the ringing stops. Typically the ringing extension is programmed as part of a hunt group so that it receives ring signal simultaneously with one or more phones to function as a loud ringer in noisy or large areas.

# Troubleshooting

If the unit cannot register with the programmed SIP server, the LED will blink on and off every two seconds, and three error beeps will be heard every 30 seconds until communication is restored. This alerts a potential user of a problem with the device.

You may silence the error beeps, per instance, by pressing and holding the RESET Switch for 5 seconds or by clicking the “Mute Alarm Until Next Failure” button in the Viking IP Programming Software (see section **A** on page 6). The error beeps automatically re-enable once the unit is registered, to alert of any new problems that arise.

# 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 through Friday 8:00am - 5:00pm 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 Product Manual 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 **SR-IP** loud ringer, 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 tests in 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**

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