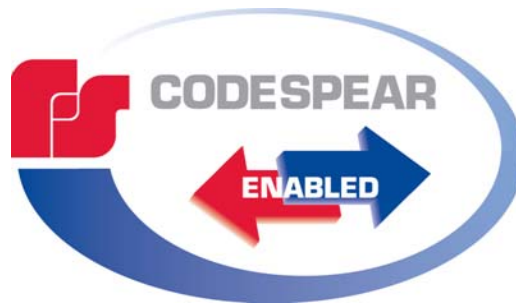




FEDERAL SIGNAL

Advancing security and well-being.



Informer-IP
Product Manual
255378 Rev. A
2/25/2010



IMPORTANT SAFETY NOTICES

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions.

- **Read and Follow Instruction** - All the safety and operating instructions should be read before the unit is operated. Follow all installation, operating, and use instructions.
- **Retain Instructions** - The safety and operating instructions should be retained for future reference.
- **Heed Warnings** - All warnings on the Informer and in the operating instructions should be adhered to.
- **Installation, Placement and Testing** – Proper installation, placement and testing is required to ensure the unit is able to perform as intended. Installation, placement and testing should only be performed after the installer has read and understood this manual. All applicable electrical codes must be followed.
- **Water and Moisture** - The Informer should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, rain or similar environments.
- **Wall Mounting** - The INFORMER should be mounted to a wall only as specified in this instruction manual.
- **Heat** - The INFORMER should be situated away from heat sources such as radiators, heat registers, stoves, or other accessories that produce heat.
- **Power Source** - The INFORMER should be connected to a 9 VDC, 500 mA., Class 2 wall transformer as provided with the unit. Contact your authorized service center if a replacement is required.
- **Power-Cord Protection** - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs.
- **Accessories** – Do not exceed maximum accessory relay output rating of 30 VDC, 5 Amps.
- **Cleaning** - The INFORMER should be cleaned with a non-abrasive cleaner and a damp cloth. Do not apply solvents directly onto the INFORMER.
- **Power Lines** - An outdoor antenna should be located away from power lines.

- Outdoor Antenna Grounding - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide protection against voltage surges and built up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to the antenna-discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
- Ethernet wiring must be at least 6 feet from bare power wiring or lightning rods and associated wires, and at least 6 inches from other wire (antenna wires, doorbell wires, wires from transformers to neon signs), steam or hot water pipes, and heating ducts
- Do not place Ethernet wiring or connections in any conduit, outlet or junction box containing high voltage electrical wiring
- Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
- Acoustic Output – The sound output of the INFORMER may cause hearing damage if the INFORMER is activated too close to the user. Always keep the INFORMER at least six inches away from a listener’s ears whenever the INFORMER power LED is on or blinking.
- Damage Requiring Service - The INFORMER should be serviced by qualified service personnel when:
 - The power-supply cord has been damaged; or
 - Objects have fallen, or liquid has been spilled into the INFORMER; or
 - The INFORMER has been exposed to rain; or
 - The INFORMER does not appear to operate normally or exhibits a marked change in performance; or
 - The INFORMER has been dropped, or the enclosure damaged.



Servicing Note: This symbol means to reduce the risk of fire, replace fuse as marked.

- Servicing - CAUTION! There are no user serviceable parts inside. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel. Always test the INFORMER before using after repairs have been made.

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1 General Description

1.1 Introduction

The **Informer-IP** is an intercom, a warning device, and an alarm initiation point that connects to your Ethernet network. A loud internal speaker and a sensitive microphone provide clear two-way voice communications between control and monitoring points and distributed locations. Six different alerts can be triggered remotely using a combination of a remote input, a local Alert pushbutton, and an optional wireless Key-Fob transmitter to initiate local or mass alerting events.

The Informer-IP has an optional audio output for connecting to existing PA systems and two relay outputs to control strobes or other remote devices. An RS232 port is available for driving an optional scrolling message display. The Informer-IP provides the same tone and voice alerts available with Federal Signal Ultravoice outdoor siren controllers to provide seamless indoor and outdoor Mass Notification.

The unit can be wall mounted or sit on a desktop. It can be powered via POE from your network, or via local power. The WiFi option allows a wireless connection to your network. Using existing network infrastructure significantly lowers installation costs and simplifies wide-scale deployments.

Schools, Hospitals, Police and Fire Stations, Gov't facilities and Industrial plants will find that the Informer-IP provides an unmatched value for indoor alert and notification.

1.2 Features

- Tone and Voice Alert and Notification compatible with Federal Signal UltraVoice controllers
- Two-Way Intercom with Remote audio monitoring, recording and playback
- Up to 8 minutes of local digital audio storage
- Small size, rugged construction and wide operating temperature range
- High output speaker with adjustable volume control and exceptional sound quality
- LED status indicators for Power, Alert, Test and Talk
- Optional Wireless Remote FOB Input triggers four Remote Alerts up to 75' away
- Alert/Intercom request button for intercom use
- Remote contact closure input triggers Alert/Intercom request
- Replay Button allows Alert messages to be replayed when the red Alert LED is flashing
- Reset Button Silences Alerts
- Local and remote volume level controls
- Alerts are IP addressable Individually, in Groups or All at once without a network broadcast
- Requires minimal network bandwidth and uses TCP/IP protocol for security and reliability
- Remote supervision of Communications, Audio Output, Alert Function Execution
- Remote management via web page browser and Telnet with password protection
- Supports remote monitoring via SNMP
- Supports fixed IP, DHCP and Auto-IP
- Wired Ethernet or optional WiFi connection
- Powered by wall transformer and/or Power-Over-Ethernet (POE)
- Works with redundant Codespear and Commander network servers for reliable failsafe operation with full 2-way control, status monitoring and configuration of the Informer-IP

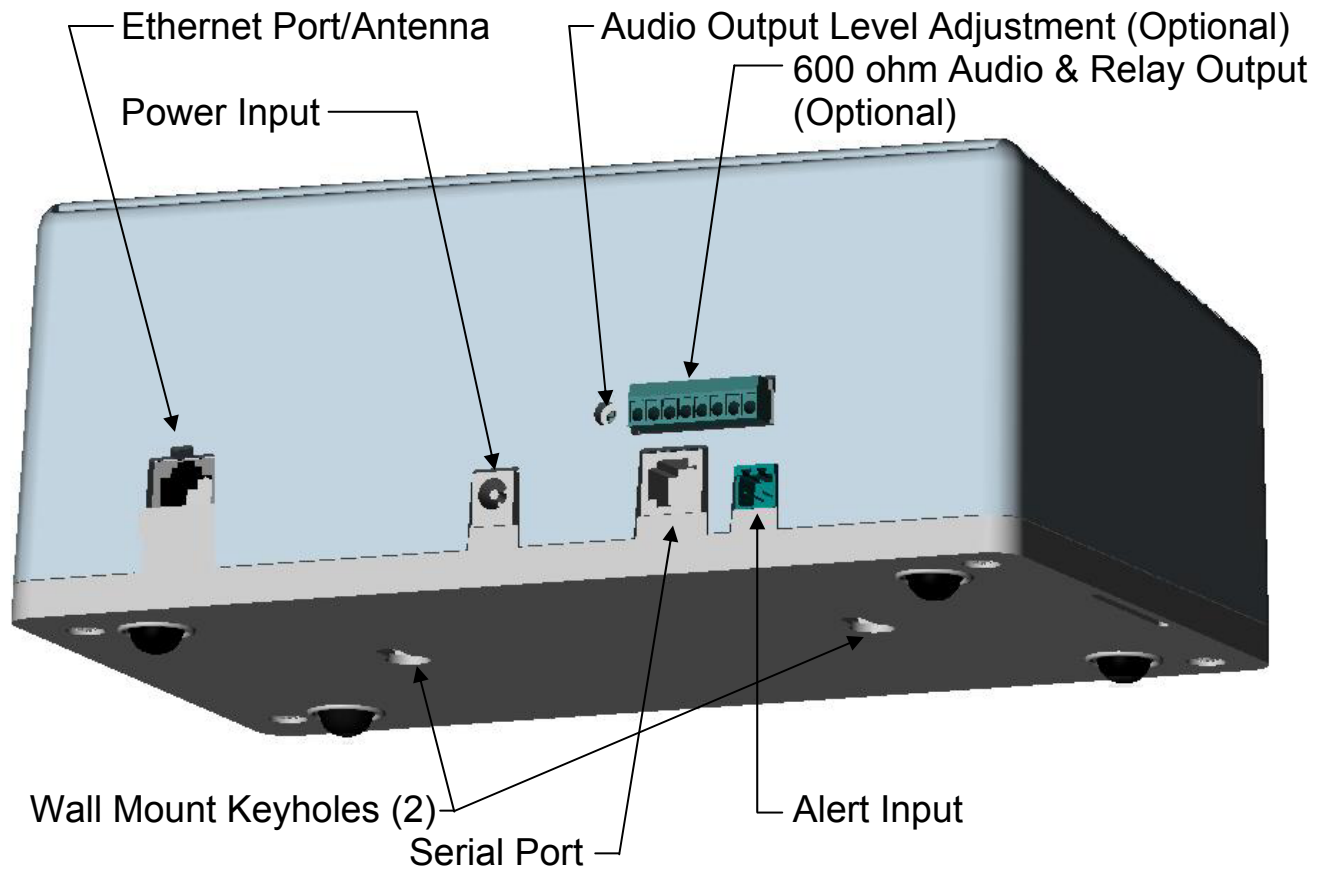
1.3 Optional Features

- 802.11b Wi-Fi (Model: I-IP-WIFI)
- 600-ohm audio and Two programmable relay outputs (Models: I-IP-IO & I-IP-WIFI-IO)
- 4-button wireless remote FOB (Model: I-KEYFOB) Triggers Remote Alerts up to 75' away
- Scrolling message displays with 50' serial cable

1.4 Informer-IP Main Components



1.5 Rear View I/O Definitions



2 SPECIFICATIONS

2.1 Electrical

Operating Voltages	8.0 to 40 VDC POE: 42 to 57VDC, IEEE 802.3af 108 - 128VAC, 60Hz w/wall transformer
Operating current	Standby; 9V=<200 mA, 12V=<150mA, 24V=<100mA With siren or message audio; 9V=<450mA, 12V=<350mA, 24V=<200mA
Operating current PoE, IEEE 802.3af, 48V input	Standby; <60 mA w/ siren or message audio; <110 mA
Audio Data	8000 samples/sec, μ Law compression
Audio Data Playback Storage	8 minutes non-volatile FLASH memory
Audio Frequency response	300Hz to 3000Hz, +1 to -3dB per octave
Audio Output	1/2 watt into 8 ohms
Audio Distortion	< 5% @ 80dB output, with 700 Hz tone

2.2 Audible Indications

Warning Siren Audio	Seven user-configurable tones
Internal Failure Alarm	Unit will sound a short, low-level beep once every 30 seconds if network connectivity is lost.

2.3 Wireless Key FOB Alert Buttons

Range	Up to 75 feet without obstructions
Frequency	433 MHz
Modulation	ASK/OOK
Unique Addresses	1024
Button Quantity	4

Complies with FCC Part 15 and Industry Canada RSP-100 compliance
Tested for CE compliance for use in the European Union

2.4 Serial and Ethernet Ports

Serial Port	RS232C, N, 8, 1 Baud rate configurable
Ethernet Port	IEEE 802.3, 10Base-T connection or IEEE 802.11b, 2.4 GHz WiFi Rcv -92dBm – 1Mbps, -82dBm – 11Mbps Tx + 16dBm

2.5 Visual Indications

Power LED - Green	On steady with power applied and connected to the network. Flashes on and off at a 100ms rate when disconnected from the network server.
Alert LED - Red	Flash 500ms. on / 500ms. off when alerted. LED turns off when Reset button is pressed or a Reset is sent from the control point. LED will not turn on for any function programmed to turn on the TEST LED.
Test LED - Yellow	On Steady when a Quiet Test message is received. The LED turns off when the Reset button is pressed or a Reset is sent from the control point. Flash 500ms. on / 500ms. off with internal failure. Flash 50ms. on / 50ms. off for 255 seconds when reset to factory defaults.
Talk LED – Blue	Turns on steady when audio is being monitored. Flash 500ms. on / 500ms. off when intercom audio is being broadcast to the Informer.

2.6 Programming

Code space and user data programmable over an RS232 serial port to Non-volatile EEPROM and FLASH memory.

2.7 Controls

Volume Up Button	Increases volume and beeps at the current volume level
Volume Down Button	Decreases volume and beeps at the current volume level
Replay Button	Button is debounced for 50ms. Replays last voice message received if Red Alert light is blinking.
Reset Button	Button is debounced for 50ms. Push to cancel alert signal, reset Alert LED, scrolling message and RSO relays.
Alert Button	Button is debounced for 50ms. The Alert button function is programmable and can be used to request an intercom chat session or send an alert to the Control Points.

2.8 Optional Audio/Relay Output -IO Models

Two Relay Outputs, 5 amps @ 30VDC

Relay outputs can be programmed to cycle on & off, or come on continuously with programmable on time, off time, and total-time.

Once activated, the relay outputs can be programmed to be reset manually, or reset after a programmable number of seconds.

The 600-Ohm audio output will respond as the speaker does. Audio comes on with the speaker and is reset or shut off when the speaker audio shuts off. The output level is adjustable from 0 to 2.5Vp-p into 600 Ohms w/ 1kHz tone.

2.9 Electromagnetic Interference

Complies with FCC Title 47, Part 15



FCC Part 15 Class B

Radio Frequency Interference (RFI)(FCC 15.105)

The Informer-IP has been tested and found to comply with the limits for Class B digital devices pursuant to Part 15 Subpart B, of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential 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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and the receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

WiFi versions of the Informer-IP contain a Transmitter Module FCC ID: MCQ-50M880/ IC: 1846A-50M880

2.10 Electrical Code Compliance

Complies with UL 1492

2.11 Connectors and Jacks:

- J1 Alert Button Alarm Input (Dry contact across pins activates input)
 - 2 – Active low input (Pulled to 4.5 VDC internally through 4.75K ohms)
 - 1- Ground

- J2 Power connector
 - Center - (8.0 to 30 VDC)
 - Outside - GND

- J3 Line Out
 - Center – Line Level Audio Output, 1.4Vpp, 0.500VRMS max
 - Outside – GND

- JP1 Serial / FLASH Port
 - 1 – Serial / FLASH! Select
 - 2 – (TXD)
 - 3 – (RXD)
 - 4 – (GND)
 - 5 – CTS / SCK (Serial Clock) Input
 - 6 – RTS / Reset Input

- JP2 RSO
 - 1 - VCC (4.9VDC to 5.10VDC)
 - 2 - Relay 2 Control (Active high)
 - 3 - Relay 1
 - 4 – GND

- JP3 Mic Enable Jumper
 - Jumper to enable Microphone

- JP4 Power connector
 - 1 - (8.0 to 40 VDC)
 - 2 - GND

- JP5 RSO
 - 1 - Audio input
 - 2 - VCC (4.9VDC to 5.10VDC)
 - 3 – Mute, active high
 - 4 - GND

- JP7 Speaker Audio
 - Non-polarized

- JP8 Panel Switches & LED's
 - 1 – Talk LED
 - 2 - Test LED
 - 3 – Heart Beat / AC Power LED
 - 4 - Alert LED
 - 5 – Alert Button
 - 6 - Volume Down Button
 - 7 - Volume Up Button
 - 8 – Replay Button
 - 9 - Reset Button
 - 10- GND

- JP9 Internal I²C Bus
 - 1 - VCC (4.9 – 5.1 VDC), 2.5W max draw.
 - 2 – Serial Data
 - 3 – Serial Clock
 - 4 – 8.0 to 40 VDC (9-24V Nom.), 2.5W max draw.
 - 5 - GND
 - 6 - GND

- JP10 Mic Audio Test
 - 1 – Input for 1Vpp test audio
 - 2 – GND

2.12 RSO (2005062B) I/O Connections

- JP1 (Connects to the Informer PCB)
 - 1 - Audio input
 - 2 - VCC (4.9 – 5.1VDC)
 - 3 – Mute, active high
 - 4 - Ground

- JP2 (Connects to the Informer PCB)
 - 1 - 5 VDC nominal (4.9 – 5.1VDC)
 - 2 - Relay 2 Control (Active high)
 - 3 - Relay 1 Control (Active high)
 - 4 - Ground

- JP3 (Field Wiring)
 - 1 - Normally closed, relay #2 (Right hand side of connector)
 - 2 - Common, relay #2
 - 3 - Normally open, relay 2
 - 4 - Normally closed, relay #1
 - 5 - Common, relay #1
 - 6 - Normally open, relay 1
 - 7 - 600 Ohm audio output
 - 8 - 600 Ohm audio output

2.13 300VSC and Sensor-board Connections

- Power – JP4
- Line level audio output – J3
- 8 digital inputs / 8 relay driver outputs – JP9

2.14 Environmental

Operating temp range	-22°F + 140°F / -30° + 60° C
Humidity range	0-95%, non-condensing

2.15 Physical

Size	8.5" W x 5" D x 3.5" H / 215.9mm x 127mm x 88.9mm
Weight	< 2.0 lbs / 0.9 Kg
Shipping Weight	2.80 lbs / 1.27 Kg

3 INSTALLATION INSTRUCTIONS



Warning

Read and adhere to all safety warnings beginning at page “i” of this manual before installing the Informer.

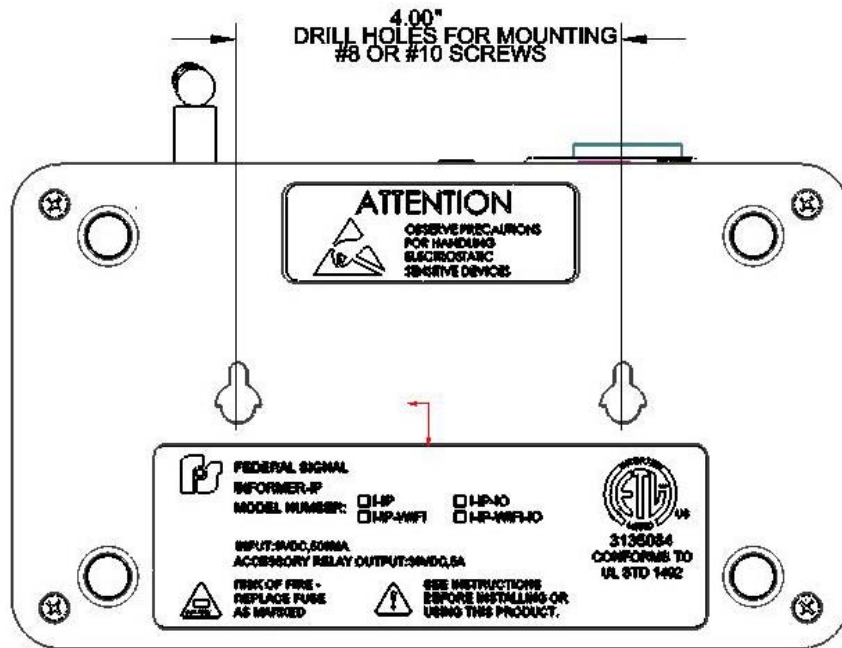
3.1 Determine a Suitable Location

When picking a location for the Informer first consider the following criteria:

1. The Informer should be placed as far as possible from electrically noisy electronic devices to avoid interference. Examples of noisy devices may include microwave ovens, motor driven devices, light ballasts, and electrical switching devices.
2. The Informer requires a connection to a wired or wireless Ethernet network depending on the model purchased. Ethernet wire runs must be less than 328’ from the nearest network switch.
3. The Informer should be placed in an area where the speaker can be heard when the Informer is activated. The level of the warning tone can be checked by holding pressing the Volume UP and Down buttons until the desired level is heard. If the coverage area is large, multiple Informers or external amplifiers and speakers may be required to provide adequate warning.
4. The Informer should be positioned to keep the unit at least six inches away from the listener’s ears to avoid potential hearing damage.
5. The Informer should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool, rain or similar environments.
6. The Informer should be located within six feet of an AC power receptacle to eliminate the need for an extension cord unless a Power Over Ethernet (POE) connection is available.
7. The Informer should be placed where it will not be inadvertently covered or moved. A permanent wall mounting is recommended after a suitable location has been found. Alternatively, a flat, level surface may be used to place the Informer on.

3.2 Wall Mounting

Wall mounting is the preferred mounting method for the Informer. Before mounting the unit, determine a suitable location considering the criteria listed above. The Informer has two keyholes located on the bottom of the unit that will accept #8 screws. The mounting screws should be placed horizontally level, approximately 6” above eye level and 4” apart on center. Ensure the screws are placed into material that can adequately support the weight of the Informer. Use a #8 wall anchor when mounting to drywall. Ensure that the screws are tightened sufficiently to securely fasten the Informer against the wall.



If the Wireless Ethernet model is being installed, the local rubber antenna should be mounted vertically on top of the unit such that the antenna is pointed toward the ceiling. If an external antenna is required, it should be installed by a qualified electrician in accordance with local and national electrical codes.

If the Wired Ethernet model is being installed, connect the Informer to the LAN using CAT5 cable. If the Wired Ethernet has POE, no other power connection is required.

If POE is not available, the supplied 9 VDC power supply should be run against the wall and plugged into a 120 VAC, 60 Hz outlet. Plug the low voltage end of the cord into the power jack located at the rear of the Informer. The cord should be routed to ensure it is protected against walking on, tripping over or pinching the cord.

3.3 Desk Mounting

Before installing the Informer, determine a suitable location considering the criteria listed above. If the Wireless Ethernet model is being installed, the local rubber antenna should be bent at 90° so the antenna points toward the ceiling. If an external antenna is required it should be installed by a qualified electrician in accordance with local and national electrical codes.

If the Wired Ethernet model is being installed, connect the Informer to the LAN using CAT5 cable. If the Wired Ethernet has POE, no other power connection is required.

If POE is not available, the supplied 9 VDC power supply should be run against the wall and plugged into a 120 VAC, 60 Hz outlet. Plug the low voltage end of the cord into the power jack located at the rear of the Informer. The cord should be routed to ensure it is protected against walking on, tripping over or pinching the cord.

3.4 Optional Audio/Relay Output - IO Model Connections

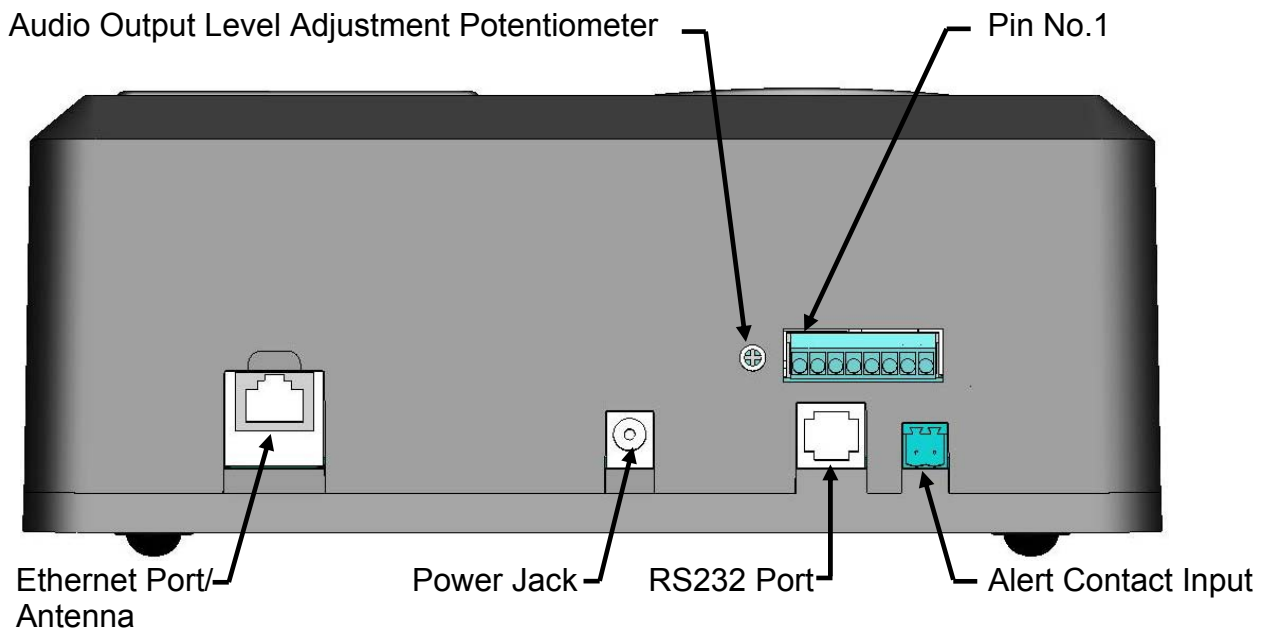


Do not exceed the electrical ratings defined in the specifications for the IO option.

If one of the IO models of the Informer is purchased, a 600-ohm balanced audio output and two SPDT relay outputs are available. A removable 8 position connector is located on the back side of the Informer for making electrical connections. The connector accepts 5mm (3/16") stripped wire, 18 – 26 AWG.

Make electrical connections to the I/O connector as follows:

PIN	DESCRIPTION
1	Audio Output
2	Audio Output
3	Relay 1 N.O. Contact
4	Relay 1 Common
5	Relay 1 N.C. Contact
6	Relay 2 N.O. Contact
7	Relay 2 Common
8	Relay 2 N.C. Contact



3.5 Alert Contact Input

A two-position Alert contact input is located on the rear of the housing. The removable connector accepts 5mm (3/16") stripped wire, 18 – 26 AWG.

3.6 RS232 Port

The RS232 Port uses a 6 pin modular connector. Federal Signal provides a 50' foot pre-terminated cable when scrolling message displays are purchased with the Informer. Longer cable runs require the use of a modem to reliably extend the range.

RS232 Connector Pin-out

PIN	DESCRIPTION
1	Serial / Flash Select
2	TXD
3	RXD
4	GND
5	CTS / Serial Clock In
6	RTS

3.7 Ethernet Port

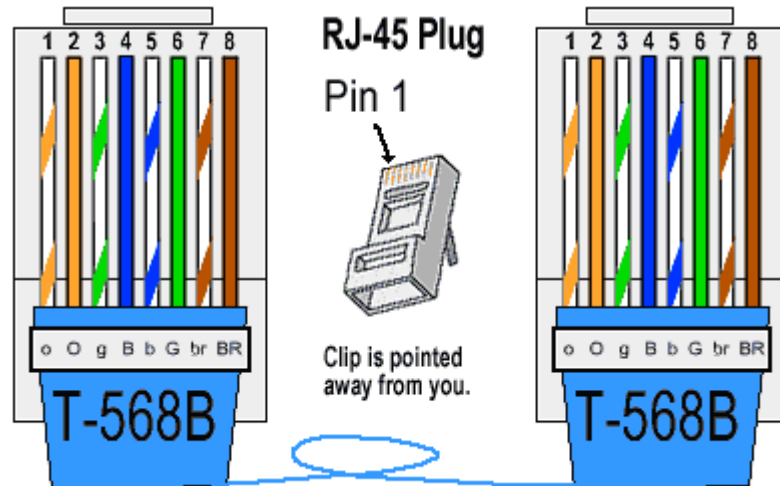
The non-WiFi versions of the Informer-IP have an 8 pin Ethernet port for connecting to the network. The port accepts 42 to 57VDC POE per IEEE 802.3af. Ethernet wire runs must be less than 328' from the nearest network switch. The wired Ethernet port auto-negotiates a 10/100, full or half duplex connection.

The Informer-IP Wifi will connect up to 11 Mbps with auto rate fallback.

3.7.1 Ethernet Cable Reference

This information is provided as a general reference. Refer to TIA/EIA 568 for additional information.

T-568B Straight-Through Ethernet Cable



Cable Making Tips:

1. Pull the cable off the reel to the desired length and cut. If you are pulling cables through holes, its easier to attach the RJ-45 plugs after the cable is pulled. The total length of the wire segments between the Informer-IP and the nearest a hub cannot exceed 100 Meters (328 feet) for 100BASE-TX and 300 Meters for 10BASE-T.
2. Start on one end and strip the cable jacket off (about 1") using a stripper or a knife. Be extra careful not to nick the wires, otherwise you will need to start over.
3. Spread, untwist the pairs, and arrange the wires in the order of the desired cable end. Flatten the end between your thumb and forefinger. Trim the ends of the wires so they are even with one another, leaving only 1/2" in wire length. If it is longer than 1/2" it will be out-of-spec and susceptible to crosstalk. Flatten and insure there are no spaces between wires.
4. Hold the RJ-45 plug with the clip facing down or away from you. Push the wires firmly into the plug. Inspect each wire is flat even at the front of the plug. Check the order of the wires. Double check again. Check that the jacket is fitted right against the stop of the plug. Carefully hold the wire and firmly crimp the RJ-45 with the crimper.
5. Check the color orientation, check that the crimped connection is not about to come apart, and check to see if the wires are flat against the front of the plug. If even one of these are incorrect, you will have to start over. Test the Ethernet cable using an Ethernet cable tester.

4 Configuration

4.1 Overview

Before using the Informer-IP on your network, configuration must be performed by a System Administrator. The Administrator must be familiar with IP network equipment, this manual and the Federal Commander Product manual. Proper configuration settings are required for the network to be able to reliably communicate with the device and create a redundant, failsafe network architecture for your system.

The minimum configuration requires an IP address, Parent Server IP Address, Port Number, and an Informer Site number assignment before placing the Informer into service. The Informer can be statically addressed or it can be configured for DHCP and Auto-IP. For permanent installations and good network management, it is recommended to reserve static IP addresses for all Informer-IP devices on the network. The factory default setting places the Informer-IP on a static IP address of 10.10.10.1 with a subnet mask of 255.255.255.0 on port 16887. The unit may be restored to this factory default setting with a hardware reset if the configuration information is lost.

Static IP addresses must be reserved on your network for each Federal Signal network server and are recommended to be reserved for each Informer-IP and any other Federal Signal network equipment such as Sirens, SIU, or RIU devices. Numeric site ID numbers must be reserved for use by the Commander software to identify each Commander Control Station, Informer-IP and Siren device on a map display using numbered ICONS. IP addresses and site ID numbers **MUST NOT** be duplicated on the network at any time or network errors will occur. Server Site, RIU and SIU numeric site ID numbers are not used. Informer-IP and Siren site ID numbers start at number 001 and are numbered sequentially. Commander Control Station Site ID numbers start at number 900.

Three configuration methods are available:

1. Web browser interface
2. Command line Telnet session
3. Informer-IP Setup Wizard (Recommended for 1st time configuration of WiFi Informer-IP units)

All methods require a username and password for security. The default username / password is: **User: config, Password: Informer-IP**. The config user has security rights to change the config user password. Usernames and Passwords are case sensitive.

It is recommended to fill in the applicable sections of the following forms to assist with configuration and future maintenance.

4.2 Informer-IP Network Configuration Form

Informer-IP Network Configuration Form

Fill in this form and store in a safe location prior to attempting to configuring the Informer-IP

Domain Name	<input type="text" value="mydomain"/>
IP Range	<input type="text" value="0.0.0.0 - 0.0.0.0"/>
Subnet Mask	<input type="text" value="000.000.000.000"/>
Gateway	<input type="text" value="0.0.0.0"/>
Primary DNS Server	<input type="text" value="0.0.0.0"/>
Alternate DNS Server	<input type="text" value="0.0.0.0"/>
SMTP Server Name	<input type="text" value="Parent 1 / 0.0.0.0"/>
SMTP Server Address	<input type="text" value="Child 1 / 0.0.0.0"/>
Codespear Parent Server Name	<input type="text" value="mydomain"/>
Codespear Parent Server Address	<input type="text" value="0.0.0.0"/>
Failover Server 1 Name / Address	<input type="text" value="Child 1 / 0.0.0.0"/>
Failover Server 2 Name / Address	<input type="text" value="Child 2 / 0.0.0.0"/>
Failover Server 3 Name / Address	<input type="text" value="Child 3 / 0.0.0.0"/>
Failover Server 4 Name / Address	<input type="text" value="Child 4 / 0.0.0.0"/>
Informer-IP Config Username	<input type="text" value="config"/>
Informer-IP Config Password	<input type="text" value="Informer-IP"/>
Other 1	<input type="text"/>

Network Authentication

Use the following selected method(s) for WiFi Enabled units:

SSID

- Open System
- Shared Key
- WEP with 802.1x authentication
- WPA with pre-shared key (WPA-PSK)
- WPA with 802.1x authentication
- Cisco LEAP

Data Encryption



Use any available encryption method



Use the following selected method(s):

- Open System (no encryption)
- WEP
- TKIP
- CCMP

WEP Keys

Transmit
key:



1



2



3



4

Encryption Keys:

1:

2:

3:

4:

WPA PSK

A Network SSID is required before a passphrase can be entered for WPA-PSK authentication. *Note: Enter the Network name (SSID) on the WiFi LAN Settings tab.*

Passphrase:

Username/Password

Enter a username/password when the following network authentication methods are enabled: WEP with 802.1x authentication, WPA with 802.1x authentication, or LEAP.

Username:

Password:

WiFi 802.1x Authentication Settings

These options are only configurable when **WEP with 802.1x authentication** or **WPA with 802.1x authentication** is used

EAP Methods:



PEAP



TLS



TTLS

PEAP/TTLS Tunneled Authentication Protocols:



GTC



MD5



MSCHAPv2



OTP



CHAP



MSCHAP



TTLS-MSCHAPv2



PAP

Client Certificate

A client certificate and private key is required when TLS is enabled.

Certificate File:

Private Key File:

A password is required only if the key file is encrypted:

Password:

4.3 Recommended ID Label

Location	IP Address	Site ID#	MAC
Lobby	x.x.x.x	001	00:00:00:00:00:00

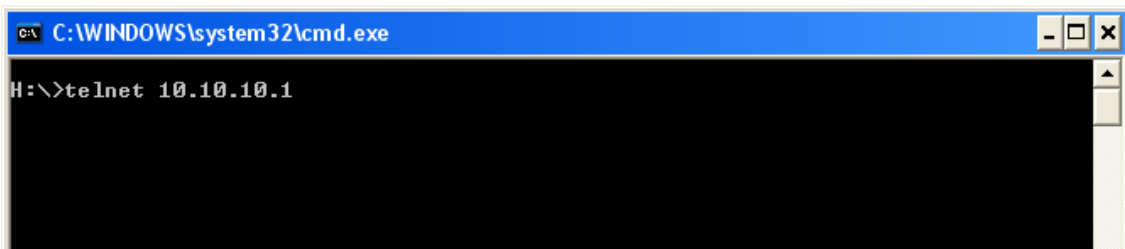
4.4 Recommended Network Device Record

Name/Location	IP Address	Site ID#	MAC
Control Station 1	x.x.x.x	900	00:00:00:00:00:00
Control Station 2	x.x.x.x	901	00:00:00:00:00:00
Control Station 3	x.x.x.x	903	00:00:00:00:00:00
Campus Siren 1	x.x.x.x	001	00:00:00:00:00:00
Campus Siren 2	x.x.x.x	002	00:00:00:00:00:00
EOC Informer	x.x.x.x	003	00:00:00:00:00:00
Police Informer	x.x.x.x	004	00:00:00:00:00:00
Auditorium Informer	x.x.x.x	005	00:00:00:00:00:00
...

4.5 Configuration Via Telnet Command Line Interface

4.5.1 Telnet Login

Establish a Telnet session with the Informer-IP using the command line interface as shown below. The factory default IP address for wired versions of Informers is 10.10.10.1 and the default port for Telnet is 23. Enter the default IP address (10.10.10.1) or the static IP address that has been reserved for the Informer-IP as shown below in the format: telnet <ip address> <port> (the port can be omitted if the default port is used).



The device will respond with:

login:

Enter the username ie: Login: **config** (config is the default user)

The device will respond with:

password:

Enter the password ie: **password: Informer-IP** (Informer-IP is the default password)

The device will respond with **#>** indicating the Telnet session is active

4.5.2 Parent Server, Site ID and Location Configuration

Enter the Parent Server address:port number, Site ID and physical location as follows:

```
#> set system description=10.50.50.5:16887 contact=005 location=Lobby
```

Where:

10.50.50.5 = Parent Server Address (system description)

16887 = Port number

005 = Site ID (contact)

Lobby = location

4.5.3 Change Config User Password

Change the default password for security. The default password and original configuration can be restored by executing a Factory Default function.

The Telnet command to change the password is:

```
#> newpass name=config (User will receive prompts to change password)
```

4.5.4 IP Address Configuration

Configure the Informer-IP to use the static IP that has been reserved for it as shown in the following example:

```
#> set network ip=10.50.50.12 gateway=10.50.50.1 submask=255.255.255.0 dhcp=off static=on
```

The changes will take effect immediately and the device will attempt to reconnect to the network. Once the IP address is changed you can place the Informer-IP on the live network that it will be used on. If the domain changes, you will have to place the configuration PC in the same IP address range as the Informer-IP and restart the Telnet session to communicate with it again.

4.5.5 End Telnet Session

The Telnet session is terminated by executing the quit command or by rebooting the device.

```
#> quit (Quits the telnet session)
```

```
#> boot action=reset (Reboots the device)
```

4.6 Configuration Via Web Browser Interface

4.6.1 Login

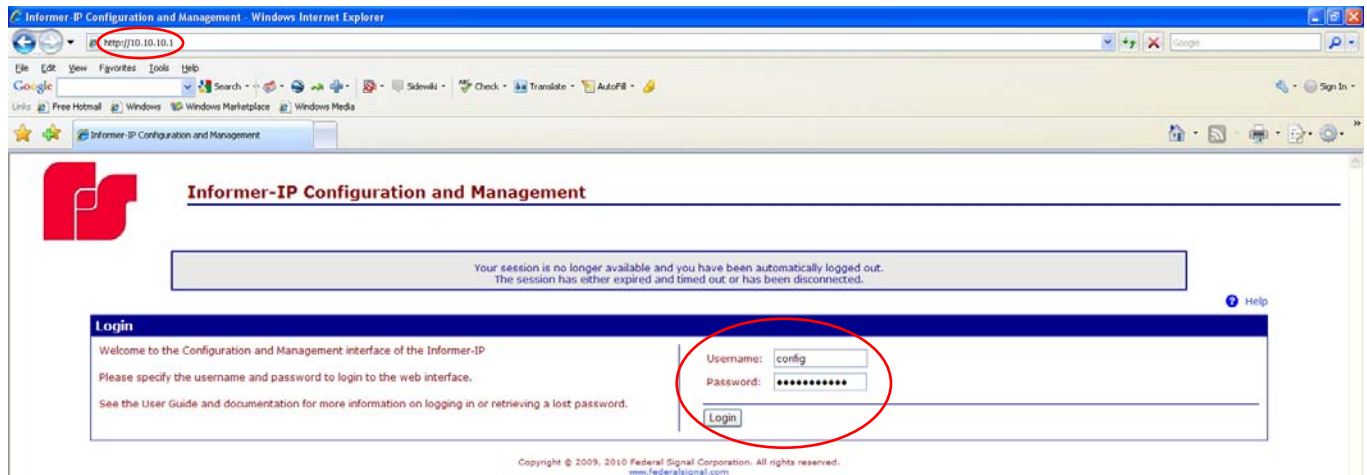
Enter the default 10.10.10.1 IP address or the pre-configured static address for the Informer-IP into your web browser to view the web page of the device.

Enter the default **username and password** as follows:

Username: config (or pre-configured Username)

Password: Informer-IP (or pre-configured Password)

Login to the device.



4.6.2 System Sever and Unit ID Assignment

Once the Home page is displayed, select System from the Configuration menu on the left.



Informer-IP Configuration and Management

System Configuration

Device Identity Settings

Description: 10.10.10.2:16887

Contact: 005

Location: M Location

Apply

Simple Network Management Protocol (SNMP) Settings

Enter the static IP address for the primary server the Informer-IP will connect to in the server Description field. The format is: **address:port**
Do not change the port address unless required by your Network Administrator. The port address must match the Server's port address. Enter the Location for the device ie: Lobby. Do not change the information in the Device ID field.

Enter the Informer-IP site number that will be used by the Federal Commander to identify the device in the Contact field and Apply. Enter the Location name.

4.6.3 Change Config User Password

Change the Config user default password for security and store the new password and the network configuration settings in a secure location. The default password and original configuration can be restored by executing a Factory Default function. Select Users from the Configuration menu. Select the config user to change the password. Enter the New Password, Confirm and apply the new password.

Informer-IP Configuration and Management

Users Configuration

Users

Enable user logins

Apply

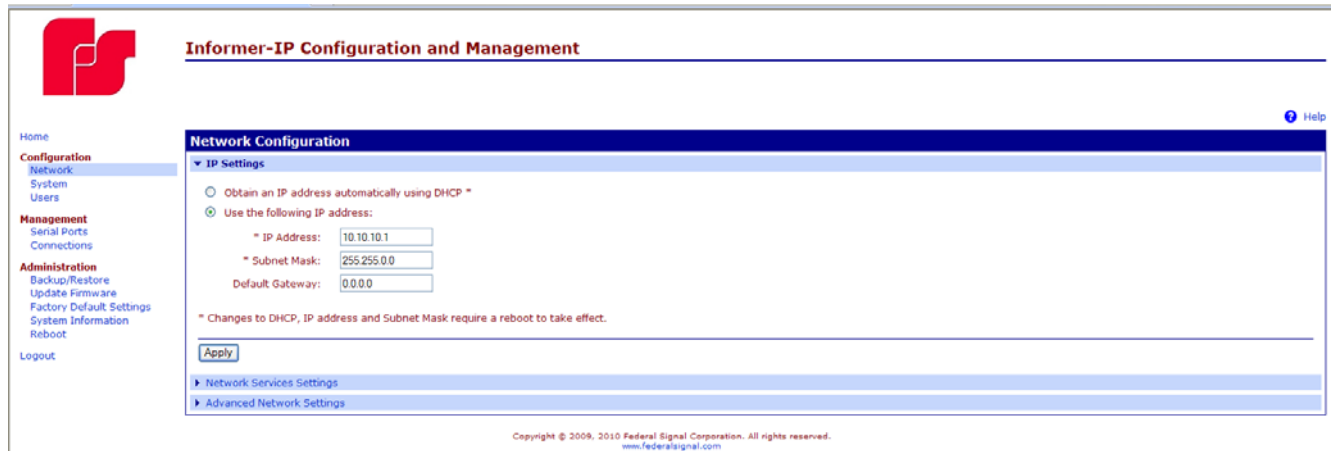
Configure Users

User Name	Action
admin	Remove
config	

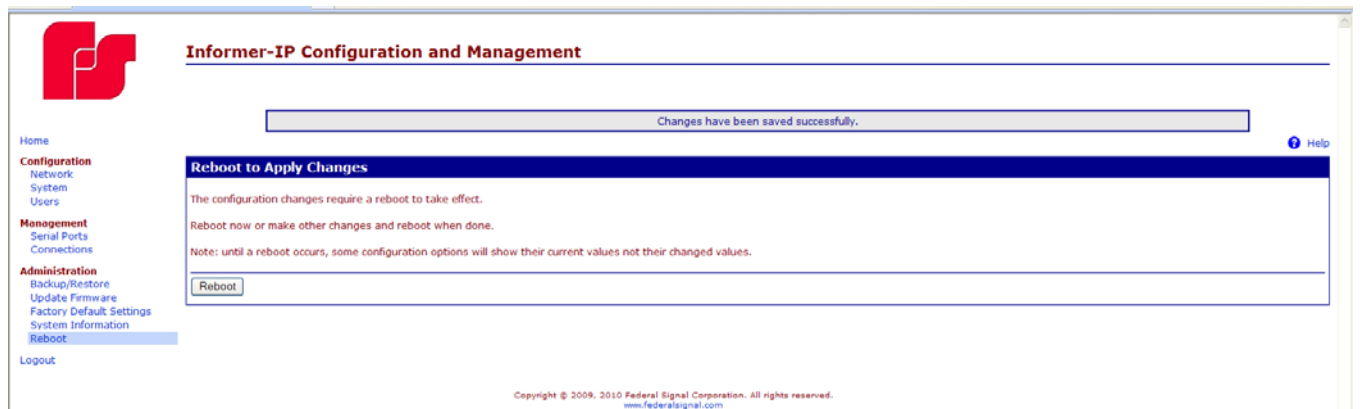
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4.6.4 Static IP Address, Site ID, and Location Assignment

Click on the Network menu item and select: **Use the following IP address:**
Enter the static IP address, Subnet mask and Gateway for the Informer-IP then Apply the changes.



The device must be rebooted for the IP address change to take effect using the Reboot menu item.



Once the IP address is changed, configuration will only be possible when the Informer-IP and the configuration computer are placed on the live network together. Remember to reconfigure the configuration computer's IP settings before returning to the live network. You will have Login to the web page with the new IP address after the address is changed.

4.6.5 Advanced Configuration

The Informer-IP is a very versatile network appliance that has many other advanced network configuration parameters that can be fine tuned to enhance the performance, security, and maintenance of the Informer-IP on your network. Although users do not have to take advantage of these advanced features to begin using the Informer-IP on their network, help screens are available on each of the web pages to assist users to navigate the advanced settings.

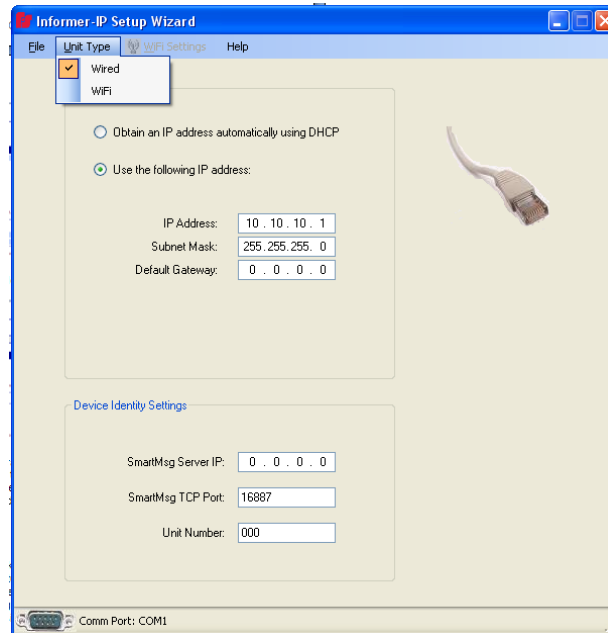
4.6.6 Backup and Restore Configuration

Once all configuration settings are complete, configuration settings can be backed up and restored using the Backup/Restore menu selection.

4.7 Configuration Via Informer-IP Setup Wizard (Model Informer-IP-SW)

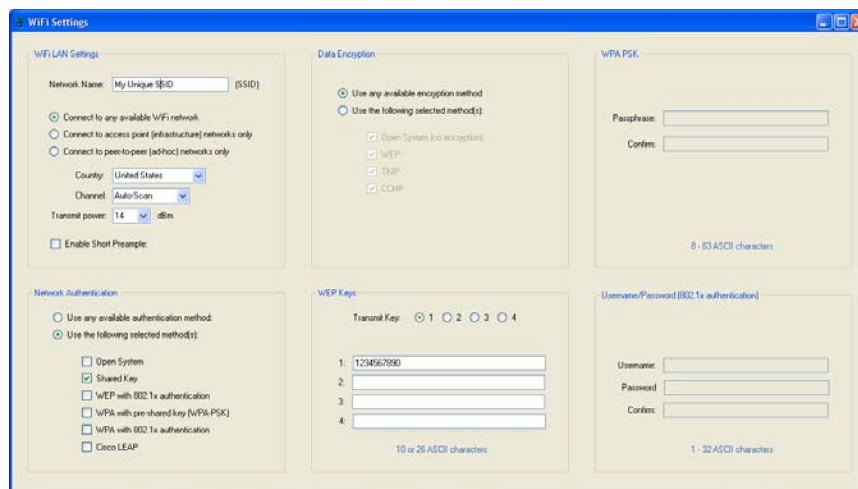
The Informer-IP Setup Wizard is a standalone WindowsXP/2003 Server based software application that is used to configure the basic network settings of the Informer-IP over the device's RS232 port. A 9-pin serial to 6-pin modular adaptor cable is used to connect the PC to the Informer-IP. Advanced network configuration settings require the Telnet or Web page interface.

Install the Setup Wizard and run the application. Select the Unit Type: Wired or WiFi



The first screen contains all the basic configuration settings for wired units. Enter the IP address, Subnet Mask, and Gateway or select DHCP. Enter the static IP address of the SmartMsg server, the TCP port (default is 16887) and the unique Unit Number for the Informer-IP.

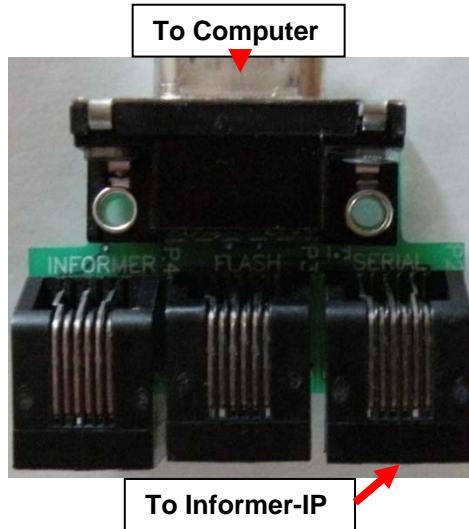
WiFi unit types require another set of parameters to be configured in addition to the settings required for wired types. Enter the WiFi configurations then close the screen.



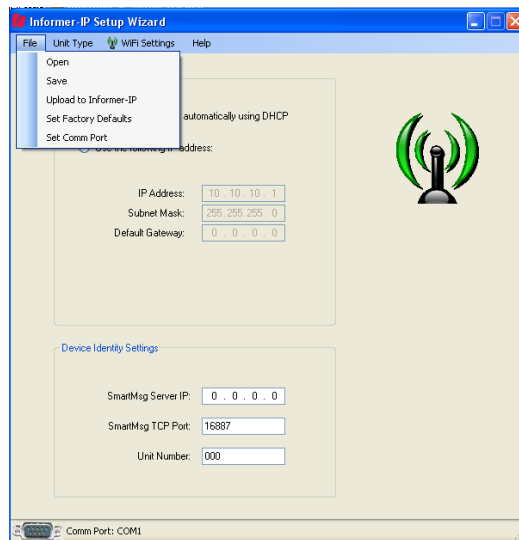
Use the File menu to save the configuration settings and upload to the Informer-IP. Configuration file settings previously saved may also be opened from the File menu. The file is stored in an XML format. Since the file contains security information, it should be stored in a secure location.

4.7.1 Upload Configuration Settings

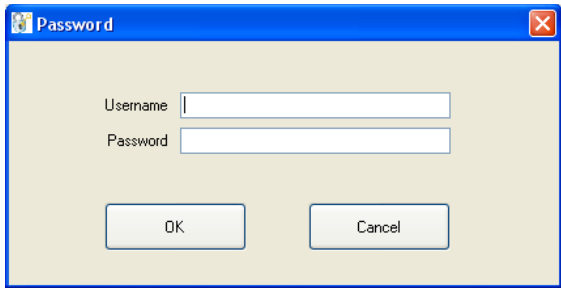
Insert the serial port adaptor board into the serial port of the computer. Connect the modular cable to the Informer's serial port and connect the other end to the serial port connector labeled Serial on the adaptor board.



Select the computer's serial communications port number that will be used to connect to the Informer-IP by selecting Set Comm Port from the File menu. Upload the configuration by selecting Upload to Informer-IP from the File menu. The factory default settings can also be restored from this menu.



The Informer-IP's configuration is protected with a username and password. The user will be prompted to enter a Username and Password with configuration rights before the configuration file will be uploaded to the Informer-IP.



Enter the default **username and password** as follows:

Username: config (or pre-configured Username)

Password: Informer-IP (or pre-configured Password)

The configuration upload will begin after the correct credentials are entered. A success message will be displayed after the configuration has been uploaded successfully.

4.8 Restore Configuration to Factory Defaults

If the configuration details are lost or changed incorrectly and it becomes necessary to restore the Informer-IP to factory default settings, a Power-On Factory Default procedure may be performed as follows:

1. Remove power from the Informer-IP.
2. Press and hold down the Reset button.
3. Apply power while holding down the Reset button until the Power and Test LED begin to blink confirming that the default configuration has been loaded.

All local configuration settings will need to be re-entered before placing the Informer-IP into service.

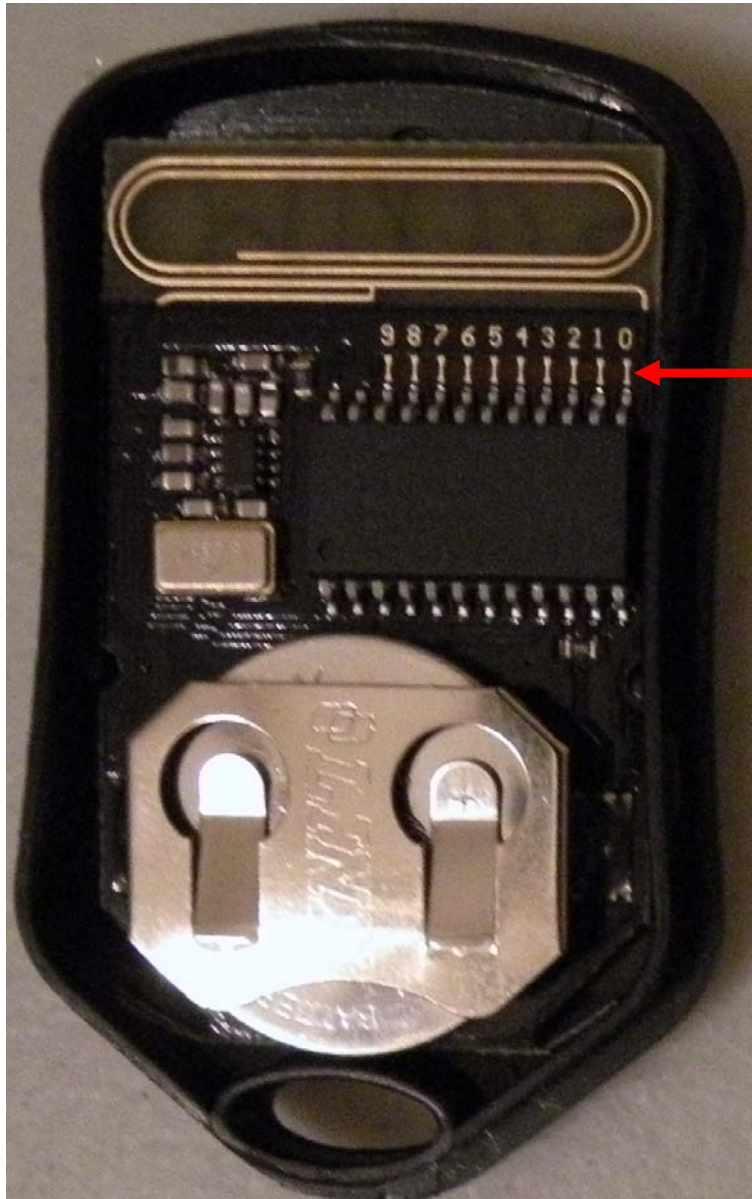
4.9 FOB Addressing

The Optional wireless FOB remote keypad can be uniquely addressed to one of 1,024 unique addresses so that the FOB will only be able to communicate with an Informer-IP containing a matching address. By default, all FOBs and Informer-IPs are set to the same address.

If all FOB holders should be able to remotely control any Informer-IP they are near, the default settings can be used and no address changes are required. If the implementation plan requires unique pairing of FOBs and Informer-IPs, the FOBs and Informers must be configured with matching addresses.

4.9.1 Assigning the FOB Address

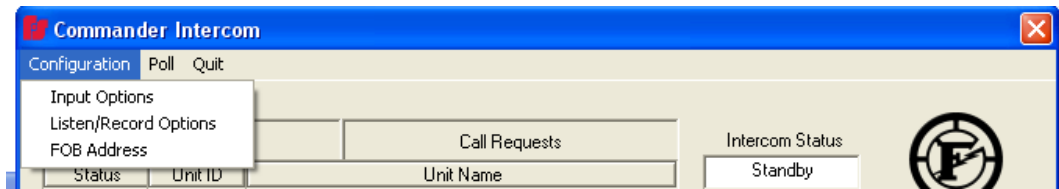
The address configuration traces can be accessed by gently prying apart the two halves of the keyfob at the seam (fingernails will do for this). Once the unit is open, the configuration traces will be visible under the rear plastic cover as shown below. The traces are labeled 0-9. A unique address is assigned by selectively cutting the traces with a small razor knife. If the trace is intact, the address line is connected to ground, otherwise it is floating. The Informer-IP's address must match exactly in order for the FOB to communicate with the Informer-IP.



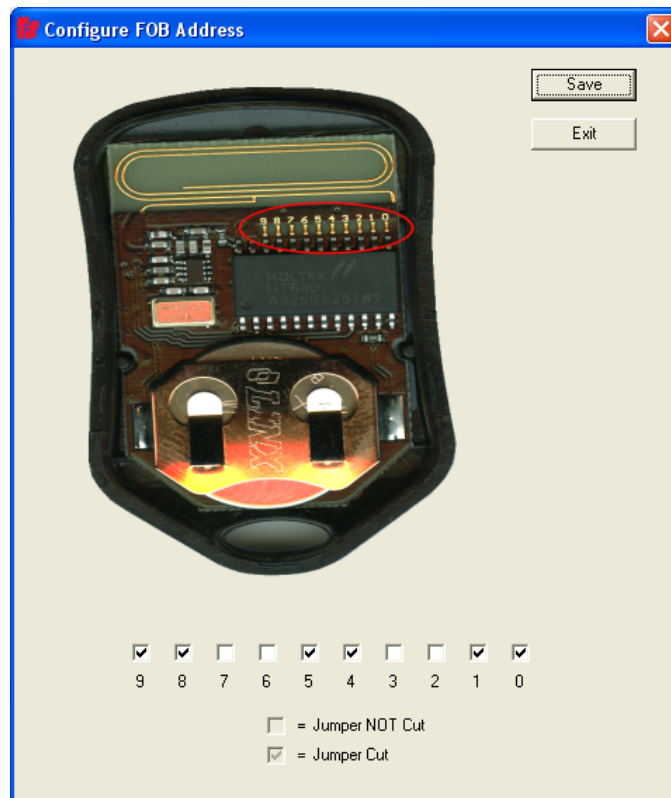
Address Configuration Traces

4.9.2 Configuring the Informer's FOB Address

The Informer's FOB address is configured from the Intercom window by highlighting the Informer and selecting the Configure/Fob Address from the top menu bar.



This will bring up the FOB address configuration window where the address will be configured and saved. Each Informer's FOB address setting must be configured to match the FOB's that will be used with the Informer. These settings must be sent to the Informer to take effect.



5 OPERATING INSTRUCTIONS

5.1 General Information

The Informer must be configured correctly and tested before placing into service. Refer to the configuration section of this manual and the Federal Signal Commander software manual for configuration instructions. If you are experiencing any difficulties with the Informer, contact Federal Signal Customer Care at: <http://www.alertnotification.com/customer-care> or your local Sales Representative for assistance.

The following sections describe the various features and functions of the Informer-IP. Refer to the Federal Commander Operator Reference manual for additional information about configuration, control and status monitoring of the Informer-IP.

5.2 LED Indicators

5.2.1 Power LED

The green power LED will turn on when power is connected and the device is connected to a Federal Signal Codespear enabled network server. The power LED will flash on for 100ms when the unit is disconnected from the server.

5.2.2 Alert LED

The red Alert LED will Flash on and off at a 1/2 second interval when an Alert is received. The LED is reset when the Reset button is pressed or a Reset command is sent from a control station.

5.2.3 Test LED

The yellow Test LED turns on Steady when a Quiet Test function is executed. The LED is reset when Reset button is pressed or a Reset command is received from a control station. The LED flashes on and off at a 1/10 second rate indicating the unit has been reset to factory defaults and requires configuration. The unit will not attempt to connect to a parent server when this LED is flashing.

5.2.4 Talk LED

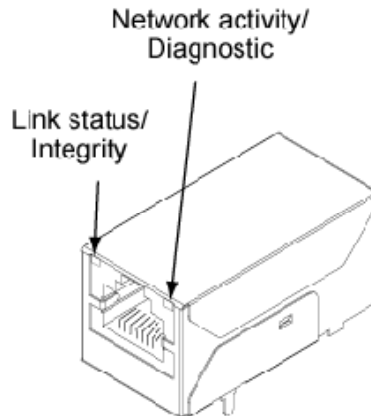
The blue Talk LED flashes at a 1/10 second interval when a Live PA, Intercom Talk session, or Text-To-Speech message is in progress. The Talk LED turns on steady when the intercom monitor function is active. During an Intercom chat session, the local operator must listen while the blue LED is blinking and may talk when the LED is on steady. Audible turn-around beeps also indicate the transitions from Talk and Listen modes. The Intercom chat session will end when the control point Ends the Call or Resets the device.

5.2.5 Network LEDs

The Ethernet port has two diagnostic LEDs.

Yellow - Link Status
Off - no link has been detected.
On - a link has been detected

Green - Port Activity
Off - the channel is idle.
Blinking - data is transmitted or received.



5.3 Keypad

The Informer-IP includes a 5-button membrane keypad with a tactile feel and 4 diagnostic LEDs.

5.3.1 Volume Adjustment

The Informer provides the ability to control the sound volume of tone and voice messages heard over the speaker. To adjust the volume, press the **VOLUME** ↑ button to increase the sound volume. Press the **VOLUME** ↓ button to decrease the volume. A beep will be heard indicating the current volume level each time the volume buttons are pressed. Holding down either arrow will allow you to "scroll" to the highest or lowest volume levels.

The control points can over-ride the local volume controls with remote volume control commands. If no volume control commands are issued from the control points, the local volume level will be heard. Control points should always issue Emergency Alerts using a High Power command to ensure all users will hear the Alert. The user can lower the volume while a tone or voice message is in progress.

5.3.2 Replay Button

The Replay button replays last voice message received if the Red Alert light is blinking. If the Alert light is not blinking, the event has ended or reset which removes the message from memory.

5.3.3 RESET Button

Push to Reset:

1. Alert Signals
2. Alert, Test and Talk LEDs
3. Scrolling Message Display
4. Relay Outputs

5.3.4 Alert Button

The Alert button sends Alert #6 to the control points and changes the status icon to Red. Alerts can also be configured as a Call Request to alert emergency operations personnel that an intercom chat session is being requested. Each of the six alert inputs can be configured with application specific names.

A Call Request is a request for an Intercom Chat Session with the Emergency Operations personnel at the control point(s). The Call Request pops up the Commander Intercom window and turns on the red Call Request status icon next to the Unit ID and Unit Name of the Informer-IP that issued the request.

5.4 Receiving an Alert

Whenever the Informer receives an Alert message or Alert tone, the red Alert LED will begin to flash and audio will be heard over the speaker. The audio will also be sent out the optional 600-ohm audio output and the output relays will close as programmed. An optional scrolling message display may be driven by the Alert or the display may be driven separately without sounding the Informer-IP.

The Alert messages and wavefiles will be recorded and stored in memory until the Alert is reset. Alert Tones are not recorded. The message can be played back by pressing the REPLAY button anytime the red LED is blinking.

The Informer will automatically reset and return to standby when the local RESET button is pressed or the Control Point sends a Reset command. The red Alert and yellow Test LED will also be reset.

If the Control Point cancels the Alert or the Alert message is complete, the Alert will stop but the Alert LED will continue to flash indicating that an Alert was issued. The use of RESET should be avoided until the emergency has ended after an actual Alert,

The user may acknowledge receipt of an Alert if one of the remote Alert inputs is configured as an acknowledgement. New activation commands will over-ride all previous functions in progress.

5.5 Receiving a Test Message

The yellow Test LED will light steady whenever a Quiet Test message has been received. This light will remain on until the RESET button is pressed. The Alert LED will not light for the Quiet Test function that is programmed to light the TEST LED.

5.6 Optional Dual Relay and 600 ohm Audio Output

When the –IO option is purchased with the Informer-IP, two independently programmable relay outputs and a 600-ohm output are available. The relay timing is configured and programmed into the Informer-IP from the Federal Commander user interface.

5.6.1 Relay Outputs

The Informer comes with an optional pair of relay outputs capable of controlling external devices. The outputs are located at pins 3 - 8 of the removable output connector. Refer to section 1 for parts locations.

Do not exceed the voltage and current ratings listed in the specifications section of this manual. When using this option, the relay outputs will turn on until the programmed default timeout occurs or when the RESET button is pressed or a CANCEL or RESET command is received.

The relay outputs can be individually configured to open, close and cycle based on a pre-programmed sequence. Refer to the Federal Commander Operator Reference for additional information.

Note: The relay outputs close for 5-10 ms. during initial power-up.

5.6.2 600 Ohm Audio Output

The 600-ohm audio output is useful for tying the Informer into existing PA systems or other externally amplified speaker systems. An adjustable balanced audio output is available at pins 1 & 2 of the output connector. The output level is adjustable via a potentiometer located near the output connector on the rear of the unit. Refer to section 1 for parts locations.

5.7 Generating Alerts

The Informer-IP can generate up to 6 different Alerts to alert **Emergency Operations Center (EOC)** personnel at the Federal Commander control point. The Commander provides the EOC with visual and audible indicators for the Alert.

Alerts can be generated in three ways:

1. The Four button wireless Keyfob option (Alerts #1, 2, 3. &4)
2. The Alert Contact Closure Input – (Alert #5, terminal block on the rear of the unit)
3. The Alert Button on the Informer-IP keypad (Alert #6)

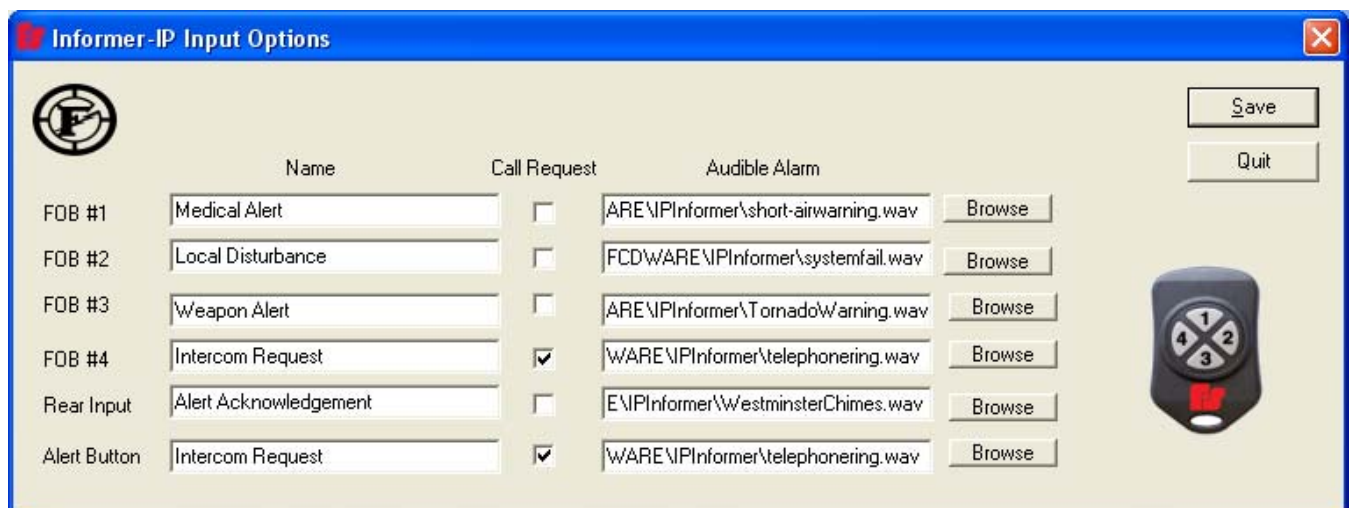
5.7.1 Alert Configuration

The Alerts can be configured to indicate specific user predefined events ie: Medical Alert, Local Disturbance Alert, Weapon Alert, Weather Alert, Fire Alert. Etc. or the inputs can be used to request an Intercom Chat session or act as an acknowledgement of an Alert or Test.

Alert Input	Function
1	Medical Alert
2	Local Disturbance
3	Weapon Alert
4	Alert Acknowledgment
5	Intercom Request

Example Alert Configuration

Alerts can also be configured to automatically send email and Codespear SmartMsg alerts. The Alert names are configurable within the control system software from the Intercom window shown below. Each input can be named and configured to play an audible alarm wavefile. These settings pertain to all Informers in the system.

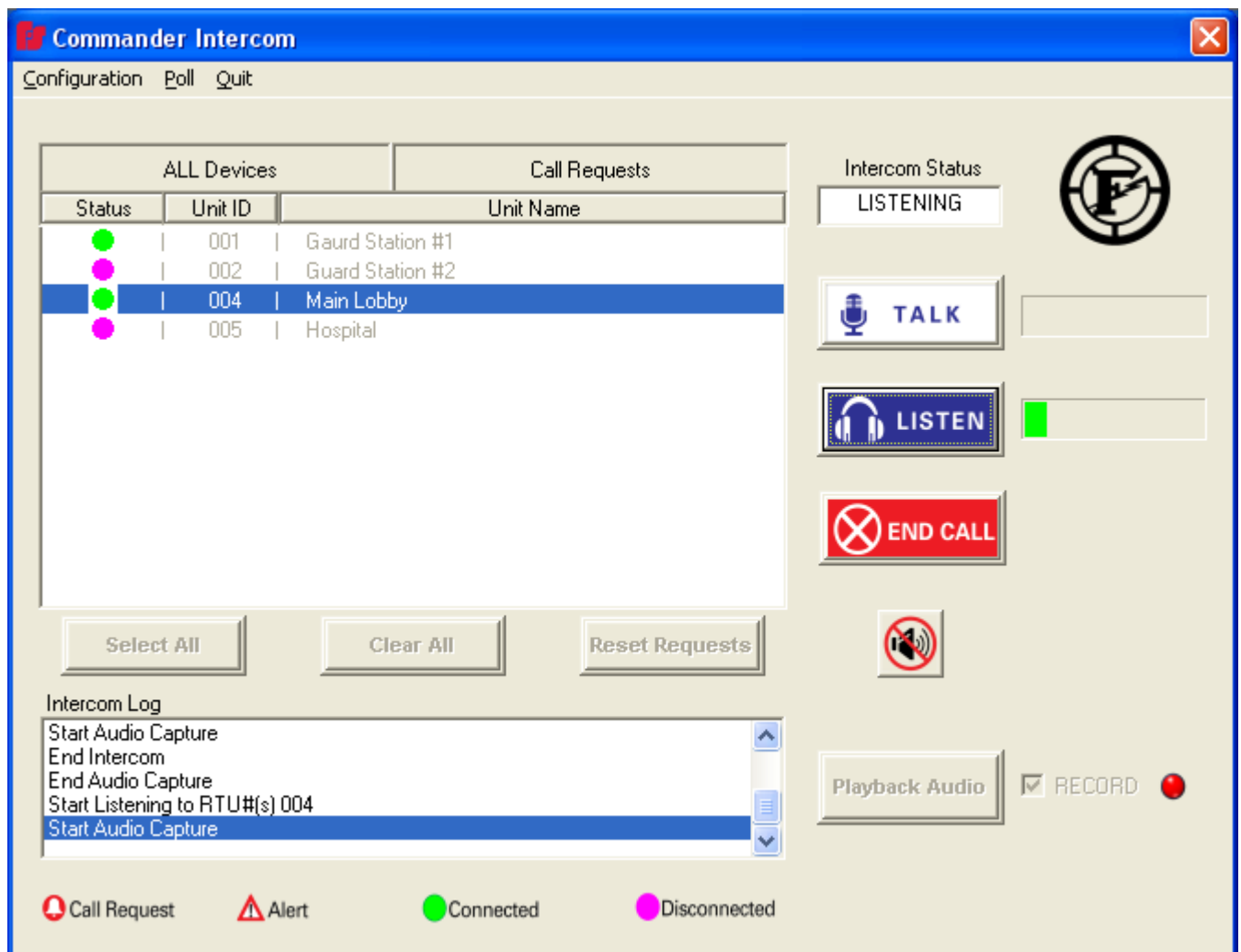


5.8 Using the Intercom

The Intercom function is used to provide bi-directional voice communications between the Informer-IP and the EOC control point. The EOC can talk to one or many units at the same time but only one device can be listened to or recorded at a time. The Federal Commander GUI runs the Intercom session. Use of a headset with earphones and microphone is recommended to reduce background noise for EOC operators.

Intercom Call Requests may be initiated by the Informers. A Call Request will launch the Intercom window in the GUI if it isn't already up. The EOC can view all devices that are requesting a call. Requests are indicated by a red bell icon on the Intercom screen at the EOC. EOC operators select which Informer they want to start an Intercom Session/Call with by highlighting the device on the Intercom screen.

Note: Make sure the Informer-IP is not near the microphone at the control point or an audio feedback loop will be created.



Intercom Window within Federal Commander Software

5.8.1 Record Checkbox

If the Record checkbox is checked, the Intercom Talk and Listen Chat session will be recorded until the Intercom session is ended by pressing the End Call button. The Informer-IP individual configuration settings determine if and when the Intercom Chat session can be recorded. Recordings are stored in a wavefile in the AudioCapture subdirectory within the Commander program directory.

5.8.2 Selecting an Informer Device

An Informer must be selected within the Device Listbox in the Graphical User Interface (GUI) to begin a Call, Configure, or view the current status of the device. The devices can be selected by clicking on the row in the list box containing the Informer or by clicking the Select All button. If the row is double clicked, the Status Detail screen for the device will be displayed.

The devices that show in the listbox can be selected by the Show All Devices button and the Show Call Requests button located on top of the listbox. The devices can be sorted within the listbox by clicking on the top of each column to sort by Status, Unit ID, or Unit Name.

5.8.3 Talk Button

The Talk button initiates an Intercom Chat session and allows the EOC operator to send live voice announcements using a PC microphone. One or more Informers must be selected to talk to by clicking on the row in the list box containing the desired Informer. The Talk button will change to a Listen button that can be pressed to allow the EOC operator to listen to the local microphone in the Informer. Since only one Informer can be listened to at a time, listen will not be possible when multiple Informers are selected. The dual purpose button allows the operator to switch between talking and listening just by clicking the mouse.

The Talk session will remain active until the Listen or End Call button is selected.

5.8.4 Listen Button

The Listen button initiates an Intercom chat session and allows the EOC operator to listen to the local mic inside the Informer-IP that has been selected to listen to. Only one Informer-IP can be listened to at a time. The Listen session will remain active until the Talk or End Call button is selected.

5.8.5 End Call Button

The End Call button terminates an Intercom session and stops the recording process.

5.8.6 Intercom Status Window

The Intercom Status window shows the current operating state of the Intercom. There are three possible states: Standby, Talking and Listening.

5.8.7 Intercom Log Window

The Intercom Log shows all Intercom communication activity including which device is being communicated with. The user can scroll through the entries.

5.8.8 Command Log Window

The Command Log window will pop up automatically on the bottom center of the screen when another control point sends an activation command or starts an intercom chat session. This popup is intended to notify other operators so that they do not interfere with each other. The popup includes the time, date, control point ID, and function executed.

5.8.9 Select All Button

The Select All button allow all devices to be selected at once for an Intercom Talk session.


5.8.10 Clear All Button

The Clear All button clears all device selections at once.

5.8.11 Reset Requests Button

The Reset Requests button resets all current Call Requests indicated by the bell icon. The bell icon will change to the Alert icon until the device is Reset with a Master Reset from the control point. Call Requests can be re-initiated as soon as they are Reset.

5.8.12 Stop Alert Wavefile Button

The Stop Alert Wavefile Button , is used to stop playing an active Alert wavefile. This is useful if an operator has acknowledged the alert and wants to silence the audio.

5.8.13 Playback Audio Button

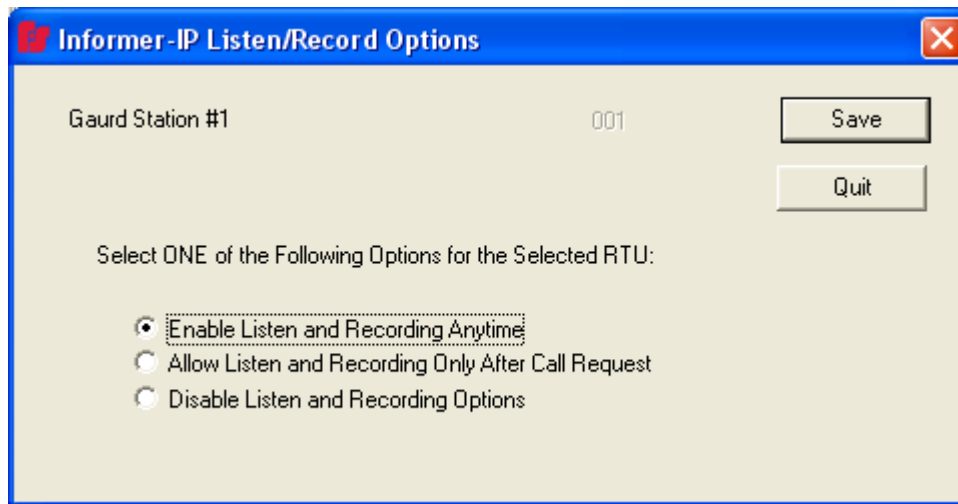
The Playback Audio button allows the control point operator to view all recorded calls and select any recorded call for playback.

When the EOC is talking, the Informer can listen but not talk. The Informer's blue LED will light steady when the EOC is talking. When the EOC is listening to the Informer, the Informer's blue

LED will flash on and off to indicate that the EOC is listening to the Informer. The EOC is in control of which Informer is included in the call and when the Informer can talk or listen.

5.8.14 Listen/Recording Configuration Options

Each Informer can be configured with unique settings for listen and recording options. The configuration settings are available from the Intercom window in the control system software as shown below.



6 Testing and Training

After the installation is complete, test the Informer and all accessories from the control point(s) to ensure it is operating properly. Ensure all users are properly trained to use the system before putting the Informer into service.

Verify all tone, voice, and text messages contain the correct content per the emergency operating plan. Alerts should exceed the ambient sound levels by at least 10dB to ensure they can be heard.

Testing should be conducted on a regular basis per facility safety plans to ensure the equipment remains in working order and operators remain familiar with the use of the equipment.

7 SERVICE AND WARRANTY

7.1 Informer-IP Service

There are no user serviceable parts inside the Informer-IP. Servicing should be referred to an authorized Federal Signal Service center. Contact Contact Alert and Notification System's Customer Care Center at: <http://www.alertnotification.com> or 1-800-524-3021 for further service information.

7.2 FOB Battery Replacement

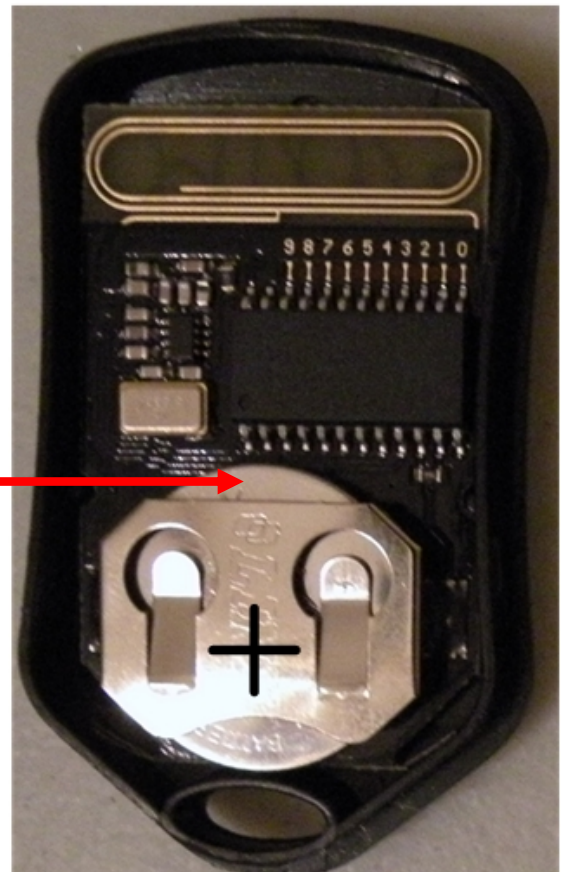


Caution

Use ESD protection when replacing the FOB battery to avoid damaging electronic components.

The optional FOB contains a standard CR2032 lithium button cell that has a typical life of 1-2 years. Access for replacement is accomplished by gently prying apart the two halves of the keyfob at the seam (fingernails will do for this). Once the unit is open, remove the battery by sliding it out from beneath the retainer. There may be the risk of explosion if the battery is replaced by the wrong type. Replace it with the same type of battery while observing the polarity shown.

Lithium Battery
Negative side faces PCB



7.3 Warranty

Limited Warranty

The Signal Division, Federal Signal Corporation (Federal) warrants each new product to be free from defects in material and workmanship, under normal use and service, for a period of one year on parts replacement and labor from the date of delivery to the first user-purchaser.

During this warranty period, the obligation of Federal is limited to repairing or replacing, as Federal may elect, any part or parts of such product which after examination by Federal discloses to be defective in material and/or workmanship.

Federal will provide warranty for any unit, which is delivered, transported prepaid, to the Federal factory or designated authorized warranty service center for examination and such examination reveals a defect in material and/or workmanship.

This warranty does not cover travel expenses, the cost of specialized equipment for gaining access to the product, or labor charges for removal and re-installation of the product. Batteries are not covered under warranty.

This warranty does not extend to any unit which has been subjected to abuse, misuse, improper installation or which has been inadequately maintained, or to units that have problems relating to service or modification at any facility other than the Federal factory or authorized warranty service centers.

THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL FEDERAL BE LIABLE FOR ANY LOSS OF PROFITS OR ANY INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY SUCH DEFECT IN MATERIAL OR WORKMANSHIP.

