FEDERAL SIGNAL
Safety and Security Systems

IP Phone for Intelligent Systems

Model: I-IPTEL1

Description, Installation, and Configuration Manual

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Limited Warranty

This product is subject to and covered by a limited warranty, a copy of which can be found at www.fedsig.com/SSG-Warranty. A copy of this limited warranty can also be obtained by written request to Federal Signal Corporation, 2645 Federal Signal Drive, University Park, IL 60484, email to info@fedsig.com or call +1 708-534-3400.

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Safety Messages

⚠ WARNING

It is important to follow all instructions shipped with this product. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents.

After installation, test the system to confirm that it is operating properly. Test the system regularly to confirm that it will be operational in an emergency. For a complete list of safety messages, see the IP Phone for Intelligent Systems User Manual (part number 25500824). See fedsig.com for online manuals.

General Description

The IP phone can multicast live PA directly to a multicast group of speakers and then multicast DTMF control commands to activate pre-recorded voice messages or siren tones stored within the speakers. Include the IP phone on an existing SIP phone system or LAN, or deploy the phones and speakers on a separate LAN/VLAN dedicated for emergency or frequent VoIP use. The IP phone supports RTP multicast and DTMF activation of pre-recorded siren tones/pre-recorded voice messages on the Federal Signal IP series of devices.

It is easy to configure the phone with preset buttons to provide one-touch dialing and pre-configured speaker activations. When used with the Federal Signal line of IP-based speakers, you can configure a low-cost alerting system for industrial and campus environments. An IP phone can call individual speakers for live Public Addresses and then use a DTMF keypad to activate pre-recorded voice or siren tones.

The phone can multicast live PA directly to a multicast group of speakers and then multicast DTMF control commands to speakers to activate pre-recorded voice messages or siren tones to an unlimited number of speakers simultaneously. This allows the creation of zones for wide areas or specific notification groups. You can use multiple phones to create multi-location control and activation points. The phones can

also be configured to allow direct SIP calls between phones and speakers without a SIP server.

Power the phone via PoE or from an (included) external power supply. The IP phone has three color displays for ease of use. You can configure each button for name and color. The phone has high-definition audio on the handset and speaker phone. The phone is configurable for 19 different languages.

The Federal Signal line of Informer IP Speakers includes an internal SD card and amplifier to deliver tone warnings and intelligible voice messages from locally stored memory, enabling autonomous operation from contact closures and single button controls from the I-IPTEL1 phones. The Informer IP Speaker also has remote volume control for optimizing sound levels across your alerting area. The remote volume control also includes an ambient-noise-monitoring capability to adjust volume automatically depending on external noise levels.

Informer IP Speaker allows connecting up to four external switches to activate predefined alert events. You can program and configure the Informer IP Speaker as a standalone device to only use the inputs for activation. This may be useful if the location has no network connectivity but where voice and tone alerts from locally activated inputs are required. The Informer IP Speaker can be networked later for additional functionality.

Features

The I-IPTEL1 has the following features.

- Over 60 programmable buttons
- Phone-to-phone and phone-speaker dialing without a SIP Server
- Phone-to-speaker for live PA
- Direct SIP calling and multicast paging
- Ability to activate pre-recorded voice messages or siren tones

- Fully functional with Informer15 and Informer100 Speakers
- Static IP or DHCP
- Supports LLDP, CDP, DHCP VLAN, VLAN Custom Options, QoS, WAN VLAN, and 8021x
- Configurable from Web User Interface
- Multicast DTMF to control Federal Signal's IP products
- Desktop stand
- Ability to synchronize with Network Time Protocol (NTP) clock

Applications

The I-IPTEL1 has the following applications.

- Indoor and outdoor speaker locations
- Muster or call stations
- Campuses or school alerting
- Use with video security systems
- Plant wide live-PA announcements
- Loud industrial facilities
- Weather alerting
- Food processing locations
- Plant wide alerting system

Table 1 Ordering Information

Model	Description
I-IPTEL1	IP Phone with 60 programmable buttons
I-IP15	15 W PoE+ indoor/outdoor speaker
I-IP100	100 W indoor/outdoor speaker
I-IPIO*	1/2 W desktop speaker
I-IPW*	1/2 W wall mount speaker
I-IP2*	Two-channel 1/2 W audio outputs module
I-IPSIU*	I/O module with 16 contact inputs, 8 contact outputs, 1/2 W audio output

*Requires Series C Model.

See www.fedsig.com for additional product information.

Overview

Use the IP Phone with the Federal Signal line of IP-based speakers. The Federal Signal Informer series IP products incorporate industry-standard Web, SIP phone, IP Multicast, and Modbus® PLC interfaces to simplify integration with existing systems. Each Informer device has its own Installation Manual.

The IP Phone can be used with the Federal Signal model UVRI-B Alarm Control and Fire Alarm interface and the following list of Federal Signal Informer series IP products:

- Informer-IP Desk Mount (I-IP-IO)
- Informer-IP Wall Mount (I-IPW)
- Informer15 Speaker (I-IP15)
- Informer100 Speaker (I-IP100AC and I-IP100DC)
- Informer-PA for Public Address Interface (I-IP2)
- Informer Sensor Interface Unit (I-IPSIU)

Unpacking the Device

Ensure that the parts listed are included in the package. If you are missing any parts, contact Customer Support.

The following is a list of the contents:

- IP Phone
- Handset
- Handset Cord
- Ethernet Cable
- Stand
- Power Adapter

Specifications

Table 2 Specifications

Physical LAN Port:	Physical: 10/100/1000 Mbps Ethernet, dual bridged port for PC bypass
IP Configuration	Static IP / DHCP
Power Consumption (PoE)	10.46 W maximum
Power Consumption (AC Adapter)	9.13 W maximum
DC Power Input	5 V / 2 A max
Operating temperature range	32°F to 113°F (0°C to 45°C)
Working Humidity	Up to 95%, non-condensing
Installation	Desktop Stand
	Handset/Hands-free-/Headset mode
Device Dimensions	Desktop Stand (Angles 1): 9.4 x 7.8 x 7.3 inches (239 x 199.3 x 185.8 mm) Desktop Stand (Angles 2): 9.4 x 7.4 x 7.7 inches (239 x 188.5 x 195.6 mm)

Introduction of the Keypad

The following figure illustrates the front view and the keypad of the IP Phone, and the table describes the keys.

Figure 1 Keypad of IP Phone

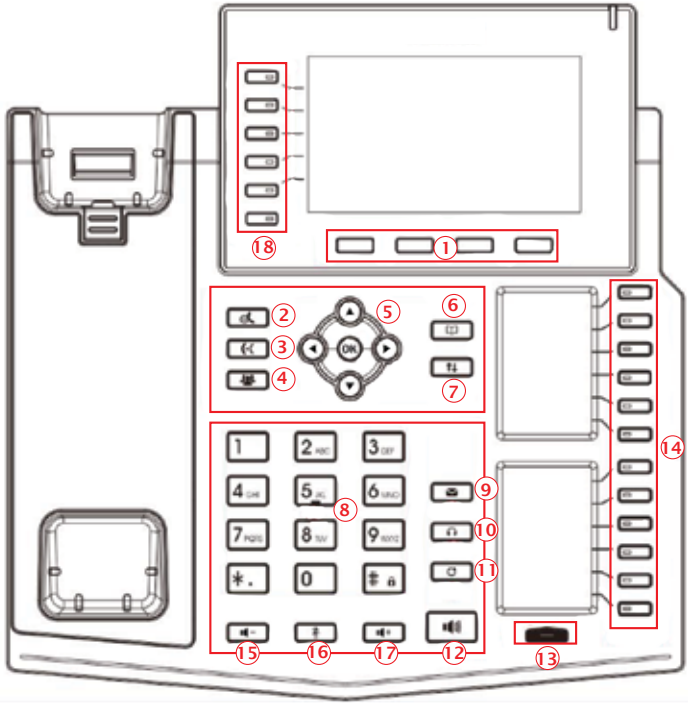


Table 3 Keypad Description

No.	Interface	Description
1	Soft-menu Buttons	These four buttons provide different functions corresponding to the soft menu displayed on the screen.
2	Hold Key	Press the Hold key during the call to hold the call, and press it again to cancel the hold.
3	Transfer Key	Press the Transfer button to transfer the current call to other numbers.
4	Conference	Press the Conference button to initiate a three-party conference.
5	Navigate/ OK Keys	Press the up/down navigation key to change the line or move the cursor in the screen list. On some settings and text editing pages, you can press the left/right navigation key to change options or move the cursor in the screen list to the left/right. OK key: the default is equivalent to soft button confirmation; you can customize.
6	Contact Key	Press the Contact key to enter the phone book interface and select the person to call.
7	Call Log Key	Press the Call Log key to see the incoming/ outgoing calls.
8	Standard Telephone Keys	The 12 standard telephone keys provide the same function as standard telephones; some keys also provide a special function by long pressing the key. (To long press, press and hold the button for more than 2 seconds.) Long press the lock key to lock the keypad. Enter the PIN to unlock the keypad.
9	Voice Mail	Press the Voice Mail key to enter the interface of SMS and the voice mail list.
10	Headset Key	Press the Headset key to open the headset channel.

No.	Interface	Description
11	Redial	Press the Redial key to redial the last number dialed.
12	Hands-free Key	Press the Hands-free key to open the audio channel of the speakerphone.
13	Next Page Key	Scrolls through multiple screens.
14	DSS KEY	Short press a DSS key to select a function. Long press a DSS key to display the settings interface. (To long press, press and hold the button for more than 2 seconds.)
15	Volume Down Key	In the standby state (on-hook), press this button to reduce the ring volume, and when on a call, this button lowers the volume on the call.
16	Mute Key	During a call, press this key to mute the microphone.
17	Volume Up Key	In the standby state (on-hook), press this button to increase the ring volume and, when on a call, this button increases the volume on the call.
18	Side Key	Long press the side keys to enter the settings interface to set the required functions.

Table 4 Status Prompt and Notification Icons

Screen Icon	Description
	Call out
	Call in
	Call Hold
	Network Disconnected
	Open VLAN
	Open VPN
	Keypad Locked
	Call forward calls
	Outgoing calls
	Incoming calls
	Missed calls
	SMS
	New voice message waiting
	Do Not Disturb inactivated on phone
	Call forward activated

Screen Icon	Description
	Auto-answering activated
	Hands-free (HF) Mode
	Headphone (HP) Mode
	Handset (HS) Mode
	Mute Microphone
	The Voice quality of calling
	The Voice encryption of calling
	Speech High Definition
	Record
	SIP Hotspot
	Bluetooth
	Wi-Fi
	USB Insert
	USB overload

Connecting the IP Phone

The phone can obtain PoE power from the Network Port (Internet connection) or from the supplied 5 Vdc power supply (Power Port). See Figure 3.

Connect the power adapter, network, PC, handset, and headset to the appropriate ports as shown in the picture below.

Figure 2 Connecting to the Device

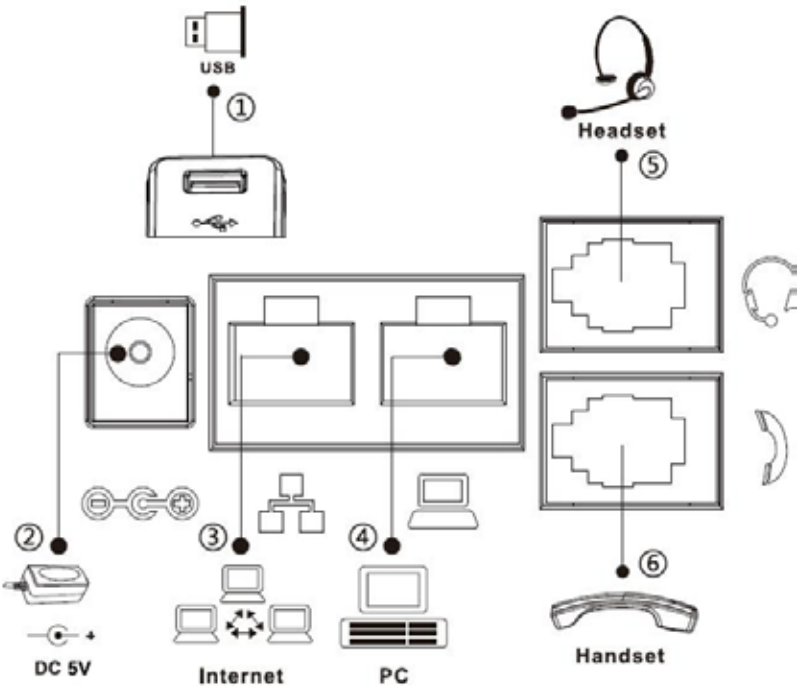
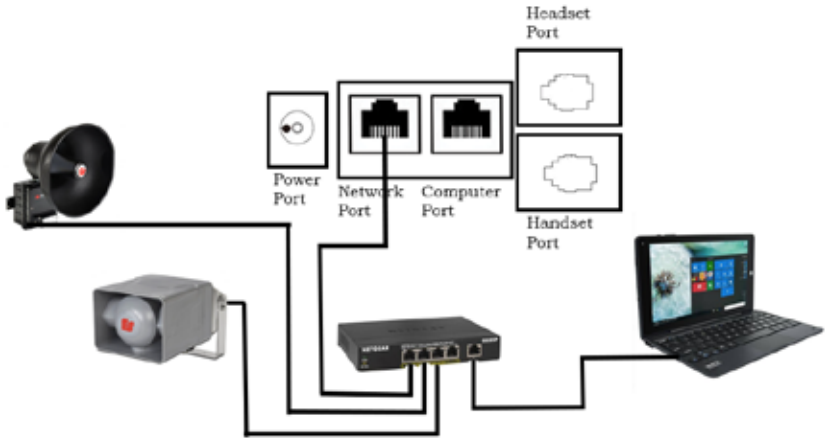


Table 5 Hardware Interface Description

No.	Interface	Description
1	USB Port	USB device connection
2	Power Port	Power adapter connection
3	Network Port	LAN or Internet connection
4	PC Port	Network port for computer connection
5	Headset Port	Headset connection
6	Handset Port	Handset connection

Figure 3 Typical IP Phone Setup



Configuring the Network Interface

NOTICE

NETWORK INSTALLATION PRECAUTIONS: Review network settings with your Network Administrator before connecting to an existing network.

To view the IP Address of the phone, press the down arrow navigation key below the OK button on the phone. The Network screen appears.

To configure the network interface through the web browser:

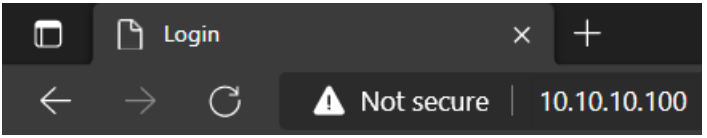
1. Before installing the IP Phone on an IP network, connect your PC to the IP Phone via the PC port using the Ethernet cable provided. Turn on your PC.

2. Change your Local Area Connection (Ethernet) adapter address to 10.10.10.“*your number*” As shown below:

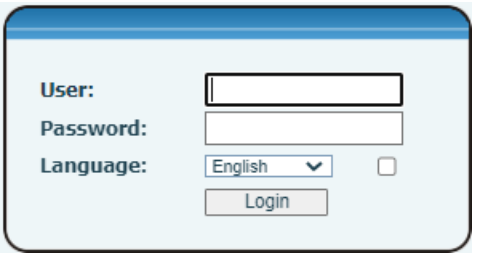
```
IP Address: 10.10.10.1

Subnet Mask: 255.255.0.0

Default Gateway: 10.10.10.1
```

When connecting directly to the phone, your computer's IP Address and Default Gateway must match. Changing your IP Address, Subnet Mask, and Gateway allows you to access the IP Phone at its default IP address (10.10.10.100).

3. Enter the default 10.10.10.100 IP address or the preconfigured static address for the IP Phone into your web browser to view the web page of the device.



4. The login window appears.



5. Enter the Username:

`admin`

6. Enter the Password:

`fedsig`

NOTE: The password is case sensitive.

7. Click Login.

The System > Information screen appears.

Configuring Static Settings

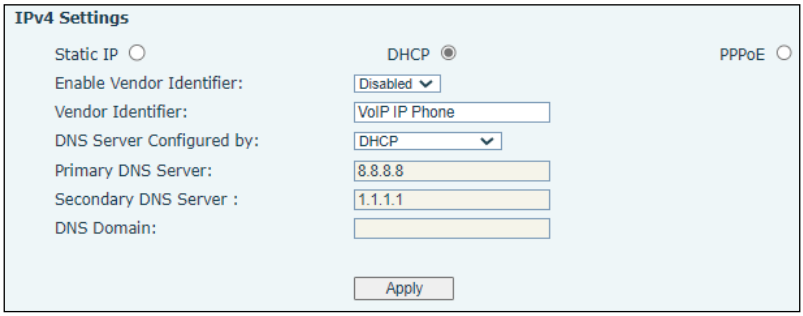
To configure a static IP address for the phone, select the Network menu option on the left side menu, then select the Basic tab on the top menu (Network > Basic). Under IPv4 Settings, click the Static IP option button. Populate the settings for your network and click apply.

NOTICE

NETWORK CAUTIONS: Coordinate with your Network Administrator before assigning addresses and connecting to an existing network.

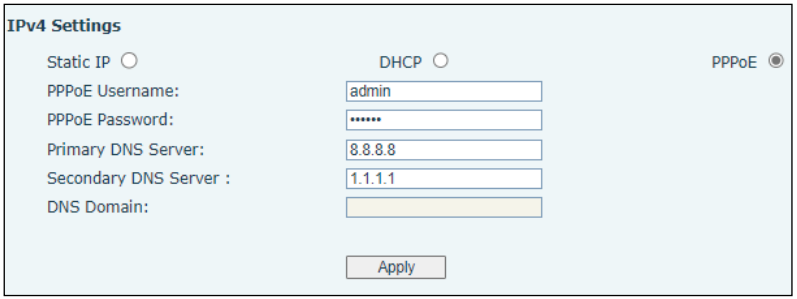
Configuring DHCP Settings

If you are connecting the phone on a network with a DHCP server and want to dynamically allocate an IP address to the phone, select the Network menu option on the left side menu, then select the Basic tab on the top menu (Network > Basic). Under IPv4 Settings, click the DHCP option button. Enter the configuration settings and click Apply.



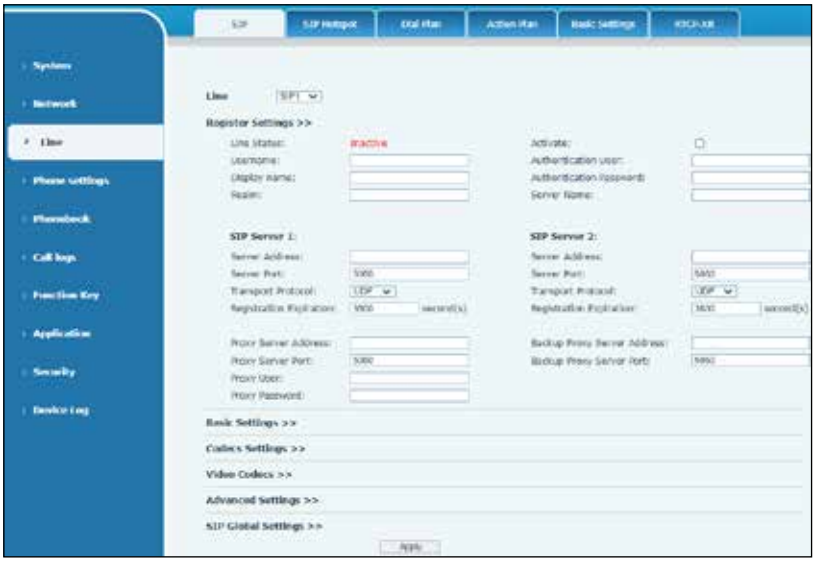
Configuring PPPoE Settings

To configure for PPPoE setting, on the Network > Basic dialog box under IPv4 Settings, click the PPPoE option button, enter the configuration settings and click Apply.



Configuring SIP Settings

To configure for SIP setting, select Line > SIP.



Enter the settings to connect to your local SIP server or (determine what to fill in when not using a SIP server).

Type in the following fields.

Username, Display name, Realm, Activate, Authentication User, Authentication Password, Server Name, Server Address, Server Port, Transport Protocol, Registration Expiration.

Basic Setting

The following section describes the basic functions of the phone.

Language setting

1. Press the Menu key > Basic > Language.

2. Select the desired language and press the OK soft key.

Making a call

1. Pre-dialing: enter the phone number and pick up the handset.
2. Direct dialing: lift the handset and enter the phone number.
3. Handsfree: enter the phone number and press or vice versa.
4. Headset: enter the phone number and press or vice versa.
5. Designated line: press the line key, enter the phone number, and press the dial key.

Accepting a call

1. With the handset: pick up the handset.
2. With a headset: press .
3. With the handsfree: press .

Placing a call on hold

1. Press key or Hold soft key, and the caller is put on hold.
2. To retrieve the call press key or the Resume soft key.

NOTE: With more than one active call, select the desired call with the navigator keys and use the corresponding soft key to hold or resume.

Three-party conference

1. Once in line with the first caller, press key or Conf soft key; the first caller is put on hold.
2. Call the second number.
3. After the second call is established, press key or Conf soft key to set up the conference.

Call transfer

To Attend Transfer your call:

1. Press key or Xfer soft key during the active conversation, and the call is put on hold.
2. Dial the second telephone number. When the call is answered, press key or Xfer soft key to complete the operation.

To Blind Transfer your call:

1. Press key or Xfer soft key during the active conversation, and the call will be on hold.
2. Enter the second telephone number and press key or Xfer soft key.

Call forward

1. Press Menu > Features > Call Forward.
2. Select the line, and the type of forward, enter the destination number and status and press OK.

Call mute

1. Press to Mute the microphone during the call.
2. Press again to un-mute the conversation.

Call list

1. Press the up navigation key or Menu > CallLog > Local Call Logs.
2. Scroll through the list using the navigation keys.
3. To dial an entry, press the Dial soft key or pickup handset or press or .

Phonebook

To access your phonebook:

1. Press Contact soft key or Menu > PhoneBook > Local Contacts.
2. Select All Contacts or other group.
3. To dial an entry, press the Dial soft key or pickup handset or press or .

To add a new entry:

1. Press Contact soft key, press All Contacts or other group, and press Add.
2. Enter the name and number and press the OK soft key.

Programmable keys

1. You can configure shortcuts for the programmable keys.
2. Press Menu > Basic > Keyboard, select among the configurable items, and select your desired type and value, press the OK key.

Redial

Press key to redial the last number dialed.

Do not disturb

1. Press the DND soft key to enable the device do not disturb mode.
2. Or press Menu > Features > DND, select the Mode and Type, and press the OK soft key.

Voice mail

1. Press or Menu > Message > Voice Message; the number of messages will be indicated if provided by your server or pbx.
2. Select the line and press Play to call.

Bluetooth

1. Press Menu > Basic > Bluetooth®.
2. Press the OK soft key to enter the Bluetooth open interface.
3. After opening, press the Scan soft key to display the list of Bluetooth scanned. Select any device and press connect.

Wi-Fi

1. Plug the Wi-Fi Dongle. Press Menu > Basic > WLAN.
2. Press the OK soft key to enter the WLAN open interface.
3. After opening, press the Scan soft key to display the list of Wi-Fi scanned.
4. Press the Enter soft key to enter the available Network, select the wireless network, press the Connect soft key and enter the password to connect.

For additional application and configuration information, see the IP Phone for Intelligent Systems User Manual (part number 25500824) located online at fedsig.com.

Getting Service

If you are experiencing any difficulties, contact Federal Signal Customer Support at 800-548-7229 or 708-534-3400 extension 7511 or Technical Support at 800-524-3021 or 708-534-3400 extension 7329 or e-mail at techsupport@fedsig.com. For instruction manuals and information on related products, visit http://www.fedsig.com.