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Introduction

Phone Features

- Backlit LCD display (FON-450i/460i)
- Flexible keys with LEDs
- Message waiting with indicator lamp and tone
- Full duplex speakerphone
- Intercom paging
- Built-in two-port, 10/100/1000 Ethernet switch. (10/100 on FON-450i/550i) Lets you share a connection with your computer.
- Inline PoE support eliminates the need for power adapters.
- Ability to add two FortiFone FF-50e expansion modules for an additional 24 keys.*
- Optional Bluetooth® module compatible with supported headsets.*

* Not available for the FON-450i/460i

Requirements

- SIP-based phone system such as the FortiVoice™ series of phone systems or a VoIP service provider account.
- Ethernet or fast Ethernet network for connection.
- Power source
  - For Ethernet networks that supply in-line power:
    - The network devices must conform to IEEE 802.3af specifications for PoE (Power over Ethernet)
  - For Ethernet networks that do not supply power to the phone:
    - Use only the power supply designed for the region you intend to use the product. This adapter is rated with an output of 48v DC at 0.3 A and a positive tip.
About this Guide

This guide describes how to set up your phone for use with FortiVoice and a brief overview of features. For detailed instructions, download the user guide from http://docs.fortinet.com.

Figure 1: FON-450i/460i Front (above) / FON-550i/560i Front (below)
<table>
<thead>
<tr>
<th>Item</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Softkeys" /></td>
<td><strong>Softkeys</strong> — softkeys change function based on the state of the phone.</td>
</tr>
<tr>
<td><img src="image" alt="Flexible keys" /></td>
<td><strong>Flexible keys</strong> — multi-colored LED keys that can be assigned to engage and monitor lines, extensions or queues. They can also be programmed as function and speed dial keys. Keys 1 and 2 are reserved for primary and secondary line appearance for the extension. Keys 3–12 or 24 (for the FON-450i/460i or FON-550i/560i, respectively) are programmable.</td>
</tr>
</tbody>
</table>
| ![Navigation buttons and OK button](image) | **Navigation buttons and OK button**  
**Left** — view previous menu when return arrow 🖤 appears in the LCD menu. Press to go back to previous menus while in the Configuration menu.  
**Right** — see additional menu items when ➔ appears in the LCD menu.  
**Up** — view Call Log when phone is idle.  
**Down** — access Phone Book while phone is idle.  
**OK** — center button. Select current item or save value in the Configuration menu. |
| ![Configuration](image) | **Configuration** — access the Configuration menu. |
| ![Voicemail](image) | **Voicemail** — access voicemail status and messages. |
| ![DND](image) | **DND** — toggle do not disturb on and off. |
| ![Headset](image) | **Headset** — toggle the headset on and off-hook. |
| ![Volume control](image) | **Volume control** — adjust ring, headset, handset, and speaker volume. |
| ![Transfer](image) | **Transfer** — transfer a call. |
| ![Hold/Retrieve](image) | **Hold/Retrieve** — place or retrieve a call on hold. |
| ![Mute](image) | **Mute** — mute and unmute the microphone during calls. |
| ![Speakerphone](image) | **Speakerphone** — engage the speakerphone and hang up after the call. |
Flexible Key States

Flexible keys assigned for line, extension or queue appearances will monitor the status of those resources

<table>
<thead>
<tr>
<th>Status</th>
<th>LED Color</th>
<th>LED Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incoming call</td>
<td>Green</td>
<td>Flashing approximately once every 1/2 second</td>
</tr>
<tr>
<td>Line in use on this phone</td>
<td>Green</td>
<td>On solid</td>
</tr>
<tr>
<td>Call on hold at extension</td>
<td>Green</td>
<td>Flashing approximately once every second</td>
</tr>
<tr>
<td>Line/extension/queue ringing</td>
<td>Green</td>
<td>Flashing approximately once every 1/2 second</td>
</tr>
<tr>
<td>Line/extension/queue in use</td>
<td>Red</td>
<td>On solid</td>
</tr>
<tr>
<td>Line/extension/queue on hold</td>
<td>Red</td>
<td>Flashing approximately once every second</td>
</tr>
<tr>
<td>Extension/line not registered</td>
<td>Red/yellow</td>
<td>Alternating red and yellow</td>
</tr>
<tr>
<td>Do not disturb (DND) enabled</td>
<td>Yellow</td>
<td>On solid</td>
</tr>
</tbody>
</table>
Display Layout

The bottom line shows choices associated with the three context-sensitive softkeys located just below the display.

On an FON-550i/560i, the top-bar status line displays icons, date and time. Below is a list of icons and their meaning.

- **LAN or Network connection.** Indicates the status of the LAN connection to the IP phone. If the icon is blinking, check the LAN connection.

- **PC port.** Indicates a device such as a PC is connected to the PC port of the IP phone.

- **Bluetooth.** Indicates the optional Bluetooth module is properly installed with no headsets paired to the phone. When blinking rapidly, the phone is searching or attempting to pair with a headset.

- **Bluetooth paired.** Indicates one or more (maximum 5) headsets are paired with the module but none are active. When blinking rapidly, the phone is attempting to pair or connect a headset.

- **Bluetooth connected.** Indicates a headset is connected to the FON-550i. When blinking rapidly, the phone is searching or attempting to pair or disconnect a headset. When blinking slowly, the Bluetooth headset is in use.
Connecting the Phone

The figure below shows the cable connections for your phone. The LAN and desktop PC connections employ standard Ethernet cables terminated with RJ-45 connectors. The phone supports Power over Ethernet (PoE) in accordance with the IEEE-802.1af Class 2 standard. When connected to a PoE compliant LAN port, the phone derives power from the port. If the LAN port does not support PoE, use the AC/DC adaptor (sold separately). The handset connects to the base with the coiled handset cord.

**Figure 2:** Phone connections

<table>
<thead>
<tr>
<th></th>
<th>Wiring Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LAN</td>
</tr>
<tr>
<td>2</td>
<td>PC</td>
</tr>
</tbody>
</table>
Attaching the Stand

The angle of the phone is set by the attachment of the provided stand in one of two positions (30° or 55°).

To attach the stand,

1. Choose the desired angle for the phone.
2. Align the tabs on the stand with the notches in the base of the phone.
3. Push the stand upward in the slot as far as it can go until properly attached.

Figure 3: Installing the foot stand

<table>
<thead>
<tr>
<th></th>
<th>Wiring Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><strong>Power</strong></td>
</tr>
<tr>
<td>4</td>
<td><strong>Headset</strong></td>
</tr>
<tr>
<td>5</td>
<td><strong>Handset</strong></td>
</tr>
</tbody>
</table>
Wall Mounting

Wall mount the phone using the instructions below.

- Mark and drill two 7 mm (5/16”) holes for plastic wall anchors (not included) with a vertical separation of 10 cm (4”).
- Insert two anchors into the holes, then insert and tighten two screws (not included) leaving about 2.5 mm (1/8”) exposed.
- Attach all wiring to the phone.
- Slide the phone over the screws and ensure the phone is secure. It may be necessary to remove the phone and tighten or loosen the screws for secure mounting. The stand must not be attached to the phone when mounting on a wall.
- Remove the handset hook from the phone as shown in the figure below (illustration a). Reverse the hook and re-install so that the hook catches the groove in the handset receiver (illustration b).
- Complete all wiring.

Figure 4: Wall mount installation
Provisioning the Phone

For instructions on programming your FortiVoice phone system for the phone, refer to “Adding IP Phones” in Chapter 2 of the FortiVoice User Guide.

For internal use (connected to the office LAN)

The phone supports ‘plug and play’ installation employing the automated provisioning process for discovering FortiVoice phone systems on the same LAN.

After discovering the FortiVoice system on the LAN, the phone downloads the configuration and registers with FortiVoice. If the extension was pre-configured via the FortiVoice Management software, then the phone display should show the extension number and name. If not yet configured in the FortiVoice system, then the MAC address of the phone will be visible as a choice in the MAC select list for that model of phone in the Local Extensions section of the FortiVoice configuration.

For external use (connected over the Internet)

When connecting your IP phone at a remote location for external use, please perform the following steps:

1. Preconfigure the extension in the FortiVoice Management software.
2. Power up the phone and press the \[ button, then go to 3. Phone Settings.
4. From the Firmware Update menu, select 2. TFTP Server Address.
5. Enter the Public IP address or FQDN of your FortiVoice system. Press the OK softkey.
6. Press the \[ button to exit the configuration then press the Yes softkey to reboot the phone.
If the top 2 LED keys continue to flash red/yellow after 30 seconds, the phone is not registered with the phone system. See “Troubleshooting” on page 14.

If you encounter problems, ensure the appropriate ports are forwarded from the firewall to the FortiVoice system. For more information, see the FortiVoice User Guide.

If you are connecting to the phone via the web interface, the login is: admin and the password is 23646. For information on the web interface, refer to the phone’s user guide.

Advanced Configuration

For further instructions on how to personalize your phone, refer to its user guide found here: http://www.fortivoice.com/support/documentation/phones/index.html.
Using your Phone with FortiVoice

Accessing an Outside Line

Dial hunt group 9 or 81–88 (Americas, UK), dial 0 or 81–88 (other countries). No hunt group is required if direct line access is enabled. You can select a line directly if it has a programmed key.

Accessing Features

If direct line access is enabled, dial * * to access features indicated with a ▲, unless you are using a programmed key.

**Do not disturb**

Press the button to toggle on/off.

▲ **Pick up — Any ringing extension**

Press the programmed Pickup key, or dial * 9 + #.

▲ **Pick up — Specific extension**

Press the programmed key associated with the extension ringing or dial * 7 + extension + #.

**Place a caller on hold**

Press the button.

**Retrieve a caller on hold**

Press the button or press the flashing key associated with the call on hold.

▲ **Answer queued call**

Press the flashing key associated with the call in the queue. Otherwise, dial 7 + # to retrieve the next caller in your queue.

**Answer FortiVoice call waiting**

Press the Answer softkey or press the flashing line appearance key.
Conference call
Press the Right navigation button, then press the Conf. softkey to put the first party on hold. Call the second party (for external calls, first access an outside line). Press the Join softkey to connect to all parties.

Screened transfer
Press the button + <extension> (or outside number) + #. To complete the transfer, press the Transfer softkey or hang up. To cancel transfer, press the EndCall softkey and then the Resume softkey to connect to the caller on hold.

Blind transfer
Press the button + <extension> (or outside number) + Dial softkey, then hang up. If an extension is tied to a programmable key, then during the call, press that key to transfer.

Voicemail transfer
Press the button + # + <extension> + Dial softkey, then hang up.

Park a caller
Press the programmed Park key. Otherwise, press the button + * 5 1 0 + #. The system will respond with a parking orbit.

▲ Retrieve a parked caller
At the dial tone, press the programmed UnPark key, then dial orbit + #. Otherwise, dial * * + orbit + #.

▲ Two-way intercom/group paging to FortiVoice phones
Press the programmed Intercom or Group Page key + <extension> + Dial softkey. Otherwise dial * 8 4 (Intercom) or * 8 5 (Paging) + extension + #.

▲ Attach account code to last call
At dial tone, dial * 8 8 + #. When prompted, enter <Account code> + #. CDR logging must be active.
Voicemail

Access Mailbox — Locally
Press the Vmail softkey or 📨

Access Mailbox — Remotely
xFF  + <mailbox number>

Change greeting options

Change personal options
(password, date stamp, remote notification options)

MESSAGE PLAYBACK CONTROLS

Rewind 10 seconds

Go to beginning

Skip ahead 10 seconds

Skip to end of message

Check time and date stamp

Forward message

Delete message

Save message

Skip to next message

Updating the Firmware

Update the firmware in the phone system Management software.
Go to Tools > Update Phones and follow the instructions.
## Troubleshooting

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Corrective Action</th>
</tr>
</thead>
</table>
| Nothing showing on the LCD                                             | 1. Ensure the power adapter is plugged in.  
2. Check/replace AC/DC adapter.  
3. Check/correct input power from the LAN if using PoE.                  |
| Phone displays “Obtaining IP Address” for more than 2 minutes          | The DHCP server is not responding.  
1. Check if the DHCP server is online or reboot the router/device.  
2. Check your VLAN settings if enabled. To exit the DHCP searching mode, press the button 3 times. The phone will complete the boot and return to idle. |
| LEDs flash red and yellow on keys associated to SIP accounts (keys 1 and 2) | 1. Ensure the MAC address in the phone system configuration is correctly entered then save and reboot the phone.  
2. Ensure the phone type (FON-450i/FON-550i) is the same as the model you have.  
3. Ensure the TFTP IP address is correct. To verify, see “Updating the Firmware” on page 13.  
4. Check network connections and firewall settings at the phone system location if using as an external extension. |
| No dial tone when off-hook                                            | 1. Ensure the RJ-45 LAN cable is connected correctly.  
2. Ensure the phone is registered with a phone system. See the previous topic for more information. |
| No audio during a call                                                 | 1. Check the handset/headset connections  
2. Make sure the phone is properly registered with the phone system.  
3. Check network connections and firewall settings at the phone system location if using as an external extension. |
Radio Frequency Emissions

FCC Compliance Statement

This device complies with Part 15 rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, 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 to correct the interference by one 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 different circuit from that to which the receiver is connected.

If problems persist, consult the dealer or an experienced radio/TV technician for help.

Canadian Compliance Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with Class B Limits of Industry Canada. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.
European Union Declarations of Conformity

Fortinet declares that the equipment specified in this document, which bears the “CE” mark, conforms to the European Union Radio and Telecommunications Terminal Equipment Directive (R&TTE 1999/5/EC) including,

- Electromagnetic Compatibility Directive (89/336/EEC) and
- Low Voltage Directive (73/23/EEC)

The product fulfills the essential requirements of the harmonized standards shown above.

Product Safety Instructions

This product complies with and conforms to the following international Product Safety standards as applicable:

- Safety of Information Technology Equipment, IEC 60950-1, including
- Relevant national deviations as listed in Compliance with IEC for Electrical Equipment (IECEE)
- Safety of Information Technology Equipment, CAN/CSA-C22.2 No. 60950-1/UL 60950-1

E-911 and use with Multi-Line Telephone Systems

Please note the use and operation of this phone as part of a multi-line telephone system (MLTS) may be subject to state and/or federal E-911 MLTS laws that require the MLTS to provide a caller’s telephone number, extension, and physical location to applicable state and/or local emergency services when a caller initiates a 911 call. The MLTS may not provide a caller’s telephone number, extension, or physical location information to emergency services when a caller dials 911, and compliance with state and/or federal E-911 MLTS laws is the sole responsibility of the purchaser of this phone.

Privacy

This phone implements security and encryption technologies. However, privacy of communications may not be ensured when using this telephone.
Warranty

This phone is covered by a one-year hardware warranty against manufacturing defects as set forth in the EULA.

www.fortivoice.com/support

For warranty service:

• **In North America**, please call 1-866-648-4638 for further information.
• **Outside North America**, contact your sales representative for return instructions.

You will be responsible for shipping charges, if any. When you return this telephone for warranty service, you must present proof of purchase.