

AudioCodes

400HD Series of High Definition IP Phones

HD VoIP

420HD IP Phone

User's Manual

420HD IP Phone for Microsoft® Skype™ for Business

Version 3.0.1



Microsoft Partner

Gold Communications

 Skype for Business

 **AudioCodes**

 **HD**VoIP
Sounds Better

Table of Contents

1	Introducing the 420HD IP Phone	9
1.1	About AudioCodes' Series of High Definition IP Phones	9
1.2	Cutting Edge Voice Quality & HD VoIP	9
2	Setting up the Phone	11
2.1	Unpacking	11
2.2	Device Description	11
2.2.1	Front View	11
2.2.2	Rear View	13
2.3	Cabling	14
2.4	Mounting the Phone	15
2.4.1	Mounting the Phone on a Desktop	15
2.4.1.1	Routing the Handset Cable	15
2.4.2	Mounting the Phone on a Wall	16
3	Getting Started	17
3.1	Getting Acquainted with the Phone's Screen	17
3.2	Softkeys	18
3.3	Navigating the Phone Menu	19
3.4	Displayed Messages	20
4	Signing In	21
4.1	Signing in with PIN Code	21
4.2	Signing in with User Name and Password	22
4.3	Signing in with the Cloud PBX Web Option	23
4.4	Switching from Letters to Numbers/Symbols	24
4.5	Online Sign-in through Microsoft's Cloud PBX	25
4.6	Signing Out	26
4.6.1	Signing out if the 'Sign out' Softkey is Removed from the Screen	26
5	Unlocking a Locked Phone	29
6	Customizing the Phone	31
6.1	Changing the Screen Language	31
6.2	Selecting Ring Tone	32
6.3	Enabling Call Waiting	33
6.4	Managing Simultaneous Incoming Calls	33
6.4.1	Configuring Busy on Busy	33
6.5	Defining Call Forwarding	34
6.6	Setting Date and Time	35
6.7	Changing Screen's Contrast Level	37
6.8	Defining the Screen's Backlight Timeout	38
6.9	Selecting an Answering Device	39
6.10	Defining Location	39
6.11	Defining an Outbound Proxy	40
6.12	Adjusting Volume	41
6.12.1	Adjusting Ring Volume	41

6.12.2	Adjusting Tones Volume	41
6.12.3	Adjusting Handset Volume	42
6.12.4	Adjusting Speaker Volume	42
6.12.5	Adjusting Headset Volume	42
6.13	Managing Your Personal Directory	43
6.13.1	Accessing the Directory	43
6.13.2	Adding Contacts to the Personal Directory	43
6.13.3	Editing Contact Information	44
6.13.4	Deleting a Contact	45
6.13.5	Searching for a Contact	46
6.14	Searching for a Contact in the Corporate Directory using T9	47
6.14.1	Changing from T9 to A/a/1	47
6.15	Defining a Speed Dial	48
6.15.1	Defining a Phone Key as a Speed Dial	48
6.15.2	Using a VocaNOM Speed Dial	49
6.15.3	Editing a Speed Dial	49
6.15.4	Deleting Speed Dials	49
6.16	Defining Phone Keys as Paging Dials	50
6.17	Changing your Presence Status	51
7	Performing Basic Operations	53
7.1	Using Audio Devices	53
7.2	Making Calls	53
7.2.1	Dialing	54
7.2.2	Redialing	54
7.2.3	Dialing a Missed Call	55
7.3	Answering Calls	55
7.4	Rejecting Incoming Calls	56
7.5	Silencing Incoming Calls	56
7.6	Making a New Call Even Though a Call is Coming in	56
7.7	Ending an Established Call	56
7.8	Viewing Missed, Received and Dialed Calls	57
8	Performing Advanced Operations	59
8.1	Answering Waiting Calls	59
8.2	Placing a Call On Hold	60
8.3	Handling Multiple Incoming Calls	60
8.4	Calling a Contact Listed in the Directory	60
8.5	Using a Speed Dial to Place a Call	61
8.6	Transferring Calls	62
8.6.1	Performing a Blind Transfer	62
8.6.2	Performing a Consultative Transfer	63
8.6.3	Performing a Semi-Consultative Transfer	64
8.6.4	Merging Calls	65
8.7	Parking a Call	66
8.8	Configuring Group Call Pickup (GCP)	66
8.9	Initiating a a Multi-Party Skype for Business Remote Conference	66
8.10	Muting Calls	69
8.11	Paging	69
8.11.1	Performing Outgoing Paging Calls	69

8.11.2	Receiving Incoming Paging Calls	69
8.12	Setting up Better Together over Ethernet	71
8.12.1	Installing the BToE PC/Laptop Application	71
8.12.2	Making Sure BToE is Correctly Installed	79
8.12.3	Configuring the BToE TCP Port.....	79
8.12.4	Enabling BToE for Online Users.....	80
8.12.5	Automatically Pairing the BToE PC/Laptop Application with the IP Phone	80
8.12.6	Manually Pairing the BToE PC Application with the IP Phone	81
	8.12.6.1 Manually Generating a Pair Code	81
	8.12.6.2 Manually Connecting the IP Phone with the BToE PC Application.....	82
8.12.7	Connecting the Skype for Windows Client with the IP Phone	85
8.12.8	Making Sure IP Phone/ Skype for Windows Client are Paired.....	85
	8.12.8.1 Making Sure Skype for Windows Client is Paired	85
	8.12.8.2 Making Sure the IP Phone is Paired	86
8.13	Using BToE Functions	87
8.13.1	Signing In	87
8.13.2	Making a Call (Click-to-Dial)	88
8.13.3	Establishing a Unified Communications Call Conference	89
8.13.4	Answering a Call.....	91
8.13.5	Transferring a Call	92
8.14	Switching Primary Audio Device.....	93
8.15	Routing Voice from a Video Call to the Phone	94
8.16	Retrieving Voice Mail Messages.....	94
9	Troubleshooting	95
9.1	Uploading Logs to Microsoft Server for Support Purposes.....	95

List of Figures

Figure 2-1: Front View	12
Figure 2-2: Rear View.....	13
Figure 2-3: Cabling	14
Figure 3-1: Screen in Idle State	17
Figure 3-2: Phone Menu	19
Figure 4-1: Entering Letters of the Alphabet	24
Figure 4-2: Entering a Symbol (e.g., a dot)	25
Figure 4-3: Reverting to Letters (e.g., abc)	25
Figure 4-4: Login.....	26
Figure 4-5: Web Interface – Home Page.....	27
Figure 4-6: Sign-in – Content Blocked.....	27
Figure 4-7: Sign-in – Windows Security Prompt.....	28
Figure 4-8: Windows Security Prompt.....	28
Figure 4-9: Sign-out.....	28
Figure 8-1: InstallShield Wizard – Preparing to Install	72
Figure 8-2: Welcome to the InstallShield Wizard	72
Figure 8-3: License Agreement	73
Figure 8-4: License Agreement	73
Figure 8-5: Destination Folder	74
Figure 8-6: Change Current Destination Folder	74
Figure 8-7: Ready to Install	75
Figure 8-8: Installing AudioCodes Better2Gether.....	75
Figure 8-9: InstallShield Wizard Completed	76
Figure 8-10: AudioCodes Icon in Taskbar.....	76
Figure 8-11: Control Panel>Programs>AudioCodes Better2Gether.....	77
Figure 8-12: Computer Management > Services and Applications.....	77
Figure 8-13: Device Manager > AudioCodes B2GoE USB Driver	78
Figure 8-14: Popup Menu	79
Figure 8-15: About AC BToE.....	79
Figure 8-16: TCP Port.....	79
Figure 8-17: AC BToE TCP Port	80
Figure 8-18: Popup Menu	82
Figure 8-19: Phone Pairing.....	82
Figure 8-20: AC BToE Failed Indication.....	82
Figure 8-21: AC BToE is Connected Indication.....	82
Figure 8-22: Popup Menu: 'Disconnect' Enabled, 'Phone Pairing' Disabled	83
Figure 8-23: BToE Disconnected	83
Figure 8-24: Popup Menu: BToE Disconnected.....	83
Figure 8-25: Start > Programs > AudioCodes > BToE Controller	84
Figure 8-26: Skype for Windows Sign-in Request Prompt.....	85
Figure 8-27: Primary Device: IP Phone.....	93
Figure 8-28: Primary Device: Headset	93
Figure 8-29: Primary Device: Speaker	93

List of Tables

Table 2-1: Front View Description	12
Table 2-2: Rear View Description.....	13
Table 3-1: Screen in Idle State	17
Table 3-2: Softkeys.....	18
Table 3-3: Messages Displayed in the Screen Indicating Processes In Progress.....	20
Table 6-1: Time Zones.....	36
Table 6-2: Presence Statuses	51
Table 9-1: Troubleshooting.....	95

Notice

Information contained in this document is believed to be accurate and reliable at the time of printing. However, due to ongoing product improvements and revisions, AudioCodes cannot guarantee accuracy of printed material after the Date Published nor can it accept responsibility for errors or omissions. Updates to this document and other documents can be viewed by registered customers at <http://www.audiocodes.com/downloads>.

© **Copyright 2017 AudioCodes Ltd. All rights reserved.**
This document is subject to change without notice.

Date Published: June-26-2017

Trademarks

AudioCodes Ltd. All rights reserved. AudioCodes, AC, HD VoIP, HD VoIP Sounds Better, IPmedia, Mediant, MediaPack, What's Inside Matters, OSN, SmartTAP, VMAS, VoIPerfect, VoIPerfectHD, Your Gateway To VoIP, 3GX, VocaNom, AudioCodes One Voice and CloudBond are trademarks or registered trademarks of AudioCodes Limited All other products or trademarks are property of their respective owners. Product specifications are subject to change without notice.

WEEE EU Directive

Pursuant to the WEEE EU Directive, electronic and electrical waste must not be disposed of with unsorted waste. Please contact your local recycling authority for disposal of this product.

Customer Support

Customer technical support and services are provided by AudioCodes or by an authorized AudioCodes Service Partner. For more information on how to buy technical support for AudioCodes products and for contact information, please visit our Web site at www.audiocodes.com/support.

Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used.

Documentation Feedback

AudioCodes continually strives to produce high quality documentation. If you have any comments (suggestions or errors) regarding this document, please fill out the Documentation Feedback form on our Web site at <http://www.audiocodes.com/downloads>. Your valuable feedback is highly appreciated.

Related Documentation

Document Name
400HD Series IP Phone for Microsoft Skype for Business Release Notes
400HD Series IP Phone for Microsoft Skype for Business Administrator's Manual
420HD IP Phone for Microsoft Skype for Business Quick Guide
400HD Series IP Phones for Skype for Windows Hosting Partner (LHPv2) Environment Configuration Note

1 Introducing the 420HD IP Phone

AudioCodes' 420HD IP Phone is based on AudioCodes High Definition voice technology, providing clarity and a rich audio experience in Voice-over-IP (VoIP) calls. The 420HD is a 1-line 2 concurrent calls per line premium model which includes a large monochrome multi-language graphic liquid crystal display (LCD).

The 420HD IP Phone is a fully-featured telephone that provides voice communication over an IP network, allowing you to place and receive phone calls, put calls on hold, transfer calls, make conference calls, etc.

Read this User's Manual carefully to learn how to operate this product and take advantage of its rich feature set.

1.1 About AudioCodes' Series of High Definition IP Phones

AudioCodes Series of High Definition IP Phones offers a new dimension of voice call quality and clarity for the IP Telephony market. This new series of IP Phones further expands AudioCodes' VoIP product offering for the service providers' hosted services, Enterprise IP telephony and Enterprise contact centers markets. As a natural addition to the AudioCodes Mobile Clients, Media Gateway, Media Server & Multi-Service Business Gateway products, the AudioCodes Series of High Definition IP Phones enable Systems Integrators and end-customers to build end-to-end solutions that rely on AudioCodes' technological advantage and proven track record in providing state-of-the-art products. The AudioCodes Series of High Definition IP Phones meet a growing demand for High Definition VoIP solutions in end-user phones and terminals, improving the productivity and efficiency of business communications with new quality standards set by the High Definition voice technology.

1.2 Cutting Edge Voice Quality & HD VoIP

Based on AudioCodes' advanced, robust and field-proven VoIPerfectHD™ software, AudioCodes' IP Phones are designed to utilize the most popular wideband coders. The phones feature enhanced proprietary capabilities such as packet loss concealment, high quality wideband acoustic echo canceler, and low-delay adaptive jitter buffers to enrich the HDVoIP experience.

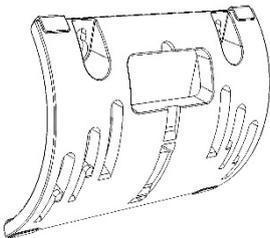
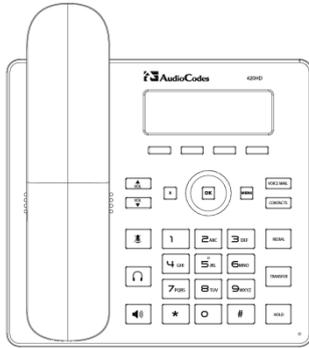
This page is intentionally left blank.

2 Setting up the Phone

2.1 Unpacking

When unpacking, ensure that the following items are present and undamaged:

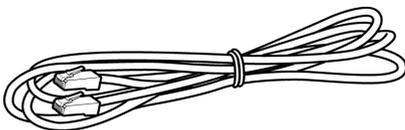
420HD IP Phone / Stand



Handset / Cord



Cat 5e Ethernet Cable



AC Power Adapter (Optional)



If anything appears to be missing or broken, contact the distributor from whom you purchased the phone for assistance.

2.2 Device Description

Use the graphics below to identify and familiarize yourself with the device's hardware functions.

2.2.1 Front View

The front view of the phone is shown in [Figure 2-1](#) and described in [Table 2-1](#).

Figure 2-1: Front View

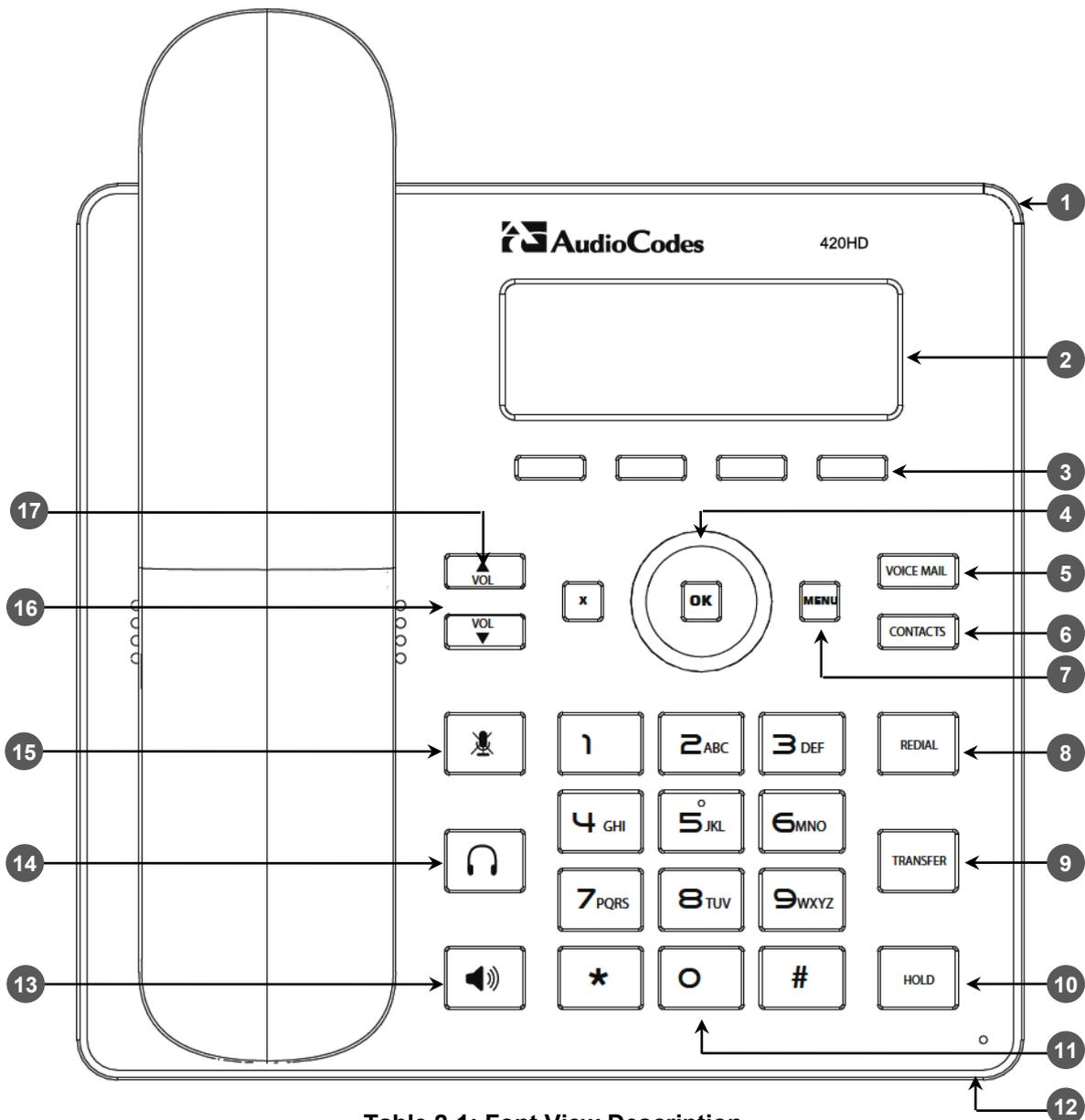


Table 2-1: Front View Description

Item #	Label/Name	Description
1	Ring LED	Flashing blue light indicates an incoming call.
2	Screen	Interactive screen displaying calling information, enabling you to set up phone features.
3	Softkeys	See Section 3.2 on page 18 for details on the four softkeys and the available functions they offer.
4	Navigation Control / OK	Press the upper rim to scroll up menus/items. Press its lower rim to scroll down. Press its left or right rim to move the cursor left or right (when editing a contact number for example). Press the OK button to select a menu/item/option.
5	VOICE MAIL	Retrieves voice mail messages.
6	CONTACTS	Press to directly access the Personal directory and Corporate directory.
7	MENU	Accesses menus (1) Call Log (2) Directory (3) Speed Dial (4) Settings (5) Status (6) Administration.

Item #	Label/Name	Description
8	REDIAL	Accesses a list of recently dialed numbers; one can be selected to redial.
9	TRANSFER	Transfers a call.
10	HOLD	Places an active call on hold.
11	Alphanumerical Keypad	Keys for entering numbers, alphabetical letters and symbols (e.g., colons)
12	Microphone	Activates the speaker, allowing a hands-free conversation.
13	SPEAKER	Allows talking and listening. Network administrators can disable it if required.
14	HEADSET	Activates a call using an external headset.
15	MUTE	Mutes a call.
16	▲VOL	Increases or decreases the volume of the handset, headset, speaker, ring tone and call progress tones.
	▼VOL	
17	x	Cancel an action, such as dialing a number, after beginning it.

2.2.2 Rear View

The rear view of the phone is shown in the figure below and described in the table below.

Figure 2-2: Rear View

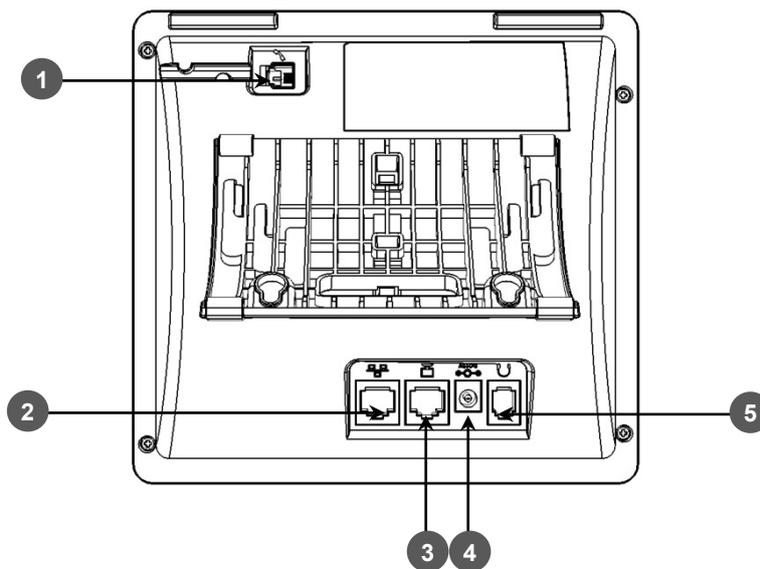


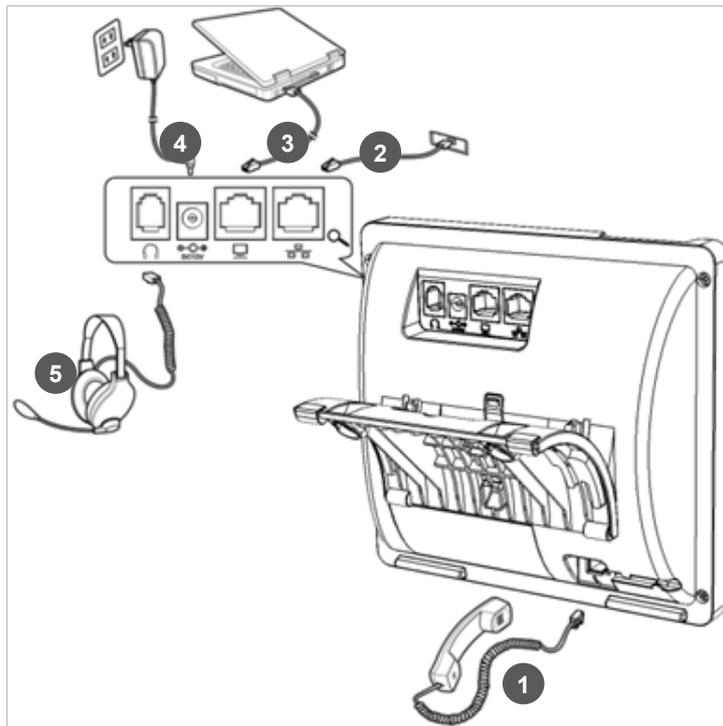
Table 2-2: Rear View Description

#	Label	Description
1		Handset jack, i.e., RJ-9 port, to connect the handset.
2		RJ-45 port to connect to the Ethernet LAN cable for the LAN connection (uplink – 10/100 Mbps). If you're using Power over Ethernet (PoE), power to the phone is supplied from the Ethernet cable (draws power from either a spare line or signal line).
3		RJ-45 port for connecting the phone to a PC (10/100 Mbps downlink).
4	 DC12V	12V DC power jack that connects to the AC power adapter.
5		Headset jack, i.e., RJ-9 port that connects to an external headset.

2.3 Cabling

This section shows how to cable your phone.

Figure 2-3: Cabling



Action	Description
1	Connect the <i>short, straight end of the cord</i> to the handset. Connect the <i>longer, straight end</i> to the jack (RJ-9 port, for the handset) on the phone.
2	Connect the RJ-45 LAN port to your LAN network (LAN port or LAN switch/router), using a CAT 5 / 5e Ethernet cable
3	Connect the RJ-45 PC port to a computer, using a CAT 5 / 5e straight-through Ethernet cable
4	Connect the connector tip of the AC power adapter to the phone's power socket (labelled DC 12V). Connect the two-prong AC adapter directly to the electrical wall outlet. When the phone powers up, all the LEDs momentarily light up
5	Connect the RJ-9 headset jack to a headset (optional)



Note: If the LAN to which the phone is connected supports Power over Ethernet (PoE), no AC adapter is required; the phone receives power from the Ethernet network.



Prior to connecting power, refer to the Compliancy and Regulatory Information at www.audiocodes.com/library.

2.4 Mounting the Phone

The phone can be mounted on a:

- Desk (see Section 2.4.1 below)
- Wall (see Section 2.4.2 on page 16)

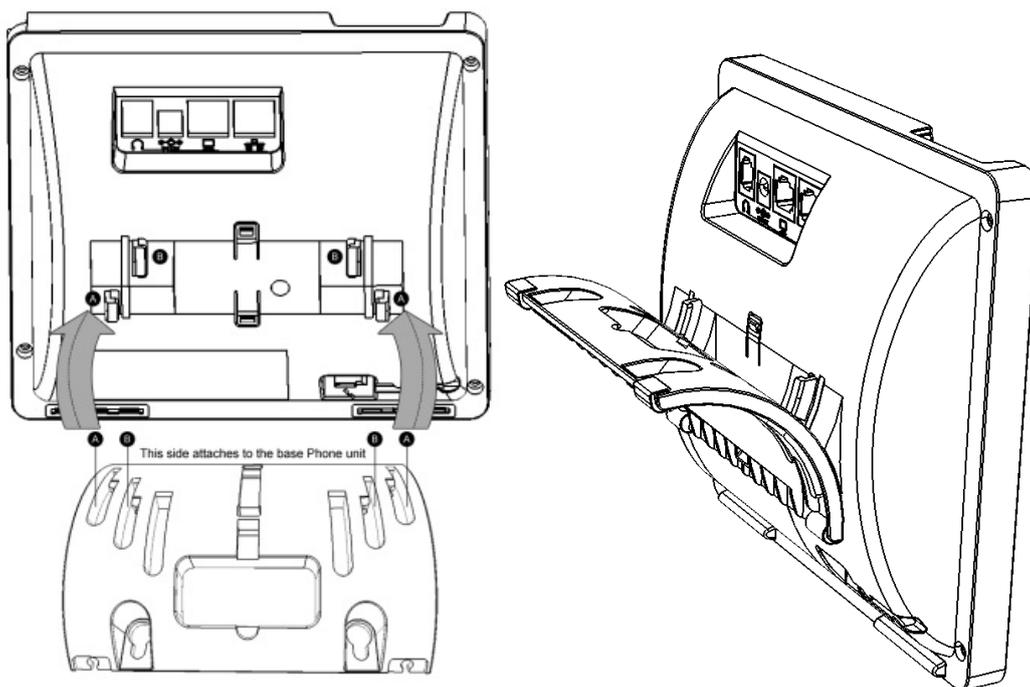
See also <https://www.youtube.com/watch?v=oGe9STB9IFE> to assemble the base stand.

2.4.1 Mounting the Phone on a Desktop

This section shows how to place the phone on a desk or flat surface.

➤ **To mount the phone on a desk or flat surface:**

1. Off-hook the handset (if on-hook) and place the phone upside down, i.e., base-up, on your desktop.
2. On the phone's base, identify outer rails.
3. On the phone's stand, identify outer notches.
4. Invert the stand and align its outer notches with the base's outer rails.
5. Insert the stand's outer notches into the base's outer rails and slide the notches along the rails until the stand click-locks into the base.
6. Revert the phone and stand it on the desktop.



2.4.1.1 Routing the Handset Cable

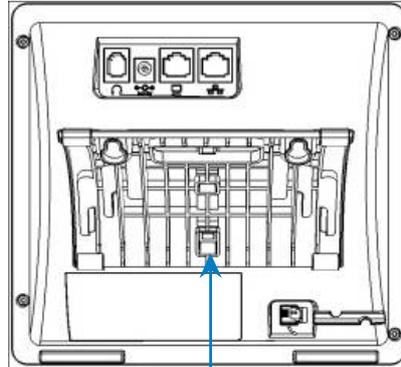
The phone features a groove for routing the handset cable.

2.4.2 Mounting the Phone on a Wall

This section shows you how to mount the phone on a wall or wall plate.

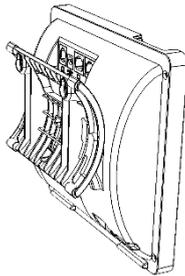
➤ **To mount the phone on a wall:**

1. Attach the stand of the phone for the purpose of a wall mounting:
 - a. Detach the base.



To detach the phone's stand, push this button

- b. Attach it again as you did for a desktop mounting (see Section 2.4.1 on page 15) only now make sure that it's flatly aligned to lie flush against the wall, i.e., slide the *middle rails* of the phone stand onto the phone base's inner notches.



2. Connect the AC power adapter, LAN and PC cords.
3. In the wall, drill two horizontal holes at a distance of 3 15/16 inches (100 mm) from one another, in line with the template.
4. Insert two masonry anchors into the holes if necessary.
5. Thread two screws (not supplied) into the two masonry anchors; ensure that the heads extend sufficiently (about 3/16 inch or 5 mm from the wall) for the phone stand's keyhole slots to hang on.
6. Hang the phone stand's keyhole slots on these screws.

3 Getting Started

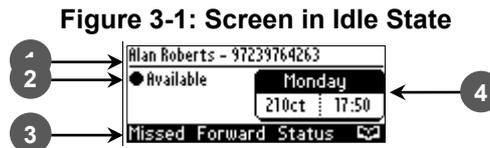
This section gets you started with the phone. The phone features a screen, providing an intuitive, menu-driven user interface for configuring the device and viewing call information.

Before using the phone, you must sign in (see Section 4 on page 21).

3.1 Getting Acquainted with the Phone's Screen

This section gets you acquainted with the phone's screen.

The figure below shows the screen in idle state.



Reference:

Table 3-1: Screen in Idle State

Reference	Description
1	Displayed Name (configured by your network administrator); see the <i>Administrator's Manual</i> .
2	Shows presence status (Available, Busy, Do not disturb, Away, or Be right back). See Section 6.17 on page 51 for details.
3	Softkeys; to activate, press the key on the device, below the screen, corresponding to the softkey. See Table 3-2 for softkey descriptions.
4	Day, Date and Time (automatically retrieved from the Network Time Protocol (NTP) server, enabled by your network administrator).

3.2 Softkeys

The table below shows the softkeys displayed in screen menus. To use a softkey, press the key located directly below it on the device.

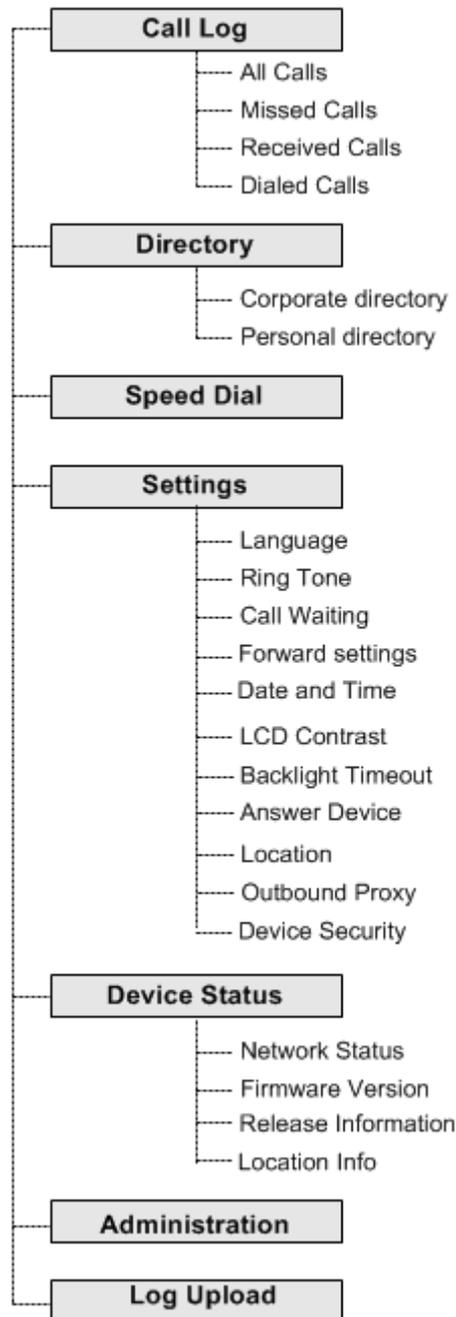
Table 3-2: Softkeys

Softkey	Description
Missed	Displays missed calls.
Forward	Automatically forwards calls.
Status	Displayed in idle state. Lets you set presence status: Available, Busy, Do not disturb, Away, Be right back, Reset
Sign in /Sign out	Sign in is displayed if you haven't signed in yet, in the idle screen. Sign out is displayed if you press the Status softkey after signing in.
	Displayed after lifting the handset (for example). Lets you select a contact from the Corporate directory or Personal directory .
	Displayed after lifting the handset (for example). Displays the Call Log.
Select	Identical to the hard OK key on the phone. Either can be used. Selects a menu or option.
BToE	Displayed after pressing the MENU hard key. Generates a code for manually pairing the phone with Skype for Business client, for unified communications.
A/a/1	Enables switching between input modes: abc, ABC, Abc, 123, or T9.
Save	Saves settings.
Cancel	Cancels the currently initiated call or configuration.
Dial	Displayed after a number is keyed, a directory contact is selected, or a logged call is selected. Dials the phone number / directory contact / logged call.
Clear	Displayed (for example) after entering a digit of a phone number. Deletes from right to left.
	Displayed after a number is dialed and answered on the other side, and after you answer a call. Displays the Call Menu.
Conf	Displayed (1) after a number is dialed and the call is answered on the other side and (2) after you answer a call. Pressing it displays the ADD PARTICIPANT screen.
BXfer	Displayed (1) after a number is dialed and the call is answered on the other side and (2) after a call is answered. Lets you transfer the call in a blind transfer.
URL	Displayed after lifting the handset (for example). Enables calling a URL.
Detail	Displayed after selecting a call log (for example). If selected, the details of a logged call are displayed (Time, Date, etc.).
Detail	Displayed after selecting a Call Log (for example). Displays the log details (Time, Date, etc.).
End	Displayed after pressing the Dial softkey (for example). Ends the call.
Back	Displayed after pressing the MENU key (for example). Returns to the previous screen.
Start	Displayed after pressing Forward > Forward to a number (for example).
Edit	Displayed after you select a contact to be edited (for example).
Delete	Displayed after pressing the MENU key on the phone and then selecting Call Log (for example).
Silent	Displayed when the phone rings on an incoming call. Lets you silence the ring.
Reject	Displayed when the phone rings, alerting to an incoming call. Lets you reject the call.
Accept	Displayed when the phone rings, alerting to an incoming call. Lets you accept the call.

3.3 Navigating the Phone Menu

The MENU key on the phone lets you access information and configure settings shown in the figure below. Press it to view call logs, access directories, configure speed dials, customize phone settings, determine device status, perform administration and perform log upload to Microsoft server.

Figure 3-2: Phone Menu



Note: **Administration** is intended for network administrators only. It is password protected. See the *Administrator's Manual* for details.

- **To access the phone's menu:**
 - Press the MENU key located on the device.
- **To navigate to menu items:**
 - After opening the menu, press the navigation control's lower rim -OR- press the menu item's number, e.g., press **3** to navigate to **Speed Dial**.
- **To select a menu or menu item:**
 - Press the **Select** softkey or press the navigation control's **OK** button.
- **To cancel and move to a previous menu level:**
 - Press the **Back** softkey.

3.4 Displayed Messages

Messages displayed in the screen indicating processes in progress include:

Table 3-3: Messages Displayed in the Screen Indicating Processes In Progress

Message	Description
Initializing	Initializing
Discovering LLDP	Discovering VLAN using Link Layer Discovery Protocol (LLDP)
Discovering CDP	Discovering VLAN using Cisco Discovery Protocol (CDP)
Acquiring IP	Acquiring an IP address from a DHCP server
Initializing Network	Initializing the network
Signing in	Signing in to the Skype for Windows server
Signing in...Contacting time server	Get the time from the NTP server
Discovering Lync server	Auto discovering the Skype for Windows server on the network
Registering	Registering to a SIP proxy server (after booting up the phone)
Downloading Firmware File	Downloading a firmware file
Upgrading Firmware	Upgrading the phone's firmware
Signing out	Signing out of the Skype for Windows server

4 Signing In

This section shows you how to sign in to the phone.

➤ **To sign in to the phone:**

- In the idle screen, press the **Sign in** softkey; the sign-in options are displayed:



- PIN code - see Section 4.1
- User name and Password - see Section 4.2
- Web Sign-in - see Section 4.3



Note:

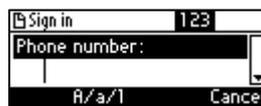
- After signing out, the next time you sign in the phone will present the option that was used to sign in before signing out.
- If a user signs out and another signs in, the phone presents empty Speed Dials and empty Call Logs to the newly signed-in user. The Speed Dials and Call Logs of the signed-out user are not saved on the phone.

4.1 Signing in with PIN Code

This section shows how to sign in with the PIN code and phone number. The PIN code is provided by your network administrator.

➤ **To sign in with the PIN code:**

1. In the 'Sign-in options' screen shown above, select the **PIN Code** option.



2. Enter your phone number.
3. Navigate down and enter your PIN code (obtainable from the network administrator). To switch from numbers to alphabetical letters and symbols, see Section 4.4.



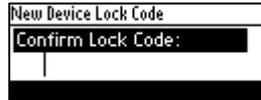
4. Navigate down with the lower rim of the navigation control button, and then enter your PIN code. You can get it from your administrator. To switch from numbers to alphabetical letters and symbols, see the next section.
5. Press the **Sign-in** softkey; the phone is signed in and the New Device Lock Code is displayed.



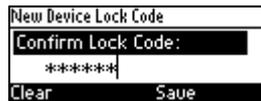
6. Enter the New Device Lock Code as shown on the next page. See Section 5 for more information.



- Press the **Next** softkey.



- Confirm the Lock Code.



- Press the **Save** softkey; the idle screen opens.



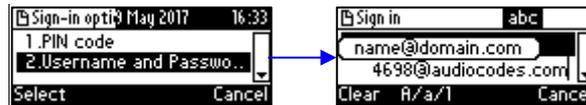
You've successfully signed in.

4.2 Signing in with User Name and Password

This section shows how to sign in with User Name and Password.

- **To sign in with User Name and Password:**

- In the 'Sign-in options' screen, select **User name and Password**.



Note: Signing in with a username that is a NetBIOS Domain Name, i.e., **domain\username**, or with the PIN Code, are *disallowed* for Skype for Business online sign-in. They are only allowed for *on-premises* sign-in. Online sign-in must be in the following format:

- Sign-in address, i.e., SIP URI. To switch from letters of the alphabet to symbols such as @, - and period, see Section 4.4.
- User name, in UPN (User Principal Name) format, i.e., the way the user's name appears in their e-mail address listed in the Active Directory: **username@domain.com**
- User's network IT password (the same password you use to access your PC)

- Press the **Sign in** softkey; after signing in successfully, the New Device Lock Code screen opens. See under the previous section – Signing in with PIN Code – for instructions about the New Device Lock Code screen, and under Section 5.

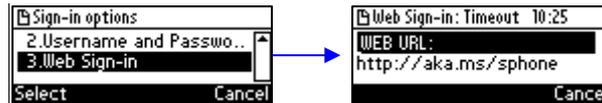
4.3 Signing in with the Cloud PBX Web Option

This section shows how to sign in with the Cloud PBX Web option, a.k.a. Device Pairing. Signing in with this option enables connectivity to Microsoft's Cloud PBX, Microsoft's cloud-hosted version of enterprise voice.



Note: Applies only to Microsoft Cloud PBX users using the 420HD phone.

The option exempts users from having to laboriously key in their user name and password using the phone keypad. If the option is selected, a URL and a Pairing Code are displayed:



Users must then point their browser to the URL and enter the Pairing Code in the Microsoft web page. Sign-in to Microsoft's Cloud PBX is then performed.

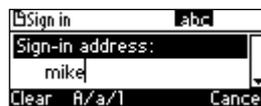
4.4 Switching from Letters to Numbers/Symbols

You can use the keypad to enter letters of the alphabet, numbers or symbols, and to switch from one to the other.

➤ **To enter letters of the alphabet/numbers:**

1. Press the **A/a/1** softkey repeatedly or the **#** key on the keypad repeatedly to navigate to:
 - **abc** = lower case letters -OR-
 - **ABC** = upper-case letters -OR-
 - **Abc** = first-letter upper case, the rest lower case -OR-
 - **123** = numbers

Figure 4-1: Entering Letters of the Alphabet



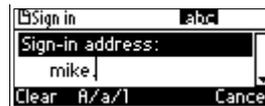
2. Select **abc**; the selection is displayed (see the figure above). Press the **MNO** key (for example) on the keypad; **m** is entered. Press the **GHI** key three successive times (pressing it once produces **g**, twice produces **h**); **i** is entered (see the figure above). Enter **k** and **e**.

➤ **To enter a symbol (e.g., dot or @ or hyphen):**

1. If you're not in lower case alphabetical mode, press the **A/a/1** softkey and navigate to **abc** (mandatory). You can also access the mode menu by pressing the **#** key on the keypad – press the **#** key successively to navigate in the menu.
2. Press the **1** key on the keypad; a dot is entered. *Immediately* press the **1** key again; a backslash is entered. Pressing successively produces:

Symbol	Explanation	Symbol	Explanation
.	Dot	*	Star sign
\	Backslash	=	Equal sign
@	At		Separator
;	Semi-colon	(Open parenthesis
:	Colon)	Close parenthesis
#	Pound	{	Open parenthesis
\$	Dollar	}	Close parenthesis
%	Percentage	[Open square parenthesis
^	Caret]	Close square parenthesis
&	Ampersand	"	Double quotation marks
!	Exclamation mark	'	Single quotation mark
?	Question mark	>	Greater than
+	Plus	<	Less than
-	Hyphen	,	Comma
_	Underscore	/	Forward slash
~	Approximates		

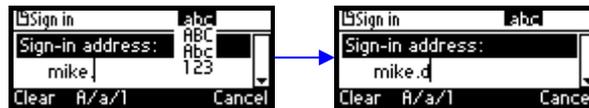
Figure 4-2: Entering a Symbol (e.g., a dot)



➤ **To revert to letters (e.g., abc):**

- Press the **A/a/1** softkey (or the **#** key on the keypad) and navigate to **abc** mode.

Figure 4-3: Reverting to Letters (e.g., abc)



4.5 Online Sign-in through Microsoft's Cloud PBX

The phones feature online sign-in and connectivity to Office 365 server on Microsoft's cloud. Users can sign in to/connect to and authenticate with Microsoft's Cloud PBX, Microsoft's cloud-hosted version of enterprise voice. Two sign-in method options allow users to connect to Microsoft's Cloud PBX:

- ADAL (Azure AD Authentication Library), based on OAuth 2.0 ([RFC 6749](#)).
- OrgID (Organizational ID) or LiveID, Microsoft's proprietary connectivity to Cloud services.



Note: Online sign-in to the phone must be in the following format:

- Sign-in address
- Username in UPN (User Principal Name) format. UPN format is the way the user's name appears in their e-mail address listed in the Active Directory, i.e., **username@domain.com**
- User's network IT password

Signing in with a username that is a NetBIOS Domain Name, i.e., **domainusername**, as well as signing in with the phone Extension and PIN Code, are *disallowed* for Skype for Business online sign-in. They are only allowed for *on-premises* sign-in.

4.6 Signing Out

This section shows you how to sign out.

➤ **To sign out:**

1. In the idle screen, press the **Status** softkey.
2. In the Status screen press the **Sign out** softkey.



You're now signed out. You're returned to the idle screen displaying the **Sign in** softkey.



Note: If a user signs out and another signs in, the phone presents empty Speed Dials and empty Call Logs to the newly signed in user. The Speed Dials and Call Logs of the signed out user are not saved on the phone.

4.6.1 Signing out if the 'Sign out' Softkey is Removed from the Screen

Located in lobbies, cafeterias, employee lounges, meeting rooms, and other gathering places, Common Area phones typically do not display a **Sign out** softkey in the idle screen, in line with network management's decision to remove the capability from users. Users can sign out, if necessary, using the Web interface.

➤ **To sign out using the Web interface:**

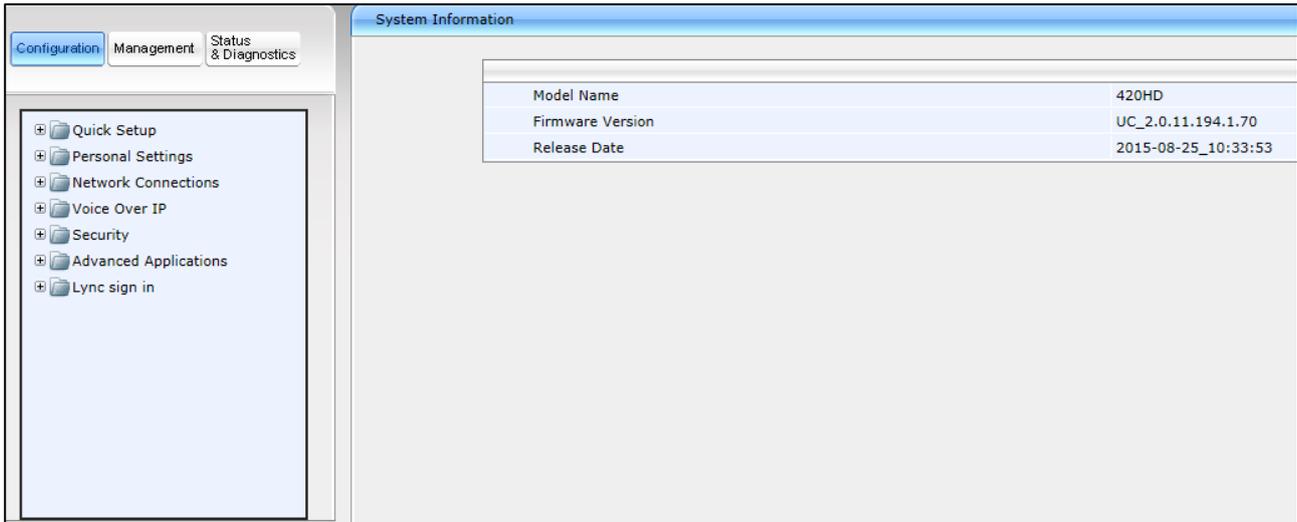
1. Obtain the Common Area phone's IP address (**MENU** key > **Status** > **Network Status** > **IP Address**) and point your Web browser to it; the phone's Web interface login page opens.

Figure 4-4: Login



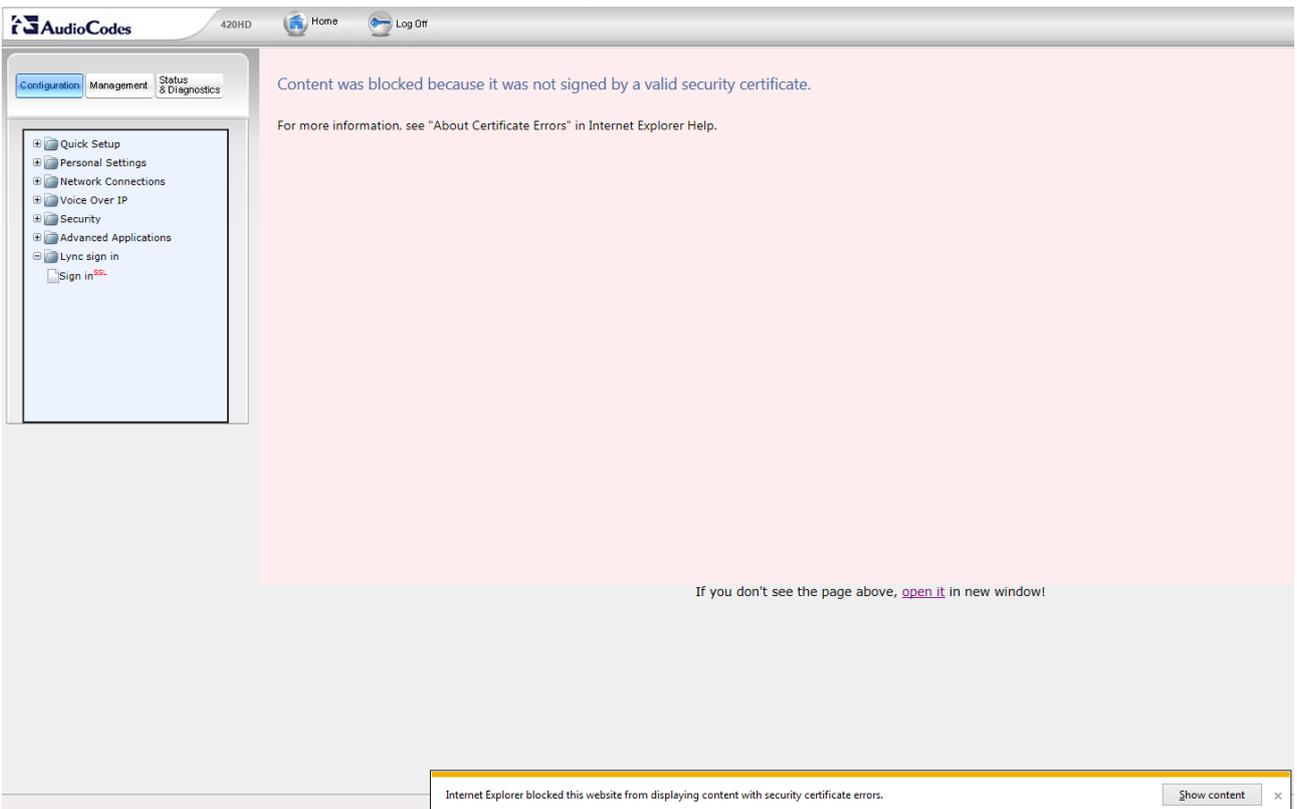
2. Enter the login credentials (default user name is **admin** and default password is **1234**); the Home page of the Web interface is displayed.

Figure 4-5: Web Interface – Home Page



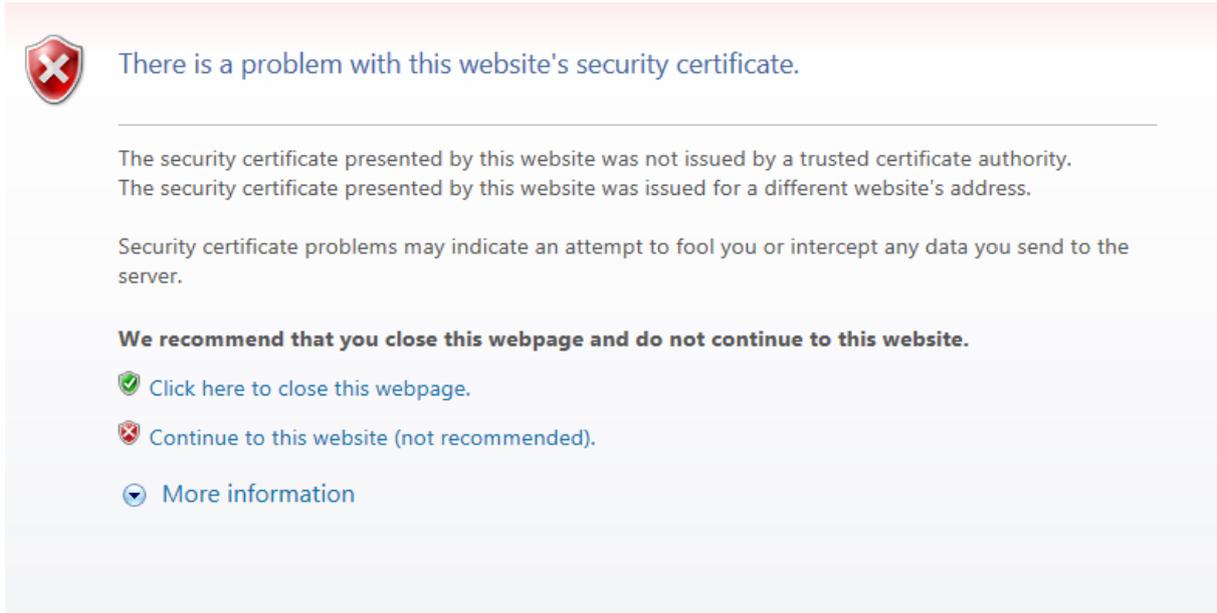
3. In the Web interface, open the Sign-In page (**Configuration** tab > **Lync sign in** > **Sign in**).

Figure 4-6: Sign-in – Content Blocked



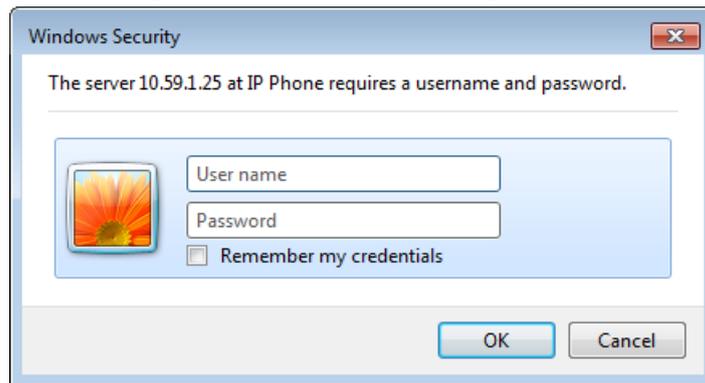
4. Click the **open it** link and then click **Show content**.

Figure 4-7: Sign-in – Windows Security Prompt



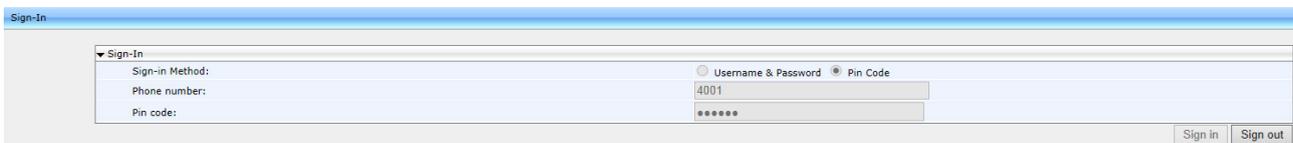
5. Click the **Continue to this website (not recommended)** link.

Figure 4-8: Windows Security Prompt



6. In the Windows Security prompt, enter the username and password and then click **OK**.

Figure 4-9: Sign-out



7. Click the **Sign out** button.

5 Unlocking a Locked Phone



Note: For the automatic locking feature to be available to users, the administrator must first enable it in the Skype for Business server and Web interface. See the *Administrator's Manual* for details.

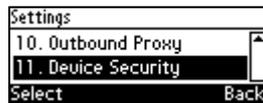
The phone supports the capability to automatically lock after a configured period of time. The feature secures phones against unwanted (mis)use. If left untouched for 10 minutes (default), the phone automatically locks and is inaccessible to anyone who doesn't know its lock code. After a phone locks:

- Incoming calls are allowed, but outgoing calls need the lock code.
- Without the lock code, users cannot access the Call Log, Calendar and Corporate Directory, but they can call preconfigured emergency numbers.

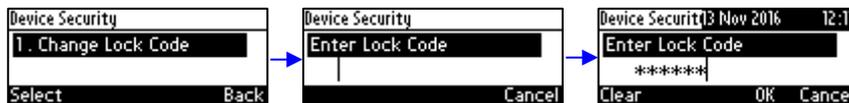
When signing in for the first time, the user is prompted for a lock code. After entering a code, e.g., **123456**, confirming it, and saving it, the phone goes into idle state, and after 10 minutes it is automatically locked.

➤ **To manually change the lock code:**

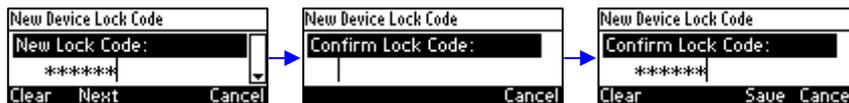
1. Press the MENU key, select **Settings** and then scroll down to select **Device Security**.



2. In the Device Security screen that opens, select **Change Lock Code**, enter the old code and press the **OK** softkey.

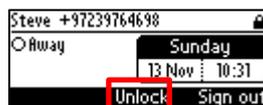


3. Enter the new code, press the **Next** softkey, confirm, and then press the **Save** softkey.



➤ **To locally unlock a phone:**

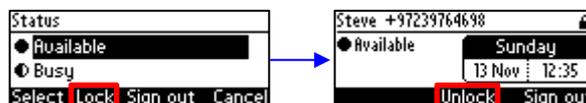
1. In the idle screen, press the **Unlock** softkey.



2. In the **Enter Lock Code** screen, enter the code and press the **OK** softkey; the phone unlocks.

➤ **To manually lock a phone at any time you choose:**

- [When the phone is in idle mode] Press the **Status** softkey and then press the **Lock** softkey that is displayed; the phone *locks*, and an **Unlock** softkey is displayed in the idle screen.



This page is intentionally left blank.

6 Customizing the Phone

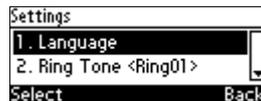
This section shows you how to customize your phone for enhanced usability.

6.1 Changing the Screen Language

The phone's screen supports multiple languages. English is the default, but you can change it to another.

➤ **To change the default:**

1. Access the **Languages** screen (MENU key > **Settings** > **Language**).



2. Navigate to the language you want.



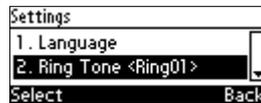
3. Press the **Select** softkey to select it.
4. Press the **Save** softkey to save the setting.

6.2 Selecting Ring Tone

You can choose from a selection of ring tones to indicate incoming calls.

➤ **To select a ring tone:**

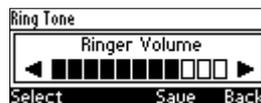
1. Access the **Ring Tone** screen (MENU key > **Settings** > **Ring Tone**).



2. Navigate to and select a ring tone. A sample of each is played as you navigate through the ring tones.



3. Set ring tone volume by pressing the VOL  or VOL  key:



A few seconds after adjusting the volume level the Ringer Volume indication is hidden.

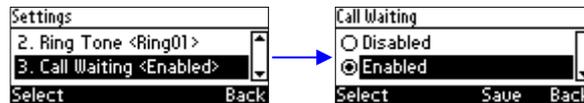
4. Press the **Select** softkey to apply your settings.
5. Press the **Save** softkey to save your settings.

6.3 Enabling Call Waiting

You can enable or disable call waiting.

➤ To enable or disable call waiting:

1. Access the **Call Waiting** screen (MENU key > **Settings** > **Call Waiting**).

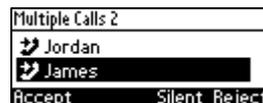


2. Navigate to and select:
 - **Disable** (disables call waiting) -OR-
 - **Enable** (enables call waiting) -OR-
 - **Busy on busy** (see Section 6.4.1 below)
3. Press the **Select** softkey to apply your settings.
4. Press the **Save** softkey to save your settings.

6.4 Managing Simultaneous Incoming Calls

If two calls simultaneously come in on a phone, or if a user is in a call and a third party calls, the phone's screen displays them in a graphically user-friendly way.

- Simultaneous incoming calls; both calling parties flash:



- When one of the calls is answered:



- When a phone is in a call and another comes in, the incoming call flashes:



Additional visual indication:

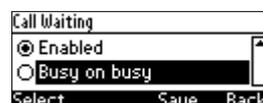
- The blue Ring LED flashes in the uppermost right corner of the phone

6.4.1 Configuring Busy on Busy

This feature rejects an coming call if you're already in an active call on either the IP phone or Skype for Windows client. It plays a busy signal to the caller.

➤ To configure Busy on Busy:

1. Access the **Call Waiting** screen (MENU key > **Settings** > **Call Waiting**).



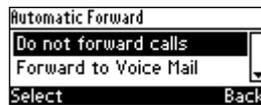
2. Select the **Busy on Busy** option.

6.5 Defining Call Forwarding

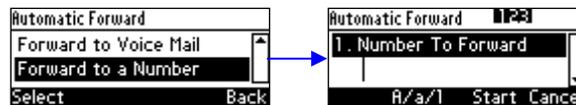
You can enable an incoming call to be automatically redirected to another phone number if a user-defined condition is met, e.g., if the line is busy.

➤ **To define call forwarding:**

1. Access the **Automatic Forward** screen (MENU key > **Settings** > **Forward settings** -or- press the **Forward** softkey when the SCREEN is in idle state).



2. To forward to voice mail: In the Automatic Forward screen, navigate to **Forward to Voice Mail** and press the **Select** softkey; you're returned to the idle screen; calls will be automatically forwarded to your Voice Mail.
3. To forward to a number: In the Automatic Forward screen, navigate to **Forward to a Number** and press the **Select** softkey:



4. Enter the number and press the **Start** softkey; you're returned to the idle screen; calls will be automatically forwarded to the number.

➤ **To deactivate call forwarding:**

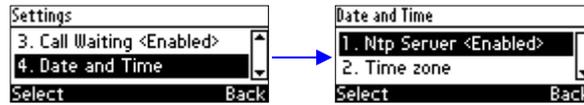
When the screen is in idle state, press the **Forward** softkey and in the Automatic Forward screen, select **Do not forward calls**.

6.6 Setting Date and Time

Date and time is automatically retrieved from the deployed Network Time Protocol (NTP) server, enabled by your administrator.

➤ To enable the NTP server:

1. Access the **Date and Time** screen (MENU key > **Settings** > **Date and Time**).



2. If *not* already 'Enabled', notify your network administrator.

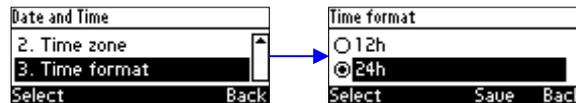
➤ To configure the Time Zone:

1. Navigate to the **Time zone** option and press the **Select** softkey.
2. Navigate to and select the time zone relevant to your geographical location. See [Table 6-1](#) below for a list of all Time Zone options.



➤ To configure the time format:

1. Navigate to the **Time format** option and press the **Select** softkey.



2. Navigate to the format of your choice and press the **Select** softkey.



Note: To configure the NTP server, see the *Administrator's Manual*.

Table 6-1: Time Zones

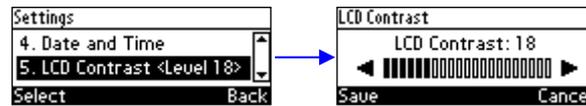
Time Zone	Place
(GMT-12:00)	Eniwetok, Kwajalein
(GMT-11:00)	Midway Is, Samoa
(GMT-10:00)	Hawaii, Alaska
(GMT-08:00)	Pacific Time (US & Canada)
(GMT-07:00)	Chihuahua, Mazatlan, Mountain Time (US & Canada)
(GMT-06:00)	Central Time (US & Canada)
(GMT-05:00)	Eastern Time (US & Canada)
(GMT-04:00)	Atlantic Time (Canada)
(GMT-03:30)	Newfoundland, Buenos Aires, Georgetown, Brasilia, Greenland
(GMT-03:00)	Buenos Aires, Georgetown, Brasilia, Greenland
(GMT-02:00)	Mid-Atlantic
(GMT-01:00)	Azores, Cape Verde Is
(GMT 00:00)	Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London, Casablanca, Monrovia
(GMT+01:00)	Amsterdam, West Central Africa, Madrid, Paris, Vilnius, Berlin, Bern, Rome, Vienna, Prague
(GMT+02:00)	Cairo, Jerusalem, Bucharest, Helsinki, Riga, Tallinn, Athens, Istanbul, Minsk, Harare, Pretoria
(GMT+03:00)	Kuwait, Riyadh, Nairobi, Baghdad, Moscow, St. Petersburg, Volgograd
(GMT+03:30)	Tehran
(GMT+04:00)	Abu Dhabi, Muscat, Baku, Tbilisi, Kabul
(GMT+05:00)	Islamabad, Karachi, Tashkent, Yekaterinburg
(GMT+05:30)	Bombay, Calcutta, Madras, New Delhi
(GMT+05:45)	Kathmandu
(GMT+06:00)	Almaty, Dhaka, Colombo, Almaty, Novosibirsk
(GMT+06:30)	Rangoon
(GMT+07:00)	Bangkok, Hanoi, Jakarta, Krasnoyarsk
(GMT+08:00)	Beijing, Chongqing, Hong Kong, Urumqi, Perth, Singapore, Taipei, Irkutsk, Ulaan Bataar
(GMT+09:00)	Osaka, Sapporo, Tokyo, Seoul, Yakutsk
(GMT+09:30)	Darwin, Adelaide
(GMT+10:00)	Canberra, Melbourne, Sydney, Brisbane, Guam, Port Moresby, Hobart, Vladivostok
(GMT+11:00)	Magadan, Solomon Is, New Caledonia
(GMT+12:00)	Fiji, Kamchatka, Marshall Is, Auckland, Wellington
(GMT+13:00)	Nuku'alofa

6.7 Changing Screen's Contrast Level

You can change the screen's contrast level. Sixty four different contrast levels are supported. The range is 0-63. The default is 18. You can choose the level that suits you best.

➤ **To define the screen's contrast level:**

1. Access the **LCD Contrast** menu (MENU key > **Settings** > **LCD Contrast**).



2. Navigate to the contrast level that suits you best. To navigate, press the navigation control's left or right rim.
3. Press the **Save** softkey to apply your settings.

6.8 Defining the Screen's Backlight Timeout

You can define for how long the phone's backlight will stay on when the phone is idle. When this duration times out, the backlight switches off. For the backlight to never time out, select **Always on**.

➤ **To define the screen's backlight timeout:**

1. Access the **Backlight Timeout** screen (MENU key > **Settings** > **Backlight Timeout**).



2. Navigate to and select **Always on** or **10 / 20 / 30 / 40 / 50 / 60 seconds**).



3. Press the **Select** softkey to apply your settings.
4. Press the **Save** softkey to save your settings.

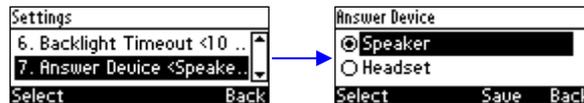
6.9 Selecting an Answering Device

You can select which audio device (speaker or headset) is activated when you answer calls (by pressing the **Accept** softkey or lifting the handset), or when you dial calls (by pressing number keys on the keypad and then pressing the **Dial** softkey).

The default device is the speaker.

➤ To select the answering device:

1. Access the **Answer Device** screen (MENU key > **Settings** > **Answer Device**).



2. Navigate to and select **Speaker** or **Headset**.
3. Press the **Save** softkey.

6.10 Defining Location

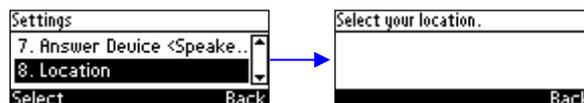
This feature allows the called party to identify the geographical location of a calling party. For example, if a caller in the U.S. makes an emergency call to E911, the feature extracts the caller's information for the police department to immediately identify the caller's location.

The network administrator configures geographical location for each subnet (see the *Administrator's Manual*). After you sign in, your geographical location is downloaded via inband provisioning. If geographical location is not provisioned by the server, a popup opens in the phone's screen enabling users to either **Set** the location manually, **Skip** (the popup closes but pops up every few hours), or **Dismiss** ('kills' the popup).



➤ To manually set location:

1. Access the **Location** screen (MENU key > **Settings** > **Location**).



6.11 Defining an Outbound Proxy

Skype for Windows Server Multitenant Hosting Pack is a Microsoft® Unified Communications (UC) hosting solution for telecommunications and hosting providers. The solution enables Microsoft hosting partners to deploy a single instance of the Skype for Windows Server software to securely and economically host multiple tenants with a rich, fully integrated UC solution.

To connect the AudioCodes' Skype for Windows-compatible phone to a hosted Lync environment (LHP), a dedicated 'Outbound Proxy' parameter is available which is used to configure the hosted service provider's domain name (FQDN).



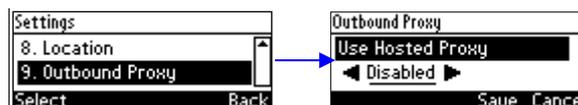
Note:

- In hosted environments, it's common practice that this hosted domain name is different to the enterprise's domain name.
- Refer also to 400HD Series IP Phones for Lync Hosting Partner (LHPv2) Environment Configuration Note.

To configure a phone for an LHP environment, configure the address of the Outbound Proxy as the hosted service provider's domain name (FQDN).

➤ To configure the address of the Outbound Proxy:

1. In the phone's screen, access the **Outbound Proxy** screen (MENU key > **Settings** > **Outbound Proxy**):



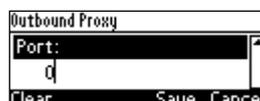
2. Press the right rim of the navigation control to set the 'Use Hosted Proxy' field to **Enabled**:



3. Press the lower rim of the navigation control to navigate down to the 'Proxy Address' field:



4. In the 'Proxy Address' field enter the hosted service provider's domain name (FQDN) and then navigate down to the 'Port' field:



5. Configure the Port (default = 0).
6. Press the **Save** softkey.

6.12 Adjusting Volume

You can adjust the volume of the

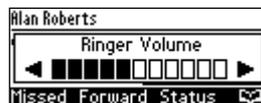
- Ring
- Tones (e.g., dial tone)
- Handset
- Speaker
- Headset

6.12.1 Adjusting Ring Volume

You can adjust the volume of the ring indicating an incoming call.

➤ **To adjust ring volume:**

1. When the phone is in idle state (i.e., not in use), press the VOL  or VOL  key; the Ringer Volume bar is displayed on the screen:



2. Press the VOL  or VOL  key on the keypad to adjust the volume. After adjusting, the Ringer Volume level disappears from the screen.

6.12.2 Adjusting Tones Volume

You can adjust the phone's tones, including dial tone, ring-back tone and all other call progress tones.

➤ **To adjust tones volume:**

1. Off-hook the phone (using handset, speaker or headset).
2. Press the VOL  or VOL  keypad key; the Tones Volume bar is displayed:



3. Press the VOL  or VOL  key to adjust the volume. After adjusting, the Tones Volume bar disappears from the screen.

6.12.3 Adjusting Handset Volume

You can adjust the volume of the handset during a call or when making a call. After changing the volume, the newly adjusted level applies to all subsequent handset use.

➤ **To adjust handset volume:**

1. During a call or when making a call ensure that the handset is off the cradle.
2. Press the VOL  or VOL  key; the Handset Volume bar is displayed on the screen.



3. Press the VOL  or VOL  key on the keypad. After adjusting, the Handset Volume bar disappears from the screen.

6.12.4 Adjusting Speaker Volume

You can adjust the volume of the speaker only during a call. After changing the volume, it applies to all subsequent speaker use.

➤ **To adjust the speaker volume:**

1. During a call, press the speaker key.
2. Press the VOL  or VOL  key; the Speaker Volume bar is displayed on the screen.



3. Adjust the volume using the VOL  or VOL  key. After you finish adjusting the volume, the Speaker Volume bar disappears from the screen.

6.12.5 Adjusting Headset Volume

You can adjust the volume of the headset only during a call. After changing the volume, it applies to all subsequent headset use.

➤ **To adjust the headset volume:**

1. During a call, press the headset key.
2. Press the VOL  or VOL  key; the Headset Volume bar is displayed in the screen.



3. Adjust the volume using the VOL  or VOL  key. After adjusting the volume, the Headset Volume bar disappears from the screen.

6.13 Managing Your Personal Directory

You can add contacts to the Personal Directory and edit and delete them if necessary. After adding a contact, you can call them directly from the directory (see Section 8.3 on page 60). If you receive an incoming call from a contact listed in the directory, the screen displays their name. If you assign a Speed Dial key to the contact, you can press it to call them.



Note:

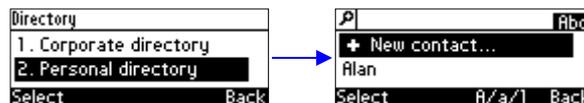
- You can add a maximum of 1,000 contacts to your Personal Directory.
- Your phone also features a Corporate Directory set up by your network administrator in the Microsoft Skype for Windows Server (see the Administrator's Manual).
- The Personal Directory and the Corporate Directory display the presence status of contacts if your network administrator sets them up in the Microsoft Skype for Windows Server (see the *Administrator's Manual*).
- Corporate Directory contacts in your phone cannot be edited or deleted.

6.13.1 Accessing the Directory

You need to access the directory to perform the management operations subsequently described.

➤ To access the directory:

1. Press the **CONTACTS** key on the keypad -OR- press the  softkey when the screen is in idle state -OR- press the MENU key on the keypad, and then navigate to and select **Personal directory**.



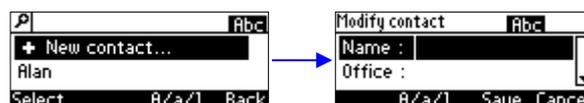
2. Add a contact, search for a contact, dial a contact, edit contact information or delete a contact (see below).

6.13.2 Adding Contacts to the Personal Directory

This section shows how to add a contact to the Personal Directory. You can enter the contact's home number, office number, mobile number and/or SIP URI. You can also define a Speed Dial key to place calls quickly to the contact (see Section 6.15 on page 48).

➤ To add a contact to the phone directory:

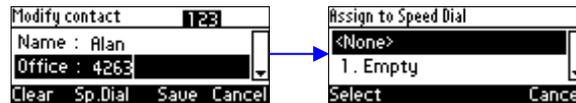
1. Access the **Personal directory**.
2. Select **+ New contact**:



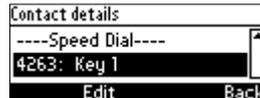
3. In the Modify contact screen, enter the 'Name' of the contact (see also Section 4.4 on page 24).
4. Navigate down and enter the contact's office phone number (see also Section 4.4 on page 24).
5. Optionally, navigate down and enter the contact's home and mobile numbers as well.
6. Optionally, navigate down and enter the contact's SIP URI, e.g., mike.dubb@audiocodes.com. You may find this option useful if you don't know their phone

number.

- Press the **Sp. Dial** softkey to assign a Speed Dial key:



- Navigate to and select the first 'Empty' Speed Dial; a Speed Dial key is assigned to the contact.
- Press the **Save** softkey; 'Contact Saved' is displayed.
- To view the assigned Speed Dial, navigate down to the contact's name and press the **Detail** softkey; navigate down to this screen:

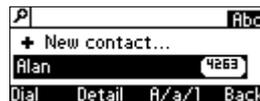


6.13.3 Editing Contact Information

This section shows how to edit contact information.

- **To edit contact information:**

- Access the **Personal directory** and navigate to the name of the contact to edit:



- Press the **Detail** softkey:



- Press the **Edit** softkey:



- Modify the contact's details and press the **Save** softkey.



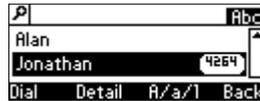
Note: You cannot modify **Corporate directory** contacts.

6.13.4 Deleting a Contact

This section shows how to delete a contact from the directory.

➤ **To delete a contact:**

1. Access the **Personal directory** and navigate to the contact to delete:



2. Press the **Detail** softkey; the contact details are shown.
3. Press the **Delete** softkey; a 'Delete current contact?' warning message appears:



4. Press the **Yes** softkey to remove the contact from the phone directory or **No** if you want to keep the contact in the directory; the contact is removed from the directory.



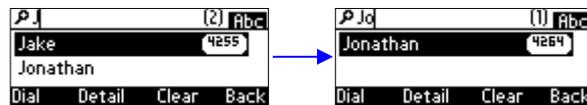
Note: Corporate directory contacts cannot be deleted.

6.13.5 Searching for a Contact

You can quickly and easily locate a contact in the directory. This is especially useful if you have a long list of contacts.

➤ **To search for a contact:**

1. Access the phone directory.
2. Search for a contact:
 - Navigate to the contact in the list
-OR-
 - Key the first letter in the contact's name using the keypad. As you press the key, the directory locates contacts whose names begin with that letter. For example, to search for the contact Jonathan, as you press the **J** key, the directory locates contacts whose names begin with "J". As you key in the next letter, i.e., **O**, contacts whose names begin with "Jo" appear, etc.



6.14 Searching for a Contact in the Corporate Directory using T9



Note: The T9 feature only applies to searching for a contact in the **Corporate directory**.

The T9 (Text on 9 keys) feature (enabled by default) lets you press the **2** key, for example, on the dial pad to input the letter **C**. You only need to press it once. So to input **Charles**, you can press **2427537**.

T9 supports predictive search, so as letters are entered, T9 displays possibilities before you finish entering the name. If the name Alex, for example, appears multiple times in the corporate directory, users can enter **ALEX**, space (*), and then the first letter of the family name – or the first letter of the middle name, if there is one.

➤ To access a contact in the Corporate Directory using T9:

1. Open the Corporate Directory (press the CONTACTS hard key - or - in the idle screen, press the  soft key - or – press the MENU hard key > **Directory** > **Corporate directory**).



2. Note that **T9** is enabled by default. On the dial pad, press the key containing the first letter in the contact's name, for example, **A**. You only need to press it once. Then press the key containing the second letter, for example, **L**. You only need to press it once.



3. Optionally, press the **OK** softkey, or press the key containing the third letter, for example, **E**.



4. Use the * key on the dial pad to enter a space, and then enter the first letter of the family name, if necessary.

6.14.1 Changing from T9 to A/a/1

You can search for a contact in the Corporate directory using T9 (default) or A/a/1.

➤ To change from the default T9 to A/a/1:

- Open the Corporate Directory (press the CONTACTS hard key - or - in the idle screen, press the  soft key - or – press the MENU hard key > **Directory** > **Corporate directory**).
- In the directory, press the **A/a/1** softkey and choose your preference:



6.15 Defining a Speed Dial

You can place a call to a contact by pressing a phone key (1-9) that has been defined as a Speed Dial.

6.15.1 Defining a Phone Key as a Speed Dial

You can define a phone key as a Speed Dial. This section shows how a Speed Dial is *typically* defined, i.e., MENU key > **Speed Dial**.

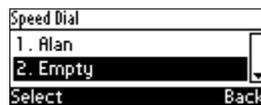


Note: Two alternative ways to define a Speed Dial are:

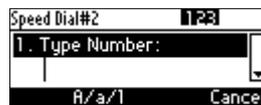
- Long-press on a key (1-9) that has not yet been defined as a Speed Dial; the Speed Dial #1 (for example) screen opens.
- Access the 'Modify contact' screen, enter the contact's phone number and press the **Sp. Dial** softkey.

➤ **To define a phone key as a Speed Dial:**

1. Access the **Speed Dial** screen (MENU key > **Speed Dial**):
2. Navigate to an empty Speed Dial (that has not yet been defined):



3. Press the **Select** softkey; the **Speed Dial #2** screen (in this example) is displayed:



Note: Speed Dial #1 defines phone key 1. Speed Dial #9 defines phone key 9.

4. Define the phone number to which the Speed Dial will dial: In the 'Type Number' field, enter the phone number that the Speed Dial key will dial -OR- navigate down and select **Select from Directory** > select the directory > navigate to and select the contact:



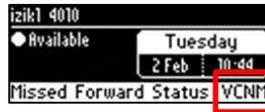
5. Select the contact and press **Save**; a Speed Dial is created to that contact.



Note: These are your own private Speed Dials. They are preserved even if you sign out of the phone, sign in with another user, sign out as that user, and then sign in again as your own user.

6.15.2 Using a VocaNOM Speed Dial

A softkey on your phone can be configured as a VocaNOM speed dial for quicker and friendlier voice dialing ability. Ask your network administrator to provide the functionality if you require it. After it is configured, you will see the following VocaNOM softkey displayed in the phone's idle screen:



6.15.3 Editing a Speed Dial

You can edit a Speed Dial.

➤ **To edit a Speed Dial:**

1. Access the **Speed Dial** screen (MENU > **Speed Dial**).
2. Navigate to and select the Speed Dial to edit.
3. Modify the fields as required.
4. Press the **Save** softkey to save your settings.

6.15.4 Deleting Speed Dials

You can delete a Speed Dial.

➤ **To delete a Speed Dial:**

1. Access the **Speed Dial** screen (MENU key > **Speed Dial**).
2. Navigate to and select the Speed Dial to delete.
3. In the 'Type Number' field, use the **Clear** softkey to delete the contact's phone number.
4. Press the **Save** softkey; the Speed Dial is listed as 'Empty':



6.16 Defining Phone Keys as Paging Dials

You can define a phone key as a paging dial. This is done in the Speed Dial screen. You can access this screen via

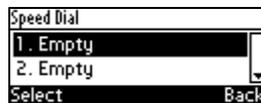
- MENU key > Speed Dial
- OR-
- Long-press a dialpad key (1-9) not yet defined as a Speed Dial



Note: Make sure the group paging feature is enabled – consult your IT Administrator.

➤ **To define a phone key as a paging dial:**

1. Access the **Speed Dial** screen as described above.



2. Select an **Empty**. You can select 1-9. This screen is displayed:



3. Navigate to **Paging** (use the right rim of the navigation control button):



4. Press the **Select** softkey; this screen is displayed:



5. In the 'Group Name' field, enter the name of the group, to be displayed in the phone's screen when there's an incoming / outgoing paging call.
6. Scroll down to the 'Multicast Address' field and enter the paging group's multicast IP address. Default: 224.0.1.0. For phones to be in a group, all must be configured with the identical multicast address.
7. Scroll down to the 'Multicast Port' field and enter the group's port. Default: 8888. For phones to be in a group, all must be configured with the identical port.
8. Press the **Save** softkey; the key is defined as a paging dial.

6.17 Changing your Presence Status

You can assign a presence status to control whether you want people to contact you and, if so, how. By default, your status is based on your Skype for Windows client.



Note:

- Presence status can be changed by your Skype for Windows client running on your computer. This status is reflected on the phone's screen.
- After n minutes (configured in the Skype for Windows server by your administrator), presence status automatically changes to 'Inactive'.
- n minutes after this (also configured in the Skype for Windows server by your administrator), presence status automatically changes to 'Away'; all calls are then automatically forwarded to the RGS (Response Group Service) if it is configured.

➤ To set/change presence status:

1. In the idle screen, press the **Status** softkey:



2. Navigate to a presence status:

Table 6-2: Presence Statuses

Presence Status	Description
Available	You're online and available for others to call.
Busy	You're busy and don't want to be interrupted.
Do not disturb	You don't want to be disturbed. Stops the phone from ringing when others call you. If DnD is activated, callers hear a tone indicating that your phone is busy; the call is blocked and your phone's idle screen indicates 'Missed Calls'.
Away	You want to hide your status and appear to others you're currently away.
Be right back	You will be away briefly and will return shortly.
Reset	Automatically updates your status received from the Skype for Windows server.

3. Press the **Select** softkey; the status you selected is displayed in the idle screen:



4. To reset your presence status, navigate to **Reset** in the Status screen and press the **Select** softkey; your status is received from the Skype for Windows server and automatically updated.

This page is intentionally left blank.

7 Performing Basic Operations

This section shows how to perform basic phone operations.

7.1 Using Audio Devices

You can use one of the following audio devices on the phone for speaking and listening:

- **Handset:** To make a call or answer a call, lift the handset off the cradle.
- **Speaker** (hands-free mode). To activate it, press the speaker key during a call or when making a call. To deactivate it, press the speaker key again.
- **Headset** (hands-free mode). When talking on the phone, you can relay audio to a connected headset. To enable it, press the headset key. To disable it, press it again.

You can easily change audio device during a call.

- **To change from speaker/headset to handset:** Activate speaker/headset and pick up the handset; the speaker/headset is automatically disabled.
- **To change from handset to speaker/headset:** Off-hook the handset and press the speaker/headset key to activate the speaker/headset. Return the handset to the cradle; the speaker/headset remains activated.

7.2 Making Calls

The phone offers multiple ways of making a call. After dialing a number:

- Screen displays  and the called party's phone number or contact name if it's listed in the phone directory
- Screen displays the line extension number on which the called party is dialed
- The phone plays a ring-back tone

Screen indications:



- **To end dialing a call before it's answered:**
 - Press the **End** softkey or the speaker key.



Note: For advanced dialing using the phone directory, see Section 6.13 on page 43.
For defining a speed dial key, see Section 6.15 on page 48.

7.2.1 Dialing

This section shows how to dial. To dial, either (1) key-in the number on the keypad (2) press the speaker key and enter the number (3) press the speaker key or lift the handset and enter a URL address (e.g., host and domain name, or IP address) or alphabetical letters (e.g., tvservice).

➤ To dial a regular-digits phone number:

1. On the keypad, key the first digit of a regular phone number; the screen displays the digit in the NEW CALL field; key in the remaining digits. To delete (from right to left) entered digits, press the **Clear** softkey. To cancel the call, press the **Cancel** softkey.



2. Do any of the following:
 - Don't do anything; dialing is automatically performed after a few seconds.
 - Press the **Dial** softkey; dialing is performed.
 - Pick up the receiver; dialing is performed.
 - Press the **Speaker** button; dialing is performed.
 - Press **#** (if you switched on speaker/handset/headset before keying in the digits of the phone number); dialing is performed.

➤ To dial a URL:

1. Press the speaker key or lift the handset; the screen displays the NEW CALL field and the **URL** softkey:



2. Press the **URL** softkey and enter a URL address (see Section 4.4 on page 24 for how to switch between letters, numerals and symbols). To delete (from right to left) entered letters/numerals/symbols, press the **Clear** softkey. To cancel the call, press the **Cancel** softkey.



3. Press the **Dial** softkey.

7.2.2 Redialing

You can redial a number previously dialed.

➤ To redial:

1. Press the REDIAL key; the Dialed Calls screen is displayed, listing in chronological order, recently dialed numbers:



2. Navigate to and select the number to redial.
3. Press the **Dial** softkey or press the **OK** key.

7.2.3 Dialing a Missed Call

The phone logs all missed calls. The screen in idle state displays the number of missed calls (if any):



➤ **To dial a missed call:**

1. Press the **Missed** softkey; the Missed Calls screen is displayed:



2. Navigate to the missed call to dial.
3. Press the **Dial** softkey or press the **OK** key.

7.3 Answering Calls

The phone indicates an incoming call as follows:

- Screen displays  together with the caller's phone number (or contact name if listed in the phone directory):



- Phone rings.
- Ring LED flashes blue.

➤ **To answer:**

- Pick up the handset -or-
- Press the headset key (ensure that the headset is connected to the phone) -or-
- Press the speaker key -or-
- Press the **Accept** softkey (the speaker is automatically activated)

When you answer, the screen displays  (if answered by handset) or  (if answered by speaker) and the caller's details and call duration:



Note:

- **HD** in the screen indicates a high-definition call (using a wideband voice coder).
- When two incoming calls occur simultaneously, the names of the calling parties appear on the screen and the adjacent incoming call icons flash. If a user is in a call and a third party calls, the name of the calling party appears on the screen and the adjacent incoming call icon flashes.

7.4 Rejecting Incoming Calls

You can reject an incoming call; the caller hears a busy tone from your phone if you do.

➤ **To reject an incoming call:**

- Press the **Reject** softkey.



7.5 Silencing Incoming Calls

You can silence an incoming call's ringing. When you do, the caller hears normal ringing but no answer.

➤ **To silence the ringing of an incoming call:**

- Press the **Silent** softkey.



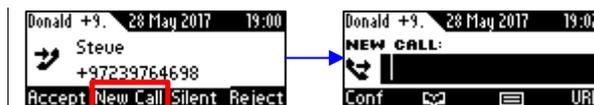
Answer a silenced call by pressing the **Accept** softkey or picking up the handset.

7.6 Making a New Call Even Though a Call is Coming in

Users can make a new call even though a call is coming in. This is typically necessary when it is more important and more pressing to make a new call than to accept the incoming call.

➤ **To make a new call when a call is coming in:**

1. In the INCOMING CALL (Steve) screen, press the **New Call** softkey:



2. In the NEW CALL screen, enter the number of the destination to which to call, and press the then-enabled **Dial** softkey. If necessary, you can clear digits entered / cancel the new call.



3. When the called party answers, you can toggle to the calling party and reject or accept them.

7.7 Ending an Established Call

You can end an established call.

➤ **To end an established call:**

- Return the handset to the phone cradle if it was used to take the call -or-
- Press the headset key -or-
- Press the speaker key -or-
- Press the **End** softkey

7.8 Viewing Missed, Received and Dialed Calls

Your phone logs missed, received and dialed calls. In idle state, the screen displays 'Missed' and the number of missed calls (if any). In the example below, 3 missed calls are indicated.



➤ **To view missed calls:**

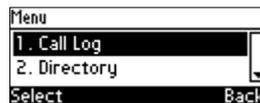
- Press the **Missed** softkey.



Note: After viewing, the indication disappears from the screen. The next time a call is missed, the indication will reappear.

➤ **To view call history:**

1. Access the **Call Log** screen (MENU key > **Call Log** menu).



2. In the Call Log screen, navigate to and select the call log you require.

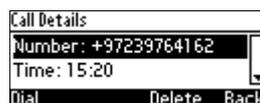


- **All Calls** = calls that were missed, received and dialed
 - **Missed Calls** = calls that were not answered
 - **Received Calls** = the most recently answered numbers
 - **Dialed Calls** = the most recently dialed numbers
3. Navigate to the option you want and press the **Select** softkey; a list of the logged calls is displayed, for example, Dialed Calls:



4. Press the softkey you need:

- **Dial** = dials the number of the selected logged entry.
- **Save** = saves the related information about the call entry in the personal directory (for adding a contact in the directory, see Section 6.13 on page 43).
- **Detail** = accesses the Call Details screen, which displays details of the call entry:



The Call Details screen displays the following logged call information:

- **Number** = phone number logged
- **Time** = the time the call was logged
- **Date** = the date on which the call was logged
- **Duration** = the duration of the call



Notes:

- The call history lists are stored from the newest to oldest entries. The maximum number of entries for each call history type is 200. Once this maximum is attained, the oldest entry is deleted and replaced with the new entry.
- The call history lists are saved on a daily basis. In the case of a power outage, some of the received information may be lost.
- If you view missed calls by pressing the **Missed** softkey, the missed calls notification no longer appears on the screen and reappears the next missed call.

8 Performing Advanced Operations

This section shows how to perform advanced operations.

8.1 Answering Waiting Calls

You can accept a call on an extension on which there already is an active call.

➤ **To answer a waiting call:**

a. **A call with Mike Dubb is in progress**



b. **A call comes in from Tomer Keshet**

📞 = call waiting



➤ **To answer Tomer:**

1. Press the **Accept** softkey; the waiting call from Tomer Keshet is answered; the previous call from Mike Dubb is put on hold:



2. To toggle between calls, press the navigation control's upper or lower rim.



Note: To enable / disable call waiting, see Section 6.3 on page 33.

8.2 Placing a Call On Hold

You can place a call on hold in order to answer an incoming call (see Section 8.1 on page 59) or to make another call. The party put on hold will hear music played (Music on Hold (MOH)).

➤ To place a call on hold:

- Accept an incoming call and then press the **HOLD** key on the keypad or press the **Hold** softkey; the call is put on hold:



➤ To retrieve a call on hold:

- Press the **HOLD** key again -or- press the **Resume** softkey.



Note: When using the handset in a call, if the handset is on-hooked after putting the call on hold, the call is *not* disconnected and the *audio is switched to the speaker*. For the call to be *disconnected*, as it was in earlier versions, refer to your network administrator.

8.3 Handling Multiple Incoming Calls

The phone is capable of handling up to eight concurrent calls per line. Multiple calls can be put on hold and you can switch between them. This feature is important for front desk personnel.

➤ To manage multiple incoming calls:

- If a call comes in from Hilary and then after it, a call comes in from Donald, when you answer Donald, Hilary is put on hold.
- If a third call comes in, this one from Alan, and you answer it, Donald is also put on hold, so now both Hilary (caller 1) and Donald (caller 2) will be on hold.



➤ To toggle between callers:

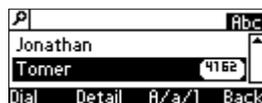
- Press the upper or lower rim of the control button to navigate from one caller to another.

8.4 Calling a Contact Listed in the Directory

You can call a contact from your directory.

➤ To call a contact from the directory:

1. Press the **CONTACTS** key on the keypad, navigate to and select **Personal directory**.
2. Navigate to the contact to call (see Section 6.13.5 on page 46 for how to quickly locate a contact).



3. Press the **Dial** softkey or the **OK** key.

8.5 Using a Speed Dial to Place a Call

To define key (1-9) as a Speed Dial, see Section 6.15 on page 48.

➤ **To use a Speed Dial to place a call:**

- Long-press the key (1-9) on the keypad which you defined as a Speed Dial; the phone dials the defined phone number of the contact.



Note: If you long-press a key which has *not* been defined as a Speed Dial, the screen displays screen **Speed Dial #** enabling you to define a Speed Dial.

8.6 Transferring Calls

You can transfer a call to another party using blind transfer (default) or consultative transfer.

Transfer	Description
Blind	Connects another party to a third party <i>before</i> the third party answers.
Consultative	Connects another party to a third party <i>after</i> the third party answers and agrees to take the call from the second party.



Note:

- The hard TRANSFER key on the phone *by default* performs a *blind transfer*.
- Your network administrator can change the key's functionality to *consultative transfer*. See the *Administrator's Manual* for more information.

8.6.1 Performing a Blind Transfer

You can transfer a call to a destination party without consulting them.

➤ **To perform a blind transfer:**

1. Steve asks you - Donald - to transfer him to Hilary. Press the TRANSFER hard key on the phone (or press the **BXfer** softkey or press the **:=** softkey and then scroll down to select **Blind Transfer**).



2. In the TRANSFER TO field, enter Hilary's number.



Press the **Trans.** softkey; Hilary's phone rings. When Hilary picks up, Steve is connected to Hilary, your phone is disconnected, and your screen returns to idle mode.



8.6.2 Performing a Consultative Transfer

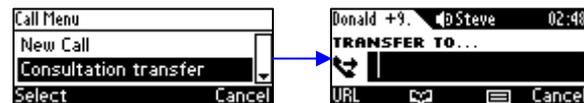
You can consult with a party before transferring the call to them.

➤ **To perform a consultative transfer:**

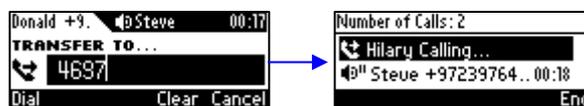
1. Steve asks you – Donald - to transfer him to Hilary. Press the **≡** softkey.



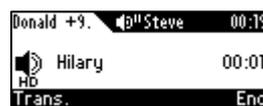
2. In the Call Menu, navigate down and select **Consultation transfer**; the TRANSFER TO field opens and Steve is put on hold. Music on Hold is played to him. You hear a dial tone.



3. Enter Hilary's number and then press the **Dial** softkey. Hilary is dialed.



4. When Hilary answers, consult with her.



5. After she agrees to take the call, press the **Trans.** softkey; you – Donald - are disconnected.



Hilary is connected to Steve.



Note: To perform a consultative transfer, you can alternatively press the **≡** softkey, select the **New Call** option and dial Hilary's number but on-hook before she answers.

8.6.3 Performing a Semi-Consultative Transfer

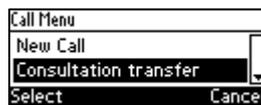
Instead of consulting extensively with the destination party after they answer, you can transfer the call immediately when they say hello. Semi-consultative transfer allows you to identify the voice of the destination party before transferring the call to them, without asking them whether they agree to take the call or not.



Note: The feature is by default disabled. Your enterprise network administrator must enable the feature on the phone. See the *Administrator's Manual* for details.

➤ **To perform a semi-consultative transfer:**

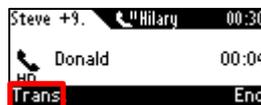
1. Hilary asks you – Steve - to transfer him to Donald. Press the **≡** softkey, as shown in the previous section, and select the **Consultation transfer** option.



2. In the TRANSFER TO screen that opens, enter Donald's number and press the now-enabled **Dial** softkey.



3. Before Donald answers, press the **Trans** softkey that appears.



Hilary is connected with Donald. Your phone – Steve – returns to the idle screen.



Note: If your network administrator has not enabled the feature, the **Trans** softkey will not be displayed.

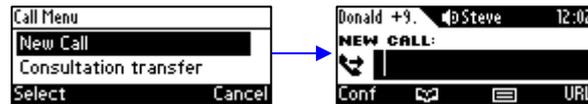
8.6.4 Merging Calls

You can merge two separate calls into one conference call if you're in a call and you want to add another participant to the established call.

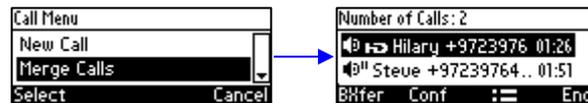
Merging therefore is in effect similar to adding a participant to a conference. It can be performed via the phone's menu softkey or via the Skype for Business client if the user is paired.

➤ To merge calls:

1. While in a call with Steve, you (Donald) decide you want to add Hilary to the conversation. Press the **≡** softkey and then select **New Call**.



2. In the New Call field, enter Hilary's number and press the now-enabled **Dial** softkey; Hilary's phone rings.
3. When Hilary answers, press the **≡** softkey and then select **Merge Calls**; all three of you are now in the conversation.



8.7 Parking a Call

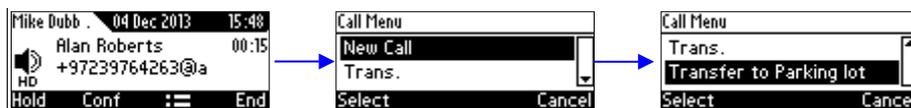
You can park a call, i.e., you can transfer a call to a "parking lot" for it to be picked up on any other phone in the enterprise by a party who must dial a retrieval number in order to retrieve it on that phone. The retrieval number is configured in the Skype for Windows server's parking lot parameter. Your network administrator can change the retrieval number if required.



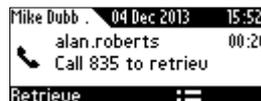
Tip: Don't park a call unless you know precisely who you want to answer it. If you park a call, it can be answered by anyone in the enterprise listed in the Skype for Windows server's parking lot parameter.

➤ **To park a call:**

1. When you're in a call, press the **≡** softkey and then navigate to and select the **Transfer to Parking Lot** option:



The screen notifies you of the retrieval number to dial to retrieve the call on another phone:



2. On another phone, dial the retrieval number (**835** in the example above); the call is pulled to that phone.
3. You can pull the call back to the phone which it originally was on by pressing the **Retrieve** softkey.

8.8 Configuring Group Call Pickup (GCP)

The GCP feature enables enterprise employees to pick up calls that are ringing for another user, by dialing a call pickup group number. Only employees configured in the Skype for Windows server's GCP parameter can pick up the call. Consult your network administrator if required.

8.9 Initiating a Multi-Party Skype for Business Remote Conference

A multi-party call conference based on the Skype for Business server (remote conference) can be initiated from the phone.

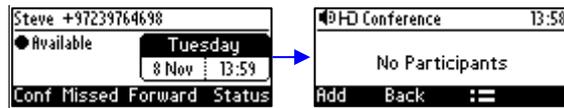


Note: This section describes conferencing when Better Together over Ethernet (BToE) is *not* installed. See Section 8.13.3 for information about conferencing when BToE *is* installed.

In versions preceding 3.0, supported conference capability was *locally based* (phone based). As of version 3.0, the phone of the conference initiator uses CCCP (Centralized Conference Control Protocol) to establish the conference.

➤ **To initiate a conference:**

1. In the phone's idle screen, press the **Conf** softkey; the CONFERENCE screen opens indicating **No Participants**.



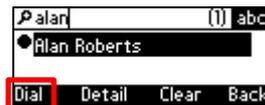
3. Press the **Add** softkey; the ADD PARTICIPANT screen opens.



4. Enter the participant's phone number. Either:
 - Press the **URL** softkey, use the alphanumerical selection displayed to enter the participant's URL (see Section 4.4 for more information), and then press the **Dial** softkey.



- Press the  softkey and in the Corporate Directory or Personal Directory, navigate to the participant and then press the **Dial** softkey (see Sections 6.13 for more information about the directories).



- Press the  softkey, choose a Call Log, navigate to the participant and then press the **Dial** softkey (see Section 7.8 for more information about the Call Logs).



5. After adding and dialing a participant, add and dial the other participants to include in the conference.

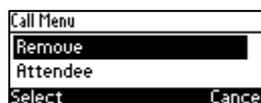
➤ **To view conference participants:**

- In the phone's idle screen, press the **Conf** softkey.



➤ **To remove a conference participant:**

- In the CONFERENCE screen, navigate to the participant to remove, and then press the  softkey. In the Call Menu screen that opens, select the **Remove** option.



➤ **To change a participant's privileges:**

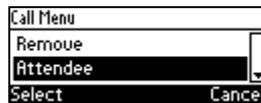


Note: The icon adjacent to each participant in the CONFERENCE screen indicates that that participant has got 'host' privileges (relevant only to Skype for Business users rather than to PSTN/mobile calls, for example):



Participants with 'host' privileges can perform every action: far mute, mute all, remove, etc. Participants with 'attendee' privileges can only add participants, no more.

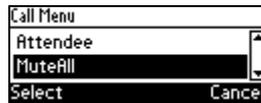
1. In the CONFERENCE screen, navigate to the participant whose privileges you want to change, and then press the  softkey.



2. In the Call Menu screen that opens, select the **Attendee** option; the participant's privileges will change to 'attendee' privileges and the icon indicating 'host' privileges in the CONFERENCE screen will disappear.

➤ **To mute all participants:**

- In the CONFERENCE screen, press the  softkey and in the Call Menu screen that opens, select the **MuteAll** option.



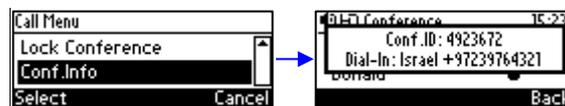
➤ **To lock a conference:**

- In the CONFERENCE screen, press the  softkey and in the Call Menu screen that opens, select the **Lock Conference** option.



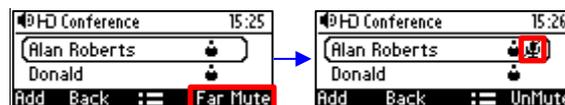
➤ **To view conference information:**

- In the CONFERENCE screen, press the  softkey and in the Call Menu screen that opens, select the **Conf.Info** option.



➤ **To mute a remote participant:**

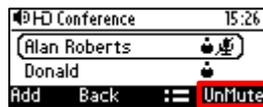
- In the CONFERENCE screen, navigate to the participant to mute and then press the **Far Mute** softkey.



On the participant's screen, the mute key illuminates red and the following message is displayed: **A presenter has muted you**

➤ **To unmute a remote participant:**

- In the CONFERENCE screen, navigate to the participant to unmute and then press the **UnMute** softkey.



On the participant's screen, the following message is displayed: **A presenter wants you to unmute yourself.** The participant should press the illuminated mute button on their phone to unmute.

8.10 Muting Calls

You can mute the microphone of the handset, headset, or speaker during a call so that the other party cannot hear you. While the call is muted you can still hear the other party. Muting calls can also be used during conference calls.

➤ **To mute/unmute:**

1. During a call, press the mute key: 
2. To unmute, press the mute key again and resume the conversation.

8.11 Paging

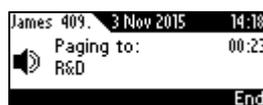
You can page others in your group and they can page you after configuring the group and the paging dial on the phone. For detailed information on setting up a paging group and a dial on the phone, see Section 6.16.

8.11.1 Performing Outgoing Paging Calls

You can page others in your group. You can use the speaker, handset or headset as the audio device.

➤ **To page others in your group:**

1. Press the key (1-9) that you assigned for paging; your phone displays this:



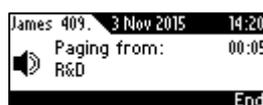
2. Pick up the receiver and make the announcement (or talk directly into the speaker or headset).

8.11.2 Receiving Incoming Paging Calls

Others in your group can page you.

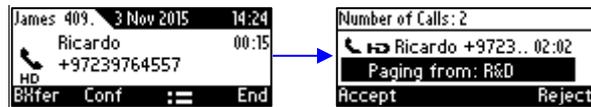
➤ **To receive a paging call from another in your group:**

1. View in your phone's screen which group (member) is paging you and listen for the incoming paging call:

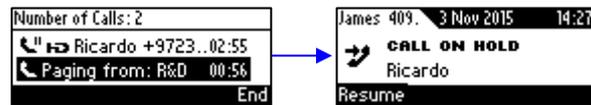




Note: If you're in a call when the paging call comes in and the 'Barge-in' feature was disabled (default) by your IP Administrator, you're prompted to accept/reject the paging call (see below).



2. Press the **Accept** softkey to hear the paging call; the regular call you were in is put on hold.

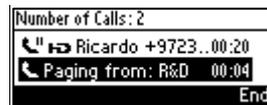


Note: If you'd have pressed the **Reject** softkey, you'd have continued with the regular call and not heard the paging call.

3. Press the **Resume** softkey when the paging call ends.



Note: If you're in a call when the paging call comes in and the 'Barge-in' feature was *enabled* by your IP Administrator, the regular call is automatically eclipsed by the paging call (see below).



4. Press the **End** softkey (optional); the regular call is put on hold.



5. Press the **Resume** softkey; the regular call is resumed.

8.12 Setting up Better Together over Ethernet

This section shows how to set up the Microsoft Skype for Windows feature 'Better Together over Ethernet' on AudioCodes' 400HD Series of IP Phones.

BToE enables operations to be mirrored on both AudioCodes' IP phone and the Skype for Windows client on the PC/laptop, so that these operations can be controlled from either the IP phone or the PC/laptop, whichever is convenient to the user at the time, for enhanced unified communications and optimized enterprise efficiency.

After your IP phone is paired with your Skype for Windows client, you can control (from phone or PC) operations such as answering incoming calls, making outgoing calls (click-to-dial), putting calls on hold and resuming them, and making conference calls.

8.12.1 Installing the BToE PC/Laptop Application

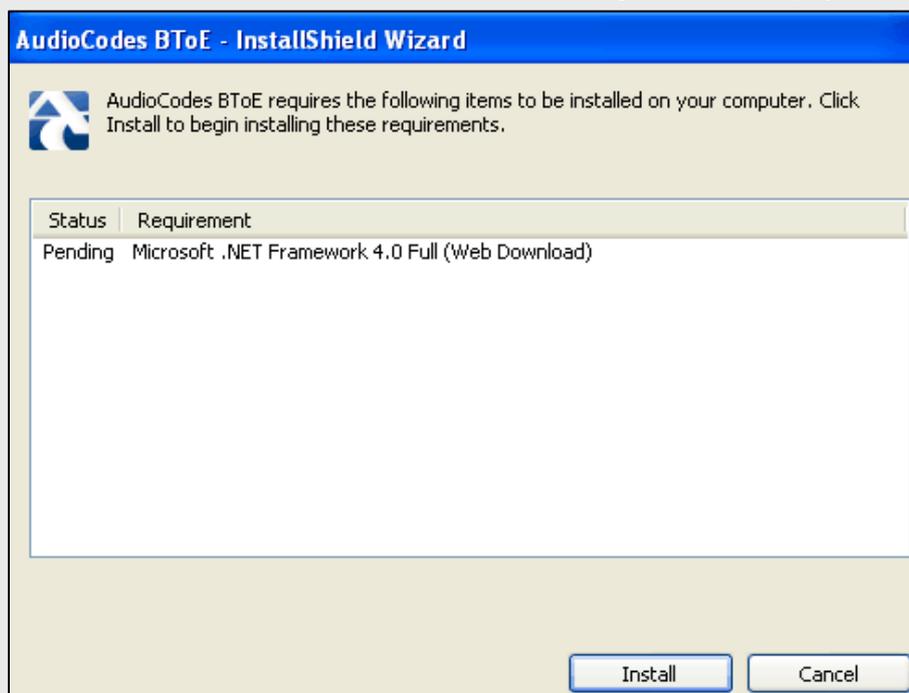
This section shows how to install AudioCodes' BToE PC/laptop application.

➤ **To install the BToE PC/laptop application:**

1. After obtaining the installation file whose name will be either *AudioCodes BToE.exe* or *AudioCodes BToE.msi*, save it to your PC/laptop and then double-click it.

Note:

- The *msi* file is for the purpose of IT administrator distribution. Users are not allowed to install BToE using the *msi* file, only using the *exe* file.
- After installing with the *exe*, then when upgrading the *exe* must be used. Upgrading with the *msi* cannot be done if the first installation was with the *exe*, and vice versa.
- Some PCs require the installation of .Net 4.0 prior to the installation of the BToE PC/laptop application. If you use the installation file *AudioCodes BToE.exe*, the Installation Wizard will detect that .Net 4.0 is missing and will prompt you to install it:



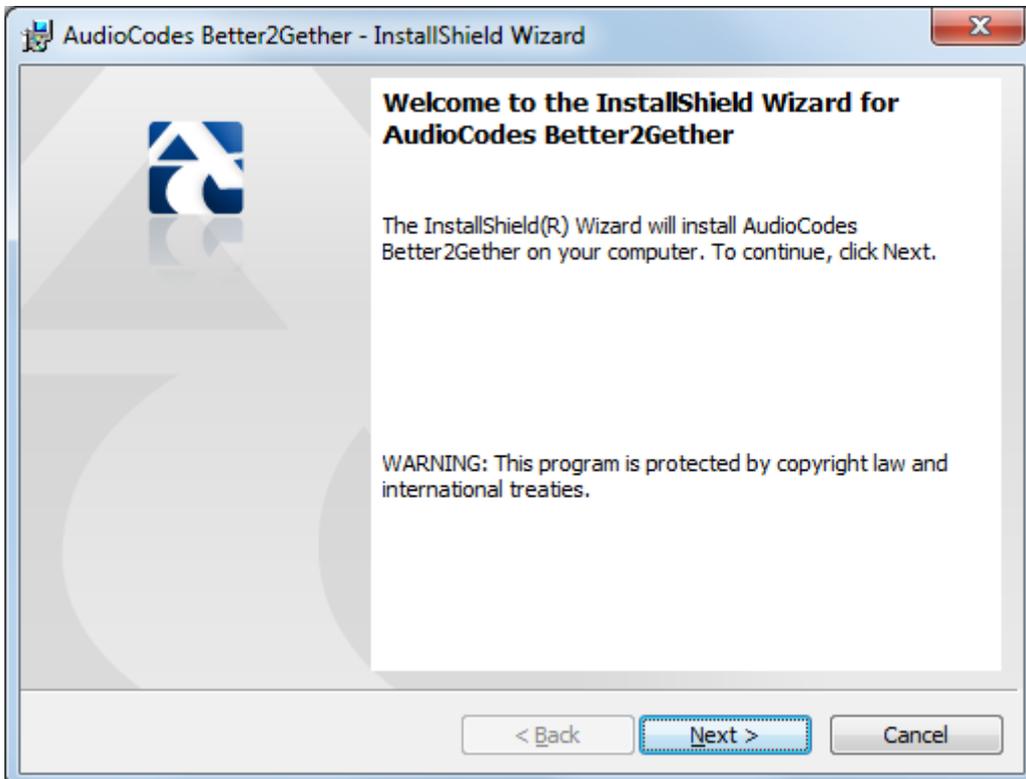
When installing the BToE PC/laptop application using the installation file *AudioCodes BToE.msi*, you won't be prompted to install .Net 4.0 and the network administrator should make the necessary preparations prior to installation of the BToE PC application.

The Prepare to Install screen opens showing preparation progress until the Welcome to the InstallShield Wizard screen opens:

Figure 8-1: InstallShield Wizard – Preparing to Install

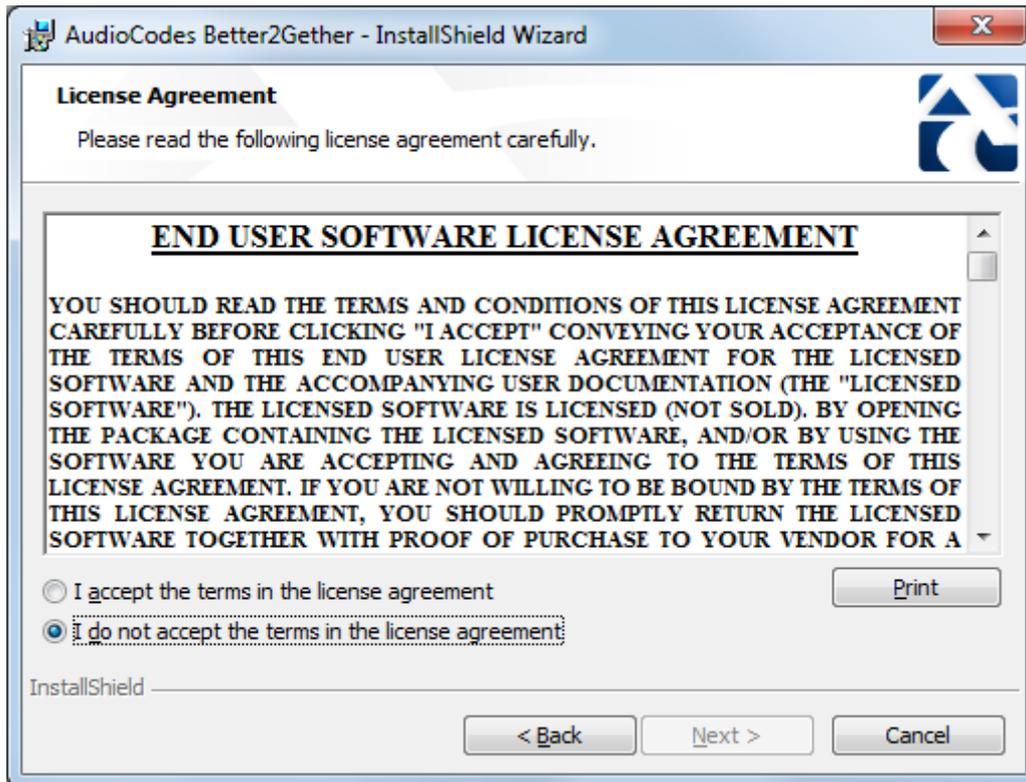


Figure 8-2: Welcome to the InstallShield Wizard



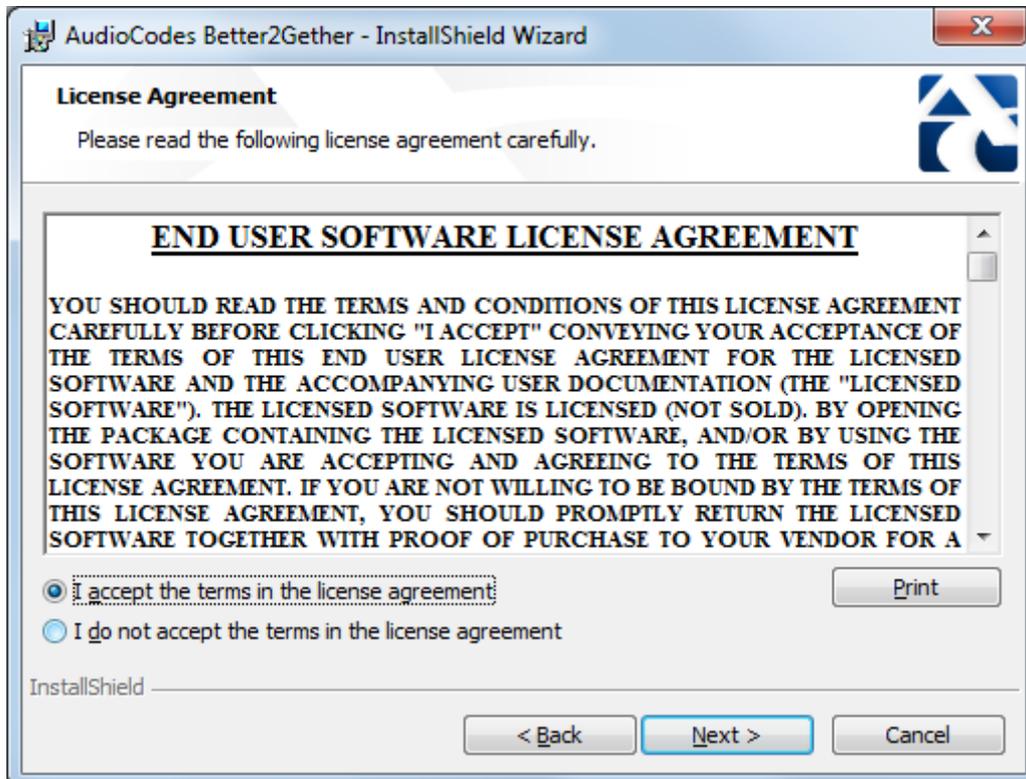
3. Click the **Next** button; the License Agreement screen opens.

Figure 8-3: License Agreement



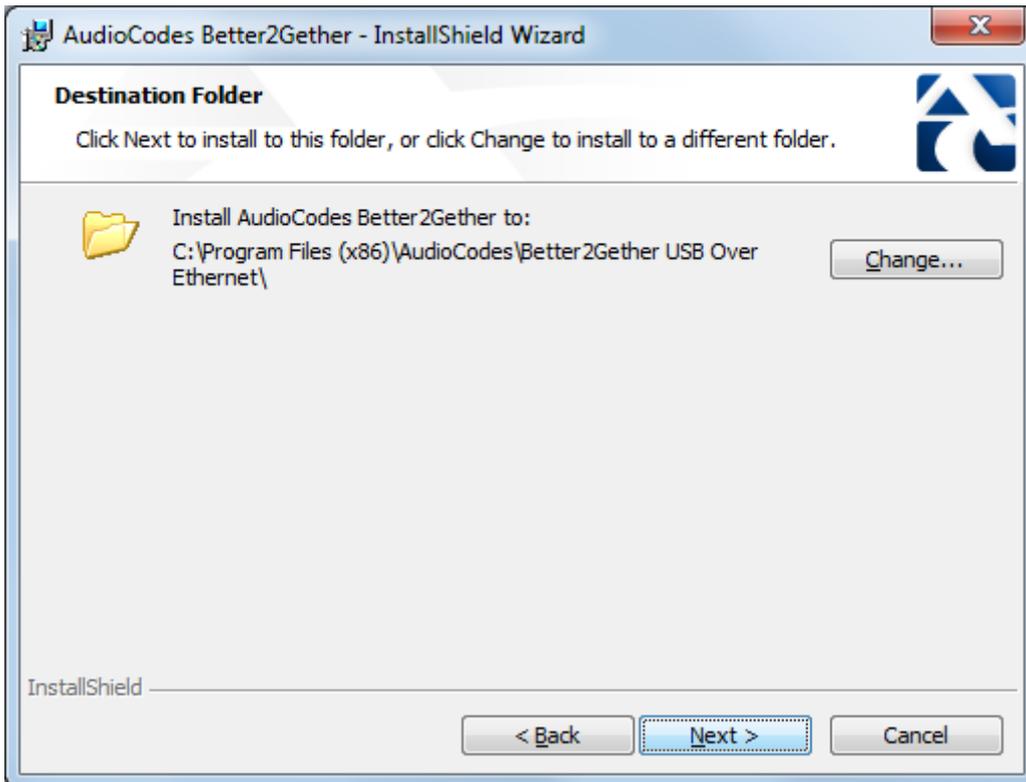
4. Select the **I accept...** option and click **Next**.

Figure 8-4: License Agreement



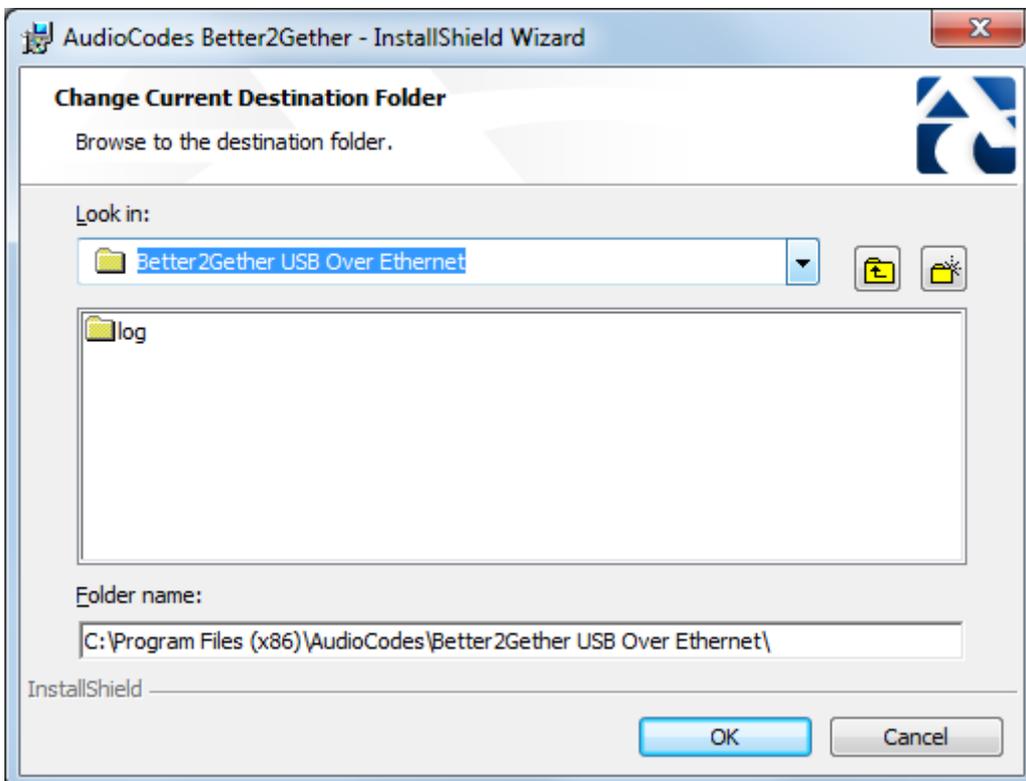
5. Click **Next**; the Destination Folder screen opens.

Figure 8-5: Destination Folder



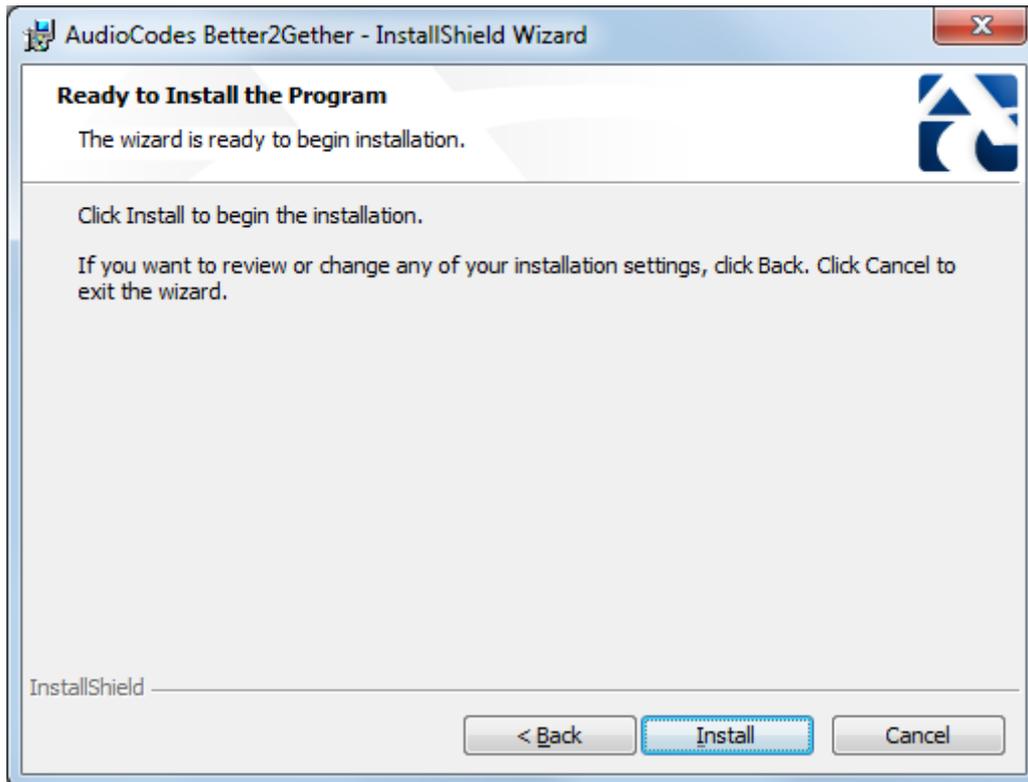
6. To change the default Destination Folder, click **Change** and proceed to step 6. To leave the Destination Folder at its default, click **Next** and proceed to step 7.

Figure 8-6: Change Current Destination Folder



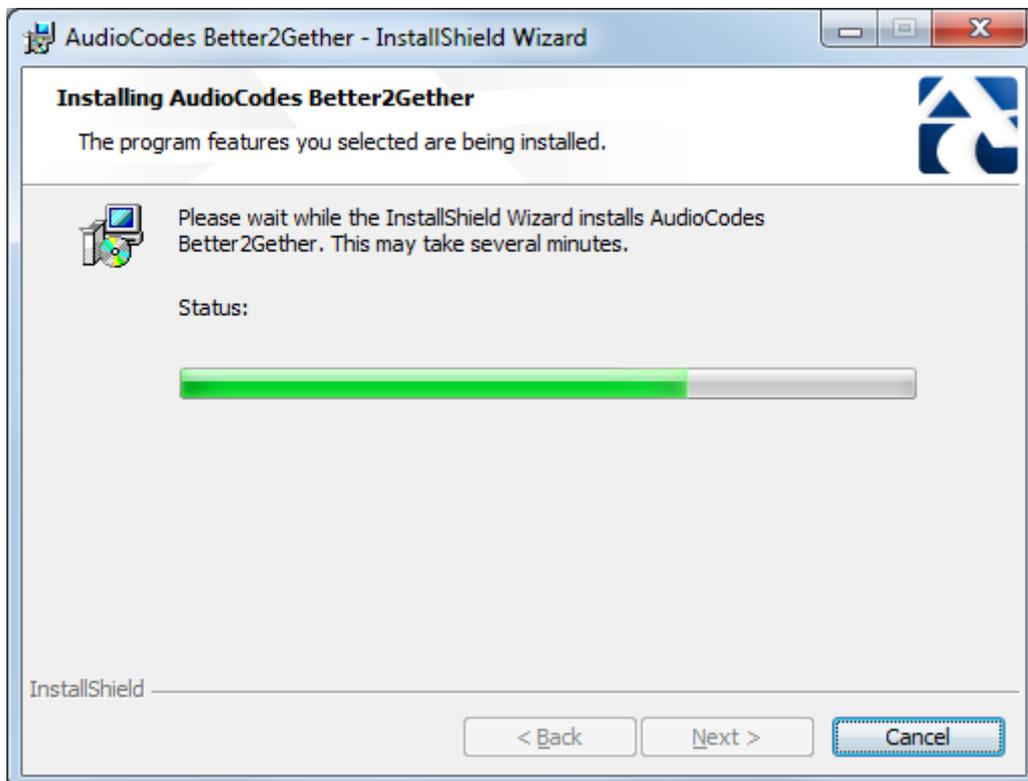
7. Click **OK**; you're returned to the Destination Folder screen.
8. Click **Next**; the Ready to Install screen opens.

Figure 8-7: Ready to Install



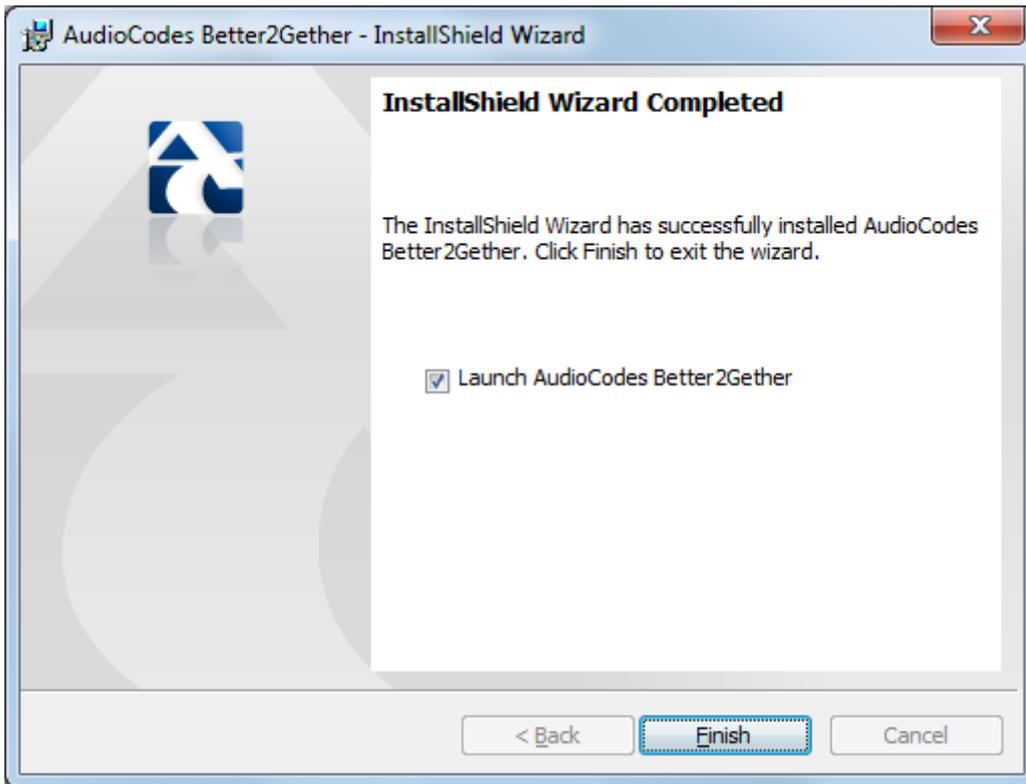
- 9. Click the **Install** button; the Installing AudioCodes Better2Gether screen opens indicating installation progress status.

Figure 8-8: Installing AudioCodes Better2Gether



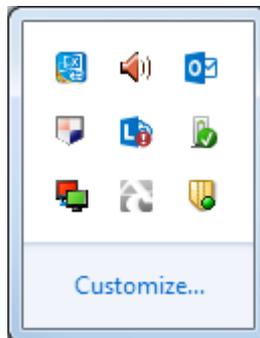
- 10. Wait until the following screen is displayed:

Figure 8-9: InstallShield Wizard Completed



11. Click the **Finish** button and then check your Windows taskbar and locate the newly displayed AudioCodes icon (AC) as shown below:

Figure 8-10: AudioCodes Icon in Taskbar

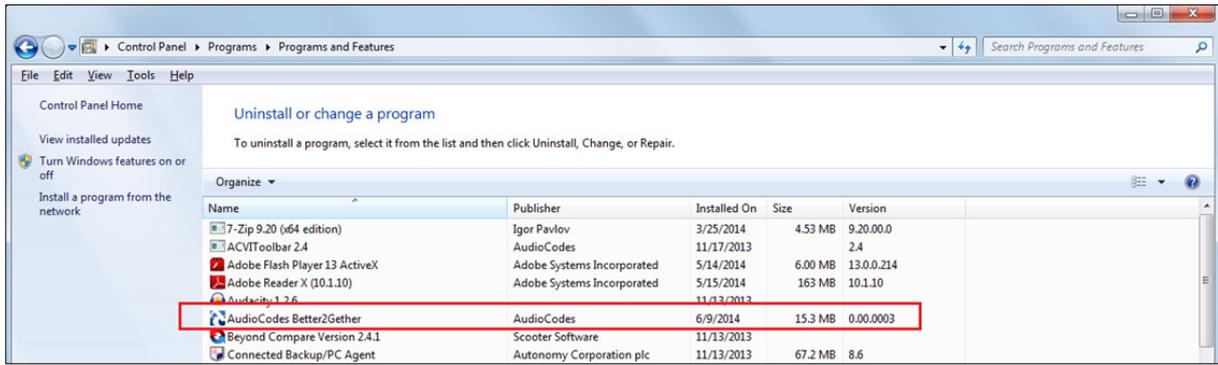


12. Wait until the “Installing device driver software” process completes:



13. Check your programs in the Control Panel > Programs. You should see:

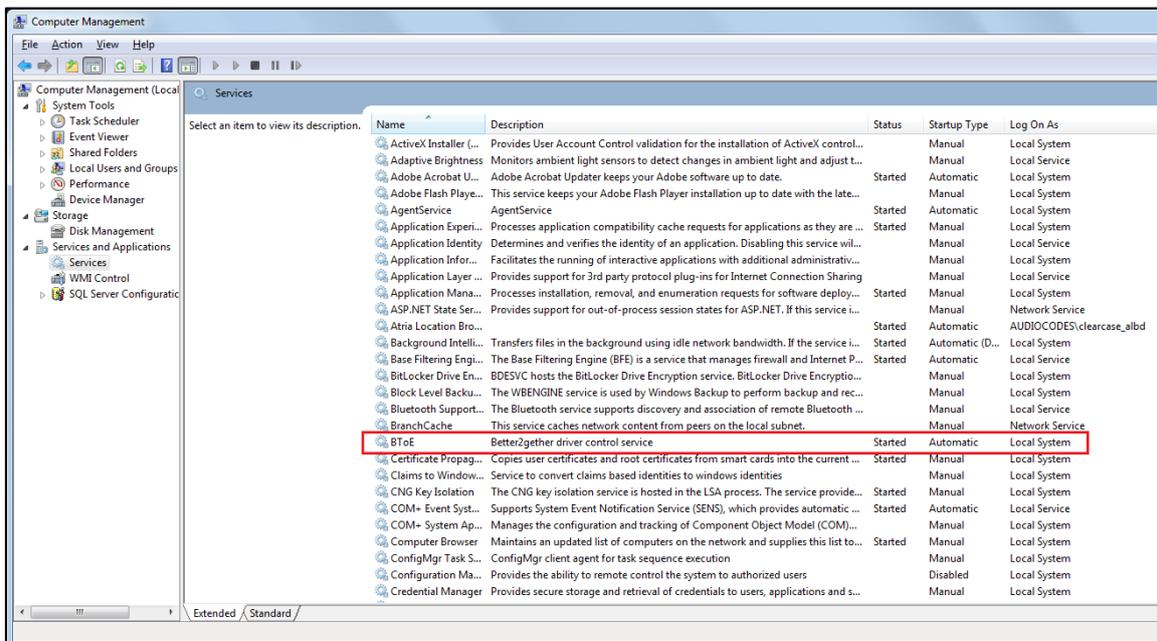
Figure 8-11: Control Panel>Programs>AudioCodes Better2Gether



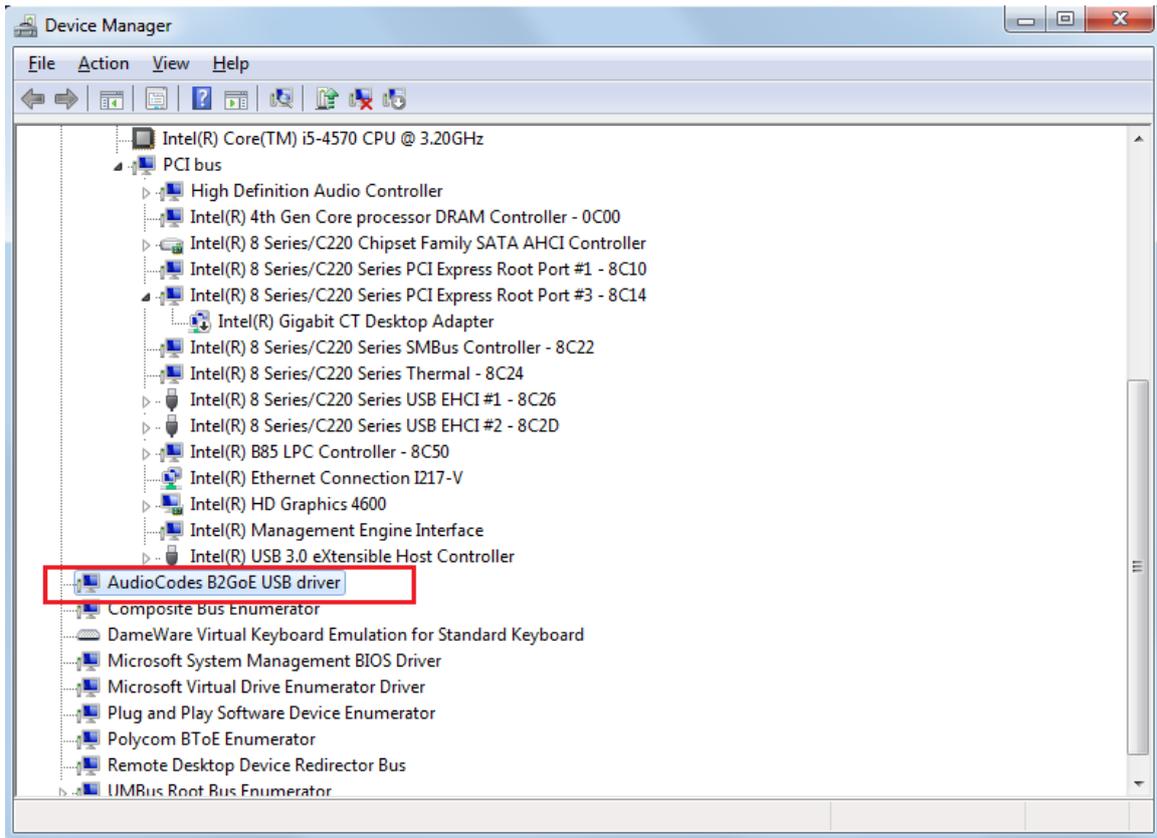
Note: You can use this entry in the Control Panel > Programs to uninstall.

14. Access Computer Management > Services and Applications and locate BToE:

Figure 8-12: Computer Management > Services and Applications



15. Access the Device Manager and locate 'AudioCodes B2GoE USB driver'.

Figure 8-13: Device Manager > AudioCodes B2GoE USB Driver

You've successfully installed the program.

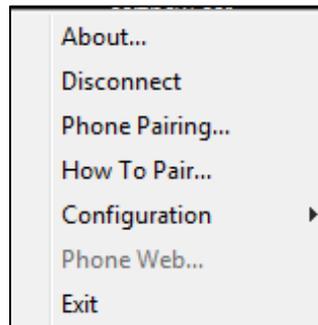
8.12.2 Making Sure BToE is Correctly Installed

This section shows how to make sure Better Together over Ethernet is correctly installed.

➤ **To make sure BToE is correctly installed:**

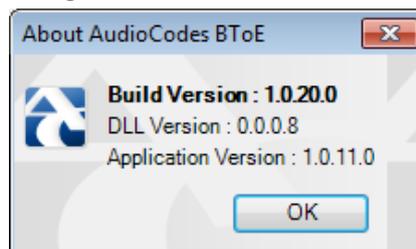
1. Click the **AC** (AudioCodes) taskbar icon; the following menu pops up:

Figure 8-14: Popup Menu



2. Select the **About...** menu option to verify the DLL and BToE version:

Figure 8-15: About AC BToE



8.12.3 Configuring the BToE TCP Port

You can opt to configure a different BToE TCP port to the default 9999, depending on the requirements of your enterprise. For example, you may decide to change the BToE TCP port to 5000 because your enterprise is using the default port of 9999, and 5000 is available. This feature therefore provides enterprise administrators with more freedom in network administration.

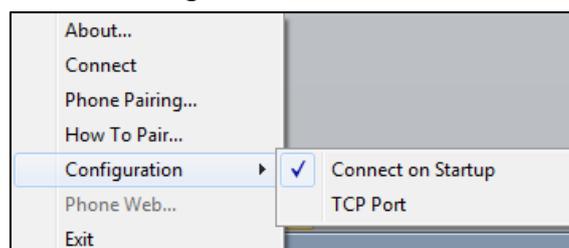


Note: If you decide to change the default BToE TCP port, you must update *both* the PC/laptop *and* the IP phone with the new BToE TCP port number.

➤ **To change the BToE TCP port on the PC/laptop side:**

2. Click the **AC** (AudioCodes) taskbar icon; the menu shown in [Figure 8-14](#) pops up.
3. Select **Disconnect** in the popup menu and then select **Configuration > TCP Port**.

Figure 8-16: TCP Port



- From the AC BTOE TCP Port dialog that opens, configure the TCP Port:

Figure 8-17: AC BToE TCP Port



The valid range is 1 to 65535.

- **To change the BToE TCP port on the IP phone side:**
 - See the *Administrator's Manual*.

8.12.4 Enabling BToE for Online Users



Note: To enable BToE for online users, the Skype for Business server must be configured to enable BToE.

8.12.5 Automatically Pairing the BToE PC/Laptop Application with the IP Phone

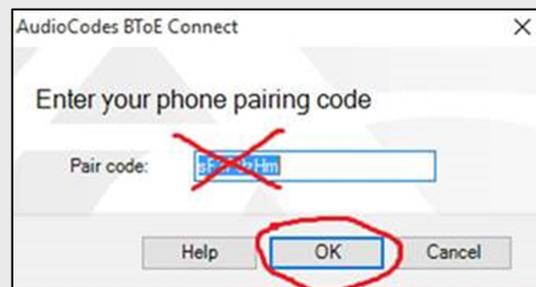
Pairing is automatically performed when the phone's PC port is connected to the PC/laptop 'behind' the phone. See the *Administrator's Manual* for more information.



Note: Automatic pairing requires BToE PC/laptop application Version 2.x.

If the laptop after *automatic* pairing is disconnected and moved to another location, its speaker/headset becomes the audio device associated with the Skype for Business client. If the laptop is *manually* paired and then relocated, Skype for Business audio will remain through the phone. It's therefore advisable to pair *automatically*.

Note: If the BToE PC/laptop application has already been *manually* paired with the phone, as shown in the section below, and you want to *automatically* pair, you must delete the old pair code from the BToE PC/laptop application in order to allow BToE *automatic* pairing:



8.12.6 Manually Pairing the BToE PC Application with the IP Phone

This section shows how to manually pair AudioCodes' BToE PC/laptop application with the IP phone using a pair code. Manually pair like this:

1. Generate a pair code (see Section 8.12.6.1)
2. Connect the IP phone and BToE PC/laptop application using the pair code (see Section 8.12.6.2)



Note:

- If the IP changes, you'll need to generate the pair code again.
- If you know the last generated pair code, you don't need to generate a new one. If you don't know it, continue as described below.

8.12.6.1 Manually Generating a Pair Code

This section shows how to manually generate a pair code.



Note: The phone is by default *automatically paired* with the PC/laptop. If you want to *manually pair*, consult with your network administrator. See the *Administrator's Manual*.

➤ **To manually generate a pair code:**

1. Press the **MENU** key on the phone; the Menu screen is displayed.



2. Press the **BToE** softkey; the BToE pair code is displayed:



This is the pair code that will be used by the BToE PC/laptop application. Make a note of it for reference when connecting the IP phone with the BToE PC/laptop application.

8.12.6.2 Manually Connecting the IP Phone with the BToE PC Application

This section shows how to manually connect the IP phone with the BToE PC/laptop application.

➤ **To connect the two:**

1. Open the AudioCodes BToE Connect screen: Click the BToE client icon placed on your taskbar after installation; the following popup menu opens.

Figure 8-18: Popup Menu



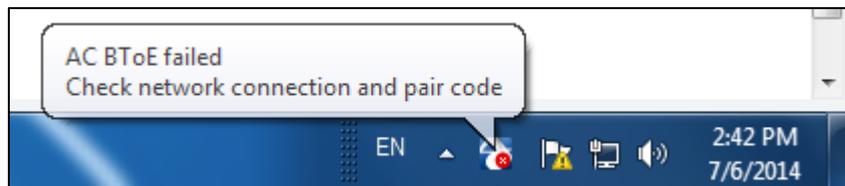
2. Select the **Phone Pairing** option

Figure 8-19: Phone Pairing



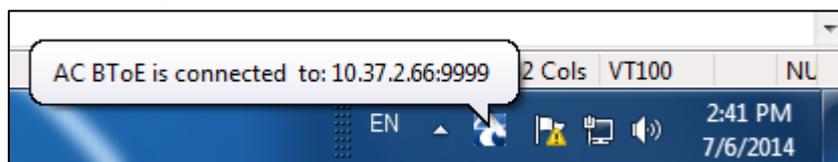
3. In the 'Type the pair code' screen, enter the pair code that you generated as shown in Section 8.12.6.1; the **OK** button is activated after 8 characters are entered.
3. Click the **OK** button; BToE is activated.
4. If a communication error occurs or the wrong pair code was entered, the following icon indication appears:

Figure 8-20: AC BToE Failed Indication



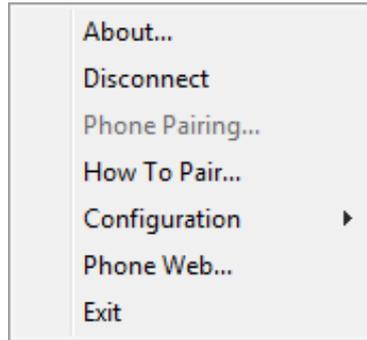
5. When BToE is successfully connected, view the following icon indication:

Figure 8-21: AC BToE is Connected Indication



6. When BToE is in 'Connected' state, the popup menu shows the **Disconnect** menu item and the **Phone Pairing** menu item is deactivated:

Figure 8-22: Popup Menu: 'Disconnect' Enabled, 'Phone Pairing' Disabled



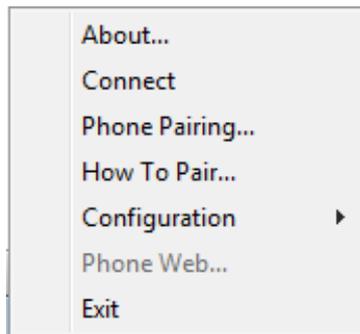
7. After selecting the **Disconnect** menu option, the 'AC BToE Disconnected' indication is displayed:

Figure 8-23: BToE Disconnected



8. From the popup menu as well you can see if BToE is disconnected:

Figure 8-24: Popup Menu: BToE Disconnected



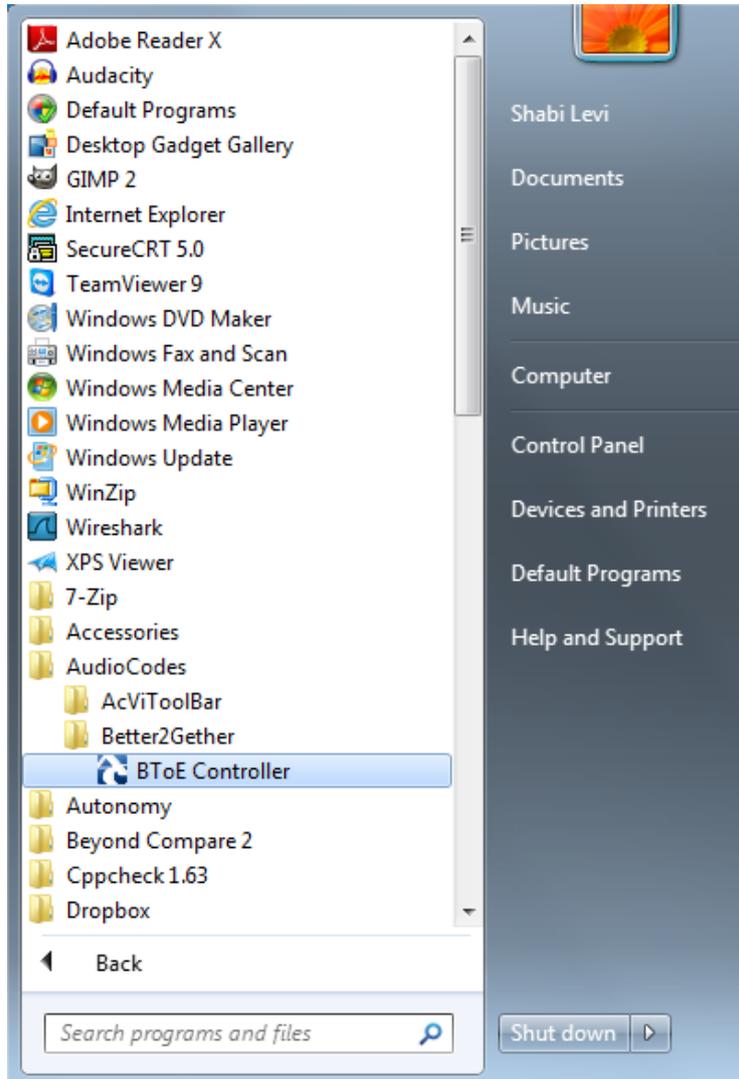
Note: When BToE is connected, you can select the **Phone Web** menu option to open the phone's the Web interface.

9. Use the table below as reference when determining BToE's connection state from the taskbar icon.

Taskbar Icon	BToE's connection state
	BToE is connected
	BToE is disconnected
	BToE is connected but a failure is preventing a correct connection. The failure can be a network problem or the wrong pair code was defined.

- From the click popup menu, you can select the **Exit** option; the BToE PC/laptop application stops. You can activate the application again from the Start menu as shown in [Figure 8-25](#).

Figure 8-25: Start > Programs > AudioCodes > BToE Controller



8.12.7 Connecting the Skype for Windows Client with the IP Phone

This section shows how to connect the Microsoft Skype for Windows client with the IP phone using the Skype for Windows login screen.

➤ **To connect the two:**

- Enter your credentials in the Skype for Windows Sign-in request prompt, and click **OK**.

Figure 8-26: Skype for Windows Sign-in Request Prompt



Note: Primary Device cannot be changed in the Skype for Windows PC client during a call. When the phone is in idle mode (not in a call), the PC application must be disconnected in order to change Primary Device. See the *Release Notes*.

8.12.8 Making Sure IP Phone/ Skype for Windows Client are Paired

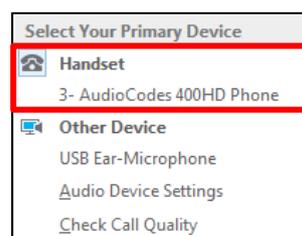
This section shows how to make sure you successfully paired your IP phone with the Skype for Windows client.

8.12.8.1 Making Sure Skype for Windows Client is Paired

You can make sure the Skype for Windows client is paired with the IP phone.

➤ **To make sure the Skype for Windows client is paired with the IP phone:**

1. In the Skype for Windows client application, in the lowermost left corner of the screen, click the Select Primary Device icon ; the following popup menu opens:



2. Make sure **Handset AudioCodes 400HD Phone** is selected.

8.12.8.2 Making Sure the IP Phone is Paired

You can determine from the IP phone's idle screen if the phone is paired with the Skype for Windows client. The idle screen below indicates the phone is not paired:



The two interlocked rings in the idle screen below indicates the phone is paired.



After connecting, 'BToE Activated' pops up, and then disappears; the two interlocked rings remain.



8.13 Using BToE Functions

This section shows how to use your IP phone as an extension of your Skype for Windows client, and how to use your Skype for Windows client as an extension of your IP phone, for enhanced unified communications and optimized efficiency.

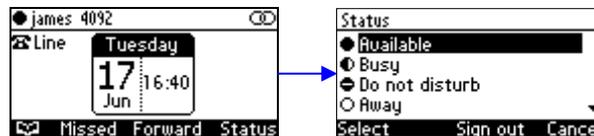
Before using BToE functions, you need to install BToE. See the *Administrator's Manual* for detailed information on installing BToE. Before using BToE functions, make sure in Skype for Windows client that the 'Primary Device' selected is **Handset AudioCodes BToE**.

8.13.1 Signing In

You can sign in to the IP phone from the Skype for Windows client.

➤ **To sign in to the phone from the Skype for Windows PC client:**

1. Sign out from the IP phone.
 - a. In the phone's idle screen, press the **Status** softkey:



- b. In the Status screen, press the **Sign out** softkey; the phone goes offline and the Skype for Windows client on the PC prompts you for Logon information:



The image shows a Windows dialog box titled 'Logon information needed'. The text inside reads: 'A connection has been detected between your desk phone and Skype for Business. To complete the connection, type your network logon password.' Below this text are three input fields: 'Sign-in address' with the value 'alan.roberts@audiocodes.com', 'User name' with the value 'AUDIOCODES\alanr', and 'Password' which is empty. At the bottom of the dialog are two buttons: 'OK' and 'Cancel'.

2. In the Skype for Windows client Logon information prompt, enter the same Password you use to access your PC, and then click **OK**; the IP phone's user interface displays the registration process, the phone is signed in and after a few seconds the two interlocked rings are displayed indicating that the IP phone is paired with the PC BToE application.



Note that the phone's IP address may change during the registration process.

8.13.2 Making a Call (Click-to-Dial)

You can make a call from the PC Skype for Windows client or from the IP phone; in both cases, the one operation mirrors the other, providing an enhanced unified communications experience and optimizing enterprise efficiency.

➤ **To make a call:**

1. In the PC Skype for Windows client, click the digit keys of the person's number to call. Alternatively, you can call them from Outlook; the IP phone's user interface displays the CALLING screen (shown below) while the PC Skype for Windows client simultaneously displays the conversation screen.



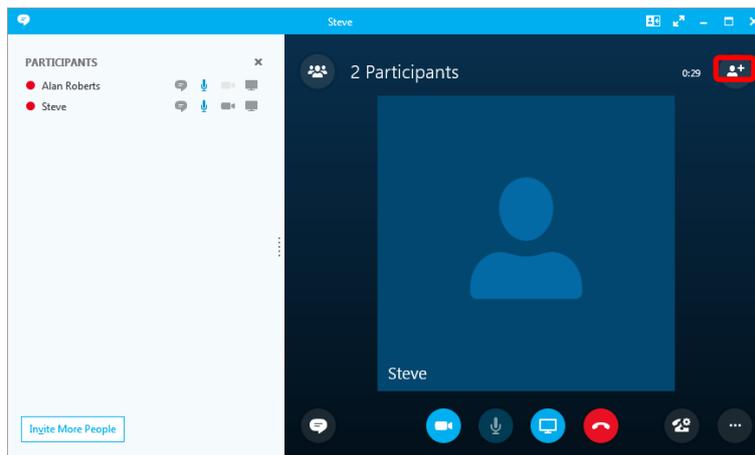
2. When the called party answers, you can use either your IP phone or PC Skype for Windows client to talk, whichever is more convenient for you at the time. When BToE is paired, you can use only the phone to talk; the client is used to control the call. To talk via the client, you need to switch the primary device. You can use the IP phone's speakerphone, handset or headphones.

8.13.3 Establishing a Unified Communications Call Conference

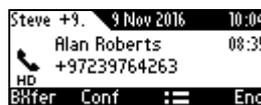
The phone supports multi-party Skype for Business remote conferencing. BToE is *not* mandatory for conferencing - see Section 8.9 for more information about conferencing. BToE *is* mandatory for *unified communications conferencing*. When BToE is installed, the phone's screen mirrors the PC Skype for Business client; conferencing in the phone's screen then reflects conferencing in the PC Skype for Business client.

The example below shows how BToE integrates phones with PC Skype for Business clients to provide unified communications call conferencing.

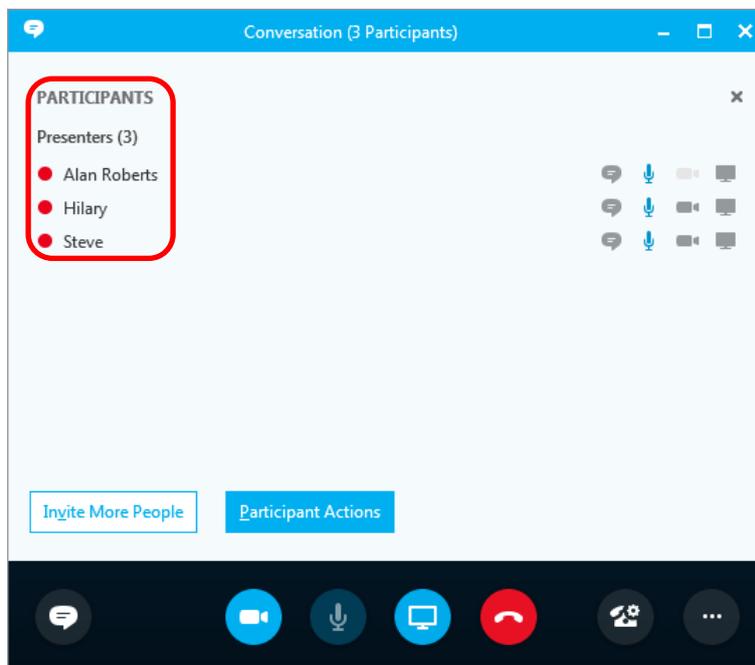
- In the PC Skype for Business client, Alan calls Steve.



- Steve answers his phone.



- In his client, Alan clicks **Invite More People** and dials Hilary, who answers.



- Hilary determines that the call is a conference call initiated by Alan and that Steve has been invited:



[The screen is for illustrative purposes].



Note:

- After making a call in the client, you can invite an unlimited number of other participants.
- You can use the phone's speakerphone, handset or headphones to continue the meeting.
- When a user whose phone is connected to BToE joins a meeting, their phone is muted and the red **MUTE** button is lit. The user can unmute using the phone's **MUTE** button or using the Skype for Windows client.
- You can press the phone's **End** softkey to end a meeting.

See Section [8.9](#) for more information about conferencing.

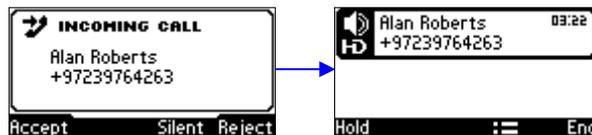
8.13.4 Answering a Call

You can answer an incoming call on the Skype for Windows client or IP phone, whichever is more convenient for you at the time, providing an enhanced unified communications experience and optimizing enterprise efficiency.

When answering an incoming *video call* with a paired phone, the call is established. The default device is the PC speaker/microphone rather than the phone. Subsequent audio calls will be unaffected; the paired phone will still be the default device.

➤ **To answer a call on the IP phone:**

1. When the INCOMING CALL screen is displayed in the IP phone's user interface, press the **Accept** softkey; the call is answered.



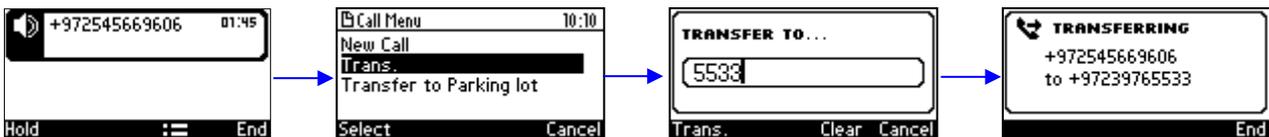
2. You can end the call by pressing the **End** softkey.

8.13.5 Transferring a Call

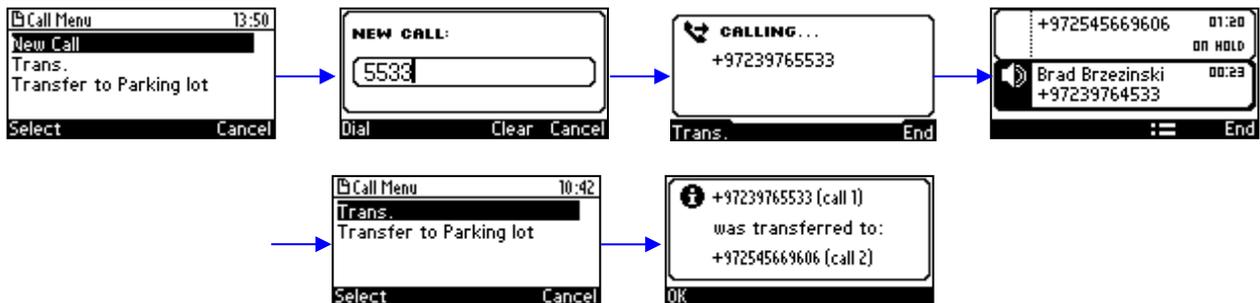
You can transfer a call to another party either from your PC Skype for Windows client or IP phone, whichever is more convenient for you at the time, for an enhanced unified communications experience.

➤ **To transfer a call:**

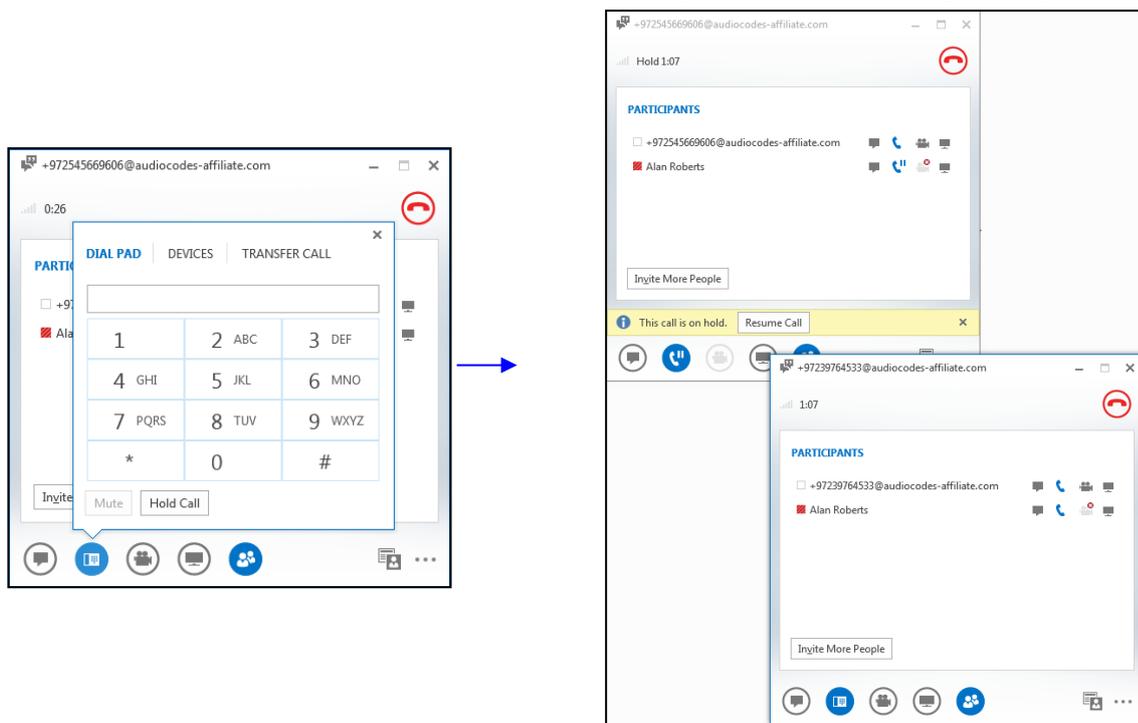
1. From your PC Skype for Windows client or IP phone, make a call; calling is indicated on both PC Skype for Windows client and IP phone.
2. When the called party answers, you can perform either a consultative transfer or non-consultative (blind) transfer.
 - From your IP phone user interface, press the **:=** softkey and perform a non-consultative transfer as follows:



-OR- perform a consultative transfer as follows:



- From your PC Skype for Windows client you can also perform a consultative transfer or non-consultative (blind) transfer. The operation is mirrored in your IP phone.



8.14 Switching Primary Audio Device

BToE lets you switch primary audio device, so you can switch from listening to a Skype for Business conversation through the phone's handset, for example, to listening on a headset, or from listening on a headset to listening through the IP phone speaker.

➤ **To determine which audio device is currently primary:**

- Locate in the lowermost left corner of the Skype for Business client screen the icon indicating 'Primary Device'.

Figure 8-27: Primary Device: IP Phone



Figure 8-28: Primary Device: Headset

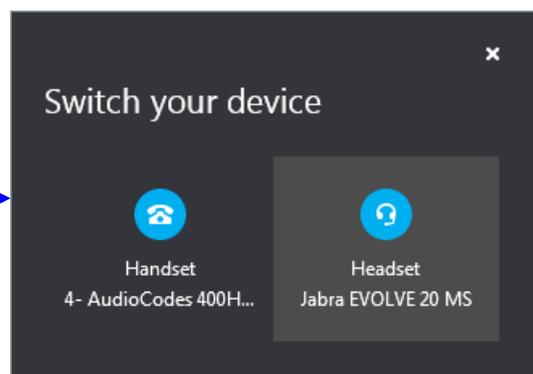
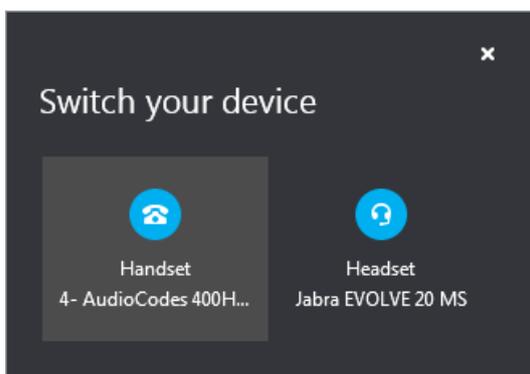
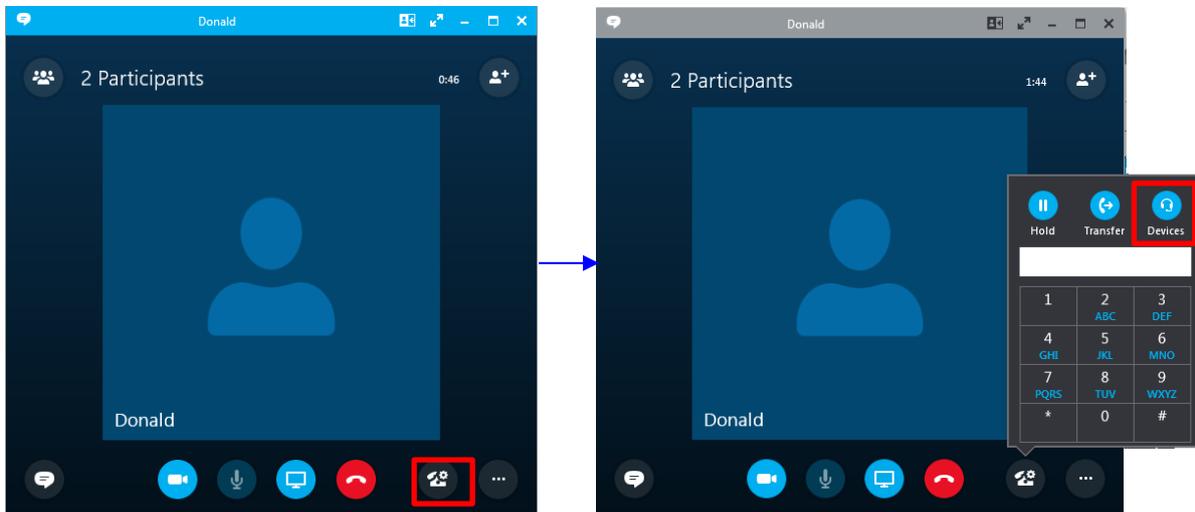


Figure 8-29: Primary Device: Speaker



➤ **To switch primary device:**

- In a Skype for Business call, click the **Call Control** icon and select **Devices**.



8.15 Routing Voice from a Video Call to the Phone

When a video call comes in, video is displayed in the PC/laptop based Skype for Business client. The user can route the voice from the video call to the phone. In this scenario, the phone performs similarly to a USB device.

8.16 Retrieving Voice Mail Messages

New messages are in your Voice Mail if:

- The Ring LED on the front of the phone is permanently lit blue (see [Figure 2-1](#), label 1).
- An envelope icon is displayed in the phone's screen.
- A stutter dial tone is heard when you pick up the handset.

When you have at least **one new message** in your voice mail box, you can listen to it.

Note:



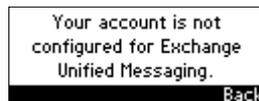
- Your network administrator must enable your voicemail for this feature to function.
- By default, the phone skips PIN code authentication and allows users direct access to voice mail. The network administrator can secure user access to voice mail with PIN code authentication so that when users press the **VOICE MAIL** key, they're prompted to enter their PIN code. See the *Administrator's Manual* for details.

When a call comes in, the caller can be referred directly to voicemail by pressing a **To VM** softkey which is displayed when the phone rings.

➤ **To listen to voice mail messages:**

- Press the **VOICE MAIL** key; the phone dials your voice mail box. Follow the instructions of your voice mail provider as required.

If you're prompted with the message below, contact IT in order to configure/enable your private voice mail.



Note: If the voice mail box phone number has not been configured by your network administrator, then after pressing the **VOICE MAIL** key, enter the mail box phone number and then press the **Save** softkey. Press the **VOICE MAIL** key again to listen to voice messages.

9 Troubleshooting

Read this section if a problem with your phone occurs. If this does not help resolve the issue, contact your network administrator.

Table 9-1: Troubleshooting

Symptom	Problem	Corrective Procedure
Phone is off (no screen displays and LEDs)	Phone is not receiving power	<ul style="list-style-type: none"> Verify that the AC/DC power adapter is attached firmly to the DC input on the rear of the phone. Verify that the AC/DC power adapter is plugged into the electrical outlet. Verify that the electrical outlet is functional. If using Power over Ethernet (PoE), contact your network administrator to check that the switch is supplying power to the phone.
'LAN Link Failure' message displayed on screen	No LAN connection	<ul style="list-style-type: none"> Verify that the LAN cable is connected securely to the LAN port on the rear of the phone. Verify that the other end of the LAN cable is connected to the network (switch). If it's not, inform your network administrator.
Phone is not ringing	Ring volume is set too low	<ul style="list-style-type: none"> Increase the volume (see Section 6.12.1)
Screen display is poor	Screen settings	<ul style="list-style-type: none"> Adjust the phone's screen contrast level (see Section 6.7) Adjust the screen's backlight timeout (see Section 6.8)
Headset has no audio	Headset not connected properly	<ul style="list-style-type: none"> Verify that your headset is securely plugged into the headset port located on the side of the phone. Verify that the headset volume level is adjusted adequately (see Section 6.12.5).

9.1 Uploading Logs to Microsoft Server for Support Purposes

An integrated log upload feature allows network administrators to upload logs from the phone to the Microsoft server for troubleshooting/support purposes, in compliance with Microsoft's certification requirements for 3rd party Skype for Business clients.

If a user experiences an irregularity such as poor voice quality, they'll contact an AudioCodes Field Application Engineer (FAE) who will instruct them to upload and send the logs for analysis. The FAE then downloads the logs to their PC, performs the analysis, and provides a fix.

➤ **To perform log upload:**

- Press the MENU hard key and scroll down to select **Log upload**.



User's Manual

420HD IP Phone for Microsoft Skype for Business

Version 3.0.1



www.audiocodes.com

