![OBIHAI technology, inc.]

OBi1000 Series IP Phones

OBi1032 / OBi1062

User Guide

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1   Introduction

The OBi1000 family of IP Phones, including the OBi1032 and OBi1062, support HD Voice with a full-duplex speakerphone, have a high resolution color active-matrix TFT LCD display with a customizable user interface, as well as a large number of fully programmable Feature Keys.

Each OBi device (or OBi) shares the same functionality:

- All standard SIP-based IP PABX and ITSPs/VSPs are supported
- Both are suited for all service provider and enterprise deployment environments, regardless of size
- For do-it-yourself (DIY) or self-service installations, anyone regardless of whether they are a home user, small business, or a corporate IT department can easily install, setup and manage the OBi
- Both integrate seamlessly with popular softswitch architectures such as BroadSoft, FreePBX, Asterisk, Elastix, Metaswitch and FreeSwitch, to name a few
- Cloud management via OBiTALK.com with both a user portal as well as an ITSP partner portal with an optional restful API

OBi Hardware

This section summarizes the hardware characteristics of each OBi. The following table provides a specification summary for each OBi, while figures 1 through 4 show the front and back of each OBi as well as the phone with an attached OBi1000e Side Car.

Specification Summary	OBi1062	OBi1032
LCD:	4.3" Color TFT	4.3" Color TFT
LCD Resolution:	480x272 pixels	480x272 pixels
Dial Pad:	Standard 12-Key (1-9,*,0,#)	Standard 12-Key (1-9,*,0,#)
Inline Power:	Yes	Yes
Line Keys/Virtual Line Keys:	6/24	3/12
Programmable Keys:	8	8
Ethernet Ports:	2x Gigabit Ethernet (10/100/1000Mb)	2x Fast Ethernet (10/100Mb)
USB 2.0 Ports:	2	2
3.5mm Headset + Mic Jack:	Yes	Yes
RJ9 Headset + Mic Port:	Yes	Yes
Navigation Keys:	Up, Down, Left, Right, OK/Enter, Cancel/Back	Up, Down, Left, Right, OK/Enter, Cancel/Back
WiFi:	Yes (built-in)	Optional (requires OBiWiFi USB Adapter)
Bluetooth:	Yes (built-in)	Optional (requires OBiBT USB Adapter)
HD Voice:	Yes	Yes
HD Full-Duplex Speakerphone:	Yes	Yes
Audio Control Keys:	Volume Up, Volume Down, Mute (w/ Red LED), Speakerphone on/off (w/ Green LED), Headset on/off (w/ Green LED)	
Message Waiting Light:	Yes	Yes
Sidecar Support*:	Yes (up to 2)	Yes (up to 2)

Each sidecar provides 16 additional feature keys

Figure 1: Front of the OBi1032 IP Phone

Figure 2: Front of the OBi1062 IP Phone
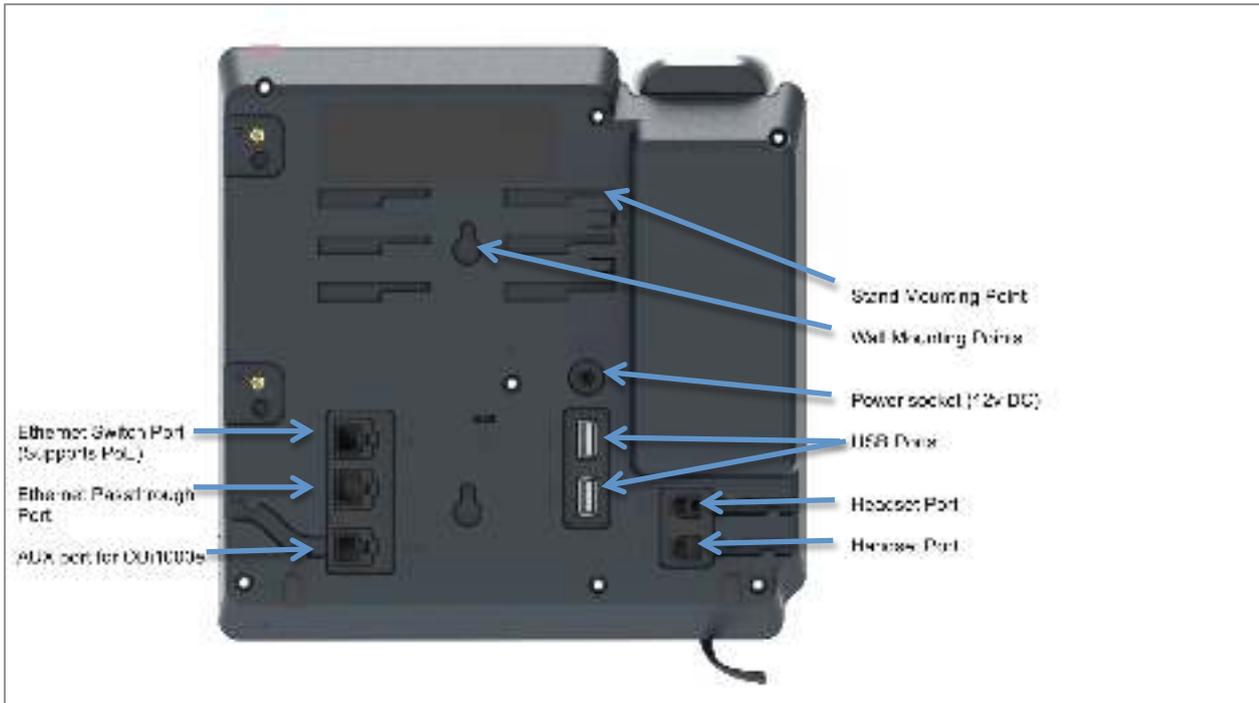
Figure 3: Rear of the OBi1032 and OBi1062 IP Phones

Figure 4: OBi1062 with an attached OBi1000e Sidecar (Optional)

Accessories Available Separately from Obihai

The OBi supports the following accessories:
- 12V DC Power Adapter: To power the OBi where **P**ower **o**ver **E**thernet (PoE) is not available
- OBiWiFi USB Adapter: To connect the OBi to a WiFi network
- OBiBT USB Adapter: To attach Bluetooth devices such as headsets and mobile phones
- OBi1000e Sidecar: To provide 16 additional feature keys. Up to two sidecars may be daisy chained from the auxiliary (AUX) port on the rear of the OBi.
- OBiLINE FXO Adapter *(Future)*: To connect to a **P**lain **O**ld **T**elephone **S**ystem (POTS), for example, to connect the OBi to the PSTN via phone jack provided by your telephone company or to connect to an analog PABX

Other Accessories

The OBi also supports the follow storage devices for copying ring tones, background images and other media to the device:
- USB Disk Drives
- USB Thumb Drives

Connecting the OBi

The OBi can be powered in two ways:
- Using an Ethernet switch that supports Power over Ethernet (PoE): Connect the Ethernet Switch Port (marked SW) on the rear of the OBi to a PoE Ethernet switch using Category-5 (or better) Ethernet cable
- Connecting an OBiPS 12V DC Power Adapter: Plug the 12v jack into the 12v socket on the back of the OBi, then connect AC (mains) adapter to the AC (mains) power socket.

Connecting the Phone to the Network

You must connect the phone to a wired LAN or WiFi network in order to obtain phone service. In most cases your network will require an internet connection and your service provider will set out requirements for the required capacity of your connection to support voice services. In some cases the OBi may be deployed on a LAN or WAN with no Internet access – for example in a corporate environment within a voice-only VLAN.

Connecting to the LAN over Wired Ethernet

Connect a Category-5 (or better) Ethernet cable from an available switch port to the RJ45 Port labeled SW on the back of the phone. Note that the SW port also supports PoE - if it is connected to a standard PoE switch port, it can draw power from the switch without needing to connect to an OBiPS 12V DC power adapter (sold separately).

Connecting to the WLAN over WiFi

The OBi can also connect to a phone service over a WiFi network. The OBi1062 has built-in WiFi and the OBi1032 requires the OBiWiFi USB Wireless dongle in order to connect to a wireless network. The phone must join the wireless network by connecting to a WiFi Access Point (AP). The user may use the WiFi setup utility within the Settings app to scan for APs that are nearby, identify the correct AP by its broadcast SSID (WiFi network name) and connect to it. If security is enabled on the AP, an input prompt will pop up on the screen to let you enter the WiFi access password. Upon entry of correct credentials and connection to WiFi the network, the screen will display an icon on the status bar that indicates the access point is connected and also shows the signal strength. For further setup information, read "WiFi Setup" in the "OBi Phone Apps" section of this document.

Overview of Phone Features

Core Features

These are features that are supported natively by the phone with little to no specific requirements on the SOFTSWITCH.

- 24 Simultaneous Calls on the OBi1062, 12 on the OBi1032
- Programmable feature keys
- Message Waiting Indicator (MWI)
- 4-way locally mixed conference call
- Push To Talk (PTT)
- Call Transfer and Blind Call Transfer (both intra-service and cross-service transfers are supported)
- Call forwarding (both intra-service and cross-service are supported)
- OBiTALK to SIP (SP) Service Bridge
- Wideband HD Voice with Full Duplex Speakerphone
- 6 Fully Configurable SP slots and 6 individually configurable ITSP services
- Multicast Group Conferences (2 multicast groups can be configured)
- Built in Auto Attendant with customizable prompts

Premium Features

Premium features may require support from the Soft Switch or the Service Provider.

- Busy Lamp Field (BLF)
- External conference bridge
- Share Line and Share Call Appearances
- Buddy List with Presence (For BroadSoft and Google)
- Directory Services in the Cloud
- Intercom calls (with or without PTT)

Phone Management Features

- Built-in Native Web GUI

(Note: To access the phone's local Web GUI, find your phone's IP address by selecting "Settings" on the home screen, and entering the IP address listed under "Network" into a web browser. The default username and password is "admin".

- OBiTALK.com Cloud Portal for remote device management at any internet-connected location
- Easy Firmware Update
- Factory Reset

2 Using the OBi

The OBi has logical areas assigned to different phone functions, helping the user to easily and intuitively operate the device.   Each area is controlled or navigated by fixed buttons on the OBi. Figure 5 shows the keys that relate to each part of the OBi Home Screen.
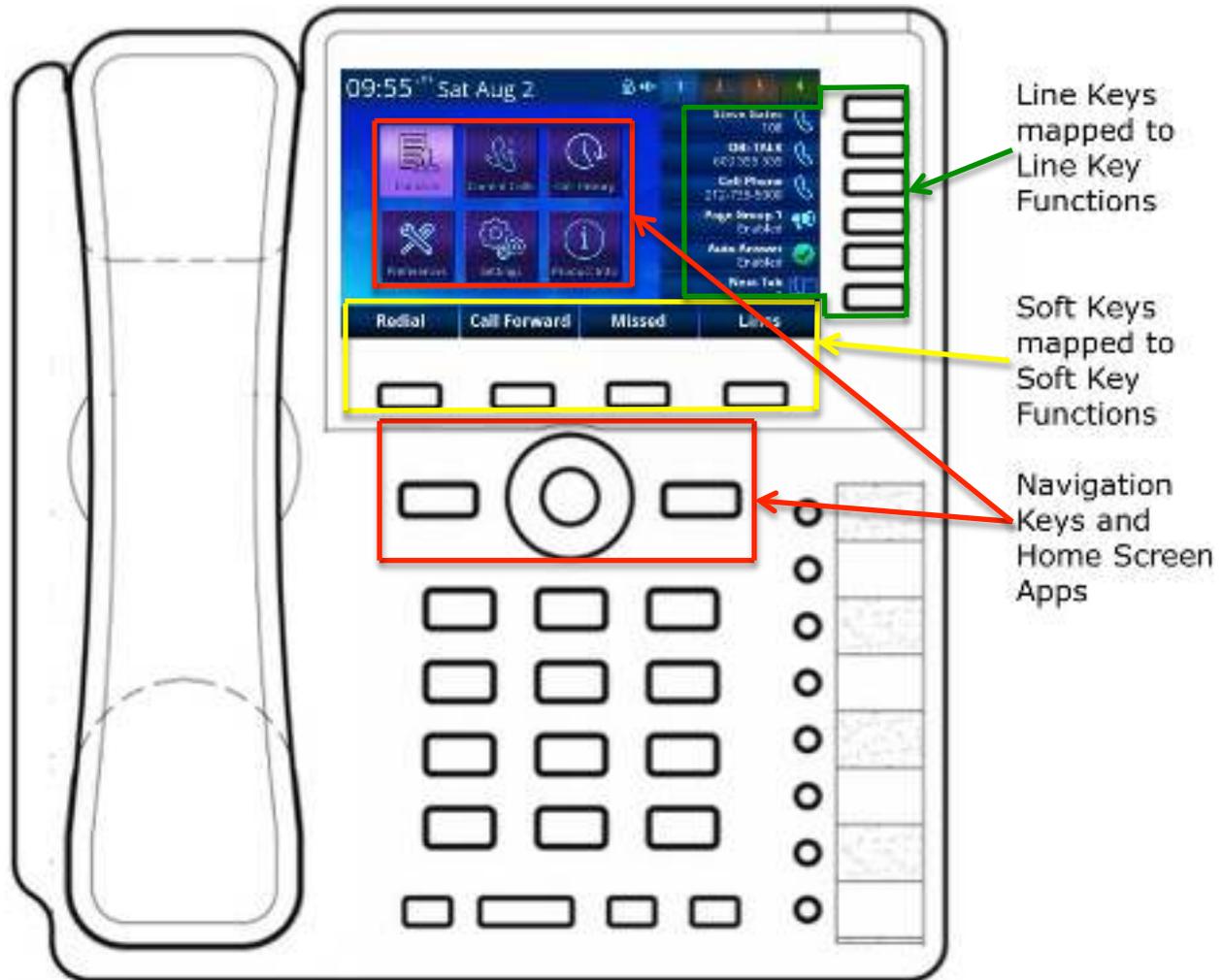
Figure 5: The Line Keys (outlined in green) activate the line key functions displayed on the screen to the left of the button. The soft keys (outlined in yellow) activate the corresponding soft key functions displayed along the bottom of the screen. The navigation keys (displayed in red) are used to navigate between and select Apps. When an app is launched, both the navigation keys and soft keys can be used within the app.

The Home Screen

The Home App launches automatically when the phone starts up. The Home App only has one level of screen called the Home Screen that shows the Main Menu of all available OBi Apps. Further information on the apps included with the OBi is available in the section titled "OBi Phone Apps".

To launch an app from the home screen:

- Highlight the corresponding icon with the Λ (Up), V (Down), < (Left) and > (Right) navigation keys
- Press the V (Enter) Key in the middle of the navigation key area to launch the app

The following operations apply to all Apps:

- Pressing the ⌂ (Home) key closes all screens and returns to the Home Screen.
- Pressing the ↩ (Back) key closes the current GUI screen shown on top. If this is the first screen of an app, then that app will exit.

Figure 6: The home screen as shown on device startup. Note the Contacts App is currently highlighted on screen. Pressing enter at this point would launch the Contacts App.

Soft key functions are displayed along the bottom of the screen. When the home screen is active the following soft keys are displayed:

- Redial: Shortcut to launch Outgoing Call History to let the user select a number from the list to call
- Call Forward: Press once to enable/disable call forwarding for all calls, or to configure a call forwarding destination number if none is configured. Pressing and holding the key also brings up the call forwarding configuration utility to enter a destination number
- Missed: When there are unchecked missed calls, the soft key will highlight red and show the number of missed calls that have not been reviewed by the user. The soft key is a short cut to launch the Missed Calls History to let the user view incoming calls that have not been answered
- Lines: Displays more soft key options for all the available "Lines" (voice services installed on the phone) to let the user select a specific line to make a call. If a line is down for any reason, the corresponding soft key option stills shows the account user name of the line, albeit greyed out

Feature Keys

Feature keys are programmable keys that can be configured to perform one of a range of predefined functions. Feature keys have a built-in multi-color LED that shows the status of the assigned function.

The following diagram illustrates the location of feature keys on the OBi1062 with an attached OBi1000e sidecar. The **Virtual Line Keys (VLKs)**, the **Programmable Keys (PKs)** and the **Sidecar Keys (SCKs)** are all feature keys that may be configured in similar ways.

Figure 7: Diagram of OBi1062 with OBi1000e sidecar showing the location and types of feature keys

A feature key can either be configured directly on the OBi by pressing and holding the feature key, via the built-in web configuration GUI or via the OBiTALK Cloud Management Portal. In some circumstances the function assigned to a feature key may be locked by the system administrator or service provider. Further configuration details can be found within the OBi1000-series phone admin guide available from www.obihai.com/docs-downloads .

Line Keys and Virtual Line Keys

There are six (6) physical **Line Keys (LKs)** on the OBi1062 and three (3) on the OBi1032. For all models, there are four (4) groups of Virtual Line Keys (VLKs) presented on the screen within tabs. This allows for a total of 12 VLKs on the OBi1032 and 24 on the OBi1062.

The virtual line keys are numbered and grouped into tabs as follows:

VLK groups within tabs	Tab 1	Tab 2	Tab 3	Tab 4
OBi1032 (12 VLKs):	VLK1 – VLK3	VLK4 – VLK6	VLK7 – VLK9	VLK10 – VLK12
OBi1062 (24 VLKs):	VLK1 – VLK6	VLK7 – VLK12	VLK13 – VLK18	VLK19 – VLK24

The LED in the line key reflects the status of the mapped VLK within the active tab. To see the LED color or pattern corresponding to a VLK that is not displayed on the current tab, the user must switch to the tab holds the desired VLK. In order to switch between tabs, a feature key must be assigned the "Next Tab" function. When a user presses the feature key assigned to next tab, the screen will cycle between the tabs in ascending order – when tab 4 is reached, pressing next tab cycles back to tab 1.

There are two approaches you can take to assigning the next tab feature key – a VLK may be used within each tab to carry the function or it can be assigned to a programmable key. Figure 8 shows the two approaches side-by-side.
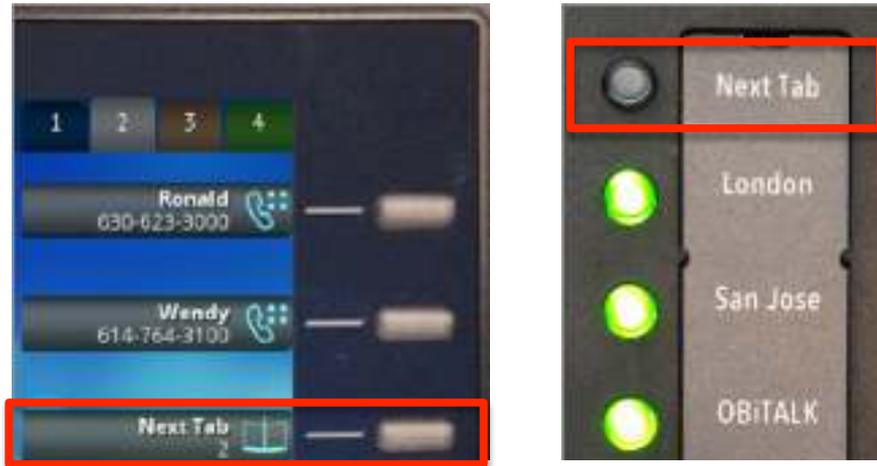
Figure 8: The example on the left shows mapping the last VLK of each tab to the next tab function, in this case we show VLK6 on tab 2 on an OBi1032. The example on the right shows PK1 mapped to the next tab function

As a feature key, a VLK is different from the other keys in that it also has an associated window area on the screen along the right edge next to the physical Line Key. This is called a **Virtual Line Key Window (VLKW)**. VLKs are arranged into tabs, displayed across the top right of the screen, with the active tab highlighted. Only the VLKW of the VLKs that are on the current tab are visible. A VLKW provides additional feature key function-dependent information. For example, if the key is assigned the "Call Appearance" function, its VLKW will show the call peer's name or number during a call, with an icon or background color that also reflects the call state. This is further illustrated in figure 9.

Figure 8: Tab 3 active with a call in progress on VLK 13, which is the first line key of tab 3 on the OBi1062. Note the active VLKW is highlighted and the icon shows a call is in progress.

Every feature key has a corresponding **Feature Key Item** that can be viewed on screen. The easiest way to view the feature key item is by pressing and holding down the corresponding feature key until the item appears on the screen. The user can then see additional information about the function assigned to the feature key and invoke other operations, for example via soft key options.

Figure 9: After pressing and holding line key 1 with tab 4 active, the corresponding virtual line key on the OBi1062, VLK19, is highlighted.

Call Keys

Each Virtual Line Key (VLK) is a feature key that can be assigned the "Call Appearance" function. When assigned this function the VLK becomes a **Call Key** that can support a single call. Each call carried out on the OBi must be assigned a call key, so there needs to be at least one inactive call key available to make or receive a call. Enough call keys should be assigned during the configuration of the device to support the call load required by the user. If there is a new incoming call but no available call key to assign the call to, then the calling party will receive a busy signal.

A **bound** call key is **tied** to a specific voice service account, such as SP1. A call key may also be **unbound** and available for any voice service to use. A bound call key is used to handle calls only on the service account it is tied to, while an unbound call key can handle calls on any voice service account that is active on the OBI.

For incoming calls, the OBi automatically assigns the call to an open call key. It first attempts to find a call key that is bound to the service account that the incoming call is on - if none is found, it then tries to look for an unbound call key to assign the call to. If no available call keys are found, the call is rejected and a busy line treatment is applied, with the calling party either sent to voicemail or receiving a busy (engaged) tone. Figure 9 shows an inactive call key bound to OBiTALK with a call in progress via SP1 on VLK2, which is also an unbound call key.

Figure 10: In this example, SP1 has no bound call keys, so when a call is made via this service an unbound call key is used. In this example, line key 1 is bound to OBiTALK and inactive; line key 2 is unbound and actively handling a call via SP1, while call keys 3 through 5 are all inactive, unbound and available for calls.

Programmable Keys (PKs)

Programmable keys are feature keys that can be assigned an array of functions but cannot be assigned the call function. The OBi has 8 programmable keys that can be used for speed dials, assigned to the busy lamp field (BLF) as well as functions such as do not disturb and switching between tabs. Figure 10 shows the programmable keys mapped to functions listed on the printed insert. Printed inserts can be created online using the OBi Printed Insert Generator. *(Future)*

Figure 11: Three examples of possible layouts for the programmable keys (PKs).

The image on the left of figure 10 shows a combination of functions mapped to the PKs. In this case, the Next Tab function is placed at PK1, putting it at the top of the PK list and nearest to the screen. Placement of the next tab function on PK1 may be preferable particularly on the OBi1032 if all VLKs are in use. With this approach to PK functionality we see the primary voice services listed on PK2 – PK5, with PK5 mapped to a cellular (mobile/GSM) phone via Bluetooth.

The middle image of figure 10 shows a Key Phone approach to the mapping of the programmable keys, where all voice services have been mapped to a "Line Monitor" feature key.   In this example, SP1 through SP6 are presented as Line 1 – 6 on PK1 through PK6, with the OBITALK service mapped to PK7 and a cell phone attached via Bluetooth mapped to PK8. In this case, as many VLKs as required could be assigned as unbound call keys to support each call, giving the flexibility of having multiple simultaneous calls without having the VLKs bound to a specific voice service. It's important to note that in this example it would be important to ensure one VLK per tab is assigned to the Next Tab function.

The rightmost image of figure 10 shows eight people within an organization and their current call availability status based on the Busy Lamp Field (BLF) information. In this image, Kate, Steven and Lucy are all on calls with all others available.

Side Car Keys (SCKs)

The **Side Car Keys (SCKs)** behave just as programmable keys, with 16 keys available per side car. Up to two side cars can be connected to the OBi, for a maximum of 32 SCKs. Side car keys allow for quick call direction to individuals and groups, providing instant visual feedback of status as indicated via the LED color of the SCK. In a busy call handling environment, SCKs can be used to map out all possible call functions to place them in easy reach of, and to personalize the experience for the user.

List of Feature Keys and their functions

Note, the icons displayed under each feature key item are only applicable when the feature key is mapped as a VLK.

Feature Key	Description
Call Appearance *Idle* *Connected* **HD** *Connected HD*	This key is known as a **Call Key** and allows the user to make or receive a single call. There must be an **available and idle** call key in order to make or receive a new call. The phone administrator should allocate as many call keys on the phone as the maximum number of concurrent calls it is expected to handle. For example, the minimum amount of call keys required to place a 3-way conference call on a single voice service, consisting of the user and 2 remote parties, would be 2 call keys allocated to that voice service – one for each remote party. The VLKW shows the idle phone icon when no active call is assigned to the key. Otherwise the icon changes to reflect the current call state (Call States and Call State Icons are described in the section "*Making and Receiving Calls*") and VLKW shows more information about the call, such as the call peer's name and number, if available. The VLKW may also change its background color to further reflect the current state. A Call Key may be bound to a voice service and is called a bound call key in that case (otherwise it is known as an unbound call key). A bound call key is used to make/received on the bound voice service only; this is one of the ways for a user to select a specific line to make a call. A call key may be bound to a service that is a Shared Line. In that case when no call is on that key, the VLKW information reflects the state of the respective Shared Call Appearance (SCA). See the section *Shared Line and Shared Call Appearances* for more details on this topic.
Line Monitor	Monitor a Line (voice service installed on the phone). The line events that are monitored include: - **Ringing**: at least one incoming call - **Holding**: at least one call holding - **In Use**: at least one active call - **Idle**: no calls The VLKW shows the monitored service name and account user name (usually same as the account DID number or extension). This function must be bound to the specific voice service that it monitors.
BLF (Busy Lamp Field)	Monitor the call state of another extension. A BLF key must be bound to a service. The call events that are monitored include: - **Ringing**: at least one incoming call - **Holding**: at least one call holding - **Busy**: at least one active call - **Idle**: no calls - **Call parked** (against the monitored extension) VLKW shows the bound service name and the monitored extension (or DID number, or account user name).
Speed Dial	If a number has not been assigned, the VLKW shows no textual information. Otherwise it shows the speed dial number configured and if the speed dial is bound to a service, the name of the service that it is bound to. If the speed dial has a display name configured, the VLKW shows the display name, for example *John Seymour*, instead of the assigned number.
Do Not Disturb *Off On*	Turn on/off the **Do Not Disturb** feature. If the function is bound to a specific voice service, it is applied to incoming calls on that service only. Otherwise, it is applied system wide to all incoming calls regardless which service the calls are coming from.
Do Not Ring *Off On*	Turn on/off the **Do Not Ring** feature. When the feature is enabled, incoming calls comes through as usual however the phone does not play an audible ring – however, the call waiting tone will still be played during a call waiting event. This function cannot be bound to a specific voice service - it is applied system wide to all incoming calls regardless which service the calls are coming from.

Feature Key	Description
Block Anonymous Callers *Off On*	Turn on/off the **Block Anonymous Caller** feature. If the function is bound to a specific service, it is applied to incoming calls on that service only. Otherwise, it is applied system wide to all incoming calls regardless which service the calls are coming from. If this feature is enabled, the phone rejects all incoming calls with their Caller ID (name/number) hidden (blocked).
Block Outgoing Caller ID *Off On*	Turn on/off the **Block Caller ID** feature. If the function is bound to a specific service, it is applied to outgoing calls on that service only. Otherwise, it is applied system wide to all outgoing calls regardless which service is used for the calls. If this feature is turned on, the phone will attempt to hide the user's caller ID on outbound calls so the called party cannot see who's calling.
Call Forward All *Off On*	Turn on/off the **Call Forward All Calls** feature. If the function is bound to a specific service, it is applied to incoming calls on that service only. Otherwise, it is applied system wide to all incoming calls regardless which service the calls are coming from.
Auto Answer *Off On*	Turn on/off the **Auto Answer (Intercom Calls)** feature. Normally this feature is turned on so that incoming intercom calls can be automatically answered on the phone by turning on the speakerphone or headset. If this feature is turned off, incoming intercom calls will be treated as regular calls and the phone will ring normally. This function cannot be bound to a specific voice service - it is applied system wide to all incoming calls regardless which service the calls are coming from.
Call Waiting *Off On*	Turn on/off the **Call Waiting** feature. Normally this feature is enabled such the user can accept more incoming calls while he is already on a call. If this feature is turned off, all incoming calls will be rejected as busy if the user is already on a call. This function cannot be bound to any specific voice service.
Monitor Voicemail Status *No messages* *Messages*	Monitor the number of messages in a mailbox. The function must be bound to a voice service that has the MWI (Message Waiting Indication) feature enabled. The VLKW shows if and how many new messages are available in the respective mailbox.
Hold	Hold all calls that are in the Connected State. The VLKW shows how many calls are currently in Holding State. The LED turns red if there is a least one call in the Holding State, or turned off if there are no holding calls. This function cannot be bound to a specific voice service.
Add to Conference	Add all calls that are in the Holding State to the current conversation (or conference call). The VLKW shows how many calls are in the Holding State. The LED turns red is there is at least one call in the Holding state, or turned off otherwise. This function cannot be bound to any specific voice service.
Leave/Join Page Group (1/2) *Left Joined*	Join/Leave Page Group 1 (or 2). If the user joins the group, then the phone automatically turns on the speaker when anyone in the group starts a page. The user may also start the page (announcement/broadcast) by pressing down the feature key - this is known as PTT or Push-to-talk (otherwise the user is just listening). If allowed by the phone admin, user may also "Clamp On" the feature key to talk continuously without needing to hold down the key. This function cannot be bound to a specific voice service.

Feature Key	Description
Change ACD Agent State *Available* *Unavailable* *Signed off* *Wrapping Up*	Change/monitor an ACD (or Call-Center) Agent State to one of the following values: - Available (to take new calls) - Unavailable (to take new calls) - Signed Off - Wrapping Up (the last call) **Automated Call Distribution (ACD)** is the primary way a call-center distributes calls among a number of agents working for the call-center. The ACD controller should only send incoming call to an agent whose state is "Available". An agent may sign off when done for the day, or unavailable when taking a break, or wrap up if when wrapping up a call (i.e. processing associated paperwork after the call has finished). While "Signed Off", the agent presses the key once to sign on and becomes "Available". While "Available", the agent presses the key once to become "Unavailable". While "Unavailable" or "Wrapping Up", the agent presses the key once again to become "Available". Note that agent cannot change state to "Signed Off" or "Wrapping Up" directly by pressing the feature key. To change to these states, agent must use the corresponding feature key menu item from the GUI (invoked by pressing and holding down the feature key), or some other means provided by the Soft Switch, such as a web portal. This function must be bound to a specific voice service. The ACD agent handles calls on the bound service only with respect to the underlying Call Center. The Call Center is not aware of calls the agent makes or receives with other voice services installed on the phone.
Guest User *Logged Off* *Logged On*	This feature is also known as Hoteling or Hot Desking. The phone may be set up to be used temporarily by a guest, such as a visiting employee or temporary worker. The guest can press the key and enter a user-id and password to log in and start using the guest phone as their own extension temporarily (until logging out or on a remote logout performed by the server). This function must be bound to a specific voice service that supports this feature.
Disposition Code	Enter a **Disposition Code** for the last call. This is used by a Call Center agent to enter a disposition code for the last customer call. This function must be bound to a specific voice service (that supports this feature).
Next Tab	Move to the next tab of VLKs – when at Tab 4, this will cycle back to Tab 1. This function cannot bound to a specific voice service.
Transfer	Invoke the call transfer function on the currently highlighted call on the screen when the Calls App is at the top of the display stack. The call must be in a transferrable state, such as is in the Holding or Connected state. This function cannot be bound to a specific voice service.
Blind Transfer	Invoke the blind call transfer function on the currently highlighted call on the screen when the Calls App is at the top of the display stack. The call must be in a transferrable state, such as is in the Holding or Connected state. This function cannot be bound to a specific voice service.

3 Making and Receiving Calls

Current Calls App

The Current Calls App is for managing calls currently in progress on the phone. The calls app starts automatically when a call is added in the following scenarios:
- An incoming call is answered
- A new outgoing call is being connected (i.e. after the number to reach has been entered), or becomes connected, or has failed.

You can dismiss (or hide) the calls app at any time and your calls will continue. If there are calls in the ended state, they will be removed when exiting the calls app. You can also launch the calls app from the home screen. Calls in the following states are shown on the calls screen, the landing screen of the calls app:
- Trying
- Peer Ringing
- Ringing
- Connected
- Holding
- Ended

The calls are arranged in a single list of call entries. Pressing the **V** enter key shows the details of the highlighted call in a 2nd level screen within the App.

Figure 12: The calls app showing an active call and a call on hold

Call States

As a call progresses from beginning to end, it goes through a number of defined stages known as Call States. The following call states are defined for calls on the OBi:

Icon	Call State	Description	Available Operations	LED Pattern
	Dial Tone	Dial tone is played to prompt user to enter the target number to call	End	Steady green
	Dialing	User is entering a target number to call	End	Steady green
	Trying	Trying to call the dialed number but the called party has not started ringing yet	End	Steady green
	Peer Ringing	The called party is ringing	End	Fast blinking green
	Ringing	An incoming call is ringing the phone	Reject, Answer	Fast blinking red
	Connected	Connected on a call and both sides are talking	End, Hold, Transfer, Blind Transfer	Steady green
	Holding	User has placed the call on hold	End, Resume, Add to Conf., Transfer, Blind Transfer	Slow blinking red
	Ended	Call failed due to various reasons, such as invalid number, service not available, called party busy, etc.	End (Remove the Call)	Slow blinking green
	Idle	No Call	-	Off

There are many operations that may be applied to a call - for example, holding, resuming or ending a call are commonly used operations. The options to manipulate a call are typically presented to the user as soft key options, while the most frequently used call operations can also be mapped to a feature key - such as the Hold and Transfer functions.

Soft key options are call state sensitive, only the options that are applicable to the call at its current state are shown and as the call transitions from one state to another, the soft key options on the screen will be updated accordingly. This will be discussed further in the *"Calls App"* section.

As detailed in the section titled *"Call Keys"*, each call on the phone must be assigned to a call key and each call key has its own VLKW on the screen that is displayed next to the line key. To help the user identify the current state of a call, each call state is represented by a distinct icon that is shown in the respective VLKW. Furthermore, the LED of each call key stays steady or blinks with a certain pattern, indicating the current call state.

Making Basic Calls

With the Handset

Lifting the handset from the cradle will start the dial tone and display the **Dial Dialog** on the screen. The following figure shows a dial dialog ready for the user to enter a number.

Figure 13: GUI screen showing a Dial Dialog during off-hook dialing with the handset. Note the handset icon in the status bar.

It is possible that the handset is not resting on the cradle while the phone is idle (i.e. with 0 calls). In such a case the user may toggle the hook switch (the button the handset rests on in it's cradle) to start the dial tone on the handset.

With the Speakerphone

Turing on the speakerphone by pressing the speakerphone key when the phone is idle has a similar effect as off-hooking the phone (i.e. lifting the handset from it's cradle) and also selects the speakerphone for use with the call. The speakerphone key lights up green when it is turned on. When the phone returns to idle mode the speakerphone will be turned off automatically.

With the Headset

Activating the headset by pressing the headset key when the phone is idle has similar effect as off-hooking the phone and also selects the headset for the call.

The headset key lights up green when it is turned on. When the phone returns to idle mode the headset will be turned off automatically.

There are three headset ports available on the OBi:
- RJ9 Headset Port
- 3.5mm Headset Jack
- Bluetooth Headset

When there is only one headset connected, the phone automatically selects that headset port when the user selects to use headset for the call. When more than one headset is connected, the phone picks the preferred headset port based on the setting of the *Preferred Headset Device* option in the Preferences app.

Figure 14: Preferred Headset Device

On-hook Dialing (Predial)

The previous off hook dialing methods start the dial tone when the user lifts the handset, or activates the speakerphone or headset, before entering the target number. On-hook dialing is when a number is dialed without invoking the dial tone.

On-hook dialing is triggered when:
- The phone is idle with no calls or with all current calls on hold
  and
- The home screen or calls app is displayed

The digit map is not applied until one of the following occurs after entering the number:
- The Dial or Call soft key on the screen is pressed - this will direct the call via the default voice service
- The phone is taken off-hook by lifting the handset, pressing the speakerphone button or pressing the headset button
- An idle call key or a line monitoring feature key is pressed

Figure 15: A phone number being entered during on-hook dialing. The digit map is not applied until the user presses the dial button.

After the number is entered, the phone then applies the digit map on the entered number and proceeds with the call if the number is valid or plays the fast busy tone with a call failure indication on the screen otherwise.

The pre-dialed number may include one or more star code options, such as *67 to block the outgoing caller ID for this call. For example, if the user enters *6714089991234, the phone will interpret each recognized * code as it parses the given number and apply them to the call – in this case block the outgoing caller ID and dial +1 (408) 999-1234.

As with other apps, the user may cancel on-hook dialing by pressing the ↰ back key or ⌂ home key to return to the home screen.

Using a Speed Dial Feature Key

The user or phone administrator may define one or more feature keys on the phone to be used as speed dials. You can identify a speed dial key by:

- The speed dial icon ⎙ is displayed beside a line key
- Pressing and holding the feature key to check it's function

A user is unable to change the function of a feature key that has been pre-assigned by either the device administrator or service provider.

To set the target number of a speed dial feature key, press and hold down the key until the feature key item is shown on the display, then enter a new target number. You may also specify which voice service to use when calling

from that speed dial key. To call from a speed dial key, simply press and release the feature key. The following displays the speed dial configuration screen (using VLK23 on an OBi1062).

Figure 16: Speed dial configuration

User can also select the Phone Book option to assign a number directly from a Phone Book entry in the contacts app instead of manually entering a name and number for the speed dial.

Note that the phone still has 99 configurable speed dial numbers that are invoked by dialing the corresponding one/two-digit number (i.e. 1 – 99). These 99 speed dial numbers are not related to the speed dial feature keys.

Additional Ways to Make Calls

* Off-hooking the phone when the screen is showing a phone book or directory listing on the top, and the currently highlighted entry has a valid phone number. You can direct a phone book or directory entry to call via a specific voice service by pressing the corresponding feature key for the voice service you wish to use, after highlighting the party to be called.
* Off-hooking the phone when the screen is showing a call history listing on the top and the currently highlighted entry has a valid phone number

Line Selection When Making Calls

To draw an analogy to conventional telephony, an ITSP service account or an IP PBX extension installed on an IP phone is commonly referred to as a "line". A multi-line phone therefore refers to an IP phone with multiple ITSP service accounts installed. A line key on an IP phone is a key to access an available ITSP account (ie Voice Service) on the phone. The OBi1000 is a 6-line phone, with 6 (OBi1062) or 3 (OBi1032) line keys. With 4 tabs containing VLKs, up to 24 (or 12 on the OBi1032) call keys may be defined to carry out that number of simultaneous calls. Normally a user would let the phone select the line to make a call based on the number dialed. The phone makes this selection according to the values set for the following parameters:

* Phone *Digitmap*
* Phone *OutboundCallRoute*
* Phone *PrimaryLine*

The *PrimaryLine* parameter may also be set by the user from the home screen in the User Preferences app. Alternatively, the user may select the line to use explicitly by pressing an available call key that is bound to the desired line. This can be done during off-hook dialing when invoking dial tone or on-hook dialing when initiating the call. Usually the corresponding VLKW of a bound call key will also show the name or ID of the bound line to help the user identify the line.

When the user selects a line to direct a call, that call may not always be directed via the selected line. After applying the *Digitmap* and *OutboundCallRoute* to the dialed number, it may be the case that the line to use is different to the line the user selected. In this case, the phone will first look for a call key that is bound to the voice service, as defined by the *Digitmap* and *OutboundCallRoute*, and if a bound call key is available, then the call will use this slot. If no bound call key is available then the phone will look for an unbound call key to place the call. If no unbound call

key exists then the call will fail. For this reason it is important to ensure enough bound and unbound call keys are defined to support your expected call volume and flow.

Numbers that are specified within a speed dial, entries of a directory listing or phone book contacts may contain explicit information specifying which line to use when making calls to the programmed number. In this case, the entry is bound to the specified line.   When a phone number is called using a speed dial or contact entry, the phone does not apply the *Digitmap* or *OutboundCallRoute* on the given number. It is important to note that the numbers in the respective entries must be complete and valid without relying on any transformation by *Digitmap* processing.

If no explicit line information is given, usually with line field of the respective entries blanked out or set to auto, the phone applies standard *Digitmap* and *OutboundCallRoute* processing on the given number to determine the line to use for the call.

Receiving Calls

When a new incoming call arrives over one of the voice service accounts (lines), the phone finds an available call key to assign the call to. If one is found, the call is admitted and the phone either rings or plays the call waiting indication tone if the called party is already on a call. The call key that the incoming call has been assigned to blinks quickly in red as a visual alert during the ringing state.

When the phone is ringing, the user may answer the call in one of the following ways:
- Lifting the handset from the cradle to answer the call
- Turning on the speakerphone to answer with the Speakerphone
- Turning on the headset to answer with a connected headset
- Pressing the Answer soft key
- Pressing the call key that the incoming call is assigned to – this call key will flash to indicate it has been assigned the call

In the latter two cases, the talking device will be chosen according to the following:
- If the handset has been picked up, the handset will be chosen
- Otherwise, the Speakerphone or Headset will be chosen according to the value of the *PreferredAudioDevice* parameter, which may be preconfigured by the phone administrator or changed by the user under Settings/User Preferences on the GUI

When the phone is playing the call waiting tone, the user may answer the call in one of the following ways:
- Pressing the Answer soft key
- Pressing the call key that the incoming call is assigned to

In the case of call waiting, right before answering a call the phone automatically applies the following operation on all other calls in the system based on their call state:
- Connected Calls: hold them
- Ringing or Held Calls: leave them alone
- All Other Calls: end them

Ending Calls

You can end a call in any state. The simplest way to end a call is by hanging up, which is done in the following ways:
- Put the handset on the cradle (on-hook), if the handset is being used
- Turn off the Speakerphone, if Speakerphone is being used
- Turn off the headset, if headset is being used

The hanging up action ends all calls in the following states: Dialtone, Dialing, Trying, Peer Ringing, Ended. Calls in other states are unaffected. Hanging up does not require the calls app to be running. You may selectively end a call from the calls app by highlighting the call and pressing the End soft key.

Holding Calls

While a call is connected, the user can place the call on hold using one of the following methods:
- Pressing the Hold soft key; this holds only the highlighted call on the screen
- Pressing the feature key that has been assigned the Hold function; this holds all calls that are in a holdable state

Resuming Calls

While a call is holding, the user may resume the call using one of the following methods:
- Pressing the "Resume" soft key; this resumes only the highlighted call on the screen
- Pressing the call key that hosts the call to resume; this resumes the call only if it is in the Holding State as indicated by the key's LED blinking pattern (slowly in red)

Note that unlike Hold, there is no Resume function that can be assigned to a feature key. Instead a "conference" function is available for resuming calls to join a conversation, which is discussed when we describe the multi-party conference call feature.

Bringing a Call to the Foreground

Operations that bring a call to the foreground include:
- Resuming a call using the Resume soft key
- Answering a call
- Making a new call by on-hook dialing, dialing from speed dial, phonebook, call history, etc.
- Invoking dial tone by off-hooking, pressing a call key or a line monitoring feature key

Right before carrying out a foregrounding operation, the phone automatically applies the following routine operation on all other calls in the system based on their respective call states at that moment:
- Calls in Connected State: hold them
- Calls in Ringing or Holding State: leave them alone
- Calls in other states: end them

4   Advanced Call Scenarios

Managing Multiple Calls with the Calls App

The OBi1000 series supports as many calls as the number of call keys defined on the phone. Since a call key may only be defined on a VLK, this call limit is 12 calls on the OBi1032 and 24 on the OBi1062.

The best way to manage your current calls is from the phone GUI within the calls app, which shows a list of current calls on the phone. Using the navigation keys, the user can move the cursor up and down the call list and the set of soft keys displayed will reflect the available options based on the current call state.

The calls app starts automatically when a new call starts, if it is not already running. Otherwise, it updates the call list shown on the screen by adding an entry for each new call. You may hide the calls app (just like any other app) by pressing the home key at any time or the back key when in the first screen of the calls app. Dismissing the calls app does nothing to the current calls; each call will continue in it's respective current state. You can start the calls app manually at any time by launching it from the home screen. The picture below shows a typical call screen with three calls; the call being highlighted is in the peer ringing state, while the other two calls are in the holding state.

Figure 17: Snapshot of a Calls App screen with three calls; the last is partially off screen.

Transferring Calls

Transferring a call with remote party A on the phone involves:
  a) Calling another party (remote party B) known as the **transfer target**
      and
  b) Connecting A and B while the phone user drops-out of the conversation. Remote party A is known the **transferee** while the local OBi1000 user is the **transferor**.

There are three types of call transfer:
  1. **Attended Call Transfer**: The user waits for B to answer and the user then talks to B first, before completing the call transfer. The user presses the "Transfer Now" soft key to complete the call transfer. This is sometimes called consulted transfer or transfer with consultation. The next two types described are known as transfer without consultation.
  2. **Semi-Attended Call Transfer**: The user waits for B's phone to ring, then completes the call transfer before B answers. The user presses the "Transfer Now" soft key to complete the call transfer.
  3. **Unattended (Blind) Call Transfer**: The call transfer is completed by the phone as soon as the user enters B's number, without waiting for it to ring. The user does not need to press any additional key to complete the call transfer. The user would not know if B is busy, or if the number entered is valid or not.

To transfer a call, the user must first identify the call to transfer by highlighting the corresponding entry in the call list from the calls app. Hence the calls app must be running and active on screen. The call must also be in a

transferrable state, which is either the Connected or Holding state. If the highlighted call is transferrable, the soft keys will include the "Transfer" option.

Figure 18: A connected call with the Transfer and Conference soft keys shown

Pressing the Transfer soft key starts off-hook dialing, prompting the user to enter the transfer target number and subsequently placing the call to the dialed number. As such, the phone applies standard handling to all current calls before playing the dial tone and displaying a dialog box to let the user enter the transfer target number.

The OBi user can abort the call transfer operation any time before the call transfer completes, but not after. While entering the target number, the transfer operation will be aborted if the user dismisses the Dial Dialog before a complete number is entered.

As soon as a complete transfer target number is entered, the transfer operation may not be aborted in the case of a blind transfer. In the attended and semi-attended cases, the phone shows the complete call transfer dialog along with the "Transfer Now" soft key option as shown in the next figure.

Figure 19: A complete call transfer dialog

The user may abort the pending transfer operation by dismissing this dialog by pressing the Home or Back Key. Once aborted, the pending transfer operation is canceled but the call to the transfer target continues, albeit reverted to a regular outgoing call. The user must explicitly end the call to the transfer target if they do not wish to continue with it.

Ending the call to the transfer target at any time before the call transfer completes will cancel the pending call transfer. The original call (with the transferee), which may have been placed on hold automatically as a result of starting a call transfer, is not automatically resumed when call transfer is canceled - the user must explicitly resume the call to reconnect with the transferee party. If the transfer operation eventually fails after completion (from the user's perspective), the original call with the transferee cannot be restored.

Call Forwarding

OBi phones support three styles of call forwarding:
1. **Call Forward All (Forward Unconditional)**: Forward all incoming calls
2. **Call Forward On Busy**: Forward incoming calls when the phone is busy
3. **Call Forward On No Answer**: Forward incoming calls when the calls are not answered after a certain user-defined number of rings

Each can be individually configured with a different destination number. The call-forwarding configuration can also be enabled/disabled on a per-service basis or per-phone basis. The administrator can apply different call forward settings to calls on each specific service, or apply one set of call forwarding settings to the entire phone regardless which service the calls are coming from.

The OBi allows users to toggle "Call Forward All" from the home screen soft key or a feature key and to also specify a destination number. The phone admin can decide which keys to use and whether the call forward is per service or per phone. If it is per service, the admin may allocate multiple keys to call forward multiple services. As a user, you can turn on/off a call forward service by pressing the call forward soft key or feature key. To configure a forwarding destination number, press and hold the call forward key until the call forward configuration dialog appears on the screen.

Figure 20: Call forward screen – from here the user can quickly configure forwarding options

Conference Calls

A conference call is a conversation involving 2 or more remote parties. In order to start a conference, there must be at least two calls with at least one in the connected state and one in the holding state. The following figure shows such a scenario with two calls in progress. To start a conference, highlight one of the calls in the holding state and press the "Add to Conf" soft key.

Figure 21: A two-call scenario that may be turned into a 3-way conference call by highlighting the holding call and selecting Add to Conf

The OBi1000 phones support two methods to conference multiple parties:

    a) **Local mixing/bridging**: the conference call is mixed locally by the phone
        and
    b) **External conference bridge**: The conference call is mixed by an external conference bridge. In this case the options shown on your phone may be different. Check with your administrator for further details.

Local Mixing/Bridging

The OBi supports up to 4-way conferencing (with 3 remote parties) using the local mixing/bridging method. After starting a 3-way conference call the user can see the two remote parties both in the connected state, as shown in the following figure.

Figure 22: A locally-mixed conference call in progress

There are two ways to add a third remote party, either make a new call to the target party or answer a new incoming call from another remote party.

To make a new call to the target party, either press the "more" soft key and select the "conference" option, or press an available and inactive call key. In the event that the remote party places an incoming call to the user, the OBi will automatically place the two currently connected calls on hold. When the target party rings or answers, resume the two original conferencees one at a time by highlighting each holding call on screen and applying the "Add to Conf" option to it. Now, you will have a 4-way conference with three calls in the connected state.

External Conference Bridge

When using an external conference bridge, the conference size is not limited by the phone but by the conference bridge. Check with your phone administrator or service provider on the size limit. Earlier, we described how to start a 3-way conference, however, after the conference is started, you will notice that only one connected call to the conference bridge remains on the screen while the two calls with the initial two conferencees are removed. This indicates the two conferencees have also connected to the conference bridge on their own.

To add another conferencee, make a new call to the target number or answer a new incoming call from another party - this will automatically hold the current call to the conference bridge. When the called target rings or answers, highlight the call to the conference bridge that is currently in the Holding State and select the "Add to Conf" option. At that point the call to the conference bridge is resumed while the new remote party is also added to the conference bridge. You can continue to add more conferencees this way until it reaches the limit set by the conference bridge.

Group Paging

A paging group is a multicast group such that every phone on the same LAN that has joined the group can send audio to and receive audio from other members of the group. A multicast group is defined with a multicast address. Each OBi1000 phone supports two multicast groups that are configurable by the administrator. The administrator may also assign a feature key for users to join or leave each group. Consult your phone administrator to check whether the group paging feature is enabled at your location.

In most cases, adding the "Page Group" feature key will enable group paging using the default settings. Simply add page group 1 or 2 to each phone as required.

Here is how to use the group paging feature:
1. If not joined (LED off), press the key once to join the paging group. Once you have joined, the LED is red and your phone will play audio received from the paging group (multicast channel)
2. After joining (LED red), press and hold down the key to talk (PTT or push-to-talk) to the group. Audio received from the multicast channel is paused while you are talking
3. If the "clamp-on" option is enabled by the admin, you can enable clamp-on so that you can continue to talk without needing to keep the key pressed down. To enable clamp-on, after joining press and release the key quickly and the LED will change (blinking slowly in red) to indicate that clamp-on is enabled
4. To leave the group after joining (and clamp-on, if available), press and release the key quickly

When audio is received from the group, all your current calls will be interrupted and put on hold in the standard way as if a new foreground call is added. When joining two page groups, and in the event two pages are received at the same time, the audio from the two groups is mixed locally by the phone.

5   Premium Features at a Glance

The features in this section have special requirements on the soft switch or PABX that provides the services. The availability and operation of these features may depend on the particular service provider soft switch or office PABX in use and how it is set up. Here we only discuss feature functionalities and common behavior generically. Please consult your local phone administrator to get the details and availability of these features at your location.

Busy Lamp Field (BLF)

Busy Lamp Field (BLF) is a common collaborative feature for a group of users to monitor calls on one or more extensions. BLF is a feature for the monitoring of an extension. The detection and notification of events occurring at the monitored extension are carried out by the soft switch or PABX.

When the BLF service is available with a specific voice service, the BLF function can be assigned to a feature key bound to that voice service to monitor an extension that is also on that voice service. We refer to a feature key that is assigned the BLF function as a "BLF key". One BLF key monitors one extension only. Your phone administrator can assign as many BLF Keys as there are feature keys available, to monitor as many extensions. The following table lists the typical events that are monitored with a BLF Key. The table also shows the operation that can be invoked when the respective event occurs and the LED pattern indicating that particular event. Two or more events may be happening at the same time at the monitored extension, for example, the monitored extension may be connected on a call (hence Busy) plus have a ringing call and a holding call at the same time. The LED pattern can only show one event at a time.

The OBi treats a BLF key-press as pressing a speed dial to call the monitored extension regardless if any event is taking place at the monitored extension. To carry out another BLF event-dependent operation, the user must invoke the corresponding feature key item on the screen and select the appropriate soft key option. The feature key item also provides more details of each event, such as the caller ID of the remote party.

Icon	BLF Event	Description	Available Operation	LED Pattern
	Ringing	Monitored extension is ringing	Answer the call. This operation is known as *Directed Call Pickup*	Fast blinking red
	Busy	Monitored extension is on a call or making a call	Barge in to either a) fully participate in the call or conference, or b) listen to the conversation without talking, or c) listen to the conversation but talk only to the monitored extension (a.k.a. coaching or whispering). There can be other variations along these lines.	Steady red
	Holding	Monitored extension is holding one or more calls	Resume and take over the call	Slow blinking red
	Call Parked	A call is parked against the monitored extension	Pickup the call from the parking slot	Periodic short blink in red
	Idle	Monitored extension is idle	Make or transfer a call to the extension	Steady green

Call Park and Call Pickup

Call Park and Call Pickup (Call Retrieval) are complimentary operations very much like call hold and call resume, except the pickup (vs. resume) operation can be carried out at extensions other than the one that parks (vs. holds) the call. Generally speaking, a "parking lot" for calls with many slots can be setup at the soft switch or PABX such that a call may be parked at an unoccupied slot from one extension and picked up by the same or another extension from the same slot.

Each parking slot can hold one call and is uniquely identified with a numeric ID, such as 001, 1234, 88912, etc. While a user is talking on the phone to someone, they can choose to park the call at an unoccupied slot and later have someone else or pick up the call themselves from the same slot. From a usability standpoint, it may be inconvenient for the user to first find out which parking slots are available, before parking a call. A simple solution is to let the system pick an available slot to park the call, perhaps in a certain range if requested by the user. The latter case can be referred to as "valet parking", while the first case "self parking".

The problem with valet parking is that the system still needs to tell the user which parking slot ID is selected in order for the call to be picked up. In some systems this is done by showing the parking slot ID on the phone screen.

Another strategy for choosing a parking slot is to use the parking phone's extension as the parking slot identifier, for easy memorization. You can think of each extension as having an associated parking slot, such that one call can be *parked against each extension* that has this resource enabled. When the user attempts to park a call, you can park against the current extension the call is on by default or against another extension by explicitly entering the target extension. Similarly you can pick up a call that is parked against your current extension or against another extension by explicitly entering the target extension.

In applications where most users normally park no more than one call at a time, each user can just park against their own extension, avoiding parking slot collisions. With this approach, some BLF implementations also include parking slot monitoring when monitoring an extension.

Shared Line Appearance (SLA) and Shared Call Appearance (SCA)

A Shared Line is a service account or extension that is installed on a group of phones, such that if any phone is using that extension, other sharing phones will be notified. There can be multiple simultaneous calls on a shared line. The maximum allowed simultaneous calls on a shared line will typically be fixed. Each call on a shared line is called a Share Call Appearance (SCA) and is sometimes referred to as a Bridged Line Appearance (BLA). If your phone has a shared line configured as one of the services, it should have as many Call Keys defined on the phone as are bound to that service. SCAs of a shared line are ordered with an index $1-n$ as SCA1, SCA2, SCA3, ... SCAn, where n is the maximum number of calls permitted for that line. On the OBi1000, the SCAs are assigned sequentially in ascending order according to the VLK index of the corresponding Call Key bound to the shared line. For example, suppose a shared line with 4 SCAs is configured on a phone with VLK1, VLK3, VLK7, and VLK8 assigned as the 4 Call Keys bound to that line, then the calls hosted on VLK1, VLK3, VLK7, and VLK8 are SCA1, SCA2, SCA3, and SCA4, respectively.

Icon	SCA State	Description	Available Operation	LED Pattern
	Seized	A sharing phone has seized the SCA to make an outgoing call		Blinking in red (30ms on/30ms off)
	Trying	A sharing phone is trying an outgoing call		Steady red
	Proceeding	A sharing phone is making an outgoing call and the called party is ringing		Steady red
	Connected	A sharing phone is on a connected call with that SCA	Barge In to monitor the conversation only or to fully participate in the conversation	Steady red
	Held	A sharing phone is on a call with that SCA and has placed the call on hold	Resume and take over the call	Slow blinking in red
	Private Held	A sharing phone is on a call with that SCA and has placed the call on private hold		Slow blinking in red (100ms on/100ms off)
	Call Parked	A call is parked against the extension	Pickup the parked call	Blinking in red (50ms on/50ms off)
	Idle	None of the sharing phones is using the SCA	Seize the SCA to make an outgoing call	Off
	Error	Protocol error		Steady amber

Intercom Calls

Intercom refers to a call with the following characteristics:
- The called phone answers automatically, usually immediately without ringing and uses the speakerphone or headset to answer the call. Typically the answering phone also plays a short beep to alert the called user right after answering the call
- The calling phone may support Push To Talk (PTT) such that the call ends as soon as the caller releases the respective PTT key on the calling phone. PTT does not apply to the called phone on the other hand; the called user talks and ends the call normally just like any other call

When an intercom call is received and answered, all other current calls on the called phone will be interrupted in the standard way, as this is a new call to be added to the foreground. With the OBi, a feature key may be assigned the function "Auto Answer On/Off" to give the user an easy way to disable auto-answering intercom calls in case they do not want to be interrupted. If Auto-Answer is turned off, the intercom call will be presented to the called phone as a call and the phone will ring normally.

Buddy List

A Buddy List is a contact list with presence information incorporated. The OBi supports Buddy Lists based on the XMPP standard and currently provides options for Gmail and BroadSoft Buddy Lists. You and your buddies must be using the same XMPP service (such as Gmail) in order to see each other. Each entry in the buddy list consists of the following information:

- **JID (Jabber ID):** Every user of an XMPP service is identified with a unique User ID called Jabber ID for historical reason. It is in the form of an email address such as: *bbking@gmail.com*
- **Display Name (optional):** The display name of the user, such as: *Benjamin B. King*
- **Phone Number (optional):** This may be a public number or an internal extension if the XMPP service is an internal service deployed within an enterprise for example
- **Status (optional):** An arbitrary text string usually entered by the user to provide further details of their current state. For example: *On a break, back at 1PM*
- **Presence, which may take one of the following values:**

Icon	Presence	Description
	Offline	The user is offline. This is also known as "invisible" in some XMPP clients
	Online	The user is online. This is also known as "available" in some XMPP clients
	DND	The user is busy and does want to be disturbed. This is also known as "busy" in some XMPP clients
	Away	The user has stepped away from the computer momentarily
	Extended Away	This user has stepped away from the computer and may take a while to return

The Buddy List App can be launched from the Main menu on the Home Screen. The picture below shows an example of a Buddy List.
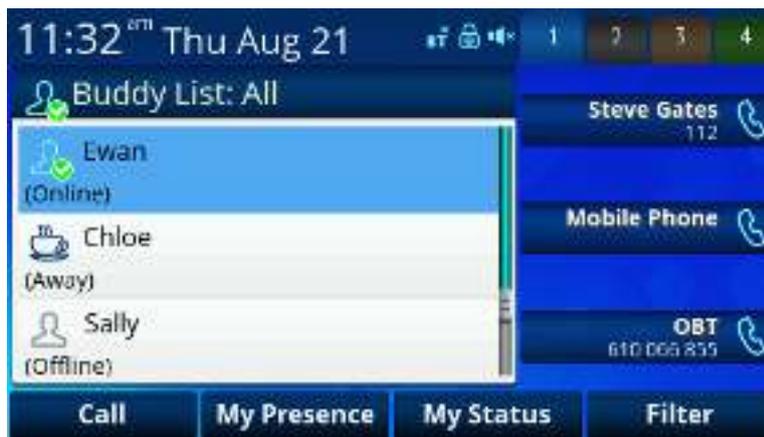
Figure 23: A Buddy List filtered by the "All" Group Filter

In addition to showing the buddy list as described above, the user has the option to set their own presence and status as seen by other users of the same XMPP service. The user sets their presence status by pressing the "MyPresence" soft key; the default value is *online.* The current Presence setting is shown as an icon displayed in the title area of the screen.

Figure 24: Setting my presence from the GUI

The user sets their status by pressing the "MyStatus" soft key - the default status is *{blank}*. Below is an example of the screen shown after pressing "MyStatus". It shows a history of status messages that the user has entered before, with the current user status message shown in the title area of the screen. The user can edit or remove an old status message, or add new ones. They can select a different message from the list, or clear the current status by pressing the "Clear" soft key.
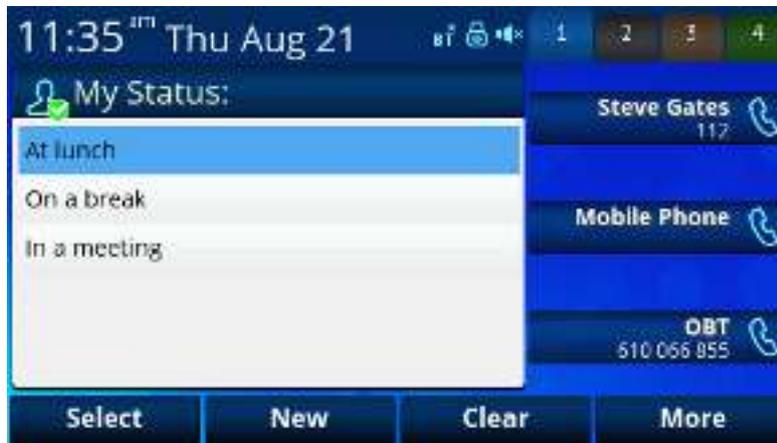
Figure 25: Setting my status from the GUI

Note that whenever the phone is in use (i.e., off-hook), the phone automatically sets the user status to "*On the phone*", with *presence = DND*. It restores to the last user set presence and status when the phone returns to idle.

Expanded Buddy List

An Expanded Buddy List may include additional contacts that do not have presence information. For those contacts, you will not see a presence icon in the respective entry in the buddy list display. This is just a matter of convenience so that you can have all your contacts consolidated in one list, with or without presence information.

Buddy Groups

A Buddy List may be divided into groups such as "Friends", "Co-workers" and so on. A contact may belong to more than one group or no group at all. By default, all contacts in a Buddy List are in the "All" group. Most Buddy List implementations also allow the user to tag a contact as "Favorite" (or "Starred"). The phone treats this as the "Favorite" Group – in addition, the user may define custom groups.

Buddy List Management

Basic Buddy List operations include:
- Add a contact
- Remove a contact
- Add a group
- Remove a group
- Add contact to a group
- Remove contact from a group
- Tag/untag a contact as a favorite
- Accept presence subscriptions (i.e. invites) from other users

The OBi1000 does not support any of these operations from the phone GUI. However, the user can perform these operations by running a PC or web client (such as Gmail) and logging in with the same account credentials to manipulate the buddy list. The phone can then pick up the changes to the buddy list in that account automatically. The phone should be thought of as a client to a cloud buddy list, with the management of the buddy list performed via the online service that hosts the buddy list.

Network Directories

A network directory refers to a directory service offered by a service provider or your company, which could be one of the services offered by the soft switch or PABX the phone is registering with. All the contacts in a network directory are stored on the server and are downloaded on demand when the Network Directory App is running. A network directory may be grouped into a number of sub-directories. For example, in the case of a BroadSoft soft switch, the network directory service comes with the following sub-directories by default:
- Group
- Group Common
- Enterprise
- Enterprise Common
- Personal

The network directory is downloaded once when the app is launched. The user may force a download after the app has launched by pressing the "Refresh" or "Refresh All" soft key. There is a "Search" function where the user can enter a search string of a name pattern (such as Obi*) and submit it to the server. The server then returns a list of entries matching the search criteria to display on the phone screen.
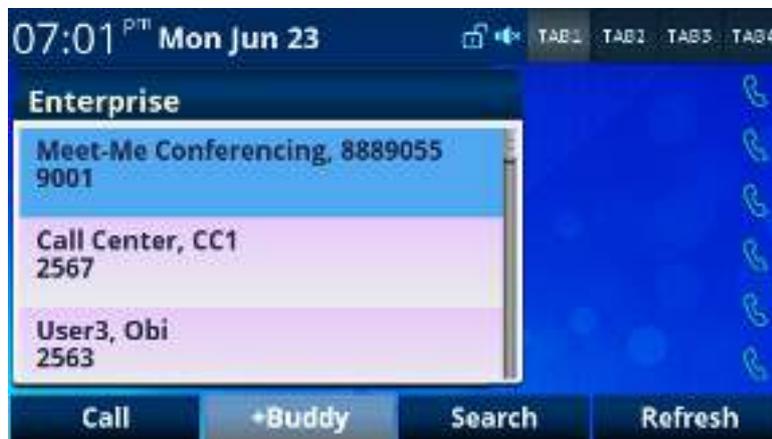
Figure 26: Snapshot of a Network Directory (showing the Enterprise sub-directory)

Call Recording Controls

Some soft switch platforms (such as BroadSoft) support call recording features during a call. When the feature is available, the phone shows one of the following call recording states in the call items of the Current Calls App:

Icon	Call Recording State	Description	Available Options
■	off	Recording has been turned off	*Rec.Start*
●	on	Recording has been turned on	*Rec.Stop, Rec.Pause*
❚❚	paused	Recording has been turned on but paused at the moment	*Rec.Resume*

The recording controls options are available only when the call is in the Connected or Holding State.

Advice of Charges (AOC)

Some soft switch platforms (such as BroadSoft) support AOC during a call. When the feature is available, the phone shows the current and final charges in the call item of the Calls App.

Call Center Features

Setting Agent State for Automated Call Distribution (ACD)

Automated Call Distribution (ACD) is the primary way a call-center distributes calls amongst a group of agents. With the OBi1000, an agent can sign on and off as well as change their state from the phone GUI. The agent can set their state to one of the following values:

- Available (to take new calls)
- Unavailable (to take new calls)
- Signed Off
- Wrapping Up (the last call)

The ACD controller should only send an incoming call to an agent whose state is "Available". An agent may change their state to "signed off" when done for the day, "Unavailable" when on a break, or "wrap up" when dealing with paperwork or data-entry tasks relating to the previous call.

While "Signed Off", the agent presses the key once to sign on and becomes "Available". While "Available", the agent presses the key once to become "Unavailable"; the agent must also enter one of the valid unavailable-reason codes (such as 11) that are defined by the Call Center admin. While "Unavailable" or "Wrapping Up", the agent presses the key once again to become "Available".

Note that agent cannot change their state to "Signed Off" or "Wrapping Up" directly by pressing the feature key. To change to these states, the agent must use the corresponding feature key menu item from the GUI (invoked by pressing and holding down the feature key), or some other means provided by the Soft Switch, PABX or call center software, such as a web portal for agents.

Disposition Code

A disposition code is used to mark a call with a particular code, which is then passed on to the soft switch, PABX or call center software for further handling. An application of a disposition code could be where an agent is talking to a customer and wants to flag that customer for a particular sales promotion or perhaps even to flag that customer as having a short temper. Your phone's administrator configures the disposition codes in use and the events or activities these relate to.

A disposition code can be entered by an agent for the current call that is still ongoing, or for the last call that has just ended. For the first case, the agent selects the "Dispose Code" soft key that is available when the call is in the connected state. The agent then enters the code and submits it while talking to the caller. For the latter case, the agent can press the feature key that has been assigned the "Disposition Code" function (by the phone admin) right after the call, enter and submit the code.

Customer Originated Call Trace

An agent can start a call trace upon request by the caller during the call by pressing the "Trace" soft key, which is available when the call is in the Connected State.

Escalation

An agent can escalate the current call to a specific supervisor or the predefined default supervisor by selecting the "Escalate" soft key that is available when the call is in the Connected State. After pressing "Escalate", the agent has a chance to enter a specific supervisor extension, or skip that to use the default supervisor extension.

Call Center Information

When the call center sends a call to the phone, it may include some basic information about the call center. Such information, if available, is displayed with the Ring Alert message for the incoming call. The call center information that can be displayed is:

- Call Center name
- Call Center user ID
- Average waiting time
- Number of calls in the queue

Guest Login/Logout for Hot Desk environments (Hoteling)

This feature is also known as a Hoteling or Hot Desk feature on some Soft Switches and PABXs. The phone may be set up to be used temporarily by a guest, such as a visiting employee or temp worker or by multiple workers who share the same desk, such as in shift-work and rostered/rotored environments. To use this feature, the admin must assign a feature key with the Hoteling function. The guest can press the hoteling feature key, enter their user credentials and start using the guest phone for as if it were their own extension until logged out (either manually or via server-triggered logout).

Emergency Calls

Your phone admin may designate one or more numbers as emergency numbers. When the phone detects that you are calling one of those numbers, it applies the emergency call treatment to that call for the duration of the call:

- You cannot hold or end the call; only the remote party can end it
- You can start the call with the headset; but you cannot switch to use a headset subsequently after the call is started. You can only switch between the handset and speakerphone
- You cannot start or resume any other calls
- You cannot press the Home or Cancel key to get to the Home screen to start another App
- Call waiting is disabled
- All the feature keys are disabled

Call Diversion History

Sometimes an incoming call is sent to the user extension after being call forwarded one more times at other extensions. Each of these call forward instances is referred to as a diversion. When the soft switch sends the incoming call to the users phone, it may include the diversion history of the call, if any. OBi1000 shows the call diversion history in the call item of the Calls App, if available.

User Settings Synchronization with the Service Provider

There are some service provider features that have settings configurable by the end-user. For example,

- Call Forward: User can enable or disable the service, or set the call forwarding number from the phone GUI, or using a feature key or soft key
- Do Not Disturb: User can enable or disable the service from the phone GUI or using a feature key or soft key
- ACD Agent State: User can sign on/off or change the available/unavailable state from the phone GUI or using a feature key or soft key

When the phone starts up, it loads the latest settings for the respective features from the server (the Soft Switch or PABX). When a setting is changed by the user, the phone automatically syncs back the new value with the server and the server then normally sends down the latest setting. The phone always takes the feature settings sent by the server and not the values submitted by the user. If the settings entered by the user are not acceptable by the server, they will not take effect and the phone GUI will not reflect any changes in the settings either.

6   OBi Phone Apps

The functionalities of the OBi1000 series phones are organized into OBiPHONE Apps. Most Apps are launched from the Home Screen. We talk about the Home App and the Home Screen in the next section. Each App is manifested as one or more levels of GUI screens. The first level, or landing screen, is the screen that shows when the app is launched and will typically contain the base functionality of the app. When a user selects an item in the first screen that has additional information or configurable items to display, a 2nd level screen, will pop up and cover the previous GUI screen. If further GUI are nested from this level onwards, each level of GUI screen will cover the previous.

Settings App

The landing screen shows a list of settings categories and a summary of each category within each entry, as shown in the following screenshot.
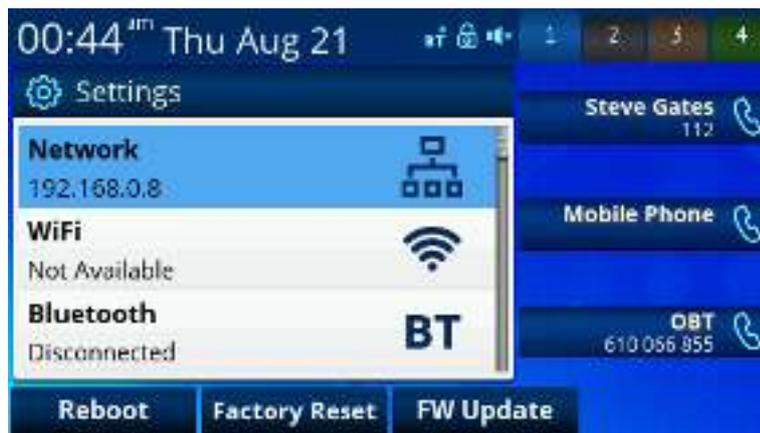
Figure 27: The settings app

Available Soft Key options:

- **Reboot**: Reboot the phone
- **Factory Reset**: Revert all settings to factory installed values
- **FW Update**: Check whether there is newer phone firmware available and present option to user to update

The following is a list of all settings categories:

Settings Category	Summary Information
Network – Everything that is related to the Ethernet connection	Current IP Address
WiFi – All settings relating to WiFi, including scanning for nearby Access Points	Shows if WiFi is disabled, or enabled. And if enabled, whether and which Access Point it is connected to
Bluetooth – All settings relating to Bluetooth, including scanning for nearby Bluetooth devices	Shows the external Bluetooth device that the phone is currently connected with
Storage (File Explorer) – Explores the contents of an attached USB drive and the phone's internal user storage	Shows if a USB flash drive is attached or not
(Virtual) Line Keys – Shows the configuration and status of the 24 (12 on the basic model) virtual Line Keys	
Programmable Keys – Shows the configuration and status of the 8 programmable Keys	
Sidecar 1 – Shows the configuration and status of the 16 feature keys	Shows if the sidecar is connected or not
Sidecar 2 – Shows the configuration and status of the 16 feature keys	Shows if the sidecar is connected or not
Voice Services – Shows a list of the Voice Services on the phone	
Device Admin – Things such as Admin password, Syslog settings, etc.	
Lock/Unlock Admin Settings – Lock the admin settings with the admin password if it is currently unlocked. Or unlock the admin settings by entering the admin password if it is currently locked. After locking, user must enter the admin password in order to access the admin level settings (Device Admin and Voice Services categories)	

Network Settings
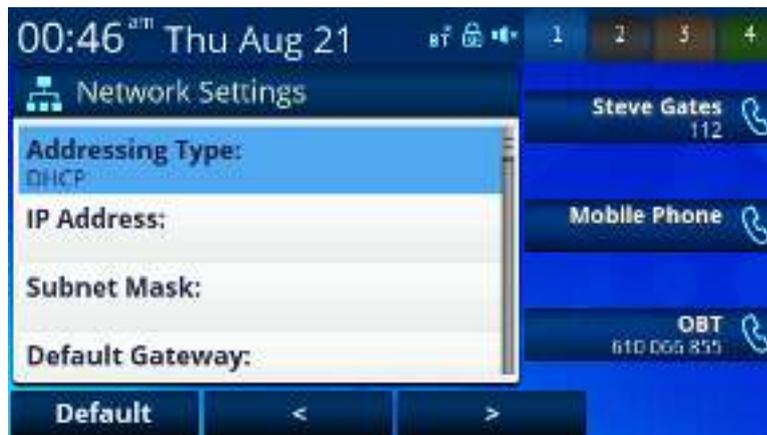
Figure 28: A view of network settings

Network Setting	Description	Example Values
Addressing Type		DHCP
IP Address		192.168.15.127
Subnet Mask		255.255.255.1
Default Gateway		192.168.15.1
DNS Server 1		8.4.4.4
DNS Server 2		4.2.2.2
DNS Query Order		DNS Server 1, DNS Server 2
DNS Query Delay		2 (seconds)
PPPoE Account Name		

PPPoE Server Name	
PPPoE User Name	
PPPoE Password	
VLAN Enable	Disabled
VLAN ID	10
VLAN Priority	1
NTP Server 1	pool.ntp.org
NTP Server 2	
Local Time Zone	GMT-08:00(Pacific Time)
Daylight Saving Time Enable	Enabled
Daylight Saving Time Start	3/8/7/2 (i.e. 2nd Sunday of Mar 2 am)
Daylight Saving Time End	11/1/7/2 (i.e. 1st Sunday of Nov 2 am)
Daylight Saving Time Diff	1 (hour forward)

WiFi Setup

Below is a snapshot of the WiFi setup screen:
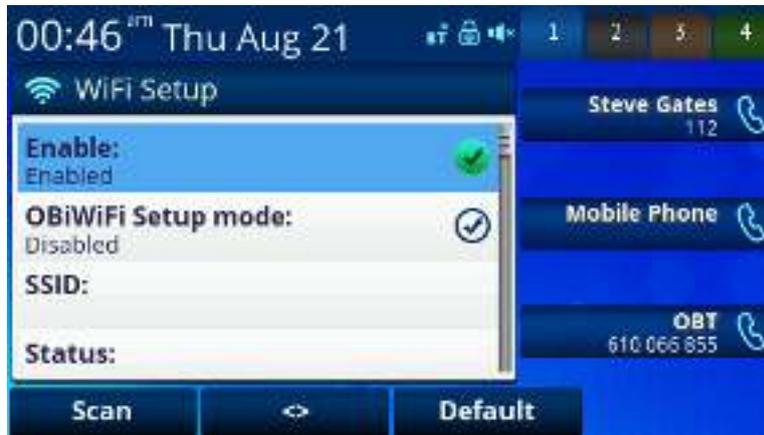
Figure 29: WiFi Setup screen

Available Soft Key Options:
- **Scan**: Start a WiFi Scan of APs that are in range

WiFi Settings	Description	Example Values
Enable	Enable/disable WiFi operation	Enabled
OBiWiFi Setup Mode	Enable/disable the OBiWiFi setup method where the phone acts temporarily as an AP so that a computer may connect with it over WiFi and configure the WiFi settings on the phone's Native Web Portal	Disabled
SSID	If connected to an AP, this shows the SSID of the AP. Read only.	myOfficeAP
Status	Connection status with the AP. Either "Connected" or "Disconnected". Read only.	Connected
Security	If connected to an AP, this shows the security method currently used to connect to the AP. Read only.	WEP
Signal Strength	If connected to an AP, this shows the signal strength from the connected AP. Read only.	4

WiFi Scan Results

Below is an example of the results of a WiFi Scan:

Figure 30: WiFi Scan screen

Available Soft Key Options:
- Rescan: Refresh the wireless network scan results
- Connect: Connect to the highlighted AP. A dialog box then pops up to let user enter the password to connect to the AP:
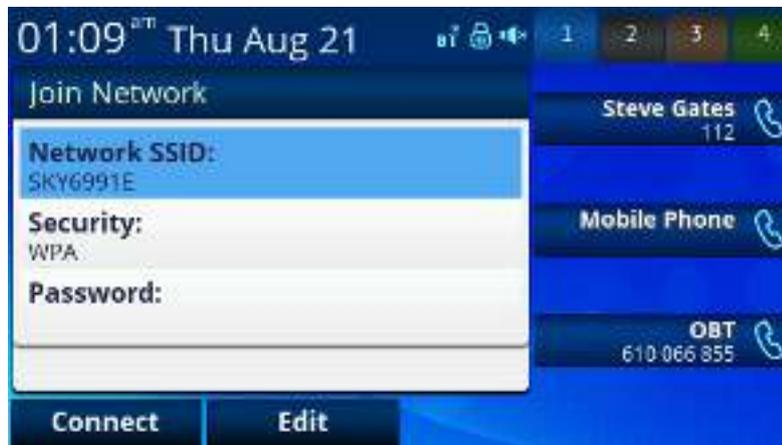
Figure 31: Connect to AP screen

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Bluetooth Setup

Bluetooth Setup allows a user to pair the OBi Phone with a mobile phone or with a Bluetooth headset. When a mobile phone is paired with the OBi via Bluetooth, inbound calls to the mobile phone will also be directed to the OBi phone – you can answer a call and add it to a conference or otherwise handle the call just like you would any other on your OBi phone. Contacts can also be copied via Bluetooth from the mobile phone to the OBi. Additionally, a call key can be programmed for your mobile device, allowing you to dial out via your mobile phone from your OBi phone when it is paired via Bluetooth. The superior audio acoustics of the OBi phone means you can have much clearer and richer conversations than via the mobile phone's built-in speaker.

To connect the OBi to a mobile phone:
1. Select "Pair with Mobile Phone" from the pairing mode option
2. Select discoverable – this will make the OBi visible to nearby devices for 2 minutes
3. On the mobile phone, go to Bluetooth setup and you will see "OBiPhone xxx" (where xxx is the last 3 digits of your OBi number). Select this device to connect to the OBi.

Figure 32: Bluetooth Setup screen

Available soft key options:
- <>: Toggle the highlighted on/off setting
- Default: Revert the highlighted setting to default value
- Scan: Scan for all nearby discoverable Bluetooth devices – this option will only show when Pairing Mode is set to "Pair with Headset" – press scan to find and pair with your Bluetooth headset

A list of all Bluetooth Settings:

Bluetooth Settings	Description	Example Values
Enable	Enable/Disable Bluetooth operation on the phone	Enabled
Status	Bluetooth connection status which can be: - Connected: connected to a Bluetooth device - Disconnected: not connected to any Bluetooth device - Not Available: Bluetooth feature is not available Read only.	Connected
HSP AudioGateway (Pair with headset)	Enable/Disable AudioGateway Bluetooth operation: - If enabled, the phone will pair/connect with Bluetooth headsets only. This allows the user to use a connected Bluetooth headset for calls - Otherwise, the phone will pair/connect with mobile phones only. This allows the use of the connected mobile phone as a voice gateway for the phone to make/receive calls on the underlying mobile carrier	Pair with headset Enabled
Discoverable	Make the phone discoverable for 120s	Not Discoverable

Storage

The Storage settings allow user to copy files from a USB drive to the phone's Internal storage. This can be used to add new background pictures or ringtones to the phone for example. Note that the phone neither allows copying files from its internal storage to a USB drive, nor copying files between two USB drives (one on each USB port). Below is an example of the first level screen of the Storage settings.
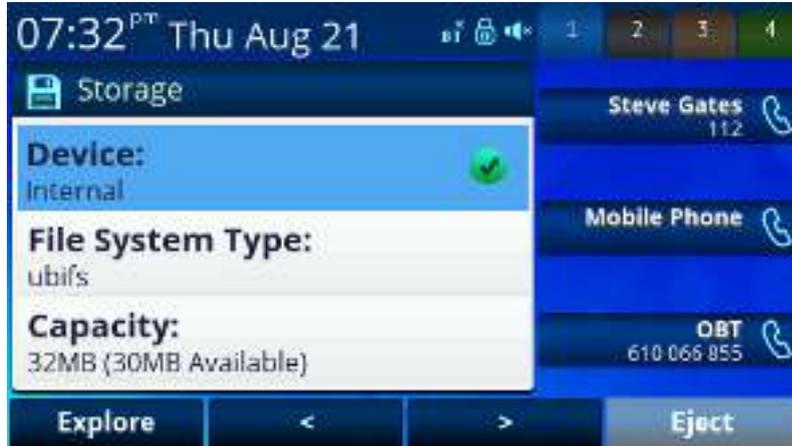
Figure 33: Storage settings screen

Available soft key options:
- **Explore**: Explore the file system of the selected storage device
- **Eject**: Eject the connected USB drive so it can be unplugged safely

Storage Setting	Description	Example Values
Device	Select the storage device to explore using the > and < soft keys. The choices are: - Internal - USB Port 1 - USB Port 2 If there is a working storage device connected to a USB port, it will show a Green icon when that USB port is selected. Otherwise a Gray icon is shown	Internal
File System Type	The type of file system used in the selected storage device. Read only.	NTFS
Capacity	Shows the total capacity of the selected storage device, while the amount of free space remaining in parentheses	33MB (10MB Available)

The user can select "Explore" to browse and copy files from the selected storage device:

Figure 34: Explore files on storage device

For example, to copy a wallpaper image from a USB key to the phone, you would first explore the contents of the USB key and locate the item you wish to copy, then press select. Next press copy and navigate to the location where you wish to paste the item. For example, you would want to navigate to (and then open) the folder called "*backgnd*" before pasting your custom wallpaper for use on the OBi Phone.

Voice Services

Voice Services presents the settings available to configure a voice service. These settings are protected by the same admin password as the phones native web portal (NWP) – by default this is admin for both username and password. The user will be prompted to enter this password in order to see the settings. The first level of Voice Services settings is a list of sub-categories within the Voice Settings category, as shown in the following table:

Voice Services Settings Sub-Category	Summary
SP1	Shows if the service is configured, up or down, which ITSP profile it based on, and the account user-id. For example: *Up, ITSP Profile A, 2404982565*
SP2	See SP1
SP3	See SP1
SP4	See SP1
SP5	See SP1
SP6	See SP1
ITSP Profile A	Shows the ProxyServer value configured in the profile. For example: *sip.myisp.com*
ITSP Profile B	See ITSP Profile A
ITSP Profile C	See ITSP Profile A
ITSP Profile D	See ITSP Profile A
ITSP Profile E	See ITSP Profile A
ITSP Profile F	See ITSP Profile A

Below is a sample screen of Voice Services:
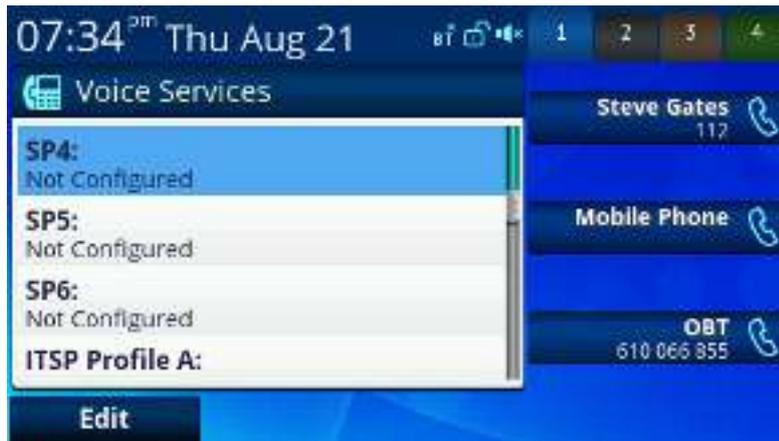
Figure 35: Voice services screen

Each ITSP Profile consists the following list of settings:

ITSP Profile {x} Settings	Description	Example Value
Signaling	Choose the signaling method to use with this service provider. Choices are: - SIP - Google Voice	SIP
ProxyServer	The SIP Proxy Server (name or IP address). Not used if Signaling is Google Voice	sip.myisp.com
ProxyServerPort	The listening port at the SIP Proxy Server. Not used if Signaling is Google Voice	5060
ProxyServerTransport	Select the transport protocol for SIP messages. Choices are: - UDP - TCP - TLS Not used if Signaling is Google Voice	UDP
OutboundProxy	The SIP Outbound Proxy Server (name or IP address). Not used if Signaling is Google Voice	
OutboundProxyPort	The listening port at the SIP Outbound Proxy Server. Not used if Signaling is Google Voice	5060
RegistrationPeriod	Interval in seconds between SIP REGISTER renewal	60
ProxyRequire	A text string to put into a SIP Proxy-Require header when sending SIP messages to the Proxy Server. Not used if Signaling is Google Voice.	
DnsSrvAutoPrefix	Enable/Disable auto prefix when using DNS SRV to resolve ProxyServer or OutboundProxy. Not used if Signaling is Google Voice.	Enabled
DiscoverPublicAddress	Enable/Disable private-to-public address substitution in outbound SIP messages, when public address is discovered. Not used if Signaling is Google Voice.	Disabled

Each SP Service consists of the following list of settings:

SP{n} Service Settings	Description	Example Values
Enable	Enable the use of this service (line)	Enabled
DisplayLabel	An alternative text string to show on screen instead of the default service name (such as SP3 or GoogleVoice6)	Office
DisplayNumber	An alternative text string to show on screen instead of the service account username	Sales
InboundCallRoute	Inbound call route parameter that tells the phone how to handle an incoming call based on the caller's number. See the phone admin guide for further explanations	{ph}
RegisterEnable	Enable/Disable SIP Registration with the service provider. Not used if Signaling is Google Voice	Enabled
UserAgentPort	The local SIP User Agent listening port. Not used if Signaling is Google Voice	5062
SipDebugOption	Select a SIP debug option. Choices are: - Disable (i.e., do not log any SIP messages) - Log All Messages - Log All Except REGISTER Messages Not used if Signaling is Google Voice	Log All Messages
SipDebugExclusion	A comma separated list of SIP methods to exclude from the SIP debug logs. Not used if Signaling is Google Voice	notify,subscribe,options,ping
ServProvProfile	Select a service provider profile to use for this service. Not used if Signaling is Google Voice.	A
AuthUserName	The username to be used for authentication	4089992345
AuthPassword	The password to be used for authentication	****
URI	The username to be used for SIP registration, if it is different from the AuthUserName. Not used if Signaling is Google Voice.	
CallerIDName	The display name to use for outbound Caller ID. Check with your service provider if they take Caller ID name from a SIP message. Not used if Signaling is Google Voice.	Joe T. Smith
MWIEnable	Enable/Disable MWI (Message Waiting Indication) feature. If enabled, phone plays stutter tone instead of normal dial tone when there are new messages in the mailbox associated with this service.	Enabled
VMWIEnable	Enable/Disable VMWI (Visual Message Waiting Indication) feature. If enabled, phone turns on the message waiting lamp on the phone when there are new messages in the mailbox associated with this service.	Enabled
AnnonymousCallBlockEnable	Enable/Disable Anonymous Call Block feature for incoming calls on this service only. Not used if Signaling is Google Voice	Disabled
AnnonymousCallEnable	Enable/Disable Anonymous Call feature for outgoing calls on this service only. Not used if Signaling is Google Voice	Disabled
DoNotDisturbEnable	Enable/Disable Do Not Disturb feature for incoming calls on this service only.	Disabled

(Virtual) Line Keys

Figure 36: Configure line keys screen

Line Keys	Value
Key 1	Shows the assigned function, the assigned service, and number, and status. See table called *Line Key*) for details on the available function and status per function
Key 2	See Key 1
…	See Key 1
Key 24	See Key 1

Programmable Keys

There are 8 items in the list; one for each programmable key. The contents for each is similar to those in the Line Keys
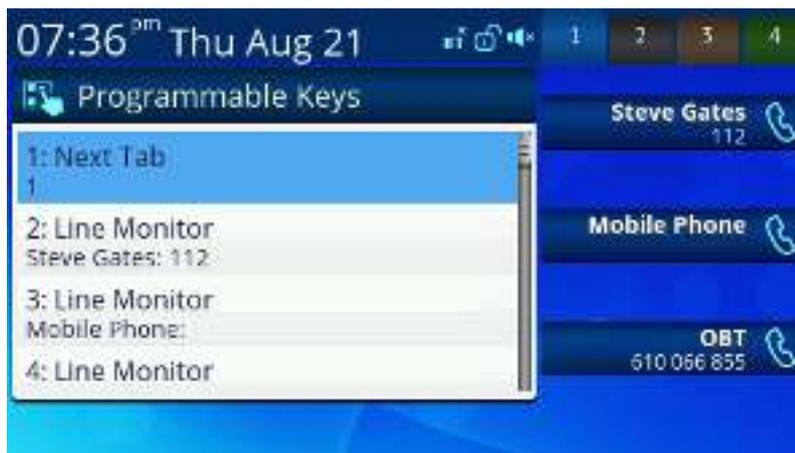
Figure 37: Programmable keys screen

Sidecar 1 and 2

There are 16 items per Sidecar list; one for each Sidecar key. The content for each is similar to those in the Line Keys.

Figure 38: Sidecar setup screen

Device Admin

Device Admin settings are protected by the same admin password for accessing the phone native web portal (NWP) – by default this is admin for both username and password. The following is a list of the Device Admin settings:

Device Admin Settings	Description	Example Value
Web Server Port	The NWP listening port	80
Web Admin Password	The admin password to access the NWP as the admin (with the username admin)	*****
Web User Password	The user password to access the NWP as the user (with the username user)	*****
Syslog Server	The name or IP address of a syslog server for capturing debug messages sent by the phone	192.168.15.225
ITSP Provisioning Method	Select an ITSP Provisioning Method. Choices are: - Disabled - System Start - Periodically See the phone admin guide and provisioning guide for more explanations	System Start
ITSP Provisioning Interval	Interval in seconds between periodic downloads of phone configuration file from the provisioning server	3600 (seconds)
ITSP Provisioning Config URL	Configuration file URL or provisioning script. See the phone admin guide and provisioning guide for more explanations	https://prov.myitsp.com/obi$MAC.cfg
Auto Firmware Update Method	Select an automatic Firmware Update method. Choices are: - Disabled - System Start - Periodically See the phone admin guide and provisioning guide for more explanations	Disabled
Auto Firmware Update Interval	Interval in seconds between periodic check for new firmware from the firmware update server	3600 (seconds)
Auto Firmware Update URL	Firmware file URL or provisioning script. See the phone admin guide and provisioning guide for more explanations	http://prov.myitsp.com/firmware/obi1000-5-0-1-457.fw

Lock/Unlock Admin Settings

There are no settings under this category. This is solely for locking/unlocking the admin level settings. The padlock icon shown on the status window indicates if the admin settings are currently locked. Once unlocked, the settings will stay unlocked until they are locked again by choosing the same Settings item, or when the phone restarts.
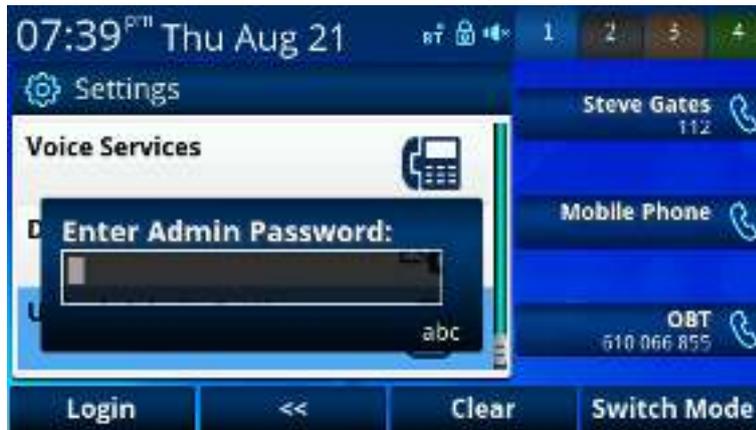
Figure 39: Unlock admin dialog box

Call History App

The Call History App contains 4 call history listings, as shown in the following picture:

Figure 40: Call history app listing call types

The four types of call history are:
- **Missed Calls**: Incoming calls that the user did not answer
- **Received Calls**: Incoming calls that the user has answered
- **Outgoing Calls:** Calls that the user made from this phone
- **All Calls**: All of the above mixed into one single list

The "Clear List" option is to remove the entire highlighted list. Each list is arranged in reverse-chronological order (newest first). Below is a sample of the *All Calls* call history. Each entry shows the Name and Number of the caller, the time of the call, the duration of the call, and an icon that indicates the type of the call (missed, received, or outgoing).
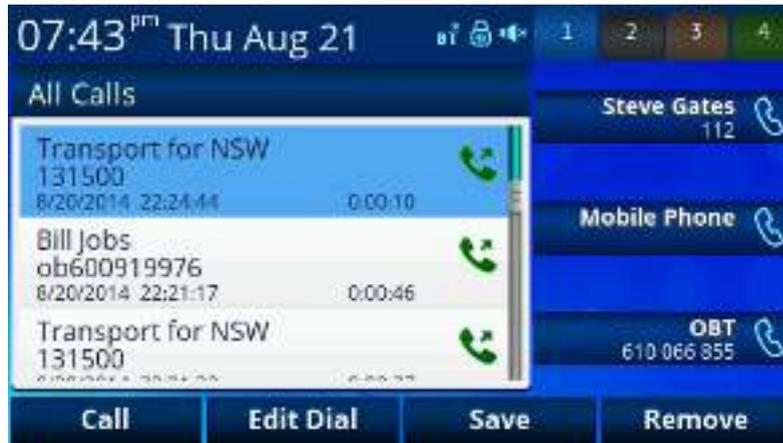
Figure 41: All calls showing options

Contacts App

Below is a sample screen of the Contacts App. It has three tabs on the top that may be selected using the left/right navigation keys.
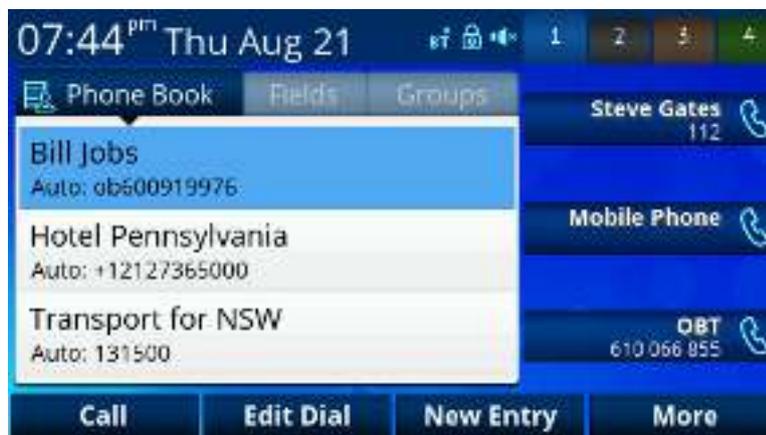
Figure 42: Contacts app main screen

The soft key options under the Phone Book tab are:
- **Call**: Call the highlighted entry
- **Edit Dial**: Edit the stored number before dialing – for example, to insert a "9" for an outside line or "**3" to direct via SP3
- **New Entry**: Add a new entry
- **More**: Shows more options:
    o **Group Filter:** Enable/Disable filtering of list based on groups. Press and hold down the key to show a list of the groups that are currently enabled in the filter. User can toggle the choices for the highlighted group on this table. Here is a sample screen of the Phone Book Filter.
    o **Import:** Import contacts, for example from a mobile phone that is connected via Bluetooth to the OBi or via a CSV file on a USB stick inserted into the OBi
    o **Export:** Export the Phone Book to a CSV file on an attached USB drive
    o **Sync:** Synchronize the Phone Book with OBiTALK

The entries are sorted alphabetically by name; a user can type in a single letter to scroll to the first entry with a name that starts with that letter. Enter 2 for A, 22 for B, 222 for C, 3 for D, 33 for E, and so on. Text entry via the OBi phone numeric keypad is performed in the same fashion as texting (typing an SMS) on a mobile phone via it's numeric keypad.

Under the "Fields" tab is a list of phone book fields that can be included/excluded from the phone book display. Here is a sample screen of the available fields:
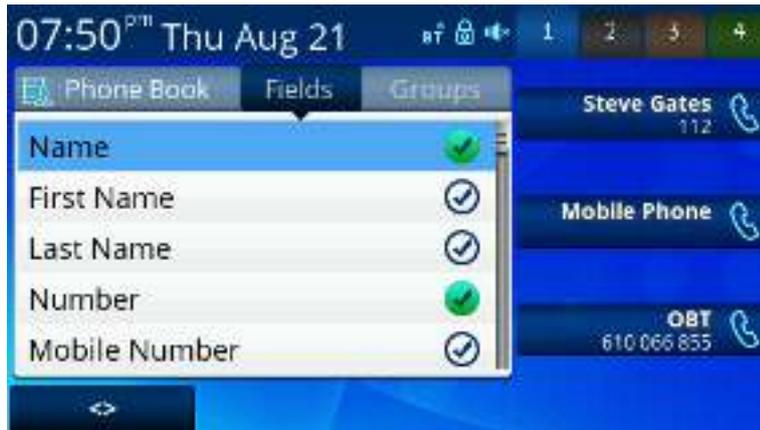
Figure 43: Fields tab showing available user-selectable fields

Under the Groups tab is a list of groups defined by the user. The user may add or remove groups by selecting the soft key options.
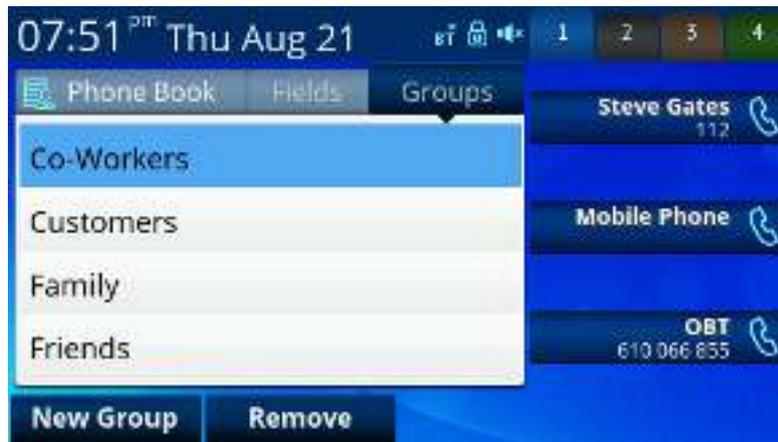
Figure 44: Groups tab showing a list of defined groups

The user highlights an entry under the Phone Book tab and presses the Enter key to view or edit the details of the selected entry. Only the fields that are enabled under the Fields tab are shown, as seen in the following picture:
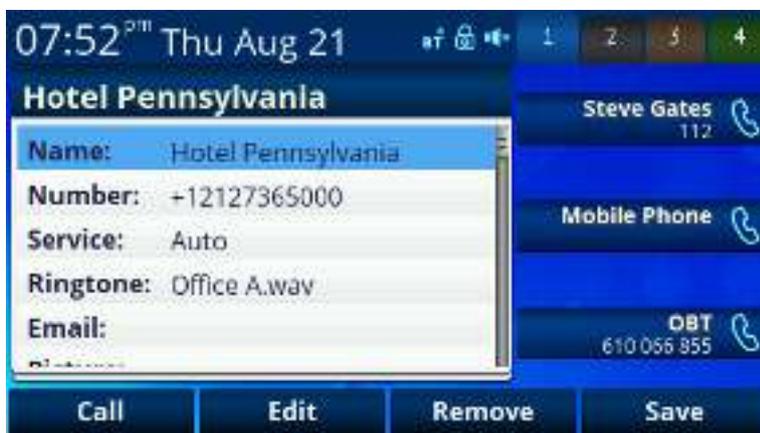
Figure 45: Details of selected entry

Preferences App
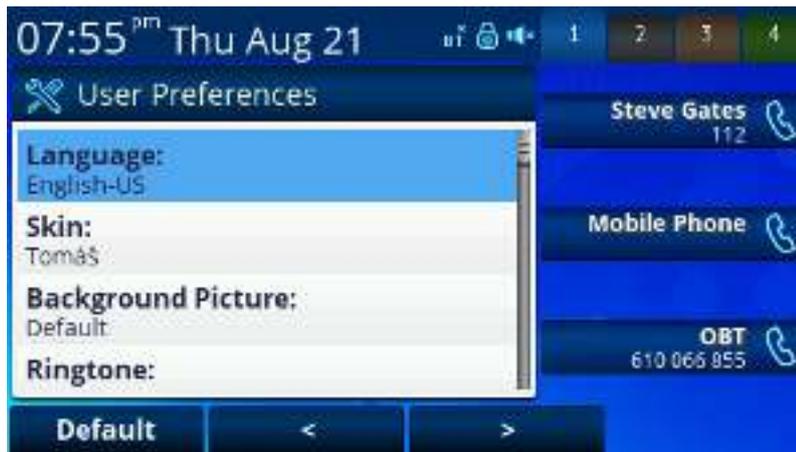
Figure 46: Main screen of Preferences App

Preferences	Value
Background Picture	/obi/themes/backgnd/pebbles.png
Default Ringtone	candlestick.wav
Screen Saver	Enabled
Screen Save Delay	10 (seconds)
Screen Saver Type	Slide Show
Screen Brightness	7
Preferred Audio Device	Speaker
Preferred Headset Device	3.5mm Headset
Do Not Disturb	Disabled
Do Not Ring	Disabled
Call Forward	Enabled
Call Waiting	Enabled
Block Anonymous Call	Disabled
Anonymous Call	Disabled
Auto Answer Intercom	Enabled
Join Page Group 1	Disabled
Join Page Group 2	Disabled
Ringer Volume	3
Speakerphone Volume	5
Speakerphone Mic Gain	1
Handset Volume	2
Handset Mic Gain	1
RJ9 Headset Volume	5
RJ9 Headset Mic Gain	3
3.5mm Headset Volume	3
3.5mm Headset Mic Gain	1
BT Headset Volume	2
BT Headset Mic Gain	1

Product Information App

The product information app displays relevant data about your OBi phone. This includes model number, OBi number, software version and so forth.
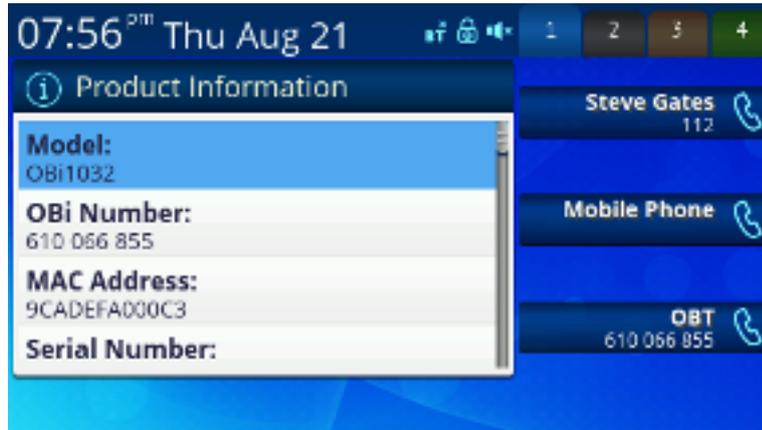
Figure 47: Product information app

Product Information	Example Values
Model	OBi1062
Serial Number	88K01NA00ZK1
OBi Number	600 651 103
MAC Address	009C ADEE 1234
Software Version	5.0.1 (Build: 1234)
Hardware Version	1.1
OBiPHONE XML Version	1.0.3

Dialog Boxes

Dialog boxes are simple, single-screen popup apps to display a short message and/or to collect input data from the user. The following dialog boxes are used.

Input Dialog

This dialog is to ask for user input, with a short title that indicates the information being requested, such as: "Enter Admin Password". A small text icon shown at the lower right bottom indicates the current input mode. There are four input modes supported:

- **abc**: Alphanumeric input with no assumption about capitalization
- **Abc**: Alphanumeric input with the assumption that the 1st character of every word should be capitalized
- **123**: Numeric input only (0-9, *, and #)
- **IPv4**: An IP address, such as 192.168.15.123

Input letters are entered using the number keys (0-9, * and # keys). When the input mode is abc or Abc, the alphanumeric symbols can be selected from a short horizontal symbol menu shown on the screen by:

- Pressing the same key to move the highlight on the menu
- Wait 1s or press another key for the highlighted symbol to be entered

The symbol table is different for each input key. For example, 2 = 2abcABC, 3 = 3defDEF, etc. The picture below shows a typical input dialog.
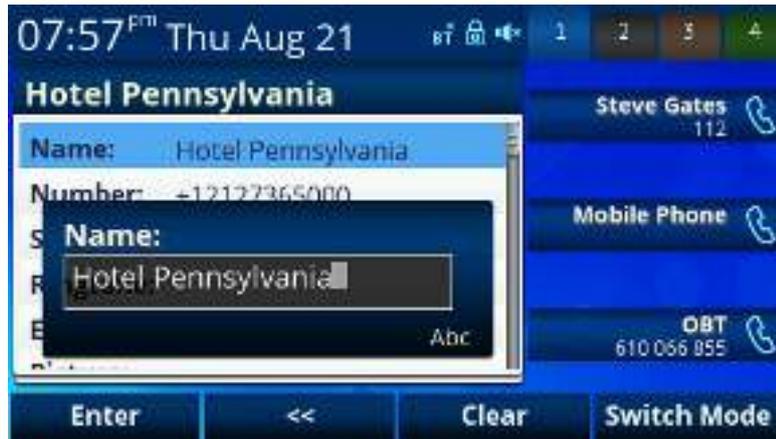
Figure 48: Add name dialog

The soft keys have the following options:
- **Enter** (or Save): Accept the current input
- **<<** : Backspace / delete: Deletes the preceding character
- **Clea**r: Clear the input value (ie back to blank text entry point)
- **Switch Mode**: Change the input mode by cycling through abc, Abc, 123, and IPv4

The user can cancel the input operation by pressing the ⤺ back key. In many cases, the user can also press the OK key to accept the current input.

Dial Dialog

This is a special input dialog for the user to dial a number; it has all the elements of a generic input box. There are two flavors of dialing:
- Off hook dialing: This is the normal kind where the user goes off hook or turns on the speakerphone first before dialing the first digit. Dial tone will be played by the phone before the first digit is entered.
- On hook dialing (a.k.a. pre-dialing): User dials the number first and then goes off hook, or turns on speakerphone, headset, or presses one of the call keys or line keys to start the call.

The Dial Dialog itself looks the same in both cases. The audio speaker icon on the status bar will indicate whether this is off-hook dialing or on-hook dialing
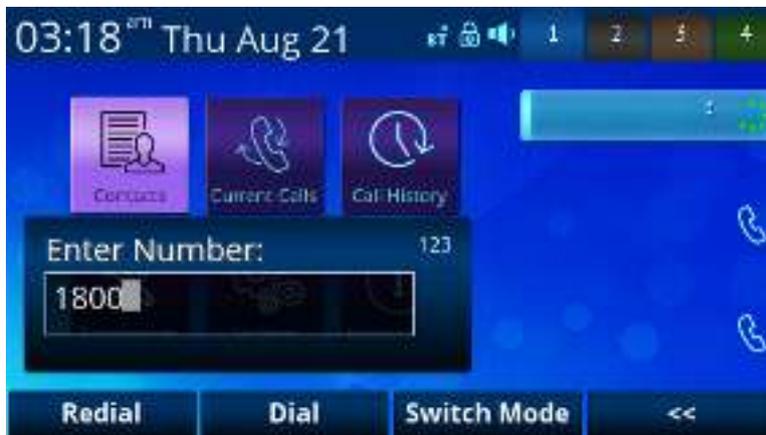
Figure 49: GUI showing a Dial Dialog during off-hook dialing, where the speakerphone is being used

Notification/Warning Dialog

This dialog pops up to show the user a short notification message, as shown in the example below. The user can press the ↩ back key or the OK soft key to dismiss the dialog.

Figure 50: Display of a notification dialog

Confirmation Dialog

This dialog pops up to show the user a short message and request confirmation from the user before proceeding with a certain operation. Here is an example that asks for confirmation before proceeding with a Factory Reset. The user can press OK to confirm or cancel to abort. User may also press the ↩ back key or the Home key to cancel the operation.

Figure 51: Display of confirmation dialog

Audio Volume Settings

Audio Volume Adjustment is a special app that is invoked automatically anytime the user presses the Volume Up or Volume Down Key. The type of audio volume to adjust is based on the context in which the app is invoked. If the speakerphone is on, then speaker volume would be adjusted. If headset is on, then headset volume would be adjusted. If handset is being used for a call, then handset volume would be adjusted. If there are no calls or all calls are either in Holding or Ringing state, then ringer volume would be adjusted.

Figure 52: Volume change pop-up dialog shown on screen

Utility Apps

Utility apps are simple that are used as part of another App

Picture Picker

This app lets user select a picture from a list of picture files stored in an internal folder. Below is a screenshot of the Picture Gallery App.
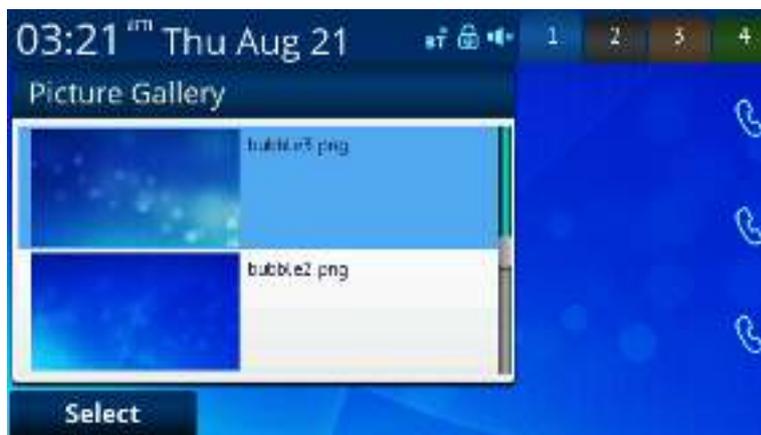
Figure 53: Picture gallery utility app

Ringtone Picker

This app allows the user to select a ringtone from a list of ringtone files stored in an internal folder. The soft sey offers options to let the user play or stop the highlighted ringtone
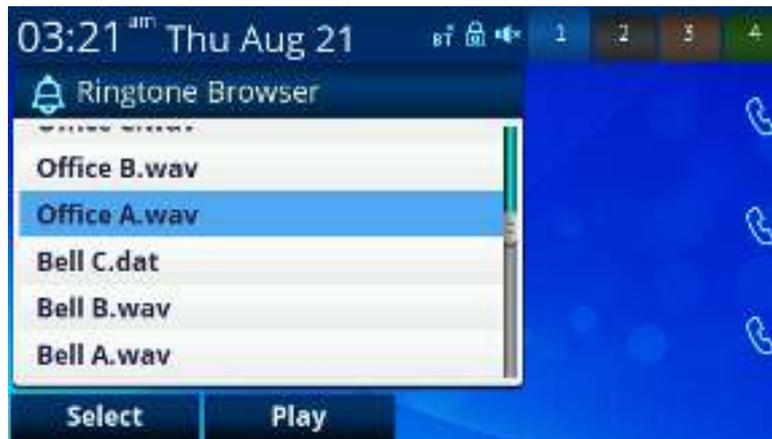
Figure 54: Ringtone browser

Adding a Background Picture to the Phone

You can select the background picture to show on the phone using the User Preferences App. The picture is selected from among the pictures stored in the phone's internal storage. To add you own pictures to the phone to be used as background picture, follow these steps:

1. Copy your picture to a USB memory drive. The picture must be in PNG or JPG/JPEG format. It is preferred to have a dimension of 480x272; otherwise the phone will resize it to the correct size. Resampling the image size on your computer before loading onto the phone will yield the best display results and ensure your wallpaper is displayed crisply.
2. Connect the USB drive to one of the USB ports on the back of the phone
3. On the phone GUI, go to Settings and select the Storage item
4. Under Settings/Storage, highlight the Device option and press > or < until you see the USB Port where the USB drive is connected (the icon should be green)
5. Select "Explore" soft key
6. Highlight the picture file in your USB drive and press "Copy"
7. Select the "*backgnd*" folder of the Internal device as the destination folder to copy the picture file to
8. Back to Settings/Storage and press "Eject" before unplugging the USB drive from the phone

Adding a Ringtone File to the Phone

You can select the default ringtone by using the User Preferences App. The ringtone is selected from among the ringtone files stored on the phone's internal storage. To add your own ringtones to the phone, follow these steps:

1. Copy your ringtone file to a USB memory drive. The ringtone must be in WAV format encoded in 16-bit linear PCM mono and sampled at 16000 samples/second (16kHz).
2. Connect the USB drive to one of the USB ports on the back of the phone
3. On the phone GUI, go to Settings and select the Storage item
4. Under Settings/Storage, highlight the Device option and press > or < until you see the USB Port where the USB drive is connected (the icon should be green)
5. Select "Explore" soft key
6. Highlight the ringtone file in your USB drive and press "Copy"
7. Select the "ringtones" folder of the Internal device as the destination folder to copy the ringtone file to
8. Back to Settings/Storage and press "Eject" before unplugging the USB drive from the phone

Modifying the Value of a Setting

Many of the items shown on the GUI are settings with values that may be changed by the user. The different setting value types used in the phone are described below.

Text String

- User enters a text string with an Input dialog
- For example, a Speed Dial Number is a setting of this type

Boolean

- User toggles between 2 values such as Yes/No, Enable/Disable, etc.
- For example, Do Not Disturb is a setting of this type
- A Soft Key with a special icon **<>** for the user the toggle between the 2 values (such as on/off or enabled/disabled)
- User may also press the OK key to toggle between the 2 values

Choose Among Multiple Choices

- User selects a value from a number of choices by cycling through the choices
- For example, ITSP Profile (choices are A, B, C, D, E, and F) is a setting of this type
- A < soft key and a > soft key will be available to let the user navigates forward and backward through the list of choices

Choose Value from a Range

- Very similar to multiple choices where the choice can be defined with a numeric range, such as 0 – 100
- GUI should show a slider control widget that reflects the position of the input value within the range

7   Overview of Administrative Features

The OBi1000 Series phones have a rich set of features to support local and remote device administration and provisioning. Phone administration is a subject that is discussed at great length in the *OBi1000 Administrator Guide*. As such, we will only describe some of the basic operations that a user may perform to resolve minor setup issues or to assist remote troubleshooting. As such many details in this section are discussed at a high level and readers interested in understanding more are encouraged to study the admin guide, available from http://www.obihai.com/docs-downloads/

Finding Out the Phone's IP Address

Each phone must have a valid IP address in order to connect to the network and communicate with other entities to access voice and other network or cloud based services. You can look up the IP address assigned to the phone from the GUI by launching the Settings App from the Main Menu. The IP address is shown with the Network item under the Settings menu. A valid address must be a value other than 0.0.0.0.   The IP address can also be read out via the phone's voice admin menu. To enter the admin menu, dial *** and then select option 1.

Phone Native Web Portal (NWP)

Each phone has its own built-in portal site at the URL `http://{ipaddress}` where `{ipaddress}` is the IP address of the phone. For example: `http://192.168.15.213`. The NWP is protected by a username and password – by default this is admin for both. The NWP site offers a lot of configurable options and status information that are organized into a number of web pages. The default page is the SystemStatus page.

For a comprehensive listing of all configuration parameters, please refer to the OBi1000 Administrator Guide.

The OBiTALK.com Cloud User Portal

OBiTALK.com forms the foundation of Obihai's cloud managed telephony solution. It has a
user portal that lets users add their OBi devices to their respective user accounts for management and enhanced technical support capabilities. Although this is the recommended way to manage your OBi devices, it should be noted that the usage of the user portal is entirely optional - a user can access all of their device functionalities by using the NWP alone for example. On the other hand, the user portal adds a new dimension to the device management model that cannot be achieved otherwise, such as configuring your devices from any location with Internet access.
The OBiTALK user portal is a self-service website that offers a lot of utilities from adding a voice service, through to setting up syslog for remote trouble-shooting, and on to signing up for a new service through Obihai's ASP program.

Joining OBiTALK.com

You can sign up for a free user account at OBiTALK.com by providing a valid email address. You do not need to own any OBi device when signing up.

Figure 55: OBiTALK.com User Login Page

Adding an OBi Device to your OBiTALK User Account

To add an OBi device to your account for device management, login to your OBiTALK user account, click "Add Device", and follow the online instructions. To complete the process, you must have your OBi device nearby and accessible in order to enter some information into the device as a rudimentary form of proof of ownership of the device.

Figure 56: Snapshot of OBi Dashboard on OBiTALK.com

Factory Reset

You may be able to reset all phone settings to factory default values if permitted by your phone administrator. You can access the Factory Reset function from the NWP or from the phone GUI under the Settings App.

Another way to force a reset is to press and hold down the Home Key and Cancel Key simultaneously for 10s while the phone is starting up, when the boot up screen is being shown. This may be the only method to factory reset the phone in the rare event that the phone's internal memory is corrupted for any unforeseen reason and the phone fails to boot up.

Firmware Update

It may be required to occasionally update the firmware on your phone in order to receive new features, feature enhancements, and bug fixes. The OBi1000 series phones are designed to make firmware update a simple task from the user's perspective. It can be as simple as pressing a few buttons or fully automated with no user involvement at all. The easiest way to update the phone's firmware is by dialing *** then pressing option 6. If a firmware update is available, the user will be prompted to press 1 to continue and then hang up. After hanging up, the download and update process should be complete in a couple of minutes over a fast internet connection, but can take much longer over legacy connectivity such as DSL, T1 and so on. The headset button will start to flash once the firmware download is complete and the phone prepares to reboot.

It should be noted that firmware update is an administrative feature that may be blocked from the user by the phone administrator. The methods described hereinafter may not be available at the user level. Consult your phone's administrator to check if firmware update feature is available to you.

From the Phone GUI

Launch the Settings App from the Main Menu and press the "F/W Update" Soft Key. A message will pop up on the screen to describe if new firmware is available or not. If new firmware is available, the "Update Now" soft key will appear. User may select that option to start the update.

You should not power off the phone until the update is completed and the phone rebooted automatically immediately after.

From the Phone Native Web Portal

To use this method, you must first download the firmware file from OBITALK.COM and store it on your computer. Then visit the phone's NWP from a web browser on the same computer and click on the Firmware Update link on the left side panel of the landing page. On the firmware update page enter the path to the firmware file (or click Browse to locate the firmware file on the computer).