



**Programmable Buttons User Guide  
Supplement to IP 212k, IP 230,  
IP 560, and BB24 Devices**



# Document and Software Copyrights

Copyright © 1998–2009 by ShoreTel, Inc., Sunnyvale, California, U.S.A. All rights reserved. Printed in the United States of America. Contents of this publication may not be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without prior written authorization of ShoreTel, Inc.

ShoreTel, Inc. reserves the right to make changes without notice to the specifications and materials contained herein and shall not be responsible for any damage (including consequential) caused by reliance on the materials presented, including, but not limited to, typographical, arithmetic, or listing errors.

## Trademarks

ShoreCare, ShoreWare and ShoreGear are registered trademarks of ShoreTel, Inc. in the United States and/or other countries. ShoreTel, ShorePhone, Office Anywhere and ShoreTel Smart are trademarks of ShoreTel, Inc. in the United States and/or other countries.

## Patents

This product is covered by one or more of the following patents: United States Patent 6,996,059, United States Patent 7,003,091, United States Patent 7,167,486, United States Patent 7,379,540, and United States Patent 7,386,114. ShoreTel, Inc. All rights reserved.

## Version Information

PN 850-1055-04  
ShoreTel Programmable Buttons User Guide  
Date: January 6, 2009

## Company Information

ShoreTel, Inc.  
960 Stewart Drive  
Sunnyvale, California 94085 USA  
Phone: +1.408.331.3300 OR +1.800.425.9385  
Fax: +1.408.331.3333  
[www.shoretel.com](http://www.shoretel.com)

# Contents

OVERVIEW.....	5
HOW TO ASSOCIATE A BUTTON BOX WITH A PHONE .....	6
HOW TO TIE A USER TO A PHONE .....	8
HOW TO PROGRAM BUTTONS FROM DIRECTOR.....	10
HOW TO PROGRAM BUTTONS FROM AN IP PHONE .....	14
SUPPORTED FUNCTIONS.....	15
LEDS AND ICONS BY PHONE TYPE.....	16
COLOR AND BLINK PATTERNS FOR CUSTOM KEYS .....	17
STATUS ICONS FOR OPERATIONAL STATES .....	18



## OVERVIEW

The programmable buttons allow an administrator or an end user to change the functions associated with the custom buttons on some IP phones and on the button box. This lets the user create shortcuts for operations that would normally require pressing two or three buttons.

For example, the action associated with the bottom button on an IP 560 could be configured to speed-dial a particular extension or external number. The button above that could be set to perform overhead paging, and so on. All of the custom buttons on the IP 560 phone are configurable except for the top-most button, which is permanently set to provide call appearance information (i.e. ringing indicator and call timer information). All 24 buttons on the button box (BB24) are configurable with none limited to call appearance.

Users can figure out which actions they perform on a regular basis and then associate those actions with the custom buttons so that instead of having to dial a star code (such as \*14 for picking up the Night Bell) they can just press one button. See the table on the following page for supported functions.

### Details:

- After a function is assigned to a button, users can enter a label (up to five characters on the IP 560 and up to six characters on the IP 100 and BB24). The label appears on the LED display next to the custom button.
- The system administrator can configure the custom buttons via ShoreWare Director on behalf of a user or can enable permissions for an individual user so that the user can modify the custom buttons on the IP phone via the telephone interface.
- The programmable button feature is supported on the BB24, IP 100, IP 212k, IP 230, and IP 560 models. The feature is not supported on the analog models or on the IP 210.
- The IP100 does not have custom buttons, but the soft keys can be configured (via ShoreWare Director) in the same way that custom buttons are configured on the other phones.
- IP 100 phones cannot be configured by the user. The buttons on these phones must be configured by the system administrator.

# HOW TO ASSOCIATE A BUTTON BOX WITH A PHONE

Before you can program the buttons on a BB24 button box, you must first associate the button box device with a user's IP 212k, 230, or 560 phone. To create this association using ShoreWare Director, follow the procedure below:

- Step 1** Launch ShoreWare Director and enter the user ID and password. Then click the **Login** button.
- Step 2** Click on the **Administration** link to expand the list (if it has not already been expanded).
- Step 3** Click on the **IP Phones** link and then the **Individual IP Phones** link to display a list of devices on this system.

## IP Phones

**Filter IP Phones**

By Sites: All Sites ▼

By Switches: All Switches ▼

---

**IP Phone List**

Show Page: 1 : 00-03-47-3A-13-C2 - ED-52-24-24-24-24
<
<<
>>
>

San francisco SG24 (Headquarters)

	Name	Site	Switch	MAC Address	IP Address	Current
<input type="checkbox"/>	<a href="#">00-03-47-3A-13-C2</a>	Remote	Chicago fuji	00-03-47-3A-13-C2	10.2.75.15	<a href="#">Remote User 3 User 3</a>
<input type="checkbox"/>	<a href="#">00-04-F2-00-39-EE</a>	Headquarters	Seattle	00-04-F2-00-39-EE	10.2.91.21	
<input type="checkbox"/>	<a href="#">00-09-6E-04-0A-C9</a>	Remote	Chicago fuji	00-09-6E-04-0A-C9	10.2.77.21	<a href="#">Patsy Kline</a>
<input type="checkbox"/>	<a href="#">00-09-6E-06-96-94</a>	Headquarters	Seattle	00-09-6E-06-96-94	10.2.77.13	<a href="#">Willie Nelson</a>
<input type="checkbox"/>	<a href="#">00-09-6E-08-11-B0</a>	Headquarters	San francisco SG24	00-09-6E-08-11-B0	10.2.77.20	

**Figure 1** The MAC address appears in the left-most column

- Step 4** In the **Name** column, click on the MAC address of the button box you are configuring. (The system automatically pulls this information from the device upon connection.)

A pop-up window appears displaying information about the button box device, as shown below.

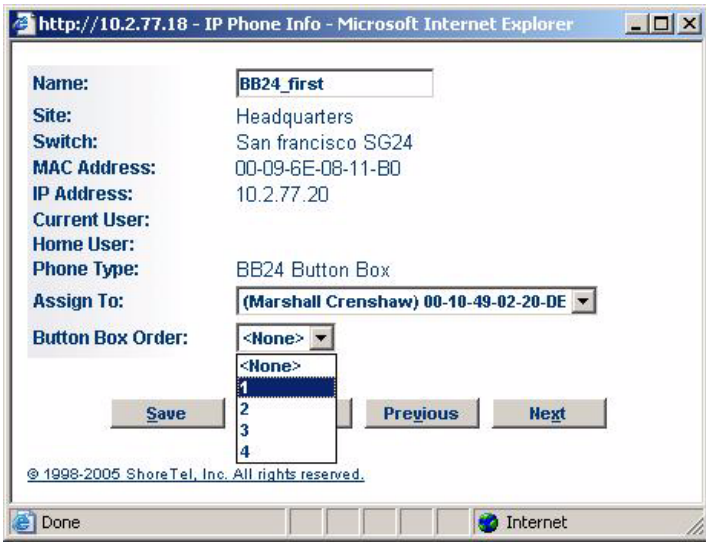


Figure 2 Select the button box order

- Step 5** The MAC address appears in the Name field. If desired, you can rename the device to something that will be easier to remember.
- Step 6** Verify that the information is correct for the Site, Switch, and other fields, and then in the Assign To drop-down menu, click on the MAC address of the IP phone. (The name of the user may appear next to the MAC address to indicate that he or she is tied to this phone.)
- Step 7** In the Button Box Order drop-down menu, select 1 if you only have one BB24 assigned to this user's phone. Only four button boxes can be assigned to a single IP 212k, 230, or 560 phone.
- After assigning the button box order, the administrator can rearrange the order of the assigned boxes or can reassign the button box device to the phone of another user, if desired.
- Step 8** Click Save to store your changes.

# HOW TO TIE A USER TO A PHONE

At this point, you should have successfully associated the button box with an IP phone. If you have not already done so, you may want to associate a user with that same IP phone to ensure that the correct person has access to the new button box. To assign a user to the phone using ShoreWare Director, follow the procedure below:

- Step 1** Click on the **Individual Users** link to display a list of users on this system.
- Step 2** From the list of names that appears in the left-most column, click on the name of the user who will be associated with the IP phone that will act as the “parent” of the button box.

**Users**  
Edit User

New Copy Save Delete

General Personal Options Distribution Lists

First Name: Marshall  
Last Name: Crenshaw  
Number: 78000  
License Type: Extension and Mailbox  
Caller ID: (e.g. +1 (408) 331-3300)  
DID: +1408331 3923 (DID Range: +1408331391)  
PSTN Failover: None  
User Group: Executives1234 [Go to this User Group](#)

Site: Headquarters  
Language: English(US)  
Home Port: IP Phones  
Current Port: 00-10-49-02-20-DE  
Jack #:  
Mailbox on Server: derbi

Home Port dropdown options:  
00-10-49-02-20-DE  
Any IP Phone  
00-09-6E-06-96-94  
00-10-49-02-20-DE  
ED-52-10-10-10-10  
ED-52-11-11-11-11  
ED-52-12-12-12-12  
ED-52-13-13-13-13  
ED-52-14-14-14-14  
ED-52-15-15-15-15  
ED-52-16-16-16-16  
ED-52-17-17-17-17

**Figure 3** Select the MAC address of the parent phone



**Step 3** Select the MAC address of the user's phone from the **Home Port - IP Phones** drop-down menu, as shown.

**Step 4** Click **Save** to store your changes.

You are now ready to move on to the next section, which provides information on programming the buttons on your BB24 button box.

# HOW TO PROGRAM BUTTONS FROM DIRECTOR

To configure programmable buttons on the phone of a specific user via ShoreWare Director, follow the procedure below:

- Step 1** Launch ShoreWare Director and enter the user ID and password. Then click the **Login** button.
- Step 2** Click on the **Administration** link to expand the list (if it has not already been expanded).
- Step 3** Click on the **Users** link and then the **Individual Users** link to display the list of users on this system.
- Step 4** Click on the name of the user to modify and then click on the **Personal Options** tab.
- Step 5** Scroll to the bottom of the window and click on the **Customize IP Phone Buttons** link.
- Step 6** Click the IP Phone Type drop-down menu and select the appropriate IP phone type (or button box) for which you would like to program buttons.
- Step 7** For each button except the first one, which is permanently associated with the Call Appearance function, click on the **Function** drop-down menu and select the action you would like to associate with a particular button.

**Customize IP Phone Buttons** Save Reset  
Mickey Raton \* m

Edit Custom Keys Refresh this page

IP Phone Type: IP530/560

Button	Function	Label	Target
1	Call Appearance		
2	Conference Blind	Conf1	<input type="radio"/> None <input checked="" type="radio"/> Extension: <span>313-5701 : Adam Ant</span> <span>Search</span> <input type="radio"/> External: <input type="text"/> (e.g. 9+1 (408) 331-3300)
3	Pickup Night Bell	Night	
4	Dial Mailbox	User1	Extension: <span>818-5301 : HQ IP1</span> <span>Search</span>
5	Pickup	User2	Extension: <span>818-5302 : HQ IP2</span> <span>Search</span>
6	Transfer Blind	Trans	<input type="radio"/> None <input checked="" type="radio"/> Extension: <span>2001</span> <span>Search</span> <input type="radio"/> External: <input type="text"/> (e.g. 9+1 (408) 331-3300)

**Figure 4** Program the Custom Keys on an IP 560 phone

- Step 8** In the **Label** field to the left of the drop-down menu, enter a descriptive word to remind the user which function is associated with that button. This label will appear on the LED display adjacent to the button. Note that this label can be up to five characters long for the IP 212k, 230, and 560 phones and up to six characters long for the IP 100 phone and BB24 device.
- Step 9** After you have selected a function and entered a label for a particular button, you may optionally enter destination information in the **Target** field. Certain functions, such as “record call” do not require entering a destination, but other functions such as speed-dial or blind transfer can optionally take a destination. Some functions take only extensions and some take any type of phone number.
- Step 10** When you have finished entering functions and labels for all of the buttons, click the **Save** button at the top of the window to store your changes.

To enable a user to configure the programmable buttons on his or her phone, follow the procedure below:

- Step 1** Launch ShoreWare Director and enter the user ID and password.
- Step 2** Click on the **Administration** link to expand the list (if it has not already been expanded).
- Step 3** Click on the **Users** link and then the **Individual Users** link to display the list of users on this system.
- Step 4** Click on the name of the user whose profile you would like to modify (enabling him to customize the buttons on his IP phone). A window similar to the one shown below appears.

## Users

### Edit User

[New](#)[Copy](#)[Save](#)[Delete](#)[Reset](#)[General](#)[Personal Options](#)[Distribution Lists](#)[Workgroups](#)

First Name:	<input type="text" value="Mickey"/>
Last Name:	<input type="text" value="Raton"/>
Number:	<input type="text" value="500"/>
License Type:	<input type="text" value="Extension and Mailbox"/>
Caller ID:	<input type="text" value="+1 (408) 331-1235"/> (e.g. +1 (408) 331-3300)
<input checked="" type="checkbox"/> DID:	<input type="text" value="+1408331"/> <input type="text" value="3929"/> (DID Range: +14083313921 - 3940)
PSTN Failover:	<input type="text" value="None"/>
User Group:	<input type="text" value="Executives"/> <a href="#">Go to this User Group</a>

**Figure 5** Access the User Group via the Edit User window

- Step 5** Click on the **Go to this User Group** link and on the next window that appears, click on the **Go to this Class of Service** link located to the right of the **COS - Telephony** field. The Class of Service window appears, similar to the one shown below.

## Class of Service

### Edit Telephony Features Permissions

[New](#)[Copy](#)[Save](#)

<b>Edit this record</b>	<a href="#">Refresh this page</a>
Name:	<input type="text" value="Fully Featured"/>
Max. Call Stack Depth:	<input type="text" value="8"/>
Max. Parties in Make Me Conference:	<input type="text" value="6"/>
<input checked="" type="checkbox"/> Allow Call Pickup	
<input checked="" type="checkbox"/> Allow Trunk-to-Trunk Transfer	
<input checked="" type="checkbox"/> Allow Overhead and Group Paging	
<input checked="" type="checkbox"/> Allow Make Hunt Group Busy	
<input checked="" type="checkbox"/> Allow Extension Reassignment	
<input checked="" type="checkbox"/> Allow PSTN Failover	
<input checked="" type="checkbox"/> Show Caller ID Name and Number on Monitored Extensions	
<input checked="" type="checkbox"/> Allow Customization of IP Phone Buttons	
<input checked="" type="checkbox"/> Show Extensions with Different Prefixes in Directory	
<input checked="" type="checkbox"/> Allow Collaboration Features	
<input checked="" type="checkbox"/> Allow Recording of Own Calls	
Directed Intercom / Paging:	<input checked="" type="checkbox"/> Allow Initiation

**Figure 6** Enable customization of IP phone buttons

**Step 6** Select the **Allow Customization of IP Phone Buttons** check box.

**Step 7** Click the **Save** button to store your changes.

#### Details:


- The default for new Class of Service (Telephony) profiles is to have this feature disabled, thus preventing users from modifying their own custom buttons.
- Once this Class of Service (Telephony) profile has been created, you can apply it to every person in the system that you would like to allow to change his or her custom buttons. (Note that the user must belong to the appropriate user group in order for the modified Class of Service to take effect.)

## HOW TO PROGRAM BUTTONS FROM AN IP PHONE

To change the custom buttons on your IP 212k, 230, 560 phone or BB24 device via the telephone interface, follow the procedure below:

- Step 1** Press the **Options** button on your IP phone and enter your password, followed by the # key or OK soft key.
- Step 2** Scroll through the list to option 4. **Program Buttons**, or press 4 on the keypad.
- Step 3** Press the **Edit** soft key.
- Step 4** Press the custom button that you would like to modify. (If you are modifying the buttons on the BB24 device via the 212k/230/560 interface, press the button on the BB24 that you would like to configure.)
- Step 5** Scroll through the list of functions until you find the function that you would like to apply to this button.

**NOTE** Your choices are limited to just **Call Appearance** and **Dial Number** (i.e. Speed Dial) when programming the buttons via the 212k/230 interface. This limitation does not apply to the IP 560 phone. To program one of the other functions, contact your system administrator.

- Step 6** When you have highlighted the appropriate function, press the **Next** soft key.
- Step 7** Enter an extension, external number, or leave it blank. Then, press the **Next** soft key.
- Step 8** Press the  soft key to shift the key pad between numeric and alphabet mode.
- Step 9** Use the key pad to enter a short descriptive label that will remind you of the new function of the custom button. The label can be up to five characters long for an IP 212k, 230, or 560 phone and up to six characters long for a BB24 button box.
- Step 10** Press the **Done** soft key.
- Step 11** Press the **Done** soft key again to store your changes.

## SUPPORTED FUNCTIONS

**Table 1** Supported Functions

Function	Parameter	Comments
Barge In	Extension or none	
Call Appearance	None	Not supported on Button Box
Conference Blind	Extension or external number	
Conference Consultative	Extension or external number	
Conference Intercom	Extension or none	
Dial Mailbox	Extension or none	
Dial Number (Speed Dial)	Extension or external number	
Intercom	Extension	
Monitor Extension	Extension	
Page	None	
Park	Extension or none	
Park and Page	Extension or none	
Pickup	Extension or none	
Pickup Night Bell	None	
Pickup/Unpark	Extension or none	Uses internal presence to determine which operation to perform
Record Call	None	Operates on selected external call while connected; Pressing a second time stops the recording
Record Extension	Extension	
Send Digits Over Call	Extension	
Silent Monitor	Extension or none	
Transfer Blind	Extension or external number	

**Table 1** Supported Functions

Function	Parameter	Comments
Transfer Consultative	Extension or external number	
Transfer Intercom	Extension or none	
Transfer to Mailbox	Extension or none	
Transfer Whisper	Extension or none	
Unpark	Extension or none	
Whisper Page	Extension or none	
Whisper Page Mute	None	

## LEDS AND ICONS BY PHONE TYPE

The table below lists the type of device, and the number of colors that the LEDs on that device are capable of displaying. The next column lists the number of characters that can appear across the display, and the last column indicates whether or not the device supports the display of icons.

**Table 2** LEDs and Icons By Phone Type

Device	LEDs	LABEL (characters)	ICON
IP 212k Phone	3-color	6	No
IP 230 Phone	1-color	5	Yes
IP 560 Phone	3-color	5	Yes
BB24	3-color	6	No



## COLOR AND BLINK PATTERNS FOR CUSTOM KEYS














The LEDs on your ShoreTel IP phone or button box provide color cues to help determine the operational status of the device. The table below provides information about the colors and blink patterns associated with various operational states.

















Note that the information in this table applies to the following devices, which have LEDs capable of displaying three colors: IP 212k, 530, 560, 560g, and BB24.















<b>Call State</b>	<b>Color and Blink Pattern</b>
Held or Parked Calls or Conference Calls	Orange 250ms on 250ms off
Monitored Ext. Call + Offering Call	Green 800ms on 200ms off Red 800ms on 200ms off
Monitored Ext. Call + Held or Parked Owner Call/Conference Call	Orange 200ms on 100ms off 200ms on 500ms off
(Unpark, Pick/Unpark Only) Held or Parked	Orange 250ms on 250ms off










## STATUS ICONS FOR OPERATIONAL STATES

In addition to multi-colored LEDs, your ShoreTel IP phone offers icons to help indicate the status of the device. The table below provides information about these icons, and offers additional information about the LED blink pattern and color. The information in this table applies to IP phone models that support the display of icons (IP 530, 560, 560g models).

Icon	Blink Icon	LED Color and Blink Pattern	State
<b>Call Appearance States</b>			
		Off	Idle
		Orange Steady on	Idle and DND
		Off	Idle and Message Waiting
		Orange Steady on	Idle, Message Waiting and DND
		Green Steady on	Off Hook
		Green Steady on	Active Call
		Green Steady on	Active Conference Call
		Green Steady on	Remote Hold
		Green 1000ms on, 1000ms off	Offering Call
		Orange 250ms on, 250ms off	Held or Parked Call or Conference Call

Icon	Blink Icon	LED Color and Blink Pattern	State
		Red Steady on	Whisper Page Call
		Red Steady on	Active Call Whisper Muted
<b>Extension Monitor States</b>			
		Off	Idle
		Orange Steady on	Idle and DND
		Off	Idle and Message Waiting
		Orange Steady on	Idle, Message Waiting and DND
		Green 1000ms on, 1000ms off	Offering Call
		Green Steady on	Active Call Picked Up
		Orange 250ms on, 250ms off	Held or Parked Call or Conference Call
		Red Steady on	Monitored Ext. on Active Call
		Red Steady on	Monitored Ext. on Conference Call
		Green 200ms on, 100ms off, 700ms on, 1000ms off	Monitored Ext on active Call + Offering Call
		Green 800ms on Orange 200ms on	Picked up Monitored Ext. Call + Monitor Ext on Active Call

Icon	Blink Icon	LED Color and Blink Pattern	State
		Orange 200ms on, 100ms off, 200ms on, 500ms off	Picked up Monitored Ext. Call and Held + Monitor Ext on Active Call
		Orange 200ms on Green 800ms on Orange 200ms on Green 100 on	Picked up Monitored Ext. Call + Monitor Ext held Active Call
<b>Bridged Call Appearance States</b>			
		Off	Idle
		Green 1000ms on, 1000ms off	Offering Call
		Green Steady on	Active Call Picked Up
		Red Steady on	Line In-Use
		Orange 250ms on, 250ms off	Held or Parked Call or Conference Call
<b>Feature Key With Extension Target States</b>			
		Off	Idle or Offering Call
		Red Steady on	Connected or Held Call
		Orange Steady on	DND
		Red Steady on	(Dial/Transfer Mailbox Only) MWI

Icon	Blink Icon	LED Color and Blink Pattern	State
		Green 1000ms on, 1000ms off	(Pickup, Pick/Unpark, Pickup NightBell Only) Offering
		Orange 250ms on, 250ms off	(Unpark, Pick/Unpark Only) Held/Parked
<b>Toggle Functions (Record, Whisper Mute)</b>			
		Off	Function Off
		Orange Steady on	Function Available
		Orange 500ms on, 500ms off	Record Active
		Orange 500ms on, 500ms off	Whisper Mute Active

