Siemens ROLM PBX System

LinkPlus Interface Guide

SpectraLink 6000 System

SpectraLink 8000 System

POLYCOM®

Contact Information

Please contact your Polycom Authorized Reseller for assistance.

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About this Guide

Polycom is the market leader in multi-cellular wireless telephone systems for the workplace. We manufacture a range of products to suit any size installation. All Polycom products use our LinkPlus digital integration technology to integrate with various digital switch platforms. Using LinkPlus technology, Wireless Telephones (handsets) emulate digital telephone sets to deliver advanced capabilities such as multiple line appearances and LCD display features. This document explains the programming or administration required to use the host digital switch with the following Polycom products:

SpectraLink 6000 System – SpectraLink 6300 MCU

The SpectraLink 6000 System supports up to 3,200 handsets and up to 1,000 Base Stations. Up to 25 shelves can be interconnected for maximum system capacity.

SpectraLink 6000 System – SpectraLink 6100 MCU

Designed for smaller installations supporting up to 64 handsets and up to 16 Base Stations. Up to four MCU controllers can be interconnected for maximum system capacity.

SpectraLink 8000 Telephony Gateway

The SpectraLink 8000 Telephony Gateway is a wireless telephony product that provides high quality packetized voice communications using the Internet Protocol (IP).

Different models of SpectraLink Wireless Telephones vary in functional capabilities. This document covers the basic operational features of all handsets. However, certain handset or PBX features may not be supported by your emulation.

Related Documents

SpectraLink 6300 MCU : Operator's Console (1725-36125-001)

SpectraLink 6100 MCU: Installation and Operation (1725-36097-001)

SpectraLink 6020 Wireless Telephone and Accessories User Guide (1725-36092-001)

Available at
http://www.polycom.com/usa/en/support/voice/proprietary_wireless/proprietary_wireless.html

SpectraLink 8000 Telephony Gateway: Administration Guide for SRP (1725-36028-001)

SpectraLink 8020/8030 Wireless Telephone and Accessories User Guide (1725-36023-001)

SpectraLink e340/h340/i640 Wireless Telephone: Configuration and Administration (SRP) (72-1065-09)

Available at
http://www.polycom.com/usa/en/support/voice/wi-fi/wi-fi.html

Telephone Switch Interface Matrix (1725-36128-001)

Available at
http://www.polycom.com/usa/en/support/voice/wi-fi/pbx_integration.html

Customer Support

Polycom wants you to have a successful installation. If you have questions please contact the Customer Support Hotline at (800) 775-5330. The hotline is open Monday through Friday, 6 a.m. to 6 p.m. Mountain time.

For Technical Support: technicalsupport@polycom.com

For Knowledge Base:
http://www.polycom.com/usa/en/support/voice/voice.html

Icons and Conventions

This manual uses the following icons and conventions.

	Caution! Follow these instructions carefully to avoid danger.

	Note these instructions carefully.

Label	This typeface indicates a key, label, or button on Polycom hardware.

1

Plan the Interface

The system administrator programs the telephone system for use with the Wireless Telephone System using the normal administration terminal or procedures. Programming can be done after the handsets are registered.

Recommended programming includes assigning extension numbers to the handsets and programming features on the telephone system so they are easily accessible from the handsets.

For analog interfaces, macro codes are in the document relating to configuring the system. See *SpectraLink 6300 MCU: Operator's Console, SpectraLink 6100 MCU: Installation and Operation,* or *SpectraLink 8000 Telephony Gateway: Administration Guide for SRP.*

The following information will help the system administrator set up the SpectraLink handsets to operate in a way that feels familiar and comfortable to users.

Plan Programming

Digital Interface programming for the Wireless Telephone System will be faster if it is planned in advance by verifying the parameters and features on the current telephone system and wired phones. The system administrator must assign extension numbers to the handsets and plan the functions (trunk access, toll restrictions, system features, ringing options etc.) to be programmed for the handsets.

One of these scenarios concerning how the handsets are programmed should apply to this site:

- **All handsets are programmed alike**: All handsets will be programmed exactly the same. Depending on the capabilities of the switch, the system administrator can often program one handset and use it as a model for all other handsets.

- **Groups of handsets are programmed alike**: Handsets are grouped into classes that are programmed alike. Depending on the capabilities of the switch, the system administrator can program

"model" handsets then use the model as a template to program the other handsets.

- **All handsets are different**: All handsets are programmed differently, so each handset will be programmed individually.

Before the system is installed, verify the operating parameters and features on the Rolm system and sets, and set up template tables to reflect the required parameters and features for the handsets. Programming will be faster if you determine this information in advance.

Line assignment

The handset supports a total of nine line resources. Which lines should ring at this handset?

Extensions

Which extensions will be assigned to the handsets?

Message waiting

Does voicemail turn on a message waiting light for this handset?

Class of Service

To which Class of Service should handsets be assigned?

Extension routing

Where is this handset forwarded on busy/no answer?

Pickup group

To which group does this handset or group of phones belong?

Programmable buttons

The handset supports nine features accessed through the FCN key. Determine which features, if any, should be programmed on the handsets. The Siemens-ROLM technician will create a template table for each unique button layout.

It may help to identify a wired ROLMPhone 400 set that is programmed exactly or close to the way the handsets should be

programmed. The feature table for this set can be assigned to the handsets and modified accordingly.

Assign Extension Numbers

The wire contractor should inform the system administrator which port numbers have been designated for the handsets.

The system administrator may use the *Extension Assignments Worksheet* at the end of this document to track the port numbers, extensions, users, and features assigned to handsets.

The Wireless Telephone Display

The SpectraLink Wireless Telephone will display the telephone number as it is dialed.

Certain characters may be used by the system that are not implemented in the handset. Flashing characters are not implemented on the handset, nor is rolling or scrolling of text.

Handset indicators

Line indicators are associated with line access keys. Status indicators or icons are associated with voicemail, low battery function, other functions, and service interruption. A left or right arrow is displayed when the screen can be toggled either left or right to display more characters.

When lines are programmed as shown on the key-map diagrams, the numeral icons on the handset display will be mapped to any deskset LEDs associated with the corresponding feature keys. The line icons will be displayed as follows:

Line State	Handset Line Status Icon State
On-hook	Off
Off-hook	On
Ringing	Fast flash
On hold	Slow flash

Feature Programming Requirements

When planning the interface, the following information must be taken into account:

Line sequences

The handset uses two types of key sequences to access PBX features and multiple lines. Line sequences are those where the user presses the **LINE** key and then a number key. The key-map design designates "line" keys that should be programmed for line appearance so that they correspond to line sequences on the handset.

The **LINE** icon on the handset will reflect activity on the corresponding deskset key. For this reason, it is recommended that line appearance keys be used only for line access. If only one line is assigned to a particular handset, leave the other designated line keys identified on the key maps unassigned. The corresponding handset **LINE** + key sequences will then have no function.

- Lines 10-19 are not supported on the handset.

Function sequences

Function sequences are those where the handset user presses the **FCN** key and then a number key. Designated "function" deskset keys programmed to system features such as Transfer and Conference may have their corresponding menu items display on the handset function menu. See the key-map diagram for the function keys that are available for feature programming.

Function Menu Programming

SpectraLink 6300 MCU

The function menu text defaults for the handsets associated with the SpectraLink 6300 MCU can be changed via the SpectraLink Operator's Console.

SpectraLink 6100 MCU

For the SpectraLink 6100 MCU, the handset function menu text can only be changed via remote configuration through the services of Polycom's Customer Support.

SpectraLink 8000 Telephony Gateways

Function menu text options can be changed in the Administration Console of the SpectraLink 8000 Telephony Gateways.

Hold

The Hold feature should be programmed to the Hold key as shown on the key-map diagrams so that when the **Hold** key or softkey is pressed on the handset, the call is placed on hold.

Mute

The handset Mute function is hard-coded to **FCN** +**1** on the PTB4xx handset. This function sequence is recommended, but the system administrator can assign the Mute function to any available function key sequence or leave the function unassigned. The SpectraLink 6000 and SpectraLink 8020/8030 Wireless Telephones use a **Mute** softkey.

Voicemail

The message-waiting icon on the handset is activated with the message indication of the deskset. The voicemail feature on the deskset must be assigned to the feature key as shown in the key-map diagrams. Do not assign any other feature to this key, since the associated LED is directly mapped to the message-waiting icon on the handset. This LED assignment must be used in order to support the message-waiting icon. Using this key for any other feature or for line access could cause unacceptable system performance.

Speakerphone

If a handset such as the PTB 4xx has no speaker, speakerphone function and functions that require the use of the volume keys will not be made available on the handset. In such a case, disable all speaker-phone features, particularly any hands-free features that activate the speaker with the telephone on-hook.

Ring types

Handset ring types (soft, normal, vibrate, etc.) are programmed by the handset user and are not accessible or changeable by the system switch. Whenever possible the audible ringer on the handset will follow the cadence provided by the system switch. Call progress tones provided by the host system will be passed through to the handset.

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Interface Implementation

This section describes the recommended programming to use the Wireless Telephone System with Siemens Rolm systems. The procedures assume:

- The Rolm 8000, 9000, 9200, 9751, or 9006, or a Siemens Hicom 300E is installed and operational in an approved configuration. See the *Telephone Switch Interface Matrix* document for tested configurations.

- A trained Rolm technician or system administrator will be on site with the Installer to program the system.

- The SpectraLink 6000 System or SpectraLink 8000 Telephony Gateway is installed and the handsets are available for programming.

Set the Switch Interface Type

SpectraLink 6100 MCU

The SpectraLink 6100 Master Control Unit requires the switch interface type to be configured using the front panel buttons. The configuration procedures are detailed in *SpectraLink 6100 M3 MCU: Installation and Operation*.

SpectraLink 6300 MCU

When configuring the SpectraLink 6300 MCU, the PBX interfaces are available as sub-menu selections when defining the Interface Module type using the SpectraLink 6300 MCU Operator's Console. Refer to *SpectraLink 6300 MCU: Operator's Console* for details on configuring the Interface Modules.

SpectraLink 8000 Telephony Gateways

Connect to the SpectraLink 8000 Telephony Gateway using the serial or modem interface. From the Main Menu, choose Gateway Configuration. Scroll to Telephone Switch Type and press enter to change this field, from the Submenu of PBX types, select Siemens Rolm. Refer to *SpectraLink 8000 Telephony Gateway: Administration Guide for SRP* for details on configuring the Telephone Switch Type.

Key-mapping the Handset to Emulate ROLMPhone 400 Functionality
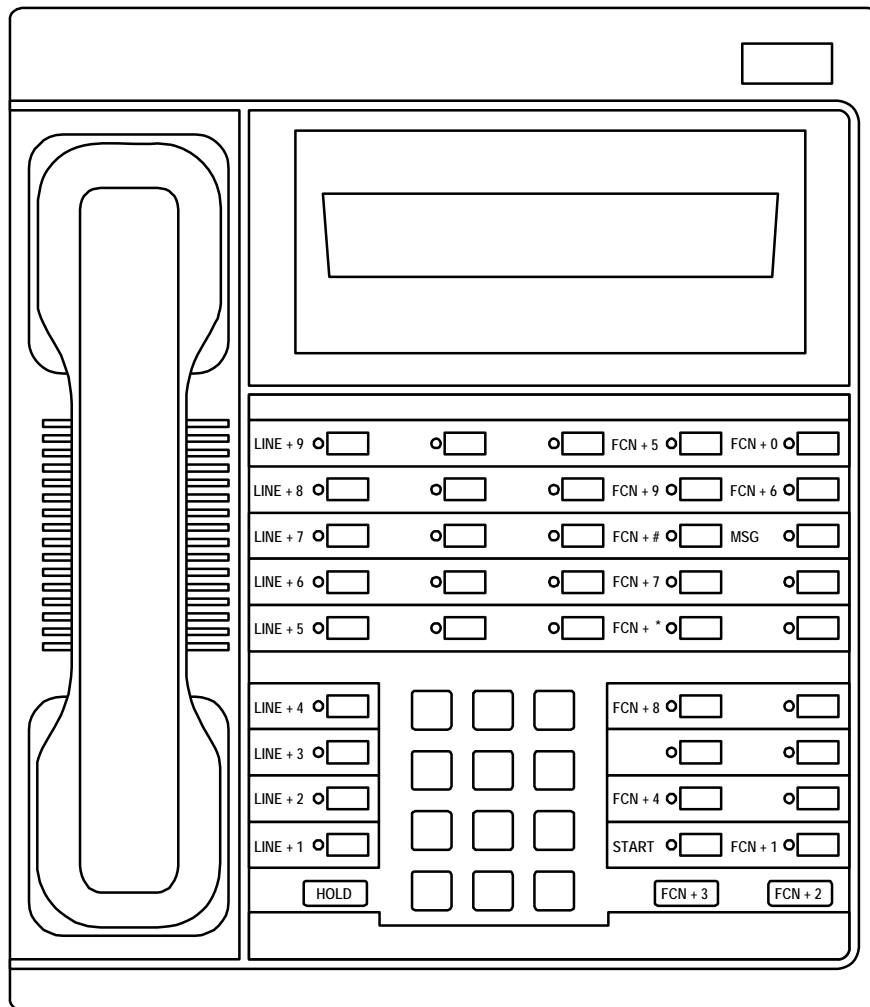
ROLMPhone 400 Key-mapping

The FCN [number] and LINE [number] labels represent the key sequence on the handset mapped to the corresponding key on the desk set. The FCN * label indicates that pressing the **FCN** key on the handset followed by the * key and the [number] key is the sequence equivalent to pressing the corresponding button on the desk set.

The handset function menu default settings are shown in the table below; these may be changed as described above in *Function Menu Programming*. Some of these functions (Mute, Redial, Forward, etc.) are activated by softkeys or **FCN** menu options on the SpectraLink 6000 and SpectraLink 8020/8030 Wireless Telephones.

FCN + 1	MUTE	**FCN + 2**	XFER
FCN + 3	CONN	**FCN + 4**	CONF
FCN + 5	FWD	**FCN + 6**	SV RPT
FCN + 7	PICK	**FCN + 8**	CAMP
FCN + 9	EXIT MENUS	**FCN + #**	STA SP

Program Rolm

Each handset must be programmed so the Rolm switch will recognize the handset and allow access to system facilities and features. The Rolm technician or local system programmer should perform the necessary programming.

Create template table for handsets

Set up a template table with features assigned as shown below.
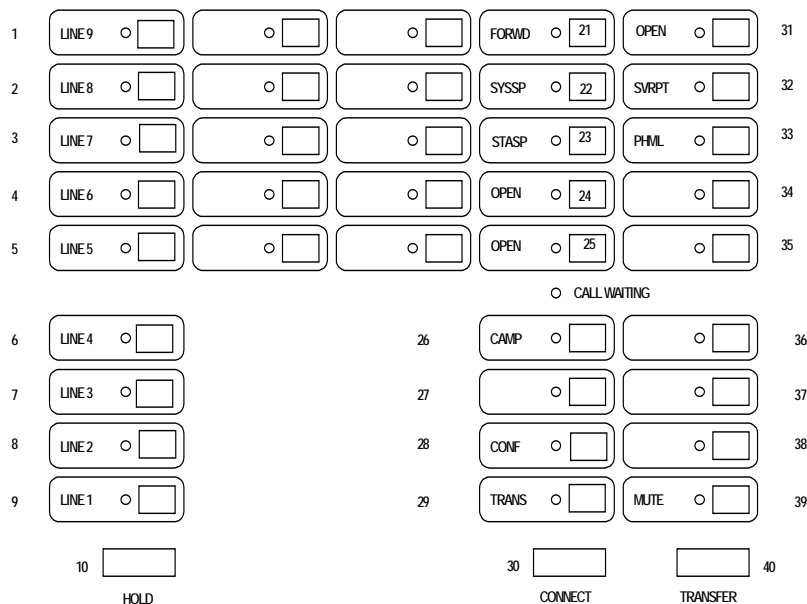
Note: On the Rolm 8000 and 9000 systems, the PHML button is MSGWT, and the TRANS button is FLASH.

The technician can customize the table by assigning features to the unused buttons in the upper quadrant (above Call Waiting, accessed by **FCN 0**, **FCN 7**, and **FCN ***). Do not change the assignments for Message Waiting, Hold, Connect, Mute or Transfer; however, other features and the "Open" buttons can be re-assigned if desired.

Set up the handset

- For each handset, set up a ROLMPhone defined as RP_400.
- Associate this RP with the template table as displayed.
- Assign extensions (trunks and lines) to buttons as determined in planning process.

Assign the port

Assign the handset's table and extension to the appropriate port.

The installer can now test the handsets.

Program Hicom 300E

To program the Hicom 300E to emulate a flashhook button on the handset, program the Siemens button 29 as a XFER (Transfer) key.

This programming will enable users to access the following features.

Transfer	**START** – dial number – **END**
Conference	**START** – dial number – **START**
Conference – Drop Last Call	**START - ****4 – START**
Conference – Drop Designated Call	**START - **4x – START**
Hold	**HOLD**
Hold Return	**START, LINE #**

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Extension Assignments Worksheet

Shelf: _____ Interface Module: _____

Handset #	Ext. #	Name	Interface Module Circuit #	Comment	Handset Serial #
Handset 1			1		
Handset 2			2		
Handset 3			3		
Handset 4			4		
Handset 5			5		
Handset 6			6		
Handset 7			7		
Handset 8			8		
Handset 9			9		
Handset 10			10		
Handset 11			11		
Handset 12			12		
Handset 13			13		
Handset 14			14		
Handset 15			15		
Handset 16			16		