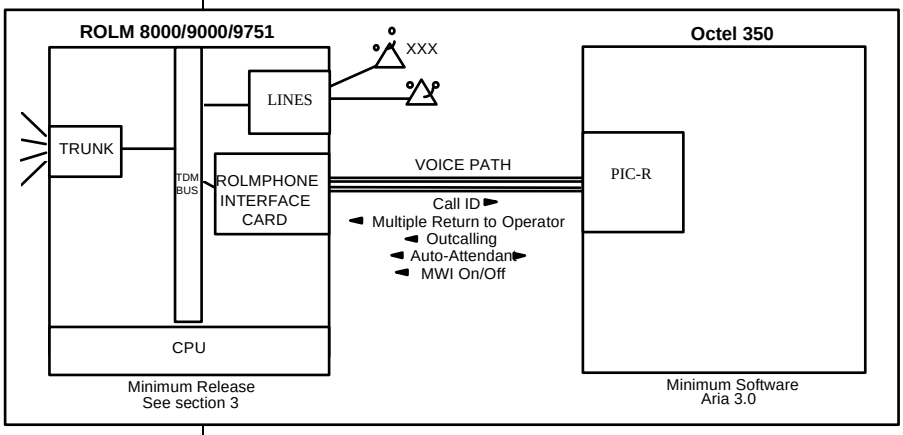
ctel 350

Message Server

Configuration Note 4089 - Ver. E (09/04)

ROLM CBX 8000/9000/9751 (PIC-R)



The PIC-R emulates Rolmphone 400 digital telephone sets

1.0 METHOD OF INTEGRATION

The digital set emulation integration on the Rolm CBX, the PIC-R, appears as one or more digital Rolmphone 400 telephone sets to the PBX. When a call is presented to PIC-R ports, the display information is read and the call is then answered with the appropriate greeting. Message-Waiting is set using the Message Center function over dedicated PIC-R port(s).

Octel 350 requirements

2.0 OCTEL ORDERING INFORMATION

- PIC-R(s) - Each PIC-R supports 12 Ports
- Set Emulation Software feature (Feature Bit 33)
- RS232 Integration feature (Feature bit 34). This is required on Sales Order only, see note in section 6.0
- In-band Integration feature (Feature bit 35). This is required on Sales Order only, see note in section 6.0

PBX hardware requirements

3.0 PBX HARDWARE REQUIREMENTS

- Rolmphone Interface channels, One per PIC-R port
- One analog line for remote service access (RDAC)
- 25-pair, right-angle, male-Amphenol cables, one per PIC-R

3.1 PBX SOFTWARE REQUIREMENTS

- Supported software: Release 9005 and below; 9005.6.84

Supported integration features

4.0 SUPPORTED FEATURES

- Station forward to personal greeting
  - all calls
  - DND
- System forward to personal greeting
  - Busy
  - RNA
  - DND
- Message-waiting Indicator
  - lights
  - audible message waiting (stutter dial tone)
- Automated attendant
  - Supervised
  - Unsupervised
- Outcalling
- Multiple return-to-operator
- Direct call
- Personal greeting of original-called party on double-call forward
- Reply to message left by subscriber in internal telephone-answering mode
- Call sender
- Multiple Personal Greetings
  - RNA
  - Busy

5.0 ROLM CBX 8000 CONFIGURATION

- Define the extensions that connect to the Octel ports using the following commands:
- NEX extn#
- Using the SCS command, assign a class of service (COS) to each of these extensions. The COS **must have** the following feature:
- NOH - No Howler Tone if left off hook (feature 17)
- The COS **must not** have the following features:
- NFL - No Flash Allowed (feature 13)

- APK - Automatic Camp-On (feature 15)
- UNV - Unavailable (feature 18)
- TER - Terminate Only (feature 24)
- Configure the Rolmphone Interface ports connecting to the PIC-R. Using the RFC command, create a Rolmphone 400 feature table as shown in *Table 1*. **The button placement must be exactly as specified, or the PIC-R will not function properly.**

NOTE*: Make sure to configure the feature table with the MWCTR key, not the MSGWT key. MWCTR enables the RPI channel to set and cancel message waiting at subscribers' phones. Rolmphone 400 feature table programming for the PIC-R*

Rolmphone 400 Feature Table

BTN	FEAT	BTN	FEAT	BTN	FEAT	BTN	FEAT	BTN	FEAT
1		11		16		21		31	
2		12		17		22		32	
3		13		18		23		33	
4		14		19		24		34	
5		15		20		25		35	
6		***	***	***		26			
7		***	***	***		27			
8		***	***	***		28		36	
9	LINE-001	***	***	***		29		37	MWCTR
10	HOLD					30	CNCT	38	XFER

Table 1. Rolmphone 400 Feature Table

- Assign the Rolmphone 400 feature table to the first RPI channel:

REC	"Revise ETS configuration" command
XXYYZZ	Enter the physical address (PAD) of the first RPI channel
#	Enter the feature table number created in the previous step for the PIC-R ports
EXTN#	Leave this entry blank

TYPE	Enter 'RP400'

- Repeat the REC command for all the remaining RPI channel, changing only the physical address (PAD) entry to correspond to the proper RPI port
- Assign a display module to the RPI channels connecting to the PIC-R:

ROM	"Revise Rolmphone option modules" command
PAD	Enter the physical address of the RPI channel
FLAG	Enter '1' to set the display module
FLAG	Enter '0' to set no speakerphone module
FLAG	Enter '0' to set as a RP400, not a CAS console

- Repeat the ROM command for the remaining RPI channels, changing only the PAD entry to correspond to the proper RPI port.
- The following programming assigns the extensions to the RP400.

RKB	"Revise Key Button" command
PAD	Enter the physical address of the RPI channel used
BT#	1
EXTN#	Enter the extension number to be assigned to the line number
FLAG	1
FLAG	0
FLAG	0

- Repeat the RKB command for all remaining RPI channel connecting to PIC-R ports.
- Assign all the newly-created Rolmphone interface channels, except for the channel(s) to be used as dedicated message waiting ports, to a Hunt/Distribution Group using the RHG command. The pilot number of this Hunt/Distribution group is the Octel access number subscribers call to access the Octel 350. This is also the pilot number that subscribers will use as the forwarding target for their extensions.

Configuring the Rolm CBX 9000/9751

5.1 ROLM CBX 9000/9751 CONFIGURATION

- The CBX must have the Internal Dial Tone parameter set to HIGH frequency, not LOW frequency. Otherwise, the Octel 350 will not recognize dial tone. LOW frequency is the default value.
- Define the extension numbers that will connect to the Octel 350 ports using the CR EXT command.
- Assign a class of service (COS) to each of these extensions. The COS **must have** the following feature:
- NOH - No Howler Tone if left off hook
- The COS **must not** have the following features:
- NFL - No Flash Allowed
- ACB - Automatic Camp-On
- APV - Always in Privacy
- TRM - Terminating Only

Configuring the digital ports

- Create a Rolmphone 400 feature table as shown in *Table 2*. The button placement must be exactly as specified, or the PIC-R will not function properly.

NOTE*: Make sure to configure the feature table with the MWCTR key, not the MSGWT key. MWCTR enables the RPI channel to set and cancel message waiting at subscribers' phones. Rolmphone 400 feature table programming for the PIC-R*

Rolmphone 400 Feature Table

BTN	FEAT	BTN	FEAT	BTN	FEAT	BTN	FEAT	BTN	FEAT
1		11		16		21		31	
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5		15		20		25		35	
6		***	***	***		26			
7		***	***	***		27			
8		***	***	***		28		36	
9	LINE-001	***	***	***		29		37	MWCTR
10	HOLD					30	CNCT	38	XFER

Table 2. Rolmphone 400 Feature Table

- Using the CR RPI/RLI command, configure the Rolmphone Interface channels connecting to the PIC-R ports. Note the following:

• TYPE	RP400
• TBL NO.	The number of the feature table created in the previous step
• RING	Yes
• MW	No
• BI	No
• CLD NAME	No

- Configure the remaining Rolmphone channels to be connected to the PIC-R ports.
- Assign all the newly-created Rolmphone interface channels, except for the channel(s) to be used as dedicated message waiting ports, to a Hunt/Distribution Group using the CR HD_G command. The pilot number of this Hunt/Distribution group is the Octel access number subscribers call to access the Octel 350. This is also the pilot number that subscribers will use as the forwarding target for their extensions.

NOTE: ***The Rolm CBX 8000 allows up to 50 members in a Hunt/Distribution Group. This 50 member limitation only applies to the ROLM 8000. The ROLM 9000 and 9751 can only support 48 members in a hunt group. If the Octel 350 is equipped with more than 48/50 integrated ports, simply configure a second Hunt/Distribution Group, assigning the remaining ports to it. Then, assign the pilot number of this second Hunt/Distribution Group as the forwarding target for the Octel access hunt group. This is done within the HD_G screen , by configuring the following fields:***

FWD/BUSY	C (condition)	B (both internal and external calls)
	NUMBER	Enter the second Hunt/Distribution Group pilot number.

6.0 CONFIGURING THE OCTEL 350

☐ Menu 1.1 - System Parameters

- Type of Switch connected to: B - PBX Integration Device / ROLM
- Number of Digits in Extension used for Outcalling and ECP:
- Number of Digits in Extension used for Message Waiting:

- Sender ID Used for Telephone Answering Messages: 2 - Calling Party, if known

Menu 4.1 - Port Configuration

- Extension/Phone No: Enter the extension number of the digital line
- Incoming: Y
- Telephone Answering: Y
- Message Waiting: N for all call processing ports, and Y for the dedicated message waiting port(s).
- Line Type: 146 (ROLM 9005 and below)

☐ Menu 6.1 -Transfer Dialing Sequences

- "Flash" On-hook Time: set to average of the minimum and maximum values configured on the ROLM - Typically 700ms
- "Pause" Time: 1000 ms
- Dialing Sequence to Transfer a Call: Leave Blank
- Dialing Sequence to Reconnect a Call -
- Ring/No Answer: Leave Blank
- Busy: Leave Blank

☐ Menu 6.2 - In-band Integration

- Leave all values to default settings. This menu is not used for this PBX integration.

☐ Menu 8/9.1 - Subscriber Mailbox Profile

- Subscribers Extension: Enter extension number assigned to subscriber's telephone set.
- Message Waiting Allowed: Y only for mailboxes associated with subscribers' telephones that have message waiting enabled. N for mailboxes not associated with subscribers' telephones.

▪ Int. Link Number: Not Used

☐ Menu 8/9.1 - Subscriber Mailbox Profile

- Subscribers Extension:
- Message Waiting Allowed: Y
- Int. Link Number: N/A

☐ Menu 7 - Class of Service Profile:

For subscribers allowed multiple personal greetings, set their class of service parameter ***Personal Greeting*** to ***2 - Multiple Greetings***. Be sure to remind them to record both greetings within their mailbox.

7.0 HARDWARE INSTALLATION

Connecting the PIC-R

7.1 CONNECTING THE PIC-R

Each PIC-R supports 12 ports. Each PIC-R connects to the switch via a single 25-pair cable. The first port uses the first pair of connectors (1, 26); every other pair is used by the remaining ports.

- ☐ Physically connect the lines used for the voice path between the switch and the Octel 350. The voice lines are connected to the switch using customer-supplied male-amphenol cables which terminate on the main backplane on the Octel frames. See *Figures 5 and 6.*

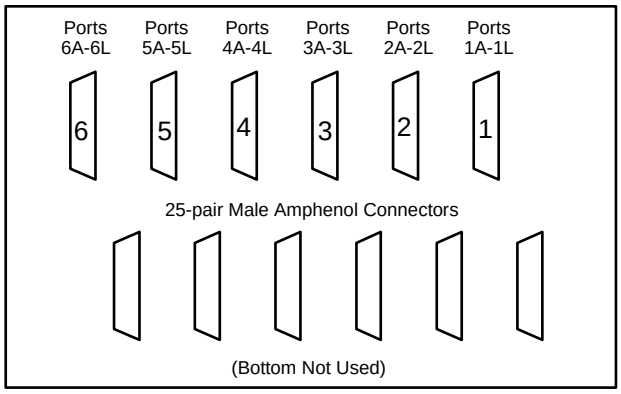


Figure 5. Octel 350 Main Backplane (rearview)
First Frame - PIC-R Connections

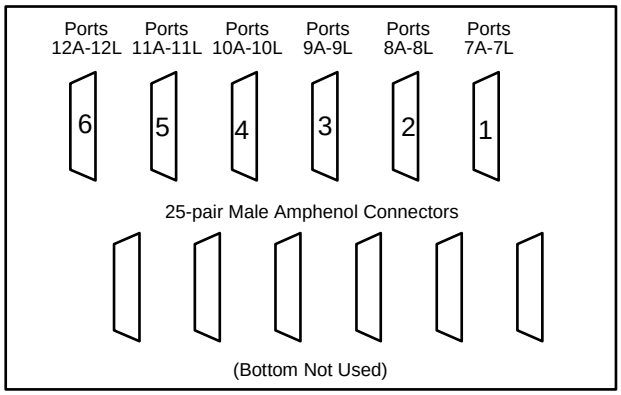


Figure 6. Octel 350 Main Backplane (rearview)
Second Frame - PIC-R Connections

- ☐ Make sure that, in every line-card group, the first 8 ports of that group are physically connected to the PBX's ports, as any of those channels are used for line-card group synchronization.

7.2 TESTING THE INSTALLATION

Testing the installation

- ☐ Create two mailboxes associated with two test extensions. Record a name and personal greeting for each mailbox.
- ☐ Make sure these extensions have been forwarded under busy and no-answer conditions to the Octel 350 pilot number.
- ☐ Using one test extension, call the other test extension. You should hear the personal greeting.
- ☐ Leave a message. Verify that the message waiting indicator turns on.
- ☐ Verify that return-to-operator works properly.
- ☐ Call the Octel 350 from a test extension. You should immediately hear the recorded name and be asked to enter your password.
- ☐ Review the message in the mailbox. Make sure the message waiting indicator turns off. Verify that you can automatically reply to internal telephone-answering messages.

8.0 CONSIDERATIONS

Important notes regarding this integration

8.1 The following six patches are required on the ROLM 9751 Satellite Operations can be tailored to meet customer needs. The following features are supported for subscribers on the remote CBX:

- Forward to personal greeting
- Return to operator on the local CBX **only**
- Direct call
- Message waiting through outcalling

Note: Release 9005.6.84 does not require any patches. Please consult with your Siemens representative to see if your release may require any software patches.

See *section 9.0* of this note for further information.

8.2 The ROLM CBX does not allow a call to be transferred unsupervised to an extension that is busy and not busy forwarded. This is to prevent a caller from being transferred to a busy signal. Instead, the call will be sent back to the extension of the person attempting to transfer the call.

This will affect return to operator and unsupervised automated attendant transfers. Make sure any extensions to be used as

attendants or any extensions that can be dialed from an unsupervised automated attendant mailbox have busy forwarding targets programmed. Otherwise, callers might be returned to the Octel 350 when attempting to transfer out of it.

8.3 **This Integration requires the use of "Dedicated Message-Waiting port(s)".**

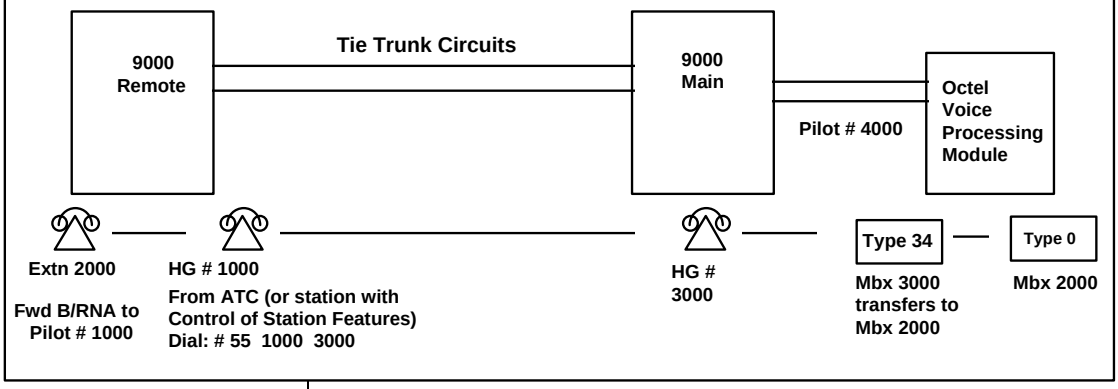
8.4 **If you are converting from a PID/R integration** make sure that you use Menu 4,3 in the Octel 350 and remove the RS-232 link or option of "Y". YOU MUST remove the "Y" option (set it to “N”) **BEFORE** any cards are removed or the system is shut down. Additionally, you should delete the links in menu 6. All this is required to get MWI functioning properly.

NOTE: Conversions from one integration type to another is something outside the scope of the Configuration Notes. Consideration 8.4 is added as a courtesy only.

9.0 ADDENDUM A - SATELLITE OPERATIONS SOFTWARE

One Octel 350 can support two or more ROLM CBX, provided that all switches have Satellite Operations software and all remote systems have Off-Premise Forwarding (Off-system Station Forwarding). The Octel 350 must be integrated with a PID and located at the main CBX. Use the following procedure referencing the diagram below.

ROLM 9000 CBX with Satellite Operations Software



One hunt group (with no members) per remote subscriber must be created at both *the remote and the main site*. At the remote CBX, the hunt-group pilot number must be off-system station forwarded to the hunt-group pilot number at the main site using the **"Invoke Call Forward"** command (a Control of Station Features (CSF) command). The hunt-group pilot number at the main site must system forward on a busy condition to the Octel pilot number. A transfer mailbox should be created for each remote subscriber that matches the pilot number of the subscriber's hunt group *at the main site*. This transfer mailbox should have as its **"Transfer Mailbox Number"** the subscriber's mailbox number. With the use of transfer mailboxes, remote subscribers' mailbox numbers will match their extension numbers. To forward their stations to personal greeting, subscribers system or station forward their extensions to their own individual hunt group at the remote site.

Message Waiting Notification at the remote CBXs will only be possible through outcalling. Return to operator is possible *only* to the main CBX site. This process prevents callers from being sent back to the Octel 350

(system greeting) when all tie trunks are busy. In addition, the ROLM CBX does not allow a blind transfer across the tie trunks.

NOTE: This procedure uses a large number of hunt groups (for phantom extensions) in the main and remote CBX(s). If a remote CBX has a large number of extensions, this might not be practical. It might be better to buy two Octel 350.

NOTE: The remote or main CBX may be a CBX II 8000 or CBX II 9000. Lexes (logical, or phantom, extensions) should be used on the CBX II 8000 in place of hunt groups.

CHANGE HISTORY		
Revision	**Issue Date**	**Reason for Change**
REV D	03/01	Version D
REV E	09/04	Added Consideration

AVAYA

911 Murphy Ranch Road

Milpitas, CA 95035-7912

(408) 577-7000

http://www.avaya.com