

Smooth Operator Configuration Note

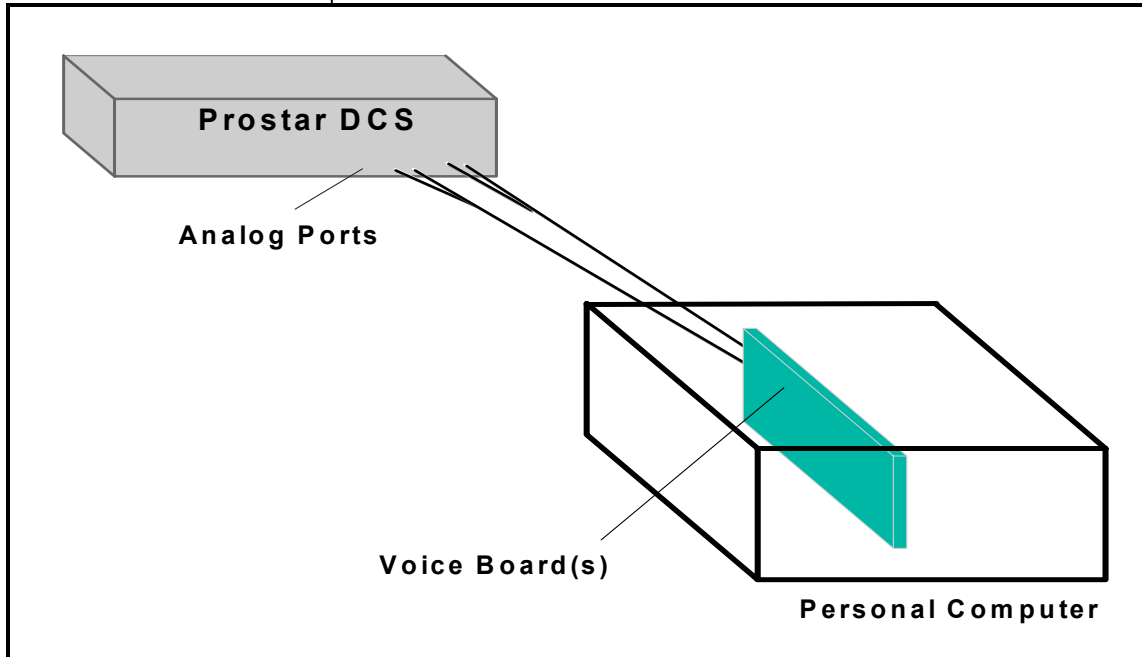
For Smooth Operator Family of Products

Configuration Note 77225

Prostar DCS*

Revised 9/17/97

Octel
Voice
Processing
Module



**Inband signaling is
used for integration**

***All references to Smooth
Operator pertain to the entire
family of products***

1.0 METHOD OF INTEGRATION

Inband. Call forward to personal greeting is achieved via DTMF signals passed from the 56ex/120mx to the Smooth Operator family of products. Message waiting indicators are set by dialing a feature access code followed by the extension number. A hookflash followed by the extension number transfers the caller to the operator.

2.0 SMOOTH OPERATOR ORDERING INFORMATION

There are many options available for both kit and turnkey versions of this product, depending on the application. Please consult with your sales representative.

Disclaimer: Configuration Notes are designed to be a general guide reflecting Octel's experience configuring its systems. These notes cannot anticipate every configuration possibility given the inherent variations in all hardware and software products. Please understand that you may experience a problem not detailed in a Configuration Note. If so, please notify Sales Engineering at (408)324-3066, and if appropriate we will include it in our next revision. Octel accepts no responsibility for errors or omissions contained herein.

Switch Hardware Requirements**3.0 PROSTAR HARDWARE REQUIREMENTS**

- SLI card provides 4 Analog stations (Smooth Operator ports) and has a built in DTMF receiver.

or

- 8SLI card has 8 Analog Stations (Smooth Operator ports) it does not have a DTMF receiver and must share system DSP resources.

Switch Software Requirements**3.1 PROSTAR SOFTWARE REQUIREMENTS**

- ROM Version V2.2 C

Additional Material Requirements**3.2 ADDITIONAL MATERIAL REQUIREMENTS**

- One RJ-14 jack with 4-conductor line cord for every two Smooth Operator ports
- One analog line for remote service access
- One RJ-11 Jack for above and 2-conductor modular telephone cord.
- If FaxMail is installed.
 - One analog line per FAX port.
 - One RJ-11 Jack for every Brooktrout TR-112 fax port
OR one RJ-14 Jack for every two Brooktrout TR-114 fax ports,
along with 4-conductor modular telephone cords.

All references to Smooth Operator pertain to the entire family of products

Supported integration features

4.0 SUPPORTED FEATURES

[✓] Items are supported

System Forward to Personal Greeting		Message Waiting	
All Calls	[]	LCD Display	[]
Ring/no answer	[]	LED	[✓]
Busy	[]	Lamp	[]
Busy/No Answer	[]	Distinctive Dial Tone	[✓]
Do Not Disturb	[]	Multiple Return to Operator	[✓]
Station Forward to Personal Greeting		Direct Call³	[✓]
All Calls	[✓]	Auto Attendant	[✓]
Ring/no answer	[✓]	Outcalling	[✓]
Busy	[✓]	Personal Greeting of Original-Called Party	
Busy/No Answer	[✓]	Multiple Call Forward ⁴	[]
Do Not Disturb ¹	[✓]	Double Call Forward ⁴	[]
Flexible Forwarding²		Call Coverage	[]
Forward to No Answer Greeting ²	[✓]	Intercom Paging	[✓]
Forward to Busy Greeting ²	[✓]	Supervised Transfers	
Intercom/CO Forwarding	[]	Call Screening	[✓]
		Call Queuing	[✓]
		Intercom Paging	[✓]
¹ See Section 7.3	² See Section 7.6	Record Telephone Conversation	
³ See Section 7.4	⁴ See Section 7.2		[]

4.1 DISCONNECT TYPE

Disconnect Type

Disconnects are programmable and can be achieved by either Hangup String or Drop in Loop current. For proper external disconnect supervision, Ground start or Supervised Loop start CO lines are recommended.

5.0 CONFIGURING THE PROSTAR

Programming PBX system parameters

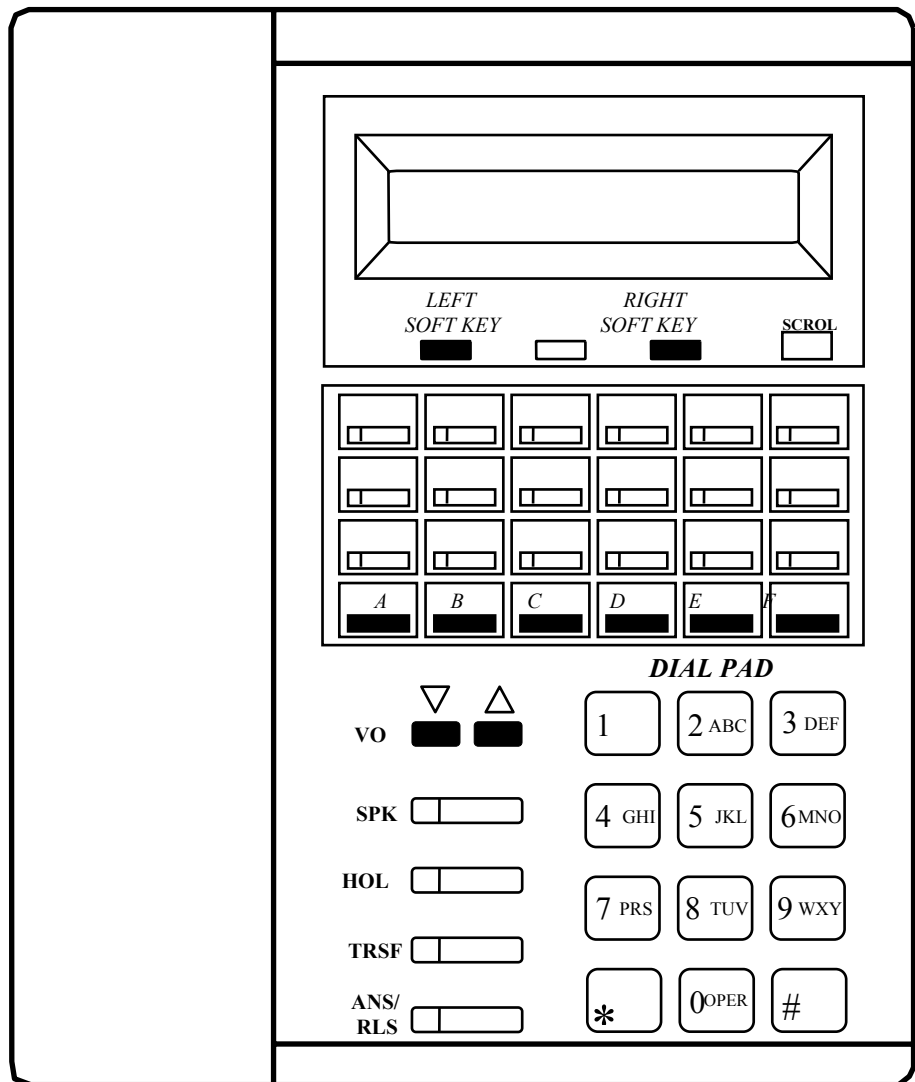
Before you begin programming, it is recommended that a hard copy of the customer database be obtained to verify existing programming. Not all administrative possibilities are shown. The scope of this document does not include discussing all features and their interactions. Initial Startup or Default values on the Switch are assumed. Default codes for the Prostar can be found in the Prostar Technical Manual.

5.1 PROSTAR SYSTEM PROGRAMMING

PROSTAR System Programming

The programming keys used are defined below:

UP & DOWN	Select the program option
SOFT KEYS	Used to move cursor right and left
TRSF	Used to enter and exit programming mode
KEYPAD	Used to enter DTMF information
HOLD	Press to clear entry
SPK	Save data and advance to next MMC
ANS/RLS	Used to select 'ALL'



Assign the Smooth Operator Ports as VM/AA

All references to Smooth Operator pertain to the entire family of products

5.2 ASSIGN THE SMOOTH OPERATOR PORTS AS VM/AA

Smooth Operator port must be assigned as VM/AA ports to receive the inband digits designated in MMC 726. Do not make VM/AA ports Data; this will stop Voice Mail integration.

In the following examples, we will use extensions 209 through 212 as the Smooth Operator ports.

Note: See Section 7.5 for Call Analysis Considerations

MMC#: 207 Assign VM/AA Port

1. Press TRSF 207 the display will show

[209] VMAA PORT
NORMAL PORT

Configuring the Smooth Operator Line Ports

*All references to Smooth
Operator pertain to the entire
family of products*

2. Press UP or DOWN to select the first Smooth Operator station. When the first station is displayed, press the RIGHT Soft Key to move the cursor to the port type.
3. Press the UP arrow to change the port type to VMAA.
4. Press the RIGHT Soft key to move the cursor to the station number.
5. Enter the next station to be programmed.

In this example the next station would be 210. Repeat steps 1 through 5 until all Smooth Operator stations are programmed as VMAA ports.

6. Press TRSF to store the information and exit, or Press SPK to store the information and advance to the next MMC number.

5.3 ASSIGN THE SMOOTH OPERATOR PORTS TO A STATION GROUP

MMC #: 601 Assign Station Group

Smooth Operator ports must be in a Station Group that is designated as VMAA. For this example we will use Station Group 501 (this would be the Voice Mail access code).

1. Press TRSF 601 the display will show [501] STN GROUP
TYPE: NORMAL
2. Press the RIGHT Soft Key twice to move the cursor to the TYPE selection.
3. Press the UP arrow until TYPE displays **VMAA GROUP**.
4. Press the RIGHT Soft Key twice to move the cursor back to TYPE.
5. Press the UP arrow to advance to RING. Press the RIGHT Soft key to move the cursor to the ring mode selection.
6. Press the UP arrow until RING type displays **SEQUENTIAL**
7. Press the RIGHT Soft Key twice to move the cursor back to RING.
8. Press the UP arrow until MEMBER 01: is displayed.

Note: Calls will be routed to the OVERFLOW destination if the Voice Mail becomes inoperative. OVERFLOW, GRP TRSF and NEXT PORT can be set as customer needs dictate.

9. With the cursor under MEMBER, press the RIGHT Soft Key twice.
Enter the First Smooth Operator port programmed in Section 5.2
10. Press the RIGHT Soft Key three times to move the cursor under the MEMBER number.
11. Press the UP arrow to advance to MEMBER 02, then press the RIGHT Soft Key once and enter the next Smooth Operator port.

Trunk Ring Assignment

All references to Smooth Operator pertain to the entire family of products

Assign Station COS for Smooth Operator Ports

Assign VM/AA Options for Smooth Operator

Repeat steps 9 through 11 until all the Smooth Operator ports have been added.

5.4 TRUNK RING ASSIGNMENT

To set the Voice Mail system to answer incoming calls you must program MMC #: 406 (Trunk Ring Assignment) to ring to the Station Group set in section 5.3.

1. Press TRSF 406 the display will show [701] TRK RING
D: 500 N: 500
2. Dial the trunk number or Use the UP / DOWN arrow keys to scroll through the trunks. Press the RIGHT Soft Key to move the cursor.
3. Set D: to 501 (the station group assigned in 5.3) if you want the Voice Mail system to answer incoming calls during the day.
4. Set N: to 501 if you want the Voice Mail system to answer incoming calls during the night.

5.5 ASSIGN STATION COS FOR SMOOTH OPERATOR PORTS

MMC #: 701 Assign COS Contents

1. Press TRSF 701 the display will show COS CONTENTS (01)
TOLL LEVEL : A
Toll level A allows for unrestricted outdial.
2. Use the UP or DOWN key to select an option,
Press the RIGHT Soft Key to move the cursor.
3. The remaining COS options can be set as customer needs dictate.

5.6 ASSIGN VM/AA OPTIONS FOR SMOOTH OPERATOR

MMC 726 is used to set inband signaling parameters and protocols for the Smooth Operator system.

MMC #: 726 VM/AA Options

1. Press TRSF 726 the display will show EXT FOR DN1
NO
2. Press the RIGHT Soft Key to move the cursor to NO.
3. Press the UP arrow to change NO to YES
4. Press the RIGHT Soft Key to move the cursor back to EXT
5. Press the UP twice arrow and advance to EXT FOR DN2. Press the RIGHT Soft key to move the cursor to NO.
6. Press the UP arrow to change NO to YES
7. Press the RIGHT Soft Key to move the cursor back to EXT

8. Press the UP arrow until SEPERATOR is displayed. SEPERATOR should be set to **NO**.

9. Press the UP arrow again to display DISCONNECT SIGNAL

With DISCONNECT SIGNAL set to **NO**, the DCS will provide Drop in Loop current as a disconnect.

See Section 7.5 Busy/No Answer Call Flow before continuing with step 10.

10. Press the UP arrow again to display CALL TYPE ID

The display will show CALL TYPE ID
DIRECT CALL :NO

Initially, all CALL TYPES are set to NO.

(1) Press the RIGHT Soft Key until the cursor is at NO

(2) Press the UP arrow until * is displayed

(3) Press the RIGHT Soft Key twice to move the cursor back to DIRECT CALL

(4) Press the UP arrow to advance to the next option

The display will show CALL TYPE ID
ALL FWD CALL :NO

Press the RIGHT Soft Key until the cursor is at NO

(5) Press the UP arrow until # is displayed

(6) Press RIGHT Soft Key twice to move the cursor back to ALL FWD CALL

(7) Press the UP arrow to advance to the Next option.

Use the Key stroke pattern established in steps (1) through (7) to program the remaining Call Types as shown below.

CALL TYPE ID	Code sent to Voice Mail on
BSY FWD CALL : #	Call Forward Busy

CALL TYPE ID	Code sent to Voice Mail on
NOA FWD CALL : #	Call Forward No Answer

CALL TYPE ID	Code sent to Voice Mail when a call
RECALL : #	is recalled to Voice Mail

CALL TYPE ID	Code sent when a C.O. call goes
DIR TRK CALL : NO	directly into Voice Mail

CALL TYPE ID	Code sent when a call has
OVERFLOW : #	Overflowed to Voice Mail

CALL TYPE ID	Code sent when a DID call has
DID CALL : #	called Voice Mail

All references to Smooth Operator pertain to the entire family of products

CALL TYPE ID
MESSAGE CALL : *

Code sent to Voice Mail when
message reply feature is used

11. After programming the MESSAGE CALL, press the RIGHT Soft Key once to advance to CALL TYPE ID. Press the UP arrow to advance to CALL PROGRESS TONES.

The Smooth Operator system cannot operate with CALL PROGRESS TONES enabled. Each CALL PROGRESS TONE must be individually disabled.

- (1) Press the RIGHT Soft Key once to advance to DIAL TONE. Press the
- (2) RIGHT Soft Key again to advance to :BA
The display will show: PROGRESS TONE ID
DIAL TONE : BA
- (3) Press the HOLD Key to change DIAL TONE to **NO**
- (4) Press the RIGHT Soft Key twice, then the UP arrow once to advance to the next tone.

Using the Key strokes defined above repeat this procedure until all tones are changed to NO.

The display should show

PROGRESS TONE ID
BUSY TONE : **NO**

PROGRESS TONE ID
RNGBACK TONE : NO

PROGRESS TONE ID
DND NO MORE : NO

PROGRESS TONE ID
HDSET ANSWER : NO

PROGRESS TONE ID
SPKER ANSWER : NO

5.7 CONFIGURING THE MESSAGE WAITING LIGHTS

Section MMC #: 724 Dial Numbering Plan section of the Prostar Technical Manual is used to program Message Waiting Lights. By default, the Prostar sends a '41' to light the message LED (SETMG) and a '42' to turn off the LED (CANMG). The default settings are used in the Integrator.

Note: Verify these dialing sequences for your PBX

5.8 CONFIGURING THE SUBSCRIBER STATIONS

For subscribers to be able to forward calls to Voice Mail, MMC #: 300 VMAA FORWARD, must be set to ON for each subscribers station. Set the remaining parameters as customer needs dictate.

Configuring Message Waiting Lights

Configuring the Subscriber Stations

ACCESS DIAL	Determines whether a subscriber can select a trunk or trunk group by dialing its DN number.
MICROPHONE	Allows keyset to be used in speakerphone mode.
OFFHOOK RING	Allows a short burst of ring tone to indicate another call.
SMDR PRINT	If the station is set for no CO calls to and from this station, the station will not print on SMDR.
TGR ADV. TONE	If this feature is set to ON, a warning tone will be heard when the LCR advances to next route.
VMAA FROWARD	If this feature is set ON, it allows calls to be forwarded to Voice Mail.

The default for all of these parameters is **ON**.

1. Press TRSF 300 the display shows [201] CUS. ON/OFF
ACCESS DIAL : ON
2. Dial the subscribers station number or use the UP / DOWN arrow keys to select the station. Press the RIGHT Soft Key once to move the cursor to ACCESS DIAL
3. Press the UP arrow until **VMAA FORWARDING** is displayed. It should be set to **ON**. If it is **not**, press the RIGHT Soft Key once to advance to :OFF. Then press the UP arrow to change it to ON.
4. Press the RIGHT Soft Key again to advance to the Station Number.
5. Press either the UP arrow to advance to the next station number, or, Press TRSF to exit programming.

5.9 CONFIGURING SUBSCRIBER'S CLASS OF SERVICE

If the customer is using forwarding, message waiting lights or paging the following COS options should be programmed. Use a different COS for subscribers stations than you did for the Smooth Operator ports.

MMC #: 701 Assign COS Contents

1. Press TRSF 701 the display will show COS CONTENTS (01)
TOLL LEVEL : A
Use the UP or DOWN key to select another COS,
Press the RIGHT Soft Key to move the cursor to TOLL LEVEL
2. Press the UP arrow until the following is displayed
Use the RIGHT Soft Key to move the cursor. COS CONTENTS (02)
16:EXT FWD :YES
Use the UP/Down arrows to select the options. COS CONTENTS (02)
19:FORWARD :YES
COS CONTENTS (02)
24:MESSAGE :YES

Configuring Subscriber's Class of Service

Programming Subscriber's Stations to Forward

COS CONTENTS (02)

33:PAGE 0 :YES

Configure the remaining Subscriber's Class of Service options as customer needs dictate.

5.10 PROGRAMMING SUBSCRIBER'S STATIONS TO FORWARD

Forwarding to Voice Mail must be done manually from each subscribers station. Use MMC# 102 Call Forward to assign a forwarding target.

MMC# 102

For this example we will use station 201,

1. Press TRSF 102 the display will show [201] FORWARD
0: FORWARD CANCEL
2. Press the RIGHT Soft Key to move the cursor to 0:
3. Press the UP arrow to change to 1: [201] FORWARD
1: ALL CALL :501
Assign the forwarding target for Forward All Calls. This generally would be the Station Group number (501) assigned in section 5.2.
4. Press the RIGHT Soft Key to move the cursor to NONE
Enter **501** (or the station number you assigned in section 5.2)
5. Press the RIGHT Soft Key three times then the UP arrow until you advance to 2: BUSY. [201] FORWARD
2: BUSY :501
6. Press the RIGHT Soft Key to move the cursor to NONE
Enter **501** (or the station number you assigned in section 5.2)
7. Press the RIGHT Soft Key three times then the UP arrow until you advance to 3: NO ANSWER [201] FORWARD
3: NO ANSWER :501
8. Press the RIGHT Soft Key to move the cursor to NONE
Enter **501** (or the station number you assigned in section 5.2)
9. Press the RIGHT Soft Key once, then press TRSF to exit programming.

All remaining options can be set as customer needs dictate.

The remaining forwarding must be done from the subscribers station set.

To set Forward Busy / No Answer to Voice Mail. Go to the individual subscribers stations, lift the hand set, dial 604, you will hear a confirmation tone and the display will show 'forward busy/no ans to 501/501. (501/501) would be the forward destination programmed above.

**All references to Smooth
Operator pertain to the entire
family of products**

Smooth Operator Programming

6.0 CONFIGURING THE SMOOTH OPERATOR

During the install process, run the Integrator program and choose the Prostar DCS. The Integrator will place appropriate feature codes into the Smooth Operator Setup.

The following codes should be inserted by the integrator. Three digit extensions are assumed.

Outside Line Access Code	9,
Off Hook Delay (OFFHDLY)	25
Hook Flash Interval (FLINTVL)	50
DTMF Tone Length (TONELEN)	8

Message Waiting Parameters

Permit Message Waiting Lights	✓
Message Waiting Light Prefix ON	41
Message Waiting Light Prefix OFF	42
Message Waiting Light Suffix ON	,
Message Waiting Light Suffix OFF	,

Inband Parameters

Total Number of DID Digits	10
Seconds to Wait for DID	2
Location of Inband Signaling Code	1
Number of Milliseconds to Wait for Digits	750
Code for Go to Voice Mail	#
Start at End of String for Go to Voice Mail	(Blank)
Location of Mailbox Number for Go to Voice Mail	2
Code for Immediate Subscriber Login to Mailbox	*
Start at End of String for Immediate Login	(Blank)
Location of Mailbox Number for Immediate Login	2
Start at End of String for Default Code	(Blank)
Location of Mailbox Number for Default Code	2

In addition to running the Integrator, ensure the following parameters are set to their corresponding values in System Setup. The information sets up drop in loop current as Hangup Detection.

Hangup Detection

Dial Tone Detection Time (DTONDET)	600
Min. duration for Drop in Loop Current (LDCTIME)	30

Note: *Verify all above dialing sequences for your PBX*

Important notes concerning this integration**Supervised Transfers****Multiple Call Forward not Supported****Considerations for Using DND****Direct Call****Call Analysis Considerations****7.0 CONSIDERATIONS/ALTERNATIVES**

The following items should be considered, below:

- ☐ Supervised Transfers
- ☐ Multiple Call Forward not Supported
- ☐ Considerations for Using DND
- ☐ Direct Call
- ☐ Call Analysis Considerations
- ☐ Busy / No Answer Call Flow

7.1 SUPERVISED TRANSFERS

When the system is programmed to perform a supervised transfer, ensure that the ring timer is greater than Max Rings in the Mailbox Class of Service.

7.2 MULTIPLE CALL FORWARD NOT SUPPORTED

Personal greeting of original called party on double or multiple call forward is not available on the Prostar DCS.

7.3 CONSIDERATIONS FOR USING DND

If you program an extension for DND, internal callers to that extension will not forward to Voice Mail, they will hear DND tone. External callers that are transferred by Voice Mail to an extension that is programmed for DND will forward to the personal greeting of the extension.

7.4 DIRECT CALL

Direct Call / Auto Login, can be achieved by either dialing the Voice Mail access code (assigned in section 5.3) or, if the message light is on, the subscriber can press the message light, then press the Soft Key under REPLY on the LCD display.

7.5 CALL ANALYSIS CONSIDERATIONS

To run Call Analysis Automatically (from port to port) you must change the two ports you are using from VMAA to NORMAL. (*See Section 5.2*). The ports must be changed back to VMAA after you are done.

or

If the Smooth Operator stations are set as VMAA in MMC 207, you must run Call Analysis manually.

Call Analysis must be run manually to a station. To run Call Analysis manually set Channel IN to 0, leave Channel OUT as it is, enter a physical extension number in the Phone Number field. It is best to use the extension of a phone that is next to you as you will be asked to make the phone busy, let the phone ring and answer the phone etc. Make sure the extension you

Busy / No Answer Call Flow

are using does not have hands free announce or any type of call forwarding active.

7.6 BUSY AND/OR RING NO ANSWER CALL FLOW

This integration provides system-wide inband codes indicating those calls which have failed an attempted transfer due to either Busy or Ring No Answer conditions. There are two basic ways these codes can be used; these options are system wide and mutually exclusive. The first option is set as the default by the Integrator for this integration.

First Option: (This is the option that is set by the integrator)

This option deletes the “I’m sorry, but there is no answer at that extension.....” prompt in the Second Option Without Using Subscriber Call Handling (which is very important to some users). It actually offers a lower degree of integration because there is no differentiation between Call Forward Busy and Call Forward Ring No Answer call handling.

System Setup: the Busy and Ring No Answer inband functions should be left blank, allowing the default to take these codes to “Go to Voice Mail.”

Subscriber Setup: Subscribers must be instructed not to use Subscriber Call Handling (except when they wish to block all calls to their extension, such as when they will be away from their desk for an extended period of time). Subscriber settings should be left at their defaults and subscribers should only maintain their Personal Greetings.

Caller Experience: Upon either a Ring No Answer or Busy forward to voice mail the caller will hear the subscriber’s personal greeting followed by, “When you are finished recording, you can press pound for special sending (and fax) options.”

Second Option: (This option offers a higher degree of integration)

Switch and System Setup: The Prostar DCS can be programmed to send a different code for Busy and No Answer conditions. To use this option you must change the Busy and No Answer codes that are set in section 5.5 MMC 726

CALL TYPE ID	Code sent to Voice Mail on
BSY FWD CALL : #	Call Forward Busy
CALL TYPE ID	Code sent to Voice Mail on
NOA FWD CALL : #	Call Forward No Answer

The codes that can be used are 0-9 * and #.

For Example if you changed the Prostar DCS codes as follows

CALL TYPE ID	Code sent to Voice Mail on
BSY FWD CALL : 9	Call Forward Busy
CALL TYPE ID	Code sent to Voice Mail on
NOA FWD CALL : 8	Call Forward No Answer

then the corresponding changes must be made in Smooth Operator System Setup by changing the following Inband Signaling Parameters:

Code for Busy Extension	9	
Location of Mailbox Number for Busy Extension	2	
Start at End of String for Busy Extension		[blank]
Total Length of Busy Extension String	0	
Code for No Answer Extension	8	
Location of Mailbox Number for No Answer Extension	2	
Start at End of String for No Answer Extension		[blank]
Total Length of No Answer Extension String	0	

Subscriber Setup: Subscribers may configure mailboxes in one of two ways. An exception is when subscribers wish to block all calls to their extension, such as when they are away from their desk for an extended period of time.

Using Subscriber Call Handling. Set call handling to block Ring No Answer calls to Optional Prompt 1 and Busy calls to Optional Prompt 2. Subscribers must record and maintain appropriate Optional Prompts.

or

Without Using Subscriber Call Handling. Subscriber settings are left at their defaults, and subscribers should only maintain their Personal Greetings.

Caller Experience: Based upon the Subscriber Setup above, the caller's experience will be one of the following:

Using Subscriber Call Handling. Upon either a Ring No Answer or Busy forward to voice mail the caller will hear the subscriber's Optional Prompt 1 or 2, respectively, followed by, "When you are finished recording, you can press pound for special sending (and fax) options."

or

Without Using Subscriber Call Handling. Upon either a Ring No Answer or Busy forward to voice mail the caller will hear "I'm sorry, but there is no answer at that extension. To try another extension press 1. To leave a voicemail press 2....." After the caller presses <2>, he will hear the subscriber's personal greeting followed by, "When you are finished recording, you can press pound for special sending (and fax) options."

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