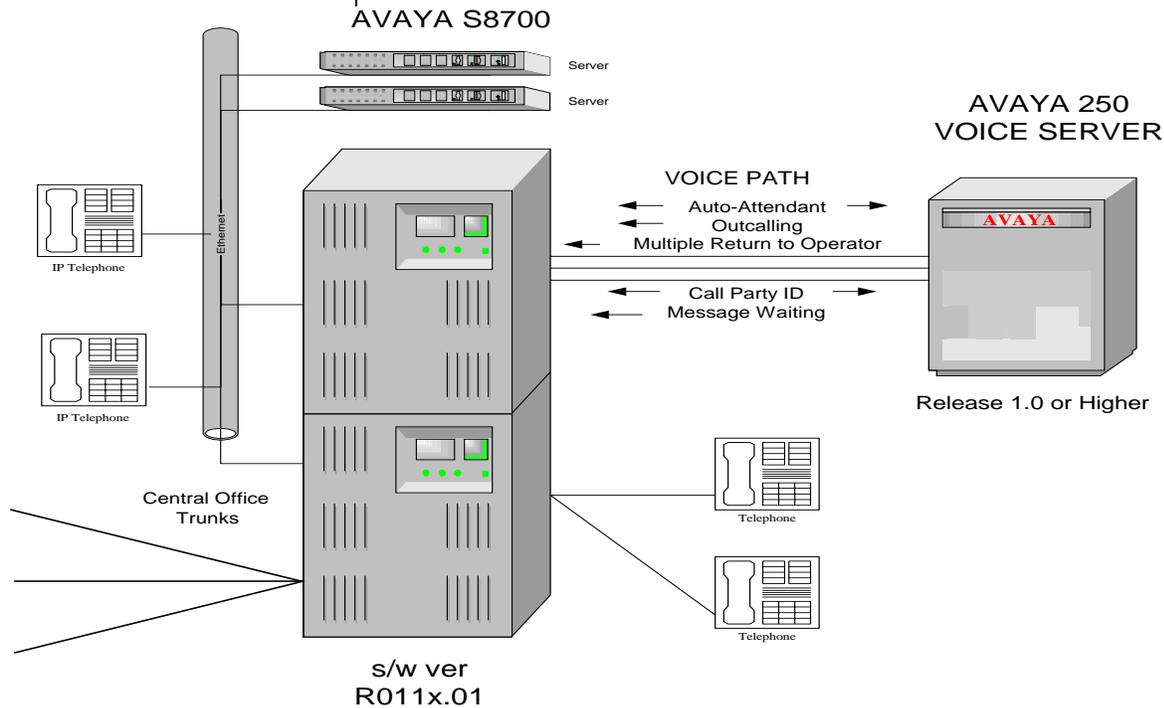


## AVAYA S8700 Digital Set

### Emulation

**Note:** This CN assumes use of traditional cabinets and circuit packs (TN754) that support 74xx sets.

G700 MM712 media modules are not compatible.



The FLT-A emulates digital 7405D/7405ND terminals

### 1.0 METHOD OF INTEGRATION

With digital set emulation integration, Virtual Telephone Interface Card's (FLT-A's) within the Aria voice server emulate the 7405D/7405ND display sets of the AVAYA S8700. When a call is sent to a hunt group consisting of FLT-A ports, the display is read and provides the call information to the voice server. The call is then answered with the appropriate greeting. Message-waiting notification is set and canceled by FLT-A ports using the Leave-Word Calling functionality of the PBX.

### 2.0 OCTEL ORDERING INFORMATION

- FLT-A - Each card supports 8 ports
- Set Emulation Software feature (Feature Bit 33)
- RS232 Integrations feature (Feature bit 34)

**PBX hardware requirements**

- In-band Integrations feature (Feature Bit 35)

**3.0 PBX REQUIREMENTS**

- 4-Wire Digital channel, one per voice server port.

**NOTE: This note defines integration of S8700 with Legacy G3 type carrier cabinets. For G700 implementations set emulation (FLT-A) is not supported**

**AVAYA strongly recommends using the newer TN754B or TN754C circuit packs, as the earlier versions of TN754 circuit packs may cause integration problems25-pair Amphenol cables (male end), one per FLT-A**

**PBX software requirements****3.1 PBX SOFTWARE REQUIREMENTS**

- Supported Software:
  - AVAYA S8700 – R011x.01.0.065.0 or Higher

**Supported integration features****4.0 SUPPORTED FEATURES**

- Call Coverage to personal greeting:
  - All Calls
  - RNA
  - Busy
- Station forward to personal greeting
  - All Calls
- Message Waiting Indicator
  - Audible (Optional PBX feature)
  - Visual
- Direct Call
- Reply to message left by internal party in Telephone Answering
- Multiple Return-to-Operator
- Outcalling, Paging
- Networking
- Automated Attendant
- ANI
- Call Sender
- Multiple Personal Greetings
  - RNA
  - Busy

## Configuring the AVAYA S8700

### 5.0 CONFIGURING THE S8700

The screens shown in this section are taken from an AVAYA Definity G3 administration terminal. **Boldface** fields indicate where required information must be entered. Some parameters may not appear on all software releases. Below is an example of configuration of a 7405ND channel **used to support an Aria 250 voice server port.**

**Note:** *When ports are configured as 7405ND terminal types, the original called party ID is automatically sent to the Aria application. The administrator is not required to input the subscriber's extension in the Name Field of the station. Special Application Package SA7608 is now part of the standard package available to customers. Refer to system-parameters features (Page 5 of 12) verify 7405ND Numeric Terminal Display? y is enabled. If other applications on the switch require 7434ND to also be enabled, TSO must administer load 129. When 7405ND terminals are implemented, changes to the Aria Set Emulation Call Table Setups are required to fully support all integration features. Contact Octel Technical Support to have those changes made to your system.*

*Using the 7405ND terminal type for Octel 250's supporting VDN applications configured to "route" callers to mailboxes on the Aria voice server will experience integration problems, unless the Vector programming associated with those VDN applications is configured with "messaging split" (or "messaging skill" if EAS is used) steps instead of "route to" steps. In order for the Avaya S8700 to allow the use of "messaging split" or "messaging skill" steps, the Aria UCD/ACD group must be configured as "Message Center: msa". This field is located on page 2 of the Hunt Group Programming Form.*

**Note 2:** *Later Avaya CM software releases have replaced the "msa" keyword with "msa-vm."*

*(continued on next page)*

### 5.1 DIGITAL TERMINAL ADMINISTRATION

Configure one 7405ND channel per Aria 250 voice server port in the same fashion as illustrated in the following screens:

add station 47125		Page 1 of 5
STATION		
Extension: 47125	Lock Messages? n	BCC: 0
Type: <b>7405ND</b>	Security Code:	TN: 1
Port: 01B0401	Coverage Path 1:	COR: 1
Name: <b>VOICEMAIL</b> x47125	Coverage Path 2:	COS: 1
	Hunt-to Station:	
STATION OPTIONS		
Loss Group: 2		
Data Module? n	Message Lamp Ext: <b>47125</b>	
Display Module? <b>y</b>	Feature Module? n	
Display Language: english	Coverage Module? <b>n</b>	
	Media Complex Ext:	
	IP SoftPhone? n	

7405ND Terminal administration, Pg. 1 of 5

display station 47125		Page 2 of 5
STATION		
FEATURE OPTIONS		
LWC Reception: <b>none</b>	Auto Select Any Idle Appearance? n	
LWC Activation? <b>y</b>	Coverage Msg Retrieval? y	
LWC Log External Calls? n	Auto Answer: none	
CDR Privacy? n	Data Restriction? <b>y</b>	
Redirect Notification? y	Idle Appearance Preference? n	
Per Button Ring Control? n	Restrict Last Appearance? y	
Bridged Call Alerting? n	Active Station Ringing: single	
H.320 Conversion? n	Per Station CPN - Send Calling Number?	
Service Link Mode: as-needed		
Multimedia Mode: basic	Audible Message Waiting? n	
MWI Served User Type:	Display Client Redirection? <b>y</b>	
AUDIX Name:	Select Last Used Appearance? n	
Messaging Server Name:	Coverage After Forwarding? s	
	Multimedia Early Answer? n	

Direct IP-IP Audio Connections? y
Emergency Location Ext: 47125 <span style="float: right;">IP Audio Hairpinning? y</span>

7405ND (7405D, if applicable) Telephone administration, Pg. 2 of 5

display station 47125	Page 3 of 5	
<b>STATION</b>		
<b>SITE DATA</b>		
Room:	Headset? n	
Jack:	Speaker? n	
Cable:	Mounting: d	
Floor:	Cord Length: 0	
Building:	Set Color:	
<b>ABBREVIATED DIALING</b>		
List1:	List2:	List3:
<b>BUTTON ASSIGNMENTS</b>		
1: <b>call-appr</b>	6:	
2: <b>call-appr</b>	7:	
3:	8:	
4:	9:	
5:	10:	

7405ND Terminal administration, Pg. 3 of 5

display station 47125	Page 4 of 5
<b>STATION</b>	
<b>FEATURE BUTTON ASSIGNMENTS</b>	
1:	13:
2:	14:
11:	23:
12:	24:

7405ND Terminal administration, Pg 4 of 5

display station 47125

Page 5 of 5

## STATION

## DISPLAY BUTTON ASSIGNMENTS

1: normal  
 2:  
 3:  
 4:  
 5:  
 6:  
 7:

7405ND Terminal administration, Pg 5 of 5

- Make sure that the Class of Service (COS) assigned to the 7405ND sets has feature “**Client Room**” set to “n”.
- After configuring all necessary 7405ND channels, create an Hunt Group (**Group Type: ucd; Queue: Y; Queue Length: 15**), and assign all the newly created 7405ND extensions to it. The Group Extension will be the Aria voice server System Access number. If configuring this group as an ACD, you must set parameter "Auto Available Split" to "Yes", so that the ACD agents (the Aria ports) will automatically login to the ACD group without the need to manually log them in using the ACD Login Access Code. Assign a name to this group, making sure it does not contain any numeric characters. Avaya recommends assigning the name “VOICEMAIL”. If using dedicated ports for message waiting operation, do not include extensions assigned to those ports into the Hunt Group.
- Configure a Coverage Path. A coverage path forwards calls to another telephone if the individual does not answer or is busy. Placing Octel’s Hunt Group number in the coverage path assures that all unanswered and busy calls are sent to voicemail.

**NOTE:** If the Aria ports are configured as 7405D terminals, the final requirement for the administrator is at the subscriber level. This consists of two parts: name field administration and the assignment of a coverage path. As stated before, in order for a telephone set to be Integrated, the complete extension number must appear in the first 15 characters of the subscriber’s name field when using 7405D terminals. The field can contain up to 15

characters; therefore, abbreviations may be necessary. For example:

Smith,J.507 or 507.J,Smith

After configuring the name field, make sure to assign the newly created coverage path to subscribers' stations.

All users stations with message-waiting indicators must be programmed with:

LWC Reception: MSA-SPE (SPE on G3r)

Single line stations should have "Message Indication:" LED.

## 5.2 CONFIGURING THE HUNT GROUP

The following screens are examples of Hunt Group programming:

### Configuring the Hunt Group

display hunt-group 5	Page 1 of 60
HUNT GROUP	
Group Number: <b>5</b>	ACD? n
Group Name: <b>VOICEMAIL</b>	Queue? <b>y</b>
Group Extension: <b>50000</b>	Vector? n
Group Type: <b>ucd-mia</b>	Coverage Path:
TN: 1	Night Service Destination:
COR: 1	MM Early Answer? n
Security Code:	
ISDN Caller Display:	
Queue Length: <b>15</b>	
Calls Warning Threshold: Port:	
Time Warning Threshold: Port:	

display hunt-group 5	Page 2 of 60
HUNT GROUP	
Message Center: none	
LWC Reception: none	
AUDIX Name:	
Messaging Server Name:	
First Announcement Extension:	Delay (sec):

```

display hunt-group 5                               Page 3 of 60
                HUNT GROUP
Group Number: 5   Group Extension: 50000   Group Type: ucd-mia
Member Range Allowed: 1 - 1500   Administered Members (min/max):
1 /4
                Total Administered Members: 4
GROUP MEMBER ASSIGNMENTS
  Ext   Name (24 characters)   Ext   Name (24 characters)
1: 47125  VOICEMAIL x47125     14:
2: 47126  VOICEMAIL x47126     15:
3: 47127  VOICEMAIL x47127     16:
|: |           |           |:
x: xxxx  VOICEMAIL xxxxx     |:
    
```

**Define Coverage Path**

```

display coverage path 505
                COVERAGE PATH
                Coverage Path Number: 505
                        Hunt after Coverage? n
                Next Path Number:   Linkage
COVERAGE CRITERIA
  Station/Group Status   Inside Call   Outside Call
  Active?                 n             n
  Busy?                   y             y
  Don't Answer?          y             y   Number of Rings: 2
  All?                   n             n
  DND/SAC/Goto Cover?   y             y
COVERAGE POINTS

  Terminate to Coverage Pts. with Bridged Appearances? n
  Point1: h5             Point2:       Point3:
  Point4:                Point5:       Point6:
    
```

## Configuring the Octel 250

**6.0 CONFIGURING THE OCTEL 250**

## Menu 0 - First Time Setup

- AT&T System 85 Special Message Waiting: Y

**NOTE: When using this feature, make sure that Menu 1.2 field “Time of Day to Refresh Message Waiting” is left blank. Also, do not use COS feature “AT&T Message Waiting” for mailboxes configured for “Message Waiting Allowed: Y”.**

## Menu 1.1 - System Parameters

- Type of Switch connected to: F - PBX Integration Device/AT&T 85
- Number of Digits in Extension used for Outcalling and ECP:
- Number of Digits in Extension used for Message Waiting: 4 or 5
- Sender ID Used for Telephone Answering Messages: 2 - Calling Party, If Known

**Menu 4.1 Port Configuration**

- Extension/Phone No.: Extension number of digital channel
- Line Type: 145

*NOTE: Although it is not an absolute requirement, Avaya recommends dedicating ports for MWI. If port(s) are not dedicated for MWI operation, Message Waiting Indication may be delayed. All other entries are customer application specific. If dedicating port(s) for MWI, set “M” column in Menu 4.1 to “Y”, and all other tasks to “N”. Station forward all calls those extensions to the Aria 250 hunt group pilot number. This step will prevent the MWI port from being accessed by subscribers using the Message Retrieval - Return Call feature.*

**Menu 6.1 - Transfer Dialing Sequences**

- Flash On-hook Time: 500 milliseconds
- Pause Time: 500 milliseconds
- Dialing Sequence to Transfer a Call: FN
- Dialing Sequence to Reconnect with a Call:
  - Ring/No Answer: F
  - Busy: F

**Menu 6.2 - In-Band Integration**

- Maximum Time Before First Digit Received: 0 ms
- Dialing Sequence to Activate MWI: XXN (XX= LWC-Activate feature access code as configured in PBX)
- Dialing Sequence to Deactivate MWI: XXN (XX= LWC-Cancel feature access code as configured in PBX)
- Retry Message Waiting on Failed Attempt: Y (*site/traffic specific*)
- Reset Message Waiting on System Boot: Y
- Number of Message Waiting Retry Attempts: 3 (*site/traffic specific*)
- Maximum Response Time For Message-Waiting Confirmation: 500 milliseconds
- Digit Sequence for Direct Calls: Leave Blank
- Digit Sequence for Forward - All Calls: Leave Blank
- Digit Sequence for Forward - RNA/Busy: Leave Blank
- Digit Sequence for Forward - RNA: Leave Blank
- Digit Sequence for Forward - Busy: Leave Blank

*Note: These may vary from switch to switch, please verify the proper sequences for your installation.*

#### **Menu 8/9.1 - Subscriber Mailbox Profile**

- Subscriber's Extension: 4 or 5-digit extension number assigned to subscriber's telephone set.
- Message Waiting Allowed: Y only for mailboxes associated with subscribers' telephones that have "LWC reception" enabled. N for mailboxes not associated with subscribers' telephones.

#### **Connecting the 7405ND channels**

### **6.1 HARDWARE INSTALLATION**

Each FLT-A supports 8 voice ports. On the Aria 250, each FLT-A connects to the switch via a single 25 pair male Amphenol cable. See *Figure 1* for cable pin-outs.

- Physically connect the lines used for the voice path between the switch and the Aria 250. The voice lines are connected to the switch using customer-supplied male-Amphenol cables, which terminate on the front of the FLT-A(s) in the Aria 250 frame. See *Figure 1*.

**NOTE:** Make sure that when connecting voice ports from the PBX to the Aria 250, do not use unprotected outside wiring, as FLT-A's do not use surge protection hardware.

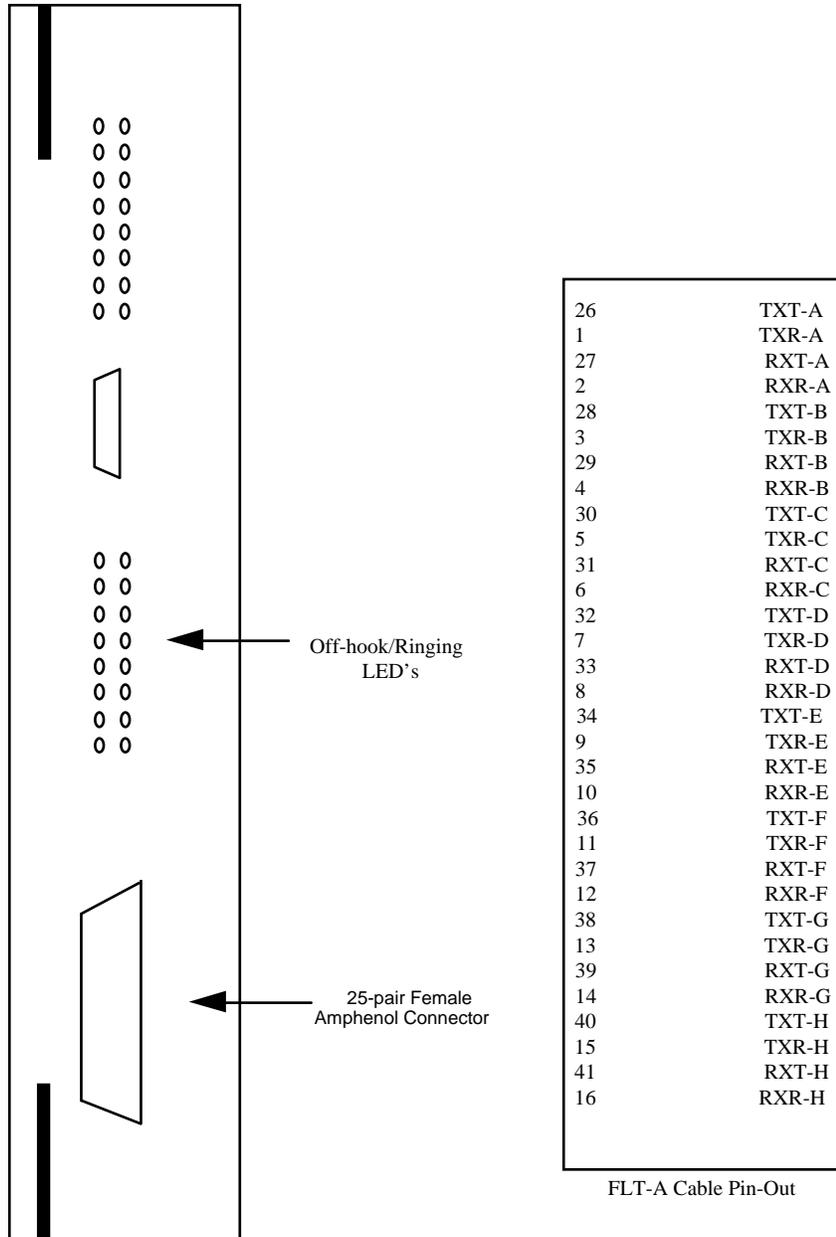


Figure - 1

**Testing the installation when complete**

**7.0 TESTING THE INSTALLATION**

Create two mailboxes associated with two test extensions. Record a name and personal greeting for each mailbox.

Assign a call coverage path to the test extensions that contains the Octel system access 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 Aria 250 from a test extension. You should immediately hear the recorded name and be asked to enter your password.

Review the message in the mailbox.

Delete the message. Verify that the message-waiting indicator turns off.

Important notes regarding this integration

## 8.0 CONSIDERATIONS

**8.1 Unsupervised transfers require busy-call coverage.** Calls that are blind transferred to stations that are busy and are not call covered will be lost.

**8.2 Leave Word Calling (LWC) provides message notification.** If the LWC feature is being used by the Aria voice server **and** other sources (that is message center and station users), then users without display terminals must contact their designated message retriever to determine the source of their message-waiting light.

**CAUTION: Users with display terminals must not delete any Aria voice server messages on their display. This allows the Aria voice server to turn off the message-waiting light when voice messages are reviewed.**

**8.3 DCS is AVAYA's PBX networking package.** In a DCS environment, subscribers on the remote nodes may not have the same integration feature functionality as those on the hub node. In general, all integration features are supported. Call Coverage support on the remote nodes is dependent on the type of switch and software as follows:

- If they are on a G3 V2 or higher system, the Remote Call Coverage feature allows coverage to personal greeting for Busy and RNA conditions.
- In all cases MWI is supported to the remote hubs over a DCS network.

**Note:** G3i V1 7.0 with DCS is NOT SUPPORTED! The display field is shifted 2 characters on the G3i side. V1 also does not support call Coverage to a VDN.

**8.4 Avaya highly recommends that the Aria voice server ports be distributed among different port cards/shelves on the PBX.** This reduces the possibility that a single card/shelf failure will affect a large number of voice server ports

- 8.5 AVAYA strongly recommends using the TN754B or TN754C circuit packs, as field-testing of TN754 circuit packs uncovered problems.** Furthermore, AVAYA has recognized problems with TN754 Version 5 to Version 10, and if the use of TN754 circuit packs is an absolute requirement, the circuit pack(s) must be Vintage 11 or higher. It is also been discovered that SN270 circuit packs do not work properly with FLT-A's. Use SN270B circuit packs instead, as those cards have been successfully implemented.
- 8.8 Name fields descriptors of Trunk Groups require that at least one numerical value be entered, regardless of AVAYA PBX model type.** Valid examples are: TIE 1, INWATS 2, 800 INWATS, etc. If the name field is left blank, the PBX will by default display the trunk number; this is also satisfactory.
- 8.9 Performing station/board tests may cause port lock-up.** AVAYA has discovered that if a station/board test is invoked for the DCP ports connected to the Aria voice server (from Avaya system consoles, test is invoked by entering: "test station XXXX" or "test board XXYY"), it may cause port lock-up. This only happens if a call is presented to the port at the same time as the station test is performed. If ports are tested while in idle state, the test will not affect functionality.
- 8.10 Multi-appearance voice terminal users on S8700's and G3's can bridge onto calls that forwarded to the voice server.** A feature called "Temporary Bridged Appearance" allows multi-appearance voice terminal users to "bridge" onto a call that has "Call Covered" and been answered by another station. If the "covering" station is an voice server port, the calling party can inadvertently be "conferenced" by the called party and the voice server port. Switch documentation reveals this feature can be disabled by setting the Feature-Related System Parameter "Keep Held SBA at Coverage Point" to "N". Field-testing has shown that this parameter does not have any effect on "Temporary Bridged Appearance" for AVAYA System 75, G1 and G3 PBX's. In order to disallow "Temporary Bridged Appearance" on G3 PBX's using G3V1, G3V2 and G3V3 software release, Vectoring software is required. This is accomplished by configuring the Aria voice server ports UCD/ACD group pilot number into a Vector as a "route to" step. Then, assign the VDN (configured with "Allow VDN Override: n") associated with this newly configured Vector as the call coverage point for all subscribers' stations. For G3V4 and higher software releases, Temporary Bridged Appearance can be disabled by setting Feature-Related System Parameter "Prohibit Bridging onto Calls with Data Privacy" to "y", and configuring the Class of Service assigned to the digital ports connected to the FLT-A's with "Data Privacy" enabled; then simply enable "Data Restriction" on those same ports. Please note that when "Prohibit Bridging onto Call with Data Privacy" is used, the call appearance receiving the call is still going to be

“active” (busy) for the duration of the entire call, and cannot be used to receive or initiate calls during that time. This means that digital stations having only one call appearance (such as the 7401 sets) cannot make any calls until the party leaving the voicemail message hangs up. To completely eliminate the Temporary Bridged Appearance on Definity G3 (software G3V4 or higher) and on Prologix PBX’s, Vectoring software is required and must be implemented as described above. The most basic and least expensive Vectoring software package, Automated Attendant Vectoring (PEC Code 1227-AAI or 1227-AAR, depending on switch type), will enable them to do so.

- 8.11 Supervised transfers to busy stations forwarding back to the Aria voice server are not supported.** Because of the way AVAYA PBX’s handle forwarded calls, the Aria system cannot reliably detect Automated Attendant and return-to-operator transfers that immediately forward back to another Aria port. AVAYA strongly recommends configuring Automated Attendant and Return-to-Operator applications to perform “unsupervised” transfers. If the Aria system must perform supervised transfers, make sure that in Menu 1.1, field “Number of Rings for On-PBX Calls (Used for ECP)” is configured for less rings that it takes for a call to forward on a ring-no-answer condition. This will allow “supervised” transfers to work properly for stations forwarding under ring-no-answer conditions.
- 8.12 AVAYA G3 Digital line self-test can cause errors in the status log upon system reboot.** This self-test causes a momentary interruption on the digital link connecting FLT-A ports to the PBX. This causes the Aria 250 to log “F9” errors in the status log. One error per FLT-A port is logged shortly after system reboot. This self-test feature can be disabled within the PBX; however, the command to disable this test can only be accessed via “Maintenance” level password.
- 8.13 Subscribers’ station name field configuration may not contain numbers other than the actual subscriber’s extension.** If numbers other than the extension numbers appear within the name descriptors, such as “Comp. Rm1, 3000” or “3000, Conf Rm.2”, calls will not integrate. Furthermore, all internal stations accessing the Octel system (either as direct or forwarded calls) must not have more than one set of numbers within the first 15 characters of the name field, as this will cause loss of call integration. For AVAYA G3/Prologix PBX’s only, an alternative to this requirement would be to enable Special Application Package included with Release 7 or higher, which provides the 7405ND functionality. Note that customers currently at V4-V6 must upgrade to V7 and beyond to get this feature capability. When configured as 7405ND telephone set types, Aria ports will always receive calling/called station extension numbers, not the name descriptor associated with the calling/called station. If your site is going to be implementing this, changes to the

Set Emulation Call Table Setups must be made to fully support all integration features. Contact Aria/Octel Technical Support to have those changes made to your system. Refer to Section 5.0, page 7, for more information.

- 8.14 Hybrid telephone sets (7300-series) do not generate DTMF tones when calling internal digital stations.** This prevents subscribers, calling from those telephone sets into FLT-A ports, from accessing their mailboxes. Hybrid telephone sets do generate DTMF tones when completing calls to analog stations and after connecting to outside trunks, however, making it possible for subscribers to access the Aria 250 if the system is equipped with FLT8 ports or if subscribers place calls to outside trunks routing back into the Aria system pilot number.
- 8.15 Use of autodial and/or abbreviated dialing buttons to access the Aria 250 is not supported.** The PBX does not output DTMF tones that are part of autodial and/or abbreviated dialing digit strings to digital stations; therefore, using this method to dial into the Aria 250 and automatically input the password will not work.
- 8.16** This configuration note details the integration for an Avaya S8700 using traditional G3 carrier cabinets. G700 implementations set emulation (FLT-A) is not supported
- 8.17 MSA administration** is required for voice mail hunt groups that are accessed by a "messaging split" vector step. In particular, this functionality is required when a vector on an ECLIPS accesses an Octel Voice Mail system, a Magix centralized voice mail system, or any voice mail system that uses Mode Code integration to turn on Message Waiting lights. For MultiVantage (MV) software V1.1.2 (both the "r" server [formerly G3r] and S8000 series servers use this software/term) a patch is available to restore the keyword 'msa' back to the Message Center field on the hunt group form. There is no patch for systems earlier MV software versions. MV Version 1.2 restores the 'msa' keyword without the need for a software patch. **Later CM software releases have replaced the "msa" keyword with "msa-vm."**

CHANGE HISTORY		
Revision	Issue Date	Reason for Change
DRAFT 0.1	07/29/02	Initial release for review/validation
A	11/19/02	Release to GA
B	10/10/03	Added NOTE re: MM712s title page
C	04/20/05	Updated MSA information in 8.17 adding msa-vm keyword. Also added Note 2 on page 3 (Section 5.0)

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