



## **Avaya Solution & Interoperability Test Lab**

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# **Application Notes for Configuring Telecor VS-600 Staff Call Station with Avaya Aura<sup>™</sup> Communication Manager – Issue 1.0**

### **Abstract**

These Application Notes describe the steps required to configure Telecor VS-600 Staff Call Station and peripherals to interoperate with Avaya Aura<sup>™</sup> Communication Manager. The VS-600 Staff Call Station is a device that seamlessly integrates all the functions of a traditional nurse call system, providing instant two-way speech between residents and staff. The device is essentially an analog speaker telephone, primarily for retirement/assisted living residents to call staff; with capabilities such as programmable multiple call destination points for initial and redirection of residents calls to staff.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

# 1. Introduction

These Application Notes describe the steps required to configure Telecor VS-600 Staff Call Station and peripherals to interoperate with Avaya Aura™ Communication Manager.

The VS-600 Staff Call Station enables easy and fast communication between residents and staff of assisted living facilities or retirement communities. All of the facility's administrative, external/internal communication needs are encompassed into one application. Using Communication Manager's features and functions as the core element, the VS-600 Staff Call Station and peripherals such as wired and wireless pull cords, call cords, pendants and corridor lights will provide total connectivity between residents and staff.

In addition, programmable software allows the capability to program each unit individually as a separate device to allow for the special care needs of a particular resident. Each device can be programmed for system announcements (for example, a kitchen menu or activities for the week). When the Menu or Activities buttons are pressed, the residents will hear a pre-recording announcement through the VS-600 Staff Call Station's speaker.

When a resident initiates a call on the VS-600 Staff Call Station or peripheral, the call is routed to a Communication Manager extension, VDN, or hunt group to contact a staff member. The designated staff's telephone(s) receive the call and its LCD screen displays the type of call device, such as a pendant or call cord. The station number identifies the location where the call originated from. When the call is answered, the resident and staff will have a two-way communication.

## 1.1. Interoperability Compliance Testing

The compliance testing focused on analog calls from the VS-600 Staff Call Station and peripherals to telephones on Avaya Aura<sup>TM</sup> Communication Manager, and redirection of those calls utilizing the features of the VS-600 Staff Call Station.

In addition to calls from the VS-600 Staff Call Station, the following peripherals were tested:

- **Wireless Pendant** - A Wireless Pendant is worn by the resident to allow them to move freely about the room and place calls without being near the VS-600 Staff Call Station.
- **Wireless Pull Station** – A Wireless Pull Station is most often installed in the resident's washroom to provide additional security.
- **Hard Wired Pull Station** – A Hard Wired Pull station can also be used in a resident washroom to provide call capabilities.
- **Bed Call Cord** – The Call Cord plugs into the VS-600 Staff Call Station, providing the convenience of being able to initiate a call remotely from the bedside.
- **Dome Light** – A Dome Light provides visual signals to nearby staff of calls originating from rooms. It's multi colored lamps and lighting patterns help to identify the call-in device, which has a designated priority level.

## 1.2. Support

For Telecor technical support, contact Telecor at:

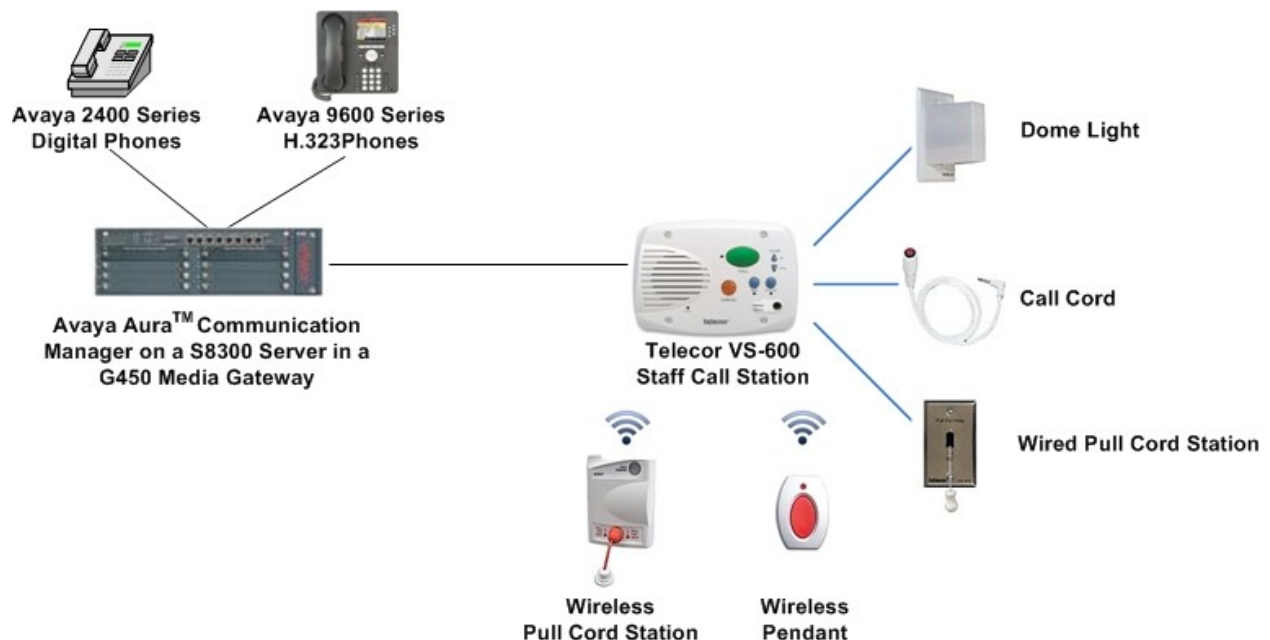
- Phone: 1-800-464-3274
- E-mail: [vstech@telecor.com](mailto:vstech@telecor.com)

## 2. Reference Configuration

**Figure 1** illustrates the Avaya Aura™ Communication Manager configuration used during compliance testing with the Telecor VS-600 Staff Call Station and peripherals. The VS-600 Staff Call Station connects to Communication Manager via an analog port.

The Avaya Aura™ Communication Manager solution comprised of the following equipment:

- S8300 Server running Avaya Aura™ Communication Manager 5.2.1
- Avaya G450 Media Gateway
- Avaya 2400 Series Digital Telephones
- Avaya 9600 Series IP Telephones (H.323)



**Figure 1: Communication Manager with Telecor VS-600 Staff Call Station & Peripherals**

### 3. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Avaya Solution Components	
Equipment	Software/Firmware
Avaya Aura™ Communication Manager - Avaya S8300 Server	5.2.1
Avaya G450 Media Gateway <ul style="list-style-type: none"><li>MM711AP (Analog board)</li></ul>	HW31, FW091
Avaya 9600 Series IP Telephones (H.323)	3.0
Avaya 24xx Digital Telephones	-
Telecor Solution Components	
Equipment	Software/Firmware
VS-600 Staff Call Station	3.13
Peripherals: <ul style="list-style-type: none"><li>Dome Light</li><li>Wireless Pull Cord Station</li><li>Wireless Pendant</li><li>Hard Wired Pull Station</li><li>Call Cord</li></ul>	
Resident Unit configuration software	4.52

## 4. Configure Avaya Aura™ Communication Manager

This section describes the steps required for configuring Avaya Aura™ Communication Manager to interoperate with the Telecor VS-600 Staff Call Station and peripherals.

**Note** - The initial installation, configuration, and provisioning of the Avaya Aura™ Communication Manager, Avaya Media Gateways and their associated boards, as well as the Avaya telephones, are presumed to have been previously completed and are not discussed in these Application Notes.

**Note** – The Avaya Aura™ Communication Manager commands described in these Application Notes were administered using the System Access Terminal (SAT). SSH was used to connect to the SAT via the appropriate IP address, login and password.

1. *Configure an analog extension for the VS-600 Staff Call Station.*  
Use the **add station x** command, where **x** is a valid extension in the provisioned Communication Manager dial plan, to add an analog station for the VS-600 Staff Call Station.

Configure the following:

- Set **Type** to **2500**.
- Set **Port** to an available analog port (e.g. **001V301**).
- Enter a descriptive **Name** (optional)
- The default values may be used for the remaining fields.

The screen below shows the station added during compliance testing.

change station 1005		Page 1 of 4
STATION		
Extension: 1005	Lock Messages? n	BCC: 0
<b>Type: 2500</b>	Security Code:	TN: 1
<b>Port: 001V301</b>	Coverage Path 1:	COR: 1
<b>Name: VS-600</b>	Coverage Path 2:	COS: 1
	Hunt-to Station:	Tests? y
STATION OPTIONS		
XOIP Endpoint type: auto	Time of Day Lock Table:	
Loss Group: 1	Message Waiting Indicator: none	
Off Premises Station? n		
Survivable COR: internal		
Survivable Trunk Dest? y		

2. *Configure Hunt Groups.*

The VS-600 Staff Call Station was configured to dial a primary hunt group extension when a call was placed from the device. As a backup, it was also configured to dial a secondary hunt group extension when the call to the primary hunt group was not answered.

Use the **add hunt x** command, where **x** is available hunt group number, to create a new hunt group. The screens below show the primary and secondary hunt groups added during compliance testing.

Configure the following for the primary hunt group on Page 1:

- Enter a descriptive Group Name (optional).
- Enter a valid extension in the Group Extension field.

change hunt-group 2		Page 1 of 60	
HUNT GROUP			
Group Number: 2		ACD? n	
<b>Group Name: primary</b>		Queue? n	
<b>Group Extension: 1003</b>		Vector? n	
Group Type: ucd-mia		Coverage Path:	
TN: 1	Night Service Destination:		
COR: 1	MM Early Answer? n		
Security Code:	Local Agent Preference? n		
ISDN/SIP Caller Display:			

On Page 3:

- Enter one or more stations (staff member's phones) to the hunt group by adding the appropriate extensions under the **Group Members Assignments**.

change hunt-group 2		Page 3 of 60	
HUNT GROUP			
Group Number: 2	Group Extension: 1003	Group Type: ucd-mia	
Member Range Allowed: 1 - 1500	Administered Members (min/max): 1 /1	Total Administered Members: 1	
<b>GROUP MEMBER ASSIGNMENTS</b>			
Ext	Name(19 characters)	Ext	Name(19 characters)
1: <b>1002</b>	<b>Staff Member 1</b>	14:	
2:		15:	

- The default values may be used for the remaining fields.

Configure the secondary hunt group following the same steps used for the primary hunt group.

change hunt-group 3		Page 1 of 60	
HUNT GROUP			
Group Number: 3		ACD? n	
<b>Group Name: secondary</b>		Queue? n	
<b>Group Extension: 1004</b>		Vector? n	
Group Type: ucd-mia		Coverage Path:	
TN: 1	Night Service Destination:		
COR: 1	MM Early Answer? n		
Security Code:	Local Agent Preference? n		
ISDN/SIP Caller Display:			

change hunt-group 3		Page 3 of 60	
HUNT GROUP			
Group Number: 3	Group Extension: 1004	Group Type: ucd-mia	
Member Range Allowed: 1 - 1500	Administered Members (min/max): 1 /1	Total Administered Members: 1	
<b>GROUP MEMBER ASSIGNMENTS</b>			
Ext	Name(19 characters)	Ext	Name(19 characters)
1: <b>1007</b>	<b>Staff Member 2</b>	14:	
2:		15:	



3. *Configure routing to announcements.*

Two announcements were created during compliance testing, one for the Menu button and one for the Activities button on the VS-600 Staff Call Station. Each button can be programmed to dial a string (in this case, a VDN extension) to access pre-recorded announcements (for example, a kitchen menu or activities for the week). When the buttons are pressed, the residents will hear the pre-recording message through the VS-600 Staff Call Station's speaker. The creation of announcements is outside the scope of this document; however for completeness, the announcements that were used during compliance testing are shown below.

The announcement for the **Menu Button** was assigned extension **68001**.

change announcement 68001		Page 1 of 1
ANNOUNCEMENTS/AUDIO SOURCES		
<b>Extension:</b> 68001	COR:	1
<b>Annc Name:</b> Menu Button	TN:	1
Annc Type: integrated	Queue?	y
Group/Board: 001V9		
Protected? n	Rate:	64

The announcement for the **Activities Button** was assigned extension **68002**.

change announcement 68002		Page 1 of 1
ANNOUNCEMENTS/AUDIO SOURCES		
<b>Extension:</b> 68002	COR:	1
<b>Annc Name:</b> Activities Button	TN:	1
Annc Type: integrated	Queue?	y
Group/Board: 001V9		
Protected? n	Rate:	64

Use the **add vdn x** command, where **x** is a valid VDN extension, to create the VDN to be used to route calls to the Menu button announcement. Repeat this command to create the VDN to be used to route calls to the Activities button announcement. The screens below show the VDNs added during compliance testing.

For each VDN:

- Enter a descriptive **Name\*** (optional).
- Enter an available **Destination: Vector Number** (e.g. 2)
- The default values may be used for the remaining fields.

```
change vdn 67001                                     Page 1 of 2
                                                    VECTOR DIRECTORY NUMBER

      Extension: 67001
      Name*: Menu Button
      Destination: Vector Number                2
Attendant Vectoring? n
Meet-me Conferencing? n
  Allow VDN Override? n
                COR: 1
                TN*: 1
                Measured: none

                1st Skill*:
                2nd Skill*:
                3rd Skill*:

* Follows VDN Override Rules
```

```
change vdn 67002                                     Page 1 of 2
                                                    VECTOR DIRECTORY NUMBER

      Extension: 67002
      Name*: Activities Button
      Destination: Vector Number                3
Attendant Vectoring? n
Meet-me Conferencing? n
  Allow VDN Override? n
                COR: 1
                TN*: 1
                Measured: none

                1st Skill*:
                2nd Skill*:
                3rd Skill*:

* Follows VDN Override Rules
```

VDN 67001 routes calls to vector 2. Use the **change vector x** command, (in this case, **x = 2**), to create a vector that routes calls to the Menu button announcement extension (i.e. **68001**).

- Enter a descriptive **Name** (optional).
- For vector step **01**, enter **announcement 68001**.
- Enter **stop** for vector step **02**.

<b>change vector 2</b>		Page 1 of 6	
CALL VECTOR			
Number: 2	Name: Menu		
Multimedia? n	Attendant Vectoring? n	Meet-me Conf? n	Lock? n
Basic? y	EAS? y G3V4 Enhanced? n	ANI/II-Digits? n	ASAI Routing? y
Prompting? y	LAI? n G3V4 Adv Route? n	CINFO? n BSR? n	Holidays? n
Variables? n	3.0 Enhanced? n		
<b>01 announcement 68001</b>			
<b>02 stop</b>			
03			

VDN 67002 routes calls to vector 3. Use the **change vector x** command, (in this case, **x = 3**), to create a vector that routes calls to the Activities button announcement extension (i.e. **68002**).

- Enter a descriptive **Name** (optional).
- For vector step **01**, enter **announcement 68002**.
- Enter **stop** for vector step **02**.

<b>change vector 3</b>		Page 1 of 6	
CALL VECTOR			
Number: 3	Name: Activities		
Multimedia? n	Attendant Vectoring? n	Meet-me Conf? n	Lock? n
Basic? y	EAS? y G3V4 Enhanced? n	ANI/II-Digits? n	ASAI Routing? y
Prompting? y	LAI? n G3V4 Adv Route? n	CINFO? n BSR? n	Holidays? n
Variables? n	3.0 Enhanced? n		
<b>01 announcement 68002</b>			
<b>02 stop</b>			
03			

4. Enter the **save translation** command to save changes.

## 5. Configure Telecor VS-600 Staff Call Station

The Resident Unit configuration software is Windows application that is used to configure the Telecor VS-600 Staff Call Station. Launch the Resident Unit application provided by Telecor.

### 5.1. Options Tab

The display of the **Options Tab** is split into two main areas: **Set Number** and **Parameters**. The **Set Number** area contains the dial strings, priority and dome light settings for each call device/peripheral and for the menu and activities buttons. The **Parameters** area allows the administrator to check the resident unit's battery and internal clock. The **Options Tab** is subdivided into three tabs: **Numbers**, **Supervision Numbers**, and **Misc**. No changes were required on the **Misc**. tab during compliance testing.

#### 5.1.1. Numbers Tab

The **Numbers Tab** contains dial string, priority, and dome light settings for different call-in devices.

1. **Primary:** The **Primary** boxes contain the primary dial string that the VS-600 Staff Call Station will call when a particular device makes a call-in. Set these boxes to the primary hunt group extension administered in **Section 4, Step 2**.
2. **Secondary:** The **Secondary** boxes contain the secondary or rollover dial string that the VS-600 Staff Call Station will call when a particular device makes a call-in and the primary contact does not answer. This number will only be dialed if the **Redial Primary num.** box is checked on the **Prog./Config.** tab. Set these boxes to the secondary hunt group extension administered in **Section 4, Step 2**.
3. **Priority:** A call device can be assigned a priority from 1 (highest) to 6 (lowest). For example, if a resident presses the call button, it dials the assigned phone number and alerts the destination. If the resident then triggers a higher-priority device, such as a call pendant, the call from the call button will be cancelled because of its lower priority, and the higher-priority device will dial its assigned number. Note: When a call device is triggered, there will be a delay of approximately five seconds before the destination is alerted. If the resident activates a higher priority device within five seconds of activating a lower priority device, the lower priority device will still be first to alert the destination.
4. **Light:** From the drop-down box, select which color in the dome light will illuminate when a call is made by the call device. Options are none, red, green, or white.
5. **Menu:** The dial string that the VS-600 Staff Call Station will call when someone presses the Menu button. Set this to the appropriate VDN extension administered in **Section 4, Step 3**.
6. **Activities:** The dial string that the VS-600 Staff Call Station will call when someone presses the Activities button. Set this to the appropriate announcement extension administered in **Section 4, Step 3**.

**Telecor 4.52**

Set Com Port

Options | Prog./Config. | Wireless Tool | Log File | Speech Param. |

Numbers | Supervision numbers | Misc. |

**Set Number:**

	Primary:	Secondary:	Priority:	Light:
Wall Unit Call	1003	1004	6	White
Pendant	1003	1004	1	Red
Wired Pull Cord	1003	1004	5	Green
Call Cord	1003	1004	4	White
Wireless Pull Cord	1003	1004	2	Red

Menu 67001 Load options and config from file Get

Activities 67002 Save options and config to file Set

**Parameters**

Battery 3.77 V Get

Current Date/Time 06/02/10 10:38:19 Get

Device Date/Time 06/02/10 10:14:15 Set

### 5.1.2. Supervision Numbers Tab

The **Supervision Numbers Tab** contains dial strings for situations triggered from battery or device supervision.

1. Set the **Number** boxes to the primary hunt group extension administered in **Section 4, Step 2**.

The screenshot shows the 'Telecor 4.52' software window with the 'Supervision numbers' tab selected. The interface includes a 'Set Com Port' section at the top, followed by tabs for 'Options', 'Prog./Config.', 'Wireless Tool', 'Log File', and 'Speech Param.'. Below these are sub-tabs for 'Numbers', 'Supervision numbers', and 'Misc.'. The main area is titled 'Set Number:' and contains a table with two columns: 'Number' and 'Repeat interval(hours)'. The table has four rows for different supervision scenarios: 'Wall Unit low battery:', 'Pendant low battery:', 'Wireless Pull Cord low battery:', and 'Wireless Pull Cord no communication:'. Each row has a text input field for the number (all set to '1003') and a spin box for the repeat interval (all set to '2'). At the bottom, there are fields for 'Menu' (67001) and 'Activities' (67002), a 'Params' section with 'Current Date/Time' (06/02/10 10:40:02) and 'Device Date/Time' (06/02/10 10:14:15), and a 'Battery' section showing '3.77 V'. Action buttons like 'Load options and config from file', 'Save options and config to file', 'Get', and 'Set' are also present.

Set Number:	Number	Repeat interval(hours)
Wall Unit low battery:	1003	2
Pendant low battery:	1003	2
Wireless Pull Cord low battery:	1003	2
Wireless Pull Cord no communication:	1003	2

Menu: 67001  
Activities: 67002  
Params: Current Date/Time: 06/02/10 10:40:02, Device Date/Time: 06/02/10 10:14:15  
Battery: 3.77 V

### 5.1.3. Prog./Config. Tab

The **Prog./Config. Tab** contains programming and configuration settings for the VS-600 Staff Call Station. Use this tab to change the desired behavior when a call goes unanswered, to upgrade the software, to configure the unit for use in a common area, or to configure whether a call from the unit can be cancelled by dialing \*9 at the destination. Note: In a majority of installations, these settings do not need to change.

1. **Delay between dialing the numbers:** After dialing a number, the number of seconds to wait before dialing the secondary or rollover number if the call is unanswered. During compliance testing, 20 seconds was used.
2. **Redial Primary num.** (Redial secondary number if primary number does not answer): Check this box to enable the VS-600 Staff Call Station to redial or rollover to the secondary number, after dialing the primary number, if the primary number does not answer.

3. **Redial Secondary num.** (Redial primary number if secondary number does not answer):  
Check this box to enable the VS-600 Staff Call Station to redial or rollover to the primary number, after dialing the secondary number, if the secondary number does not answer.
4. **Various Delays (ms):** These values are set by default and should not be changed unless instructed to do so by Telecor Technical Support.

Telecor 4.52

Set Com Port

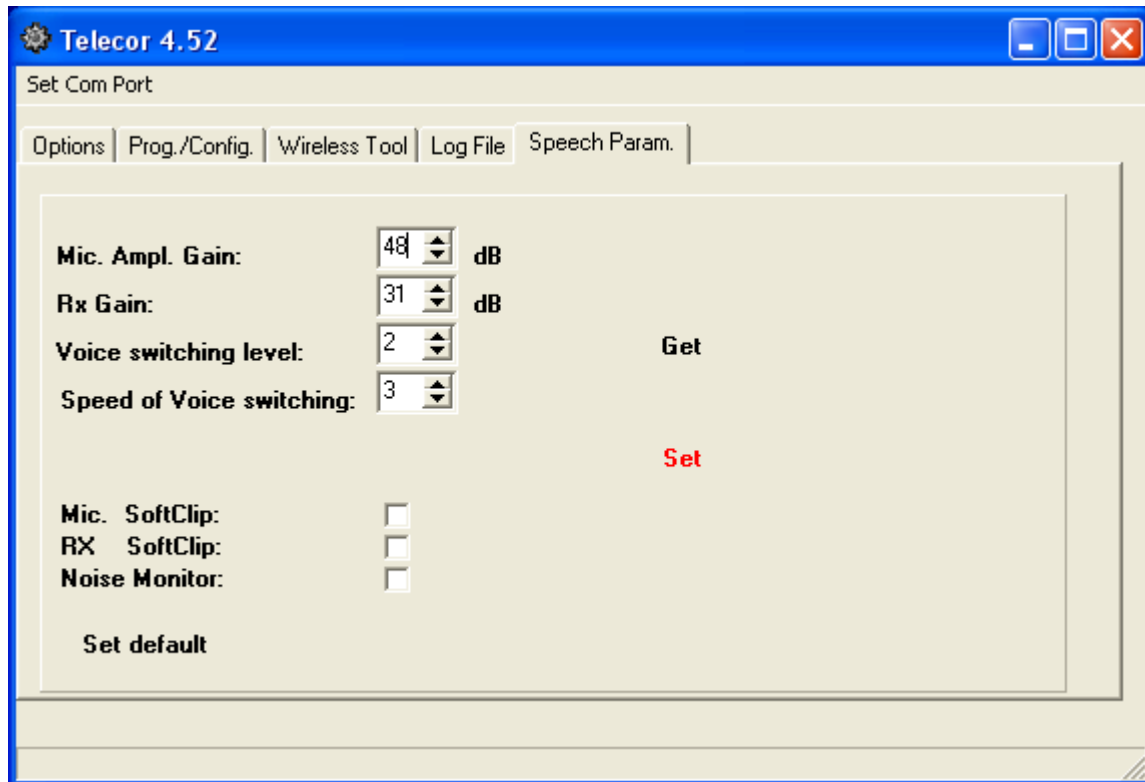
Options Prog./Config. Wireless Tool Log File Speech Param.

**Software upgrade**  
Open File  
Ver. Ver 3.13 Get  
☐ Set default config after programming  
**Program**  
Set default config.  
Reset Device

Delay between dialing the numbers: 20 Sec.  
Silent ☐ Redial Primary num. ☒ Redial Secondary num. ☒  
Resident "Check-In" ☐ "Check-In" time(hour) 14  
**Various delays (mS)**  
Off hook duration 200  
F (Flash, ON hook) 600  
PF(preFlash, OFF hook) 300  
'.' (Pause) 500  
Allow All Wireless ☐  
Disable the " = 9 " ☐  
Menu\Activities Timeout 10 Sec.  
Limit User Volume ☐ Charging from line ☒ Get **Set**

#### 5.1.4. Speech Param. Tab

The **Speech Param. Tab** allows the administrator to adjust the VS-600 Staff Call Station audio settings. Use this tab to adjust microphone volume, speaker volume, or voice switching settings. Note: In a majority of installations, these settings do not need to change.





## 6. General Test Approach and Test Results

This section describes the interoperability compliance testing used to verify Telecor's VS-600 Staff Call Station and peripherals ability to interoperate with Communication Manager. This section covers the general test approach and the test results.

The Telecor VS-600 Staff Call Station was connected to Communication Manager as an analog device. The peripherals were either directly connected or used wireless communications to communicate with the VS-600 Staff Call station.

In addition to the VS-600 Staff Call Station, the following peripherals were tested:

- Dome Light
- Wireless Pull Cord Station
- Wireless Pendant
- Hard Wired Pull Station
- Call Cord

The compliance testing focused on analog calls from the VS-600 Staff Call Station and peripherals to telephones on Communication Manager, and the redirection of those calls utilizing the features in the VS-600 Staff Call Station. The following functionality was tested:

- Calls initiated by button presses on the VS-600 Staff Call Station
- Calls initiated by the Wireless Pull Cord Station peripheral
- Calls initiated by the Wireless Pendant peripheral
- Calls initiated by the Hard Wired Pull Station peripheral
- Calls initiated by the Call Cord peripheral
- Calls initiated by smoke detection (simulated by physically shorting the proper connection) on the VS-600 Staff Call Station
- Proper failover/redirection for calls that were not answered at the primary and secondary hunt groups.

For all call scenarios, the voice paths and proper termination of the calls were verified. Interoperability testing was completed successfully with all test cases passing.

## 7. Verification Steps

This section provides verification steps that may be performed to verify that the VS-600 Staff Call Station and peripherals are set up correctly to interoperate with Communication Manager.

1. Verify that VS-600 Staff Call station and peripherals can all initiate calls to Communication Manager. Answer the calls and verify talk paths.
2. Press the Menu and Activities buttons on the VS-600 Staff Call Station. Verify the proper pre-recorded announcement is played for each button push and then the call is terminated.
3. Verify unanswered calls from the VS-600 Staff Call station and peripherals are properly redirected from the primary hunt group to the secondary hunt group extension and then back to the primary hunt group extension.

## 8. Conclusion

These Application Notes describe the configuration steps required to configure the Telecor VS-600 Staff Call Station and peripherals to interoperate with Avaya Aura™ Communication Manager. The VS-600 Staff Call Station is a device that seamlessly integrates all the functions of a traditional nurse call system, providing instant two-way speech between residents and staff. The configuration described in these Application Notes has been successfully compliance tested.

## 9. Additional References

This section references the documentation relevant to these Application Notes.

The following Avaya product documentation is available at <http://support.avaya.com>.

[1] *Administering Avaya Aura™ Communication Manager*, Doc ID 03-300509, June 2010.

Telecor product documentation can be obtained by contacting Telecor:  
[http://www.telecor.com/Contact\\_VSCare.htm](http://www.telecor.com/Contact_VSCare.htm)

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