



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

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# **Application Notes for Configuring Plantronics DA40 USB Adapter, Plantronics SupraPlus Wideband and EncorePro Headsets with Avaya one-X® Attendant - Issue 1.0**

### **Abstract**

These Application Notes describe the compliance test and configuration procedures needed to integrate the Plantronics DA40 USB Adapter and Plantronics SupraPlus Wideband and EncorePro headsets to operate with Avaya one-X® Attendant.

The Plantronics DA40 is a wideband, enterprise class, corded USB-to-headset adapter which provides Plantronics H-Series headsets, traditionally used with deskphones, the ability to connect to a PC for use with softphone applications. Plantronics SupraPlus Wideband and EncorePro headsets were used to verify the functionality of the adapter.

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 configuration steps required to integrate the Plantronics DA40 USB Adapter and Plantronics SupraPlus Wideband and EncorePro headsets to operate with Avaya one-X® Attendant. The Plantronics DA40 is a wideband, enterprise class, corded USB-to-headset adapter that provides Plantronics H-Series headsets, traditionally used with desk phones, the ability to connect to a PC for use with softphone applications. Plantronics SupraPlus Wideband and EncorePro headsets were used to verify the functionality of the adapter.

In this compliance testing, the following headsets and accessories were tested:

- Plantronics DA40 USB Adapter - Provides the headsets with an USB interface for connection to a PC. Features wideband audio support and Quick Disconnect™ capability.
- Plantronics SupraPlus Wideband HW251N – Monaural, noise cancelling headset
- Plantronics SupraPlus Wideband HW261N – Binaural, noise cancelling headset
- Plantronics EncorePro HW291N – Monaural, noise cancelling headset
- Plantronics EncorePro HW301N – Binaural, noise cancelling headset

## 2. General Test Approach and Test Results

The interoperability compliance test included functionality and serviceability testing. The functionality testing focused on placing and receiving calls to and from Avaya one-X® Attendant clients using the Plantronics headsets and adapter, and verifying talk path in both directions. The type of calls made included calls to voicemail, and calls to and from internal extensions and the PSTN.

The serviceability testing focused on verifying the usability of the Plantronics adapter and headsets after the DA40 adapter was disconnected and reconnected to the USB port of the PC, the Avaya one-X® Attendant application was restarted, and after a reboot on the PC where Avaya one-X® Attendant was installed.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya's formal testing and Declaration of Conformity is provided only on the headsets/handsets that carry the Avaya brand or logo. Avaya may conduct testing of non-Avaya headset/handset to determine interoperability with Avaya phones. However, Avaya does not conduct the testing of non-Avaya headsets/handsets for: Acoustic Pressure, Safety, Hearing Aid Compliance, EMC regulations, or any other tests to ensure conformity with safety, audio quality, long-term reliability or any regulation requirements. As a result, Avaya makes no representations whether a particular non-Avaya headset will work with Avaya's telephones or with a different generation of the same Avaya telephone.

Since there is no industry standard for handset interfaces, different manufacturers utilize different handset/headset interfaces with their telephones. Therefore, any claim made by a headset vendor that its product is compatible with Avaya telephones does not equate to a guarantee that the headset will provide adequate safety protection or audio quality.

## 2.1. Interoperability Compliance Testing

The following functionality was verified:

- Placing calls to the voicemail system. Voice messages were recorded and played back to verify that the playback volume and recording level were good.
- Placing and receiving calls to and from internal extensions to verify two way audio path and quality.
- Placing and receiving calls to and from the PSTN to verify two way audio path and quality.
- Hearing ring back tone on the headsets for incoming and outgoing calls.
- Answering and ending calls using the Avaya one-X® Attendant screen interface.
- Using the volume control buttons on Avaya One-X® Attendant to adjust the audio volume on the headsets.
- Using the Mute control buttons on Avaya One-X® Attendant to Mute and Un-mute the audio on the transmitted and received audio.

For the serviceability testing, the DA40 adapter was disconnected and reconnected to the USB port of the PC, and Avaya one-X® Attendant was restarted to verify proper operation. In addition, the PC was rebooted to verify that the headsets and adapter were operational after the restart was completed and the application was reinitialized.

## 2.2. Test Results

Interoperability testing was completed with successful results for all test cases with the exception of the observations/limitations described below:

- The **Sidetone Volume** and **Mute** controls on the **Volume and Ringer Settings** menu in Avaya one-X® Attendant allow setting the volume and to mute/unmute the sound of the attendant's own voice on the headset speakers. During the compliance tests it was observed that changing these settings did not have any noticeable effect on the call. Internal Avaya GRIP request number 9802 was created and sent to the Development team for this issue.

## 2.3. Support

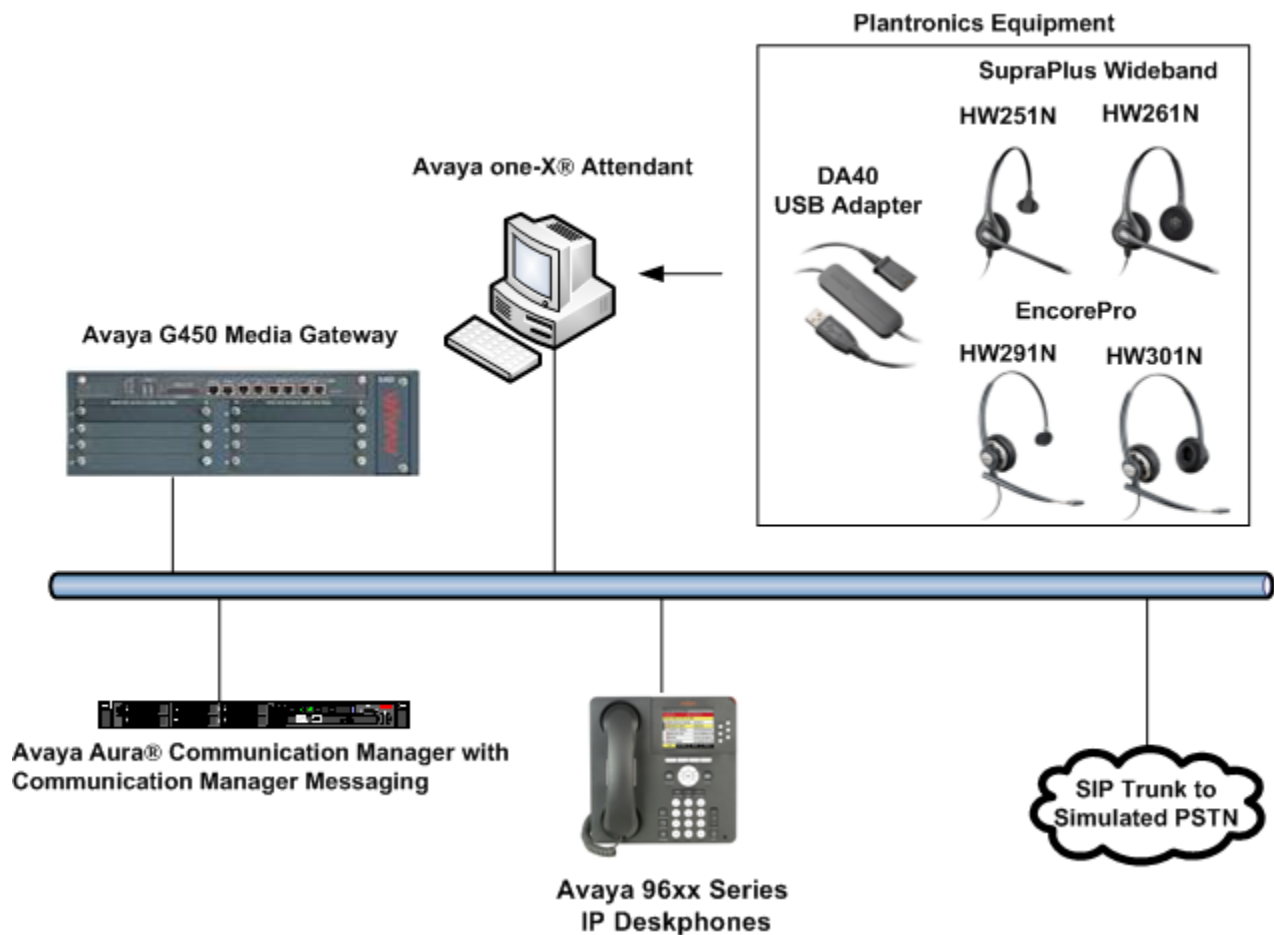
For technical support and information on the Plantronics products described in this solution, contact Plantronics Support at:

Phone: 888-752-6876

Website: <http://www.plantronics.com/us/support>

### 3. Reference Configuration

**Figure 1** illustrates the test configuration used to verify the Plantronics solution. Avaya Aura® Communication Manager and Avaya Aura® Communication Manager Messaging are installed on the Avaya DL360 Server. An Avaya G450 Media Gateway provides the VoIP resources for the connectivity of Avaya IP Telephones and the SIP trunk to the simulated PSTN used during the compliance tests. Avaya one-X® Attendant was installed on a computer running Microsoft Windows XP Professional Service Pack 3. The Plantronics headset is connected to an available USB port in the PC, using the DA40 USB Adapter supplied by Plantronics. The Speaker Volume in Windows Control Panel of the PC was set during the compliance test to a level of **16**, and remained unchanged during the tests.



**Figure 1: Test Configuration**

## 4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Communication Manager, Communication Manager Messaging on the Avaya DL360 Server	6.2 SP 2 (R016x.02.0.823.0)
G450 Media Gateway	31.22.0
Avaya one-X® Attendant	4.0 SP0
Plantronics DA40 USB Headset Adapter	N/A
Plantronics SupraPlus Wideband HW251N Headset	N/A
Plantronics SupraPlus Wideband HW261N Headset	N/A
Plantronics EncorePro HW291N Headset	N/A
Plantronics EncorePro HW301N Headset	N/A

## 5. Configure Avaya Aura® Communication Manager

This section describes the required steps for configuring Avaya one-X® Attendant in Communication Manager. The configuration is performed via the System Access Terminal (SAT). It should be noted that only the minimum configuration needed to allow the user to log in and perform the steps described in this Application Notes was performed. For more information in the Communication Manager administration for Avaya one-X® Attendant and configuration examples see the Appendix section in [1].

## 5.1. Licensing and Capacity

Use the **display system-parameters customer-options** command to verify that **IP Stations** and **IP Attendant Consoles** on page 4 are enabled in the system. The license file installed on Communication Manager controls the values for these attributes. If a required feature is not enabled or there is insufficient capacity, contact an authorized Avaya sales representative.

```
display system-parameters customer-options                               Page  4 of 11
                                OPTIONAL FEATURES

Emergency Access to Attendant? y                                     IP Stations? y
  Enable 'dadmin' Login? y
  Enhanced Conferencing? y                                           ISDN Feature Plus? n
  Enhanced EC500? y                                                  ISDN/SIP Network Call Redirection? y
Enterprise Survivable Server? n                                       ISDN-BRI Trunks? y
  Enterprise Wide Licensing? n                                       ISDN-PRI? y
  ESS Administration? y                                              Local Survivable Processor? n
  Extended Cvg/Fwd Admin? y                                          Malicious Call Trace? y
  External Device Alarm Admin? y                                     Media Encryption Over IP? n
Five Port Networks Max Per MCC? n                                     Mode Code for Centralized Voice Mail? n
  Flexible Billing? n
Forced Entry of Account Codes? y                                       Multifrequency Signaling? y
  Global Call Classification? y                                       Multimedia Call Handling (Basic)? y
  Hospitality (Basic)? y                                              Multimedia Call Handling (Enhanced)? y
Hospitality (G3V3 Enhancements)? y                                   Multimedia IP SIP Trunking? y
  IP Trunks? y

IP Attendant Consoles? y
(NOTE: You must logoff & login to effect the permission changes.)
```

On page 10, verify that there is a value assigned under **Limit** of **IP\_eCons**, and that this value is sufficient to support the number of attendants running on the system.

```
display system-parameters customer-options                               Page 10 of 11
                                MAXIMUM IP REGISTRATIONS BY PRODUCT ID

Product ID  Rel. Limit  Used
AgentSC     * : 12000  0
IP_API_A    * : 18000  0
IP_Agent    * : 18000  0
IP_NonAgt   * : 18000  0
IP_Phone    * : 18000  3
IP_ROMax    * : 18000  0
IP_Soft     * : 18000  0
IP_Supv     * : 18000  0
IP_eCons    * : 414    1
oneX_Comm   * : 18000  0
```

## 5.2. Add Attendant

Use the **add attendant n** command, where **n** is an available attendant position in Communication Manager. The **Type** field is set to **302** for IP consoles. Enter the **Extension** number and the **Security Code** which will be used when logging in to Avaya one-X® Attendant. Since only one attendant was used, **Console type** was set to **principal**. Set **Port** to **IP**.

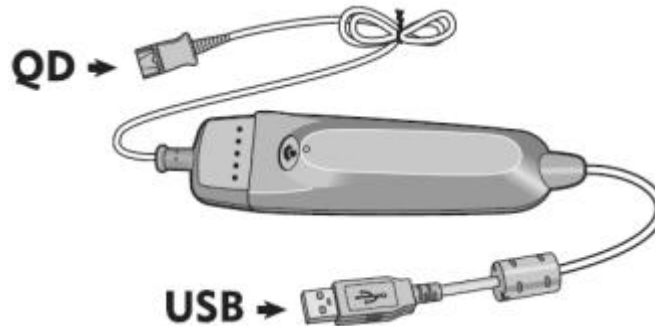
```
add attendant 1                                     Page 1 of 4
ATTENDANT CONSOLE 1
Type: 302                                           Name: one-X Attendant
Extension: 3000                                     Group: 1           Auto Answer: none
Console Type: principal                           TN: 1             Data Module? n
Port: IP                                           COR: 1            Disp Client Redir? n
Security Code: *                                  COS: 1            Display Language: english
                                                    H.320 Conversion? n
```

On page 2, set **Auto Start** to **n**. Verify that **Direct IP-IP Audio Connections** is set to **y**. This field will enable media shuffling, allowing Communication Manager to redirect media traffic directly between the attendant console and other IP endpoints on the enterprise. Default values were used for all other fields.

```
add attendant 1                                     Page 2 of 4
ATTENDANT CONSOLE
UIS FEATURE OPTIONS
Auto Start? n
Echo Digits Dialed? y
IP FEATURE OPTIONS
Remote Softphone Emergency Calls: as-on-local Direct IP-IP Audio Connections? y
Emergency Location Ext: Always Use? n IP Audio Hairpinning? n
Service Link Mode: permanent
```

## 6. Install the Plantronics DA40 USB Adapter and Headsets

Connect the Plantronics SupraPlus Wideband or EncorePro headset to the Quick Disconnect™ end of the Plantronics DA40 USB adapter. Connect the USB end of the adapter to an available USB port on the PC running Avaya one-X® Attendant.

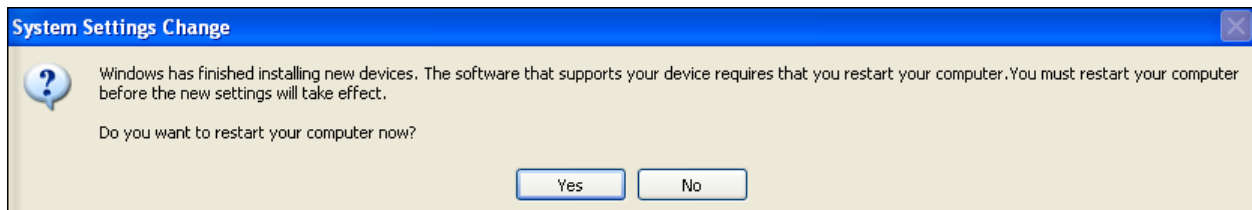


**QD** (Quick Disconnect™) plug: connect to headset

**USB** plug: connect to USB port on PC

The DA40 USB adapter is plug-and-play; it does not require extra drivers to function properly. Once the adapter is connected to the USB port of the PC, the installation is automatic out of the standard drivers in Microsoft Windows.

Depending on the version of the operating system running on the PC, the following screen may appear prompting the user to restart the computer when the adapter is connected to the USB port for the first time. In this case, click **Yes** to restart the PC.





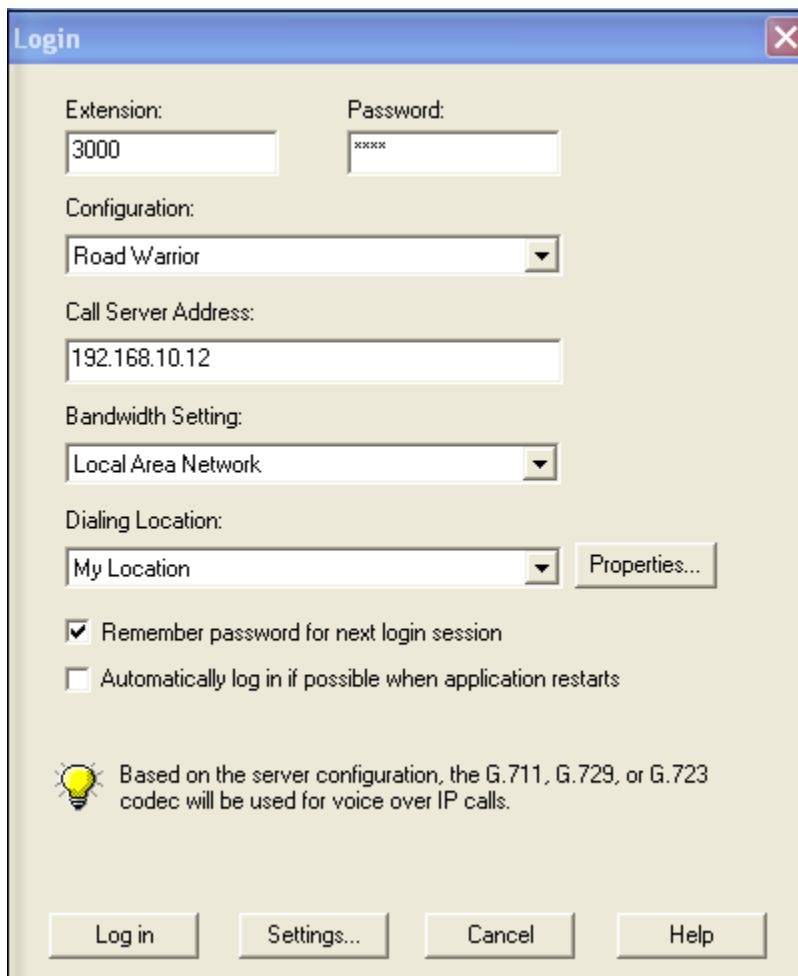
## 7. Configure Avaya one-X® Attendant

This section describes the configuration steps required for Avaya one-X® Attendant to work with the Plantronics DA40 USB Adapter and associated Plantronics headsets.

These Application Notes will not cover the Avaya one-X® Attendant general installation and configuration. For information on installing the Avaya one-X® Attendant software, configuration and licensing see [1].


### 7.1. User login

Launch Avaya one-X® Attendant and log in to Communication Manager using the attendant extension number and password created in **Section 5.2**. Since headsets are going to be used with the PC, select **Road Warrior** for the **Configuration**. Enter the information in the remaining fields as appropriate. Click **Log in**.



The screenshot shows the 'Login' dialog box for Avaya one-X Attendant. It contains the following fields and options:

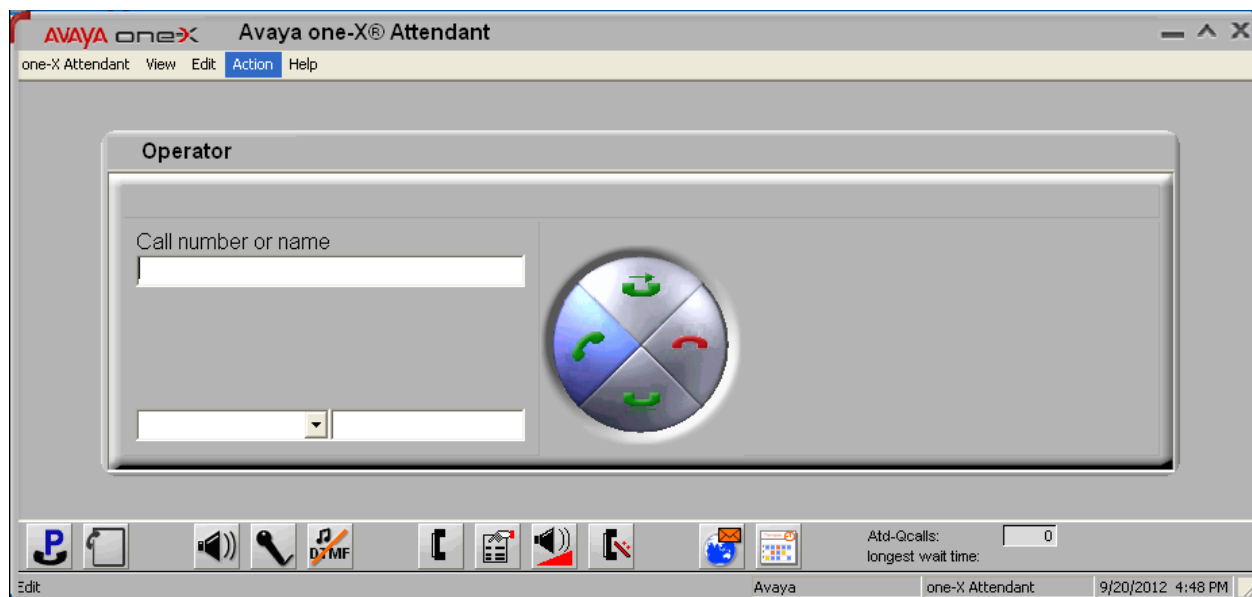
- Extension:** Text box containing '3000'.
- Password:** Text box containing 'xxxx'.
- Configuration:** Dropdown menu with 'Road Warrior' selected.
- Call Server Address:** Text box containing '192.168.10.12'.
- Bandwidth Setting:** Dropdown menu with 'Local Area Network' selected.
- Dialing Location:** Dropdown menu with 'My Location' selected, and a 'Properties...' button to its right.
- ☒ Remember password for next login session
- ☐ Automatically log in if possible when application restarts
- A lightbulb icon followed by the text: 'Based on the server configuration, the G.711, G.729, or G.723 codec will be used for voice over IP calls.'
- At the bottom are four buttons: 'Log in', 'Settings...', 'Cancel', and 'Help'.


On the next screen, click the **Login** icon  to log in as a one-X Attendant user. The default **Name** is “Avaya” and the **Password** is “000000”. The user will be prompted to change the password once logged in. Select the default *one-X Attendant* under **Work profile**. Click **OK**.



## 7.2. Audio Tuning Wizard

On the attendant main dialog screen, the Operator window in the center of the screen includes a multi-function button for the user to perform the most common attendant operations (Call Answer, Transfer, End Call, Cancel). The toolbar at the bottom of the screen includes icons indicating different conditions of the operator terminal and additional functions and menus.



Click the  icon on the toolbar to launch the **Audio Tuning Wizard**. Note that the icon is not available during an active telephone call. In addition, make sure to close all other PC applications before running the wizard.

On the first screen of the wizard, select **Plantronics DA40** for primary playback and recording device. Click **Next**.

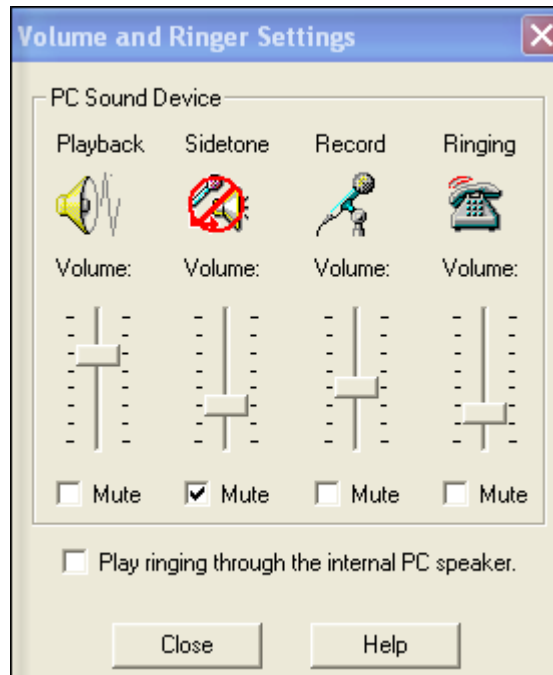



Complete the remaining pages of the wizard (not shown):

- On the second page of the wizard, specify that a **Headset/Handset** is used to make calls, instead of the PC speakers and a microphone.
- On the third page, click the **Test** button to check whether the headsets are receiving audio. If the headsets are operating correctly, a test sound is heard. The volume on the headset speakers can be set using the slider while the test sound is being played.
- On the next page click the option to “**Automatically adjust the microphone recording level**”, and use the slider to set the desired sensitivity, so when speaking normally into the microphone the audio meter stays between the carets. The further the slider is to the right, the more sensitive the microphone will be. The level on the microphone could also be adjusted manually, clicking “**Use the following microphone recording level**” option and using the slider to set the desired level.
- The next page is used to determine the normal background noise at the current location. This step helps in preventing Avaya one-X® Attendant from transmitting the background noise at the location when the user is not speaking during a call. Click the **Test** button and do not speak while the test is running.
- Click **Finish** on the last page of the wizard



### 7.3. Volume and Ringer Settings Menu

The **Volume and Ringer Settings** menu allows the user to control and make changes to audio settings while on an active call.




To access the menu, select the  icon on the toolbar during an active call. The following settings are available, separated in the four areas below:

1. **Playback** area: set the volume or mute/unmute the headset speakers
2. **Sidetone** area: set the volume or mute/unmute the sound of the attendant's own voice on the headset speakers. This feature is not currently supported with the DA40 adapter, see **Section 2.2** for more information.
3. **Record** area: set the volume or mute/unmute the headset microphone
4. **Ringing** area: set the volume or mute/unmute the ringing on the headset speakers.

Note: the Speaker  and Microphone  icons on the toolbar of the attendant main dialog screen provide additional means to quickly mute/unmute the headset speakers and microphone during a call.

## 8. Verification Steps

This section provides the steps that can be performed to verify proper installation of the Plantronics DA40 USB Adapter and headset with Avaya one-X® Attendant:

- Place a call to an extension in the system by entering the number on the **Call number or name** field on the **Operator** window of the Avaya one-X® Attendant screen.
- Verify two-way talk path between the headset and the called extension.
- Open the **Volume and Ringer Settings** menu as described in **Section 7.3**.
- Use the controls on the **Playback** area to verify that the volume on the headset speakers can be adjusted by using the slider. Check that the audio can be muted/unmuted on the headset speakers by checking/unchecking the **Mute** box.
- Use the controls on the **Record** area to verify that the volume of the audio received at the other end can be adjusted by using the slider. Verify that the audio from the headset microphone can be muted/unmuted by checking/unchecking the **Mute** box.
- Disconnect the call from the headset pressing the **End Call** button  on the **Operator** screen.
- Verify that the call is properly disconnected.

## 9. Conclusion

These Application Notes describe the configuration steps required to integrate the Plantronics DA40 USB Adapter and Plantronics SupraPlus Wideband and EncorePro headsets to operate with Avaya one-X® Attendant. All test cases performed in the compliance tests were completed successfully, with the observations/limitations noted in **Section 2.2**.

## 10. Additional references

This section references the Avaya and Plantronics documentation that are relevant to these Application Notes.

- [1] *Avaya one-X® Attendant 4.0 connected to Avaya Communication Manager. Installation and Administration Manual*, Document 16-603459, Release 4.01, July 2012.  
<http://downloads.avaya.com/css/P8/documents/100165274>
- [2] *Avaya one-X® Attendant V4.01 CM User Manual*, Release 1.0, July 2012  
<http://downloads.avaya.com/css/P8/documents/100165391>
- [3] *Administering Avaya Aura® Communication Manager*, Release 6.2, Issue 7.0, July 2012, Document 03-300509.  
<http://downloads.avaya.com/css/P8/documents/100156867>

Documentation and information for the following Plantronics headsets and adapters can be found at <http://www.plantronics.com/us/support/docs/>

- [4] *DA40 User Guide*
- [5] *Plantronics EncorePro User Guide*.
- [6] *Plantronics SupraPlus Wideband User Guide*

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