



Avaya Solution & Interoperability Test Lab

Application Notes for Plantronics Blackwire 5200 Series Headset with Avaya one-X® Attendant - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the Plantronics Blackwire 5200 Series Headsets with Avaya one-X® Attendant. Avaya one-X® Attendant integrates the Plantronics Hub SDK, which enables the integrated call control features of the Plantronics Blackwire 5200 Series Headset, including call answer/end and synchronized mute with one-X Attendant. No additional Plantronics software is required. Plantronics Blackwire 5200 Series Headset was connected to a USB or USB-C port on the desktop PC running Avaya one-X Attendant. For the compliance test, the Blackwire 5210 USB/USB-C monaural headset and the Blackwire 5220 USB/USB-C binaural headset were verified.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as the observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

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 Blackwire 5200 Series Headsets with Avaya one-X® Attendant. Avaya one-X® Attendant integrates the Plantronics Hub SDK, which enables the integrated call control features of the Plantronics Blackwire 5200 Series Headset, including call answer/end and synchronized mute with one-X Attendant. No additional Plantronics software is required. Plantronics Blackwire 5200 Series Headset was connected to a USB or USB-C port on the desktop PC running Avaya one-X Attendant. For the compliance test, the Blackwire 5210 USB/USB-C monaural headset and the Blackwire 5220 USB/USB-C binaural headset were verified.

Refer to the appropriate Plantronics documentation listed in **Section 10** for additional product information.

2. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability testing. The feature testing focused on placing calls to and from Avaya one-X Attendant using the Plantronics Blackwire 5200 Series Headset and verifying 2-way audio. The type of calls made included calls to voicemail, to local stations, and to the PSTN.

The serviceability testing focused on verifying the usability of the Blackwire 5200 Series headset after restarting the Avaya one-X Attendant, disconnecting and reconnecting the headset, and rebooting the PC.

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.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in this DevConnect Application Note included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

2.1. Interoperability Compliance Testing

All test cases were performed manually. The following features were 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 calls to local stations to verify two-way audio.
- Placing calls to the PSTN to verify two-way audio.
- Answering and terminating calls using the call control button on the Blackwire 5200 series headset.
- Using the volume control button on the Blackwire 5200 series headset to adjust the playback volume.
- Using the mute button on the Blackwire 5200 series headset and on one-X Attendant to mute and un-mute the audio, including verifying that the mute status was accurately reflected on the headset and one-X Attendant.

For the serviceability testing, the headset was disconnected and reconnected to verify proper operation. The one-X Attendant application was also restarted for the same purpose. The desktop PC was also rebooted to verify that one-X Attendant and headset were operational when the PC came back into service.

2.2. Test Results

All test cases passed with the following observation. The call button LED on the Plantronics Blackwire 5200 Series Headset does not light when there is an incoming or active call, but pressing it does answer and terminate a call.

2.3. Support

For technical support and information on Plantronics Blackwire 5200 Series Headsets, contact a Plantronics support specialist at:

- Phone: 1-855-765-7878 (toll free)
- Website: <http://www.plantronics.com/us/support/>

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify the Plantronics solution. The configuration consists of Avaya Aura® Communication Manager running in a virtual environment with an Avaya G450 Media Gateway providing connectivity to the PSTN via an ISDN-PRI trunk (not shown). Avaya Aura® Messaging was used as the voicemail system and Avaya Aura® Media Server (not shown) was used for media processing. Avaya one-X Attendant was installed on a desktop PC running Windows 10. Blackwire 5200 series headset was connected to a USB or USB-C port on the desktop PC running one-X Attendant. The Blackwire 5210 USB/USB-C and Blackwire 5220 USB/USB-C headsets were used for the compliance test.

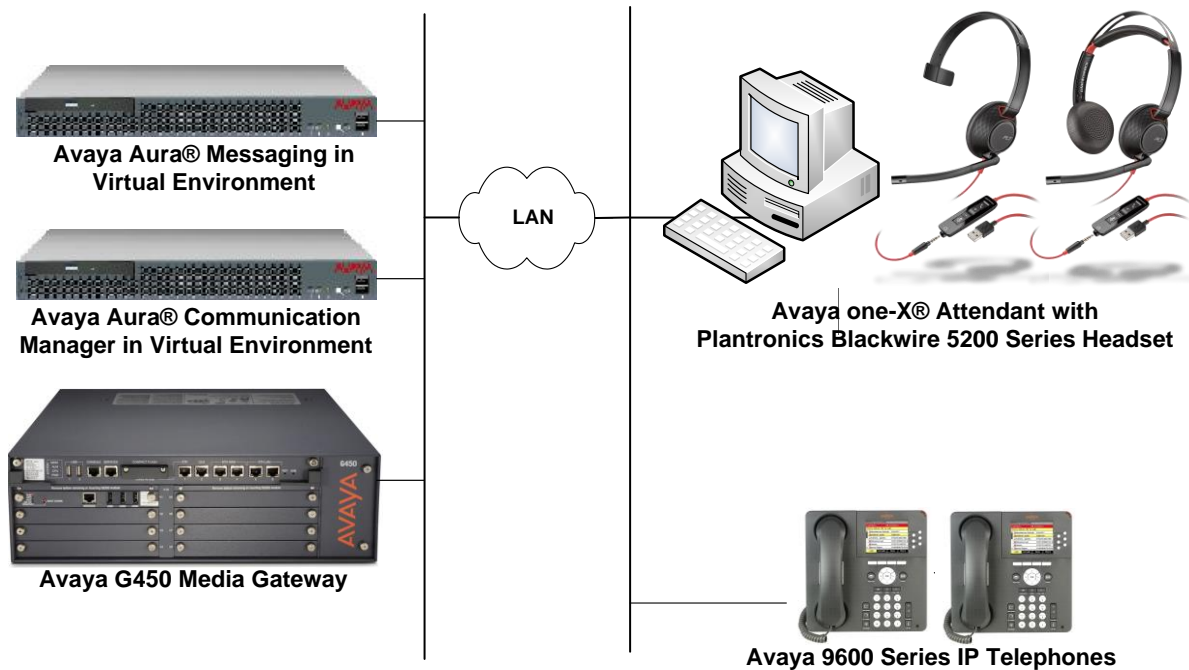


Figure 1: Avaya one-X® Attendant with Plantronics Blackwire 5200 Series Headsets

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 in a Virtual Environment	7.0.1.1 FP1 SP1 (R017x.00.0.441.0 with Patch 23169)
Avaya G450 Media Gateway	FW 38.20.1
Avaya Aura® Media Server	7.8.0.333
Avaya Aura® Messaging	7.0.1.2.0 FP1 SP 2
Avaya one-X® Attendant on Microsoft with Plantronics Hub SDK on Microsoft Windows 10	4.14.002.000 3.8.51508.40463
Avaya 9600 Series IP Telephone	6.6506 (H.323) 7.1.1.0.9 (SIP)
Plantronics Blackwire 5200 Series Headset	v.182

5. Configure Avaya Aura® Communication Manager

This section covers the station configuration for Avaya one-X® Attendant. The configuration is performed via the System Access Terminal (SAT) on Communication Manager.

Use the **display system-parameters customer-options** command to verify that **IP Stations** and **IP Attendant Consoles** on **Page 5** are enabled. 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 5 of 12
                                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? y
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.)
```

Use the **add attendant <n>** command, where **<n>** is an available attendant position. The **Type** field should be set to **302** for IP consoles. Enter the **Extension** and the **Security Code**, which will be used when by one-X Attendant to register with Communication Manager. Since only one attendant was used, **Console Type** was set to **principal**. Set the **Port** to **IP**.

```
add attendant 1                                                       Page 1 of 4
                                ATTENDANT CONSOLE 1

Type: 302                    Name: one-X Attendant
Extension: 77600             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*. Default values were used for all other fields.

```
add attendant 1                                     Page 2 of 4
                                               ATTENDANT CONSOLE

VIS FEATURE OPTIONS

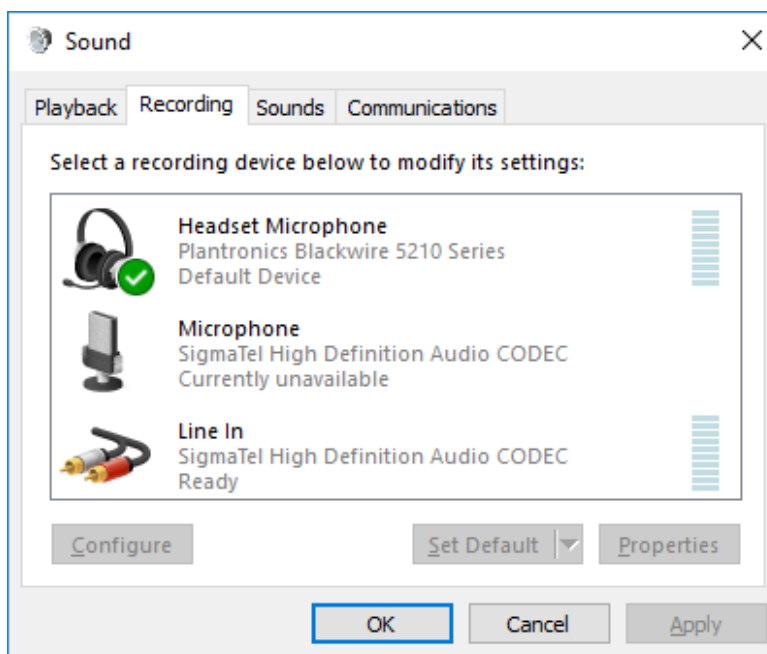
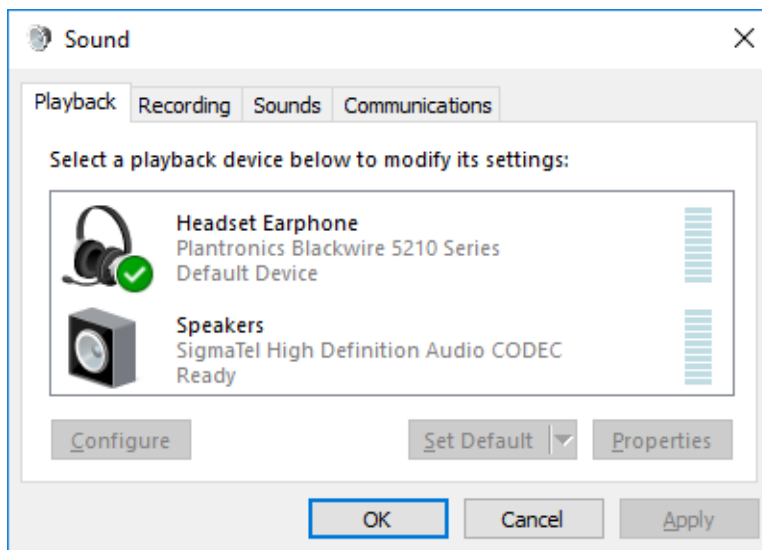
      Auto Start? n
      Echo Digits Dialed? y

IP FEATURE OPTIONS

Remote Softphone Emergency Calls: as-on-local Direct IP-IP Audio Connections? y
Emergency Location Ext: 77600           Always Use? n   IP Audio Hairpinning? n
                                           Service Link Mode: permanent
```


6. Configure Avaya one-X® Attendant

This section describes the configuration steps required for one-X Attendant to work with Plantronics Blackwire 5200 Series Headsets. These Application Notes do not cover the general installation and configuration of one-X Attendant. For additional information refer to [2]. Connect the Blackwire 5200 series headset to a USB or USB-C port on the desktop PC running one-X Attendant. Prior to configuring one-X Attendant, ensure that the **Sound** properties under Windows 10 Control Panel are set properly. Verify that the *Plantronics Blackwire 5210 Series* has been detected by Windows 10 and that it has been set as the default device in the **Playback** and **Recording** tabs as shown below.




Launch Avaya one-X® Attendant and log into Communication Manager using the attendant **Extension** and **Password** created in **Section 5**. Select *Road Warrior* for **Configuration**. Enter the information in the remaining fields as appropriate. Click **Log in**.


The image shows a 'Login' dialog box with the following fields and options:

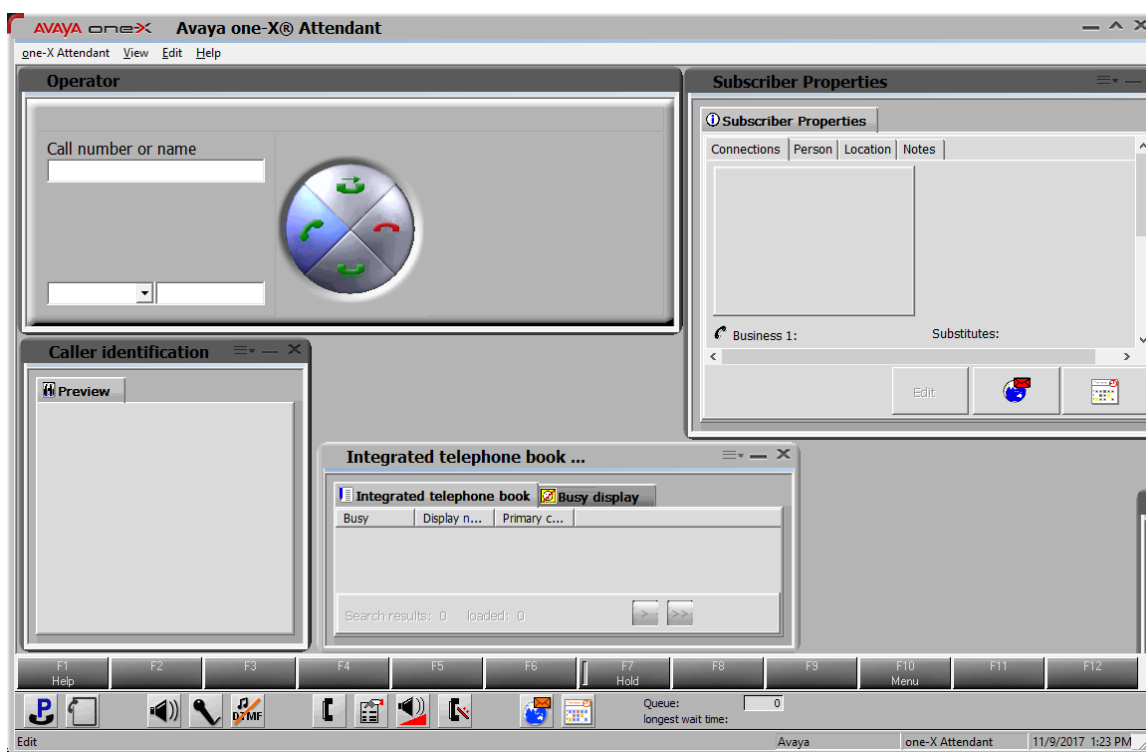
- Extension:** Text box containing '77600'.
- Password:** Password text box containing 'xxxxxxx'.
- Configuration:** Dropdown menu set to 'Road Warrior'.
- Call Server Address:** Text box containing '10.64.102.115'.
- Bandwidth Setting:** Dropdown menu set to 'Local Area Network'.
- Dialing Location:** Dropdown menu set to 'My Location', with a 'Properties...' button to its right.
- Remember password for next login session**
- Automatically log in if possible when application restarts**
-  **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, there are four buttons: **Log in**, **Settings...**, **Cancel**, and **Help**.

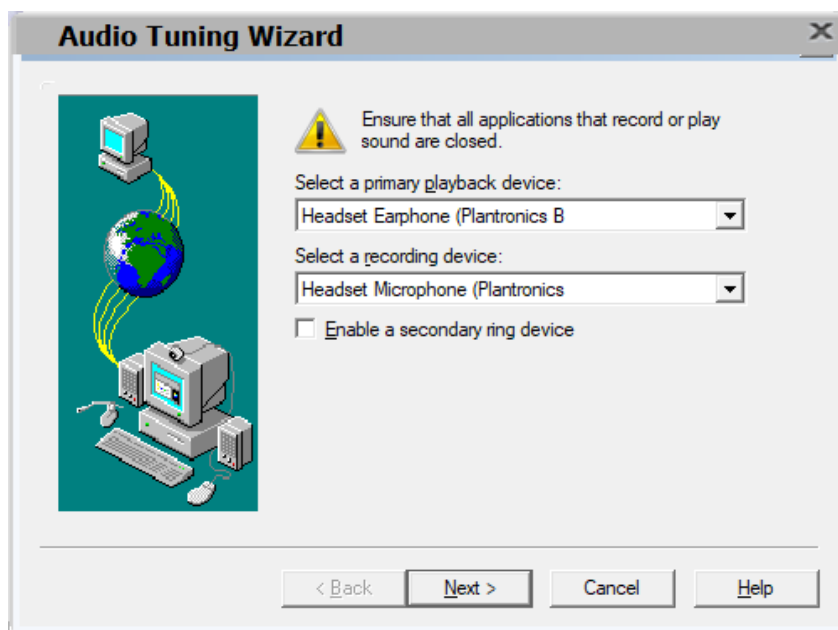
On the next screen, click the **Login** button  to log in as a one-X Attendant user. The default **Name** is *Avaya* and the **Password** is *000000*. The user will be prompted to change the password once logged in. Select *one-X Attendant* under **Work profile**. Click **OK**.



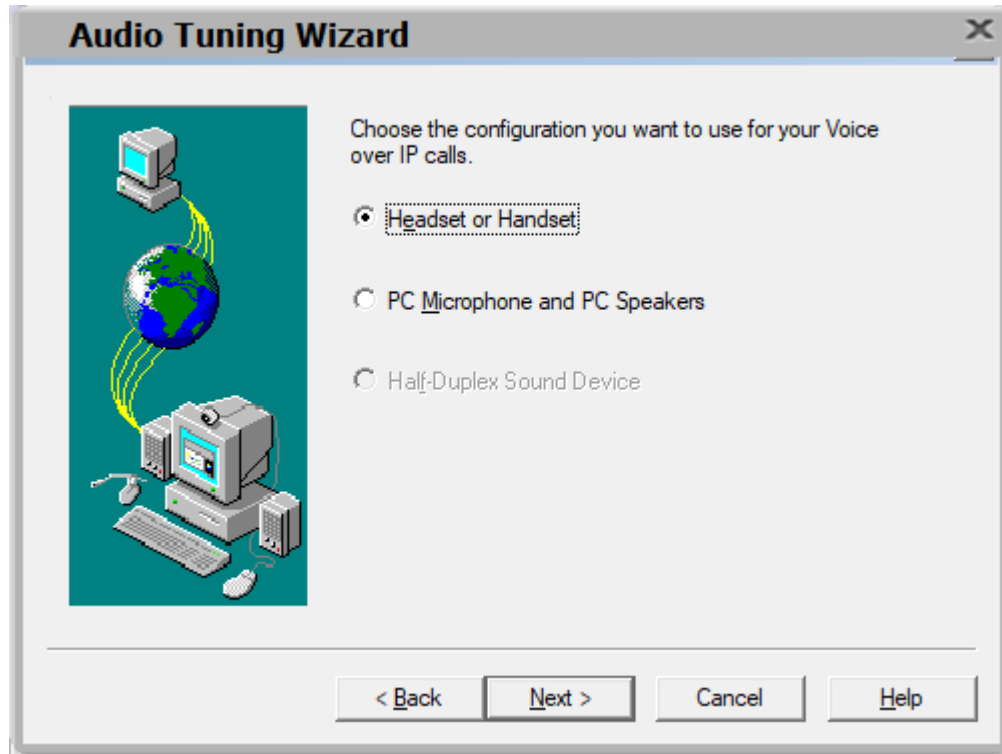
On the Avaya one-X® Attendant main screen, click the  icon on the toolbar to launch the **Audio Tuning Wizard**. Note that the icon is not available during an active telephone call.



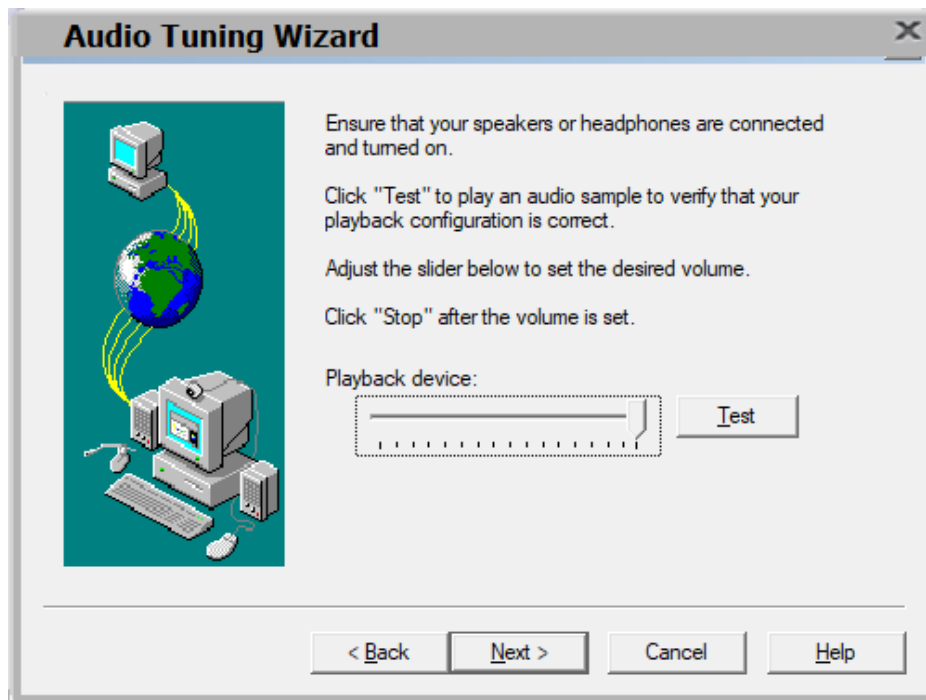
In the Audio Tuning Wizard, set the playback device and recording device to *Headset Earphone (Plantronics Blackwire 5210 Series)* and *Headset Microphone (Plantronics Blackwire 5210 Series)*, respectively. Click **Next**.



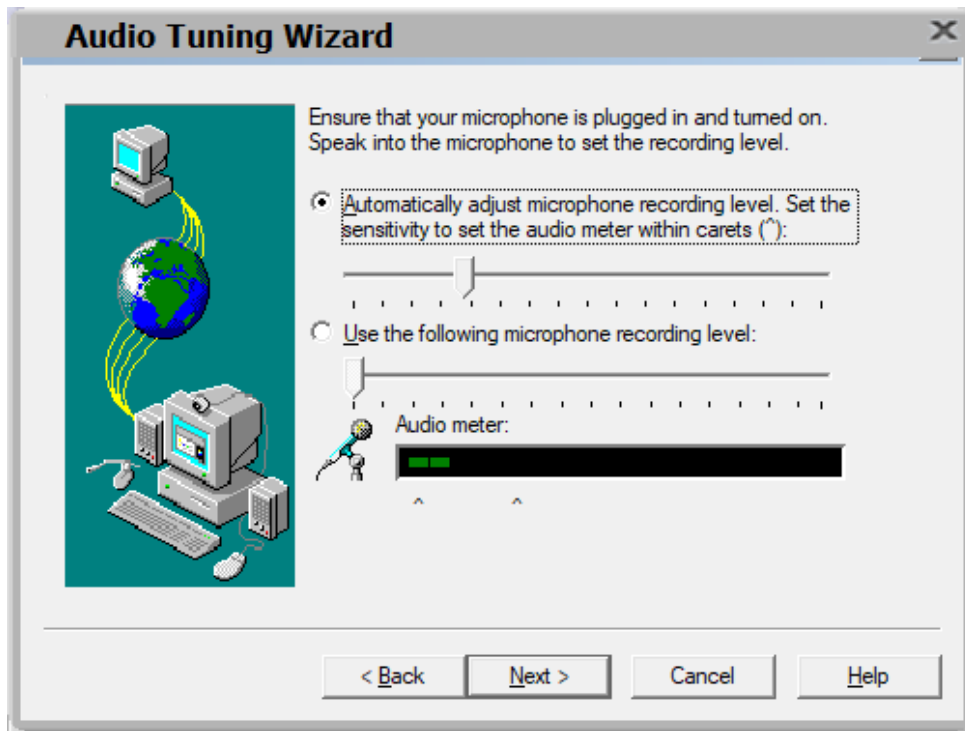
In the next window, select *Headset or Handset* as shown below. Click **Next**.



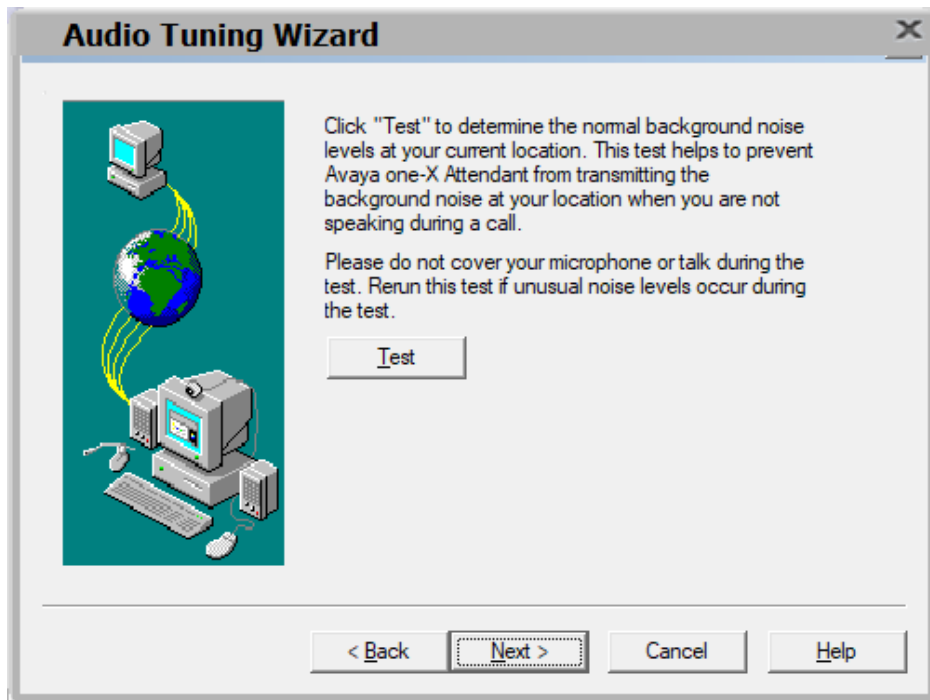
Next, click the **Test** button and verify that audio is heard through the Plantronics headset. Click **Next**.



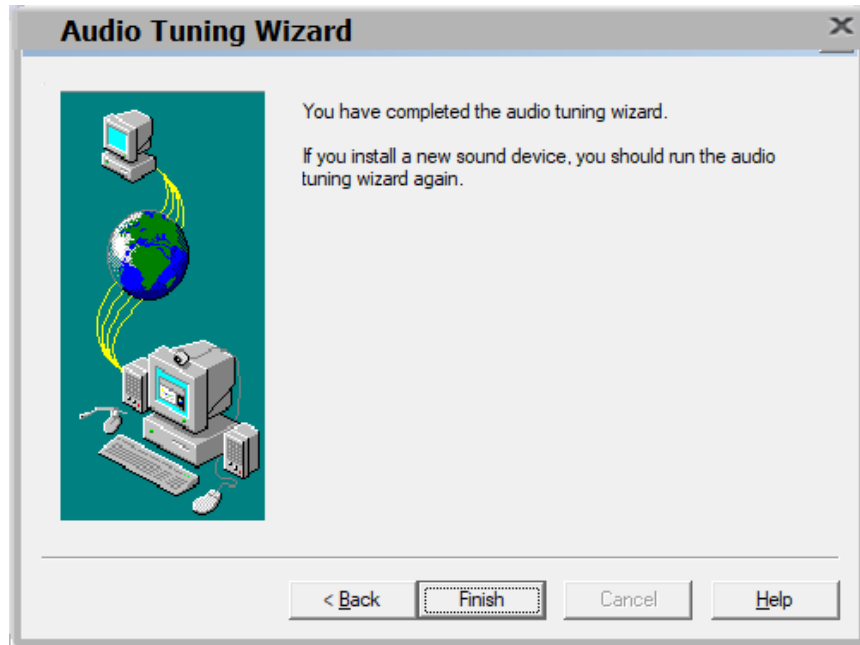
Speak into the headset and verify that the **Audio meter** detects sound to set the recording level. Click **Next**.




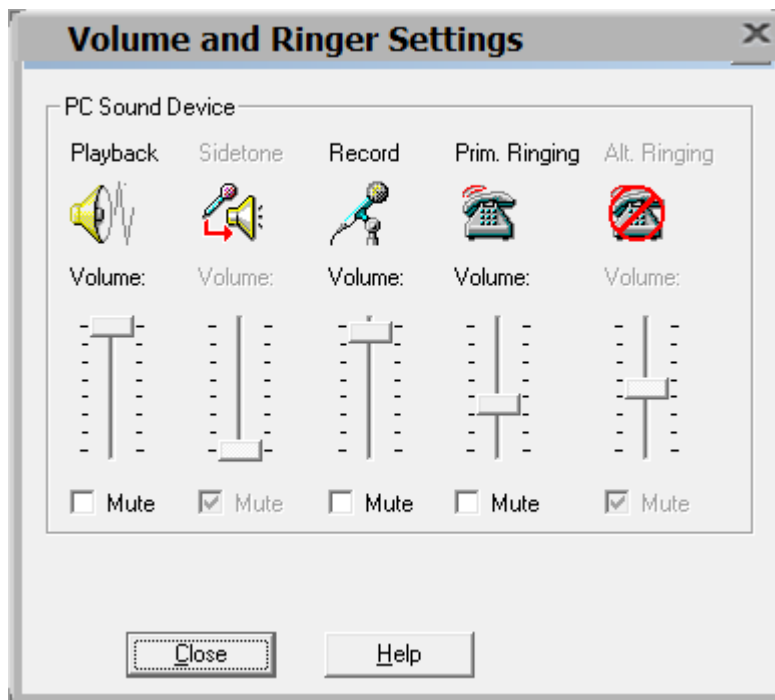
Next, click the **Test** button to determine the normal background noise. Click **Next**.



On the last Audio Tuning Wizard window, click **Finish**.



Configure the **Volume and Ringer Settings** to allow the user to hear ringing. To access the settings, select the  icon on the toolbar. Set the **Playback**, **Record**, and **Prim. Ringing** volume to the desired levels as shown below. Ensure that **Prim. Ringing** is not muted so that incoming call notification is played by the headset.



7. Install Plantronics Blackwire 5200 Series Headset

The Plantronics Hub Software should not be installed separately since one-X Attendant already has the Plantronics Hub SDK integrated. It will automatically be installed during the installation of one-X Attendant. Note that Plantronics Hub should be running, as indicated in the Windows taskbar, while one-X Attendant is being used. All that is required is to connect the Blackwire 5200 series headset to a USB or USB-C port on the desktop PC running one-X Attendant.

8. Verification Steps

This section provides the tests that can be performed to verify proper installation and configuration of the Plantronics Blackwire 5200 Series Headset with one-X Attendant.

1. Start the one-X Attendant application.
2. Place an incoming call to one-X Attendant from any local phone.
3. Answer the call using the call control button on the headset.
4. Verify two-way talk path between the Blackwire 5200 series headset and phone.
5. Disconnect the call from the headset using the call control button.
6. Verify that the call is properly disconnected.

9. Conclusion

These Application Notes describe the configuration steps required to integrate the Plantronics Blackwire 5200 Series Headset with Avaya one-X® Attendant. All test cases were completed with observations noted in **Section 2.2**.

10. Additional References

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

The following Avaya product documentation can be found at <http://support.avaya.com>.

- [1] *Administering Avaya Aura® Communication Manager, Release 7.1.1, Issue 2, August 2017.*
- [2] *Avaya one-X® Attendant 4.0 (SP13) connected to Avaya Communication Manager Installation and Administration Manual, Document 16-603459-EN, Release 4.14, December 2016.*

The following Plantronics product documentation can be found at <http://www.plantronics.com>.

- [3] *Plantronics Blackwire 5200 Series Quick Start.*

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