



**Application Notes for Configuring Sennheiser
Communications A/S CEHS-AV 03 EHS Adapter and DW
Pro1, DW Pro2, DW Office Wireless Headsets with Avaya
9600 Series IP Deskphones - Issue 1.0**

Abstract

These Application Notes describe the configuration steps required to integrate the Sennheiser Communications A/S CEHS-AV 03 EHS (Electronic Hook Switch) Adapter and DW Pro1, DW Pro2, DW Office wireless headsets with Avaya 9600 Series IP Deskphones. The Sennheiser Communications A/S CEHS-AV 03 EHS Adapter provides wireless headsets the ability to hear ring tones, answer and end calls, and mute/un-mute calls directly from the headset when the user is away from their desk. The Sennheiser Communications A/S DW Pro1, DW Pro2, DW Office wireless headsets were used to verify the functionality of the CEHS-AV 03 EHS 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 Sennheiser Communications A/S CEHS-AV 03 EHS (Electronic Hook Switch) Adapter with Avaya 9600 Series IP Deskphones.

The following headsets and accessories were tested:

- CEHS-AV 03 EHS (Electronic Hook Switch) Adapter – Provides wireless headsets the ability to hear ring tones, answer and end calls, and mute/un-mute calls directly from the headset when the user is away from their desk.
- DW Pro1 – Monaural wireless headset.
- DW Pro 2 – Binaural wireless headset.
- DW Office – Monaural wireless headset.

2. General Test Approach and Test Results

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 deskphones or with a different generation of the same Avaya Deskphone.

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

The interoperability compliance test included feature and serviceability testing. The feature testing focused on placing calls to and from the Avaya 9600 Series IP Deskphones with Sennheiser Communications A/S CEHS-AV 03 EHS Adapter and DW Pro1, DW Pro2, DW Office wireless headsets and verifying two-way audio. The call types included calls to voicemail, to and from local extensions, to and from the PSTN.

The serviceability testing focused on verifying the usability of the Sennheiser Communications A/S DW Pro1, DW Pro2, DW Office wireless headsets after restarting the Avaya 9600 Series IP Deskphones.

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 and receiving calls to and from internal extensions to verify two-way audio.
- Placing and receiving calls to and from the PSTN to verify two-way audio.
- Hearing ring back tone for incoming and outgoing calls.
- Answering and ending calls using the call control button on the headset.
- Using the volume control buttons on the headset to adjust the audio volume.
- Using the mute control button on the headset to mute and un-mute the audio.

For the serviceability testing, the 9600 Series IP Deskphone was restarted to verify proper operation of the headset after the reboot was completed.

2.2. Test Results

Testing was completed successfully with the following observations/limitations.

- Pressing the headset button on the Deskphone first does NOT automatically activate the call control button on the headset. If the user prefers to use the headset button on the Deskphone, instead of the call control button on the wireless headset or the telephone icon button on the base of the headset to answer, terminate, or to place calls, the call control button on the headset has to be active or enabled. Once the call control button on the headset is activated (by pressing it), the headset button on the Deskphone can be used to answer, terminate, or to place calls. Without it being enabled or active the headset will not receive dial-tone when attempting to place calls, or audio when answering calls, if the headset button on the Deskphone is used.

Note that the user will not hear the normal incoming call alerting tones on the headset during incoming calls if the call control button on the headset or the telephone icon button on the base of the headset is active or enabled.

The recommendation for wireless headsets is to always use the call control button on the headset to answer, terminate, or to place calls.

2.3. Support

For support on the Sennheiser Communications A/S Headset solution, contact Sennheiser Communications A/S technical support at:

Website: http://www.sennheisercommunications.com/comm/home_en.nsf/root/service

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify the Sennheiser Communications A/S CEHS-AV 03 EHS (Electronic Hook Switch) Adapter and DW Pro1, DW Pro2, DW Office wireless headsets with Avaya 9600 Series IP Deskphones. The configuration consists of an Avaya S8300 server running Avaya Aura® Communication Manager with an Avaya G450 Media Gateway and a mix of deskphones (IP, analog and IP) for placing calls to and from the equipment under test.

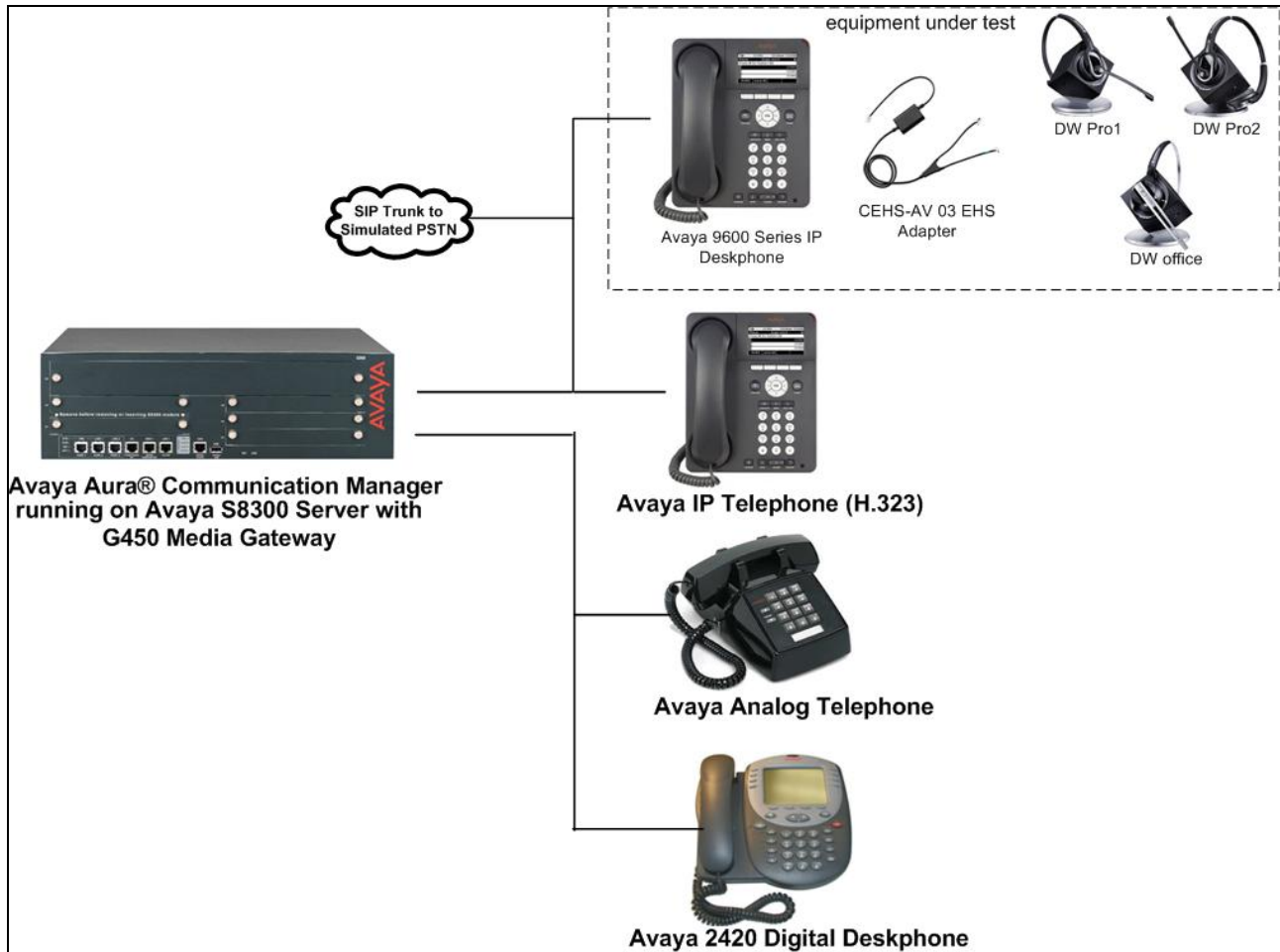


Figure 1: Avaya 9600 Series IP Deskphone with Sennheiser Communications A/S CEHS-AV 03 EHS Adapter and DW Pro1, DW Pro2, DW Office Wireless Headsets.

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 running on Avaya S8300 Server with a G450 Media Gateway.	6.0.1 SP8.01 (00.1.510.1-19917)
Avaya 9600 Series IP Deskphones (H.323)	Avaya one-X® Desk phone Edition Version 3.104
Avaya Analog Deskphone.	N/A
Avaya 2420 Digital Deskphone	6.0
Sennheiser Communications A/S CEHS-AV 03 EHS Adapter.	N/A
Sennheiser Communications A/S DW Pro1 Wireless Headset.	N/A
Sennheiser Communications A/S DW Pro2 Wireless Headset.	N/A
Sennheiser Communications A/S DW Office Wireless Headset.	N/A

5. Configure Avaya Aura® Communication Manager

This section displays the station configuration for the Avaya 9600 IP Deskphone. The configuration is performed via the System Access Terminal (SAT) on Avaya Aura® Communication Manager.

5.1. Configure a Station for Avaya 9600 Series IP Deskphone

These Application Notes assume that the Avaya 9600 Series IP Deskphones are configured and operational in Avaya Aura® Communication Manager. There are no additional settings required for the connection of the Sennheiser Communications A/S CEHS-AV 03 EHS Adapter and DW Pro1, DW Pro2, DW Office wireless headsets to the Avaya 9600 Series IP Deskphones.

An example of a 9600 Series IP Station provisioned in Avaya Aura® Communication Manager is illustrated below.

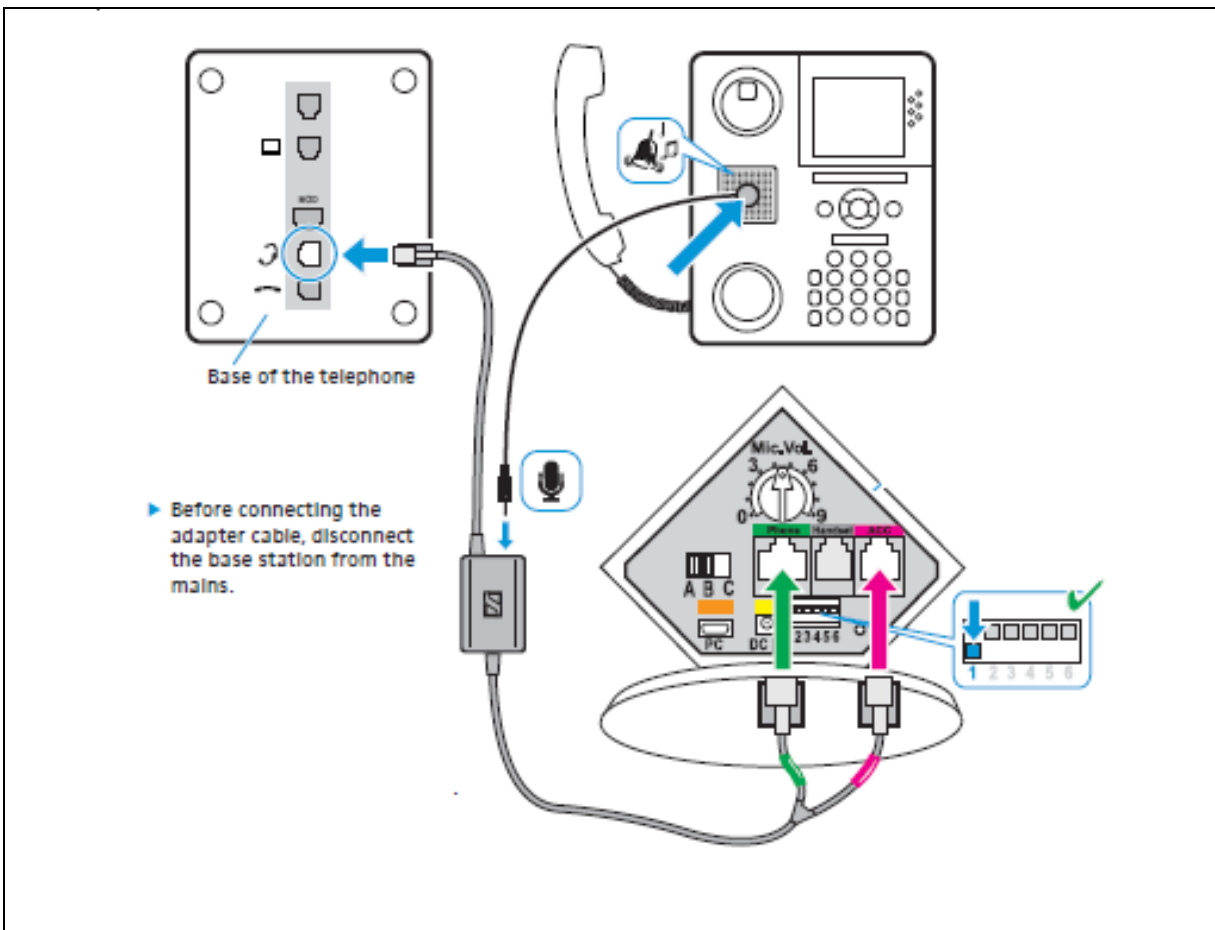
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display station 3042                                     Page 1 of 5
                                     STATION
Extension: 3042                                         Lock Messages? n      BCC: 0
  Type: 9620                                           Security Code: *      TN: 1
  Port: S00004                                         Coverage Path 1: 1    COR: 1
  Name: 3042-H323                                       Coverage Path 2:      COS: 1
                                     Hunt-to Station:
STATION OPTIONS
                                     Time of Day Lock Table:
      Loss Group: 19                                     Personalized Ringing Pattern: 1
                                     Message Lamp Ext: 3042
      Speakerphone: 2-way                               Mute Button Enabled? y
      Display Language: english
      Survivable GK Node Name:
      Survivable COR: internal                           Media Complex Ext:
      Survivable Trunk Dest? y                           IP SoftPhone? n
                                     IP Video? n
      Short/Prefixed Registration Allowed: default
                                     Customizable Labels? y
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6. Connect the Sennheiser Communications A/S CEHS-AV 03 EHS Adapter and DW Pro1, DW Pro2, DW Office Wireless Headsets to Avaya 9600 Series IP Deskphone

During the compliance testing the Sennheiser Communications A/S CEHS-AV 03 EHS Adapter was used to connect the DW Pro1, DW Pro2 and DW Office wireless headsets to the Avaya 9600 Series IP Deskphones. The Sennheiser Communications A/S CEHS-AV 03 EHS Adapter provides DW Pro1, DW Pro2 and DW Office wireless headsets the ability to hear ring tones, answer and end calls, and mute/un-mute calls directly from the wireless headset when the user is away from their desk.

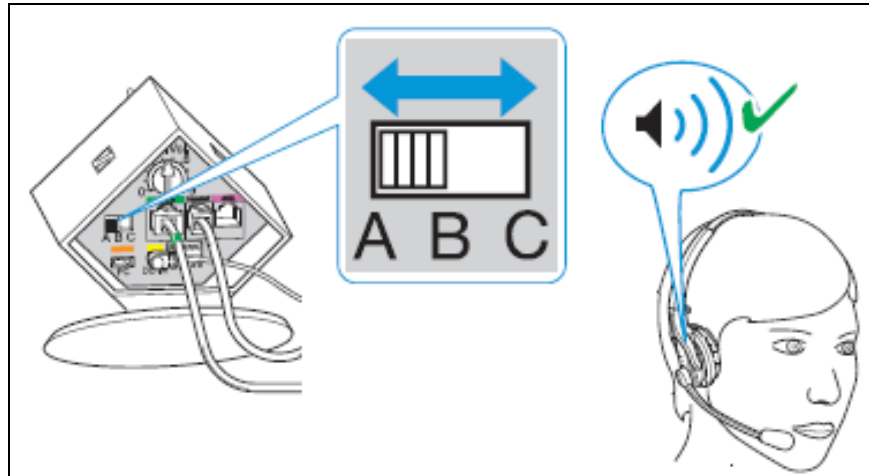
6.1. Cable connections

To connect the Sennheiser Communications A/S CEHS-AV 03 EHS Adapter to the DW Pro1, DW Pro2, DW Office wireless headsets and to the Avaya 9600 Series IP Deskphone, refer to the diagram below.

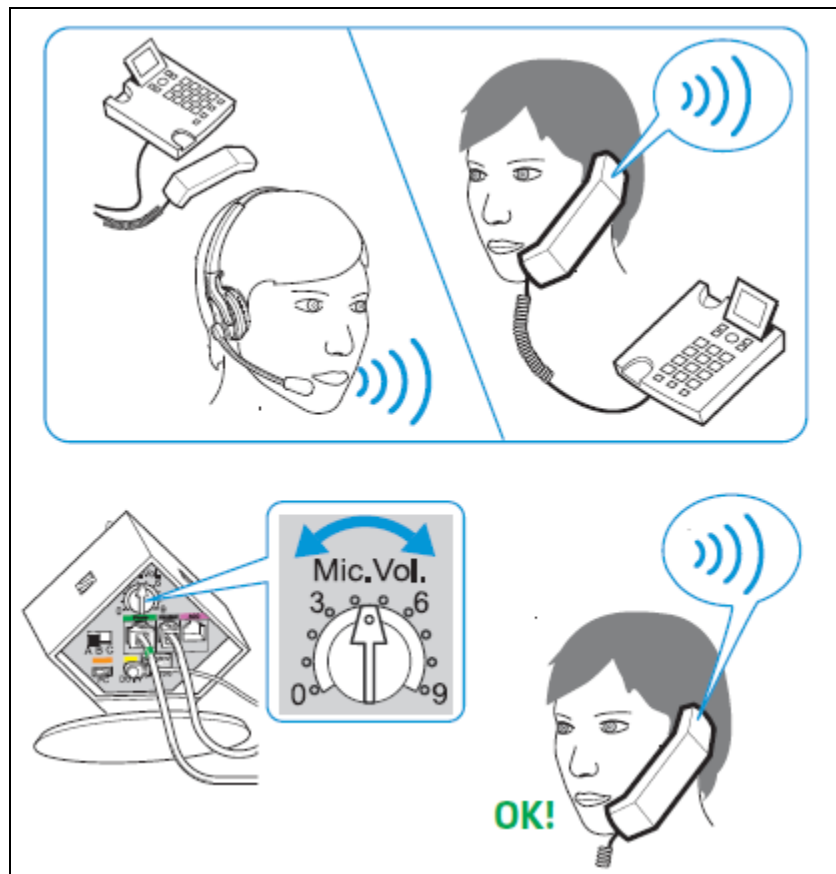


7. Configure Sennheiser Communications A/S DW Pro1, DW Pro2, DW Office Wireless Headsets

To adjust the dial tone of the telephone: Set the switch on the back of the headset base to position “A”.



To adjust the microphone sensitivity for outgoing calls: Make a call, adjust the **Mic. Vol.** dial on the back of the headset base while speaking until the desired microphone level sensitivity is reached.



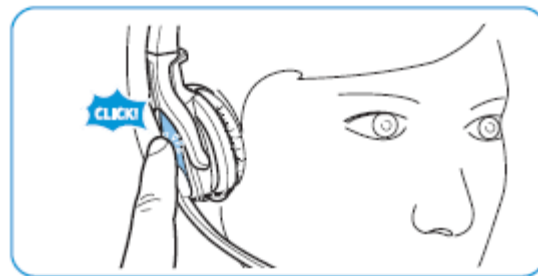
For more information on headset settings refer to the Sennheiser Communications A/S DW Pro1/DW Pro2, DW Office Quick Guides included with the headsets. For the link to on-line documentation refer to **Section 11**.

8. To Answer, End, Place Calls, Mute and adjust the volume on the Headsets

To Answer, End, Place calls, Mute/Un-Mute and adjust the Volume on the Sennheiser Communications A/S DW Pro1, DW Pro2, DW Office wireless headsets follow the instructions below.

Although the instructions shown below only illustrate the use of the call control buttons on the DW Pro1 and DW Pro2 wireless headsets, the call control buttons on the DW Office wireless headset are similar.

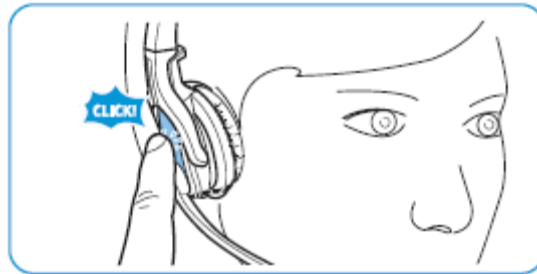
To Answer a Call: Press the call control button on the headset.



Alternatively, press the telephone icon button on the base of the headset.



To End a Call: Press the call control button on the headset.

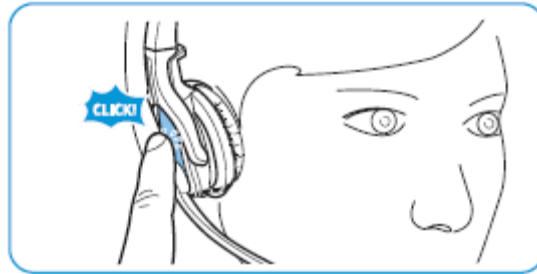


Alternatively, press the telephone icon button on the base of the headset.



To Place a Call:

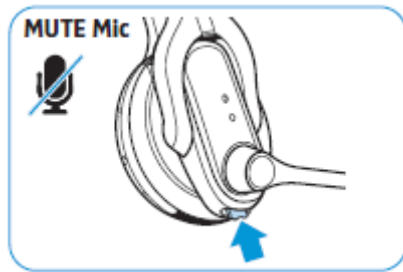
Press the call control button on the headset to get dial tone and dial the number.



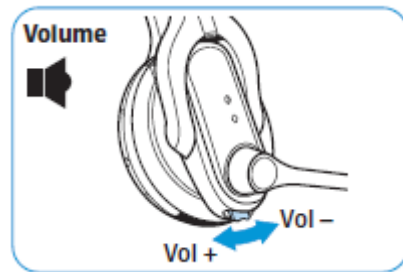
Alternatively, press the telephone icon button on the base of the headset and dial the number.



To Mute: Press the MUTE Mic button on the headset.



To adjust the volume: Use the volume control button on the headset



For more information on how to use the headsets refer to the Sennheiser Communications A/S DW Pro1/DW Pro2, DW Office Quick Guides included with the headsets. For the link to on-line documentation refer to **Section 11**.

9. Verification Steps

Verify that the Sennheiser Communications A/S CEHS-AV 03 EHS Adapter and the DW Pro1, DW Pro2 or DW Office wireless headset has been connected to the Avaya 9600 Series IP Deskphone. Once the adapter and headset are connected to the deskphone, verify that incoming and outgoing calls can be established with two-way audio to the headset and that the headset can get dial tone and end an active call.

10. Conclusion

These Application Notes describe the configuration steps required to integrate the Sennheiser Communications A/S CEHS-AV 03 EHS Adapter and the DW Pro1, DW Pro2, DW Office wireless headsets with Avaya 9600 Series IP Deskphones. Testing was completed successfully with observations noted in **Section Error! Reference source not found.**

11. Additional References

This section references the Avaya and Sennheiser Communications A/S 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 6.0, Issue 6.0, June 2010, Document Number 03-300509.
- [2] *Avaya one-X™ Deskphone Edition for 9600 Series IP Telephones Administrator Guide*, Release 3.1, Issue 7, November 2009, Document Number 16-300698.

The following Sennheiser Communications A/S documentation can be found at http://www.sennheisercommunications.com/comm/home_en.nsf/root/service_download-area?Open&print=1

- [3] *Quick guide for CEHS-AV 03*
- [4] *DW Pro1 Quick guide.*
- [5] *DW Pro1 User manual.*
- [6] *DW Pro2 Quick guide.*
- [7] *DW Pro2 User manual.*
- [8] *DW Office Quick guide.*
- [9] *DW Office user manual*

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