



Application Notes for Configuring Sennheiser SD Series Headsets with Avaya 9400/9500 Series Digital Deskphones using CEHS-AV 03 EHS Adapter – Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the Sennheiser CEHS-AV 03 EHS (Electronic Hook Switch) Adapter and SD Pro1, SD Pro2, SD Office wireless headsets with Avaya 9400/9500 Series Digital Deskphones. The Sennheiser 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 including situations when the user is away from their desk. The Sennheiser SD Pro1, SD Pro2, SD 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 CEHS-AV 03 EHS (Electronic Hook Switch) Adapter with Avaya 9400/9500 Series Digital Deskphones. Sennheiser designs and develops professional headsets for the Corporate, Financial, Health, Government, Educational, Industrial, Hotel & Hospitality and Contact Centre market sectors.

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 including situations when the user is away from their desk.
- SD Pro1 – Monaural wireless headset.
- SD Pro 2 – Binaural wireless headset.
- SD Office – Monaural wireless headset.

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 the Avaya 9400/9500 Series Digital Deskphones with Sennheiser CEHS-AV 03 EHS Adapter and SD Pro1, SD Pro2, SD 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 SD Pro1, SD Pro2, SD Office wireless headsets after restarting the Avaya 9400/9500 Series Digital Deskphones.

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 headset interfaces, different manufacturers utilize different 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

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 9400/9500 Series Digital 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 hear a series of beeping tones instead of 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.
- Since the CEHS-AV 03 adapter uses ringer sensor to notify of a call to the wireless headset, ensure that the ringer volume on the deskphone is high enough for the ringer sensor to detect.
- When far end disconnects the call, the LED on the headset and headset base is still lit. User has to manually press the call control button on the headset or the headset base to turn the LED off.
- User is on a call using the headset and handset is undocked. Turn off the headset button on the deskphone to transfer the call from the headset to the handset. Call is transferred however the LED is lit on the headset base. User has to manually press the call control button on the headset base to turn the LED off.

2.3. Support

Support from Avaya is available by visiting the website <http://support.avaya.com>. Support from Sennheiser is available at:

Web: <http://en-de.sennheiser.com/service-support/>

Phone: 1-877-736-6434

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify the Sennheiser CEHS-AV 03 EHS (Electronic Hook Switch) Adapter and SD Pro1, SD Pro2, SD Office wireless headsets with Avaya 9400/9500 Series Digital Deskphones. The configuration consists of an Avaya S8800 server running Avaya Aura® Communication Manager with an Avaya G650 Media Gateway and a mix of deskphones (IP and digital) for placing calls to and from the equipment under test.

For the Avaya 9500 Series Digital Deskphone the configuration consisted of an Avaya IP Office 500 V2 and an IP Office Digital expansion module.

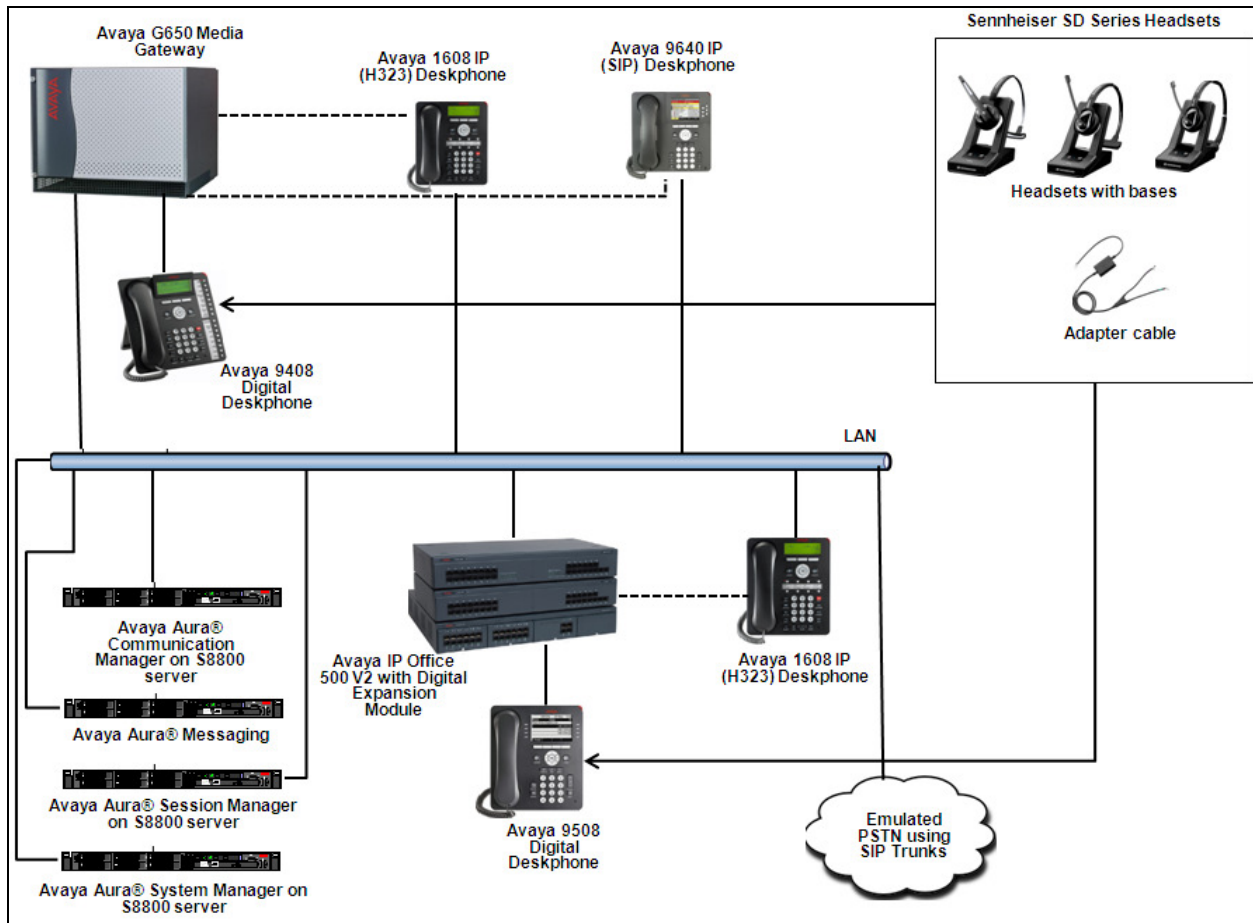


Figure 1: Avaya 9400/9500 Series Digital Deskphone with Sennheiser CEHS-AV 03 EHS Adapter and SD Pro1, SD Pro2, SD Office Wireless Headsets.

4. Equipment and Software Validated

The following equipment and software was used for the compliance test.

Equipment/Software	Release/Version
Avaya Aura® Communication Manager running on Avaya S8800 Server and G650 Media Gateway	6.3-03.0.124.0
Avaya Aura® System Manager running on Avaya S8800 Server	6.3
Avaya Aura® Session Manager running on Avaya S8800 Server	6.3
Avaya Aura® Messaging running on Avaya S8800 Server	6.1 SP 02
Avaya IP Office 500 V2	8.1 (67)
Avaya IP Office Digital Expansion Module	10.1 (67)
Avaya 9404 Digital Deskphone	21
Avaya 9508 Digital Deskphone	45
Avaya 1608 IP Deskphone (H.323)	1.301S
Avaya 9640 IP Deskphone (SIP)	2.6.9.1
Sennheiser SD series headsets <ul style="list-style-type: none">• SD Office• SD Pro1• SD Pro2	6G.3B.7E.112 6L.3B.7E.112 6I.3B.7E.112
Sennheiser CEHS-AV 03 EHS Adapter	1.0

5. Configure Avaya Aura® Communication Manager

It is assumed that a fully functioning Communication Manager is in place with the necessary licensing. For further information on the configuration of Communication Manager please see **Section 9** of these Application Notes.

5.1. Configuring 9400 Series Digital Deskphones

These Application Notes assume that the Avaya 9400 Series Digital Deskphones are configured and operational in Avaya Aura® Communication Manager. There are no additional settings required for the connection of the Sennheiser CEHS-AV 03 EHS Adapter and SD Pro1, SD Pro2, SD Office wireless headsets to the Avaya 9400 Series Digital Deskphones. For further information on how to configure these Avaya Digital Deskphones refer to **Section 9** of these Application Notes.

5.2. Configuring 9500 Series Digital Deskphones

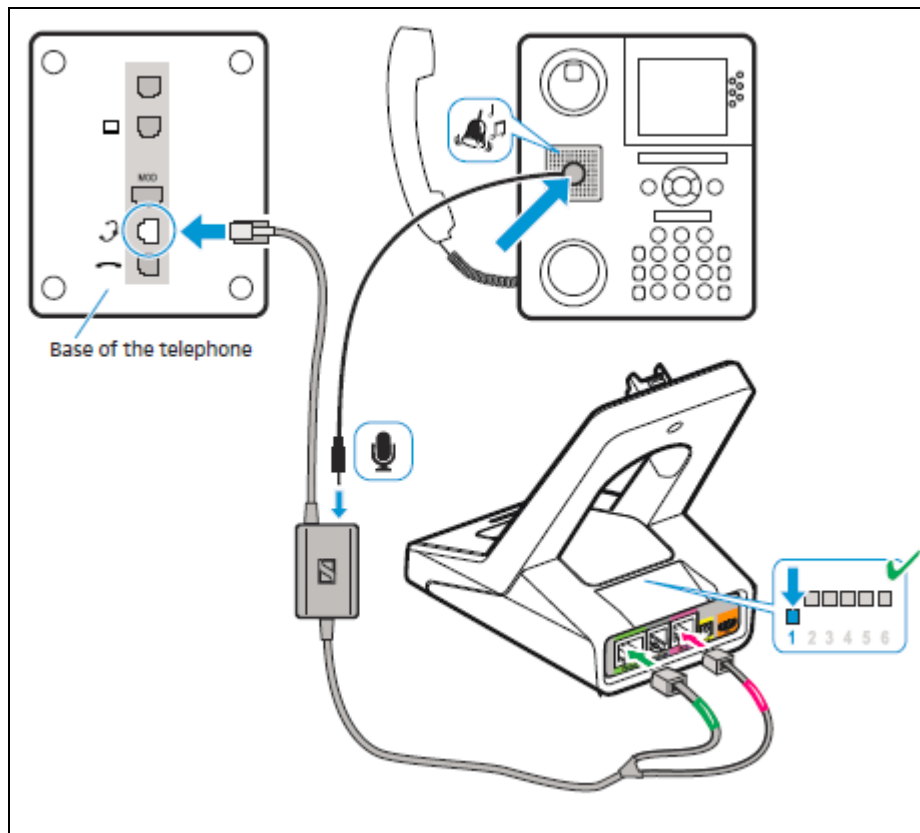
These Application Notes assume that the Avaya 9500 Series Digital Telephones are configured and operational in IP Office. There are no additional settings required on IP Office for the connection of the Sennheiser CEHS-AV 03 EHS Adapter and SD Pro1, SD Pro2, SD Office wireless headsets to the Avaya 9500 Series Digital Deskphones. For further information on how to configure these Avaya Digital Deskphones refer to **Section 9** of these Application Notes.

6. Connect the Sennheiser CEHS-AV 03 EHS Adapter and SD Pro1, SD Pro2, SD Office Wireless Headsets to Avaya 9400/9500 Series Digital Deskphone

During the compliance testing the Sennheiser CEHS-AV 03 EHS Adapter was used to connect the SD Pro1, SD Pro2 and SD Office wireless headsets to the Avaya 9400/9500 Series Digital Deskphones. The Sennheiser CEHS-AV 03 EHS Adapter provides SD Pro1, SD Pro2 and SD Office wireless headsets the ability to hear ring tones, answer and end calls, and mute/un-mute calls directly from the wireless headset including situations when the user is away from their desk.

6.1. Cable connections

To connect the Sennheiser CEHS-AV 03 EHS Adapter to the SD Pro1, SD Pro2, SD Office wireless headsets and to the Avaya 9400/9500 Series Digital Deskphone, refer to the diagram below.



7. Verification Steps

Verify that the Sennheiser CEHS-AV 03 EHS Adapter and the SD Pro1, SD Pro2 or SD Office wireless headset has been connected to the Avaya 9400/9500 Series Digital 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. Also ensure that the mute button and volume control on the headsets work as intended.

8. Conclusion

These Application Notes describe the configuration steps required to integrate the Sennheiser CEHS-AV 03 EHS Adapter and the SD Pro1, SD Pro2, SD Office wireless headsets with Avaya 9400/9500 Series Digital Deskphones. Testing was completed successfully with observations noted in **Section Error! Reference source not found.**

9. Additional References

This section references documentation relevant to these Application Notes. Product documentation for Avaya products may be found at <http://support.avaya.com>

- [1] *Administering Avaya Aura® Communication Manager*, Document Number 03-300509.
- [2] *Avaya Aura® Communication Manager Feature Description and Implementation*, Document Number 555-245-205.
- [3] *Avaya 9400 Series Digital Deskphone for Avaya Aura® Communication Manager Installation and Maintenance Guide*, Rel. 1.0, August 2011, Document Number 16-603533.
- [4] *Avaya IP Office 9500 Series User Guide*, Issue 05d, April 05, 2012.
- [5] *IP Office Manager 8.1*, Issue 25o, April 2012, Document 15-601011.
- [6] *IP Office 8.1 Installation*, Document Number 15-601042 Issue 26f, 30 July 2012.

The following Sennheiser Communications A/S documentation can be found at <http://en-de.sennheiser.com/service-support/services/download-area/>

- [1] Quick guide for CEHS-AV 03
- [2] SD Pro1 Quick guide.
- [3] SD Pro1 User manual.
- [4] SD Pro2 Quick guide.
- [5] SD Pro2 User manual.
- [6] SD Office Quick guide.
- [7] SD Office User manual.

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