



**Avaya Solution & Interoperability Test Lab**

---

## **Application Notes for Configuring Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and SC 630, SC 660 Headsets with Avaya 9400 and 9500 Series Digital Deskphones - Issue 1.0**

### **Abstract**

These Application Notes describe the configuration steps required to integrate the Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and SC 630, SC 660 headsets with Avaya 9400 and 9500 Series Digital Deskphones. The Sennheiser CSTD 01 Headset Adapter Cable is fitted with an easy disconnect plug on one end and a module plug on the other end for quick and easy connection into Avaya 9400 and 9500 Series Digital Deskphones and into Sennheiser Communications A/S SC 630, SC 660 headsets.

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 CSTD 01 Headset Adapter Cable with Avaya 9400 and 9500 Series Digital Deskphones.

The following Sennheiser Communications A/S headsets and accessories were tested:

- CSTD 01 Headset Adapter Cable – Fitted with an easy disconnect plug on one end and a module plug on the other end for quick and easy connection into Avaya 9400 and 9500 Series Digital Deskphones and into Sennheiser Communications A/S SC 630, SC 660 headsets.
- SC 630 – Monaural headset.
- SC 660 – Binaural 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 9400 and 9500 Series Digital Deskphones with Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and SC 630, SC 660 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 SC 630, SC 660 headsets after restarting the Avaya 9400 and 9500 Series Digital 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.
- Placing calls using the headset button on the deskphone.
- Answering and ending calls using the headset button on the deskphone.
- Hearing ring back tone on the headsets for outgoing calls.
- Using the Volume control buttons on the deskphone to adjust the audio volume on the headsets.
- Using the Mute control button on the deskphone to mute and un-mute the audio on the headsets.
- Using the Hold button on the deskphone to place an active call on hold to verify two-way audio is muted on the headsets.

For the serviceability testing, the Avaya 9400 and 9500 Series Digital Deskphone were restarted to verify proper operation of the headsets after the reboot was completed.

## 2.2. Test Results

Testing was completed successfully with the following observations/limitations.

- The headset button on the Avaya deskphones should be disabled when the headset is not in use. If the headset button on the Avaya deskphone is left enabled for any reason, the deskphone will only ring once during incoming calls, no alerting tone will be heard on the headset speakers. After one ring a blinking led light on the deskphone will be the only indication that a call has arrived, no further audible indication will be given. The headset button on the deskphone is enabled when the headset icon on the button is illuminated. The headset button is disabled by pressing it.

## 2.3. Support

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

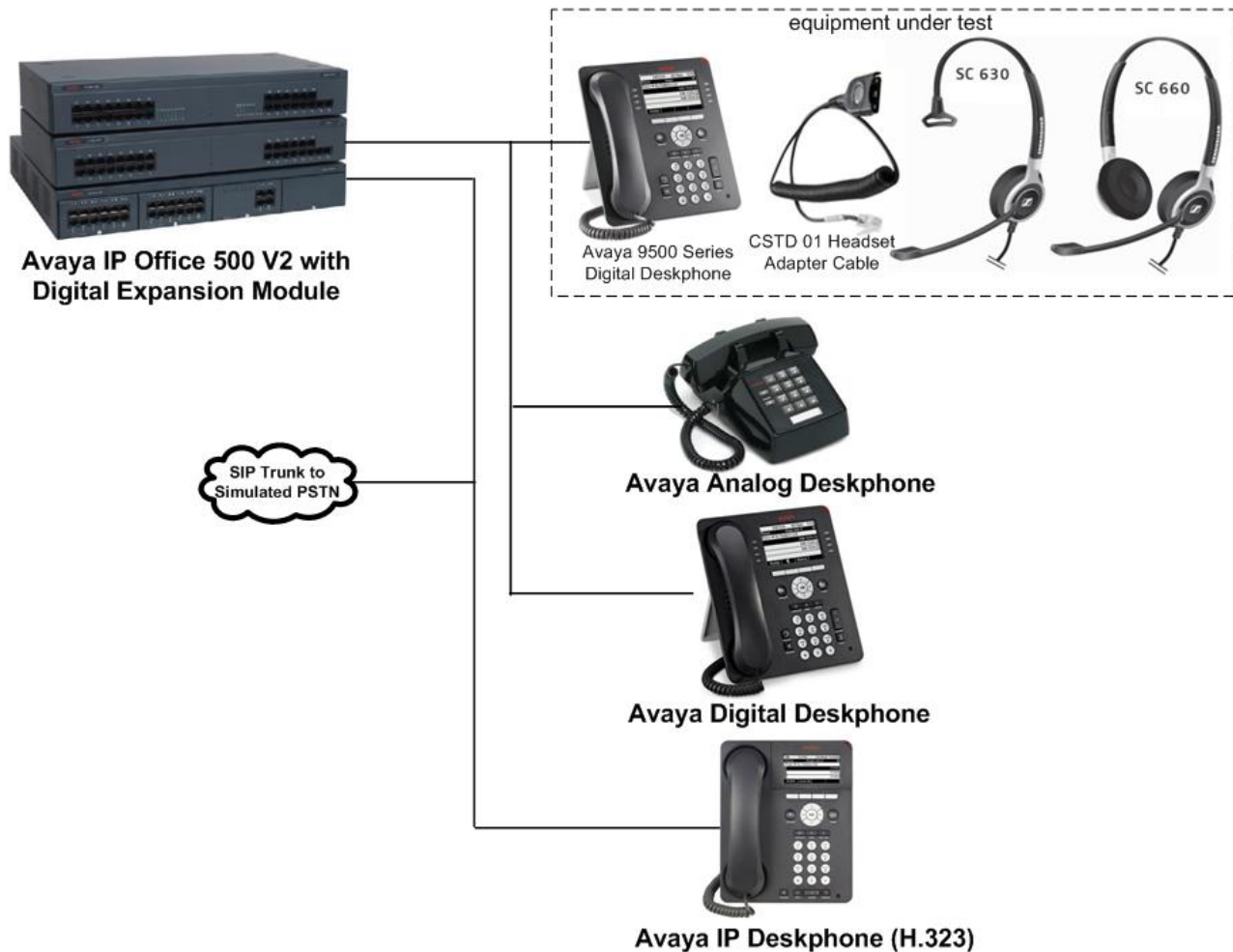
Website: [http://www.sennheisercommunications.com/comm/home\\_en.nsf/root/service](http://www.sennheisercommunications.com/comm/home_en.nsf/root/service)

### 3. Reference Configuration

Two configurations were tested, Avaya IP Office with 9500 Series Digital Deskphones and Avaya Aura® Communication Manager with 9400 Digital Series Deskphones.

#### 3.1. Avaya IP Office Configuration

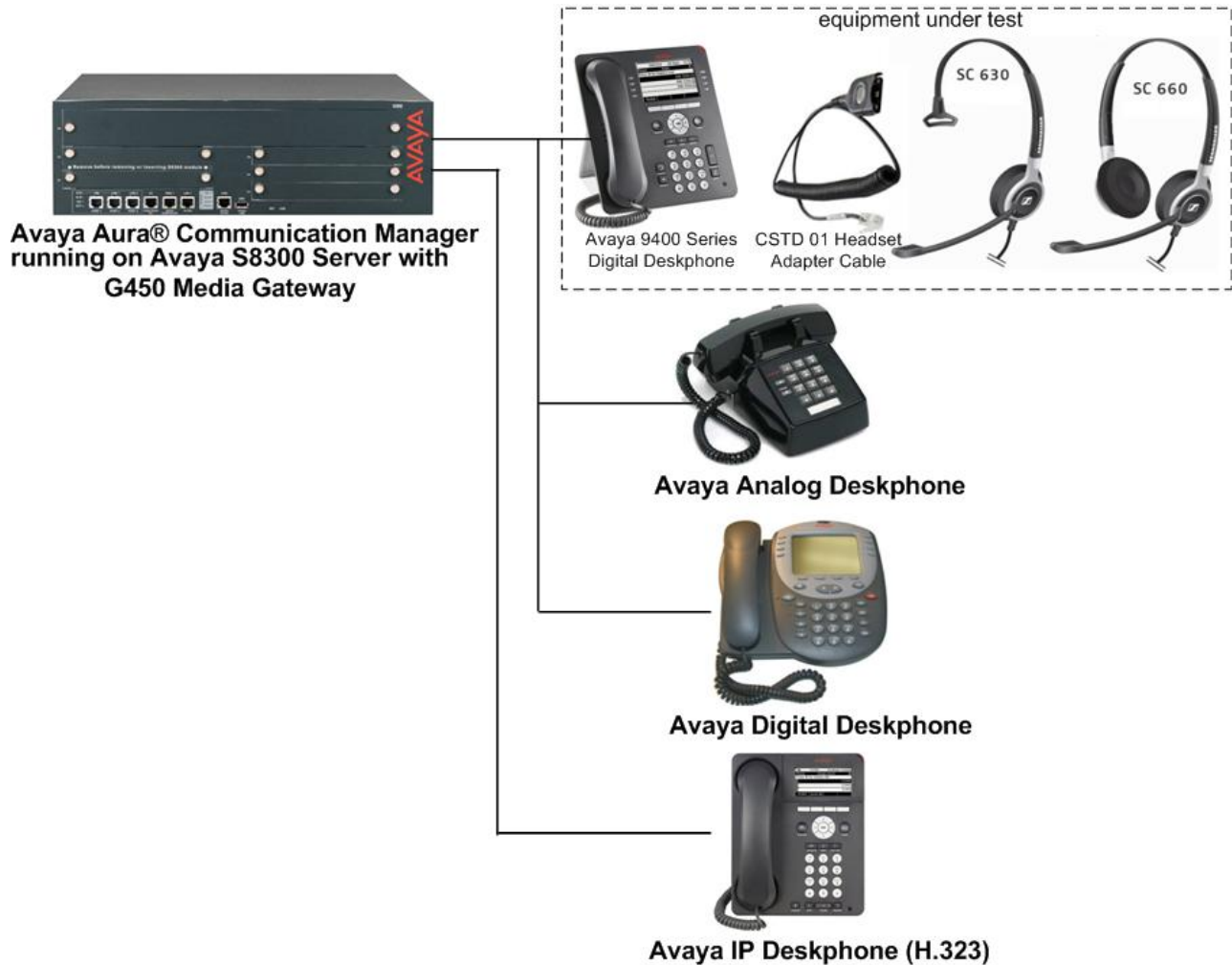
**Figure 1** illustrates the test configuration used to verify the Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and SC 630, SC 660 headsets with Avaya 9500 Series Digital Deskphones. For the Avaya 9500 Series Digital Deskphone the configuration consisted of an Avaya IP Office 500 V2 and an IP Office Digital expansion module.



**Figure 1: Avaya 9500 Series Digital Deskphone with Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and SC 630, SC 660 Headsets.**

### 3.2. Avaya Aura® Communication Manager Configuration

**Figure 2** illustrates the test configuration used to verify the Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and SC 630, SC 660 headsets with Avaya 9400 Series Digital Deskphones. For the Avaya 9400 Series Digital Deskphone the configuration consist of an Avaya S8300 Server running Avaya Aura® Communication Manager with an Avaya G450 Media Gateway.



**Figure 1: Avaya 9400 Series Digital Deskphone with Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and SC 630, SC 660 Headsets.**

## 4. Equipment and Software Validated

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

### 4.1. Avaya IP Office

Equipment/Software	Release/Version
Avaya IP Office 500 V2	8.1(65)
Avaya IP Office Digital Expansion Module	10.1(65)
Avaya 9508 Series Digital Deskphone	0.45
Avaya 9600 Series IP Deskphones (H.323)	Avaya one-X® Desk phone Edition Version 3.105
Avaya Analog Deskphone.	N/A
Sennheiser Communications A/S CSTD 01 Headset Adapter Cable	N/A
Sennheiser Communications A/S SC 630 Headset.	N/A
Sennheiser Communications A/S SC 660 Headset.	N/A

## 4.2. Avaya Aura® Communication Manager

Equipment/Software	Release/Version
Avaya Aura® Communication Manager running Avaya S8300 Server with a G450 Media Gateway	6.2 SP5 (02.0.823.0-20396)
Avaya 9408 Series Digital Deskphone	2.0
Avaya 9600 Series IP Deskphones (H.323)	Avaya one-X® Desk phone Edition Version 3.105
Avaya Analog Deskphone.	N/A
Avaya 2420 Digital Deskphone	6.0
Sennheiser Communications A/S CSTD 01 Headset Adapter Cable	N/A
Sennheiser Communications A/S SC 630 Headset.	N/A
Sennheiser Communications A/S SC 660 Headset.	N/A

## 5. Configure Stations for Avaya 9400 and 9500 Series Digital Deskphones

### 5.1. Configure Avaya Aura® Communication Manager

This section displays the station configuration for the Avaya 9400 Digital Deskphone. The configuration is performed via the System Access Terminal (SAT) on Avaya Aura® Communication Manager.

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 on Avaya Aura® Communication Manager for the connection of the Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and SC 630, SC 660 headsets to the Avaya 9400 Series Digital Deskphone.

An example of a 9400 Series Digital Station provisioned in Avaya Aura® Communication Manager is illustrated below.

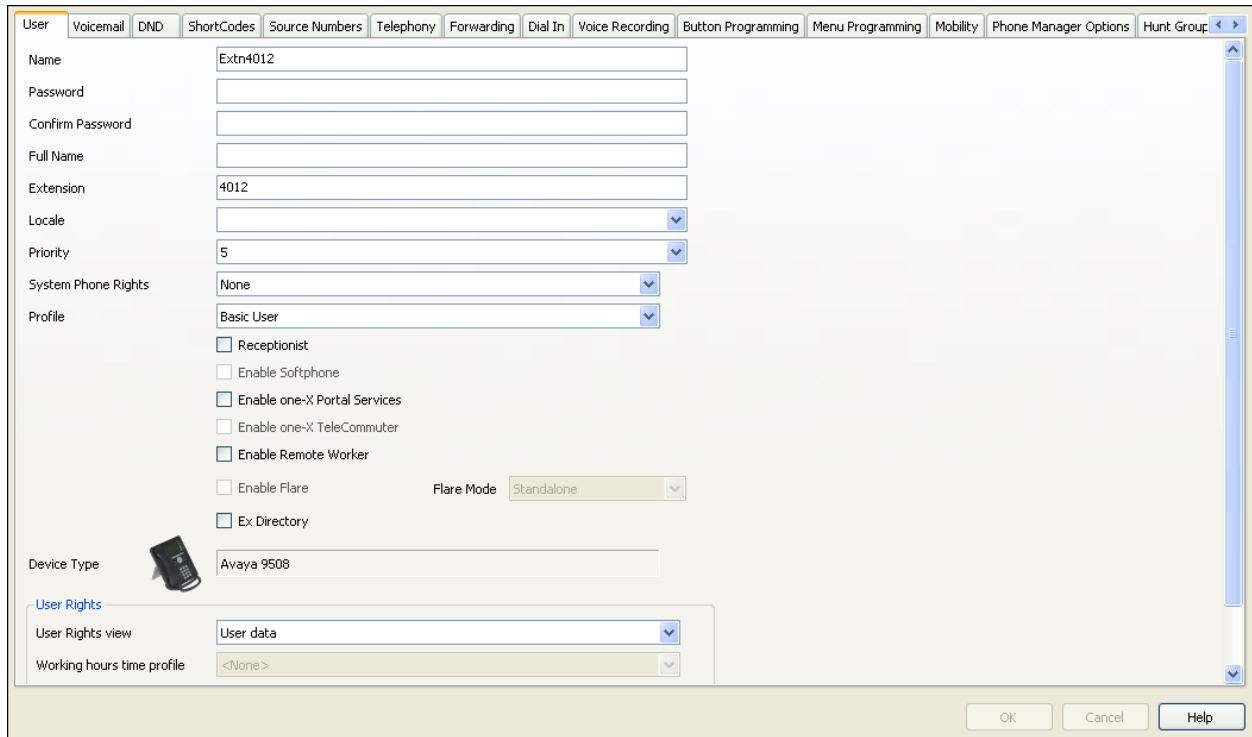
```
display station 3046                                     Page 1 of 5
STATION
Extension: 3046                                         Lock Messages? n      BCC: 0
Type: 9408                                             Security Code:        TN: 1
Port: 001V501                                         Coverage Path 1:     COR: 1
Name: Digita, Ext 3046                                Coverage Path 2:     COS: 1
                                                       Hunt-to Station:
STATION OPTIONS
Loss Group: 2                                          Time of Day Lock Table:
                                                       Personalized Ringing Pattern: 1
Speakerphone: 2-way                                   Message Lamp Ext: 3046
Display Language: english                             Mute Button Enabled? y
                                                       Button Modules: 0
Survivable COR: internal
Survivable Trunk Dest? y                               IP SoftPhone? n
                                                       Remote Office Phone? n
                                                       IP Video? n
                                                       Customizable Labels? y
```



## 5.2. Configure IP Office

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 Communications A/S CSTD 01 Headset Adapter Cable and SC 630, SC 660 headsets to the Avaya 9500 Series Digital Deskphones.

An example of a 9500 Series Digital Station provisioned in IP Office is illustrated below.



The screenshot shows the 'User' configuration window in Avaya IP Office. The window has a tabbed interface with the following tabs: User, Voicemail, DND, ShortCodes, Source Numbers, Telephony, Forwarding, Dial In, Voice Recording, Button Programming, Menu Programming, Mobility, Phone Manager Options, and Hunt Group. The 'User' tab is active.

The configuration fields are as follows:

- Name: Extn4012
- Password: [Empty]
- Confirm Password: [Empty]
- Full Name: [Empty]
- Extension: 4012
- Locale: [Dropdown]
- Priority: 5
- System Phone Rights: None
- Profile: Basic User
- Receptionist:
- Enable Softphone:
- Enable one-X Portal Services:
- Enable one-X TeleCommuter:
- Enable Remote Worker:
- Enable Flare:  Flare Mode: Standalone
- Ex Directory:
- Device Type: Avaya 9508
- User Rights: User data
- Working hours time profile: <None>

Buttons at the bottom: OK, Cancel, Help.

## 6. Connect the Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and SC 630, SC 660 headsets to Avaya 9400 or 9500 Series Digital Deskphone

During the compliance testing the Sennheiser Communications A/S CSTD 01 Headset Adapter Cable was used to connect the SC 630, SC 660 headsets to the Avaya 9400 or 9500 Series Digital Deskphones. The Sennheiser CSTD 01 Headset Adapter Cable is fitted with an easy disconnect plug on one end and a module plug on the other end for quick and easy connection into Avaya 9400 or 9500 Series Digital Deskphones and into Sennheiser Communications A/S SC 630, SC 660 headsets.

### 6.1. Cable connections

To connect the Sennheiser Communications A/S CSTD 01 Headset Adapter Cable to the SC 630, SC 660 headsets and to the Avaya 9400 or 9500 Series Digital Deskphones, refer to the diagram below.



## 7. To answer calls, end calls, place calls, mute/un-mute, place active calls on Hold and adjust the Volume on the speaker of the headsets

To answer calls, end calls, place calls, mute/un-mute, place active calls on hold and to adjust the volume on the speaker of the Sennheiser Communications A/S SC 630, SC 660 headsets the call control buttons on the deskphone **must** be used, as follows.

**To Answer a Call:** Press the headset button on the deskphone.

**To End a Call:** Press the headset button on the deskphone.

**To Place a Call:** Press the headset button on the deskphone to receive dial tone, proceed to dial the number.

**To Mute:** Press the Mute button on the deskphone.

**To adjust the volume:** Use the Volume Control button on the deskphone.

**To place an active call on hold:** Press the Hold button on the deskphone.

For more information on how to use the Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and headsets refer to the Guides included with the headset adapter cable and headsets. For the link to on-line documentation refer to **Section 10**.

## 8. Verification Steps

Verify that the Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and the SC 630 or SC 660 headset has been connected to the Avaya 9400 or 9500 Series Digital Deskphones. Once the headset adapter cable and headset are connected to the deskphone, verify that incoming and outgoing calls can be established with clear two-way audio. Verify that all call control activities listed under **Section 7** can be performed.

## 9. Conclusion

These Application Notes describe the configuration steps required to integrate the Sennheiser Communications A/S CSTD 01 Headset Adapter Cable and the SC 630, SC 660 headsets with Avaya 9400 or 9500 Series Digital Deskphones. Testing was completed successfully with observations/limitations noted in **Section Error! Reference source not found.**

## 10. 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 9400 Series Digital Deskphone for Avaya Aura® Communication Manager Installation and Maintenance Guide*, Rel. 1.0, August 2011, Document Number 16-603533.
- [3] *Avaya IP Office 9500 Series User Guide*, Issue 05d, April 05, 2012.
- [4] *IP Office Manager 8.1*, Issue 25o, April 2012, Document 15-601011
- [5] *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://www.sennheisercommunications.com/comm/home\\_en.nsf/root/service\\_download-area?Open&print=1](http://www.sennheisercommunications.com/comm/home_en.nsf/root/service_download-area?Open&print=1)

- [6] *Quick Guide for CSTD 01 Headset Adapter Cable*.
- [7] *SC 630 Headset Quick Guide*.
- [8] *SC 660 Headset Quick Guide*.

---

**©2013 Avaya Inc. All Rights Reserved.**

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at [devconnect@avaya.com](mailto:devconnect@avaya.com).