



Application Notes for Configuring Sennheiser Communications A/S HeadSetup software and SP 10/SP 20 Speakerphones with Avaya one-X® Agent - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the Sennheiser Communications A/S HeadSetup software and SP 10/SP 20 Speakerphones with Avaya one-X® Agent. The HeadSetup is a collection of programs that enable remote call control with Sennheiser headsets/speakerphones and Avaya one-X® Agent. With Sennheiser SP 10/SP 20 Speakerphones connected via USB port on a PC, users can answer, end, mute/unmute, hold/resume and adjust volume using buttons on the speakerphone devices.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any 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

The Sennheiser Communications A/S SP 10/SP 20 Speakerphones together with HeadSetup software allow connection and call control with Avaya one-X® Agent via USB port on a PC. The HeadSetup is a collection of programs that enable remote call control with the speakerphones and Avaya one-X® Agent. With Sennheiser SP 10/SP 20 Speakerphones, users can answer, end, mute/unmute, hold/resume and adjust volume using buttons on the speakerphone devices.

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 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.

The interoperability compliance test included feature and serviceability testing. The feature testing focused on placing calls with Avaya one-X® Agent, answering and ending calls using the call control button on the speakerphones, and verifying two-way audio. The call types included calls to voicemail, local extensions, and the PSTN.

The serviceability testing focused on verifying the usability of the Sennheiser Speakerphone solution after restarting the Avaya one-X® Agent, restarting the PC and reconnecting the speakerphone to the PC.

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/from internal extensions to verify two-way audio.
- Placing calls to/from the PSTN to verify two-way audio.
- Answering and ending calls using the call control button on the Speakerphone and the soft button on one-X Agent.
- Using the soft button on one-X Agent and the call control button on the speakerphone to hold and un-hold the audio.
- Using the volume control buttons on the speakerphone to adjust the audio volume.
- Using the voice control button on the speakerphone and the soft button on one-X Agent to mute and un-mute the audio.
- Using the call control button on the headset to reject or redial a call.
- Verifying incoming call notification on headset.
- Verifying call ended notification on headset.

The serviceability testing focused on verifying the usability of the Sennheiser Speakerphone solution after restarting the one-X Agent and restarting the PC and reconnecting the speakerphone to the PC.

2.2. Test Results

Redial and Reject features of the Sennheiser device are not supported as the Avaya headset API does not provide this functionality. All other test cases are successfully completed.

2.3. Support

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

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

Phone: +1-860-434-9190

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify Sennheiser HeadSetup software with Speakerphone solution. The configuration consists of an Avaya S8300D Server running Avaya Aura® Communication Manager with an Avaya G450 Media Gateway providing connectivity to a simulated PSTN via an ISDN-PRI trunk. Avaya Aura® Messaging was used as the voicemail system. The Sennheiser HeadSetup software was installed on the PC. The speakerphones are connected via the USB interface on the PC.

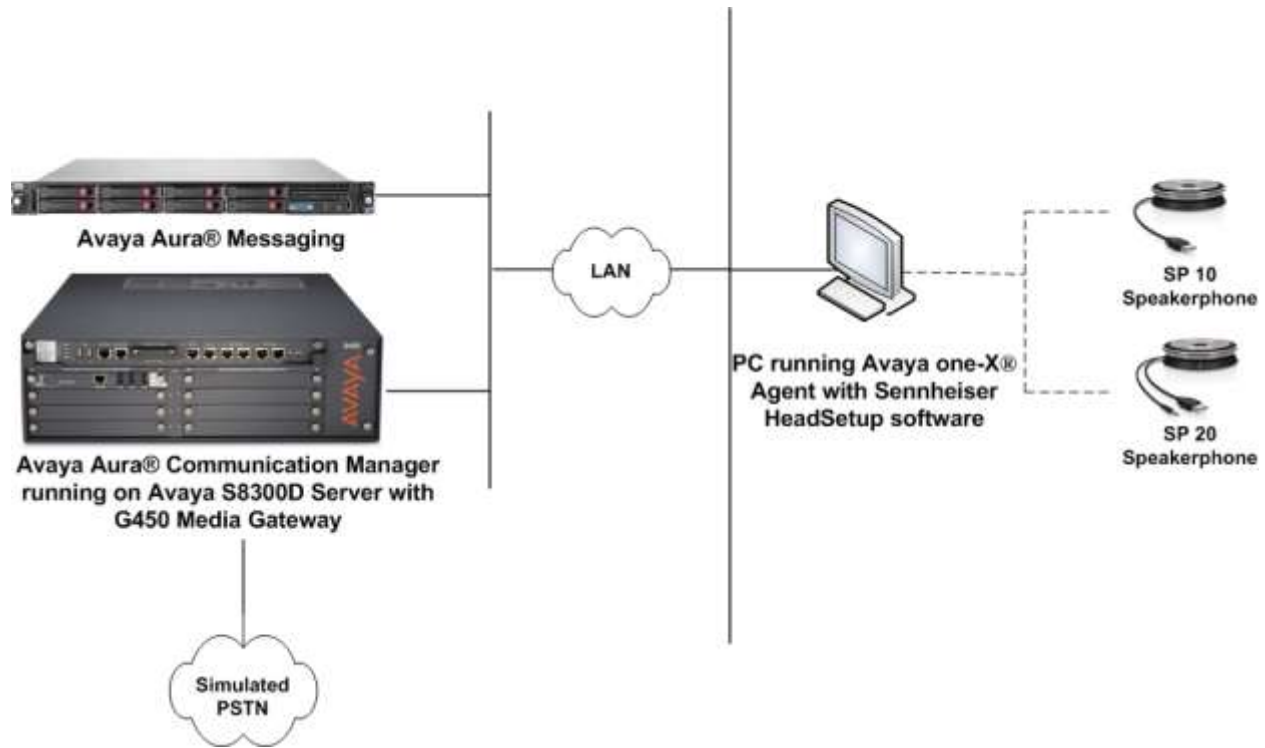


Figure 1: Test Configuration

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 running Avaya S8300D Server with a G450 Media Gateway	6.3.12.0 (Build R016x.03.0.124.0-22505)
Avaya Aura® Messaging	6.3.3 (6.3.124.321-1.253373)
one-X® Agent running on Windows 7 Professional Service Pack 1	2.5.8.3 (H.323) (2.5.58020.0)
Sennheiser HeadSetup software	V5.1.0
Sennheiser SP 10 Speakerphone	1.2.14.0
Sennheiser SP 20 Speakerphone	1.2.14.0

5. Configure Avaya Aura® Communication Manager

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

Use the **add station** command to create a station for Avaya one-X® Agent. Set the **Type** field to the station type to be emulated. In this example, *9641G* was used. Set the **Port** field to *IP* and configure a **Security Code**, which will be used as the password by Avaya one-X® Agent to log in. Set the **IP Softphone** field to *y*.

```
add station 10003                                     Page 1 of 5
                                                    STATION
Extension: 10003                                     Lock Messages? n                               BCC: 0
Type: 9641G                                         Security Code: 111222                          TN: 1
Port: S00005                                        Coverage Path 1:                               COR: 1
Name: one-X Agent                                  Coverage Path 2:                               COS: 1
                                                    Hunt-to Station:                              Tests? y

STATION OPTIONS
Location:                                           Time of Day Lock Table:
Loss Group: 19                                     Personalized Ringing Pattern: 1
Speakerphone: 2-way                               Message Lamp Ext: 10003
Display Language: english                         Mute Button Enabled? y
Survivable GK Node Name:                          Button Modules: 0
Survivable COR: internal                          Media Complex Ext:
Survivable Trunk Dest? y                          IP SoftPhone? y

                                                    IP Video Softphone? n
Short/Prefixed Registration Allowed: default

                                                    Customizable Labels? y
```


On **Page 4** of the Station form, configure the additional feature buttons shown in bold, which are used by Avaya one-X® Agent to log in as an Automatic Call Distribution (ACD) agent. Illustrated below is button 5 for Agent Login and button 6 for Agent Logout.

```
add station 10003                                     Page 4 of 5
                                                    STATION
SITE DATA
Room:                                               Headset? n
Jack:                                               Speaker? n
Cable:                                             Mounting: d
Floor:                                             Cord Length: 0
Building:                                          Set Color:

ABBREVIATED DIALING
List1: system                                     List2:
List3:

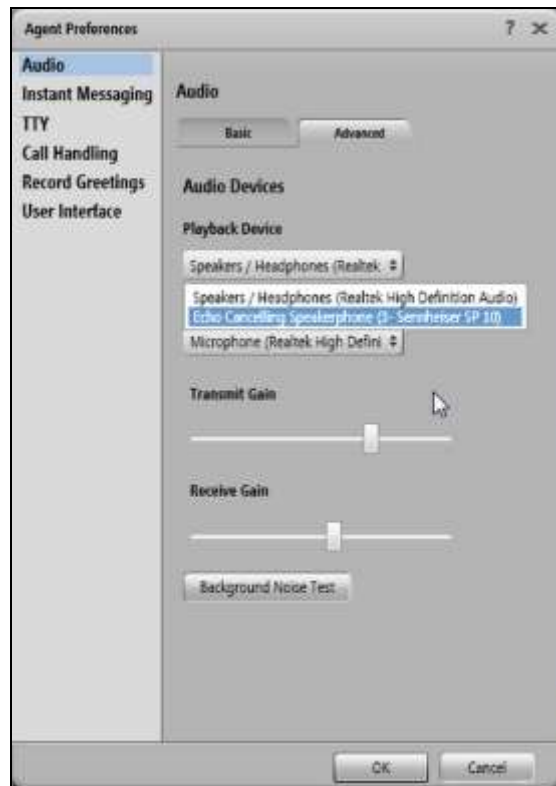
BUTTON ASSIGNMENTS
1: call-appr                                     5: abr-v-dial List: 1 DC: 01
2: call-appr                                     6: abr-v-dial List: 1 DC: 02
3: call-appr                                     7: auto-in Grp:
4:                                               8: aux-work RC: Grp:
voice-mail 10000
```

6. Configure Avaya one-X® Agent

Before configuring the Avaya one-X® Agent, the headset has to be configured and provisioned as in **Section 7** first. After logging into Avaya one-X® Agent, click on  and then select **Agent Preferences** as shown below.



In the **Agent Preferences** window, click on **Audio** and then select the **Advanced** tab as shown below. Select the **Playback Device** and **Record Device** fields to *Echo Cancelling Speakerphone (3- Sennheiser SP 10)* or *Echo Cancelling Speakerphone (3- Sennheiser SP 20)*.



7. Configure Sennheiser Speakerphone solution

This section covers the steps to integrate Sennheiser Speakerphone with one-X® Agent, including:

- Installing the Sennheiser HeadSetup software
- Configuring HeadSetup software
- Connecting Sennheiser Speakerphone

Note: After successfully performing this procedure, the speakerphone will be detected in Avaya one-X® Agent as described in **Section 6**.

7.1. Installing the Sennheiser HeadSetup software

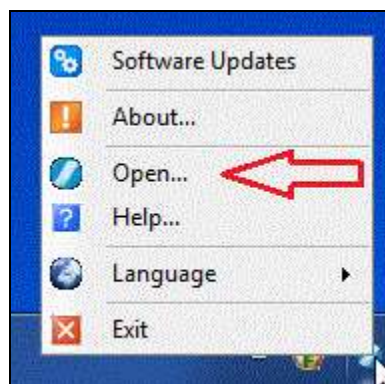
The installation instructions for Sennheiser HeadSetup software on the Avaya one-X® Agent PC is described in [5] listed in **Section 10**.

7.2. Configuring HeadSetup software

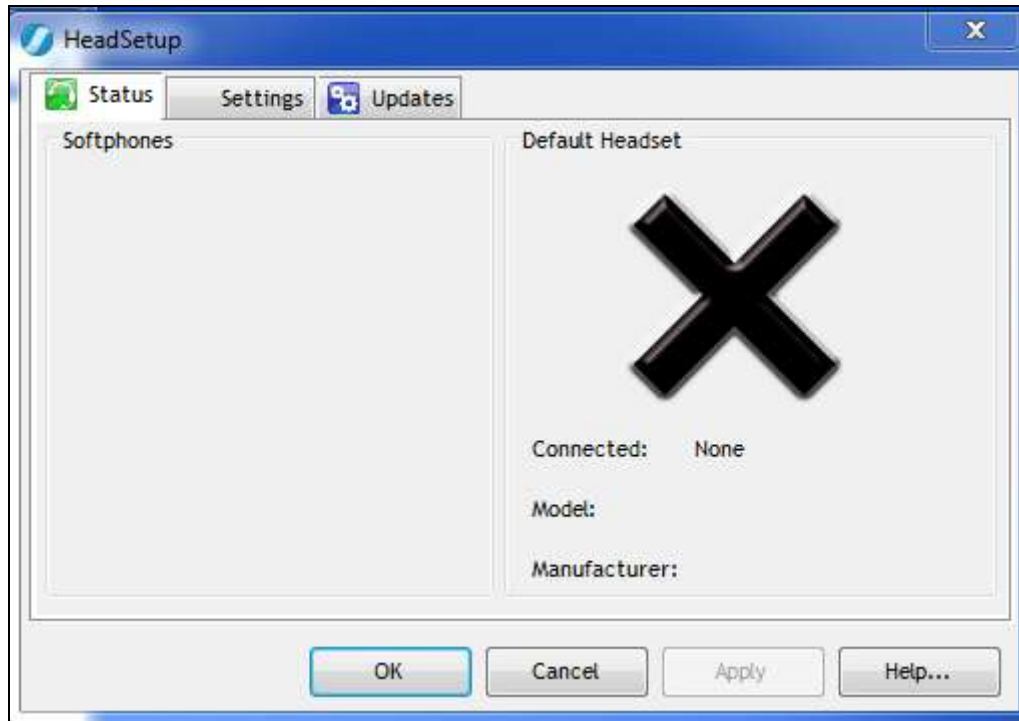
Launch the **HeadSetup** icon from the desktop. Hover mouse over the HeadSetup icon on bottom right taskbar and that it shows “**HeadSetup – Headset not connected**”.



Right Click on the HeadSetup application icon at the bottom right taskbar and select **Open**.

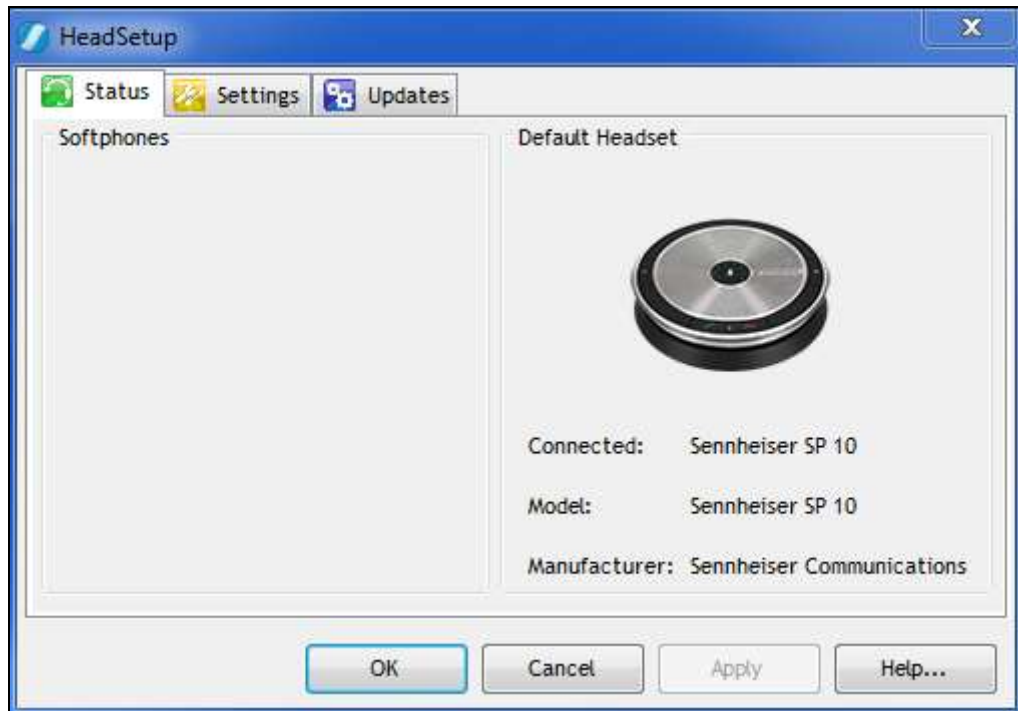


Select the **Status** tab and **Default Headset** on the right pane shows no headset is detected with an **X**.

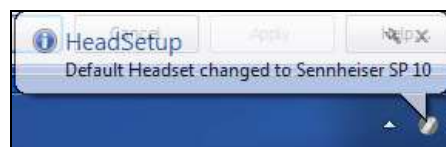


7.3. Connecting Sennheiser Speakerphone

Plug Sennheiser Speakerphone USB cable into USB port on a PC. The device drivers will automatically be installed once plugged into the PC. The HeadSetup software **Status tab** shows the **Sennheiser SP 10** (or **Sennheiser SP 20** depending on which speakerphone is plugged) is detected.



The HeadSetup icon on bottom right taskbar will pop and shows “**Default Headset changed to Sennheiser SP 10**” or “**Default Headset changed to Sennheiser SP 20**” depending on which speakerphone is connected.



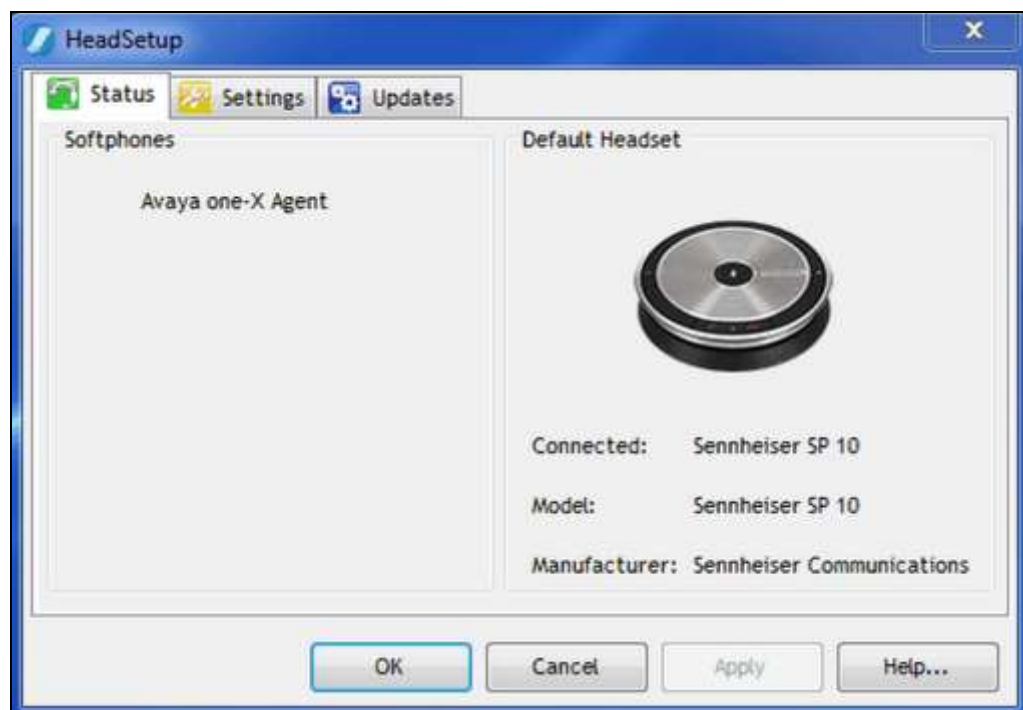
Hover mouse over the HeadSetup icon (in grey) on bottom right taskbar and it shows “**HeadSetup – Not logged to any soft-phone**”.



8. Verification Steps

This section verifies that the speakerphone solution has been successfully integrated with the Avaya one-X® Agent. Launch and log in to the Avaya one-X® Agent.

1. Verify that the Sennheiser Speakerphone has been successfully connected for use with the Avaya one-X® Agent. From the **HeadSetup** program, select the **Status** tab. Verify that:
 - The **Softphones** on the left pane shows **Avaya one-X Agent**.
 - The **Default Headset** on the right pane shows the **Sennheiser Speakerphone SP 10** or **Sennheiser Speakerphone SP 20** depending on which speakerphone is connected.



2. Hover mouse over the HeadSetup icon (in green) on the bottom right taskbar and it shows “HeadSetup – Headset Idle”.



3. Once the Speakerphone is connected to Avaya one-X® Agent; verify that incoming and outgoing calls can be established with two-way audio to the headset. Hover mouse over the HeadSetup icon on bottom right taskbar and it shows “**HeadSetup – Headset in use**”. If the headset call control buttons is not functioning, restart the connection by closing and opening the HeadSetup application; check that the correct Playback and Record Device is selected for one-X® Agent in **Section 6**.



4. For incoming calls, answer the call by pressing the call control button on the headset.
5. End the call by pressing the call control button on the headset.

9. Conclusion

These Application Notes describe the configuration steps required to integrate Sennheiser Communications A/S HeadSetup software and SP 10/SP 20 Speakerphones with Avaya one-X® Agent. All test cases were completed successfully with observations 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 6.3, Issue 10.0, Aug 2015, Document Number 03-300509.
- [2] *Administering Avaya one-X® Agent*, Release 2.5.4 (H.323), December 2013.
- [3] *Installing Avaya one-X® Agent*, Release 2.5.4 (H.323), December 2013.

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

- [4] *Sennheiser Updater – Mass Deployment Installation Guide*.
- [5] *Sennheiser SP 10 quick guide*.
- [6] *Sennheiser SP 20 quick guide*.

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