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Avaya Solution & Interoperability Test Lab

Application Notes for configuring Sennheiser Communications A/S HeadSetup™ software and SP 220 UC 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 220 UC 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 220 UC 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.

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1. Introduction

The Sennheiser Communications A/S SP 220 UC 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 220 UC 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 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.

For the testing associated with this Application Note, the interface between Avaya systems and the Sennheiser Headsets did not include use of any specific encryption features as requested by Sennheiser A/S.

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 a PC, and reconnecting the speakerphone to a 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, restarting a PC and reconnecting the speakerphone to a PC.

For Sennheiser headsets, call control will only work with the following pre-conditions:

- Sennheiser HeadSetup should be downloaded from the Sennheiser website: www.sennheiser.com/headset-software-pc
- The program version: Headset V7.3.4903 or later
- The program must be installed on a PC
- The program must be running simultaneously with the Avaya one-X® Agent

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://cco-support.sennheiser.com/en/global-support-and-service
Phone: +1-800-895-7412

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify Sennheiser HeadSetup™ software with Speakerphone solution. The configuration consists of Avaya Aura® Communication Manager with a Avaya G430 Media Gateway providing connectivity to a simulated PSTN. Avaya Aura® Messaging was used as the voicemail system. The Sennheiser HeadSetup™ software was installed on a PC. The speakerphones are connected via the USB interface on a PC.
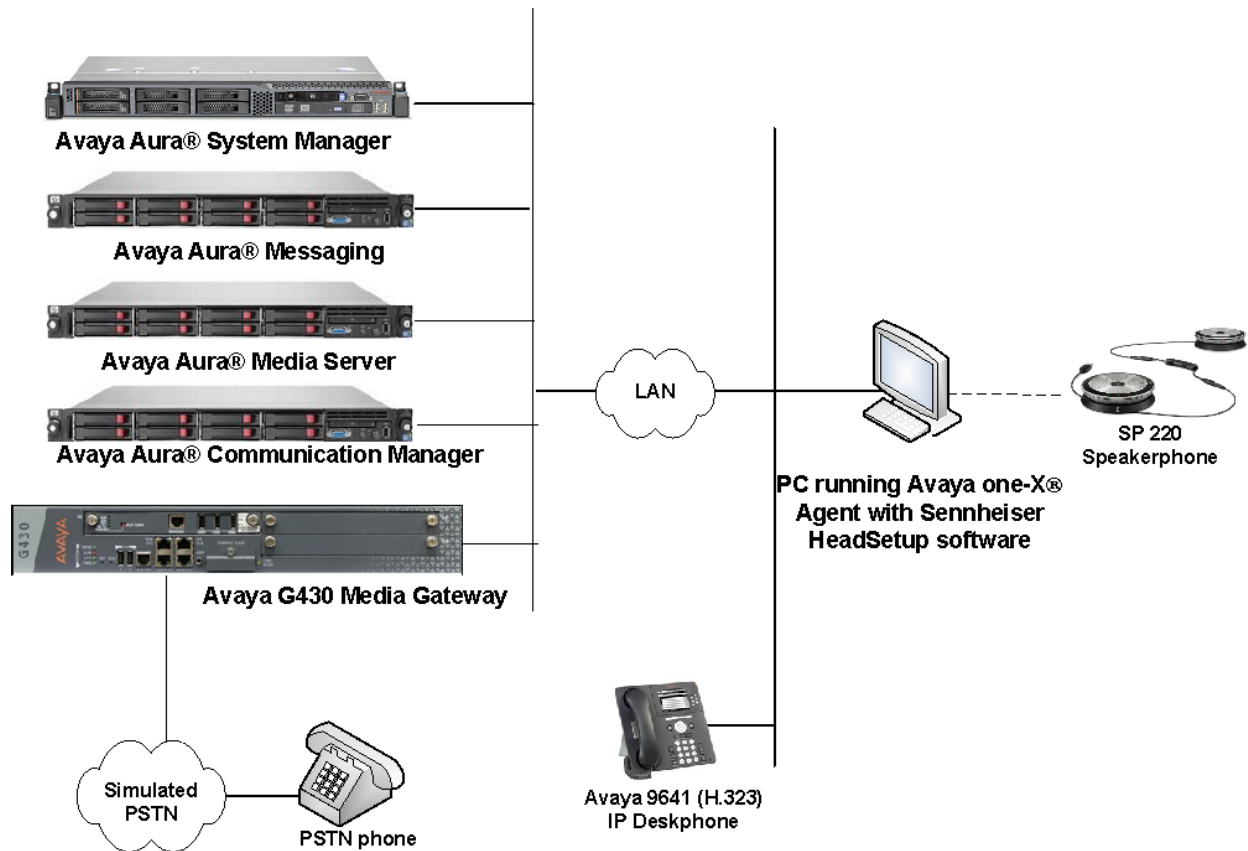
Figure 1: Test Configuration

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	7.1.1.0.0-FP1 Update ID: 01.0.532.0-23985
Avaya Aura® System Manager	7.1.1.0 Build No. 7.1.0.0.1125193
Avaya Aura® Session Manager	7.1.0.0.710028
Avaya Aura® Media Server	7.8.0.333
Avaya G430 Media Gateway ∗ MGP	38.20.1
Avaya Aura® Messaging	7.0.441.017-1.262404
Avaya 9641 Deskphone	6.6506
Avaya one-X® Agent running on Windows 10 Professional Version 1703	2.5.10 (H.323) (2.5.60037.0)
Sennheiser Communications A/S: • HeadSetup™ Software • SP 220 UC Headset	 V7.3.4903 2.0.12

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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, *9640* 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 10004                                          Page   1 of   5
                                   STATION

Extension: 10004                       Lock Messages? n              BCC: 0
    Type: 9640                         Security Code: *               TN: 1
    Port: IP                           Coverage Path 1:              COR: 1
    Name: one-X Agent                  Coverage Path 2:              COS: 1
                                       Hunt-to Station:            Tests? y
STATION OPTIONS
                                       Time of Day Lock Table:
            Loss Group: 19       Personalized Ringing Pattern: 2
                                         Message Lamp Ext: 10004
         Speakerphone: 2-way          Mute Button Enabled? y
      Display Language: english            Button Modules: 0
 Survivable GK Node Name:
          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. Ilustrated below is button 5 for Agent Login and button 6 for Agent Logout.

```
add station 10004                                             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: abrv-dial  List: 1 DC: 01
 2: call-appr                    6: abrv-dial  List: 1 DC: 02
 3: call-appr                    7: auto-in         Grp:
 4:                              8: aux-work    RC:   Grp:
    voice-mail 10000
```
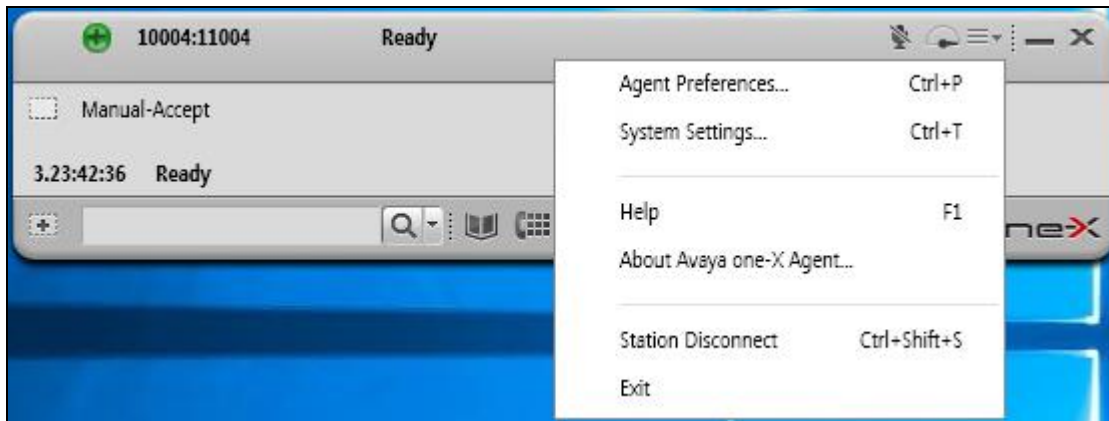
6. Configure Avaya one-X® Agent

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 select the **Advanced** tab as shown below. Select the **Playback Device** and **Record Device** fields to *Echo Cancelling Speakerphone ((2-Sennheiser SP 20 D UC)* as shown below. Click **OK**.
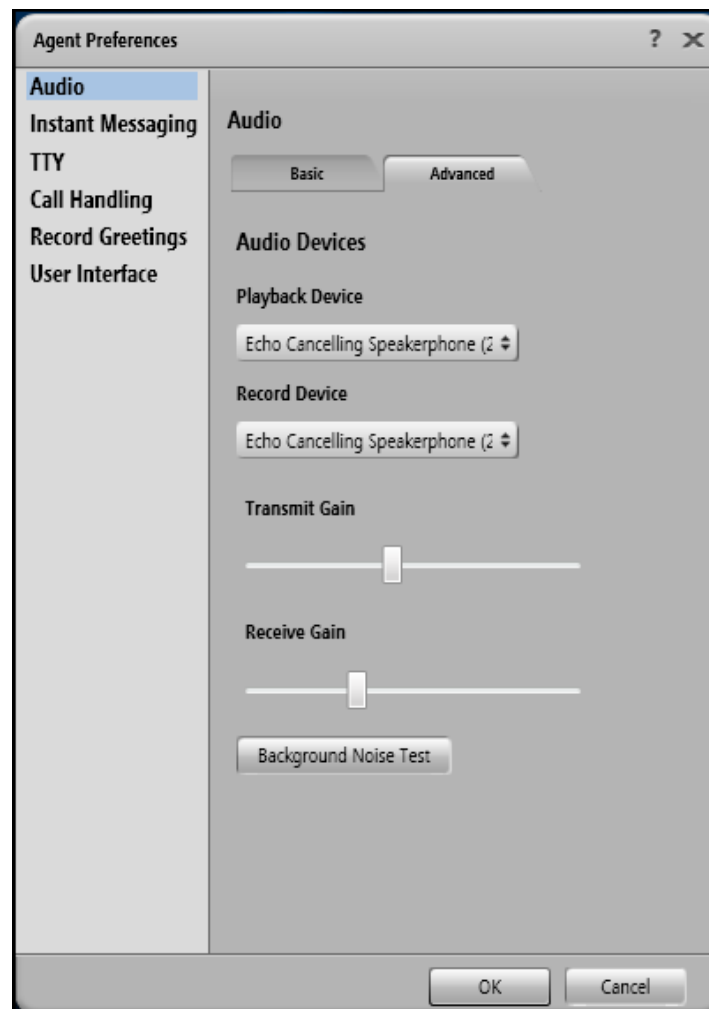
7. Configure Sennheiser SP 220 UC

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

- Installing the 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 installation instructions for HeadSetup software on the Avaya one-X® Agent PC is described in **[4]** listed in **Section 10**.
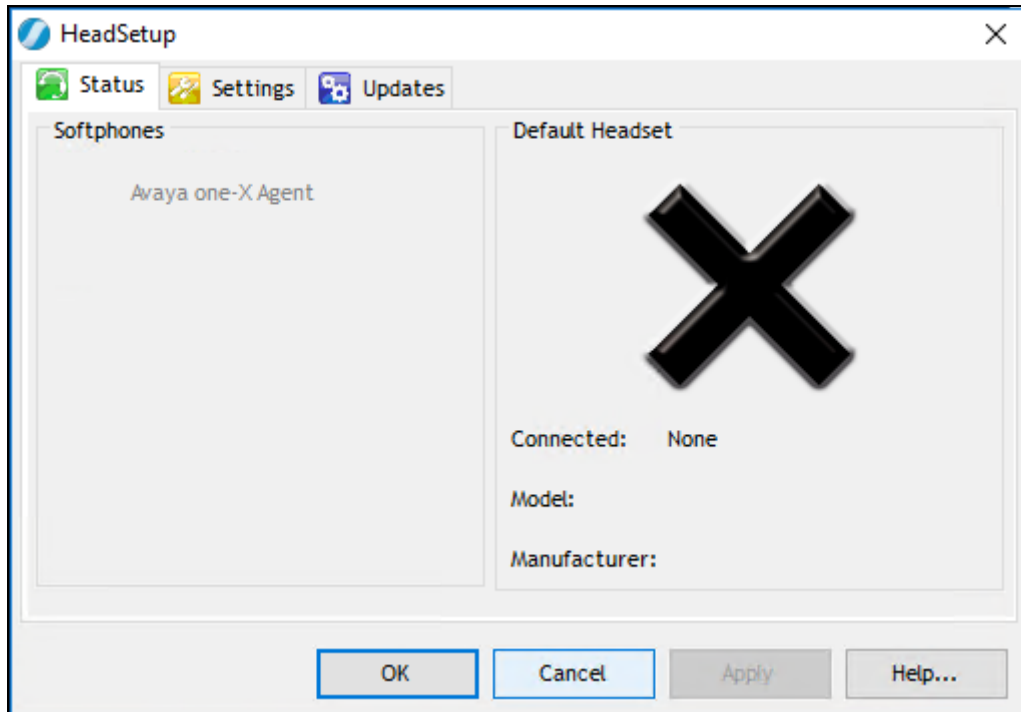
7.2. Configuring

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".**
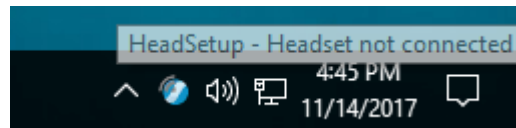
Right Click on the HeadSetup application icon at the bottom right taskbar and select **Open**.
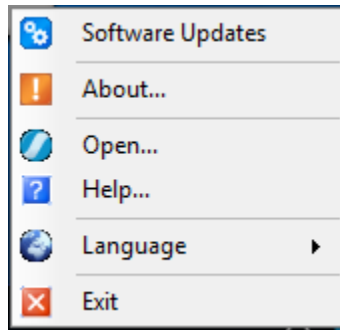
Select the **Status** tab and **Default Headset** on the right pane shows no headset is detected with an **X**.
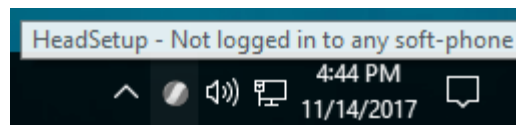
7.3. Connecting Sennheiser SP 220 UC Speakerphone

Plug Sennheiser Speakerphone USB cable into USB port on a PC. The device drivers will automatically be installed once plugged into a PC. The HeadSetup software **Status** tab shows the **Sennheiser SP 20 D UC** is detected for one unit of the speakerphone. As the speakerphone works as a pair by connecting another unit via a special cable, the whole system is known as Sennheiser SP 220 UC.
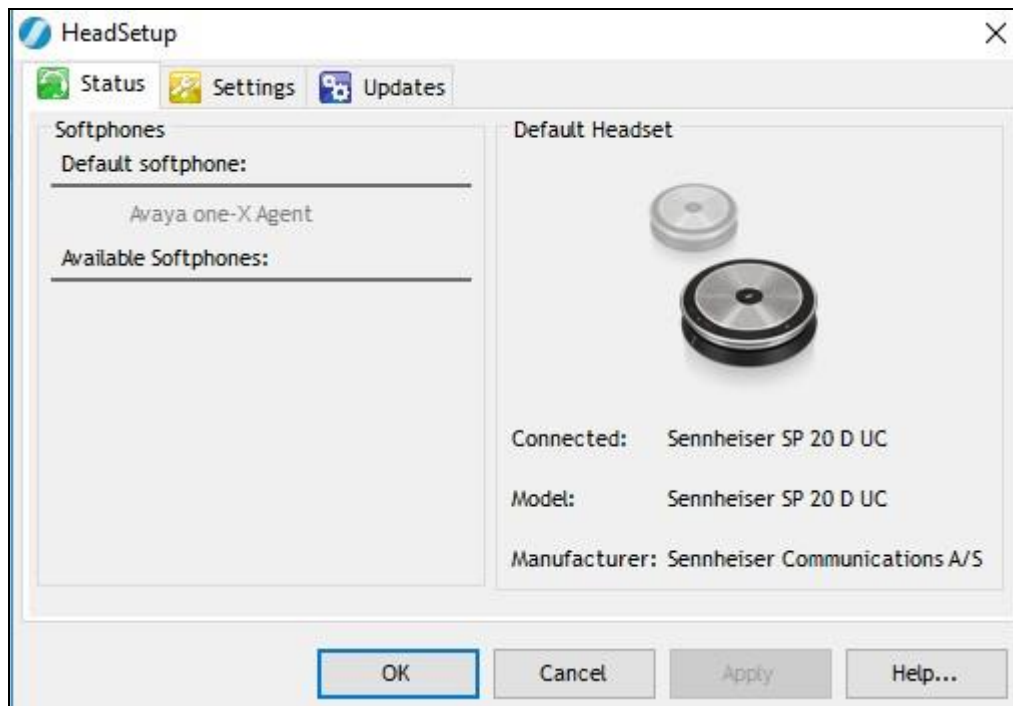
Notice the **Default softphone** on the left pane in the screenshot above is greyed out **for Avaya one-X Agent**. This will only be highlighted when user log in to one-X® Agent.
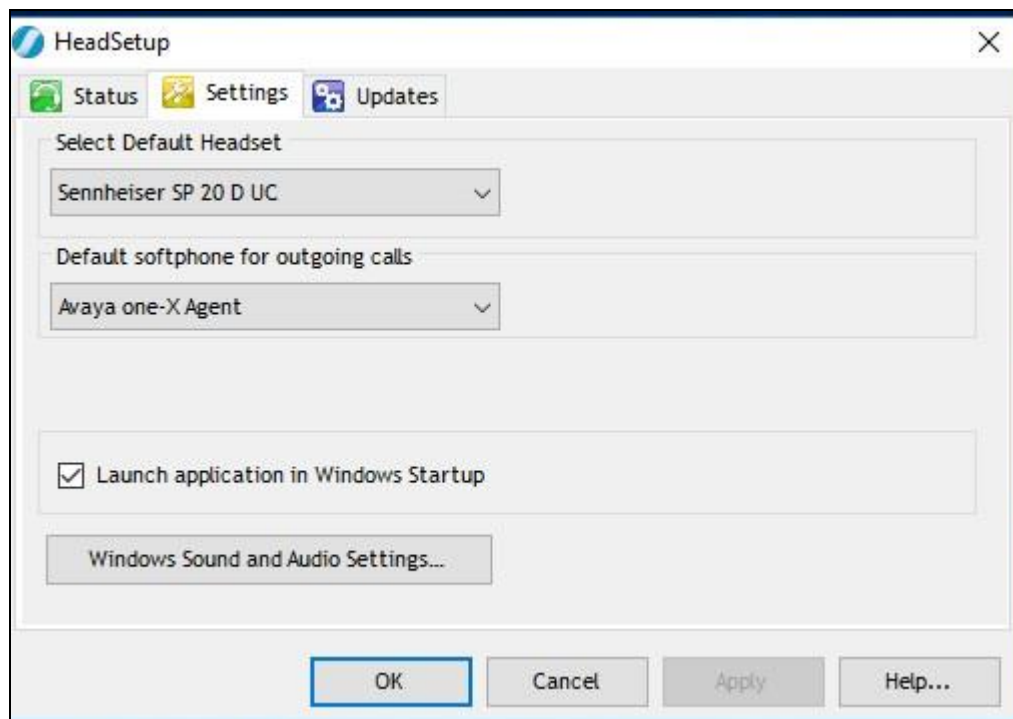
Hover mouse over the HeadSetup icon (in grey) on bottom right taskbar and it shows "**HeadSetup – Not logged to any soft-phone**".

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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 **Settings** tab. Verify that:
   a. The **Sennheiser SP 20 D UC** is selected under **Select Default Headset**.
   b. **Avaya one-X Agent** is selected under **Default softphone for outgoing calls**.

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2. Select the **Status** tab. Verify that:
    - The **Available Softphones** on the left pane shows **Avaya one-X Agent**.
    - The **Default Headset** on the right pane shows the **Sennheiser Speakerphone SP 20 D UC** for one unit of the speakerphone.
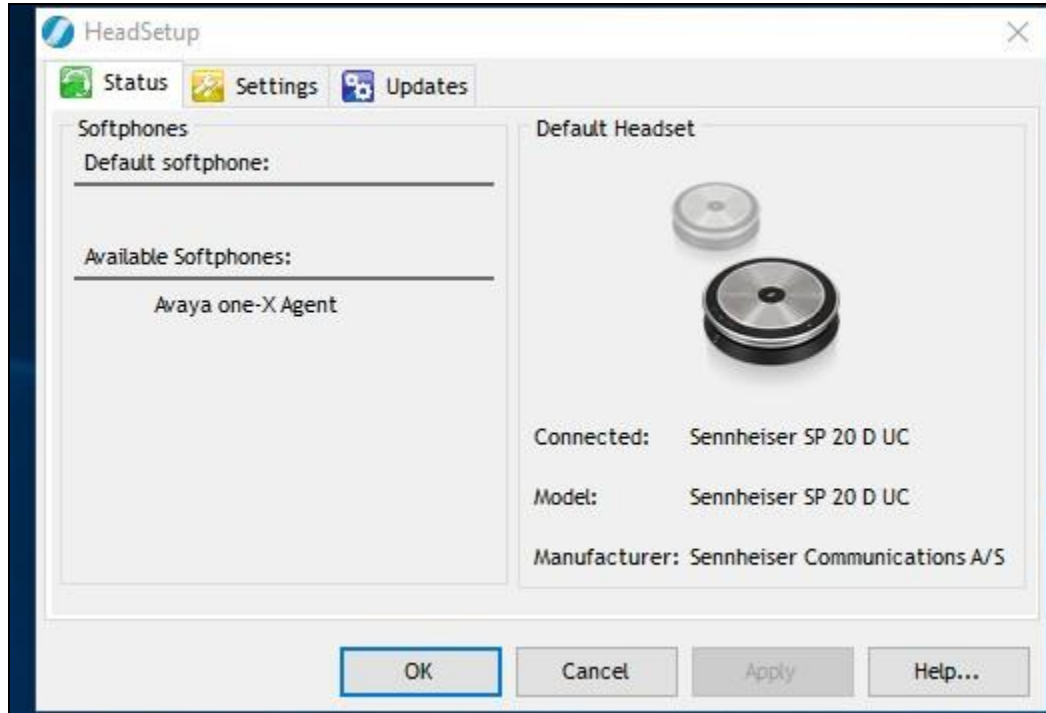
3. Hover mouse over the HeadSetup icon (in green) on the bottom right taskbar and it shows "**HeadSetup – Headset Idle".**
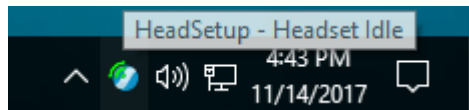
4. Once the Speakerphone is connected to Avaya one-X® Agent; verify that incoming and outgoing calls can be established with two-way audio to the headset. Hover mouse over the HeadSetup icon on bottom right taskbar and it shows "**HeadSetup – Headset in use".** If the headset call control buttons is 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.**
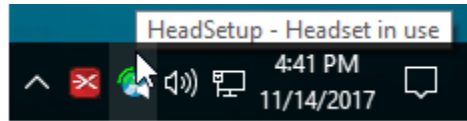
5. For incoming calls, answer the call by pressing the call control button on the headset.
6. End the call by pressing the call control button on the headset.

9. Conclusion

These Application Notes describe the configuration steps required to integrate Sennheiser Communications A/S HeadSetup™ software and SP 220 UC 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 7.1.1, Issue 2.0, August 2017.
[2] *Administering Avaya one-X® Agent*, Release 2.5.4 (H.323), Issue 1, December 2013.
[3] *Installing Avaya one-X® Agent*, Release 2.5.10 (H.323), Issue 1, March 2017.

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

[4] *Sennheiser HeadSetup™ Installation Guide*.
[5] *Sennheiser SP 220 Dual Speakerphone Quick Guide*

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