



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Sennheiser Communications A/S HeadSetup™ Software and Sennheiser Culture Plus Mobile Series USB CTRL Wired Headsets with Avaya one-X® Communicator - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the Sennheiser Communications A/S Culture Plus Mobile Series USB CTRL Wired Headsets with Avaya one-X® Communicator.

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 Culture Plus Mobile Series Headsets together with Sennheiser HeadSetup™ software allow connection and call control with Avaya one-X®. Sennheiser HeadSetup™ is a collection of programs that enable remote call control with Sennheiser Culture Plus Mobile Series Headsets and Avaya one-X® Communicator. With Sennheiser Culture Plus Mobile Series Wired Headsets connected via USB ports on personal computer (PC), users can answer, end, mute/unmute, and adjust volume using buttons on the headsets device.

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/headset 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 one-X Communicator, answering and ending calls using the call control button on the headset, 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 headset solution after restarting the one-X Communicator, restarting the PC, reconnecting the headset to the call control via the 3.5 mm plug and reconnecting the headset via the USB port 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 internal extensions to verify two-way audio.
- Placing calls to the PSTN to verify two-way audio.
- Answering and ending calls using the call control button on the headset and the soft button on one-X Communicator.
- Using the soft button on one-X Communicator to hold and resume the call.
- Using the volume control buttons on the headset to adjust the audio volume.
- Using the voice control button on the headset and the soft button on one-X Communicator 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 headset solution after restarting the one-X Communicator, restarting the PC, reconnecting the headset to the call control via the 3.5 mm plug and reconnecting the headset to the PC.

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

- Sennheiser HeadSetup™ should be downloaded from the Sennheiser website: www.sennheiser.com/headset-software-pc
- The program version: Headset V.6.0.1902 or later
- The program must be installed on the PC
- The program must be running simultaneously with the Avaya soft phone (Avaya one-X® Communicator)

2.2. Test Results

All 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 Sennheiser Culture Plus Mobile Series Headsets solution. The configuration consists of a Media Server, S8300D Server running Avaya Aura® Communication Manager with an Avaya G450 Media Gateway providing connectivity to the PSTN. Avaya Aura® Messaging was used as the voicemail system. The Sennheiser HeadSetup™ software was installed on the PC. The SC 45 /SC 75 USB CTRL are the Sennheiser Culture Plus Mobile Series wired headsets. Both are connected via USB port to the PC.

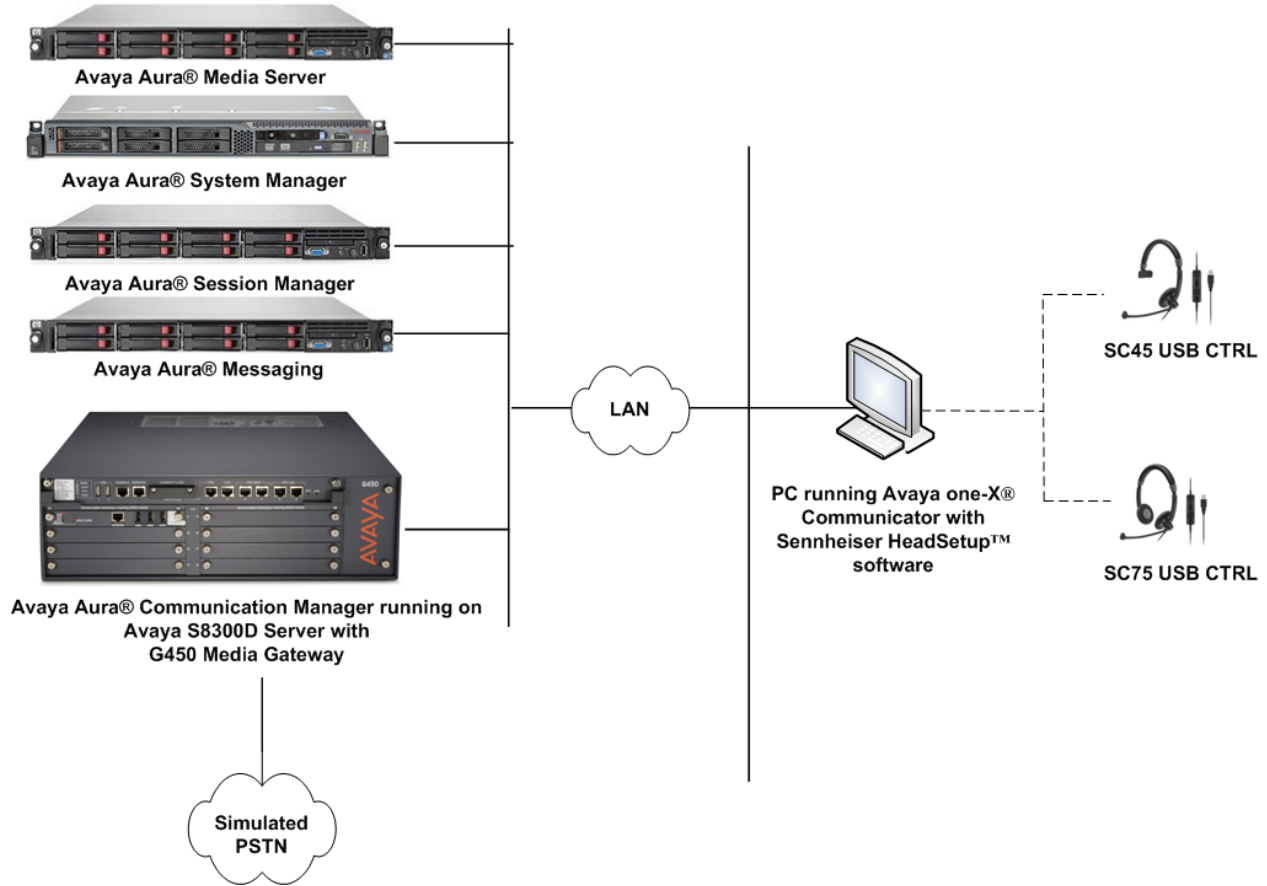


Figure 1: Test Configuration

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	7.0.1.1.1 - FP1SP1 (R017x.0.1.1.0.441.0-23384)
Avaya Aura® System Manager	7.0.1.1.065378
Avaya Aura® Session Manager	7.0.1.1.701114
Avaya G450 Media Gateway <ul style="list-style-type: none">• MGP Firmware	37.39.0
Avaya Aura® Media Server	System Layer 7.7.0.19 Media Server 7.7.0.334
Avaya Aura® Messaging	6.3.3 SP6
Avaya one-X® Communicator running on Microsoft Windows 10 Professional (64 bit)	6.2.12.04
Sennheiser HeadSetup™ Software	v6.0.1902
Sennheiser SC45 USB CTRL (Monaural)	15.05.62.602
Sennheiser SC75 USB CTRL (Binaural)	15.05.62.602

5. Configure Avaya Aura® Communication Manager

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

5.1. Configure H.323 station

Use the **add station** command to create a station for one-X Communicator. Set the **Type** field to the station type to be emulated. In this example, *9608* was used. Set the **Port** field to *IP* and configure a **Security Code**, which will be used as the password by one-X Communicator to log in. Set the **IP Softphone** field to *y*.

```
add station 10005                                     Page 1 of 5
                                                    STATION
Extension: 10005                                     Lock Messages? n          BCC: 0
  Type: 9608                                         Security Code: 111222    TN: 1
  Port: IP                                           Coverage Path 1:         COR: 1
  Name: 10005                                         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
                                                    Message Lamp Ext: 10005
  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
```

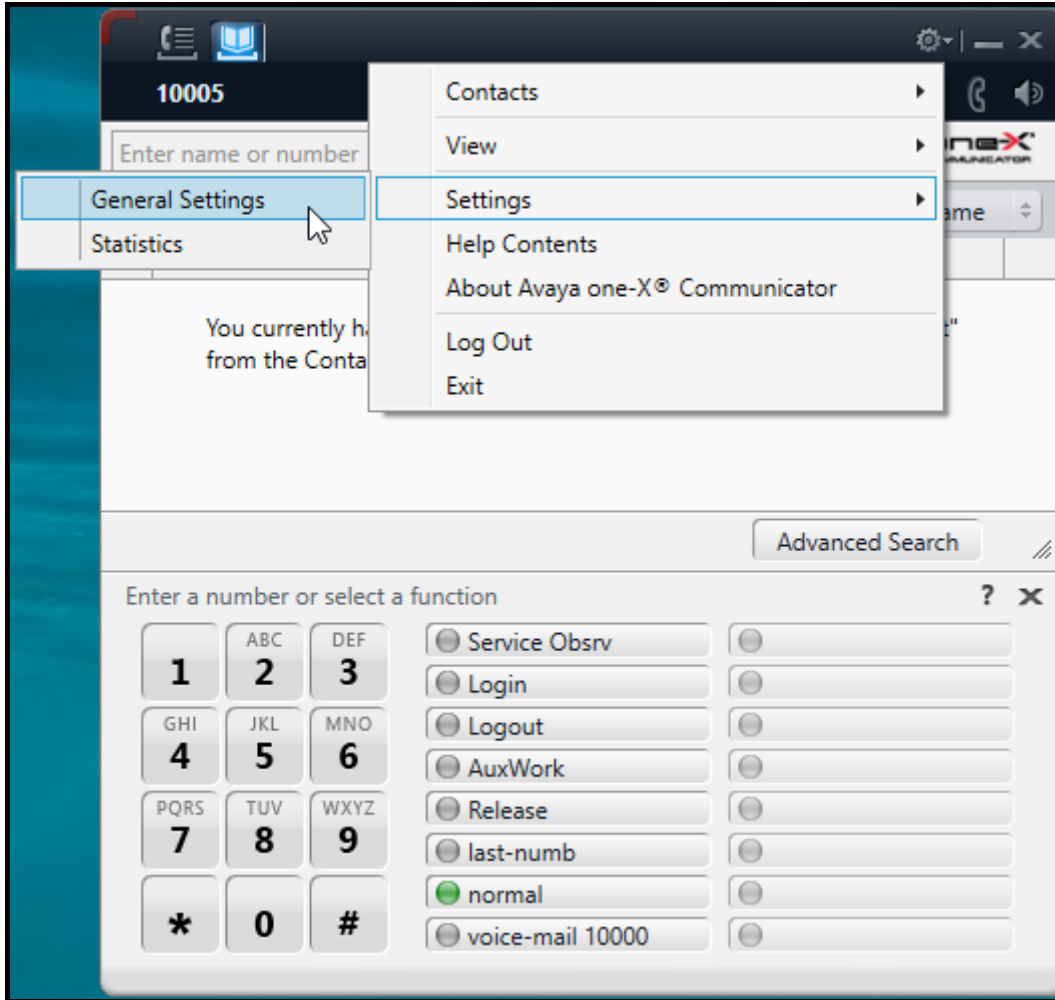
5.2. Configure SIP station

The configuration for SIP station is performed partially via the System Access Terminal (SAT) on Communication Manager. The rest of the configurations are performed via the System Manager. There is an option to generate SIP station without using the SAT when adding a new SIP user using System Manager. The details will not be covered in this document. Please refer to the application notes in [4] for details. Below shows the SIP Station with **Type 9641SIP** configured.

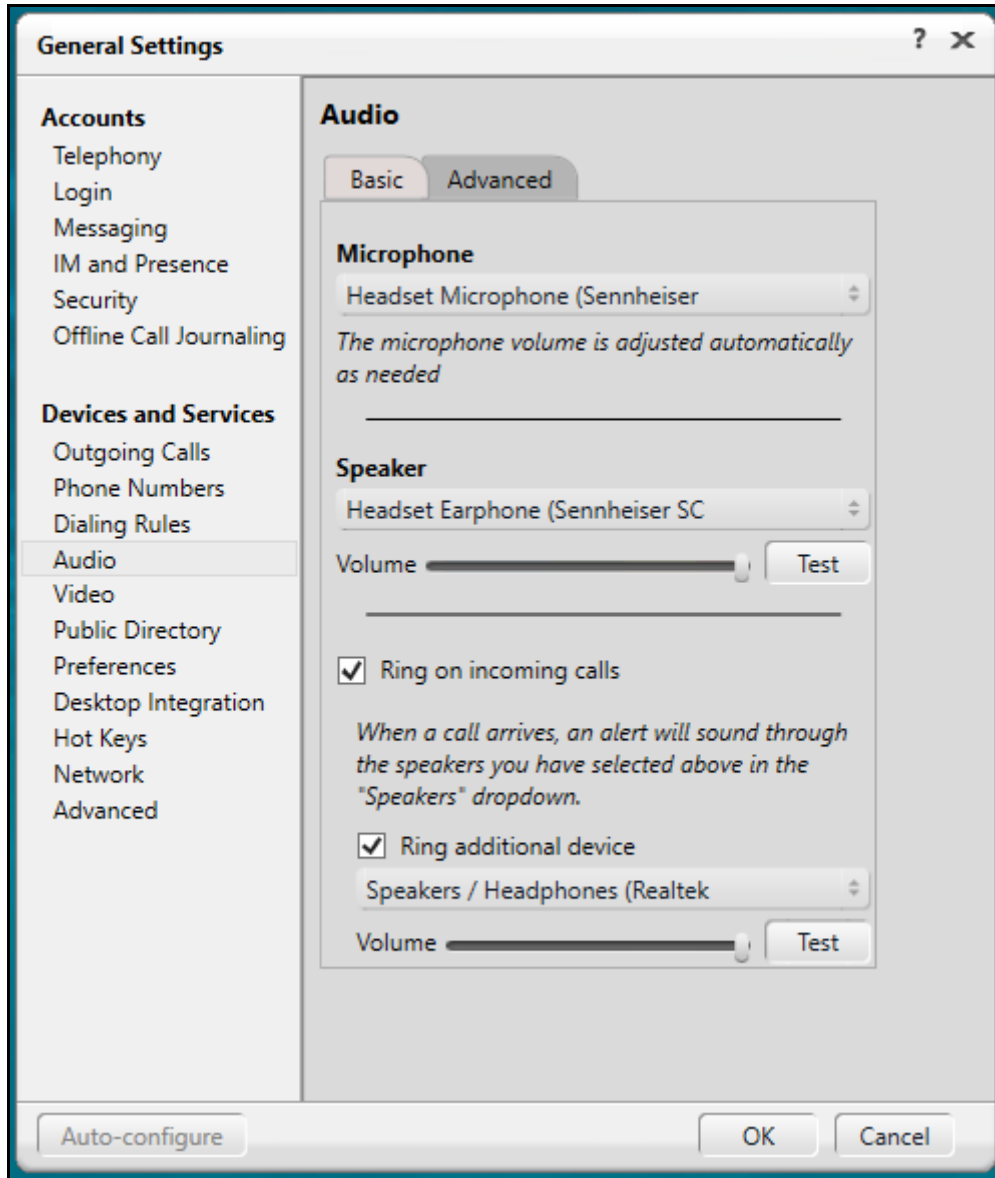
```
display station 10049                                     Page 1 of 6
                                                         STATION
Extension: 10049                                         Lock Messages? n          BCC: 0
  Type: 9641SIP                                         Security Code:           TN: 1
  Port: S00138                                           Coverage Path 1:        COR: 1
  Name: AVAYA, SIP3                                       Coverage Path 2:        COS: 1
                                                         Hunt-to Station:
STATION OPTIONS
  Location:                                               Time of Day Lock Table:
  Loss Group: 19                                         Message Lamp Ext: 10049
  Display Language: english                               Button Modules: 0
  Survivable COR: internal
  Survivable Trunk Dest? y                               IP SoftPhone? n
                                                         IP Video? n
```

6. Configure Avaya one-X[®] Communicator

Before configuring the one-X Communicator, the headset has to be configured and provisioned as detailed in **Section 7**. After logging into one-X Communicator, select  → **Settings** → **General Settings** as shown below for H.323 configuration.



Select **Devices and Services** → **Audio**. Check that the device is detected under the **Microphone** and **Speaker** fields are *Headset Microphone (Sennheiser ...)* and *Headset Earphone (Sennheiser SC ...)*. The availability of the device depends on the headset type that was plugged into the USB port of the PC such as SC45 or SC75 for the Culture Plus Mobile Series. Otherwise, if the correct device is not displayed, select them manually from the menu respectively.



7. Configure Sennheiser Culture Plus Mobile Series Headsets

This section covers the steps to integrate Sennheiser headsets with one-X Communicator, including:

- Installing the Sennheiser HeadSetup™ software
- Configuring HeadSetup™ software
- Connect Sennheiser Culture Plus Mobile Series Headsets

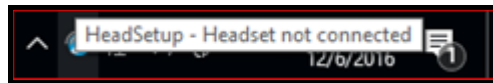
Note: After successfully performing this procedure, the headset may not be detected in the **Audio** settings of one-X Communicator in **Section 6**. Manual selection may be required as described.

7.1. Installing the Sennheiser HeadSetup software

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

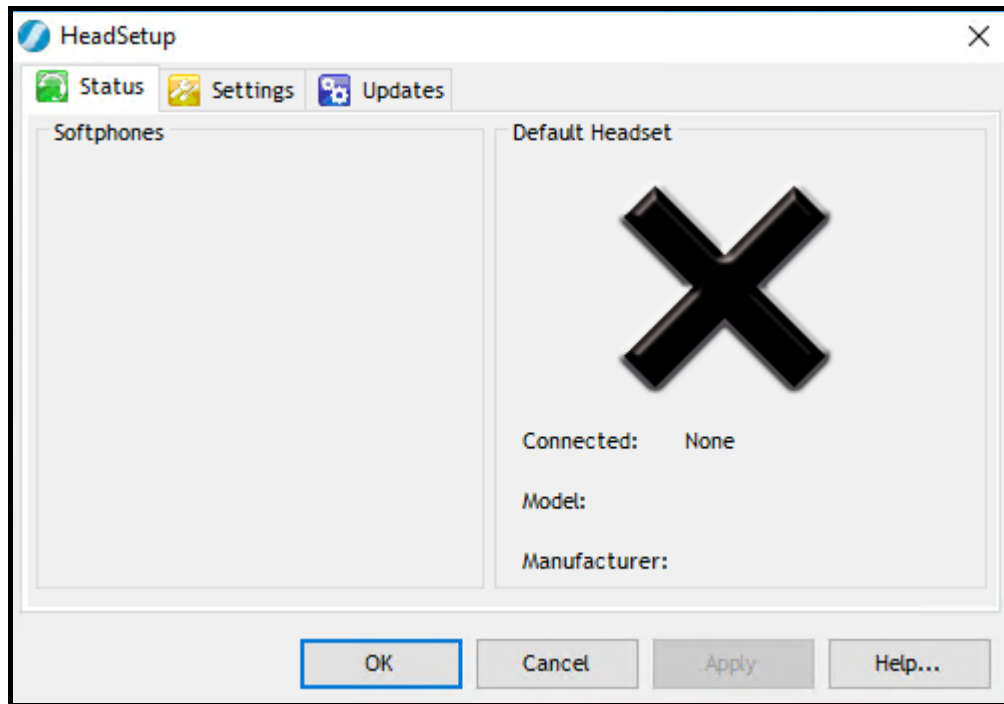
7.2. Configuring HeadSetup software

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



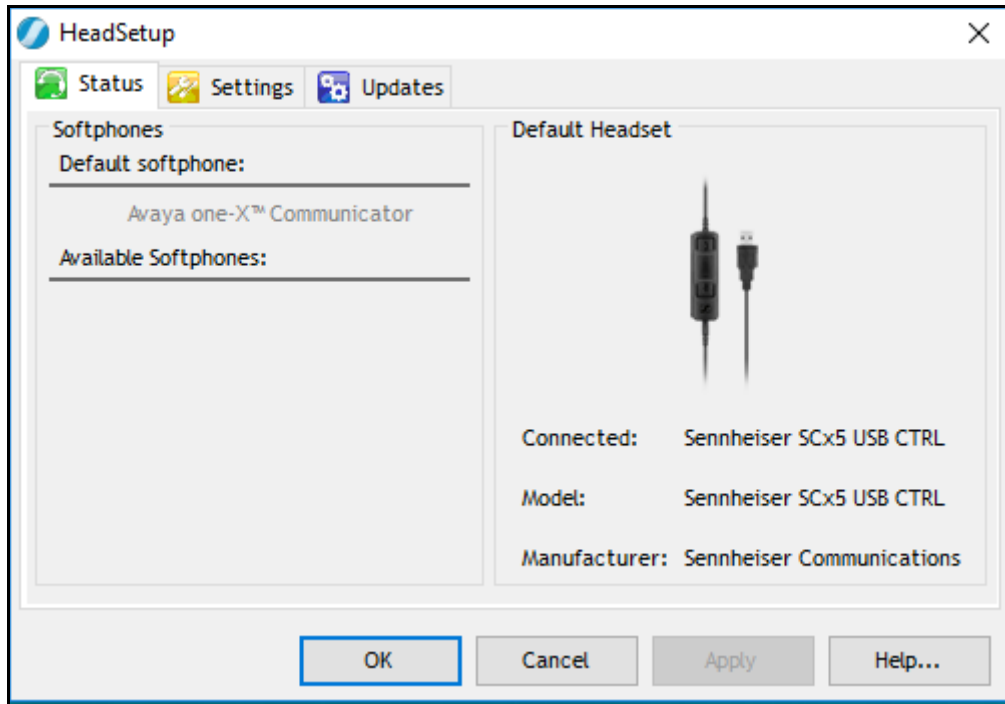
Double-click on the HeadSetup icon at the bottom right taskbar and the HeadSetup application opens.

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

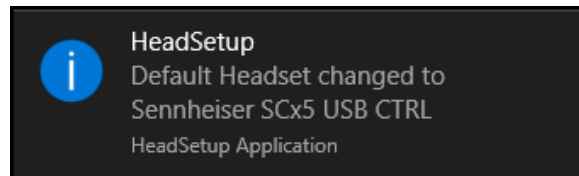


7.3. Connect Sennheiser Culture Plus Mobile Series Headsets

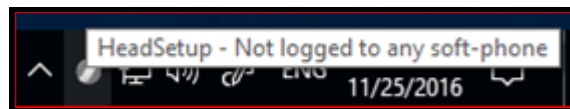
Plug Sennheiser Culture Plus Mobile Series Headsets into USB port of PC. The device drivers will automatically be installed once plugged into the PC. The HeadSetup software **Status** tab shows the “Sennheiser SCx5 ...” is **Connected** where **x** depends on the type of headset plugin. Below is the screenshot of Sennheiser SC45 Culture Plus Mobile Series Headset connected. Notice that the **Default softphone** is greyed out as the one-X Communicator is not running.



At the same instance, the following message pops up and “Default Headset changed to Sennheiser SCx5 ...” where **x** depends on the type of headset plug in.



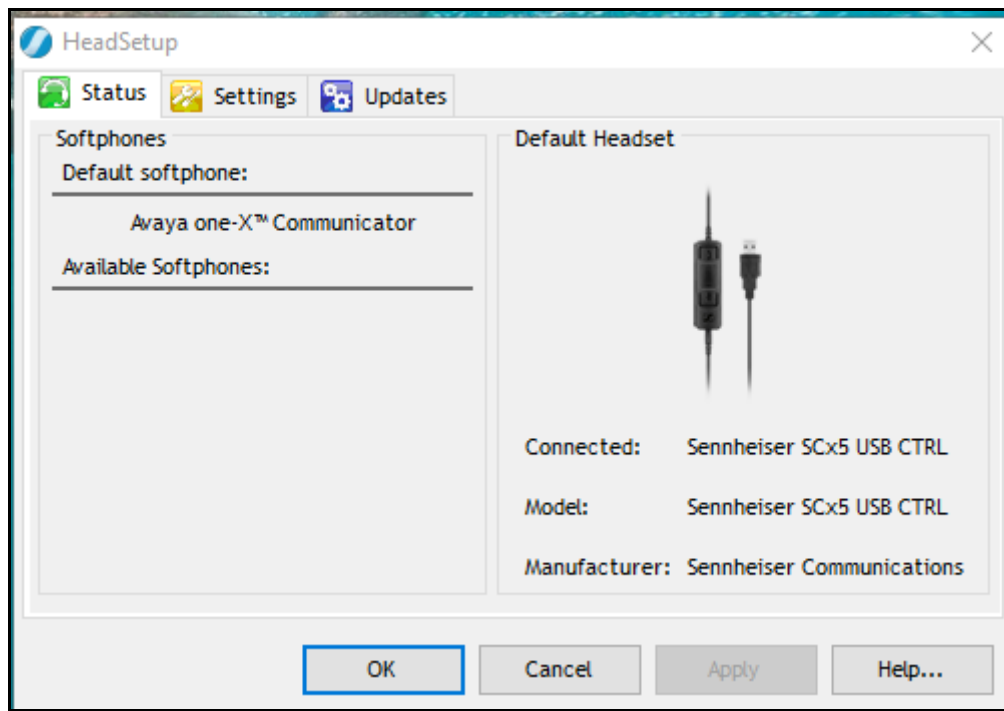
Hover mouse over the HeadSetup icon (in grey) on bottom right taskbar and it shows “HeadSetup – Not logged to any soft-phone”.



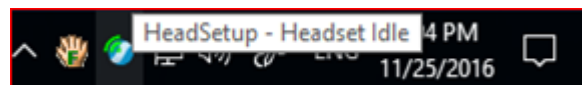
8. Verification Steps

This section verifies that the headset solution has been successfully integrated with the one-X Communicator. Launch and log in to one-X Communicator.

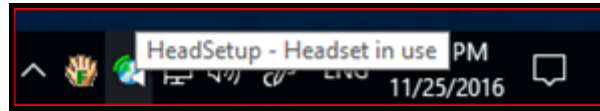
1. Verify that the Sennheiser headset has been successfully connected for use with one-X Communicator. From the **HeadSetup** program, select the **Status** tab. Verify that:
 - The **Softphones** on the left pane shows **Avaya one-X™ Communicator**.
 - The **Default Headset** on the right pane shows the “Sennheiser SCx5 ...” on the **Connected** and **Model** field.



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



3. Once the headset is connected to one-X Communicator, 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 are not functioning, restart the connection by closing and opening the HeadSetup application; check that the correct Microphone and Speaker device are selected for one-X[®] Communicator as 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, Culture Plus Mobile Series USB CTRL wired headsets with Avaya one-X® Communicator. All test cases were completed successfully.

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 7.0.1, Issue 2, May 2016, Document Number 03-300509.
- [2] *Administering Avaya one-X® Communicator*, Release 6.2 Feature Pack 10, November 2015.
- [3] *Implementing Avaya one-X® Communicator*, Release 6.2 Feature Pack 10, November 2015.
- [4] *Application Notes for Configuring Avaya 9600 Series IP Deskphones running Avaya one-X® SIP firmware with Avaya Aura® Session Manager*.

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

- [5] *Sennheiser Updater – User Guide for Installation via Mass Deployment*.
- [6] *Sennheiser HeadSetup™ Installation Guide*
- [7] *Sennheiser SC 45 S 75 USB CTRL Quick Guide*.

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