



## **Avaya Solution & Interoperability Test Lab**

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# **Application Notes for Configuring Sennheiser Communications A/S SC 230 USB CTRL and SC 260 USB CTRL Headsets with Avaya One-X® Agent - Issue 1.0**

### **Abstract**

These Application Notes describe the configuration steps required to integrate the Sennheiser Communications A/S SC 230 USB CTRL and SC 260 USB CTRL headsets with Avaya One-X® Agent.

The Sennheiser Communications A/S SC 230 USB CTRL is a corded monaural headset. The Sennheiser Communications A/S SC 260 USB CTRL is a corded binaural headset. Both headsets offer in-line controls that provide the ability to manage PC communications with the use of soft-phone applications; the in-line control buttons on the headsets offers call control for Volume, Mute, Call-Origination, Call-answer and Call-end functions.

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 SC 230 USB CTRL and SC 260 USB CTRL headsets with Avaya One-X® Agent.

The Sennheiser Communications A/S SC 230 USB CTRL is a corded monaural headset. The Sennheiser Communications A/S SC 260 USB CTRL is a corded binaural headset. Both headsets offer in-line controls that provide the ability to manage PC communications with the use of soft-phone applications; the in-line control buttons on the headsets offers call control for Volume, Mute, Call-Origination, Call-answer and Call-end functions.

## 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 a PC running Avaya One-X® Agent with the Sennheiser Communications A/S SC 230 USB CTRL and SC 260 USB CTRL headsets and verifying two-way audio. The call types included calls to voicemail, to and from local extensions, and the PSTN.

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.

## 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 IP (H.323), Digital and Analog extensions to verify two-way audio.
- Placing and receiving calls to and from the PSTN to verify two-way audio.
- Hearing ring back tone on the headsets for incoming and outgoing calls.
- Placing, answering and ending calls using the call control buttons on Avaya One-X® Agent and in-line call control buttons on the headsets.
- Using the volume control buttons on Avaya One-X® Agent and in-line volume control buttons on the headsets, to adjust the audio volume on the headsets.
- Using the Mute control button on Avaya One-X® Agent and in-line Mute control button on the headset, to mute and un-mute the audio on the headsets.
- Using the in-line call control button on the headsets to reject incoming calls.
- Using the Hold button on Avaya One-X® Agent to hold and un-hold active calls.

Serviceability testing was done by exiting and login back into Avaya One-X® Agent and by un-plugging and plugging the headsets from the PC during active calls to ensure that two-way audio is re-established automatically to the headsets.

## 2.2. Test Results

Testing was completed successfully with the following observations/limitations.

- Executing last number redial by holding the accept/end call button on the headsets for 2+ seconds did not worked.
- If the Sennheiser Communications A/S SC 230 USB CTRL or the SC 260 USB CTRL headsets are un-plugged and plugged back in from the PC during an active call audio is NOT re-established to the headsets. One-X® Agent has to be started with the headsets connected to the USB port on the PC in order for audio to work.
- The Sennheiser Communications A/S HeadSetup™ software application will show Avaya One-X® Communicator, instead of Avaya One-X® Agent, running and registered under **Soft-Phones** in the **Status** tab; refer to **Section 7.1**. This issue has been reported to Sennheiser Communications A/S and does not affect the functionality of the headsets.

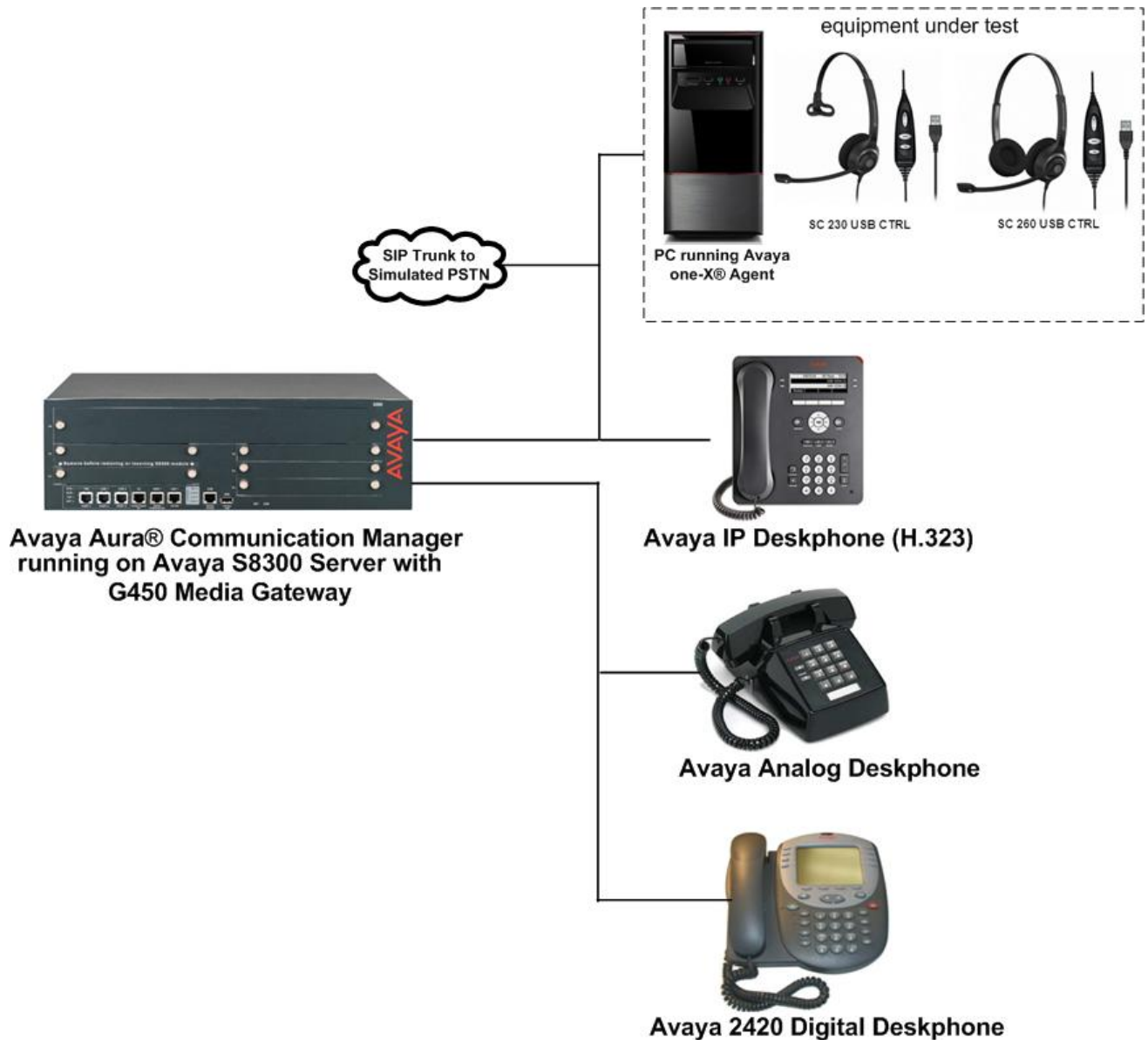
## 2.3. Support

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

**Figure 1** illustrates the test configuration used to verify the Sennheiser Communications A/S SC 230 USB CTRL and SC 260 USB CTRL headsets with Avaya One-X® Agent. The configuration consists of an Avaya S8300 server running Avaya Aura® Communication Manager with an Avaya G450 Media Gateway and a mix of Deskphones (IP, analog and digital) for placing calls to and from the equipment under test.



**Figure 1: Avaya One-X® Agent with Sennheiser Communications A/S SC 230 USB CTRL and SC 260 USB CTRL Headsets.**

## 4. Equipment and Software Validated

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

<b>Equipment/Software</b>	<b>Release/Version</b>
Avaya Aura® Communication Manager running on Avaya S8300 Server with a G450 Media Gateway	6.2 SP3 (02.0.823.0-20001)
Microsoft Windows® XP Professional	Ver. 2002, Service Pack 3
Avaya One-X® Agent	2.5.1072.11082
Avaya 9600 Series IP Deskphones (H.323)	Avaya one-X® Desk phone Edition Version 3.104
Avaya Analog Deskphone	N/A
Avaya 2420 Digital Deskphone	6.0
Sennheiser Communications A/S SC 230 USB CTRL Headset	N/A
Sennheiser Communications A/S SC 260 USB CTRL Headset	N/A
Sennheiser Communications A/S HeadSetup Software Application	2.7.0

## 5. Configure Avaya Aura® Communication Manager

These Application Notes assume that Avaya Aura® Communication Manager is configured and operational. This section focuses only on the configuration of the station to be use with Avaya One-X® Agent. The values configured in this section were used during the compliance tests, default values may be used for any fields not configured in these Application Notes. The configuration is performed via the System Access Terminal (SAT) on Avaya Aura® Communication Manager.

### 5.1. Configure a Station for Avaya One-X® Agent

To create a station to be used with Avaya One-X® Agent use the **add station n** command; where **n** is an available extension in the dial plan, extension **3036** was used in the sample configuration. Set the **Type** field to the IP Telephone type that will be emulated, **9640** was used in the sample configuration. In the **Security Code** field enter a password to be used by Avaya One-X® Agent to log in. Set the **Coverage Path 1** field to the Coverage Path configured for Voice Mail, “**1**” was used in the sample configuration. Ensure that **IP SoftPhone?** is set to **y**.

Note that in the screenshots that follow **display station 3036** was used instead of **add station 3036** since station 3036 was previously added.

```
display station 3036                                     Page 1 of 5
STATION
Extension: 3036                                         Lock Messages? n          BCC: 0
Type: 9640                                             Security Code: *         TN: 1
Port: S00010                                          Coverage Path 1: 1      COR: 1
Name: one-X Agent                                     Coverage Path 2:        COS: 1
                                                       Hunt-to Station:
STATION OPTIONS
Loss Group: 19                                         Time of Day Lock Table:
Speakerphone: 2-way                                   Personalized Ringing Pattern: 1
Display Language: english                             Message Lamp Ext: 3036
Survivable GK Node Name:                             Mute Button Enabled? y
Survivable COR: internal                             Button Modules: 0
Survivable Trunk Dest? y                             Media Complex Ext:
                                                       IP SoftPhone? y
                                                       IP Video Softphone? n
Short/Prefixed Registration Allowed: default
Customizable Labels? y
```

On **Page 4** assign the necessary agent work mode buttons. The assignment of **after-call**, **aux-work**, **release** and either **auto-in** or **manual-in** buttons are mandatory. For the compliance test both manual-in and auto-in buttons were provisioned.

```
display station 3036                                     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:                               List2:                               List3:

BUTTON ASSIGNMENTS
1: call-appr                         5: manual-in                         Grp:
2: call-appr                         6: after-call                       Grp:
3: call-appr                         7: aux-work                         RC:  Grp:
4: auto-in                           8: release
voice-mail
```

## 5.2. Configure Agent-LoginID for Avaya one-X® Agent

To create an agent-loginID to be used by Avaya one-X® Agent use the **add agent-loginID n** command; where **n** is an available extension in the dial plan. Enter and confirm a **Password** to be used by Avaya one-X® Agent to log in to the agent-loginID. Set **Auto Answer** to **station** so that the agent-loginID will follow the auto answer configuration of the station it logs in to.

Note that in the screenshots that follow **display agent-loginID 3501** was used instead of **add agent-loginID 3501** since the agent-loginID was previously added.

```
display agent-loginID 3501                                     Page 1 of 2
                    AGENT LOGINID

Login ID: 3501
Name: Agent 3501
TN: 1
COR: 1
Coverage Path:
Security Code:

AAS? n
AUDIX? n
LWC Reception: spe
LWC Log External Calls? n
AUDIX Name for Messaging:

LoginID for ISDN/SIP Display? n
Password:
Password (enter again):
Auto Answer: station
MIA Across Skills: system
ACW Agent Considered Idle: system
Aux Work Reason Code Type: system
Logout Reason Code Type: system
Maximum time agent in ACW before logout (sec): system
Forced Agent Logout Time:

WARNING: Agent must log in again before changes take effect
```



On **Page 2** under **Direct Agent Skill** enter an agent skill, “**1**” was used in the sample configuration. Under **SN** enter the required ACD skill group and under **SL** enter an associated skill level. In the sample configuration skill group **1** was used with a skill level of **1**.

```

display agent-loginID 3501                                     Page 2 of 2
                                AGENT LOGINID
Direct Agent Skill: 1
Call Handling Preference: skill-level                          Service Objective? n
                                                                Local Call Preference? n

  SN  RL  SL          SN  RL  SL
1:  1   1           16:
2:
3:
4:
5:
6:
7:
8:
9:
10:
11:
12:
13:
14:
15:

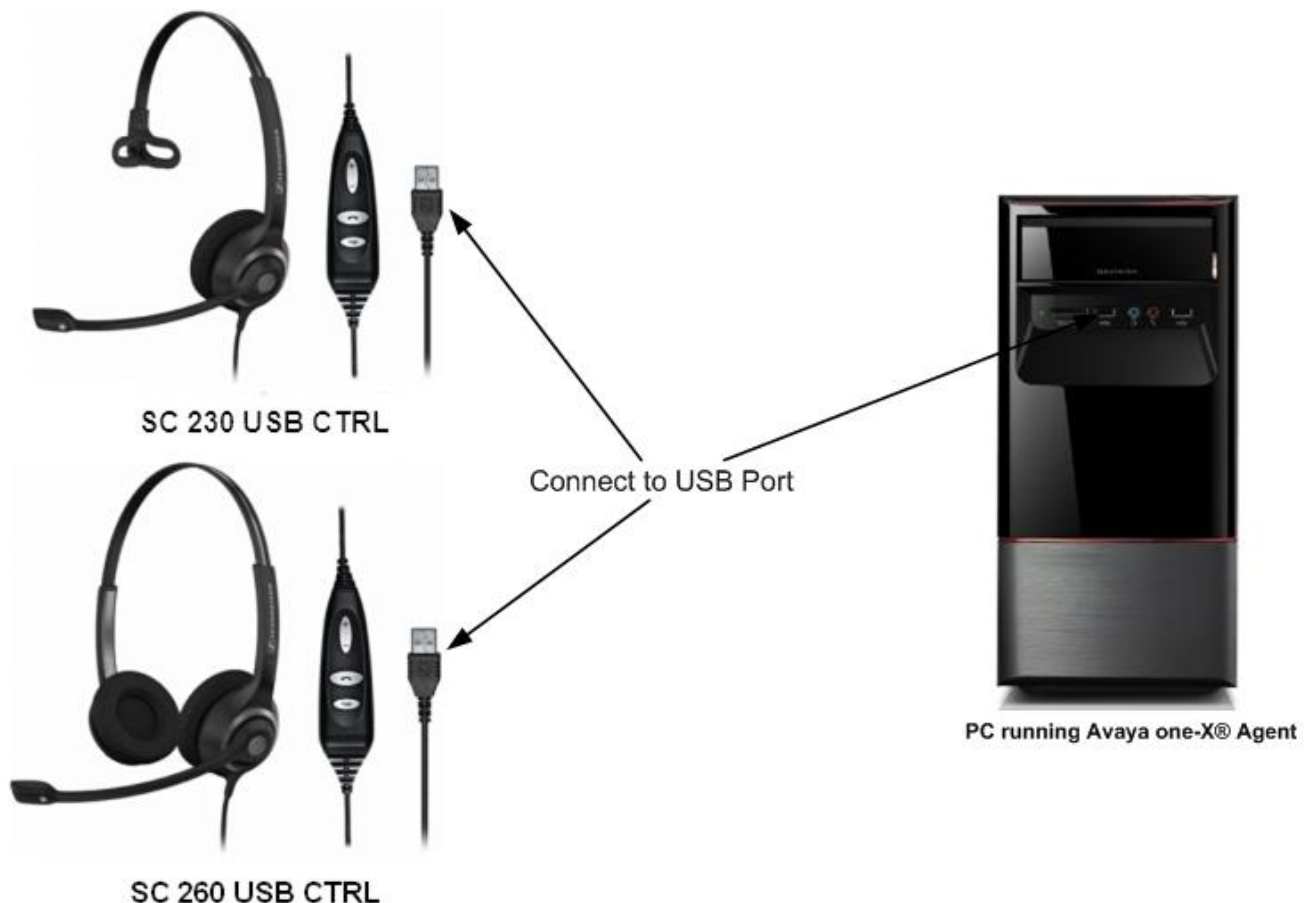
```

## 6. Connect the Sennheiser Communications A/S SC 230 USB CTRL and SC 260 USB CTRL Headsets to the PC running Avaya One-X® Agent

During the compliance test the Sennheiser Communications A/S SC 230 USB CTRL and SC 260 USB CTRL headsets were connected to the PC running Avaya One-X® Agent. The Sennheiser Communications A/S SC 230 USB CTRL is a corded monaural headset. The Sennheiser Communications A/S SC 260 USB CTRL is a corded binaural headset. Both headsets offer in-line controls that provide the ability to manage PC communications with the use of soft-phone applications; the in-line control buttons on the headsets offers call control for Volume, Mute, Call-Origination, Call-answer and Call-end functions.

### 6.1. Cable connections

To connect the Sennheiser Communications A/S SC 230 USB CTRL or the SC 260 USB CTRL headset to the PC running Avaya One-X® Agent, see diagram below.



## 7. Install the Sennheiser Communications A/S HeadSetup™ Software on the PC running Avaya One-X® Agent

Download and install the latest release of Sennheiser Communications A/S HeadSetup™ software on the PC running Avaya One-X® Agent. The Sennheiser Communications A/S HeadSetup™ software application enables integrated call control features on the Sennheiser Communications A/S headsets with the use of the in-line control buttons on the headset. The Sennheiser Communications A/S HeadSetup™ software can be downloaded from the Sennheiser Communications A/S web site; please consult references in **Section 12**.

Once the Sennheiser Communications A/S HeadSetup™ software is installed the application can be launched from **Start → Programs → Sennheiser → HeadSetup**.

If Avaya One-X® Agent is not running the program icon will initially be a gray circle with a white slash, as shown below, to indicate that it is not connected to a soft-phone.



If Avaya One-X® Agent is running, the program icon will change and will show a green arrow, as shown below, to indicate that it is connected to a soft-phone.



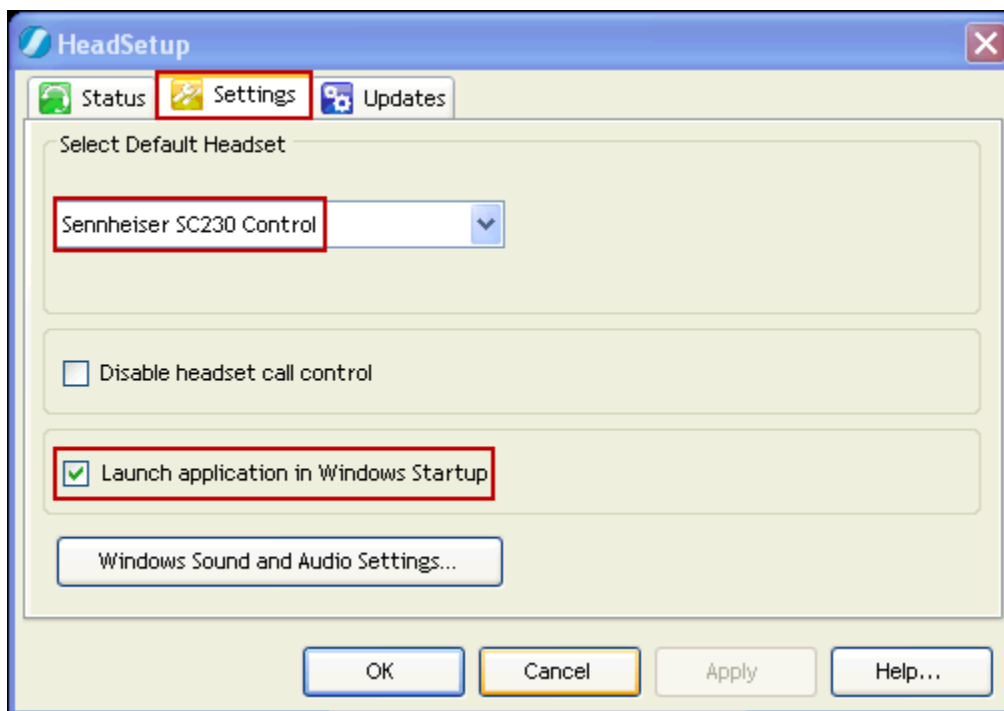
## 7.1. Configure the Sennheiser Communications A/S HeadSetup™ Application

Once the HeadSetup™ application is launched and is running, double click on the HeadSetup™ application icon shown below.

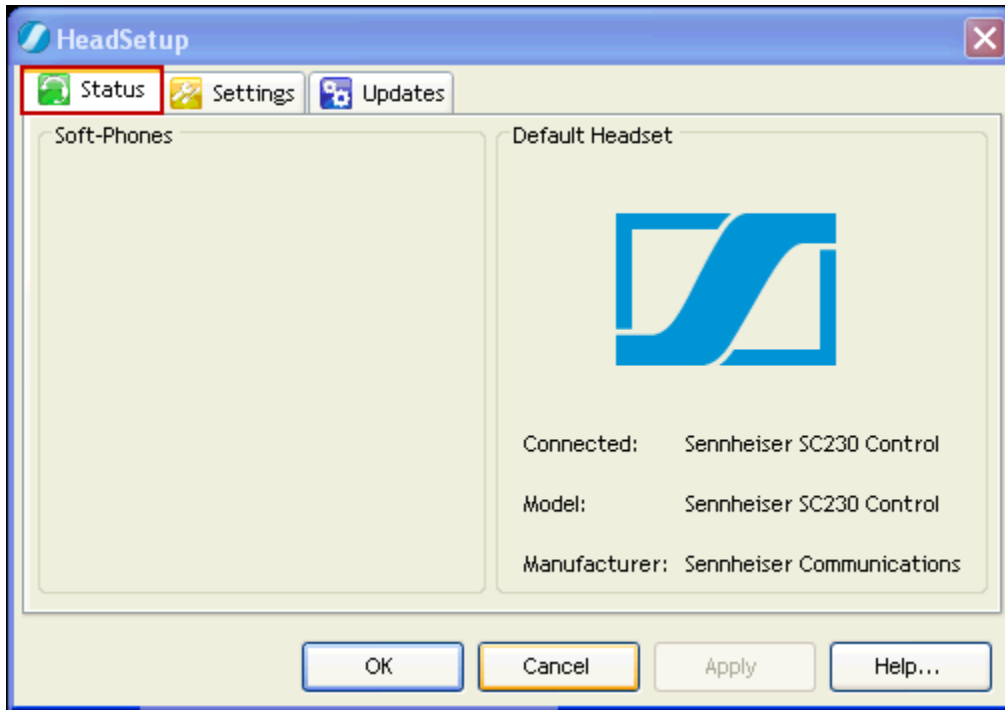


Verify that on the **Settings** tab, the **Launch application in Windows Startup** is checked (recommended).

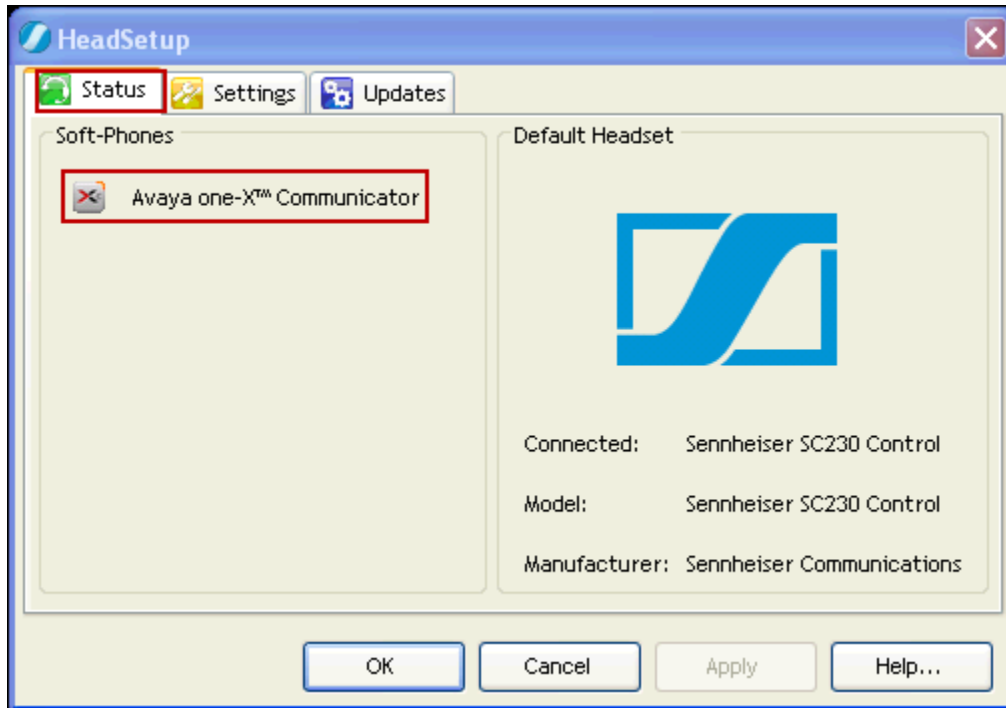
Under **Select Default Headset** the Sennheiser SC 230 USB CTRL or the Sennheiser SC 260 USB CTRL headsets is automatically detected as **Sennheiser SC230 Control** or **Sennheiser SC260 Control** (not shown).



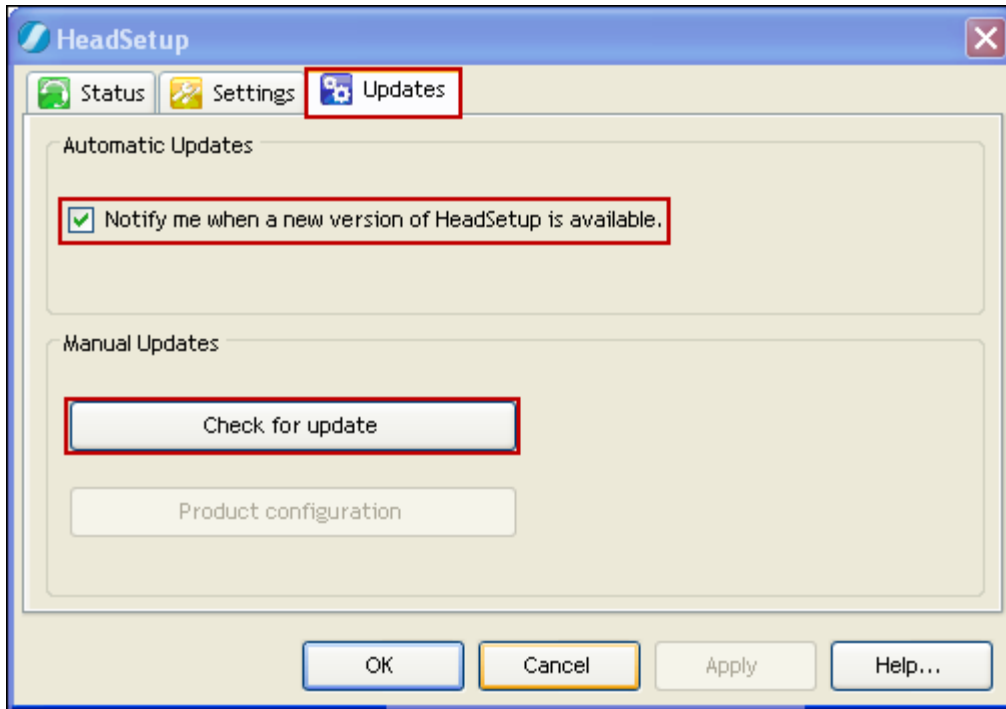
With the Sennheiser SC 230 USB CTRL or the Sennheiser SC 260 USB CTRL headsets connected to the PC and **before** launching Avaya One-X® Agent, the **Status** tab will show the program as running and connected to the **Sennheiser SC230 Control** or the **Sennheiser SC260 Control** headset (not shown). Since Avaya One-X® Agent is not running yet no soft-phone will be listed as registered under **Soft-Phones**.




With the Sennheiser SC 230 USB CTRL or the Sennheiser SC 260 USB CTRL headsets connected to the PC and **after** launching Avaya One-X® Agent, the **Status** tab will show the program as running and connected to the **Sennheiser SC230 Control** or the **Sennheiser SC260 Control** headset (not shown) with **Avaya One-X® Communicator**, instead of Avaya One-X® Agent listed under **Soft-Phones**.

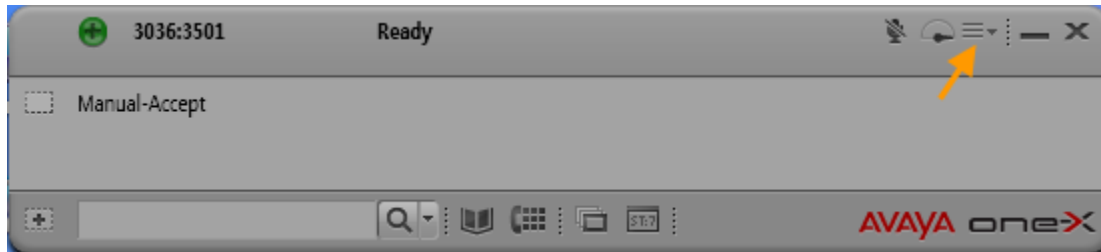


The software Version of the Sennheiser Communications A/S HeadSetup™ Application can be updated after the application is installed. To update the software manually go to the **Updates** tab and click on **Check for update**. Updates notifications can also be enabled by checking **Notify me when a new version of HeadSetup is available**.



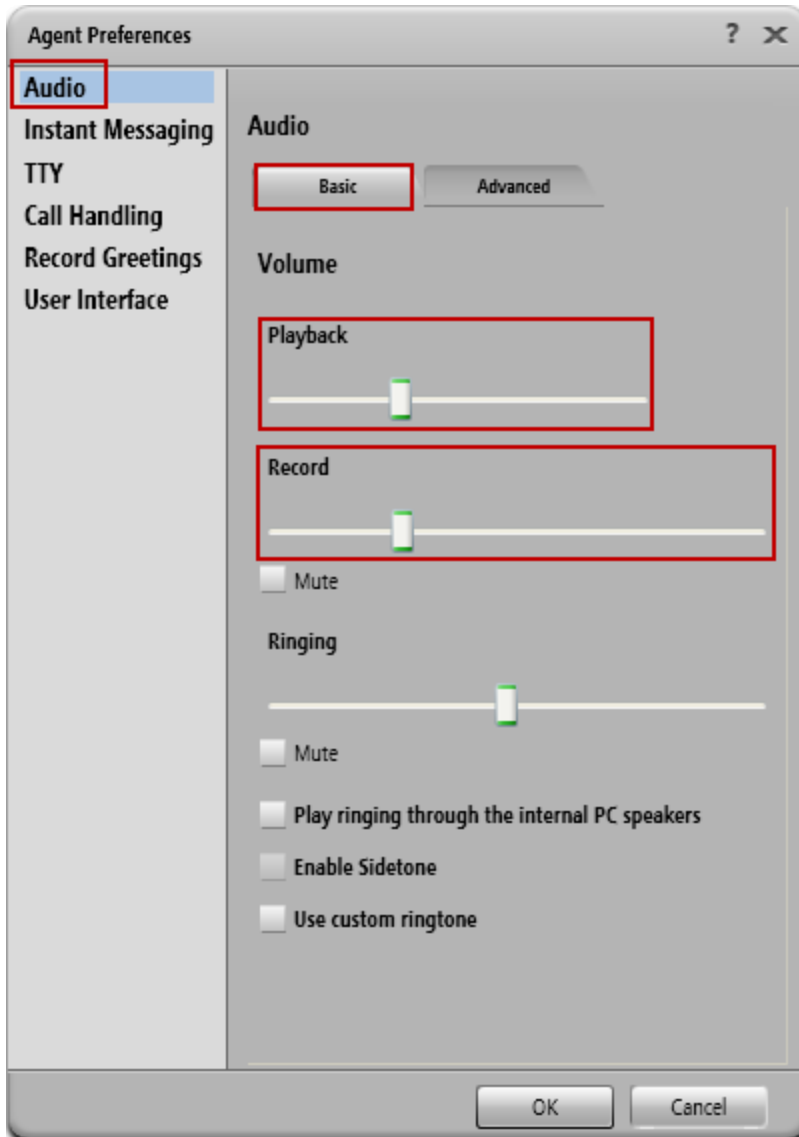
## 8. Configure Avaya One-X® Agent

These Application Notes assume that Avaya one-X® Agent is already configured and operational. This section focuses only on the settings used with the Sennheiser Communications A/S SC 230 USB CTRL and SC 260 USB CTRL headsets. After logging into Avaya one-X® Agent, select  → **Agent Preferences** from the menu as shown below.

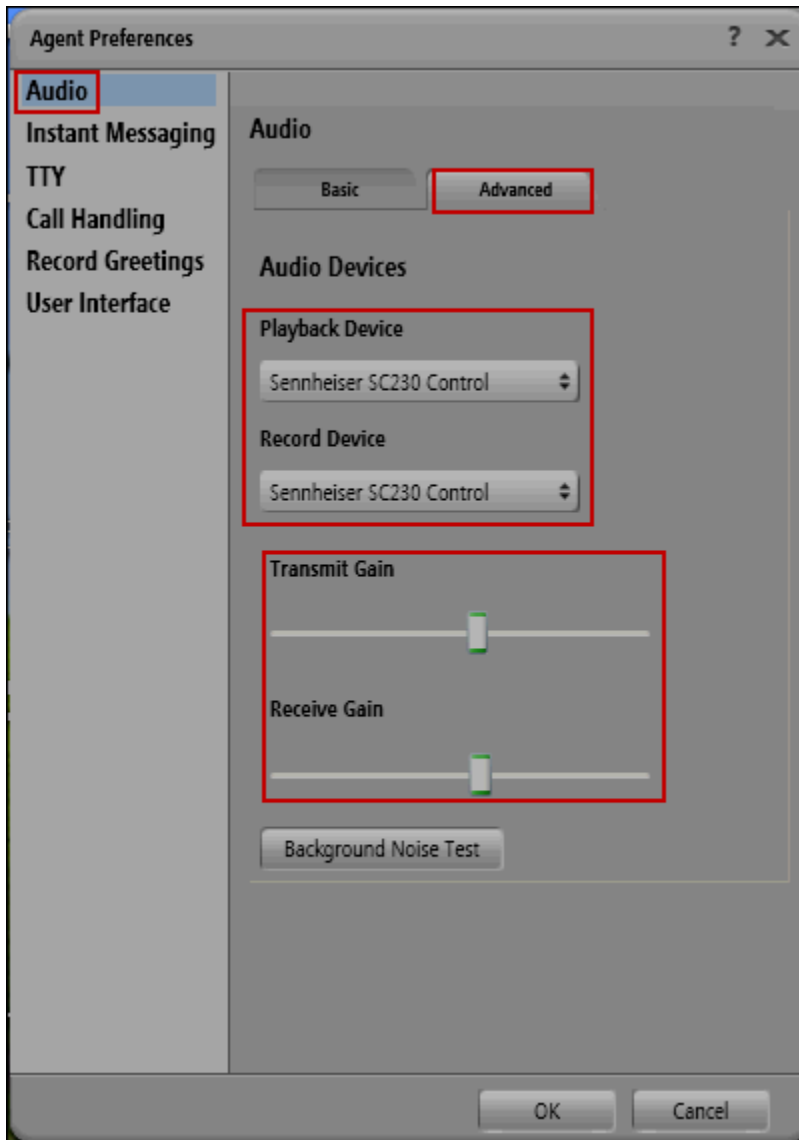




Under **Agent Preferences** select **Audio**, click on the **Basic** tab. Under Volume **Playback** and **Record**, adjust the volume of the headset as needed. The Speaker volume of the headset can also be adjusted under **Sounds and Audio Devices Properties** in Microsoft Windows® **Control Panel**.



Under **Agent Preferences** select **Audio**, click on the **Advanced** tab. Once logging into Avaya one-X® Agent is completed, the Sennheiser Communications A/S SC 230 USB CTRL or the SC 260 USB CTRL headsets are automatically detected by Microsoft Windows® as **Sennheiser SC230 Control** (not shown) or **Sennheiser SC260 Control** (not shown), Avaya one-X® Agent will display **Sennheiser SC230 Control** or **Sennheiser SC260 Control** (not shown) under Audio Devices **Playback Device** and **Record Device**. Under **Transmit Gain** and **Receive Gain** adjust the **Transmit** and **Receive Gain** of the headset as needed.

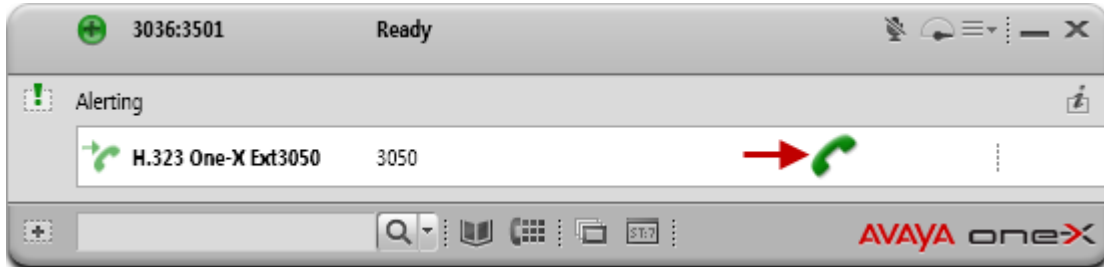


## 9. Answering, Ending, and Placing Calls

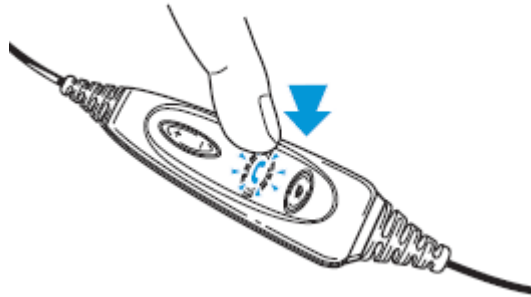
To answer, end, or place a call using the Sennheiser Communications A/S SC 230 USB CTRL or the Sennheiser SC 260 USB CTRL headsets follow the instructions below.

### To Answer a Call:

During incoming calls Avaya one-X® Agent will display “Alerting” as shown below, press the green telephone handset icon.

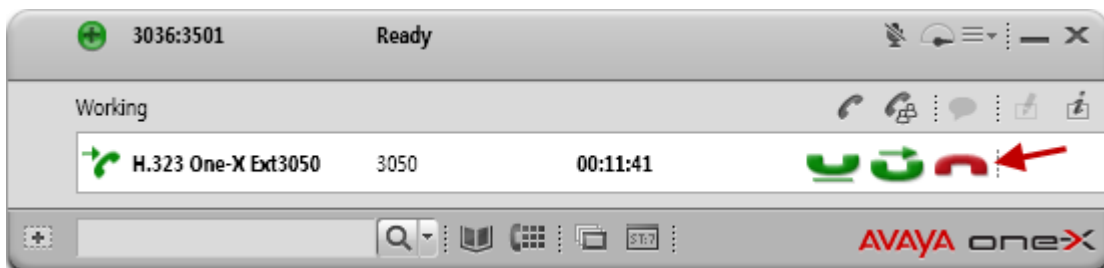


Or press the in-line Answer/End button on the Sennheiser Communications A/S SC 230 USB CTRL or the Sennheiser SC 260 USB CTRL headset to answer a call.

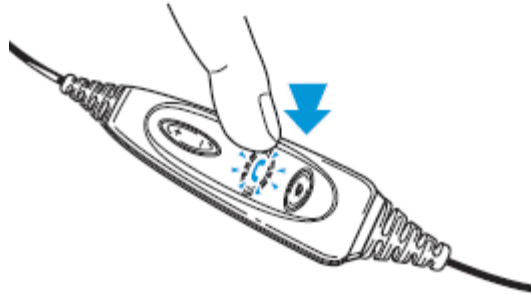


### To End a Call:

Press the red telephone handset icon on Avaya one-X® Agent to end a call.

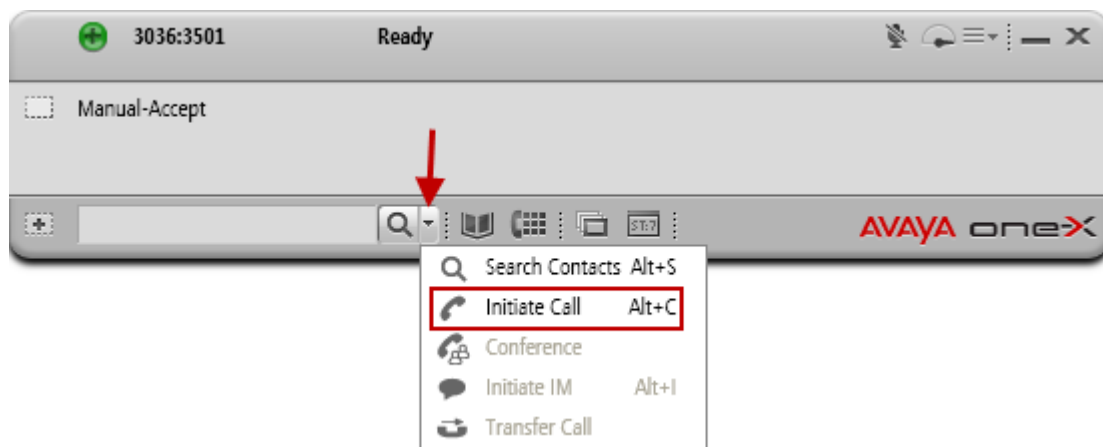


Or press the in-line Answer/End button on the Sennheiser Communications A/S SC 230 USB CTRL or the Sennheiser SC 260 USB CTRL headset to end a call.

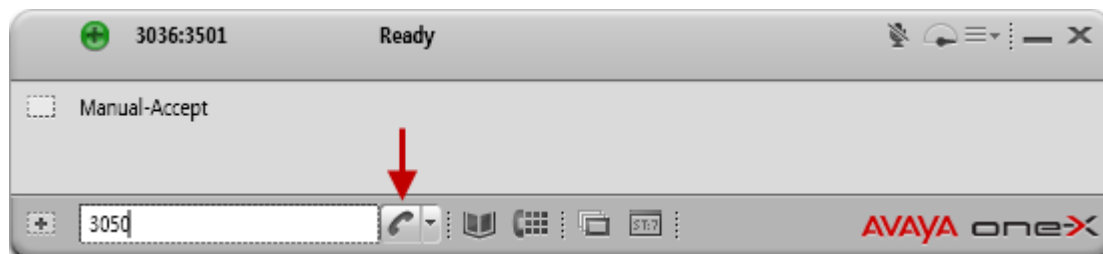


### To Place a Call:

Select **Initiate Call** on the pull down menu or enter **Alt+C**.

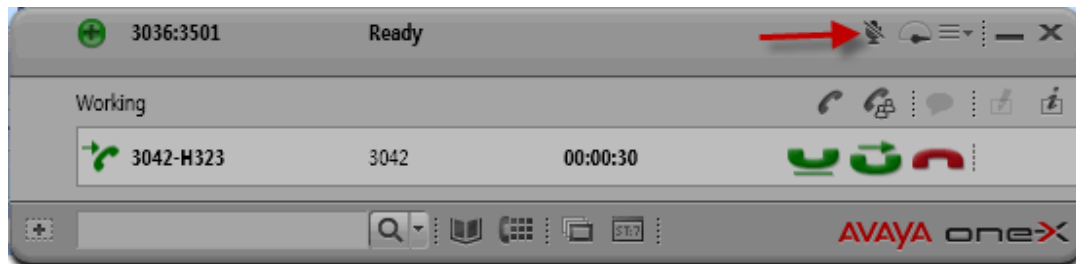


Enter the number, and then press the black telephone handset icon.



## To Mute a Call:

Press the MUTE button on Avaya One-X® Agent to place an active call on mute.

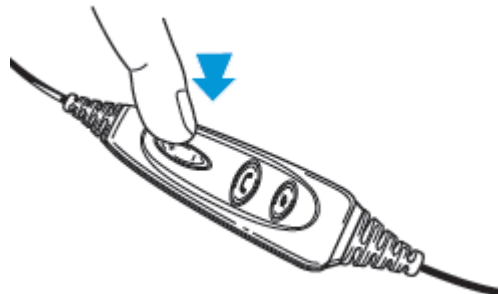


Or Press the MUTE button on the Sennheiser Communications A/S SC 230 USB CTRL or the Sennheiser SC 260 USB CTRL headset to place an active call on mute.



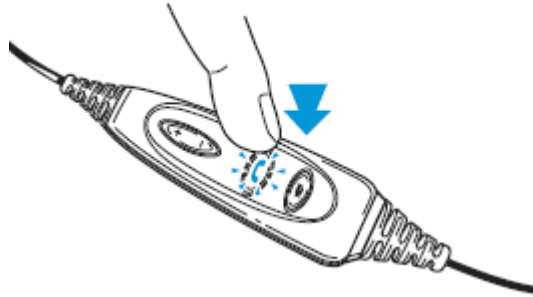
## To adjust the speaker volume:

Use the volume control buttons on the Sennheiser Communications A/S SC 230 USB CTRL or the Sennheiser SC 260 USB CTRL headset to adjust the speaker volume on the headset.



### To reject incoming calls:

Press the in-line Answer/End button on the Sennheiser Communications A/S SC 230 USB CTRL or the Sennheiser SC 260 USB CTRL headset for an extended period of time without releasing to reject an incoming call.



For more information on how to use the headsets refer to the Sennheiser Communications A/S SC 230 USB CTRL or the Sennheiser SC 260 USB CTRL headsets Quick Guides included with the headsets. For the link to on-line documentation refer to **Section 12**.

## 10. Verification Steps

Verify that the Sennheiser Communications A/S SC 230 USB CTRL or the Sennheiser SC 260 USB CTRL headset have been connected to the PC running Avaya One-X® Agent, as shown in **Section 6.1**. Launch and configure Avaya One-X® Agent and the Sennheiser Communications A/S HeadSetup™ software application as shown in **Sections 7 and 8**. Verify that incoming and outgoing calls can be established using the call control buttons on Avaya One-X® Agent and in-line buttons on the headsets, and that clear two-way audio, dial tone, ring-back tone can be heard on the headset when making and receiving calls.

## 11. Conclusion

These Application Notes describe the configuration steps required to integrate the Sennheiser Communications A/S SC 230 USB CTRL and SC 260 USB CTRL headsets with Avaya One-X® Agent. Testing was completed successfully with observations noted in **Section Error! Reference source not found.**

## 12. 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 Communication Manager for Avaya one- X® Agent*, Release 2.5, June 2011.

[2] *Avaya One-X® Agent Overview*, Release 2.5, June 2011.

The following Sennheiser Communications A/S documentation can be found at <http://www.sennheisercommunications.com/>

[3] *Quick guide for SC 230 USB ML and SC 260 USB ML*.

The Sennheiser Communications A/S HeadSetup™ software application can be downloaded from the following Website:

<http://www.senncom.com/headsetup>

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