



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

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# **Application Notes for Sennheiser HeadSetup, DW Pro1, DW Pro2, and DW Office Base Stations and Wireless Headsets, Connected to Avaya one-X® Communicator, Avaya one-X® Agent, and Avaya Aura™ Communication Manager – Issue 1.0**

## **Abstract**

These Application Notes describe the compliance testing of Sennheiser HeadSetup, DW Pro1, DW Pro2, and DW Office Base Stations and Wireless Headsets, connected to Avaya one-X® Communicator and Avaya one-X® Agent via an USB Interface. Avaya one-X® Communicator and Avaya one-X® Agent are PC-based softphones which provide telephone operations to PC users without a physical telephone. HeadSetup is a PC-based program which provides telephone events to Avaya one-X® Communicator and Avaya one-X® Agent. These headsets are intended to be used by office workers, call center agents, and others who have frequent or extensive telephone conversations. The compliance testing tested the major functions of the Sennheiser products.

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

These Application Notes describe the configuration steps required for Sennheiser HeadSetup, DW Pro1, DW Pro2, and DW Office Base Stations, and Wireless Headset solutions to successfully interoperate with Avaya one-X® Communicator, Avaya one-X® Agent, and Avaya Aura™ Communication Manager. In addition to its USB interface, each of the Sennheiser headset solutions also has a telephone headset interface which allows it to be connected to the headset port of an Avaya deskphone. However, this mode of operation is not covered by these Application Notes. Each of the Sennheiser headset solutions consists of the following components:

- DW DECT wireless base station
- DW Pro1, DW Pro2, or DW Office wireless DECT headset

A USB cable is used to connect the Sennheiser DW Wireless DECT base station to the USB port of a PC which is running either Avaya one-X® Communicator or Avaya one-X® agent.

The Sennheiser DW wireless DECT base station front panel has the following controls and interfaces:

- a charging station for the Sennheiser wireless headset
- blue/red status LED
- a “PC” button
- a “Telephone” button

The “Telephone” button is used to select the analog headset interface, which was not used for the tests described by these Application Notes. The “PC” button is used to select the USB interface. Repeated depressions of the “PC” button serve as a switch-hook which can be used to answer and terminate calls. The charging station also acts as a switch-hook, which will cause an active call to be terminated if the headset is returned to the charging unit.

The Sennheiser DW wireless DECT headsets each have the following controls and interfaces:

- a multi-function switch
- a “mute” button which can turn off / on the headset microphone
- a volume control which allows the headset earpiece volume to be turned up or down
- a blue/red status LED

The multi-function switch provides the following functionality:

- by short depression, it acts as a “hook switch” which can be used to answer and terminate calls
- by a long depression, it acts as an on/off switch

## 1.1. Interoperability Compliance Testing

The compliance testing included the following test scenarios shown below.

Tests for both Avaya one-X® Communicator and Avaya one-X® Agent:

- Verification of acceptable talk path in both directions for local and PSTN calls.
- Verification of the base station's ability to terminate calls with its "PC" button
- Verification of the headset's ability to terminate calls by being powered off.
- Verification of the headset's ability to be powered on to answer an alerting call
- Verification of the headset's mute switch
- Verification of the headset's volume control
- Verification of the base station's ability to recover from interruption to its power supply
- Verification of the base station's ability to recover from interruption of headset interface, and that active calls are preserved after reconnection
- Verification of the headset's ability to function normally after the PC is restarted.
- Verification of the headset's ability to terminate an active call by placing it on the base station's changer

Tests for Avaya one-X® Communicator:

- Verification of the base station's ability to answer calls with its "PC" button
- Verification of the headset's ability to answer calls with its switch-hook button

Tests for Avaya one-X® Agent:

- Verification of the headset's ability to redial the previous number with its "PC" switch-hook button
- Verification of the base station's ability to redial the previous number with its "PC" switch-hook button

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.

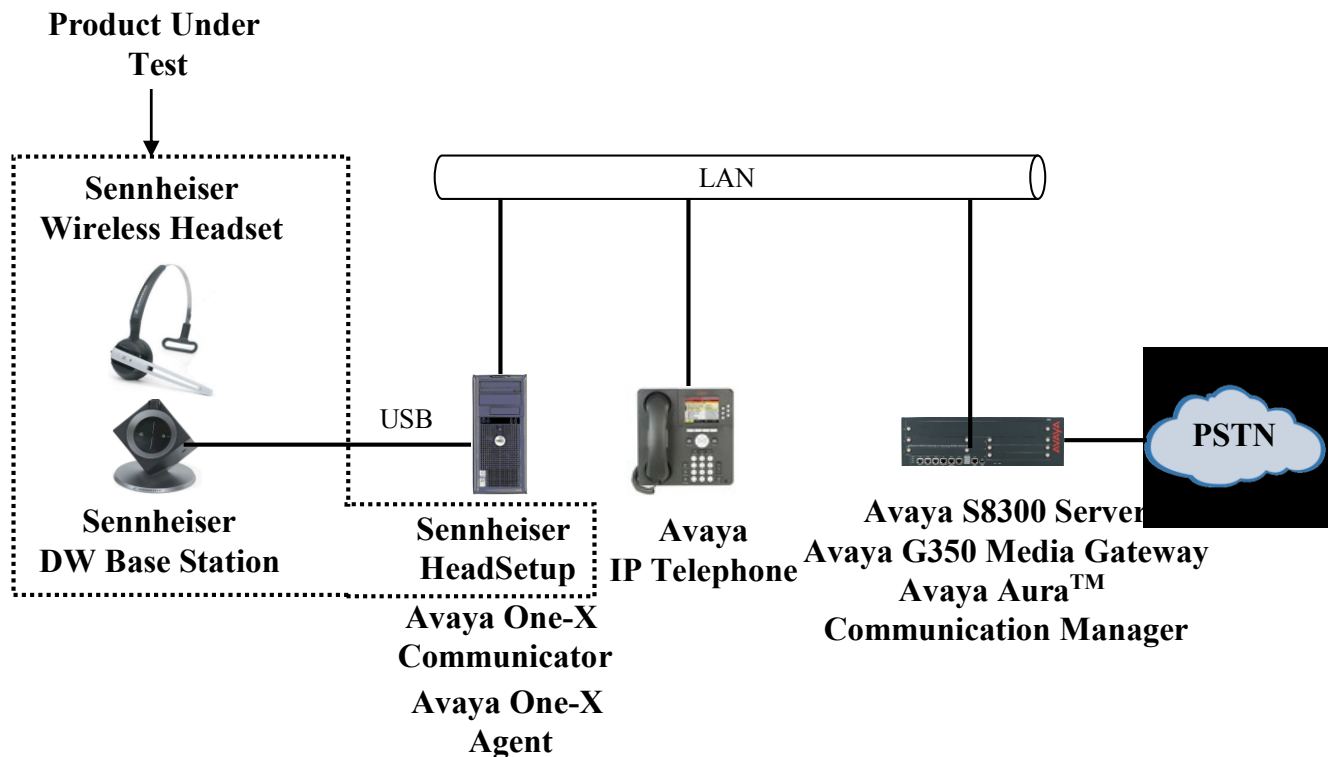
## 1.2. Support

Support from Avaya is available at <http://support.avaya.com/>.

Support for Sennheiser products is available at

- Web: [http://www.senncom.com/comm/home\\_en.nsf/root/service\\_support-contact](http://www.senncom.com/comm/home_en.nsf/root/service_support-contact)
- Email: [support@senncom.com](mailto:support@senncom.com)
- help desk: +45 56180000

## 2. Reference Configuration



**Figure 1: Reference Configuration**

The Sennheiser headset solution in the above diagram interfaces to the Sennheiser HeadSetup program which serves as an interface between Avaya one-X® Communicator or Avaya one-X® Agent and the Sennheiser DW base station.. The PSTN interface was included in the configuration to place calls to a PSTN based voicemail system to verify the intelligibility of voice messages which were recorded and replayed through the Sennheiser headset.

### 3. Equipment and Software Validated

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

Component	Version
Avaya Aura™ Communication Manager	R015x.02.1.016.4 Update 18365
Avaya G430 Media Gateway	30.14.0
Avaya 9640 IP Telephone	3.1.1
Avaya one-X® Communicator	6.0.0.26
Avaya one-X® Agent	2.0 SP3
Sennheiser DW Pro1 Base Station & Headset	5A.4A.5B.6C.71
Sennheiser DW Pro2 Base Station & Headset	5A.4A.5B.6C.70
Sennheiser DW Office Base Station & Headset	6C.4A.5B.6C.66

**Table 1: Equipment and Versions Validated**

### 4. Configure Avaya Communication Manager

The configuration and verification operations illustrated in this section were performed using the Communication Manager System Administration Terminal (SAT).

Use the **add station** command to add an extension for the softphone associated with the Sennheiser DW, Pro1, or Pro2 headset solution using the parameters shown in the following table.

Parameter	Usage
Type (page 1)	Enter endpoint type which corresponds to the endpoint being used.
Name (page 1)	Enter an appropriate name to identify the station.
Security Code (page 1)	Enter an appropriate security code for the station.
IP Softphone (page 1)	Set this parameter to “y”.
BUTTON ASSIGNMENTS (page 5)	Add “auto-in”, “manual-in”, “aux-work”, and “release” buttons if Avaya one-X® Agent is used as the softphone.

**Table 2: IP Station Parameters**

```

add station 10401                                     Page 1 of 5
                                                    STATION
Extension: 10401                                     Lock Messages? n          BCC: 0
  Type: 9630                                       Security Code: 123456   TN: 1
  Port: S00010                                       Coverage Path 1:         COR: 1
  Name: extn 10401                                   Coverage Path 2:         COS: 1
                                                    Hunt-to Station:
STATION OPTIONS
                                                    Time of Day Lock Table:
  Loss Group: 19                                       Personalized Ringing Pattern: 1
                                                    Message Lamp Ext: 10401
  Speakerphone: 2-way                                   Mute Button Enabled? y
  Display Language: english                             Button Modules: 0
Survivable GK Node Name:                               Media Complex Ext:
  Survivable COR: internal                             IP SoftPhone? y
Survivable Trunk Dest? y                               IP Video Softphone? n
                                                    Customizable Labels? y

```

**Figure 2: IP Station Form**

```

add station 10401                                     Page 5 of 5
                                                    STATION
BUTTON ASSIGNMENTS
  9: auto-in           Grp:
10: manual-in        Grp:
11: aux-work   RC: Grp:
12: release
13:
14:
15:
16:
17:
18:
19:
20:
21:
22:
23:
24:

```

**Figure 3: IP Station Form**

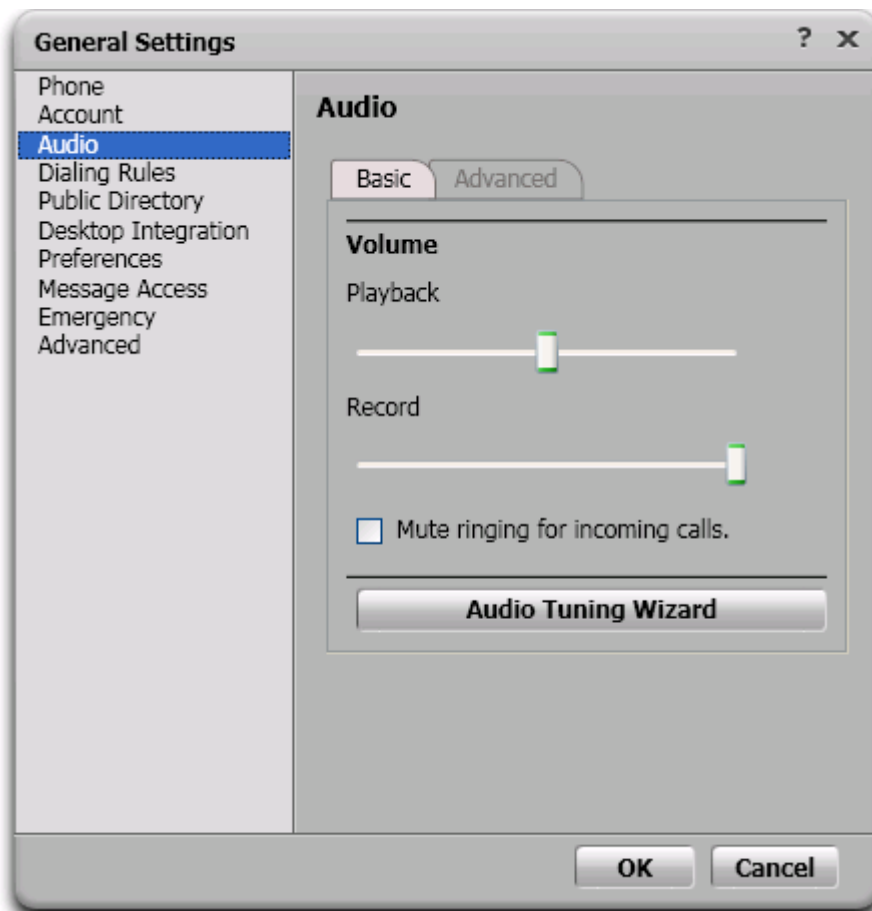
## 5. Configure Avaya one-X® Communicator

Select  → **Settings** → **General Settings** from the menu as shown below.



**Figure 4: Avaya one-X® Communicator User Interface**

Select **Audio** from the left pane and select the **Basic** tab. Click on **Audio Tuning Wizard**.



**Figure 5: Avaya one-X® Communicator Audio Settings**



The Sennheiser headset is automatically detected in Microsoft Windows as **Sennheiser DECT**. Select this device as the **playback device** and **recording device** as shown below. Click **Next**.



Figure 6: Avaya one-X® Communicator Audio Tuning Wizard

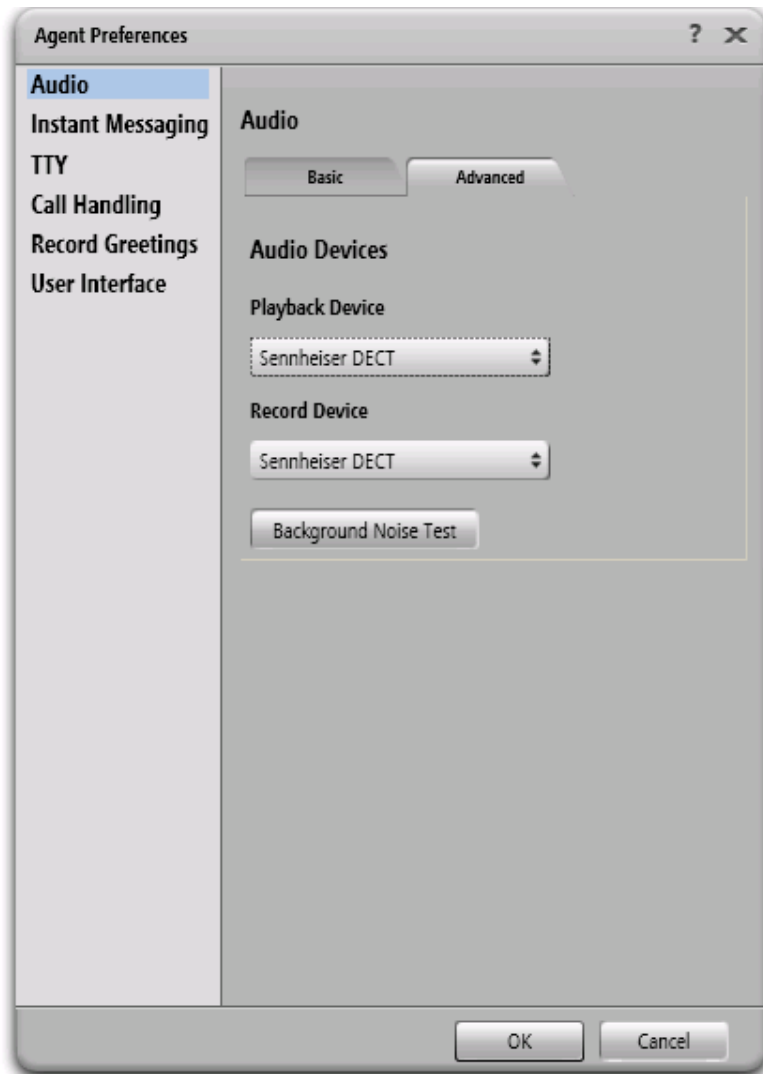
## 6. Configure Avaya one-X® Agent

Select  → **Agent Preferences** from the menu as shown below.



Figure 7: Avaya one-X® Agent User Interface

Select **Audio** from the left pane and select the **Advanced** tab. Select **Sennheiser DECT** from both the **Playback Device** and **Record Device** drop-down menus and click **OK**.

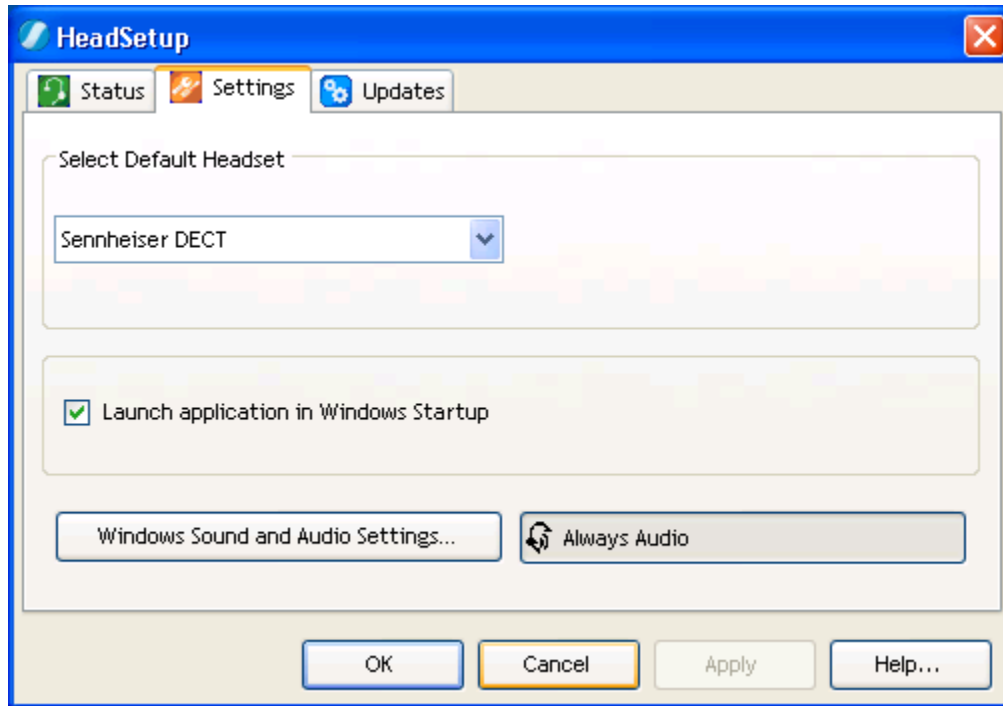


**Figure 8: Avaya one-X® Agent Audio Settings**

## 7. Configure Sennheiser Headset Solution

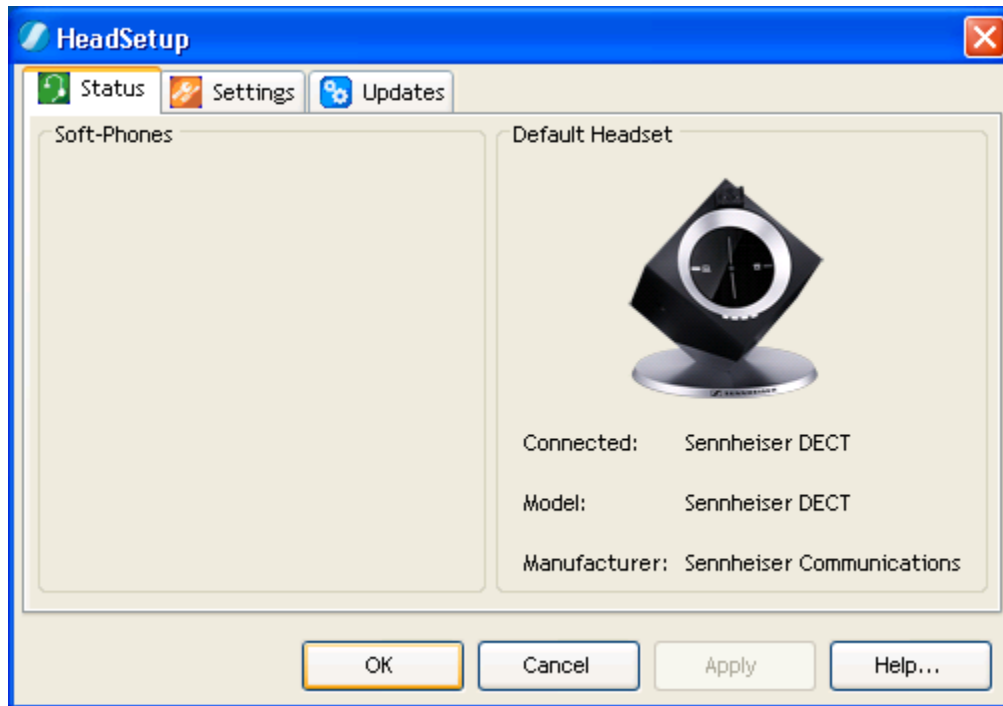
### 7.1. Configure Sennheiser HeadSetup

The Sennheiser HeadSetup program serves as an interface between the Sennheiser DECT base station and either Avaya one-X® Communicator or Avaya one-X® Agent. In the “Settings” tab, the “Launch application in Windows Startup” should normally be checked.



**Figure 9: Sennheiser HeadSetup Settings**

Clicking “Status” shows that the program is initially not connected to a softphone.



**Figure 10: Sennheiser HeadSetup Unconnected Status**

Clicking “OK” causes the program to be minimized to the Windows task tray. 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 softphone.



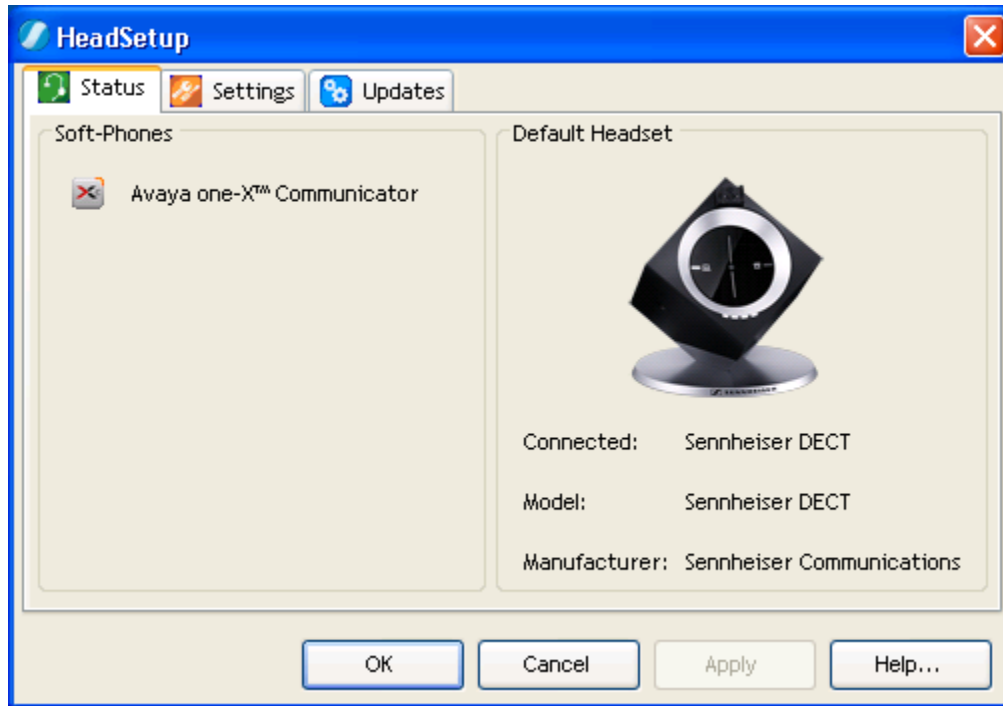
**Figure 11: Sennheiser HeadSetup Unconnected Icon**

Sixty to ninety seconds after Avaya one-X Communicator or one-X Agent has been started, the icon changes as shown below, to indicate that HeadSetup is connected to a softphone.



**Figure 12: Sennheiser HeadSetup Connected Icon**

If the icon is maximized, the name of the softphone to which it is connected is shown in the “Status” tab, along with an indication of which headset interface is active.



**Figure 13: Sennheiser HeadSetup Connected Status**

## 7.2. Configure Sennheiser Headset

Each of the DW wireless headset solutions consists of a DW wireless DECT headset packaged together with a DW DECT wireless base station and USB cable, which is used to attach to the PC on which one-X® Communicator or one-X® Agent is running.

## 8. General Test Approach and Test Results

The compliance testing of Sennheiser headset solution interoperating with 1600 and 9600 series IP telephones was performed manually. The tests were functional in nature, and no performance testing was done. The tests listed in **Section 1.1** were performed.

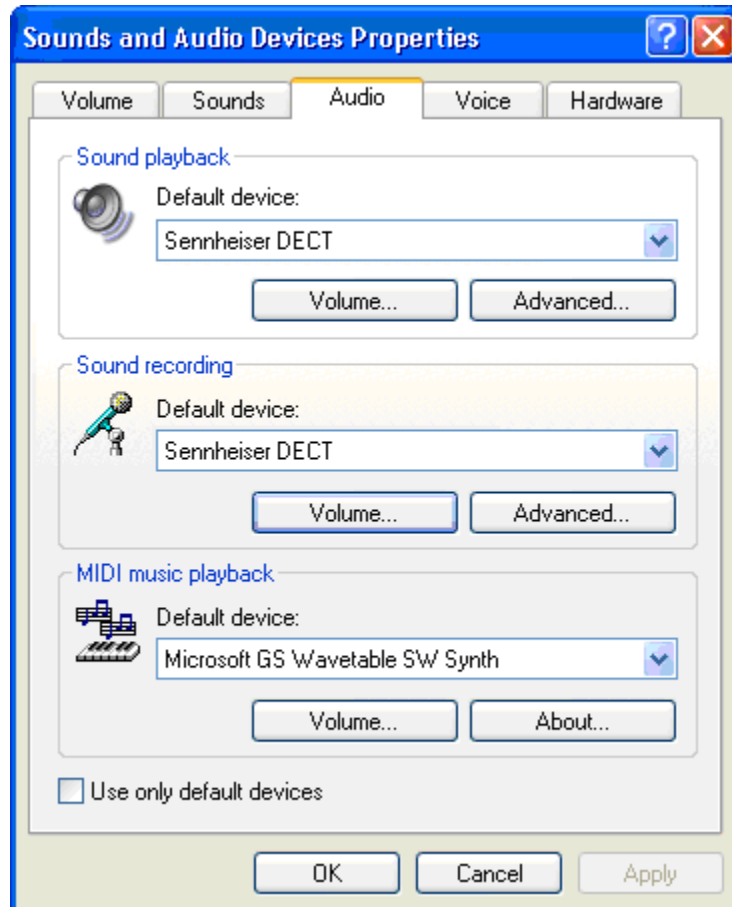
The following issues were encountered while testing:

1. The Sennheiser HeadSetup program has a latency time on the order of 60 seconds after being started prior to connection to Avaya one-X® Communicator or Avaya one-X® Agent. If a call is made or accepted by one-X® Communicator/Agent prior to expiration of this startup latency time, the Sennheiser headset and associated interface will not be able to control the call. It is possible to determine if HeadSetup is connected to one-X® Communicator/Agent by observing the state of its icon in the Windows task tray: prior to connection it is “grayed-out”, which turns to color after it is connected. It is recommended that Windows be configured to start HeadSetup and Avaya one-X® Communicator/Agent automatically when the agent logs on to Windows to minimize the chance of calls arriving prior to HeadSetup’s connection to Avaya one-X® Communicator/Agent. If, for some reason, Avaya one-X® Communicator/Agent must be restarted, the user should only accept or make calls after HeadSetup has reconnected to Avaya one-X® Communicator/Agent.
2. HeadSetup shows that it is connected to “Avaya one-X® Communicator” in its “Status” tab when Avaya one-X® Agent is running.

These issues were not deemed to be of a serious nature.

## 9. Verification Steps

From the Windows Control Panel, open **Sounds and Audio Devices** and click on the **Audio** tab. Verify that the device **Sennheiser DECT** is listed in both the **Sound playback** and **Sound recording** section as shown below.



**Figure 14: Windows Audio Device Properties**

## 10. Conclusion

These Application Notes contain instructions for configuring Avaya Aura™ Communication Manager and Avaya one-X® Communicator and Avaya one-X® Agent to interact with the Sennheiser DW Pro1, DW Pro2, and DW Office headset solutions, each of which consists of a DECT wireless headset and matching DECT wireless base station.

## 11. Additional References

This section references documentation relevant to these Application Notes. The Avaya product documentation is available at <http://support.avaya.com>.

- [1] *Administering Communication Manager for Avaya one-X® Agent*, November 2009
- [2] *Using Avaya one-X® Agent*, November 2009
- [3] *Avaya one-X® Communicator User Reference*, October 2010
- [4] *Sennheiser DW Office Quick Guide*
- [5] *Sennheiser DW Pro1/Pro2 Quick Guide*



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