AVAYA

Avaya Solution & Interoperability Test Lab

Application Notes for ADDASOUND Crystal 2731/2732 Headsets and ADDASOUND DN3222 USB Cable with Avaya one-X® Agent - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the ADDASOUND Crystal 2731/2732 Headsets and ADDASOUND DN3222 USB Cable with Avaya one-X® Agent. The DN3222 USB Cable allows the ADDASOUND headset to be connected to a USB port on a desktop PC running Avaya one-X® Agent. Together, the DN3222 USB Cable and headset provide two-way audio, volume control, and mute control directly from the headset. This solution does not provide call control features directly from the headset, such as answering or terminating a call from the headset or mute synchronization. For the compliance test, the Crystal 2731 monaural headset and the Crystal 2732 binaural headset were verified.

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

These Application Notes describe the configuration steps required to integrate the ADDASOUND Crystal 2731/2732 Headsets and ADDASOUND DN3222 USB Cable with Avaya one-X® Agent. The DN3222 USB Cable allows the ADDASOUND headset to be connected to a USB port on a desktop PC running Avaya one-X® Agent. Together, the DN3222 USB Cable and headset provide two-way audio, volume control, and mute control directly from the headset. This solution does not provide call control features directly from the headset, such as answering or terminating a call from the headset or mute synchronization. For the compliance test, the Crystal 2731 monaural headset and the Crystal 2732 binaural headset were verified.

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 Avaya one-X Agent with the ADDASOUND Crystal 2731/2732 Headsets and ADDASOUND DN3222 USB Cable and verifying 2-way audio. The type of calls made included calls to voicemail, to local stations, and to the PSTN.

The serviceability testing focused on verifying the usability of ADDASOUND Crystal 2731/2732 Headsets and ADDASOUND DN3222 USB Cable after restarting the Avaya one-X Agent, disconnecting and reconnecting the headset, and rebooting the PC.

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.

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.

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 local stations to verify two-way audio.
- Placing calls to the PSTN to verify two-way audio.
- Using the volume control buttons on the DN3222 USB Cable to adjust the playback volume.
- Using the mute button on the DN3222 USB Cable and on one-X Agent to mute and un-mute the audio. Note that there was no mute synchronization between one-X Agent and the DN3222 USB Cable.

For the serviceability testing, the headset was disconnected and reconnected to verify proper operation. Avaya one-X Agent application was also restarted for the same purpose. The desktop PC was also rebooted to verify that one-X Agent and headset were operational when the PC came back into service.

2.2. Test Results

All test cases passed with the following observation.

- The ADDASOUND headsets do not support the headset API; therefore, there is no mute synchronization between one-X Agent and the DN3222 USB Cable. That is, muting and unmuting the call via the DN3222 USB Cable doesn't reflect the mute status on one-X Agent and vice versa. However, muting and unmuting the call from one-X Agent or the DN3222 USB Cable does properly mute and unmute the audio. In addition, pressing the call control button on the DN3222 USB Cable didn't appear to have any effect on the call.

2.3. Support

For technical support and information on ADDASOUND Crystal 2731/2732 Headsets and ADDASOUND DN3222 USB Cable, contact ADDASOUND.

- Phone: (800) 781-6729 (North America)
- Website: http://www.addasound.com
- Email: info@addasound.com

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify the ADDASOUND Crystal 2731/2732 Headsets and ADDASOUND DN3222 USB Cable. The configuration consists of Avaya Aura® Communication Manager running in a virtual environment with an Avaya G450 Media Gateway providing connectivity to the PSTN via an ISDN-PRI trunk (not shown). Avaya Aura® Media Server was also used for media processing. Avaya Aura® Session Manager was used as the registrar/proxy for SIP phones and Avaya Aura® System Manager was used to configures Session Manager. Avaya Aura® Messaging was used as the voicemail system. Avaya 96x1 IP Deskphones were used for establishing calls with Avaya one-X® Agent. ADDASOUND Crystal 2731/2732 Headsets were connected to a DN3222 USB Cable which in turn was connected to a USB port on the desktop PC running one-X Agent.
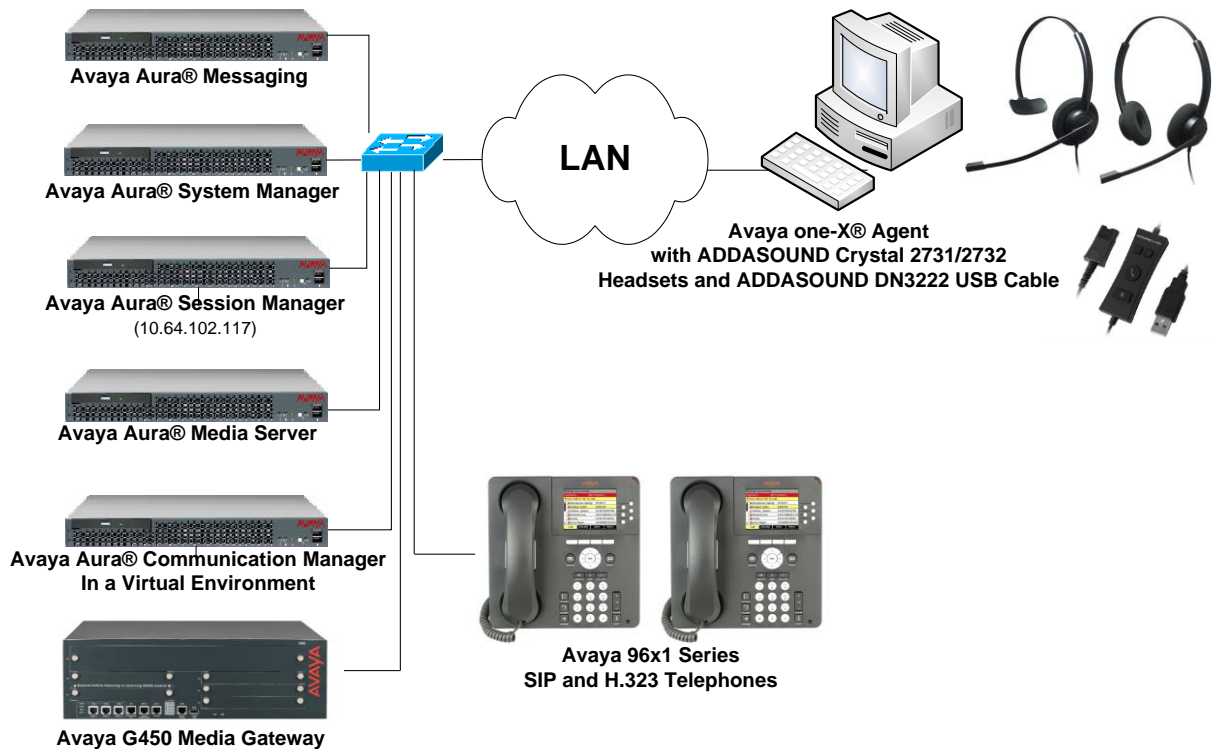
Figure 1: Avaya one-X® Agent with ADDASOUND Crystal 2731/2732 Headsets and ADDASOUND DN3222 USB Cable

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 in a Virtual Environment with an Avaya G450 Media Gateway	8.0 SP1 (R018x.00.0.822.0 Patch 24796)
Avaya G450 Media Gateway	FW 38.21.1
Avaya Aura® Media Server	v.7.8.0.393
Avaya Aura® Messaging	7.1.3.1.0-FP3SP1
Avaya one-X® Agent on Microsoft Windows 10	2.5.12 (2.5.60208.0)
Avaya 96x1 Series IP Deskphones	6.6604 (H.323) 7.1.3.0.11 (SIP)
Avaya Aura® Session Manager	8.0.0.0.800035
Avaya Aura® System Manager	8.0.0.0 Build No. - 8.0.0.0.931077
ADDASOUND Crystal 2731/2732 Headsets	N/A
ADDASOUND DN3222 USB Cable	N/A

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, *9630* was used. Set the **Port** field to *IP* and configure a **Security Code** as that password to be used by one-X Agent to log in. Set the **IP Softphone** field to *y*.

```
add station 77400                                         Page   1 of   5
                               STATION

Extension: 77400                   Lock Messages? n            BCC: 0
      Type: 9630                    Security Code: 1234          TN: 1
      Port: IP                   Coverage Path 1:               COR: 1
      Name: ADDASOUND            Coverage Path 2:               COS: 1
                                 Hunt-to Station:             Tests? y
STATION OPTIONS
                                    Time of Day Lock Table:
             Loss Group: 19     Personalized Ringing Pattern: 1
                                        Message Lamp Ext: 77400
          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 in bold, which are used by one-X Agent to log in as an Automatic Call Distribution (ACD) agent.

```
add station 77400                                         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          Grp:         8: release
    voice-mail
```

6. Configure Avaya one-X® Agent

Prior to starting and configuring one-X Agent, connect the Crystal 2731/2732 Headset and DN3222 USB Cable to a USB port on the desktop PC running one-X Agent; otherwise, one-X Agent will not detect the headset. Next, ensure that the Sound properties under Windows 10 Control Panel are set properly. Verify that the DN3222 USB Cable has been detected by Windows 10 and that it has been set as the default device in the Playback and Recording tabs as shown below.
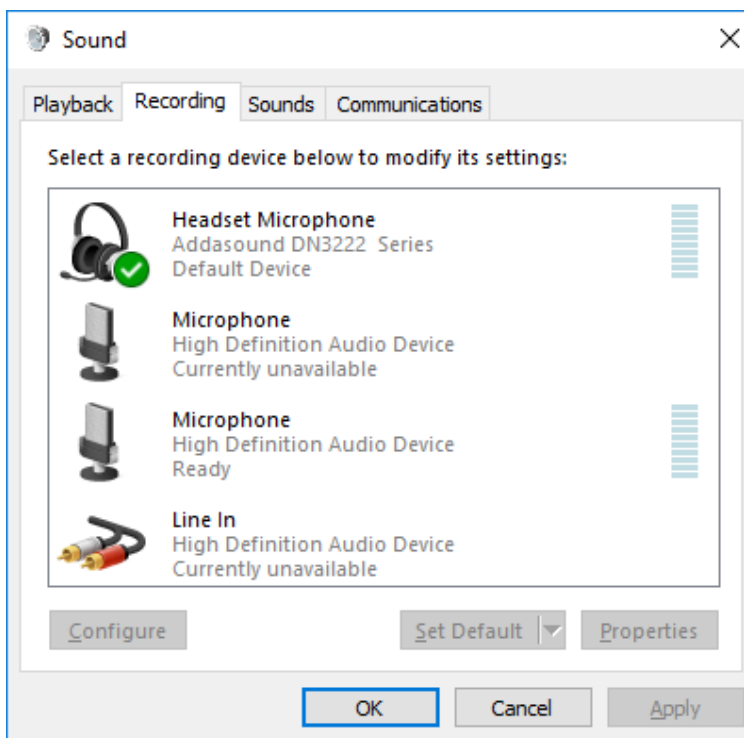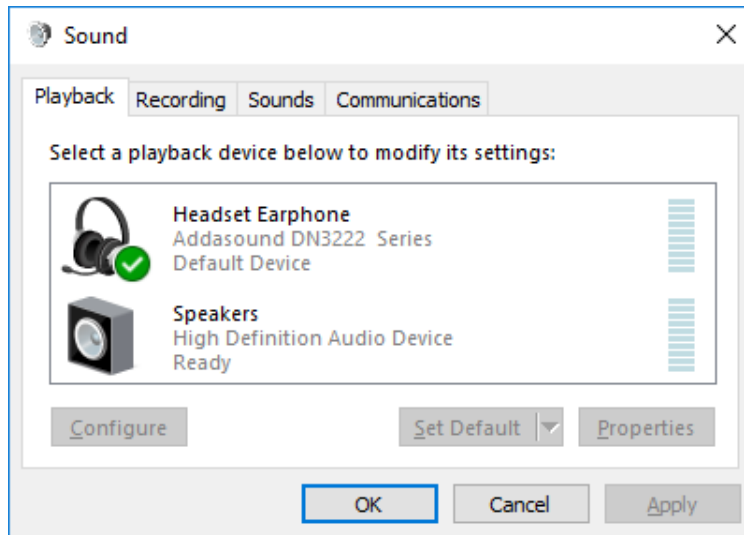
After logging into Avaya one-X Agent, click on ☰▾ and then select **Agent Preferences** as shown below.
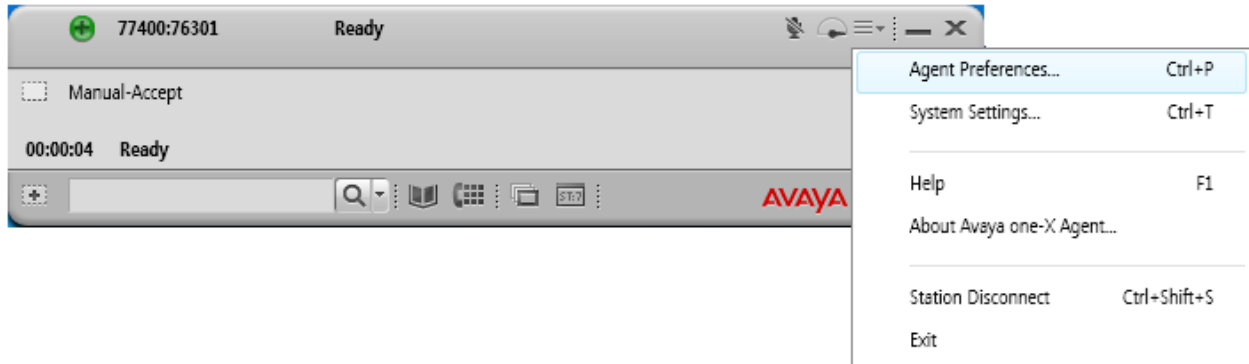
The DN3222 USB Cable is automatically detected by one-X Agent. In the **Agent Preferences** window, click on **Audio** and then select the **Advanced** tab. Set the **Playback Device** and **Record Device** fields to *Headset Earphone (Addasound DN3222 Series)* and *Headset Microphone (Addasound DN3222 Series)*, respectively, as shown below. Click the **Background Noise Test** button to determine the normal background noise levels at the location.

After clicking the **Background Noise Test** button, the following window is displayed. Click **Test**. Once the test is completed, click **Close**. Click **OK** in the **Audio → Advanced** tab.
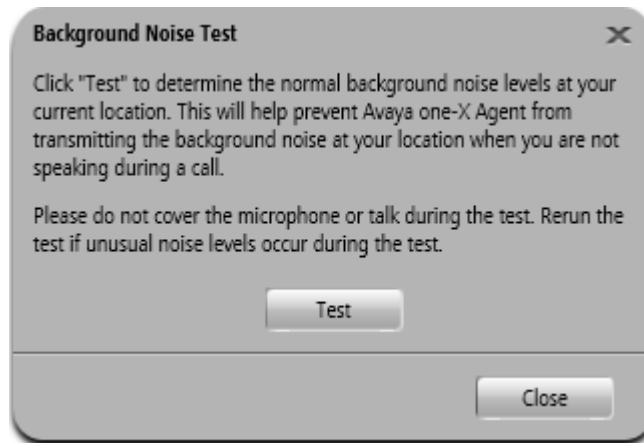
7. Install ADDASOUND Crystal 2731/2732 Headsets and ADDASOUND DN3222 USB Cable

Connect the Crystal 2731/2732 Headset to the DN3222 USB Cable, and then connect the DN3222 USB Cable to a USB port on the desktop PC running one-X Agent. Refer to **[3]** and **[4]** for additional information.

8. Verification Steps

This section provides the tests that can be performed to verify proper installation and configuration of the Crystal 2731/2732 Headsets and DN3222 USB Cable with one-X Agent.

1. Start the one-X Agent application.
2. Place an incoming call to one-X Agent from any local phone.
3. Answer the call via one-X Agent.
4. Verify two-way talk path between the headset and phone.
5. Disconnect the call from one-X Agent
6. Verify that the call is properly disconnected.

9. Conclusion

These Application Notes describe the configuration steps required to integrate the ADDASOUND Crystal 2731/2732 Headsets and ADDASOUND DN3222 USB Cable with Avaya one-X® Agent. All test cases were completed successfully with observations noted in **Section 2.2**.

10. Additional References

This section references the Avaya 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 8.0, Issue 2, November 2018.*
[2] *Installing and Configuring Avaya one-X® Agent*, Release 2.5.4, Issue 1, December 2013.

The following ADDASOUND documentation is available with the product.

[3] *ADDASOUND DN3222 User Guide*, available with product.
[4] *ADDASOUND Headset Operation Guide,* available with product.