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Avaya Solution & Interoperability Test Lab

Application Notes for JPL Gateway and JPL-Element-X500 DECT headset with Avaya one-X® Agent - Issue 1.1

Abstract

These Application Notes describe the configuration steps required to integrate the JPL Gateway and JPL-Element-X500 DECT headset with Avaya one-X® Agent. The JPL-Element-X500 DECT headset connects wirelessly to its base which in turn connects to the PC via USB cable. The JPL Gateway is a collection of programs that enable remote call control with JPL headset and Avaya one-X® Agent. With a JPL headset connected via its base to the USB interface on a PC, users can directly answer, end, mute/unmute calls and adjust speaker volume using buttons on the base or roll the volume switch on the JPL headset.

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 JPL-Element-X500 DECT headset together with JPL Gateway software allows connection and call control with Avaya one-X® Agent (hereafter referred to as one-X Agent) via USB cable from the base to a PC. The JPL Gateway is a collection of programs that enable remote call control with JPL headset and one-X Agent. With a JPL headset connected via its base to the USB interface on a PC, users can directly answer, end, mute/unmute calls and adjust volume using button on the JPL headset or the base.

2. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability testing. The feature testing focused on placing calls with one-X Agent, 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. Call hold and resume, mute and un-mute are also tested.

The serviceability testing focused on verifying the usability of the JPL headset solution after restarting the one-X Agent, restarting the PC, reconnecting the USB cable of the base to the PC and moving the headset out of DECT range.

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 these DevConnect Application Notes 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 these Application Notes, the interface between Avaya systems and endpoints utilized enabled capabilities of TLS/SRTP.

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.

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 button on the JPL headset and the soft button on one-X Agent.
- Using the soft button on one-X Agent to hold and resume the audio.
- Using the volume switch on the JPL headset or buttons on the base to adjust the speaker volume.
- Using the mute button on the JPL headset or base and the soft button on one-X Agent to mute and un-mute the audio.
- Verifying incoming call notification on JPL headset base.
- Verifying call ended notification on JPL headset base.

The serviceability testing focused on verifying the usability of the JPL headset solution after restarting the one-X Agent, restarting the PC, reconnecting the USB cable to the PC and moving the headset out of DECT range.

2.2. Test Results

All test cases passed with the following observations:

- There is no mute synchronization between one-X Agent and the JPL-Element-X500 headset solution i.e., muting and unmuting the call via the headset or the base 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 JPL-Element-X500 solution does properly mute and unmute the audio.

2.3. Support

For support on this JPL headset solution, contact JPL at:

- Phone: +44(0)1258 820100
- Website: http://www.jpltele.com/

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify the JPL-Element-X500 DECT headset solution. The configuration consists of an Avaya Aura® Communication Manager running on a virtualized server with an Avaya G450 Media Gateway providing connectivity to the PSTN via a simulated public trunk (not shown). Avaya Aura® Media Server provides the audio media processing. Avaya Aura® Messaging was used as the voicemail system. The JPL Gateway software was installed on the PC. The JPL headsets are connected wirelessly via DECT to the base, and then USB cable from base to the PC.
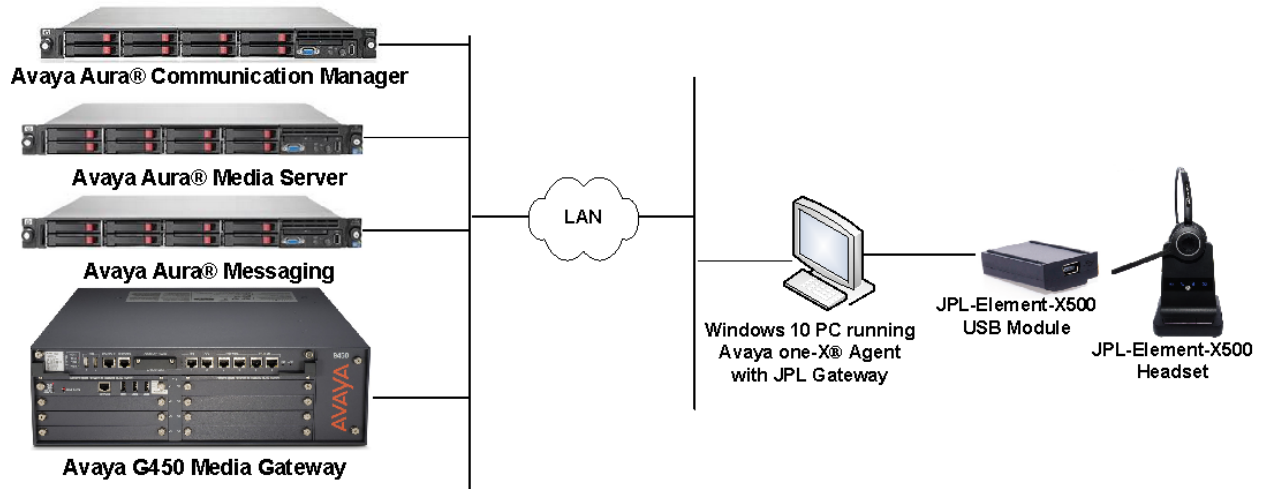
Figure 1: Test Configuration

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	R018x.00.0.822.0 - 24826
Avaya Aura® Media Server	8.0.0.150
Avaya Aura® Messaging	7.0 SP0 Patch 2
Avaya one-X® Agent running on Windows 10 Pro	2.5.12 (H.323)
JPL-Element-X500 with USB Module	0240
JPL Gateway	2.6.1

5. Configure Avaya Aura® Communication Manager

This section covers the station configuration for 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 one-X Agent. Set the **Type** field to the station type to be emulated. In this example, *9641G* was used. Set the **Port** field to *IP* and configure a **Security Code**, which will be used as the password by 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: 9641G                     Security Code: xxxxxx           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
               Location:             Time of Day Lock Table:
            Loss Group: 19      Personalized Ringing Pattern: 1
                                        Message Lamp Ext: 10003
           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 one-X Agent to log in as an Automatic Call Distribution (ACD) agent.

```
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
```
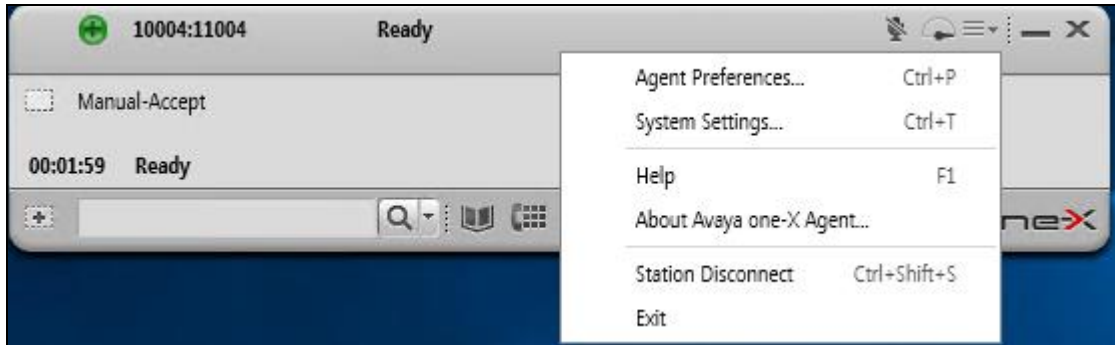
6. Configure Avaya one-X® Agent

Before configuring the one-X Agent, the headset has to be configured and provisioned as in **Section 7** first. After logging into one-X Agent, click on ☰▾ and then select **Agent Preferences** as shown below.

In the **Agent Preferences** window, click on **Audio** and then select the **Advanced** tab as shown below. Check that **Playback Device** and **Record Device** fields display *X-500U* in parentheses.
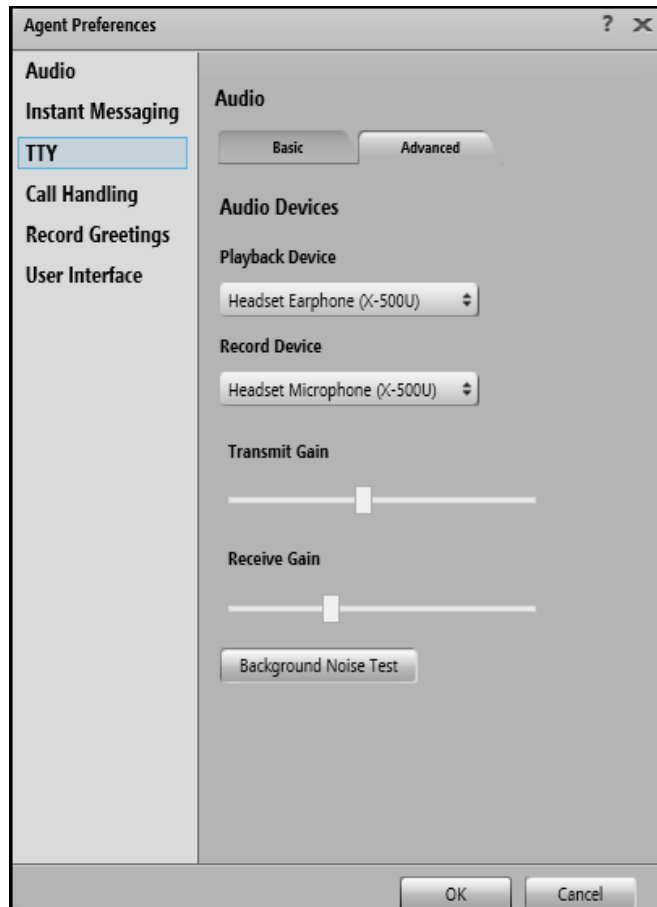
7. Configure JPL headset solutions

This section covers the steps to integrate JPL-Element-X500 DECT headset with one-X Agent, including:

- Installing the JPL Gateway software
- Connect the JPL headset

Note: After successfully performing this procedure, the JPL headset will be detected in one-X Agent as described in **Section 6**.
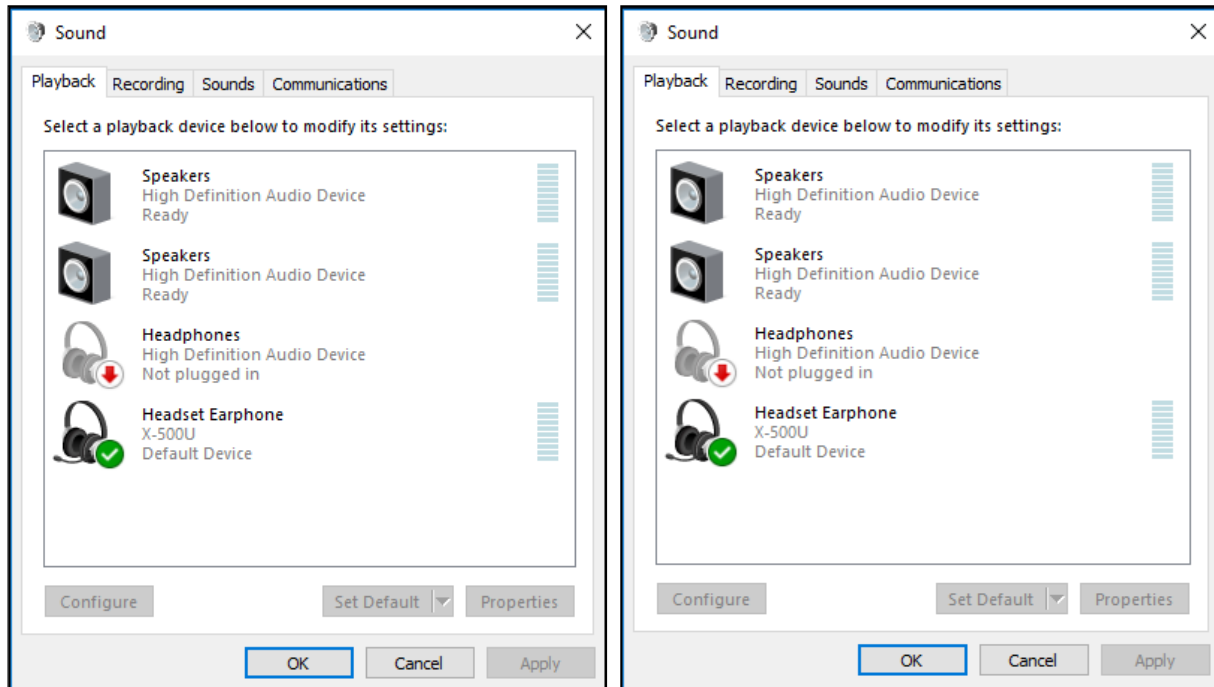
7.1. Installing the JPL Gateway Software

JPL Gateway software can be obtained from JPL portal at http://www.jpltele.com/jpl-gateway.aspx. Installation of the software is done through executing the exe file and following the prompt.

7.2. Connect the JPL headset

Prior to starting and configuring one-X Agent, plug the JPL X500 USB Cartridge Module into the base of JPL-Element-X500. Connect a USB cable between the base and the USB port of the PC; otherwise, one-X Agent will not detect the headset. Dock the headsets to the base and plug the base to the power supply with the adapter provided. The device drivers will automatically be installed, and the primary headset will be registered with the base.

Ensure that the **Sound** properties under Windows 10 Control Panel are set properly. Verify that the JPL-Element-X500 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.

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Open the JPL Gateway program installed on the PC. Select the **Device** tab on the top menu and **Device ready for use** is shown on right.

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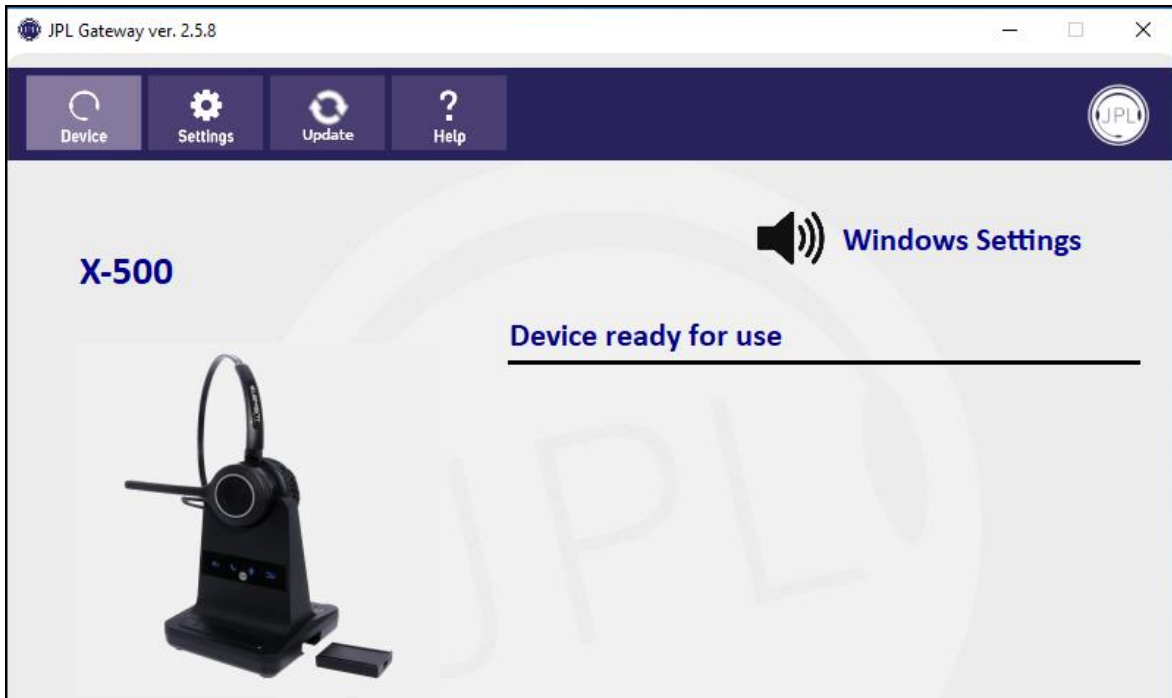
8. Verification Steps

This section verifies that the JPL-Element-X500 solution has been successfully integrated with one-X Agent PC.

1. Verify that the JPL-Element-X500 has been successfully connected for use with one-X Agent. From the **JPL Gateway** program, select the **Device** tab. Verify that the **Device ready for use** and is tick green ✅ for Avaya one-X Agent in **Ready** state.
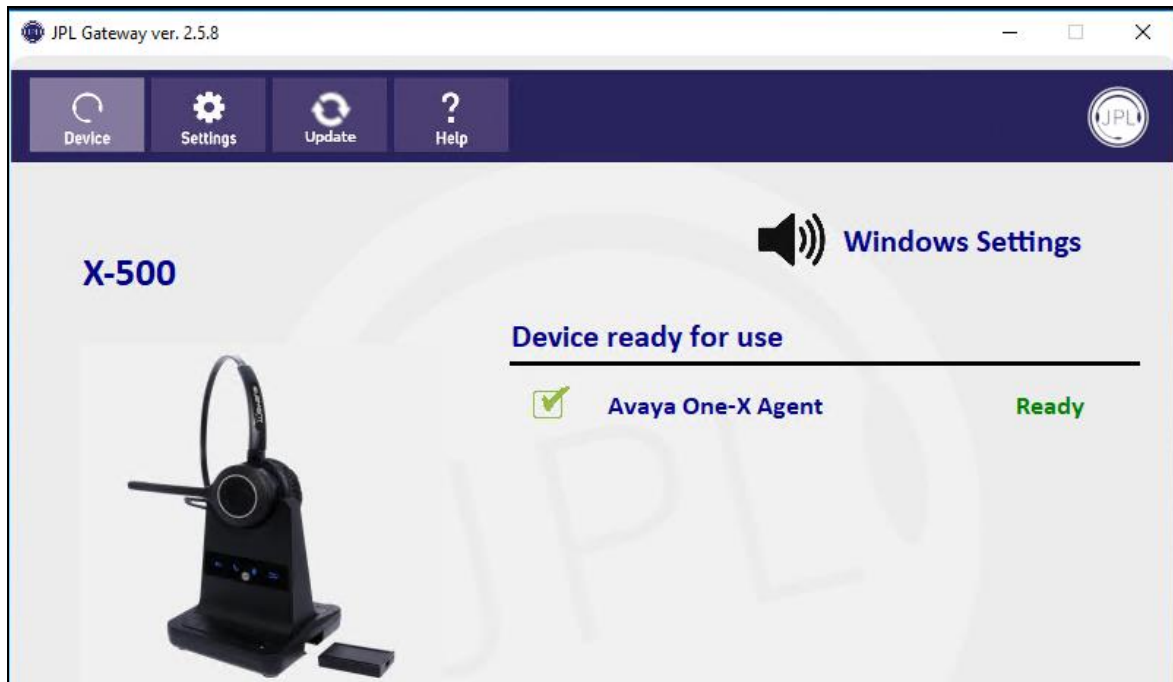
2. Note that the **Ready** state does not mean one-X Agent is logged in. The one-X Agent application can be just running without the user being logged in. Once the JPL-Element-X500 is connected to one-X Agent, verify that incoming and outgoing calls can be established with two-way audio to the headset. For incoming and outgoing call, connect to the call by pressing the call button on the headset and rolling the volume switch from the headset or the base button.
3. End the call by pressing the same call button on the headset.
4. Verify that the call is properly disconnected.

9. Conclusion

These Application Notes describe the configuration steps required to integrate JPL Gateway and JPL-Element-X500 DECT headset with Avaya one-X® Agent. All test cases were completed with observations noted in **Section 2.2**.

10. Additional References

This section references the Avaya and JPL 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 8.0.1, Issue 3, December 2018.
[2] *Using Avaya one-X® Agent, Release 2.5.4 (H.323)*, Issue 1.0, December 2013.

The following JPL documentation can be found at http://www.jpltele.com/.
[3] *JPL-Element-X500 User Guide.*