



Application Notes for Jabra Direct, Jabra Engage 65 and Jabra Engage 75 Stereo and Mono USB/DECT headset with Avaya one-X® Communicator - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the Jabra Direct, Jabra Engage 65 and Jabra Engage 75 Stereo and Mono USB/DECT headsets with Avaya one-X® Communicator. The Jabra Engage USB/DECT headsets connect wirelessly to its base which in turn connects to the PC via USB cable. The Jabra Direct is a collection of programs that enable remote call control with Jabra headset and Avaya one-X® Communicator. With a Jabra headset connected via its base to the USB interface on a PC, users can directly answer, end, mute/unmute calls and adjust volume using buttons on the Jabra headset or the base.

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 Jabra Engage 65 and Jabra 75 Stereo and Mono USB/DECT headsets together with Jabra Direct software allow connection and call control with Avaya one-X® Communicator (hereafter referred to as one-X Communicator) via USB cable from the base to a PC. The Jabra Direct is a collection of programs that enable remote call control with Jabra headset and one-X Communicator. With a Jabra 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 Jabra headset or the base.

The Jabra Direct includes 2 core functions, which were exercised during the compliance testing:

- **Readiness Status:** Status of your device and softphone via a dashboard.
- **Personalized Headset:** This is done via settings, firmware update and call control.

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 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. Call hold and resume, mute and un-mute are also tested.

The serviceability testing focused on verifying the usability of the Jabra headset solution after restarting the one-X Communicator, 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 Jabra headset and the soft button on one-X Communicator.
- Using the call button on the Jabra headset and the soft button on one-X Communicator to hold and resume the audio.
- Using the volume buttons on the Jabra headset to adjust the audio volume.
- Using the mute button on the Jabra headset and the soft button on one-X Communicator to mute and un-mute the audio.
- Verifying incoming call notification on Jabra headset base.
- Verifying call ended notification on Jabra headset base.

The serviceability testing focused on verifying the usability of the Jabra headset solution after restarting the one-X Communicator, 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 successfully.

2.3. Support

For support on this Jabra headset solution, contact Jabra Technical Support at:

- Phone: +1-866-697-8757
- Website: <http://www.jabra.com/Support>
- Email: JabraSupport.US@jabra.com

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify the Jabra Direct Engage 65 and Jabra Engage 75 Stereo and Mono USB/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. Avaya Aura® Messaging was used as the voicemail system. The Jabra Direct software was installed on the PC. The Jabra headsets are connected wirelessly via DECT to the base, and then USB cable from base to the PC.

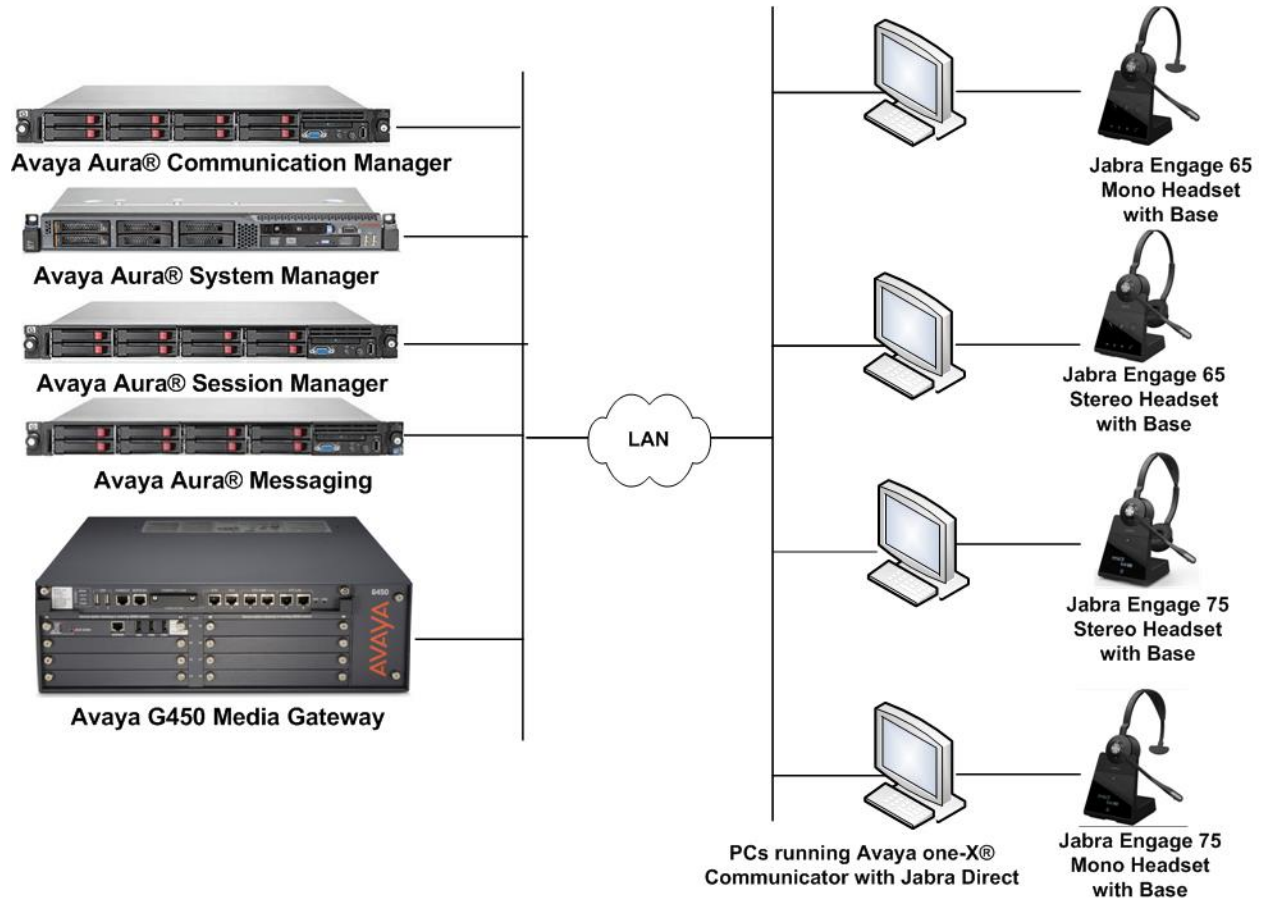


Figure 1: Test Configuration

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	7.1.3.0.0.532.24515
Avaya Aura® Messaging	7.0 SP0 Patch 2
Avaya Aura® System Manager	7.1.3.0 Build No. - 7.1.0.0.1125193
Avaya Aura® Session Manager	7.1.3.0.713014
Avaya one-X® Communicator running on Windows 10 Pro	6.2.12.04-SP12 Patch 10 (H.323)
Jabra Engage 65 Stereo and Mono USB/DECT headsets with Base	1.9.13 1.9.13 (Service Pack 2)
Jabra Engage 75 Stereo and Mono USB/DECT headsets with Base	1.9.13 1.9.13 (Service Pack 2)
Jabra Direct	3.12

5. Configure Avaya Aura® Communication Manager

Avaya one-X® Communicator can be login as a H.323 user or SIP softphone user. The information provided in this section covers the H.323 station configuration and the verification of Communication Manager System Capacity for SIP station. The configuration of SIP station will be administered on Session Manager via the System Manager in the next section.

It is implied a working Communication Manager system is already in place, including dial plans and SIP trunks to a Session Manager. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 11**.

5.1. Verify System Capacity

Using Avaya Site Administrator Emulation Mode, use the **display system-parameters customer-options** command to determine the values of user license for **Maximum Off-PBX Telephones** allowed in the system. One OPS station is required per SIP User.

```
display system-parameters customer-options                               Page 1 of 12
                                OPTIONAL FEATURES

G3 Version: V17                                                         Software Package: Enterprise
Location: 2                                                             System ID (SID): 1
Platform: 28                                                            Module ID (MID): 1

                                USED
Platform Maximum Ports: 65000 381
Maximum Stations: 41000 192
Maximum XMOBILE Stations: 41000 0
Maximum Off-PBX Telephones - EC500: 41000 1
Maximum Off-PBX Telephones - OPS: 41000 33
Maximum Off-PBX Telephones - PBFMC: 41000 0
Maximum Off-PBX Telephones - PVFMC: 41000 0
Maximum Off-PBX Telephones - SCCAN: 0 0
Maximum Survivable Processors: 313 2

(NOTE: You must logoff & login to effect the permission changes.)
```

On **Page 2** of the **system-parameters customer-options form**, verify that the number of **Maximum Administered SIP Trunks** supported by the system is sufficient.

If there is insufficient capacity in either one of these parameters, contact an authorized Avaya sales representative.

```
display system-parameters customer-options                               Page 2 of 12
                                OPTIONAL FEATURES

IP PORT CAPACITIES                                                    USED
    Maximum Administered H.323 Trunks: 12000 90
    Maximum Concurrently Registered IP Stations: 18000 6
    Maximum Administered Remote Office Trunks: 12000 0
Maximum Concurrently Registered Remote Office Stations: 18000 0
    Maximum Concurrently Registered IP eCons: 414 0
    Max Concur Registered Unauthenticated H.323 Stations: 100 0
    Maximum Video Capable Stations: 41000 0
    Maximum Video Capable IP Softphones: 18000 3
    Maximum Administered SIP Trunks: 24000 28
Maximum Administered Ad-hoc Video Conferencing Ports: 24000 0
    Maximum Number of DS1 Boards with Echo Cancellation: 522 0

(NOTE: You must logoff & login to effect the permission changes.)
```

5.2. Configure H.323 station

Use the **add station** command to create a station for Avaya one-X® Communicator. On **Page 1**, set the **Type** field to the station type to be emulated. In this example, *9611G* was used. Set the **Port** field to *IP* and configure a **Security Code**, which will be used as the password by Avaya one-X® Communicator to log in. Set the **IP Softphone** field to *y*.

```
add station 10001                                     Page 1 of 5
                                                    STATION
Extension: 10001                                     Lock Messages? n          BCC: 0
  Type: 9611G                                       Security Code: xxxxxx     TN: 1
  Port: S00002                                       Coverage Path 1:         COR: 1
  Name: one-XC                                       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: 10001
  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
```


6. Configure Avaya Aura® Session Manager

This section describes aspects of the Session Manager configuration required for Avaya one-X Communicator to register. It is assumed that the Domains, Locations, SIP entities, Entity Links, Routing Policies, Dial Patterns and Application Sequences have been configured where appropriate for Communication Manager, Session Manager and Aura Messaging.

Session Manager is managed via System Manager. Using a web browser, access **https://<ip-addr of System Manager>/SMGR**. In the **Log On** screen, enter appropriate **User ID** and **Password** and click the **Log On** button.

Recommended access to System Manager is via FQDN.
[Go to central login for Single Sign-On](#)

If IP address access is your only option, then note that authentication will fail in the following cases:

- First time login with "admin" account
- Expired/Reset passwords

Use the "Change Password" hyperlink on this page to change the password manually, and then login.

Also note that single sign-on between servers in the same security domain is not supported when accessing via IP address.

This system is restricted solely to authorized users for legitimate business purposes only. The actual or attempted unauthorized access, use, or modification of this system is strictly prohibited.

Unauthorized users are subject to company disciplinary procedures and or criminal and civil penalties under state, federal, or other applicable domestic and foreign laws.

The use of this system may be monitored and recorded for administrative and security reasons. Anyone accessing this system expressly consents to such monitoring and recording, and is advised that if it reveals possible evidence of criminal activity, the evidence of such activity may be provided to law enforcement officials.

All users must comply with all corporate instructions regarding the protection of information assets.

User ID:

Password:

[Change Password](#)

Supported Browsers: Internet Explorer 11.x or Firefox 48.0, 49.0 and 50.0.

6.1. Verify Session Manager Ports for SIP endpoint registration

Each Session Manager Entity must be configured so that the SIP Endpoint can register to it. From the home page, under **Elements**, click **Routing** → **SIP Entities** (not shown) and select the Session Manager entity used for registration. Make sure that **TCP**, **UDP** and **TLS** entries are present. During the compliance test, one-X Communicator registered to the Session Manager using TLS transport.


Listen Ports	Protocol	Default Domain	Endpoint	Notes
<input type="checkbox"/> 5060	TCP	sglab.com	<input checked="" type="checkbox"/>	
<input type="checkbox"/> 5060	UDP	sglab.com	<input checked="" type="checkbox"/>	
<input type="checkbox"/> 5061	TLS	sglab.com	<input checked="" type="checkbox"/>	

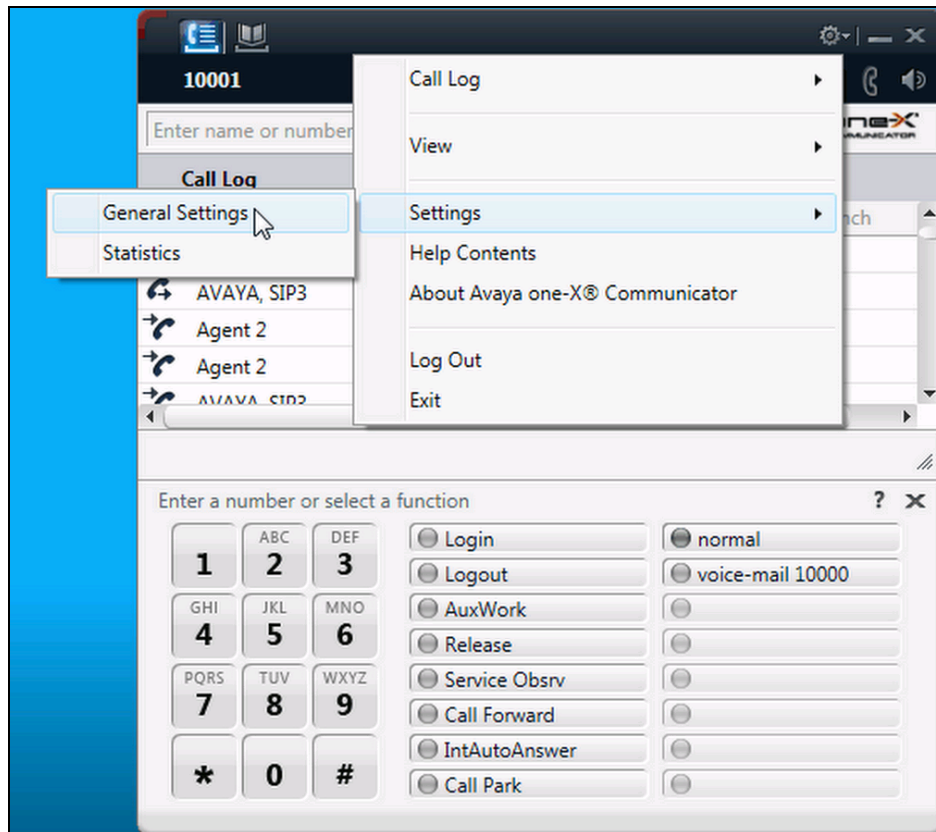
Select : All, None

6.2. Add SIP User

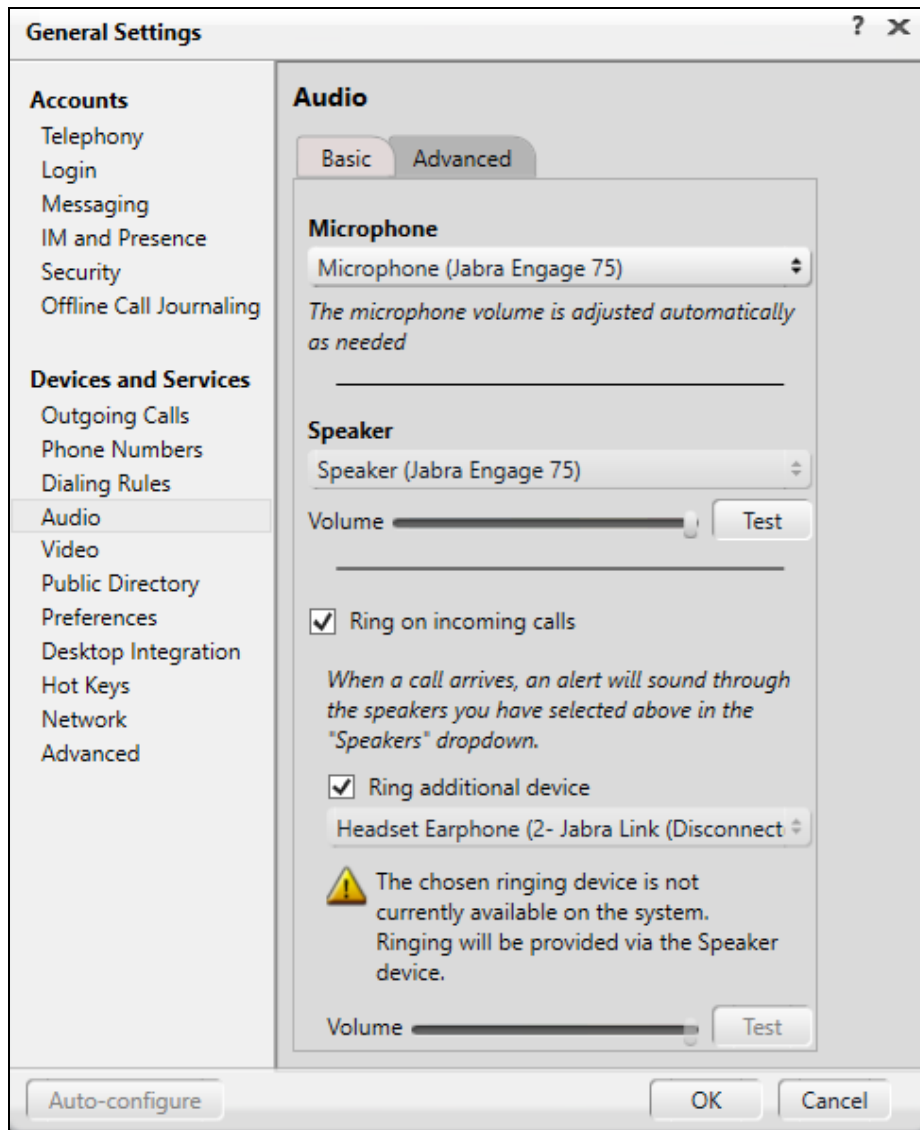
The addition of SIP User will not be detailed here. Refer to details in adding user in the administration document for Avaya Aura® Session Manager in [4].

7. Configure Avaya one-X® Communicator

Before configuring the one-X Communicator, the headset has to be configured and provisioned as in **Section 8** first. After logging into Avaya one-X® Communicator, select  → **Settings** → **General Settings** as shown below.



The *Jabra Engage 65* or *Jabra Engage 75* will appear as under the **Basic** tab of the **Audio** settings depending on the headset used. Check that this device is detected under the **Microphone** and **Speaker** fields as shown below.



8. Configure Jabra Engage 65 and 75 headset solutions

This section covers the steps to integrate Jabra Engage 65 and Jabra Engage 75 headsets with one-X Communicator, including:

- Installing the Jabra Direct software
- Connect the Jabra headset
- Configuring Jabra headset with Jabra Direct

Note: After successfully performing this procedure, the Jabra headset will be detected in one-X Communicator as described in **Section 7**.

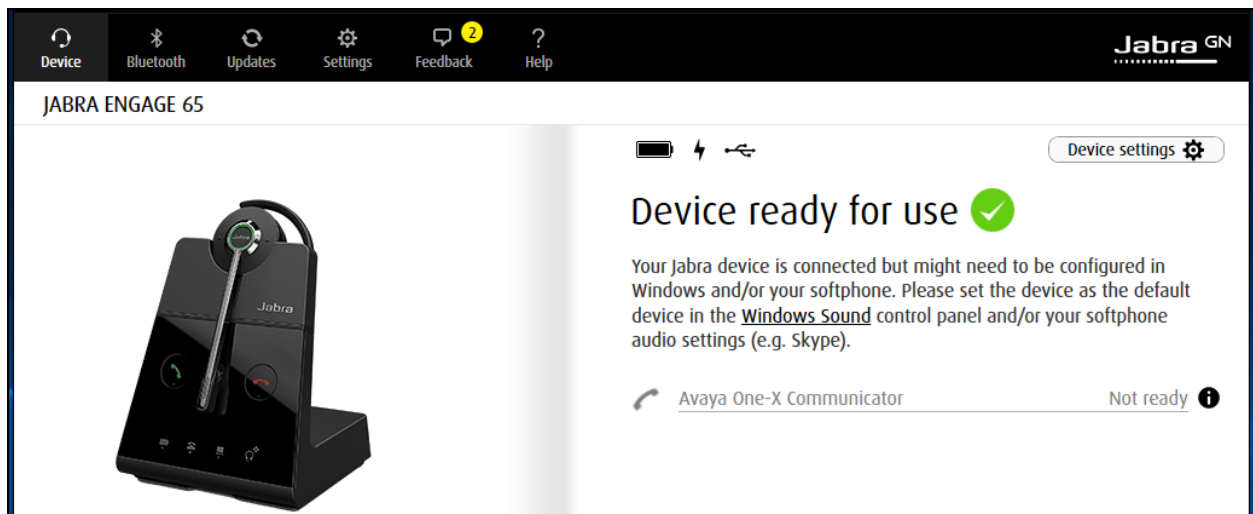
8.1. Installing the Jabra Direct Software

Jabra Direct software can be obtained from Jabra support portal at <https://www.jabra.com/support/>. Installation of the software is done through executing the setup file and following the prompt.


8.2. Connect the Jabra headset

Plug the Jabra Engage 65 and Jabra Engage 75 base to the USB port of the PC. Dock the headsets to the base. Plug the base to the power supply with the adapter provided. The device drivers will automatically be installed. The primary headset will be registered with the base.

Open the Jabra Direct program installed on the PC. Select the **Device** tab on the top menu and **Device ready for use** is shown with a **green tick** on the right pane for the Jabra Engage 65 or 75 depending on the headset used. The **Avaya one-X Communicator** will be greyed out as shown in **Not Ready** state. The Avaya one-X Communicator will be in ready state only when the application is running but not necessary logon.

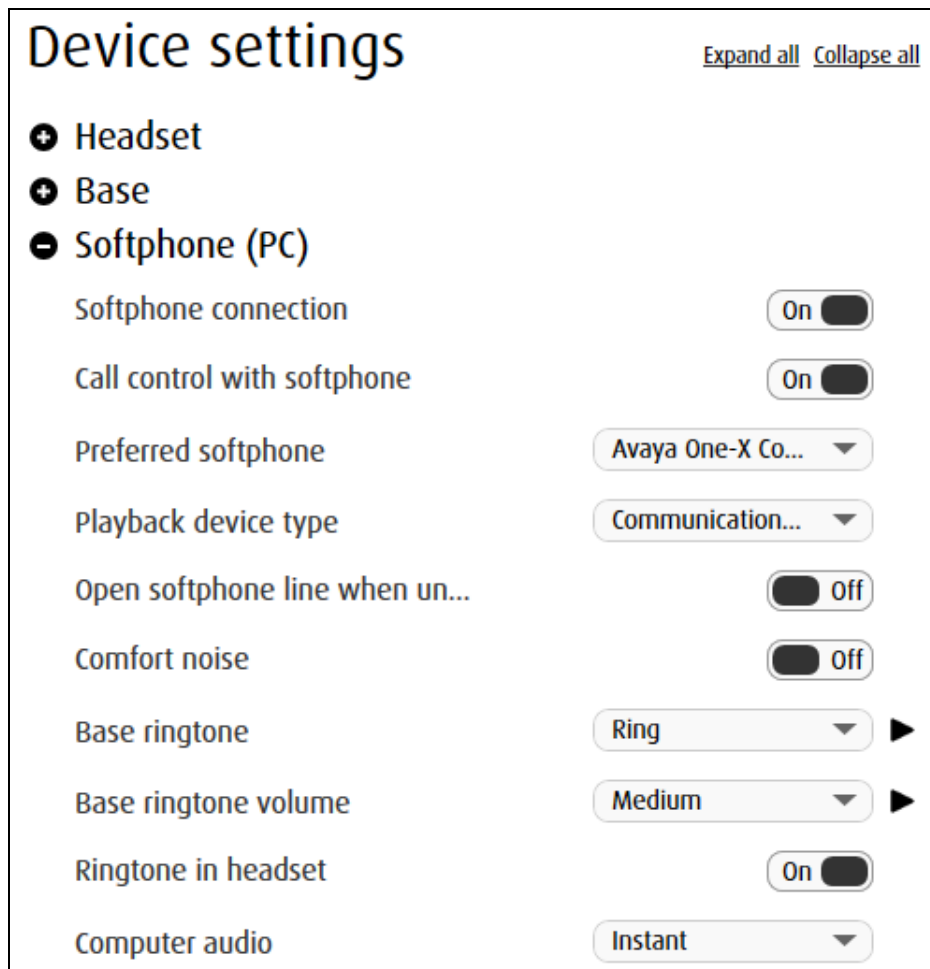


8.3. Configuring Jabra headset with Jabra Direct

On the default screen (**Device** tab), click on **Device settings**  near the top right pane (not shown). Scroll to the lower portion of the screen and expand the **Softphone (PC)**. Assuming one-X Communicator is setup and login, set the option for the following:

- **Preferred softphone:** *Avaya One-X Communicator* [as opposed to Standard Softphone]
- **Ringtone in headset:** *On* [optional for ringtone to be played on headset]
- **Computer audio:** *Manual/Delayed/Instant/Always* [depending how audio is to be received from computer]

The rest of the settings can be left as default. The **Headset** and **Base** Device settings are left as default but can be adjusted for personal preferences. Click **Apply** (not shown) to confirm the settings and the base will reboot.




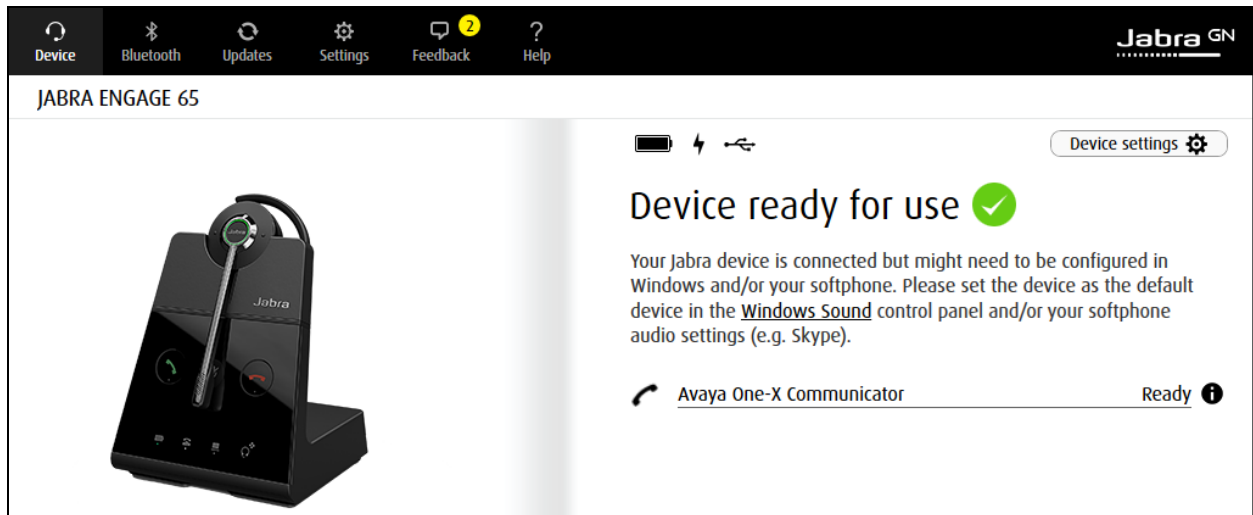
Device settings [Expand all](#) [Collapse all](#)

- ⊕ Headset
- ⊕ Base
- ⊖ **Softphone (PC)**
 - Softphone connection On
 - Call control with softphone On
 - Preferred softphone Avaya One-X Co... ▾
 - Playback device type Communication... ▾
 - Open softphone line when un... Off
 - Comfort noise Off
 - Base ringtone Ring ▾ ▶
 - Base ringtone volume Medium ▾ ▶
 - Ringtone in headset On
 - Computer audio Instant ▾

9. Verification Steps

This section verifies that the Jabra solution has been successfully integrated with one-X Communicator PC.

1. Verify that the Jabra headset has been successfully connected for use with one-X Communicator. From the **Jabra Direct** program, select the **Device** tab. Verify that the **Device ready for use** is tick green  as below.



2. Verify that the Avaya one-X Communicator is shown in **Ready** status. Note that the Ready status does not mean Avaya one-X communicator is logged in. The application can be just running without the user being logged in. Once the Jabra headset is connected to one-X Communicator, verify that incoming and outgoing calls can be established with two-way audio to the headset. For incoming calls, answer the call by pressing the call button on the headset or the answer button from the base. Refer to [5] for Jabra Engage 65 User Manual and [6] for Jabra Engage 75 User Manual for more information on the buttons.
3. End the call by pressing the same call button on the headset or the end call button on the base.
4. Verify also that Jabra Headset can remotely control call functions such as answer, mute/un-mute, hold/resume and end the call. Similarly, such call control functions could be done on the base except for hold/resume.

10. Conclusion

These Application Notes describe the configuration steps required to integrate Jabra Direct, Jabra Engage 65 and Engage 75 Stereo and Mono USB/DECT headsets with Avaya one-X® Communicator. All test cases were completed successfully.

11. Additional References

This section references the Avaya and Jabra 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 7.1.3, Issue 5, February 2018.
- [2] *Administering Avaya one-X® Communicator*, Release 6.2 FP4, October 2014.
- [3] *Implementing Avaya one-X® Communicator*, Release 6.2 FP4, October 2014.
- [4] *Administering Avaya Aura® Session Manager*, Release 7.1.2, Issue 4, March 2018.

The following Jabra documentation can be found at <http://www.jabra.com>.

- [5] *Jabra Engage 65 User Manual*.
- [6] *Jabra Engage 75 User Manual*.

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