



Avaya Solution & Interoperability Test Lab

Application Notes for GN Netcom Jabra LINK 280 USB Adapter and Jabra PC Suite with Avaya one-X® Communicator and Avaya one-X® Agent - Issue 1.0

Abstract

These Application Notes describe a compliance-tested configuration comprised of a GN Netcom Jabra LINK 280 USB Adapter and Jabra PC Suite with Avaya one-X® Communicator and Avaya one-X® Agent.

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 compliance tested configuration using GN Netcom's Jabra LINK 280 USB Adapters and Jabra PC suite with Avaya one-X® Communicator and Avaya one-X® Agent. For this compliance test the Avaya one-X® clients, are connected to Avaya Aura™ Communication Manager and installed as standalone clients.

The Jabra LINK 280 USB Adapters feature Digital Signal Processing (DSP) technology. The processor filters the audio stream and to ensure good audio quality and noise protection. The LINK 280 USB Adapters support all corded Jabra QD (quick disconnect) Adapters. The Jabra PC Suite integrates with one-X® Communicator and one-X® Agent to provide basic call control functions such as answering or hanging up a call to the Jabra LINK 280 USB Adapter which is equipped with an inline control module.

1.1 Interoperability Compliance Testing

Avaya formal testing and Declaration of Conformity is provided only on the headsets/handsets/adapters that carry the Avaya brand or logo. Avaya may conduct testing of non-Avaya headsets/handsets/adapters to determine interoperability with Avaya phones. However, Avaya does not conduct the testing of non-Avaya headsets/handsets/adapters 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 Adapter will work with Avaya telephones or with a different generation of the same Avaya telephone.

Since there is no industry standard for handset interfaces, different manufacturers utilize different headsets/handsets/adapters interfaces with their telephones. Therefore, any claim made by a vendor that its product is compatible with Avaya telephones does not equate to a guarantee that the headsets/handsets/adapters will provide adequate safety protection or audio quality.

The interoperability compliance test included both feature functionality and serviceability testing. The feature functionality testing focused on placing calls from Avaya one-X® Communicator and Avaya one-X® Agent clients equipped with the Jabra LINK 280 USB Adapter and verifying that good quality audio was sent and received. Additional features of the Jabra LINK 280 USB Adapter such as muting the microphone, adjusting incoming volume and the visual confirmation of feature activation were also verified. Intra-switch calls were made on the Communication Manager and inbound and outbound calls to and from a simulated PSTN.

The serviceability testing focused on verifying the usability of the Jabra LINK 280 USB Adapter after restarting Avaya one-X® Communicator or Avaya one-X® Agent and disconnecting and reconnecting the USB adapter from the desktop PC running the one-X endpoint.

1.2 Support

Technical support for the Avaya products can be obtained from Avaya. See the support link at support.avaya.com for contact information.

Technical support can be obtained for GN Netcom Jabra products from GN Netcom. See the support link at www.jabra.com/avaya for contact information.

2 Reference Configuration

Figure 1 illustrates the test configuration used during compliance testing to verify the GN Netcom solution. The configuration comprised of Avaya S8730 Server running Communication Manager and an Avaya G650 Media Gateway as the PBX. Avaya one-X Communicator and one-X Agent are installed on a desktop PC and are connected to the PBX via H.323. GN Netcom's Jabra PC Suite is installed on the desktop PC; the Jabra LINK 280 USB Adapters connect to a USB port on the PC running the Avaya one-X clients and Jabra PC Suite. The Jabra LINK 280 USB Adapters work with Jabra headsets equipped with a Quick Disconnect plug. A Jabra GN 2000 headset was used with the Jabra LINK 280 USB Adapter for this compliance test.

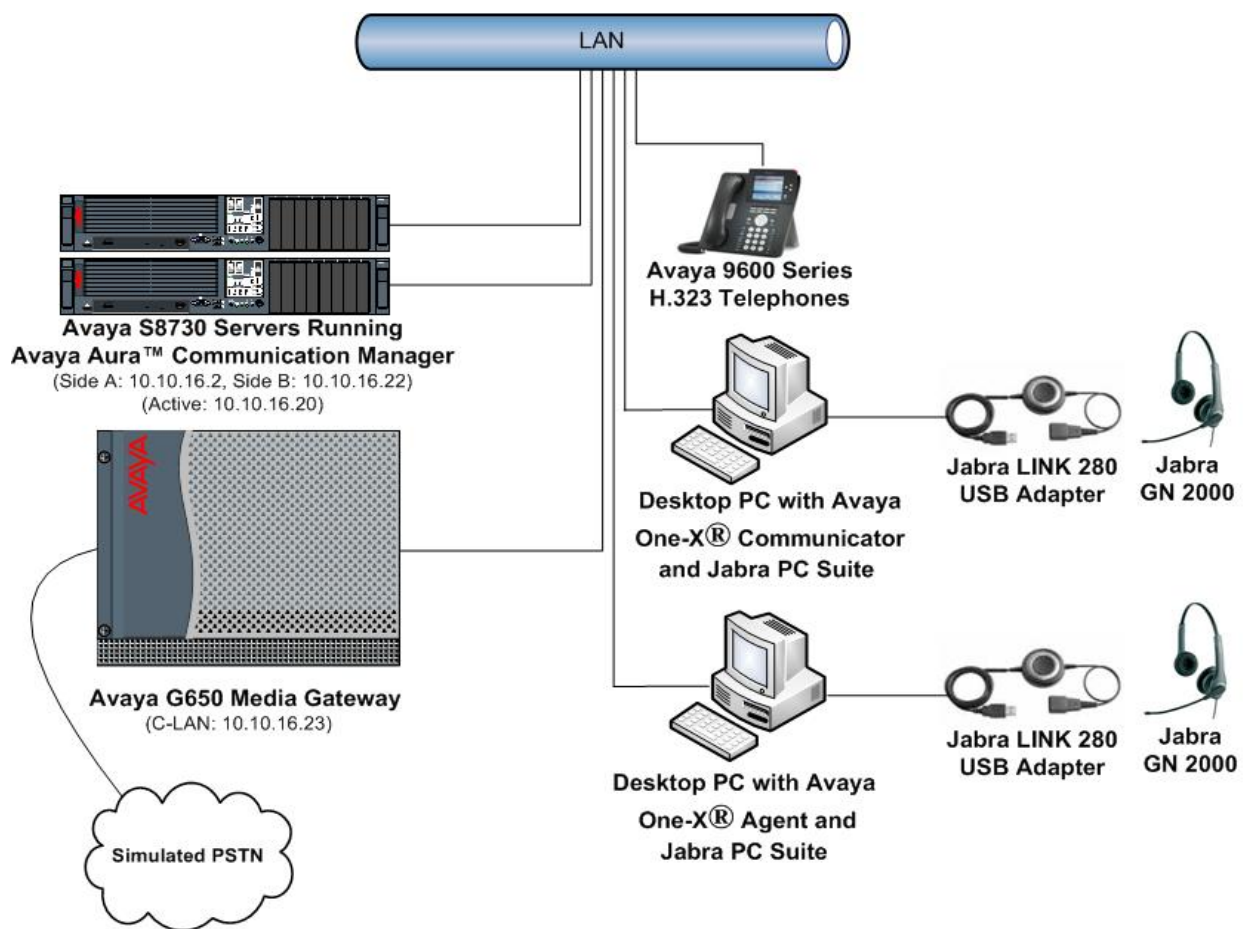


Figure 1: Network Topology

3 Equipment and Software Validated

All the hardware and associated software used in the compliance testing is listed below.

Equipment	Software Version
Avaya S8730 Server	Avaya Aura™ Communication Manager 5.2.1 (R015x.02.1.016.4)
Avaya G650 Media Gateway - CLAN TN799DP - IP Media Processor TN2602AP	HW16, FM38 HW08, FM55
Desktop PC, Windows XP Professional SP3	Avaya one-X® Communicator 5.2 (5.2.0.14)
Desktop PC, Windows XP Professional SP3	Avaya one-X® Agent 2.0 (2.0.016.3)
GN Netcom Jabra PC Suite	Release 2.2.6.0
GN Netcom Jabra LINK 280 USB Adapters	Firmware 2.5.0

Table 1: Hardware and Software Version Numbers

4 Configuration of Avaya Aura™ Communication Manager

These Application Notes assume that Communication Manager is configured and operational. This section focuses only on the configuration of the station and 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 compliance tests with the Jabra LINK 280 USB Adapter and Jabra PC suite were carried out with the default server settings for audio parameters. Please refer to [1] in Section 12. The configuration is performed via the System Access Terminal (SAT) on Communication Manager.

4.1 Configure Station for Avaya one-X® Communicator

To create a station to be used by Avaya one-X Communicator use the **add station n** command; where **n** is an available extension in the dial-plan. Set the **Type** field to the IP Telephone type that will be emulated. In this compliance test the type was set to **9630**. In the **Security Code** field enter a password to be used by Avaya one-X Communicator to log in. Ensure that **IP SoftPhone?** is set to **y**. All other fields can be left as default.

```
add station 6640                                     Page 1 of 5
                                                    STATION
Extension: 6640                                     Lock Messages? n          BCC: 0
  Type: 9630                                         Security Code: 6640      TN: 1
  Port: IP                                           Coverage Path 1: 1      COR: 1
  Name: 1XC Station                                  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: 6640
  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
                                                    Customizable Labels? y
```

4.2 Configure Station for Avaya one-X® Agent

To create a station to be used by Avaya one-X Agent use the **add station n** command; where **n** is an available extension in the dial-plan. Set the **Type** field to the IP Telephone type that will be emulated. In this compliance test the type was set to **9630**. In the **Security Code** field enter a password to be used by Avaya one-X Communicator to log in. ensure that **IP SoftPhone?** is set to **y**.

```
add station 6641                                     Page 1 of 5
                                                    STATION
Extension: 6641                                     Lock Messages? n                               BCC: 0
  Type: 9630                                       Security Code: 6641                          TN: 1
Port: IP                                           Coverage Path 1: 1                             COR: 1
Name: 1XA Station                                 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: 6641
  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
                                                    Customizable Labels? y
```

On **Page 2** of the station **Auto Answer** is set to **acd** to allow any agents logged in to the station to automatically answer Automatic Call Distribution (ACD) calls.

```
add station 6641                                     Page 2 of 5
                                                    STATION
FEATURE OPTIONS
  LWC Reception: spe                               Auto Select Any Idle Appearance? n
  LWC Activation? y                               Coverage Msg Retrieval? y
LWC Log External Calls? n                         Auto Answer: acd
  CDR Privacy? n                                  Data Restriction? n
  Redirect Notification? y                         Idle Appearance Preference? n
Per Button Ring Control? n                       Bridged Idle Line Preference? n
  Bridged Call Alerting? n                       Restrict Last Appearance? y
Active Station Ringing: single
                                                    EMU Login Allowed? n
  H.320 Conversion? n                            Per Station CPN - Send Calling Number?
  Service Link Mode: as-needed                    EC500 State: enabled
  Multimedia Mode: enhanced
  MWI Served User Type:
  AUDIX Name:
  Display Client Redirection? n
  Select Last Used Appearance? n
  Coverage After Forwarding? s
  Multimedia Early Answer? n
Remote Softphone Emergency Calls: as-on-local Direct IP-IP Audio Connections? y
Emergency Location Ext: 6641                     Always Use? n IP Audio Hairpinning? n
Precedence Call Waiting? 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.

```

add station 6641                                     Page 4 of 5
                                                    STATION

SITE DATA
  Room:                                             Adapter? n
  Jack:                                             Speaker? n
  Cable:                                           Mounting: d
  Floor:                                           Cord Length: 0
  Building:                                        Set Color:

ABBREVIATED DIALING
  List1: enhanced 1                               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 Number:

```

4.3 Configure Agent Login ID for Avaya one-X® Agent

To create an agent login ID 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 the agent login ID. Set **Auto Answer** to **station** so that the agent login ID will follow the auto answer configuration of the station it logs in to.

```

add agent-loginID 6642                             Page 1 of 2
                                                    AGENT LOGINID

  Login ID: 6642                                     AAS? n
  Name: 1XA Agent                                   AUDIX? n
  TN: 1                                             LWC Reception: spe
  COR: 1                                           LWC Log External Calls? n
  Coverage Path:                                   AUDIX Name for Messaging:
  Security Code:

  LoginID for ISDN/SIP Display? n
  Password: 6642
  Password (enter again): 6642
  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

```

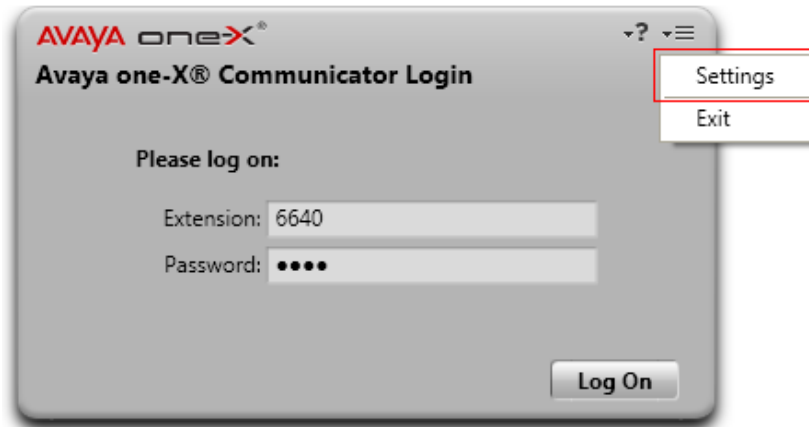
On **Page 2** under **SN** enter the required ACD skill group and under **SL** enter an associated skill level. In the example screen skill group **3** is used with a skill level of **1**

add agent-loginID 6642										Page 2 of 2					
										AGENT LOGINID					
Direct Agent Skill:										Service Objective? n					
Call Handling Preference: skill-level										Local Call Preference? n					
	SN	RL	SL		SN	RL	SL		SN	RL	SL		SN	RL	SL
1:	3		1		16:				31:				46:		
2:					17:				32:				47:		
3:					18:				33:				48:		
4:					19:				34:				49:		

5 Configure Avaya One-X® Communicator

These Application Notes assume that Avaya one-X Communicator is already configured and operational. This section focuses only on the configuration of the Jabra LINK 280 USB Adapter.

After starting Avaya one-X Communicator, select  → **Settings** from the menu as shown below.




In the resulting screen select **Audio** from the left panel and click the **Audio Tuning Wizard** button in the right panel.



The Jabra LINK 280 USB Adapter is automatically detected in Microsoft Windows XP as **Jabra LINK 280 USB**. Select this device as the **Playback Device** and **Recording Device** as shown below. Click **Next** and follow the remaining procedures to tune the audio.

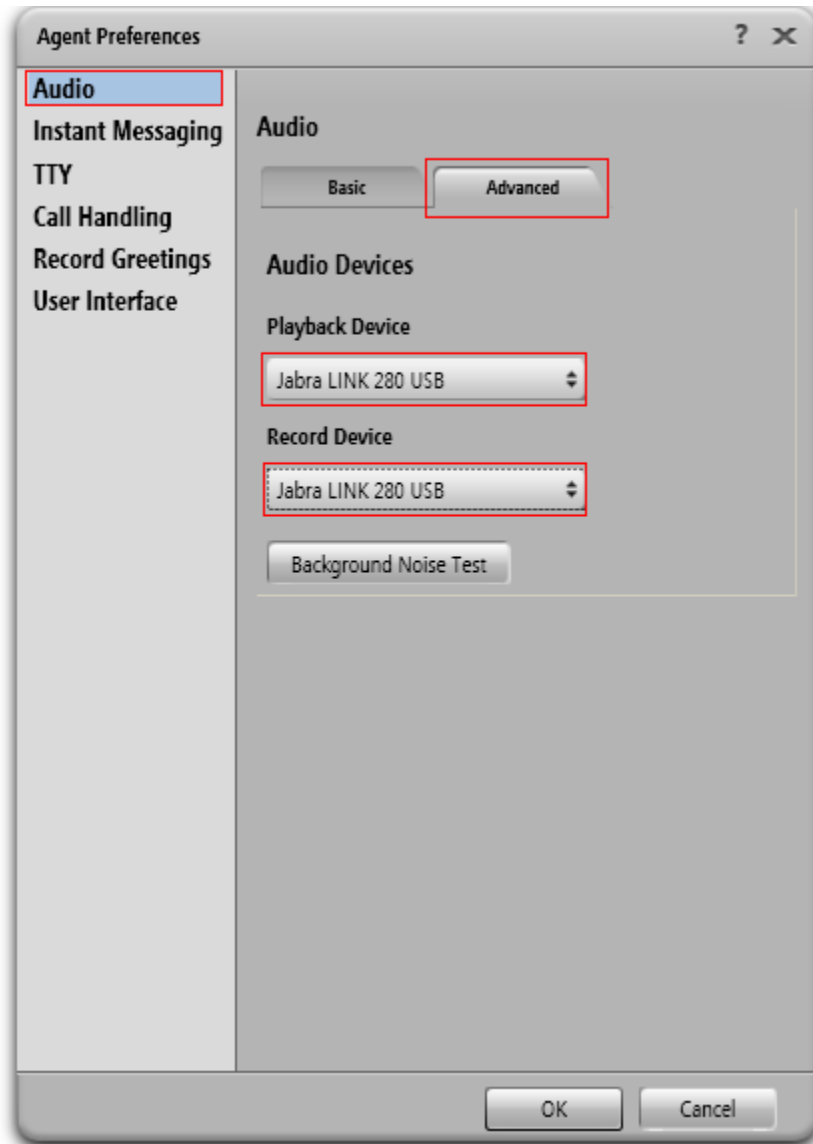


6 Configure Avaya One-X® Agent

These Application Notes assume that Avaya one-X Agent is already configured and operational. This section focuses only on the configuration of the Jabra LINK 280 USB Adapter. After logging into Avaya one-X Agent, select  → **Agent Preferences** from the menu as shown below.

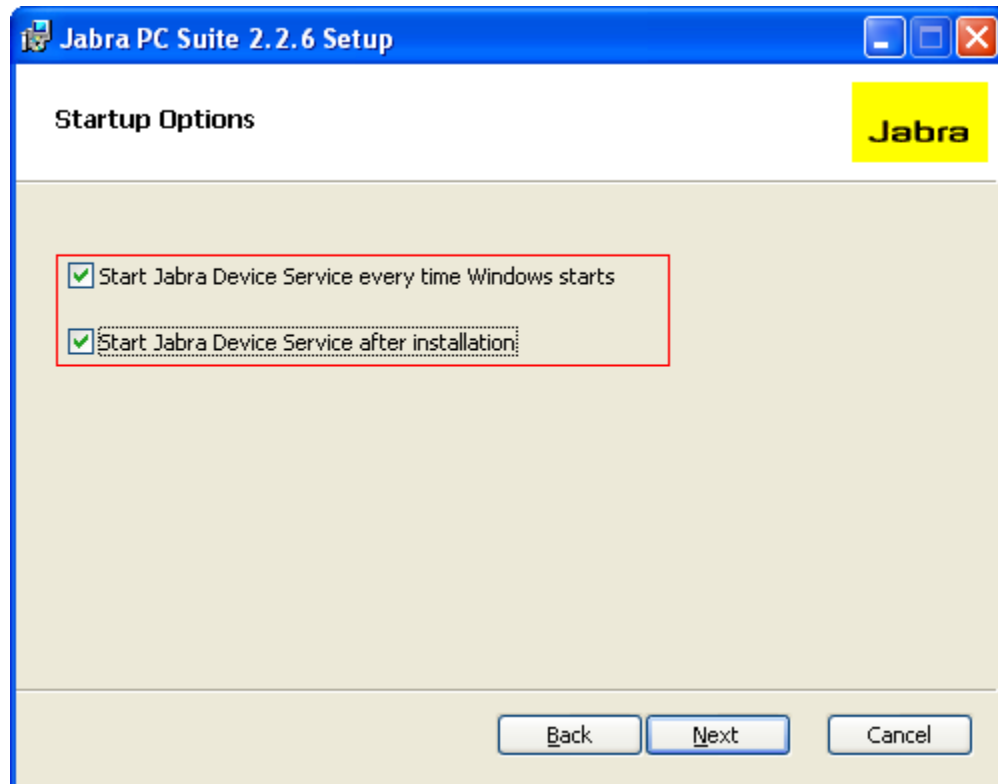


Select **Audio** from the left panel and click the **Advanced** tab. The Jabra LINK 280 USB Adapter is automatically detected in Microsoft Windows XP as **Jabra LINK 280 USB**. Select this device as the **Playback Device** and **Record Device** as shown below. Click **OK**.



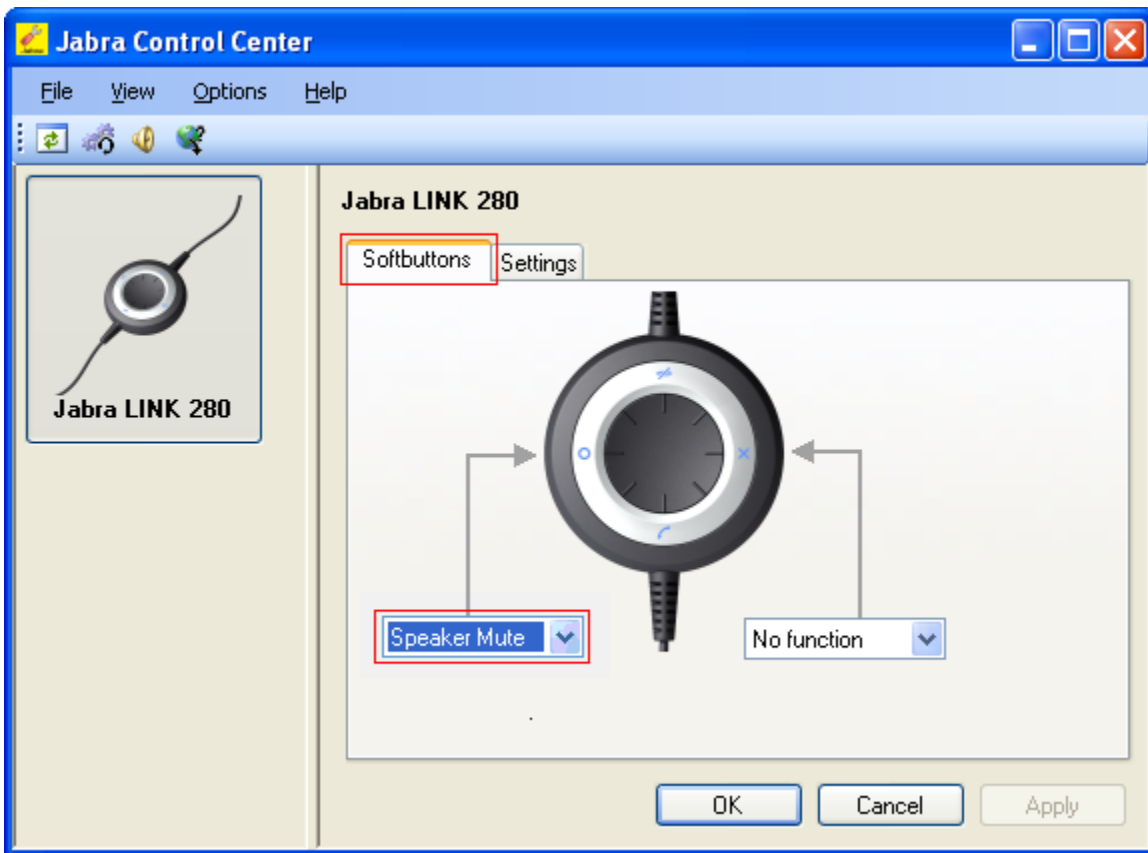
7 Configure Jabra PC Suite

Insert the CD-ROM that came with the Jabra product or download the Jabra PC Suite installer from www.jabra.com. Double-click on the **JabraPcSuiteSetup.exe** file to launch the installer. Click **Next** on the welcome screen and accept the end user license agreement. Click next until the **Startup Options** page is displayed, make sure the **Start Jabra Device Service every time Windows starts** and **Start Jabra Device Service after installation** check boxes are selected as shown below. Click **Next** and follow the remaining on screen instructions to complete the installation.

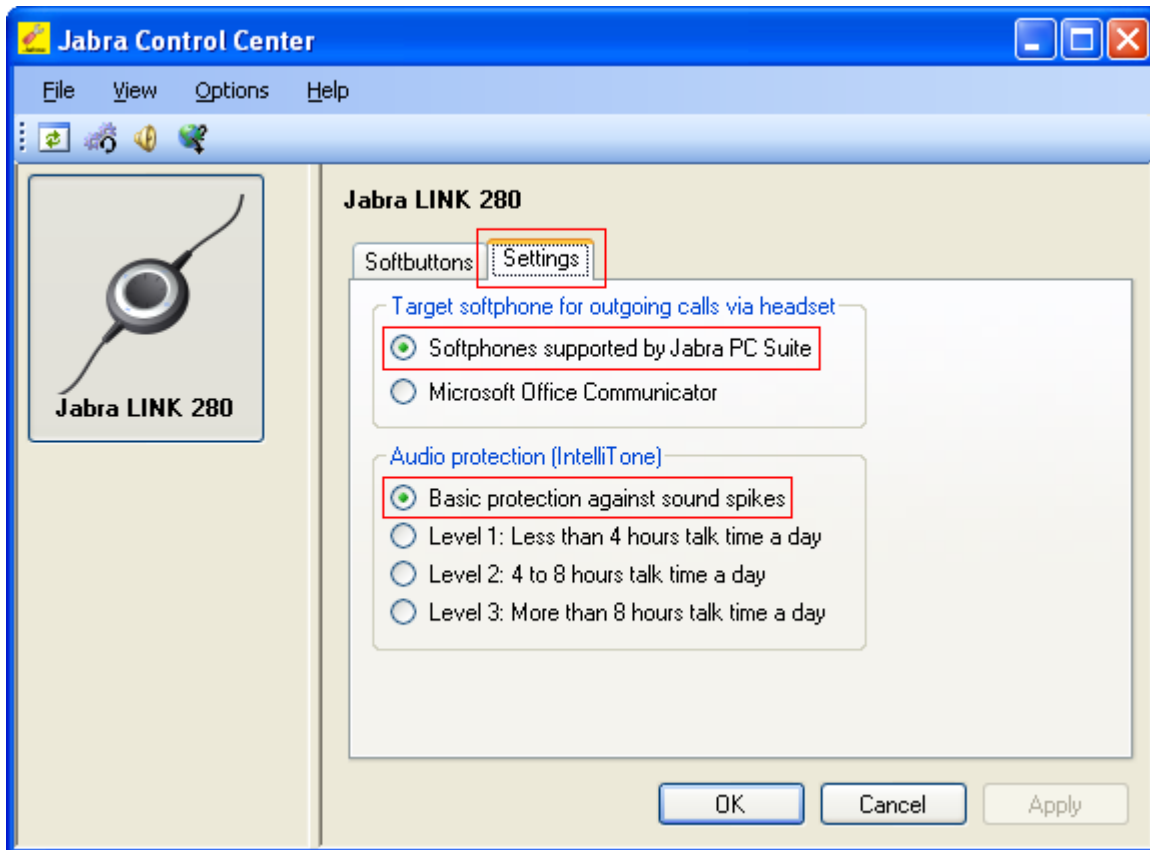


8 Configure Jabra LINK 280 USB Adapter

The inline control module for the Jabra LINK 280 USB Adapter has two user programmable buttons. To program the buttons, connect a Jabra LINK 280 USB Adapter to a PC running Jabra PC Suite and open the Jabra Control Center. In the right pane select the **Softbuttons** tab where a graphical display of the inline control module can be seen. Use the drop down menu to select a function. Currently the only function offered in addition to the preconfigured functions with one-X Communicator or one-X Agent is **Speaker Mute** as selected in the screen below.



Select the **Settings** tab and under **Target softphone for outgoing calls via headset** ensure that the radio button for **Softphones supported by Jabra PC Suite** is selected. Under **Audio protection (IntelliTone)** select the degree of acoustic protection according to the estimated length of use, for the compliance test **Basic protection against sound spikes** was used.



9 General Test Approach and Test Results

The compliance testing focused on the ability of the Jabra LINK 280 USB Adapters to work with Avaya one-X Communicator and Avaya one-X Agent. Functionality was verified by placing and receiving calls using the Jabra LINK 280 USB Adapters. The LINK 280 USB Adapter functioned correctly with good audio transmitted and received. Functionality was tested during a range of basic telephony operations.

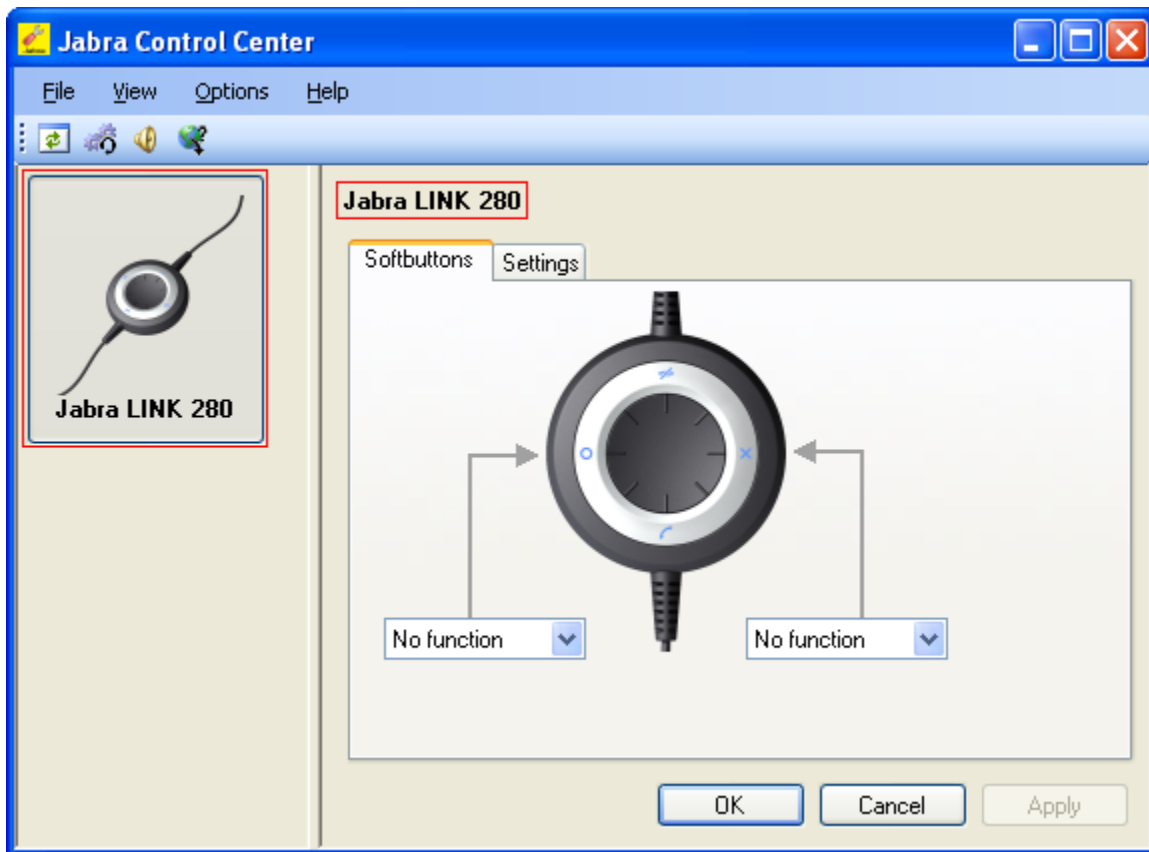
- Calls originating and terminating to the Avaya one-X client equipped with the Jabra LINK 280 USB
- Calls answered and released using both Avaya one-X controls and the Jabra LINK 280 USB inline control
- Mute activation and deactivation using both Avaya one-X controls and the Jabra LINK 280 USB inline control
- Volume control using both Avaya one-X controls and the Jabra LINK 280 USB inline control
- Calls placed on hold and retrieved
- Attended and unattended transfers to and from the one-X client equipped with the Jabra LINK 280 USB Adapter

- Calls made to and received from a simulated PSTN

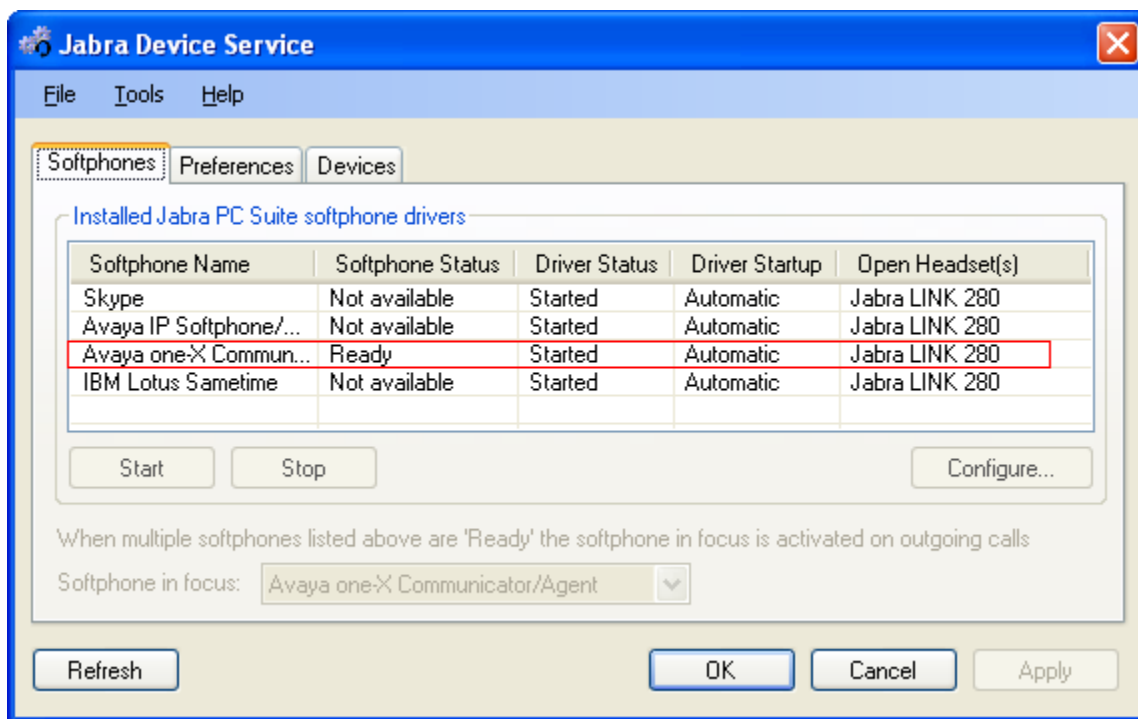
The serviceability tests were performed by disconnecting and reconnecting the Jabra LINK 280 USB Adapters from the PC and restarting either one-X communicator or one-X Agent depending on which client was in use.

10 Verification Steps

Connect a Jabra LINK 280 USB Adapter to a PC running Jabra PC suite and either one-X Communicator or one-X Agent. Open the Jabra control center and confirm the correct model is displayed.



Login to either one-X Communicator or one-X Agent and from the Jabra control Center navigate to **View → Device Service Window** and confirm the **Softphone Status** for **Avaya one-X Communicator** displays **Ready**.



Make a call from the Avaya one-X client equipped with the Jabra LINK 280 USB Adapter to confirm audio is heard at both ends of the call.

11 Conclusion

These Application Notes describe the configuration steps required to use the Jabra LINK 280 USB Adapter and Jabra PC Suite with integration to Avaya one-X® Communicator and Avaya one-X® Agent. All feature functionality and serviceability test cases were completed successfully.

12 Additional References

This section references the Avaya and GN Netcom product documentation that are relevant to these Application Notes.

Product documentation for Avaya products may be found at <http://support.avaya.com>

1. *Administering Avaya Aura™ Communication Manager, Release 5.2; Document No. 03-300509, May 2009*
2. *Administering Communication Manager for Avaya one-X Agent, Dec-2009*
3. *Using Avaya one-X Agent, Dec 2009*
4. *Avaya one-X® Communicator Getting Started, Nov-2009*

Product documentation for GN Netcom Jabra products may be found at: <http://www.jabra.com/avaya>

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