



## Avaya Solution & Interoperability Test Lab

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# Application Notes for ClearOne Communication Chat 50 with Avaya IP Softphones - Issue 0.2

### Abstract

These Application Notes describe a compliance-tested configuration comprised of ClearOne Communication Chat 50, Avaya IP Softphones, and Avaya Communication Manager. ClearOne Communication Chat 50 is a portable audio peripheral that connects to a wide variety of devices for hands-free communications and audio playback. A personal solution for road warriors and others who want rich full-duplex audio that is portable and economical

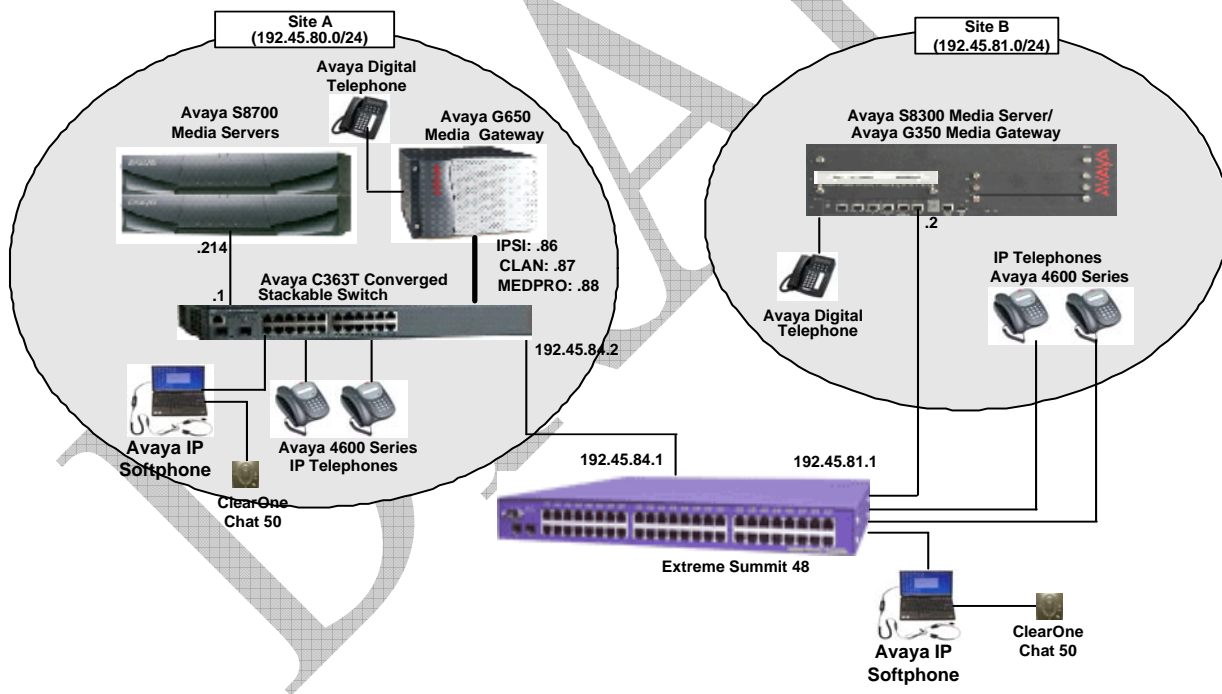
Information in these Application Notes has been obtained through compliance testing and additional technical discussions. Testing was conducted via the Developer*Connection* Program at the Avaya Solution and Interoperability Test Lab.

# 1. Introduction

These Application Notes describe a compliance-tested configuration comprised of ClearOne Communication Chat 50, Avaya IP Softphones, and Avaya Communication Manager. ClearOne Communication Chat 50 is high quality and portable USB speakerphones with DSP voice processing technologies. The Chat 50 is designed for Internet telephony applications such as Instant Messenger and Voice over IP Softphone. The Chat 50 is an ideal communication solution for any mobile worker or IM chatter to engage in hands-free conversations or conference calls.

The overall objective of this interoperability compliance testing is to verify that ClearOne Communication Chat 50 properly integrate with Avaya IP Softphone. For this compliance testing, two Chat 50s are connected to Avaya IP Softphones, which are registered to Avaya Communication Manager.

**Figure 1** illustrates the network configuration used to verify the ClearOne Communication solution. The configuration provided in these Application Notes focus on the Avaya IP Softphone and the Chat 50.



**Figure 1. Test configuration of the Chat 50 with Avaya IP Softphones**

## 2. Equipment and Software Validated

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

Equipment		Software
Avaya S8700 Media Server		Communication Manager 3.1.2 (R013x.01.2.632.1)
Avaya G650 Media Gateway		
	TN2312BP IP Server Interface	HW11 FW030
	TN799DP C-LAN Interface	HW20 FW017
	TN2302AP IP Media Processor	HW01 FW108
Avaya S8300 Media Server with Avaya G350 Media Gateway		Communication Manager 3.1.2 (R013x.01.2.632.1)
Avaya 4600 Series IP Telephones		
	4620	2.6
	4621	2.6
	4625	2.5
Avaya IP Softphones on Windows 2003 Server		5.2.4.20
Avaya C363T-PWR Converged Stackable Switch		4.5.14
Extreme Summit 48		4.1.21
ClearOne Communication Chat 50		1.4
USB driver for Windows		2.0.3

### 3. Configure Avaya Communication Manager

This section shows the relevant configuration screens for Avaya Communication Manager. The screen shots included in this section focused only on the configuration of the Avaya IP Softphone station and ip-codec-set. From the Avaya Communication Manager System Access Terminal (SAT), use the **add station x** command, where **x** is the 5-digit extension of an IP Softphone. To create an IP Softphone station, the following information should be provided:

- **Type:** The IP Telephone type which IP Softphone will emulate.
- **Security Code:** Password to access the IP Softphone.
- **IP SoftPhone?: y**

```
add station 50007                                     Page 1 of 4
                                                    STATION
Extension: 50007                                     Lock Messages? n          BCC: 0
Type: 4620                                           Security Code: *          TN: 1
Port: IP                                             Coverage Path 1:         COR: 1
Name: Softphone 1                                   Coverage Path 2:         COS: 1
                                                    Hunt-to Station:
STATION OPTIONS
    Loss Group: 19                                   Personalized Ringing Pattern: 1
                                                    Message Lamp Ext: 50007
    Speakerphone: 2-way                               Mute Button Enabled? y
    Display Language: english                         Expansion Module? n
Survivable GK Node Name:
    Survivable COR: internal                           Media Complex Ext:
Survivable Trunk Dest? y                             IP SoftPhone? y
                                                    IP Video Softphone? n
```

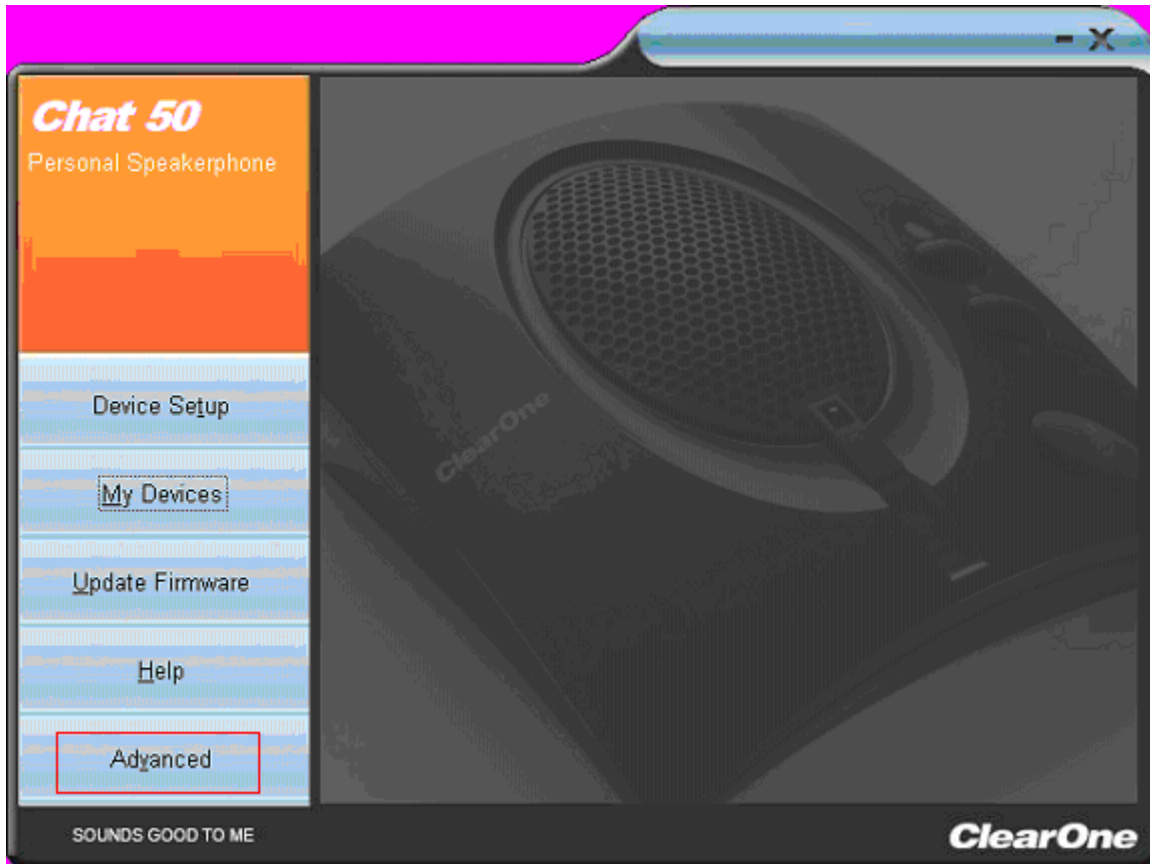
The following screen shows the codec set configuration that was used during the test. To configure the codec set, use the **change ip-codec-set** command to add an audio codec to be used for VoIP traffic.

```
display ip-codec-set 1
                                                    IP Codec Set
Codec Set: 1
Audio      Silence   Frames   Packet
Codec      Suppression Per Pkt   Size(ms)
1: G.711MU   n         2       20
2: G.729    n         2       20
3:
```

## 4. Configure ClearOne Communication Chat 50 Driver

The Chat 50 USB driver is included as a part of the Chat 50 package. This section describes how to configure the driver. The latest Chat 50 USB driver is only compatible with Windows XP or later. To configure the driver, click ClearOne Communication Chat 50 icon from the Desktop folder.

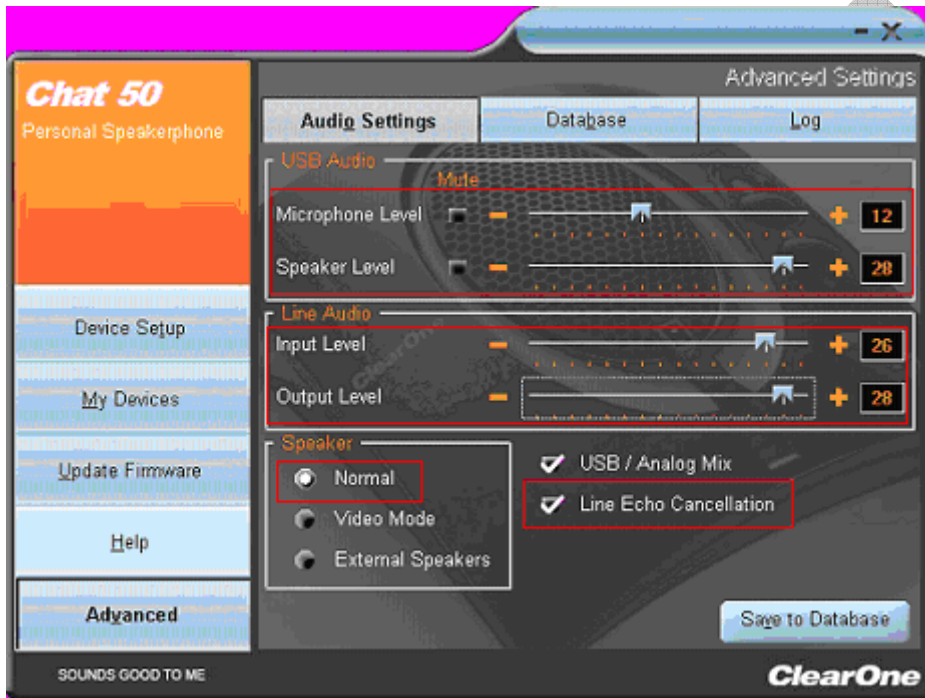
Select the **Advanced** link from the left side of the screen.



From the Advanced Settings screen, adjust the following fields by moving the line bar:

- Microphone Level
- Speaker Level
- Input Level
- Output Level

The Speaker field should be set to **Normal**, and check the **Line Echo Cancellation** box



## 5. Configure Avaya IP Softphones

For the certification test, Windows Server 2003 was utilized for installing Avaya IP Softphone. Navigate to Windows **Start → Programs → Avaya IP Softphone → Avaya IP Softphone**. In the Login screen, provide the following information:

- **Extension:** Extension of the Avaya IP Softphone – An extension was specified during installation of the IP Softphone software on the PC.
- **Password:** The Security Code in the station setting – The password was specified during installation of the IP Softphone software on the PC.
- **Configuration:** Type of configuration that the IP Softphone will be used for. During the compliance test, the **Road Warrior** configuration was utilized.
- **Call Server Address:** IP Address of the C-LAN board
- **Bandwidth Setting:** During the compliance test, the **Local Area Network** was utilized for the bandwidth setting.

If the setting is correct, then click the **Log in** button to start the registration for IP Softphone. If some parameters need to be changed, click the **Settings...** button to modify the above parameters and audio configuration.

The screenshot shows the Avaya IP Softphone Login dialog box. The fields are as follows:

- Extension:** 22007
- Password:** [Masked]
- Configuration:** Road Warrior
- Call Server Address:** 192.45.80.87
- Bandwidth Setting:** Local Area Network
- Dialing Location:** My Location

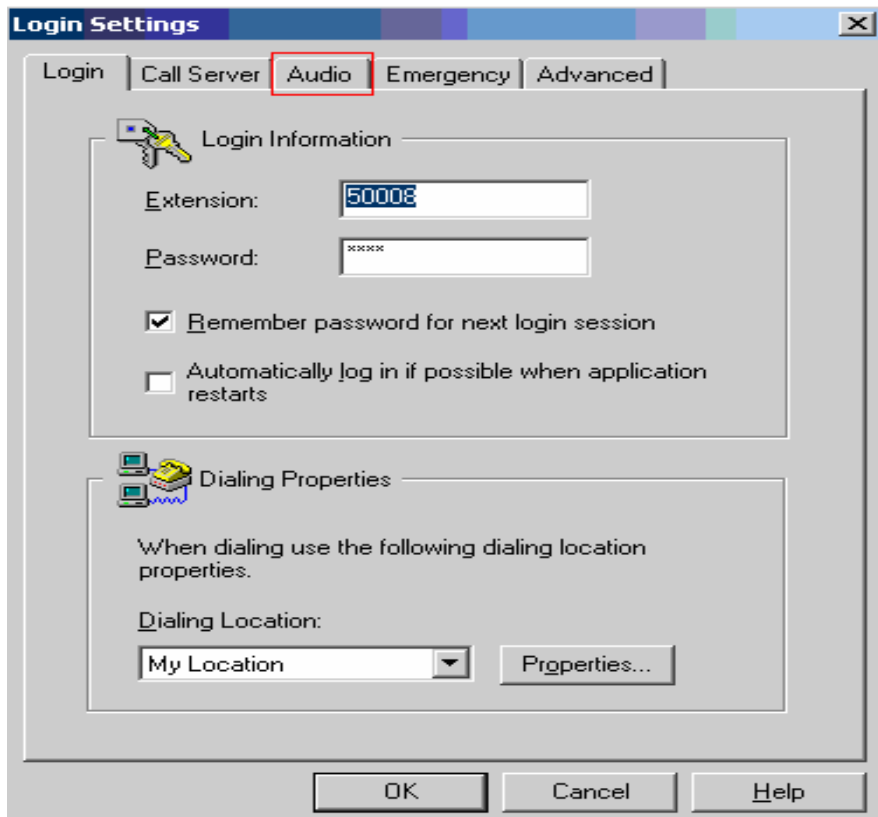
Additional options:

- Remember password for next login session
- Automatically log in if possible when application restarts

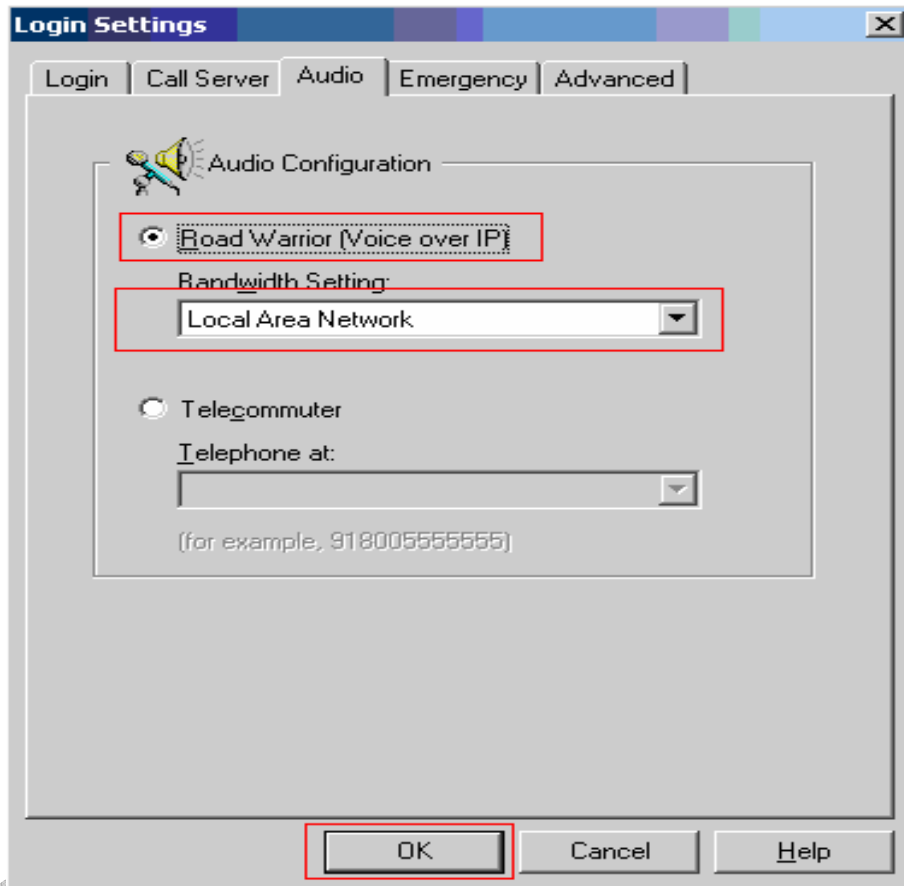
Note: Based on the server configuration, the G.711, G.729, or G.723 codec will be used for voice over IP calls.

Buttons: Log in, Settings..., Cancel, Help

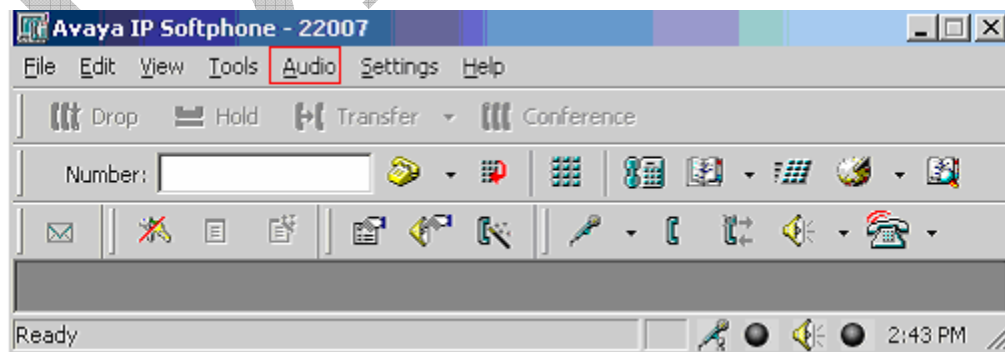
The following shows the “Login Settings” screen. Modify the **Extension** and **Password** fields if necessary, and then click the **Audio** tab to configure the audio setting.



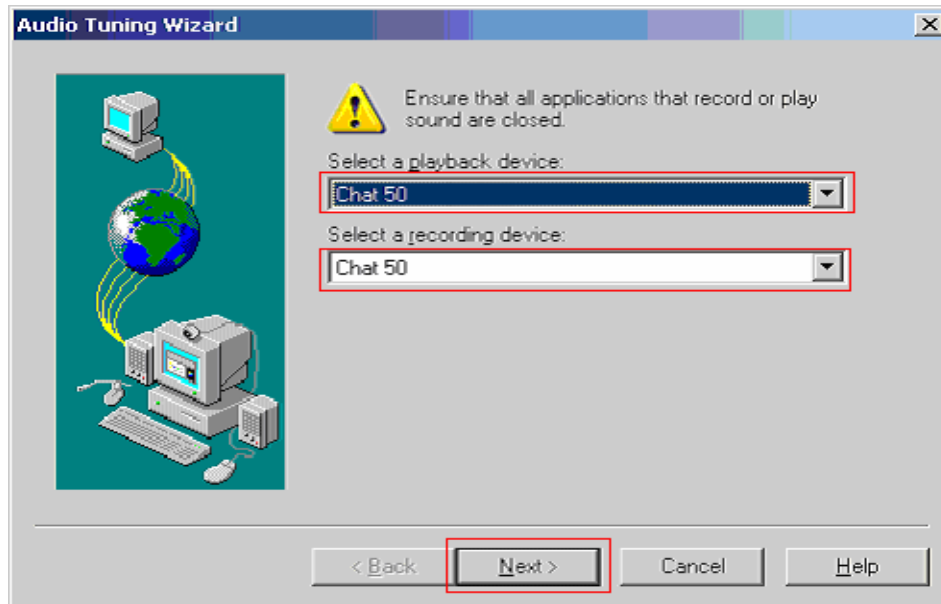
The following shows the “Audio Configuration” screen. Select **Road Warrior (Voice over IP)**, and select **Local Area Network** from the Bandwidth Setting drop down list. After the configuration changes were made, click the **OK** button to go to the Avaya IP Softphone screen.



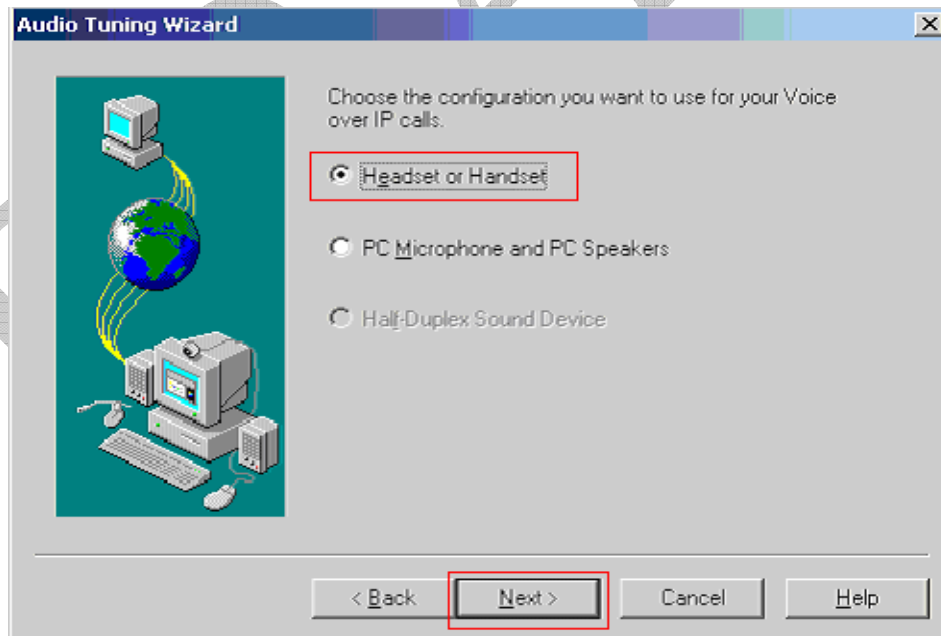
The following shows the “Avaya IP Softphone” screen. Select the **Audio → Tuning Wizard** menu to configure the audio.



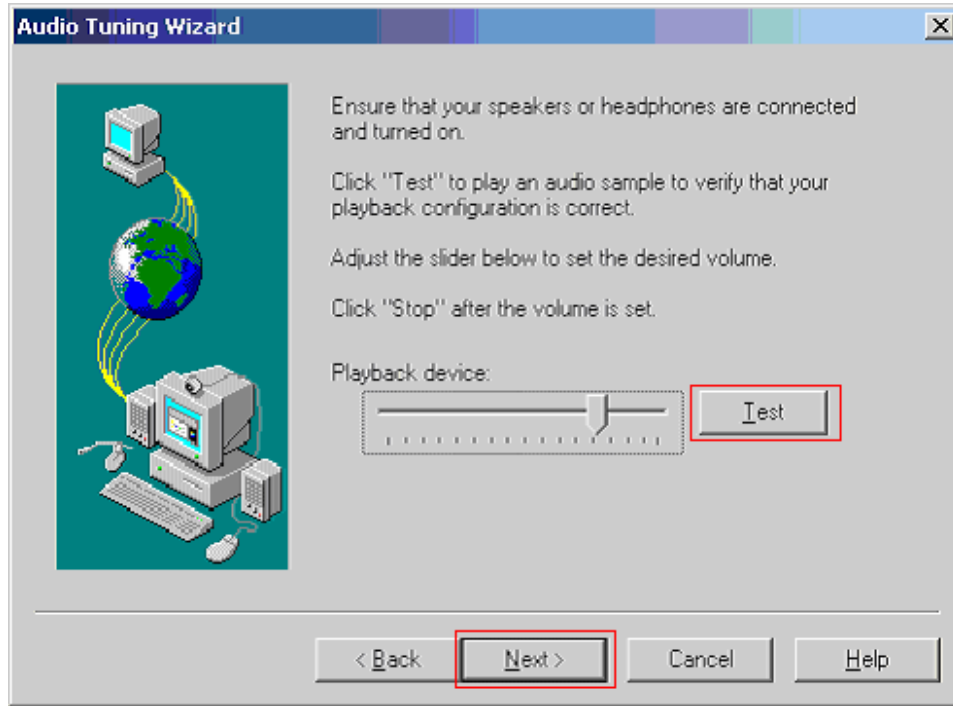
The following screens show the steps to correctly configure the audio tuning. Since the Chat 50 audio driver is already installed (see Section 4), select **Chat 50** as the playback and recording devices. Click the **Next** button.



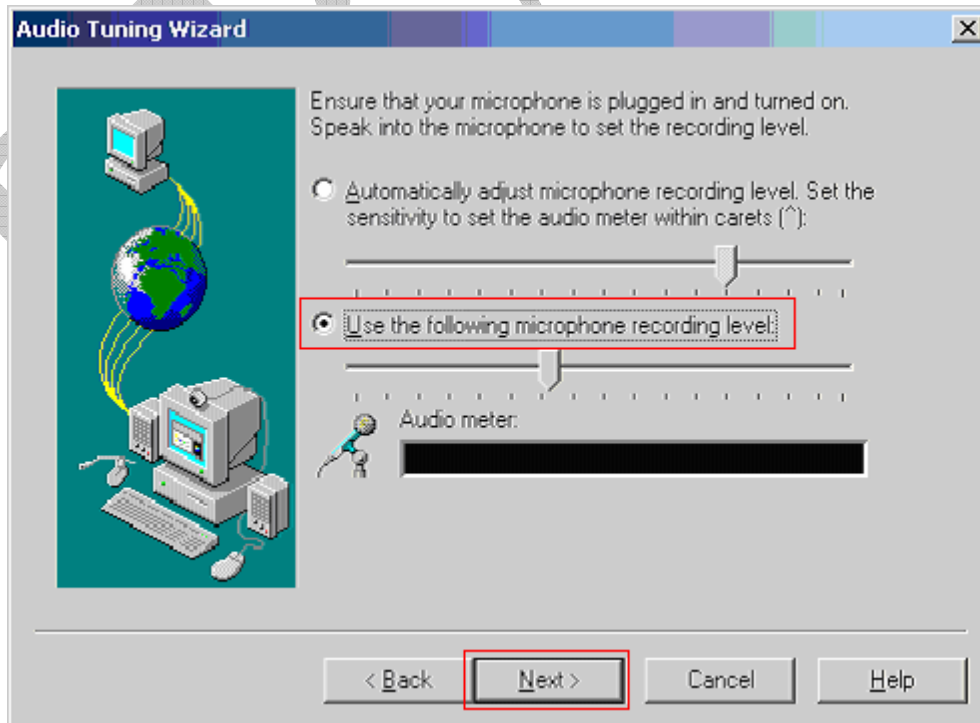
To fully utilize the full duplex feature of ClearOne Communication Chat 50, select **Headset or Handset**. Click the **Next** button, and follow the remaining procedures to tune the audio.



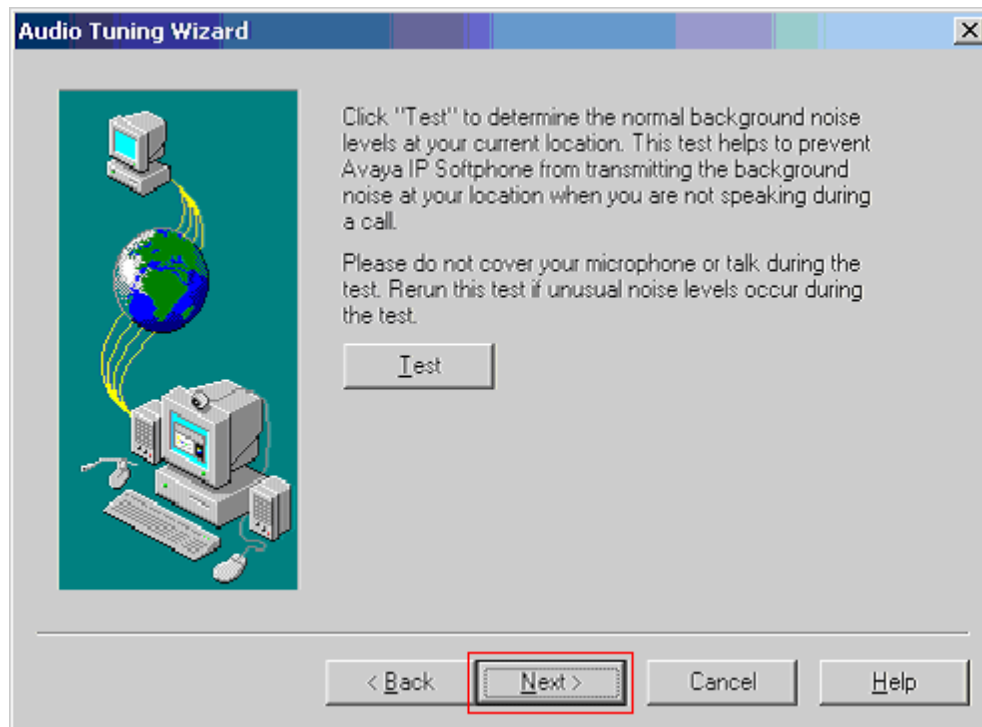
In the following screen, click the **Test** button to verify that the audio volume setting is correct. Click the **Next** button.



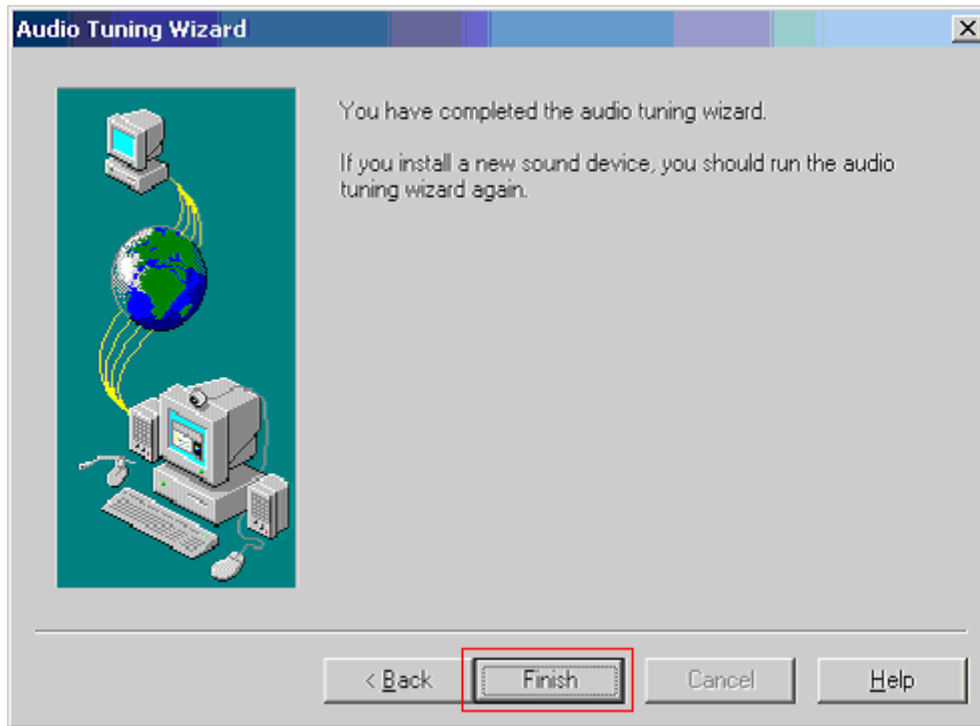
The following screen shows the microphone setting page where a user need to configure the microphone recording level. After the completion, click the **Next** button.



The next screen shows the background noise test page. For the compliance test, the background noise test was not performed due to high noise level in the testing environment. Click the **Next** button.



Click the **Finish** button to complete the audio tuning.



## 6. Interoperability Compliance Testing

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.

The interoperability compliance testing with the ClearOne Communication Chat 50 audio peripheral included feature functionality and serviceability testing. The feature functionality testing verified that ClearOne Communication Chat 50 communicates with Avaya IP Softphones reliably, using Transfer calls, Conference calls, Hold calls, and Mute calls. The serviceability testing introduced the power failure scenarios to see if ClearOne Communication Chat 50 can resume the normal function after failure recovery.

### 6.1. General Test Approach

All test cases were performed manually. The following features and functionality were verified:

- Basic calls (Intra-Switch and Inter-Switch) and verified talk path and call quality, from the Chat 50, was good.
- Transfer calls (Intra-Switch and Inter-Switch) and verified talk path and call quality, from the Chat 50, was good.
- Conference calls (Intra-Switch and Inter-Switch) and verified talk path and call quality, from the Chat 50, was good.
- Full Duplex (Verified from the IP Softphone window).

## 6.2. Test Results

All test cases passed. ClearOne Communication Chat 50 worked reliably with Avaya IP Softphones. For serviceability testing, ClearOne Communication Chat 50 was able to resume the normal function after failure recovery.

## 7. Support

For technical support on ClearOne Communication Chat 50, call ClearOne Communication Customer Support at (800) 945-7730 or send email to [tech.support@clearone.com](mailto:tech.support@clearone.com).

## 8. Conclusion

These Application Notes describe the configuration steps required for integrating ClearOne Communication Chat 50 with Avaya IP Softphones. The products interoperated successfully, providing a suitable communication for any mobile worker to engage in hand-free conversations or conference calls.

## 9. References

This section references the Avaya and ClearOne Communication documentation that are relevant to these Application Notes.

The following Avaya product documentation can be found at <http://support.avaya.com>.

[1] *Administrator Guide for Avaya Communication Manager*, Issue 2.1, May 2006, Document Number 03-300509.

[2] *IP Softphone Release 5.2 Online Reference*, Issue Jul 2005.

The following ClearOne Communication product documentation is provided. For additional product and company information, visit <http://www.clearone.com>.

[3] *ClearOne Communication Chat 50 Owner's Manual*, Version 2.0.4

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