



Avaya Solution & Interoperability Test Lab

Application Notes for Valcom Talkback IP Speakers with Avaya IP Office – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the Valcom Talkback IP Speaker devices to successfully interoperate with Avaya IP Office. The Valcom Talkback IP Speakers are SIP-based devices that integrate with Avaya IP Office as a SIP endpoint. The following Valcom Talkback IP Speakers were compliance tested: VIP-148L, VIP-160, VIP-172L, VIP-422 and VIP-431-DS.

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 for the Valcom Talkback IP Speakers to successfully interoperate with Avaya IP Office. The Valcom Talkback IP Speakers are SIP-based devices that integrate with Avaya IP Office as a SIP endpoint. The following Valcom Talkback IP Speakers were compliance tested:

- VIP-148L
- VIP-160
- VIP-172L
- VIP-422
- VIP-431-DS

When the call button is pressed on a Valcom Talkback IP Speaker, the device initiates a call to a preconfigured destination that resides on Avaya IP Office, and provides hands-free two-way communication.

1.1. Interoperability Compliance Testing

The interoperability compliance test plan included feature and serviceability test cases.

The feature testing covered SIP registration, basic calls, display verification, hold/reconnect, conferences, transfers, media shuffling, audio codec negotiation, and coverage call scenarios.

The serviceability testing focused on verifying the ability of the Valcom Talkback IP Speakers to recover from adverse conditions, such as a disconnect and reconnect of the Ethernet cable to the device, and Avaya IP Office reboots.

1.2. Support

Technical support for Valcom can be obtained through the following:

- **Phone:** (800) VALCOM1
- **Email:** support@valcom.com

2. Reference Configuration

The Valcom Talkback IP Speakers were configured as SIP endpoints that registered with Avaya IP Office. When the call button is pressed on each of the Valcom Talkback IP Speakers, the Speaker initiates a call to a preconfigured destination that resides on Avaya IP Office, and provides hands-free two-way communication. The Valcom Talkback IP Speakers were configured on the 10.64.20.0/24 subnet, while all the other Avaya IP equipment was configured on the 10.64.21.0/24 subnet.

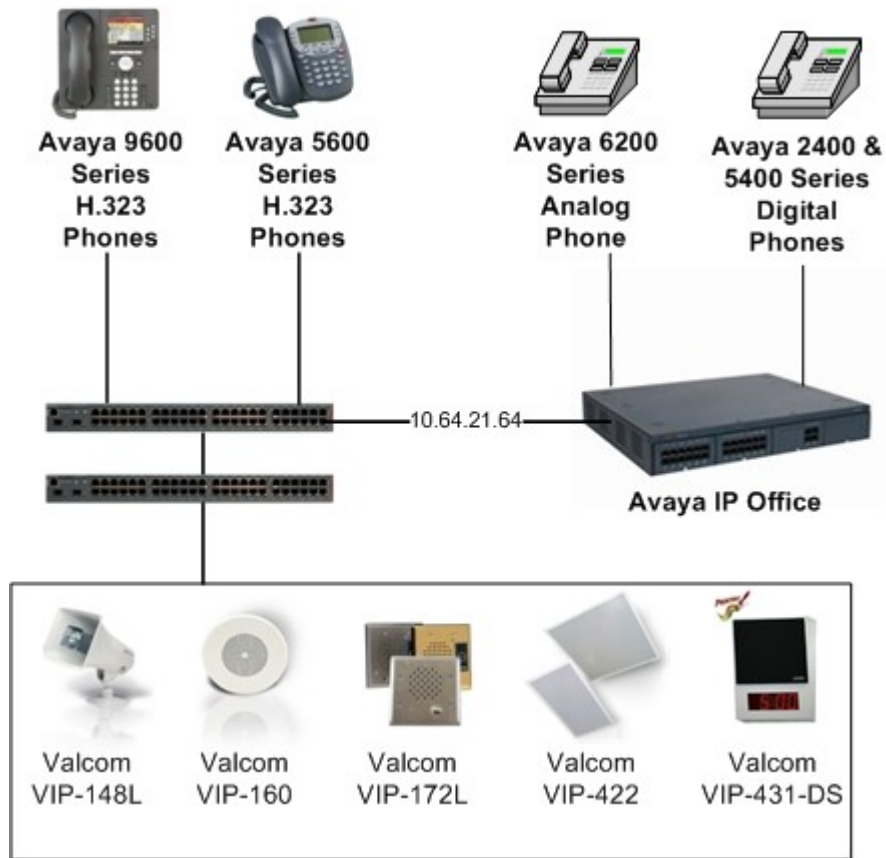


Figure 1: Valcom Talkback IP Speakers with Avaya IP Office

3. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office 500	6.0 (8)
Avaya IP Office 500 Phone Expansion Module Analog POTS 30 V2	6.0 (8)
Avaya IP Office Manager (Windows PC)	8.0 (8)
Avaya 5610SW IP Telephone (H.323)	2.9.1
Avaya 9620 IP Telephone (H.323)	3.002
Avaya 2420 Digital Telephone	R6 Firmware
Avaya 5420 Digital Phone	R6 Firmware
Avaya 6210 Analog Telephone	n/a
Valcom Talkback IP Speakers <ul style="list-style-type: none">• VIP-148L• VIP-160• VIP-172L• VIP-422• VIP-431-DS	2.17

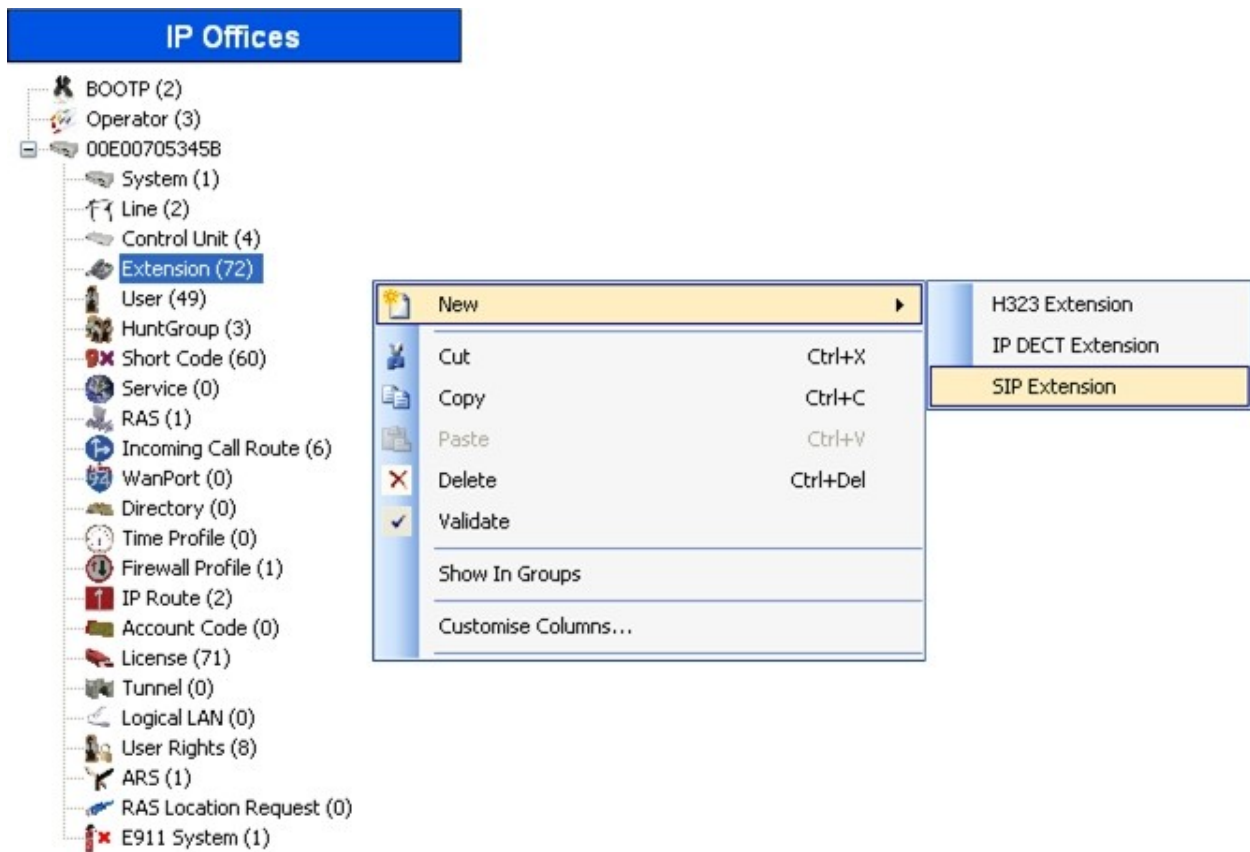
4. Configure Avaya IP Office

This section describes the steps required for to configure SIP extensions and users on IP Office.

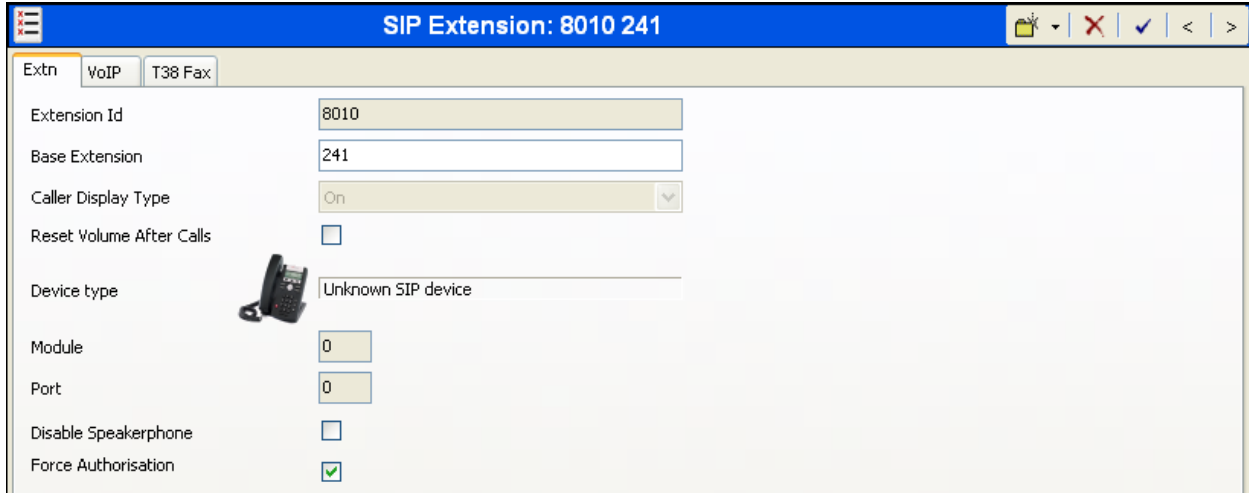
IP Office is configured via the IP Office Manager program. Log into the IP Office Manager PC and select **Start → Programs → IP Office → Manager** to launch the Manager application. Log into the Manager application using the appropriate credentials.

4.1. Administer Extensions

Create an extension for a Valcom Talkback IP Speaker. Right-click on **Extension** in the left panel menu, and select **New → SIP Extension**.

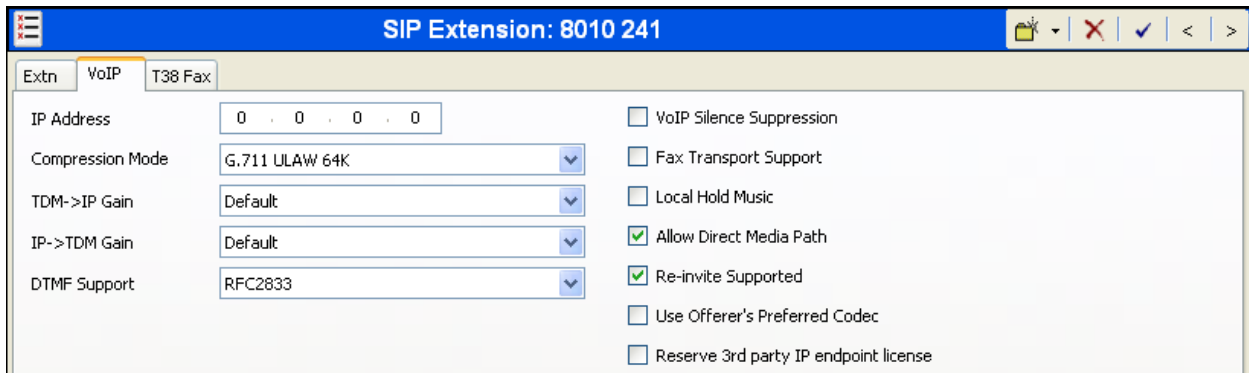


On the **Extn** tab, enter a valid **Base Extension**.



The screenshot shows the configuration page for SIP Extension 8010 241. The 'Extn' tab is selected. The 'Base Extension' field is set to 241. Other fields include Extension Id (8010), Caller Display Type (On), Reset Volume After Calls (unchecked), Device type (Unknown SIP device), Module (0), Port (0), Disable Speakerphone (unchecked), and Force Authorisation (checked).

On the **VoIP** tab, select **G.711 ULAW 64K** for **Compression Mode** and **RFC2833** for **DTMF Support**.

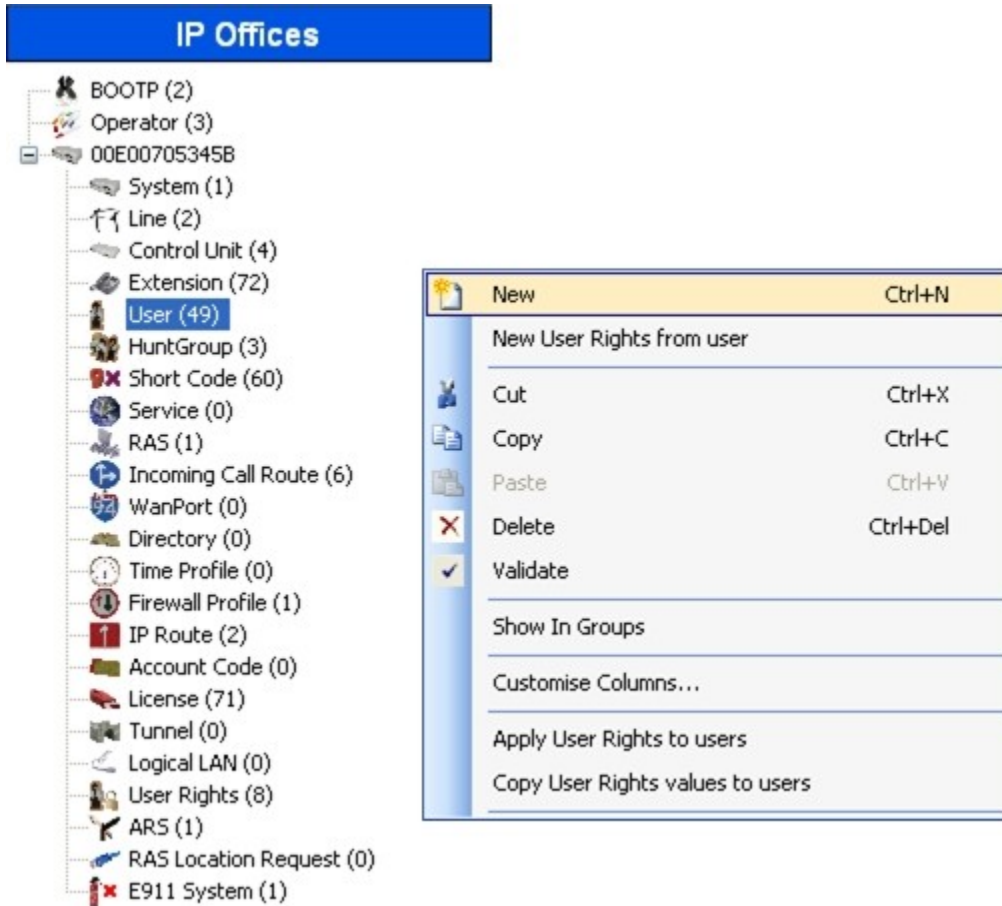


The screenshot shows the configuration page for SIP Extension 8010 241, with the 'VoIP' tab selected. The IP Address is 0.0.0.0. Compression Mode is set to G.711 ULAW 64K. TDM->IP Gain and IP->TDM Gain are both set to Default. DTMF Support is set to RFC2833. Other options include VoIP Silence Suppression (unchecked), Fax Transport Support (unchecked), Local Hold Music (unchecked), Allow Direct Media Path (checked), Re-invite Supported (checked), Use Offerer's Preferred Codec (unchecked), and Reserve 3rd party IP endpoint license (unchecked).

Click the **OK** button on the bottom of the screen (not shown).

4.2. Administer Users

Create a user for a Valcom Talkback IP Speaker. Right-click **User** from the left panel and select **New**.



Under the **User** tab, enter the following values for the specified fields, and retain the default values in the remaining fields.

- **Name** Enter a desired name.
- **Full Name** Enter a descriptive name.
- **Extension** Enter the extension configured in **Section 4.1**.

The screenshot shows the 'Valcom241: 241' configuration window. The 'User' tab is active, displaying the following fields and values:

Name	Valcom241
Password	
Confirm Password	
Full Name	Valcom 241
Extension	241
Locale	[Dropdown]
Priority	5
System Phone Rights	None
Profile	Basic User
Receptionist	<input type="checkbox"/>
Enable SoftPhone	<input type="checkbox"/>
Enable one-X Portal Services	<input type="checkbox"/>
Enable one-X TeleCommuter	<input type="checkbox"/>
Ex Directory	<input type="checkbox"/>
Device Type	Unknown SIP device

User Rights

User Rights view	User data
Working hours time profile	<None>
Working hours User Rights	[Dropdown]
Out of hours User Rights	[Dropdown]

Buttons: OK, Cancel, Help

Under the **Telephony** → **Supervisor Settings** tab, enter the following value for the specified field, and retain the default values in the remaining fields.

- **Login Code** Enter the desired login code.

The screenshot shows the 'Valcom241: 241' window with the 'Telephony' tab selected. Underneath, the 'Supervisor Settings' sub-tab is active. The 'Login Code' field contains '*****'. Other fields include 'Login Idle Period (secs)', 'Monitor Group' (set to '<None>'), 'Coverage Group' (set to '<None>'), 'Status on No-Answer' (set to 'Logged On (No change)'), 'Reset Longest Idle Time' (with 'All Calls' selected), 'After Call Work Time (secs)' (set to 'System Default (10)'), and several checkboxes for permissions. The 'Cannot be Intruded' checkbox is checked. The dialog has 'OK', 'Cancel', and 'Help' buttons at the bottom.

Click the **OK** button on the bottom of the screen and repeat the procedures in **Sections 4.1** and **4.2** for each of the Valcom Talkback IP Speakers.

After making the changes, click **File** → **Save Configuration** to push the changes to the IP Office system and have them take effect. Changes will not take effect until this step is completed.

**** NOTE ** This may cause a reboot of Avaya IP Office causing service disruption.**

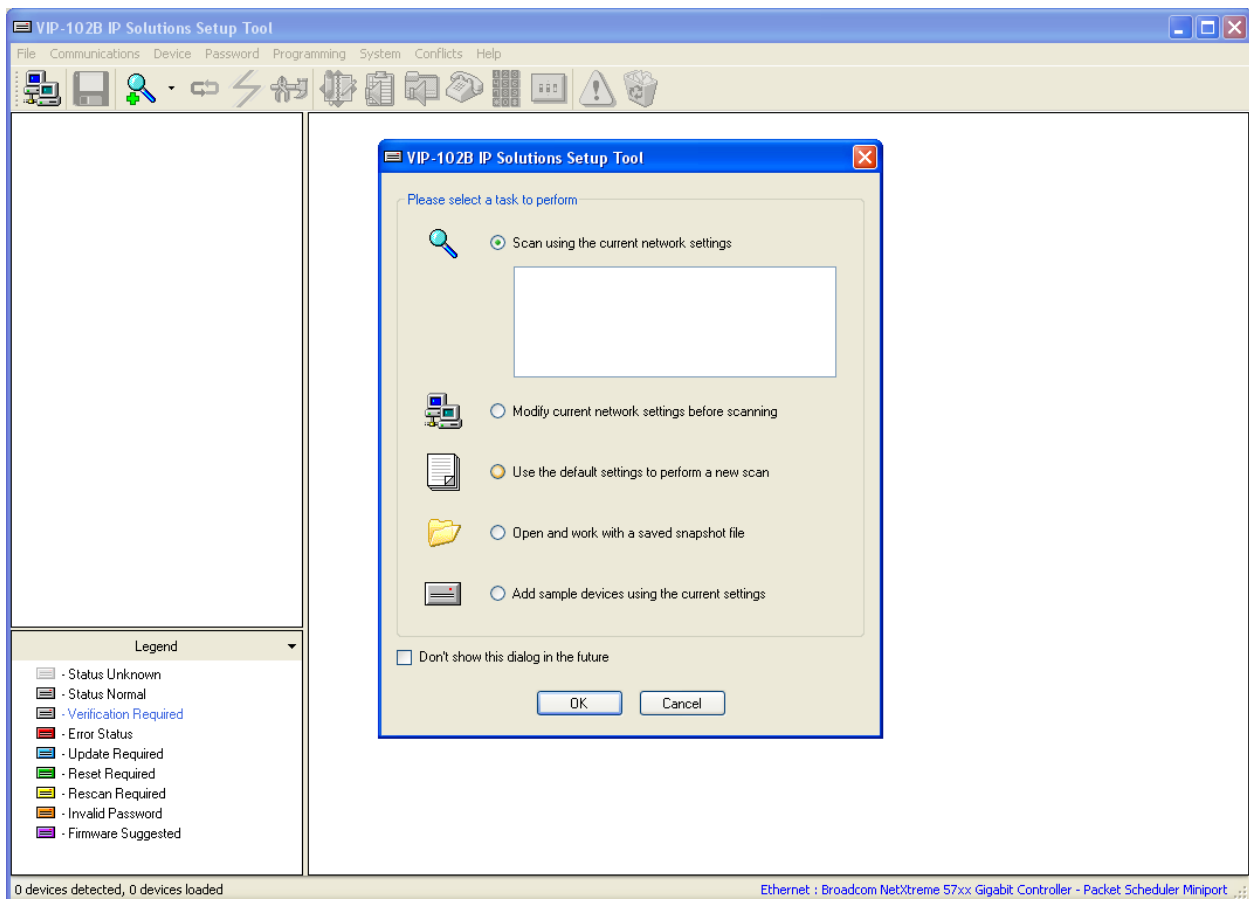
5. Configure Valcom Talkback IP Speakers

This section provides the procedures for configuring Valcom Talkback IP Speakers. The information shown is the minimum for configuring the Valcom device. Complete configuration details may be found in the Valcom documentation listed in **Section 9**. The procedures include the following areas:

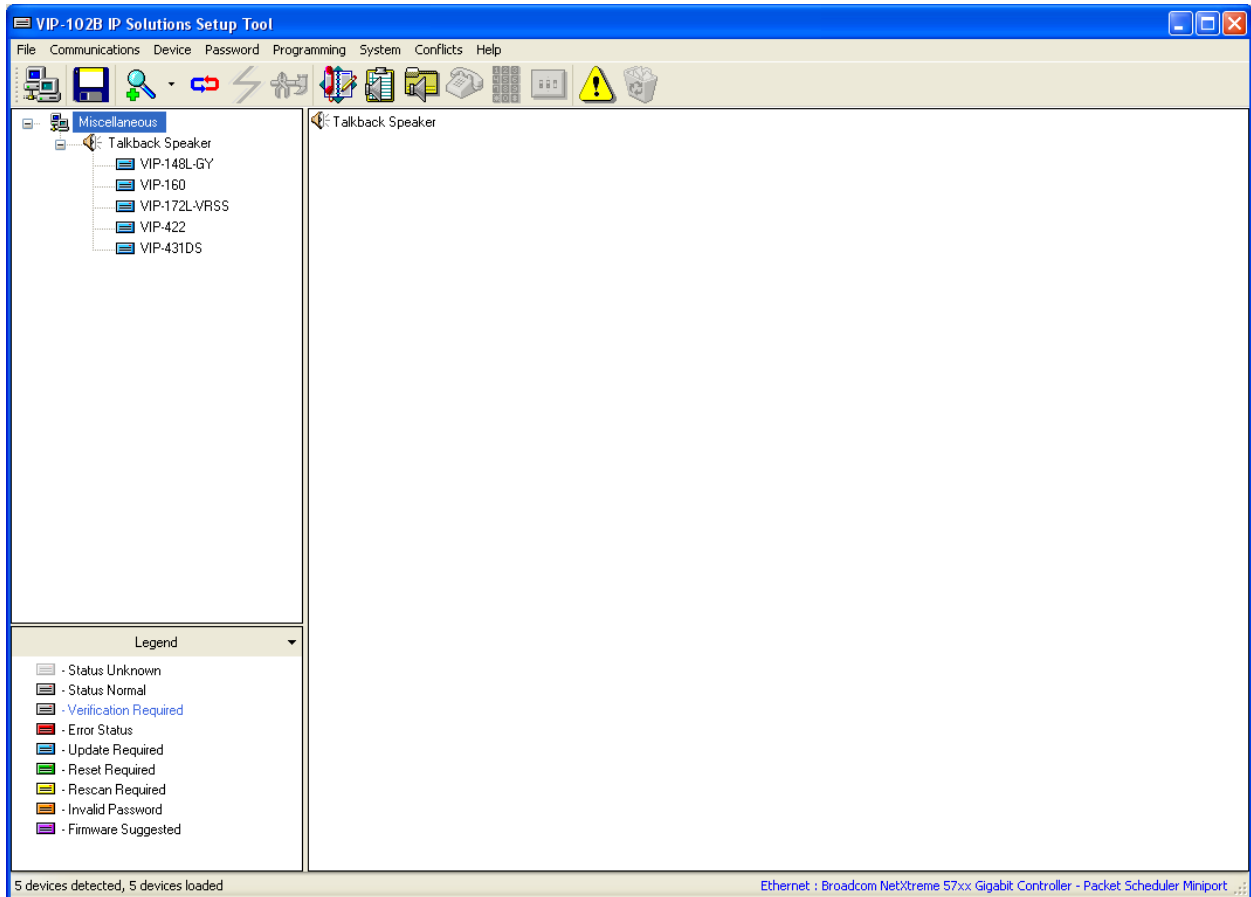
- Launch setup tool
- Administer properties
- Administer network
- Administer SIP

5.1. Launch Setup Tool

From a PC running the Valcom VIP-102B IP Solutions Setup Tool application, select **Start → All Programs → Valcom IP Solutions → VIP-102B IP Solutions Setup Tool**. The **VIP-102B IP Solutions Setup Tool** screen is displayed. Retain the default values and click **OK** to scan for Valcom devices.

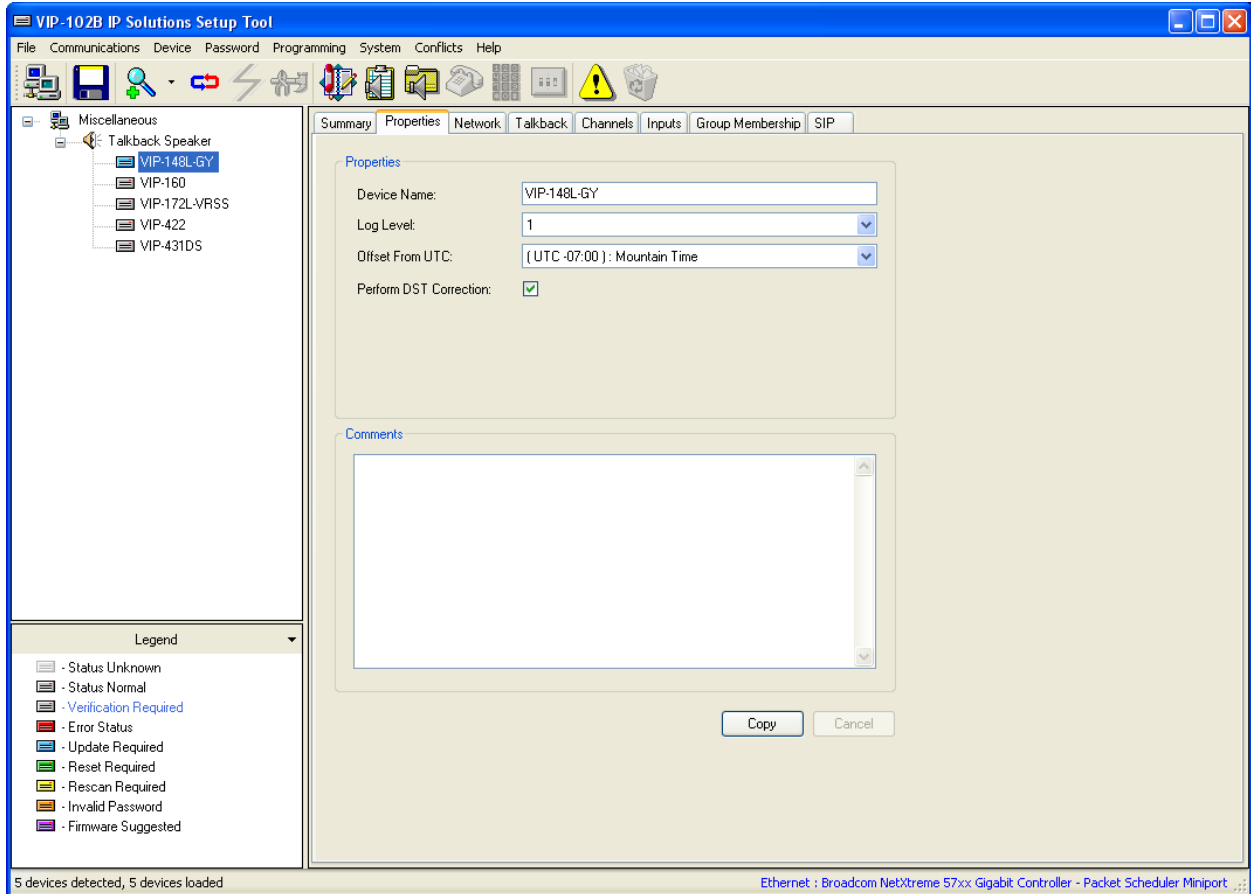


At the conclusion of the scan, the **VIP-102B IP Solutions Setup Tool** screen is updated with the discovered Valcom Talkback IP Speakers as shown below.



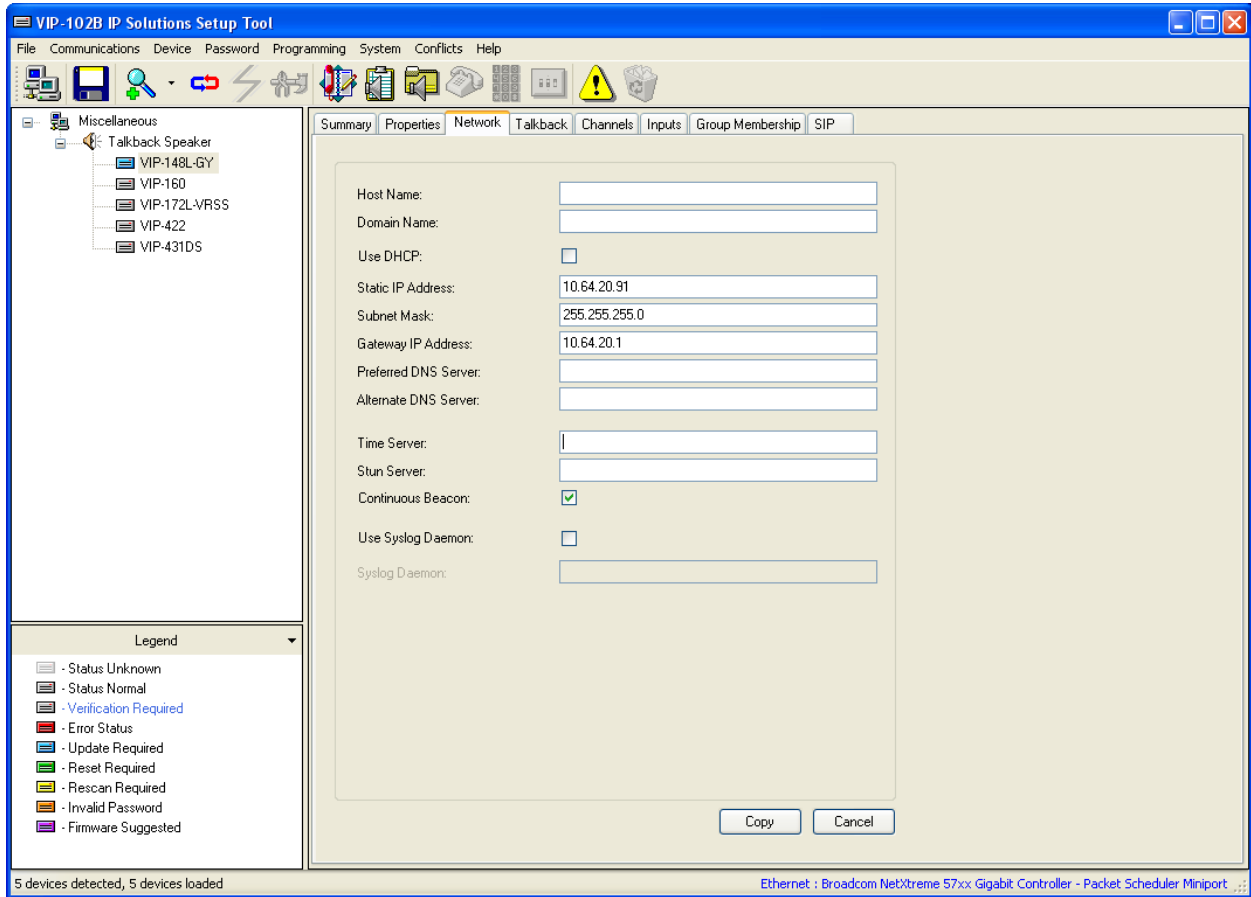
5.2. Administer Properties

Select a speaker from the left pane to display the configuration tabs in the right pane. Select the **Properties** tab, and enter a descriptive **Device Name**. Select the appropriate time zone in the **Offset From UTC** field, and enter any desired **Comments**.



5.3. Administer Network

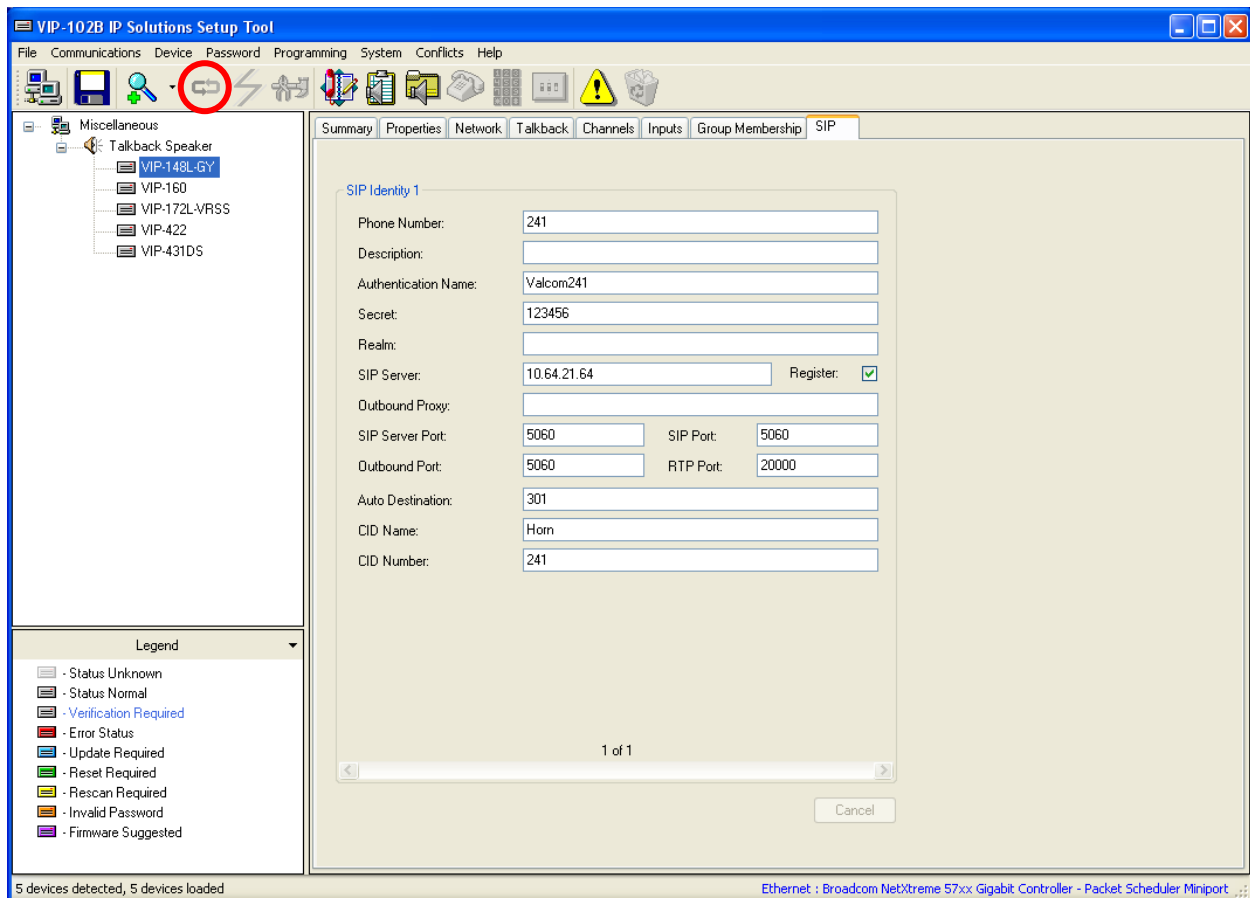
Select the **Network** tab. Enter the proper values for **Static IP Address**, **Subnet Mask**, and **Gateway IP Address** fields for the network configuration. The default values in the remaining fields may be retained.



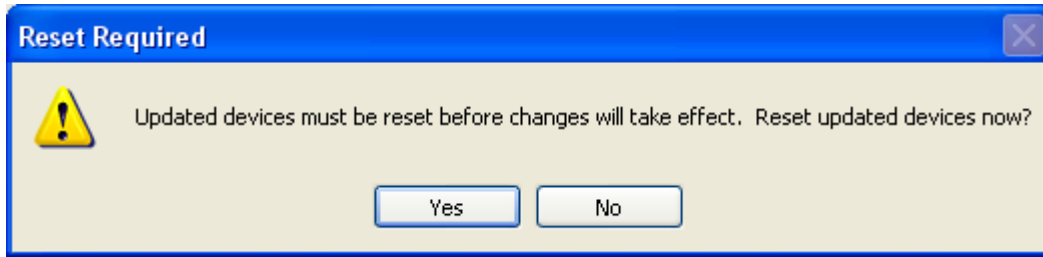
5.4. Administer SIP

Select the **SIP** tab. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Phone Number:** Enter the “Base Extension” from **Section 4.1**.
- **Authentication Name:** Enter the “Name” from **Section 4.2**.
- **Secret:** Enter the “Login Code” from **Section 4.2**.
- **SIP Server:** Enter the IP address of Avaya IP Office.
- **Register:** Check this field.
- **Auto Destination:** Enter the desired destination for calls initiated from this device.
- **CID Name:** Enter a descriptive name.
- **CID Number:** Enter the Caller-ID number (e.g. extension of device).



Repeat the procedures in **Sections 5.2** through **5.4** for each Valcom Talkback IP Speaker. Click on the **Update Changed Devices** icon circled above. The **Reset Required** dialog box will appear as shown below. Click **Yes** to reset the updated devices.



6. General Test Approach and Test Results

The feature test cases were performed manually. The call button was pressed on each Valcom Talkback IP Speaker to test the connection to different destinations on Avaya IP Office, and manual call controls from the destination were exercised to verify proper interactions with features such as “transfer” and “conference”.

The serviceability test cases were performed manually by disconnecting and reconnecting the LAN cables to the Valcom Talkback IP Speakers. Additionally, the Avaya IP Office server was rebooted to verify the Valcom Talkback IP Speakers were able to properly register and function normally after the server recovered.

All feature test cases were executed and passed with the following observations:

- When shuffling (Allow Direct Media Path) was enabled on Avaya IP Office, calls involving the Valcom Talkback IP Speakers did not shuffle.

7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and the Valcom Talkback IP Speakers.

7.1. Verify Valcom Talkback IP Speakers

Press the call button on each of the Valcom Talkback IP Speakers and verify that the “Auto Destination” specified in **Section 5.4** rings. Answer the call at the destination, and verify that the call is connected with a two-way talk path.

8. Conclusion

These Application Notes describe the configuration steps required for Valcom Talkback IP Speakers to successfully interoperate with Avaya IP Office.

9. Additional References

This section references the product documentation relevant to these Application Notes.

1. *IP Office 6.0 Documentation CD - English*, February 2010, available at <http://support.avaya.com>
2. Valcom Talkback IP Speaker documentation is available at <http://www.valcom.com>
3. Valcom VIP-102B IP Solutions Setup Tool Reference Manual is available at <http://www.valcom.com>

©2010 Avaya Inc. All Rights Reserved.

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.