



VoIP Paging Server Configuration Guide

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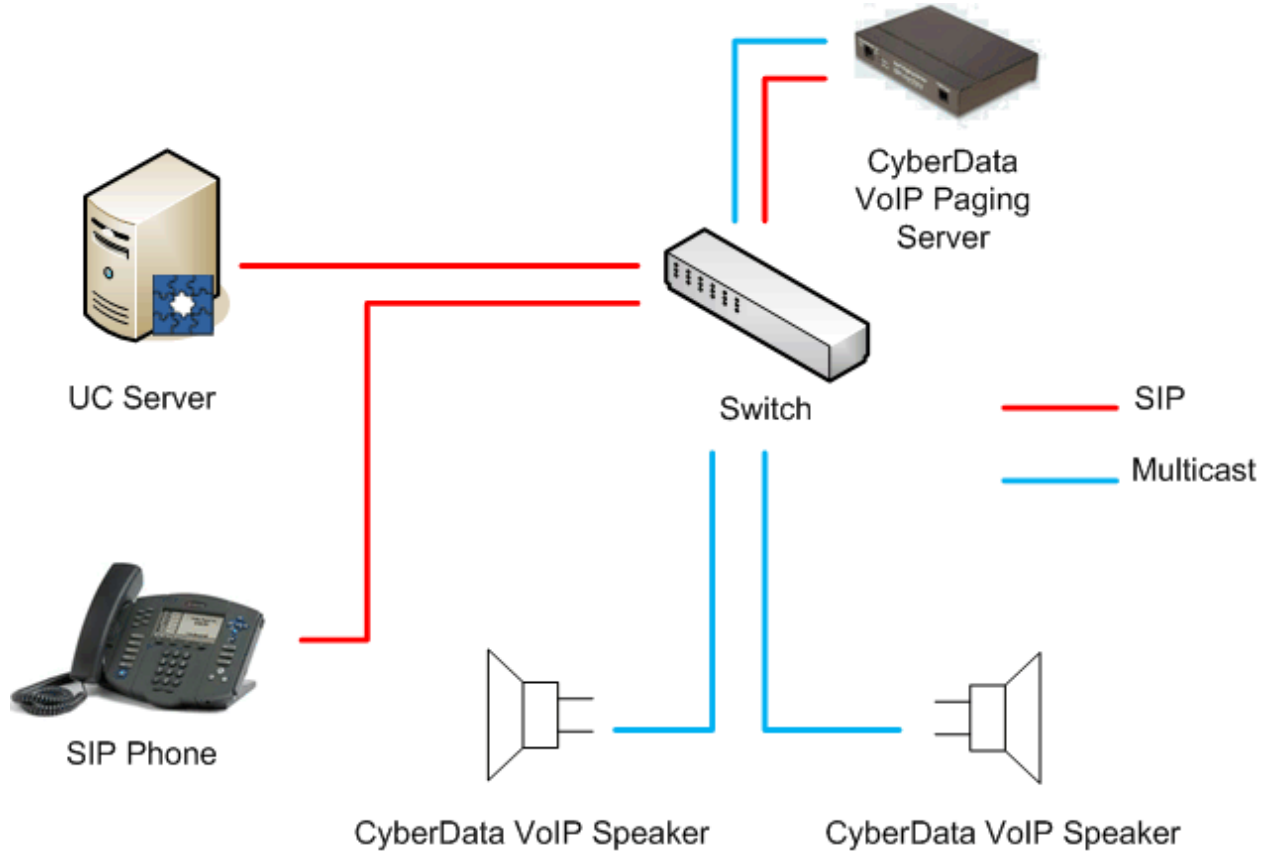
1 Introduction



As a single SIP endpoint, the CyberData VoIP Paging Server enables users to create defined zones for paging speakers in a VoIP network. The easy-to-use, Web-based configuration provides a graphical user interface to set up to 100 paging zones with unique multicast address and port number combinations. The purpose of this guide is to provide instructions about how to configure the CyberData VoIP Paging Server with UC Server.

1.1 Network Topology

Below is an example of how the CyberData VoIP Paging Server might be deployed in your network.



2 Known Integration Issues

Known integration issues include:

- Cannot perform supervised transfers
 - Performing a supervised transfer to the paging speaker does not work. It results in the transferrer indicating a successful transfer even though it was not completed.

3 Preparation

This section provides instructions about how to apply firmware updates (if necessary) and how to set up the device for manual configuration.

3.1 PC Network Settings

The factory default on CyberData products is a static IP address. To access the device, you must change your PC to the same address range.

To change the IP Address of your computer, do the following:

NOTE: Make a note of your original network settings before making any changes because you need to change these settings back after changing the network configuration on the speaker.

For **Windows Server 2003/Windows XP**

1. Click Windows **Start**.
2. Click **Control Panel**.
3. If you have the classic view, click **Network Connections**.
If you have the category view, click **Network and Internet Connections**, and then **Network Connections**.
4. Double-click the active **LAN or Internet connection**.
5. Click **Properties**.
6. In the **General** tab, highlight the **Internet Protocol (TCP/IP)** item, and click **Properties**.
7. In the General tab, click **Use the following IP address**, and enter:
IP Address: 192.168.3.1
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.3.10
8. Click **OK**.

For **Windows Server 2008/Windows Vista**

1. Click Windows **Start**.
2. Click **Control Panel**.
3. If you have classic view, click **Network and Sharing Center** and then **Manage Network Connections**.
If you have category view, click **Network and Internet, View network status and tasks** and then **Manage Network Connections**.
4. Double-click the active **LAN or Internet connection**.
5. Click **Properties**.
6. In the **Networking** tab, highlight the **Internet Protocol (TCP/IP)** item, and click **Properties**.
7. In the General tab, click **Use the following IP address**, and enter:
IP Address: 192.168.3.1
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.3.10
8. Click **OK**.

3.2 CyberData VoIP Paging Server Network Settings

The VoIP Paging Server is configured with a static IP address on factory default. This must be changed so that the device is connected to your network.

To enter network settings for CyberData VoIP Paging Amplifier

1. Open your browser and type the IP Address of the speaker. The factory default is 192.168.3.10.
2. When prompted, use the following default Web Access username and password:
 - Web Access Username: **admin**
 - Web Access Password: **admin**
3. Click **Network Setup**.
4. Under **IP Addressing**, select **DHCP**.
5. Click **Save Settings**.

NOTE: To configure the VoIP speakers, refer to **TN083 - CyberData VoIP Ceiling Speaker Configuration Guide**.

3.3 Firmware Upgrades

Refer to the Technical Note "TN051 – SIP Device Features and Comparisons" (a versioned document located on the Objectworld web site at www.objectworld.com/support/documentation) to determine the most recently supported version of firmware for the VoIP Paging Server.

The factory firmware version can be found on the check-off list shipped with your VoIP Paging Server. If the firmware version on the VoIP Paging Server is earlier than the version noted in TN051, upgrade the firmware.

3.3.1 TFTP Firmware Upgrade

1. Retrieve the latest firmware from the CyberData web site.
(<http://www.cyberdata.net/support/voip/pagingserver.html>)
2. Unzip the file to the Objectworld TFTP folder (located in: **X:\Program Files\Objectworld\UC Server\Data\TFTP** where **X** is the drive where the UC Server program files are installed).
3. Log in to the speaker home page by following the procedure in [section 3.2](#).
4. Click the **Upgrade** button.
5. Enter the IP address of your UC Server under the TFTP **Server IP** field.
6. Under New Filename, enter the filename of the rom file you unzipped from the firmware zip file.
For example: **400-romdisk-spk-sip.img**
7. Click **Upload File**.
8. After the rom image file finishes uploading, repeat step 6 but upload the image file by entering the filename of the image.
For example: **400-image-spk-sip.bin**
9. Click **Upload File**.
10. Click the **reboot** button.

4 Multicast Paging Configuration

The CyberData VoIP Paging Server acts as a software-based paging zone controller and can support up to 100 zones. The CyberData VoIP Paging Server acts as the SIP device and also broadcasts multicast packets to the speaker devices in the designated paging zone. This allows you to have 100 paging zones with one identity. This section provides guidance on configuring various paging zones and configuring multicasting on both the VoIP Paging Server and VoIP Speakers.

4.1 Configuring multicasting on the Paging Server

The CyberData VoIP Paging Server must be configured with all the appropriate zones you want for your paging system.

To configure multicasting

1. Open your browser and type the IP Address of the speaker.
2. When prompted, use the following default Web Access username and password:
 Web Access Username: **admin**
 Web Access Password: **admin**
3. Click **PGROUPS Setup**.
4. In the first group (oo) enter the following values:
Enable: Checked
Multicast IP Address: 224.224.224.224
Port: 2000
PGROUP Name: Zone oo – ALL (this can be named anything but zone oo will be the zone to broadcast to every speaker)
5. Fill in the values for additional zones you require, and increase the port number by one each time. It is important that the port changes for every zone so that you can selectively broadcast to different paging zones.

For an example of how to set up the paging groups, refer to the example below.

PGROUPS Setup

Device Name: CD_Paging_Server

	Enable	Multicast IP Address	Port: 2000-65535	PGROUP Name
00	<input checked="" type="checkbox"/>	224.224.224.224	2000	Zone 00 - ALL
01	<input checked="" type="checkbox"/>	224.224.224.224	2001	Zone 01 - SysEng
02	<input checked="" type="checkbox"/>	224.224.224.224	2002	Zone 02 - Sales
03	<input checked="" type="checkbox"/>	224.224.224.224	2003	Zone 03 - QA
04	<input checked="" type="checkbox"/>	224.224.224.224	2004	Zone 04 - Administration
05	<input type="checkbox"/>	224.224.224.224	9876	Zone 05
06	<input type="checkbox"/>	224.224.224.224	9876	Zone 06
07	<input type="checkbox"/>	224.224.224.224	9876	Zone 07
08	<input type="checkbox"/>	224.224.224.224	9876	Zone 08
09	<input type="checkbox"/>	224.224.224.224	9876	Zone 09

Save Settings

Reboot

4.2 Configuring speakers for paging zones

The CyberData speakers must be configured to listen to multicast packets from the VoIP Server. You can also configure it to listen to multiple zones, for example, if multiple departments are located in one area and you want to be able to page someone in those departments.

To configure the paging zones

1. Open your browser and type the IP Address of the speaker.
2. When prompted, use the following default Web Access username and password:
 Web Access Username: **admin**
 Web Access Password: **admin**
3. Click **MGROUPS Setup**.
4. In the first group (MG-1) enter the following values:
Enable: Checked
Multicast IP Address: 224.224.224.224
Port: 2000
MGROUP Name: ALL (this can be named anything but zone 00 will be the zone to broadcast to every speaker)
5. Fill in the values for additional zones you require, and match the port number to the value set on the VoIP Server for that particular zone.

For an example of how to setup the paging groups, refer to the example below.

MGROUPS Setup

Device Name: Ceiling Speaker

	Multicast IP Address	Port: 2000-65535	Priority: High	MGROUP Name	Beep
MG-Emergency	<input type="text"/>	<input type="text"/>	<input type="text" value="9"/>	<input type="text"/>	<input checked="" type="checkbox"/>
MG-1	<input type="text" value="224.224.224.224"/>	<input type="text" value="2000"/>	<input type="text" value="1"/>	<input type="text" value="ALL"/>	<input checked="" type="checkbox"/>
MG-2	<input type="text" value="224.224.224.224"/>	<input type="text" value="2001"/>	<input type="text" value="1"/>	<input type="text" value="SysEng"/>	<input checked="" type="checkbox"/>
MG-3	<input type="text" value="224.224.224.224"/>	<input type="text" value="2002"/>	<input type="text" value="1"/>	<input type="text" value="Sales"/>	<input checked="" type="checkbox"/>
MG-4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
MG-5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
MG-6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
MG-7	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
MG-8	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
MG-Background	<input type="text"/>	<input type="text"/>	<input type="text" value="0"/>	<input type="text"/>	<input type="checkbox"/>

Save Settings

Reboot

5 SIP Configuration

5.1 Gathering Information

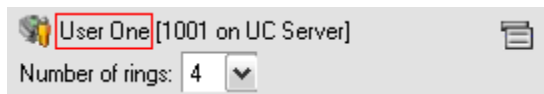
To configure the device, you need the following information.

- SIP User ID:** This is equivalent to the identity address that you want to associate with the device.
- Authenticate ID:** This is the SIP authentication identifier associated with the above identity. This is required by any SIP end-point to register with the SIP PBX.
- Authenticate Password:** This is the SIP authentication password associated with the above identity.

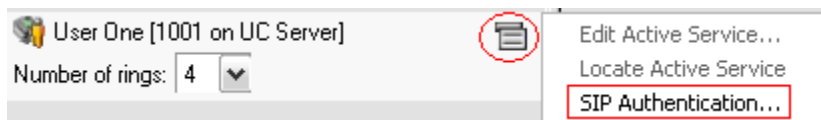
To determine the Authentication ID and Password, do the following.

5.1.1 Determining the Authentication ID and Password as the user (that owns the identity) in UC Client

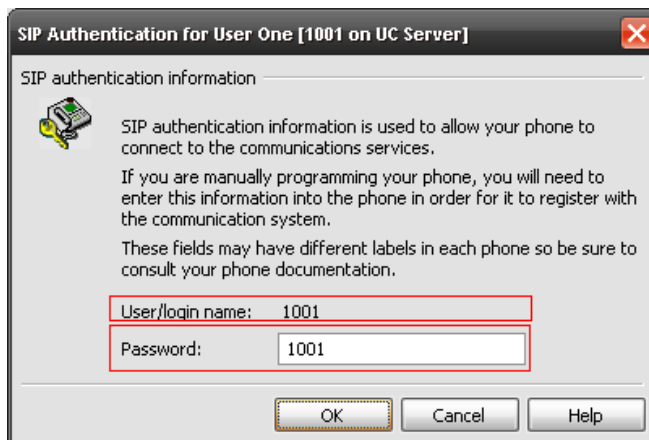
1. Start UC Client.
2. Login as the user you want to associate to the device.
3. In the bottom left pane, take note of the identity name.



4. Click the icon on the right and select **SIP Authentication**.



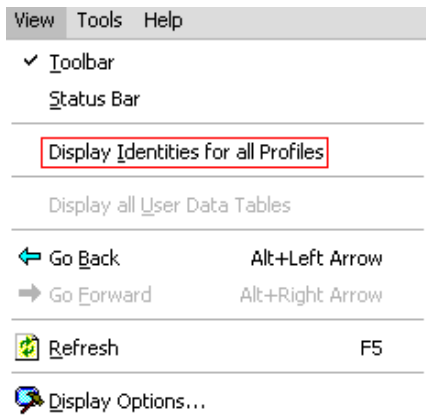
5. Record the User/login name and password from the following dialog because you need it later to configure the device.



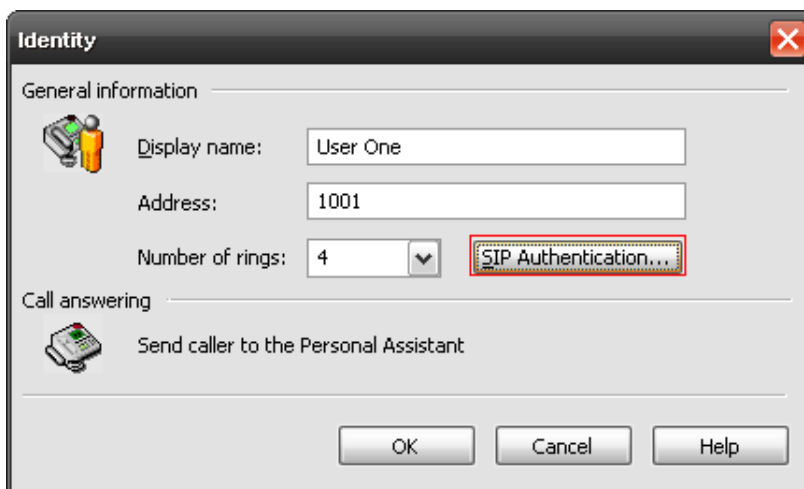
5.1.2 Determining the Authentication ID and Password as the administrator in UC Client

1. Start UC Client.
2. Login as the admin user.

3. Select the Identities tab in the left pane.
4. Go to View > Display Identities for all Profiles.



5. Find the identity in the list you want to use and double-click the entry.
6. Click **SIP Authentication**.



- Record the User/login name and password from the following dialog because you need it later to configure the device.



5.2 Device Configuration

- Open your browser and type the IP Address of the speaker.
- When prompted, use the following default Web Access username and password:
Web Access Username: **admin**
Web Access Password: **admin**
- Click the **SIP Setup** button.
- Enter the following information:
SIP Server: <IP Address of UC Server>
SIP User ID: <SIP User ID>
SIP Authenticate ID: <SIP User ID>
SIP Password: <Authenticate Password>
SIP Registration: Yes
- Click **Save Settings**.

The figure below shows an example of how to complete the required fields.

SIP Setup

SIP Server:	<input type="text" value="192.168.8.251"/>	*
Outbound Proxy:	<input type="text"/>	*
Remote SIP Port:	<input type="text" value="5060"/>	*
Local SIP Port:	<input type="text" value="5060"/>	*
SIP User ID:	<input type="text" value="700"/>	*
Authenticate ID:	<input type="text" value="700"/>	*
Authenticate Password:	<input type="text" value="1234"/>	*
SIP Registration:	<input checked="" type="radio"/> Yes <input type="radio"/> No	*
Unregister on Reboot:	<input type="radio"/> Yes <input checked="" type="radio"/> No	*
Register Expiration (minutes):	<input type="text" value="60"/>	*

** changing this parameter causes system reboot when saved*

Save Settings

6 Troubleshooting

1. **You receive a voicemail prompt when dialing the identity of the device.**

Verify the following:

- The identity was created in UC Server and the correct User ID and password is configured on the device
 - See [section 5](#)
- The SIP Server address on the device is set to the correct IP Address of UC Server
 - See [section 5.2](#)
- SIP Registration is enabled on the device
 - See [section 5.2](#)

2. **You are unable to access the Web interface to configure the paging device.**

Verify the following:

- Your PC is set to the same address range as the device for first-time configuration.
 - See [section 3](#)

3. **No audio when calling into paging device.**

Verify the following:

- The volume level is set correctly on the speaker
- The paging groups are correctly configured
 - See [section 4](#)