

CyberData SIP Intercom Integration with 8x8



This document covers the integration of CyberData's SIP Intercom with 8x8. This document was written for 8x8 and the following CyberData Products:

- 011214 SIP Outdoor Intercom with Keypad
 - Serial number begins with 2141.
- 011186 SIP Outdoor Intercom
 - Serial number begins with 1861.
- 011211 SIP Indoor Intercom
 - Serial number begins with 2111.
- 011272 SIP Indoor Intercom Flush Mount
 - Serial number begins with 2721.
- 011113 SIP Indoor Intercom with Keypad Surface Mount
 - Serial number begins with 1131.
- 011123 SIP Indoor Intercom with Keypad Flush Mount
 - Serial number begins with 1231.

All support and supporting documentation for CyberData should be obtained from CyberData itself. This document also assumes the reader is familiar with setting up CyberData Paging equipment and/or has access to the Manuals for the CyberData equipment, as several sections are left out of this manual such as setting up the network configuration of the CyberData Equipment and pin outs for relay, and audio out usage.

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2 Integration

CyberData SIP Intercom can be integrated with 8x8 to provide an intercom door box service including relay functions for door strikes/locks.

The CyberData SIP Intercom can listen in to Multicast Streams that are pre-defined, and relay out the internal speaker.

8x8 highly recommends using the speed dial functions of the CyberData SIP Intercom for placing the intercom calls inside the building, vs. allowing the party to dial direct extensions. This could leave an opening for toll fraud, unless proper toll restrictions are implemented.

This document will concentrate on using the speed dial integration method.

3 Creating a User Profile on 8x8 for SIP Calls and Night Ring Capabilities

If using the SIP Call and or Night Ring capabilities of the SIP Intercom, a softphone device should be ordered and a user is required to be created on 8x8. Create a user profile and assign the new user profile to the softphone only device ordered. This will be needed to be done for Each Registration required on the CyberData Device. If not using the SIP Call or Night Ring capabilities of the CyberData equipment this section can be skipped.

Technical Publications

3.1 Create User Profile

In account manager, click on Accounts and then User Profiles. Click Create New User Profile. Provide the following information:

- First Name (Required)
- Last Name (Required)
- Nickname (Optional)
- Email Address (Required, and must be unique)
- Job Title (Optional)
- Department (Optional)
- Location (Optional)
- User Name (Required)
- Salesforce ID (Ignore)
- Zendesk ID (Ignore)
- NetSuite ID (Ignore)
- Mobile (Ignore)
- Language (Optional, Leave as Default)
- Time Zone (Optional, Leave as default)

Create a New User Profile

First Name *
Last Name *
Nickname
Email Address *
Job Title
Department
Location
User Name *
SalesForce ID
Zendesk ID
NetSuite ID
Mobile
Language: English (U.S.)
Time Zone: US/Eastern

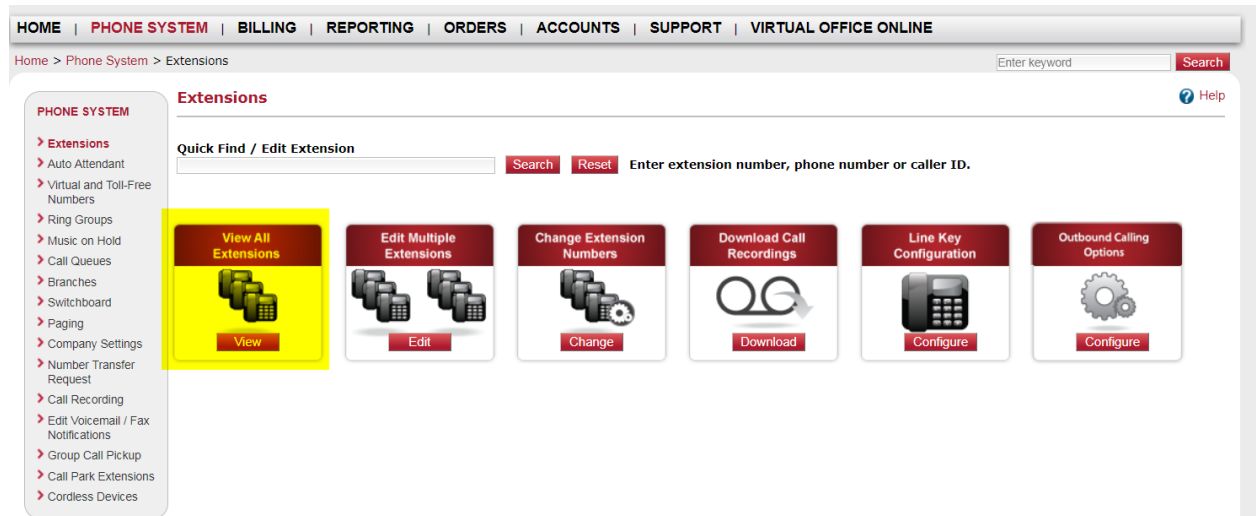
*=Indicates Required Fields

Save Save / Add Another Cancel

Click on Save (or Save / Add Another if going to add a Page user as well).

4 Assign User to the Device

After creating the user profile that will interface with CyberData Equipment, assign the user to the device. In Account Manager select Phone System, and then click on View All Extensions.



From the list of extensions find the extension ordered for the Cyber Data Device, and click Edit.

Edit	Active	Unlimited Extension				Unassigned	Unassigned	Unassigned
------	--------	---------------------	--	--	--	------------	------------	------------

Set the following item, the rest can be left as “default”

- Enable Virtual Office: No/Unchecked
- Enable Virtual Office Mobile: No/Unchecked
- Verify Preferred Codec is set to G.711U (90 kpbs)

Technical Publications

PHONE SYSTEM

> Extensions

> Auto Attendant

> Virtual and Toll-Free Numbers

> Ring Groups

> Music on Hold

> Call Queues

> Branches

> Switchboard

> Paging

> Company Settings

> Number Transfer Request

> Call Recording

> Edit Voicemail / Fax Notifications

> Group Call Pickup

> Call Park Extensions

> Cordless Devices

Phone System Setup

Help

Expand All

Edit Extension

Use the Expand and Collapse icons to view and edit this extension. **Save Changes** at the bottom of the page.

Extension Information

User Profile

Select User Profile

Create New User Profile | Reset Extension

External Caller ID:

Phone Number

Caller ID Full Name

Unassigned Unassigned

Internal Caller ID:

First Name

Last Name

Caller ID Full Name

Unassigned Unassigned UnassignedUnas

Caller ID Option Locked to User?

Phone Number

Extension

Plan

Equipment

6001

Unlimited Extension

Virtual Office Softphone

Enable Virtual Office

Enable Virtual Office Mobile

Uncheck

Click to add the User Profile Created

Must be G.711

Extension Settings

Time Zone

US/Eastern

Preferred Codec

G.711U (90 kbps)

Emergency Service Address

Outbound Calling Options

Language

English (U.S.)

Travelling Outside the Country

Hide in Auto Attendant Directory

Allow Music on Hold Selection

Permanent Caller ID Blocking

View Billing Statements

Enable Inbound Caller ID

Do Not Disturb

Then click on “Select User Profile to add the appropriate User Profile, by clicking the “select” next to the profile you want to use.

Technical Publications

Select User Profile

To search for a user profile, type the user profile information and click on the search button. You can also click on the view all button to see all the user profiles.

SearchResetView All

Actions	First Name	Last Name	Email Address	User Name
Select	Agam	Shankar	agamshankar@cyberdata.net	AGAMSHANKAR-849-FBC000
Select	Allen	Frank	allenfrank@cyberdata.net	ALLENFRANK-849-FBC000
Select	Ang	THANJUN C. 0000	angthanjun@cyberdata.net	ANGTHANJUN-849-FBC000
Select	Ann	Marlene	annmarlene@cyberdata.net	ANNMARLENE-849-FBC000
Select	Bill	Colyer	billcolyer@cyberdata.net	BILLCOLYER-849-FBC000
Select	CyberData	PageServer	cyberdata@cyberdata.net	CYBERDATA-849-FBC000
Select	CyberData	PageServer	cyberdata@cyberdata.net	CYBERDATA-849-FBC000
Select	CyberData	PageServer	cyberdata@cyberdata.net	CYBERDATA-849-FBC000
Select	David	Marlene	davidmarlene@cyberdata.net	DAVIDMARLENE-849-FBC000
Select	David	Marlene	davidmarlene@cyberdata.net	DAVIDMARLENE-849-FBC000
Select	David	Marlene	davidmarlene@cyberdata.net	DAVIDMARLENE-849-FBC000
Select	John	Marlene	johnmarlene@cyberdata.net	JOHNMARLENE-849-FBC000
Select	John	Marlene	johnmarlene@cyberdata.net	JOHNMARLENE-849-FBC000
Select	John	Marlene	johnmarlene@cyberdata.net	JOHNMARLENE-849-FBC000
Select	John	Marlene	johnmarlene@cyberdata.net	JOHNMARLENE-849-FBC000
Select	John	Marlene	johnmarlene@cyberdata.net	JOHNMARLENE-849-FBC000

Cancel

It will return you to the previous screen and click on “Save Changes”.

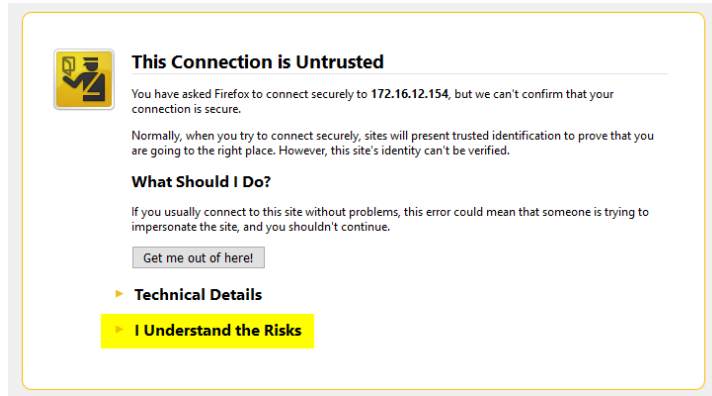
5 CyberData SIP Intercom Setup

When deploying the CyberData SIP Intercom it is recommended to use DHCP. CyberData provides a “Discovery Utility” that can be downloaded from their website (http://www.cyberdata.net/support/voip/discovery_utility.html) to initially discover the IP address of the SIP Intercom. Using the CyberData Discovery Utility to obtain the current IP address of the CyberData equipment login using a web browser using the default username of “**admin**” and the default password of “**admin**”. For more information on using the discovery utility and basic setup of the CyberData equipment, please refer to the operating manuals from CyberData.

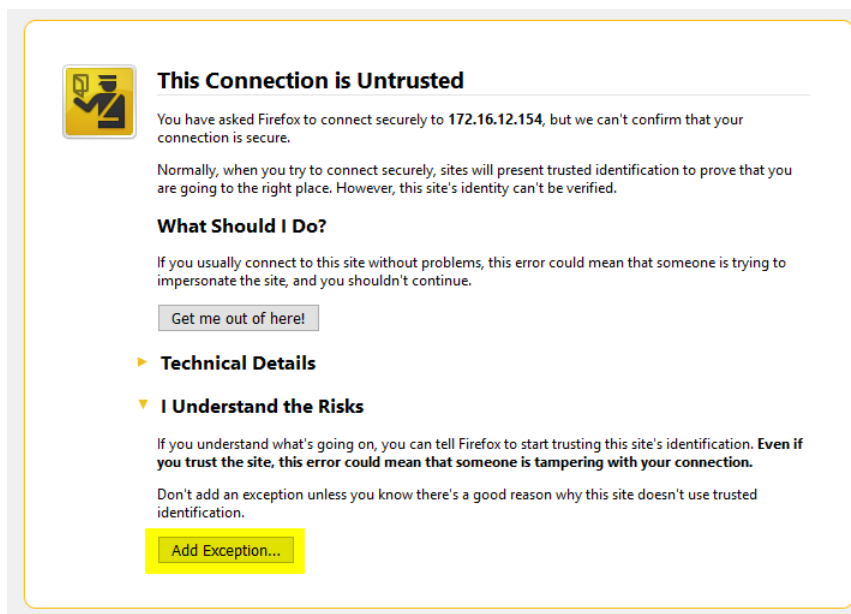
Technical Publications

5.1 Connecting to the CyberData SIP Intercom

The CyberData SIP Intercom now uses HTTPS to provision the device. When connecting to the CyberData SIP Intercom you will be required to accept the Self Signed certificate by clicking on “I understand the risks” link.

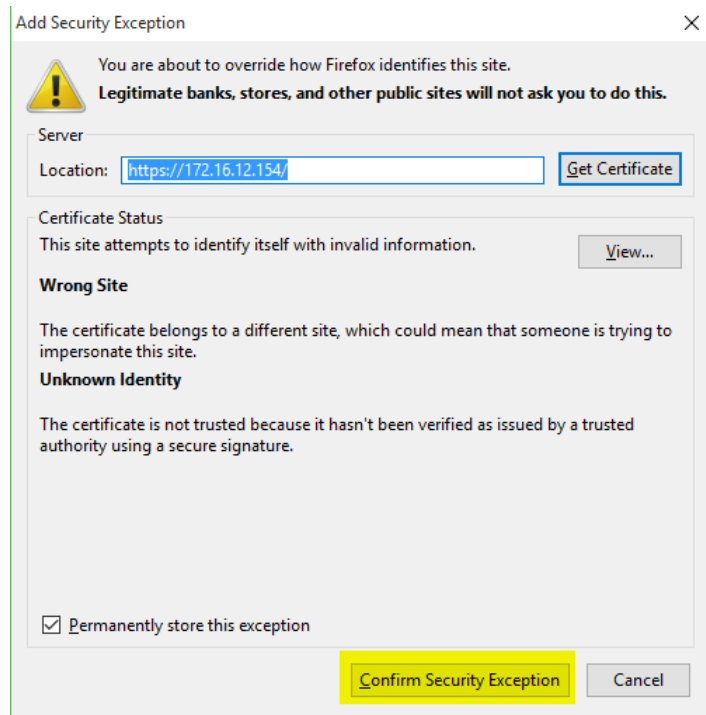


Then click “Add Exception”.



And then click Confirm Security Exception.

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5.2 Home Screen

After logging into the CyberData SIP Intercom using your favorite browser you are immediately taken to the Home Screen which will display the following information.

On the top you will find your navigation options,

Change Username: Type in this field to change the username (25-character limit).

- Default: **admin**

Change Password: Type in this field to change the password (19-character limit).

- Default: **admin**

Re-enter Password: Type the password again in this field to confirm the new password (19-character limit).

Current Settings:

Provides you with the current IP addressing of the device, Mac address and serial number.

The home screen will also show the current registration status, and features enabled on the CyberData SIP Intercom.

Import/Export Settings

Allows for Importing and Exporting settings of the CyberData Intercom.



Click on the Save button to save your configuration settings.



Note: You need to reboot for changes to take effect.



Click on the Reboot button to reboot the system.

CyberData Keypad Intercom

Current Status

Serial Number:	11-111111
Mac Address:	08:00:27:00:00:00
Firmware Version:	V11.8.0b05
IP Addressing:	DHCP
IP Address:	172.16.12.42
Subnet Mask:	255.255.255.0
Default Gateway:	172.16.12.1
DNS Server 1:	209.18.47.61
DNS Server 2:	209.18.47.62
SIP Volume:	4
Multicast Volume:	4
Ring Volume:	4
Sensor Volume:	4
Push to Talk Volume:	0
Volume Boost:	Off
Microphone Gain:	4
Push to Talk Microphone Gain:	0
SIP Mode:	Enabled
Multicast Mode:	Enabled
Event Reporting:	Disabled
Nightringer:	Disabled
Primary SIP Server:	Registered
Backup Server 1:	Not registered
Backup Server 2:	Not registered
Nightringer Server:	Not registered

Admin Settings

Username:	admin
Password:	
Confirm Password:	

SaveRebootToggle Help

Import Settings

Choose File No file chosen

Import Config

Export Settings

Export Config

5.3 Device Configuration

On the device configuration screen, you can configure several default options for the CyberData Intercom, and perform basic operation tests.

SIP Volume Set the speaker volume for a SIP call. A value of 0 will mute the speaker during SIP calls.

Multicast Volume Set the speaker volume for multicast audio streams. A value of 0 will mute the speaker during multicasts.

Ring Volume Set the ring volume for incoming calls. A value of 0 will mute the speaker instead of playing the ring tone when Auto-Answer Incoming Calls is disabled.

Sensor Volume Set the speaker volume for playing sensor activated audio. A value of 0 will mute the speaker during sensor activated audio.

The screenshot displays the configuration interface for a CyberData Intercom, organized into several sections:

- Volume Settings (0-9):** Includes sliders for SIP Volume (4), Multicast Volume (4), Ring Volume (4), Sensor Volume (4), and Push to Talk Volume (0). A dropdown menu for 'No Volume Boost' is also present.
- Microphone Settings (0-9):** Includes sliders for Microphone Gain (4) and Push to Talk Microphone Gain (0).
- Clock Settings:** Features checkboxes for 'Set Time with NTP server on boot' (checked), 'Periodically sync time with server' (checked), and a text field for 'NTP Server' (pool.ntp.org). It also includes a 'Posix Timezone String' field (PST8PDT,M3.2.0/2-00:00,M11.1.) and a 'Time update period (in hours)' field (24). The 'Current Time' is displayed as 16:23:12.
- Relay Settings:** Includes checkboxes for 'Activate Relay with DTMF code' (checked), 'Play tone during DTMF Activation' (unchecked), 'Activate Relay During Ring' (unchecked), 'Activate Relay During Night Ring' (unchecked), 'Activate Relay While Call Active' (unchecked), 'Activate Relay On Button Press' (unchecked), and a 'Relay On Button Press Duration' field (3). It also includes text fields for 'Relay Pulse Code' (321), 'Relay Pulse Duration (in seconds)' (2), 'Relay Activation Code' (456), and 'Relay Deactivation Code' (654).
- Misc Settings:** Includes a 'Device Name' field (Keypad Intercom), checkboxes for 'Auto-Answer Incoming Calls' (checked), 'Button Lit when Idle' (checked), 'Play Ringback Tone' (checked), 'Enable Push to Talk' (unchecked), 'Enable DTMF Push to Talk' (unchecked), 'Prevent Call Termination' (unchecked), and 'Disable HTTPS (NOT recommended)' (unchecked). A 'Button Brightness (0-255)' field is set to 255.

At the bottom of the screen, there are 'Save' and 'Reboot' buttons, and a row of buttons for 'Test Audio', 'Test Microphone', 'Test Relay', and 'Toggle Help'.

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Microphone Gain

Set the microphone gain level.

Volume Boost:

No Volume Boost

Volume Boost 1

Volume Boost 2

Volume Boost 3

Set the Boost level to increase the volume output of the speaker.

Using Volume Boost may introduce audio clips or cause the device to

drop from full duplex to half duplex operation. Normal operation of the product can be met with volume levels 0 through 9. 0 being mute and 9 being the loudest volume that in a normal arm's length and average background noise, will enable full duplex operation and give the best quality of sound output.

The volume boost options increase the output of the speaker by:

3db for Boost level 1

6db for Boost level 2

9db for Boost level 3

If the user would like a higher output from the speaker, the Boost settings are available. However, operation in Boost Mode may overdrive or clip the audio if, for example, the phone that is connected has a high microphone gain or if the person has a loud voice talking too close to the microphone.

The screenshot displays a web-based configuration interface for a device, organized into five main sections: Volume Settings, Microphone Settings, Relay Settings, Clock Settings, and Misc Settings. Each section contains various adjustable parameters, some with numeric input fields and others with checkboxes. At the bottom, there are buttons for 'Save', 'Reboot', 'Test Audio', 'Test Microphone', 'Test Relay', and 'Toggle Help'.

Section	Parameter	Value	
Volume Settings (0-9)	SIP Volume:	4	
	Multicast Volume:	4	
	Ring Volume:	4	
	Sensor Volume:	4	
	Push to Talk Volume:	0	
Microphone Settings (0-9)	Microphone Gain:	4	
	Push to Talk Microphone Gain:	0	
Relay Settings	Activate Relay with DTMF code:	<input checked="" type="checkbox"/>	
	Relay Pulse Code:	321	
Clock Settings	Set Time with NTP server on boot:	<input checked="" type="checkbox"/>	
	NTP Server:	pool.ntp.org	
	Posix Timezone String (see manual):	PST8PDT,M3.2.0/2.00.00,M11.1.	
	Periodically sync time with server:	<input checked="" type="checkbox"/>	
	Time update period (in hours):	24	
	Current Time:	16:23:12	
	Misc Settings	Device Name:	Keypad Intercom
		Auto-Answer Incoming Calls:	<input checked="" type="checkbox"/>
		Button Lit when Idle:	<input checked="" type="checkbox"/>
		Button Brightness (0-255):	255
Play Ringback Tone:		<input checked="" type="checkbox"/>	
Enable Push to Talk:		<input type="checkbox"/>	
Enable DTMF Push to Talk:		<input type="checkbox"/>	
Prevent Call Termination:		<input type="checkbox"/>	

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The acoustic echo canceller also has a harder time maintaining full duplex operation when in the Boost Mode.

The product may drop from full duplex operation into half/duplex mode while in Boost Mode.

Activate Relay with DTMF

code: Relay can be activated via DTMF Code when checked.

DTMF Activation Code: Code used to activate relay.

DTMF Activation Duration (in seconds): Duration the relay is activated after the proper code is entered. 0-99 seconds. If 0 is entered the relay is indefinitely activated until the DTMF code is entered a second time.

Activate Relay During Ring:

When enabled the relay is activated while the device is ringing. If Auto answer is enabled, this feature is disabled.

Activate Relay During Night

Ring: When selected, the relay will be activated if the Night ringer extension is ringing.

Activate Relay While Call

Active: When enabled the relay is activated for the duration of the call automatically.

Activate Relay on Button Press:

When enabled, the relay is activated for the duration

The screenshot displays a web-based configuration interface for a device, organized into several sections with expandable settings.

- Volume Settings (0-9):** Includes sliders for SIP Volume (4), Multicast Volume (4), Ring Volume (4), Sensor Volume (4), and Push to Talk Volume (0). A dropdown menu for "No Volume Boost" is also present.
- Microphone Settings (0-9):** Includes sliders for Microphone Gain (4) and Push to Talk Microphone Gain (0).
- Clock Settings:** Includes checkboxes for "Set Time with NTP server on boot" (checked), "Periodically sync time with server" (checked), and a text field for "NTP Server" (pool.ntp.org). It also shows the "Posix Timezone String" (PST8PDT,M3.2.0/2:00:00,M11.1.) and "Time update period (in hours)" (24).
- Relay Settings:** Includes checkboxes for "Activate Relay with DTMF code" (checked), "Play tone during DTMF Activation" (unchecked), "Activate Relay During Ring" (unchecked), "Activate Relay During Night Ring" (unchecked), "Activate Relay While Call Active" (unchecked), "Activate Relay On Button Press" (unchecked), and "Relay On Button Press Duration" (3). It also includes text fields for "Relay Pulse Code" (321), "Relay Pulse Duration (in seconds)" (2), "Relay Activation Code" (456), and "Relay Deactivation Code" (654).
- Misc Settings:** Includes a text field for "Device Name" (Keypad Intercom), checkboxes for "Auto-Answer Incoming Calls" (checked), "Button Lit when Idle" (checked), "Play Ringback Tone" (checked), "Enable Push to Talk" (unchecked), "Enable DTMF Push to Talk" (unchecked), "Prevent Call Termination" (unchecked), and "Disable HTTPS (NOT recommended)" (unchecked). It also includes a "Button Brightness (0-255)" slider set to 255.

At the bottom of the interface, there are buttons for "Save", "Reboot", "Test Audio", "Test Microphone", "Test Relay", and "Toggle Help".

specified in “Relay on Button Press Timeout” when the call button is pressed.

Relay on Button Press Duration (in seconds): Duration the relay is activated after the call button is pressed 1-9 seconds.

Device Name: Type the device name. Enter up to 25 characters.

Auto-Answer Incoming Calls: When enabled, the intercom will auto answer all incoming calls.

Button Lit when Idle: When enabled, the call button is lit when there is no active call.

Button Brightness (0-255): The desired Call button LED brightness level. Acceptable values are 0-255, where 0 is the dimmest and 255 is the brightest. Enter up to three digits.

Turn on Keypad backlight: When enabled, the keypad is backlit.

Play Ringback Tone: When enabled ringback tone is heard when making a call.

Enable Push to Talk: When enabled this will cause the device to be muted normally, and only transmit audio from the microphone while the call button is pressed. You will not

be able to terminate the call from the intercom unit.

Enable DTMF Push to Talk:

When enabled pressing the * (star) key will disable the speaker and set the microphone gain level to the max, pressing the # (pound/hash) key the mic will be muted and the speaker will be set to its loudest level.

Prevent Call Termination:

When enabled the call button cannot be used to terminate the call.

Disable HTTPS (NOT recommended): Disables the encrypted connection to the webpage. We do not recommend disabling HTTPS for security reasons.

A blue rectangular button with the word "Save" in white text.

Click on the Save button to save your configuration settings.



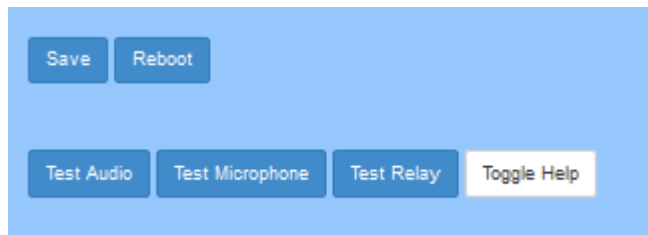
Note: You need to reboot for changes to take effect.

A blue rectangular button with the word "Reboot" in white text.

Click on the Reboot button to reboot the system.

A blue rectangular button with the text "Test Audio" in white text.

When the Test Audio button is pressed, you will hear a voice message for testing the



device audio quality and volume.

Test Microphone

When the Test microphone button is pressed, the Intercom will record 3 seconds of audio, then beep to indicate the end of recording, and play back the recording.

Test Relay

Click on the Test Relay button to do a relay test.

5.4 Button Configuration

Button configuration screen is used to configure what happens when the buttons (the Call Button or keys on the key pad) are pressed.

Enable Telephone

Operation: Select Enable Telephone Operation to put the Intercom into Telephone Dial Mode. In Telephone Dial Mode, the Intercom will operate like a telephone:

- To make a call in this mode, press the Call Button to go 'off-hook'. The unit will begin playing a dial tone and will wait for keypad input.
- Dial the extension you want to reach and wait.
- Pressing the Call Button at any time in this process will hang up the call (put it back 'on-hook').

The screenshot displays the 'Button Configuration' interface with the following sections:

- Dial Mode:** Includes radio buttons for 'Enable Telephone Operation', 'Enable Cell Phone Operation', 'Enable Speed Dial Operation', and 'Enable Security Operation'.
- Security Mode Settings:** A table for configuring security codes and DSR activation.

Security Code	Value	Activate DSR
Security Code 0:	1234560	<input type="checkbox"/>
Security Code 1:	1234561	<input type="checkbox"/>
Security Code 2:	1234562	<input type="checkbox"/>
Security Code 3:	1234563	<input type="checkbox"/>
Security Code 4:	1234564	<input type="checkbox"/>
Security Code 5:	1234565	<input type="checkbox"/>
Security Code 6:	1234566	<input type="checkbox"/>
Security Code 7:	1234567	<input type="checkbox"/>
Security Code 8:	1234568	<input type="checkbox"/>
Security Code 9:	1234569	<input type="checkbox"/>
- Relay Settings:** Fields for 'Relay Activation Code', 'Relay Deactivation Code', 'Relay Activation Timeout' (set to 6), 'Play Tone While Relay Active' (checkbox), and 'Allow Telephone Dialout' (checkbox).
- Call Button:** Fields for 'Call Button' (1010) and 'ID'.
- Send Multicast Audio:** A checkbox.
- Multicast Address:** A text field.
- Multicast Port:** A text field (set to 0).
- Repeat Message:** A text field (set to 0).
- Speed Dial Settings:** A table for configuring speed dial keys.

Key	Value	ID
Speed Dial Timeout:	0	
Keypad 1:	1001	
Keypad 2:		
Keypad 3:		
Keypad 4:		
Keypad 5:		
Keypad 6:		
Keypad 7:		
Keypad 8:		
Keypad 9:		
Keypad 0:		kd2411
Keypad *:		
Keypad #:		
Call Button:	1010	
- Button Tones:** A checkbox for 'Play Button Tones' (checked).
- Buttons:** 'Save', 'Reboot', 'Start Button Test', and 'Toggle Help'.

- During a call, you can use the keypad to send DTMF tones to the remote extension.

Enable Cellphone

Operation: Select Enable Cellphone Operation to put the Intercom into Cellphone Dial Mode. In Cellphone Dial Mode, the Intercom will operate like a cellular phone:

- This mode is similar to the telephone operation but you dial in an extension differently.
- To make a call in this mode, dial the extension and then press the call button to 'send' or initiate the call.
- Pressing the call button at any time in this process will hang up the call (put it back 'on-hook').
- During a call you can use the keypad to send DTMF tones to the remote extension.

Enable Speed Dial: Select Enable Speed Dial to put the Intercom into Speed Dial Mode. In this mode the user sets up extensions to dial when a button is pressed.

Speed Dial Timeout (in seconds): The Speed Dial

Timeout (in seconds) setting is the number of seconds you need to hold the button before it will place a call. If this value is 0, it will place a call as soon as the button is released.

Keypad (0-9, *, #): Number to be called when this button is pressed (max of 64 characters).

Call Button: Number to be called when this button is pressed (max of 64 characters).

ID: Enter the Extension number associated with the Intercom User (64 character limit).

Enable Security Keypad

Operation: Select Enable Security Keypad Operation to put the Intercom into Security Dial Mode. In Security Dial Mode, the Intercom will act like a normal, one-button Intercom by calling the extension specified in the Call Button field.

When a security code is entered on the keypad that matches one of the seven-digit fields specified on the page, the relay will be activated.

- This mode is meant for installation with security

doors. In Security Dial Mode, the Intercom will act like a normal, one-button Intercom by calling the extension specified in the Call Button field.

- Up to 10 (7-digit maximum) security codes can be registered with the device. Enter a security code by pressing the # key before entering the code. When one of these codes is typed on the keypad, it will activate the relay for the Relay Activation Timeout (in seconds) setting.

- It is possible to enter a security code both inside and out of calls.

- In this mode normal relay operation is suspended and the following settings are non-operational:

Relay On Button Press,
Relay During Call Active,
Relay During Ring, Relay
During Night-ring

- In this mode, you can't send dtmf to a remote extension using the keypad. You can however setup delayed dtmf tones in the dial out string.

Relay Activation Timeout (in seconds): Type the desired length of time (in seconds) that you want the

The screenshot displays the configuration interface for the 8x8 SIP Intercom, divided into four main sections:

- Dial Mode:** Contains four radio buttons for enabling different operations: Enable Telephone Operation, Enable Cell Phone Operation, Enable Speed Dial Operation (which is selected), and Enable Security Operation.
- Security Mode Settings:** A table for configuring security codes and their associated DSR (Do Not Store Relay) settings.

Security Code	DSR
Security Code 0: 1234560	Activate DSR: <input type="checkbox"/>
Security Code 1: 1234561	Activate DSR: <input type="checkbox"/>
Security Code 2: 1234562	Activate DSR: <input type="checkbox"/>
Security Code 3: 1234563	Activate DSR: <input type="checkbox"/>
Security Code 4: 1234564	Activate DSR: <input type="checkbox"/>
Security Code 5: 1234565	Activate DSR: <input type="checkbox"/>
Security Code 6: 1234566	Activate DSR: <input type="checkbox"/>
Security Code 7: 1234567	Activate DSR: <input type="checkbox"/>
Security Code 8: 1234568	Activate DSR: <input type="checkbox"/>
Security Code 9: 1234569	Activate DSR: <input type="checkbox"/>
Relay Activation Code:	Activate DSR: <input type="checkbox"/>
Relay Deactivation Code:	

Below the table, there are fields for: Relay Activation Timeout (set to 6), Play Tone While Relay Active (checkbox), Allow Telephone Dialout (checkbox), Call Button (1010) with its ID, Send Multicast Audio (checkbox), Multicast Address, Multicast Port (0), and Repeat Message (0).
- Speed Dial Settings:** A table for configuring speed dial keys and their associated IDs.

Keypad	ID
Keypad 1: 1001	ID: 1001
Keypad 2:	ID:
Keypad 3:	ID:
Keypad 4:	ID:
Keypad 5:	ID:
Keypad 6:	ID:
Keypad 7:	ID:
Keypad 8:	ID:
Keypad 9:	ID:
Keypad 0:	ID: id2411
Keypad *:	ID:
Keypad #:	ID:
Call Button: 1010	ID: 1010
- Button Tones:** Includes a checkbox for Play Button Tones (checked) and buttons for Save, Reboot, Start Button Test, and Toggle Help.

relay to remain activated after a security code is entered.

Play Time While Relay is

Active: Check this box to play an audible tone while the relay is activated.

Allow Telephone Dialout:

When the Allow Telephone Dialout option is enabled, you can use the keypad to place calls to a dialed extension. To call an extension, dial the number and wait. You can still enter security codes with the Allow Telephone Dialout option enabled by pressing the # key before entering the code. With the Allow Telephone Dialout option disabled, all keypad input will be treated as security input. You can still use the # key but it is not necessary.

Call Button: Enter the desired dial-out extension number (64 character limit). Security codes are limited to seven characters and are activated with the # key.

ID: Enter the Extension number associated with the Intercom User (64 character limit).

Security Code (0-9): Enter the desired security code

number (7 character limit). When a security code is entered on the keypad that matches one of the seven-digit fields specified on the page, the relay will be activated.

Play Button Tone: Check this box to hear a tone when a keypad button is pushed. This setting applies to all modes and determines whether the device will play an audible sound out of the speaker when doing any of the following:

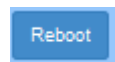
- Entering a security code.
- Initiating a speed dial.
- Pressing the keys in cellphone and telephone modes.



Click on the Save button to save your configuration settings.



Note: You need to reboot for changes to take effect.



Click on the Reboot button to reboot the system.

Dial Mode

Enable Telephone Operation: ☐

Enable Cell Phone Operation: ☐

Enable Speed Dial Operation: ☒

Enable Security Operation: ☐

Security Mode Settings

Security Code 0:	1234560	Activate DSR: <input type="checkbox"/>
Security Code 1:	1234561	Activate DSR: <input type="checkbox"/>
Security Code 2:	1234562	Activate DSR: <input type="checkbox"/>
Security Code 3:	1234563	Activate DSR: <input type="checkbox"/>
Security Code 4:	1234564	Activate DSR: <input type="checkbox"/>
Security Code 5:	1234565	Activate DSR: <input type="checkbox"/>
Security Code 6:	1234566	Activate DSR: <input type="checkbox"/>
Security Code 7:	1234567	Activate DSR: <input type="checkbox"/>
Security Code 8:	1234568	Activate DSR: <input type="checkbox"/>
Security Code 9:	1234569	Activate DSR: <input type="checkbox"/>
Relay Activation Code:		Activate DSR: <input type="checkbox"/>
Relay Deactivation Code:		

Relay Activation Timeout:

Play Tone While Relay Active: ☐

Allow Telephone Dialout: ☐

Call Button: ID:

Send Multicast Audio: ☐

Multicast Address:

Multicast Port:

Repeat Message:

Speed Dial Settings

Speed Dial Timeout:

Keypad 1:	<input type="text" value="1001"/>	ID: <input type="text" value="1234567890"/>
Keypad 2:	<input type="text" value=""/>	ID: <input type="text" value=""/>
Keypad 3:	<input type="text" value=""/>	ID: <input type="text" value=""/>
Keypad 4:	<input type="text" value=""/>	ID: <input type="text" value=""/>
Keypad 5:	<input type="text" value=""/>	ID: <input type="text" value=""/>
Keypad 6:	<input type="text" value=""/>	ID: <input type="text" value=""/>
Keypad 7:	<input type="text" value=""/>	ID: <input type="text" value=""/>
Keypad 8:	<input type="text" value=""/>	ID: <input type="text" value=""/>
Keypad 9:	<input type="text" value=""/>	ID: <input type="text" value=""/>
Keypad 0:	<input type="text" value=""/>	ID: <input type="text" value="1234567890"/>
Keypad *:	<input type="text" value=""/>	ID: <input type="text" value=""/>
Keypad #:	<input type="text" value=""/>	ID: <input type="text" value=""/>
Call Button:	<input type="text" value="1010"/>	ID: <input type="text" value="1234567890"/>

Button Tones

Play Button Tones: ☒

5.5 Network Configuration

Addressing Node Select either DHCP IP Addressing or Static Addressing by marking the appropriate radio button. DHCP Addressing mode is enabled on default and the device will attempt to resolve network addressing with the local DHCP server upon boot. If DHCP Addressing fails, the device will revert to the last known IP address or the factory default address if no prior DHCP lease was established.

Hostname This is the hostname provided by the DHCP server. See the DHCP/ DNS server documentation for more information. Enter up to 64 characters.

IP Address Enter the Static IPv4 network address in dotted decimal notation.

Subnet Mask Enter the Subnet Mask in dotted decimal notation.

Default Gateway Enter the Default Gateway IPv4 address in dotted decimal notation.

DNS Server 1 Enter the primary DNS Server IPv4 address in dotted decimal notation.

DNS Server 2 Enter the secondary DNS Server IPv4 address in dotted decimal notation.

DHCP Timeout in seconds Specify the desired time-out duration (in seconds) that the device will wait for a response from the DHCP server before reverting to the stored static IP address. The stored static IP address may be the last known IP address or the factory default address if no prior DHCP lease was established. Enter up to 8 characters. A value of -1 will retry forever.

The screenshot displays a network configuration interface with three main sections:

- Stored Network Settings:** Includes radio buttons for **Static** and **DHCP** (selected). Fields for Hostname (SipDevice033b7e), IP Address (10.10.10.10), Subnet Mask (255.0.0.0), Default Gateway (10.0.0.1), DNS Server 1 (10.0.0.1), DNS Server 2 (10.0.0.1), and DHCP Timeout in seconds (80). A note states: ** A value of -1 will retry forever*.
- VLAN Settings:** Fields for VLAN ID (0-4095) set to 0 and VLAN Priority (0-7) set to 0.
- Current Network Settings:** Displays the active configuration: IP Address: 172.16.12.154, Subnet Mask: 255.255.255.0, Default Gateway: 172.16.12.1, DNS Server 1: 172.16.12.11, and DNS Server 2.

Buttons for **Save**, **Reboot**, and **Toggle Help** are located at the bottom right.

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Save

Click on the Save button to save your configuration settings.



Note: You need to reboot for changes to take effect.

Reboot

Click on the Reboot button to reboot the system.

Toggle Help

Click on the Toggle Help button to see a short description of some of the web page items. First click on the Toggle Help button, and you will see a question mark (?) appear next to some of the web page items. Move the mouse pointer to hover over a question mark to see a short description of a specific web page item.

Stored Network Settings	VLAN Settings
Addressing Mode: <input type="radio"/> Static <input checked="" type="radio"/> DHCP	VLAN ID (0-4095): <input type="text" value="0"/>
Hostname: <input type="text" value="SipDevice033b7e"/>	VLAN Priority (0-7): <input type="text" value="0"/>
IP Address: <input type="text" value="10.10.10.10"/>	
Subnet Mask: <input type="text" value="255.0.0.0"/>	
Default Gateway: <input type="text" value="10.0.0.1"/>	
DNS Server 1: <input type="text" value="10.0.0.1"/>	
DNS Server 2: <input type="text" value="10.0.0.1"/>	
DHCP Timeout in seconds: <input type="text" value="60"/>	
<small>* A value of -1 will retry forever</small>	
Current Network Settings	
IP Address: 172.16.12.154	
Subnet Mask: 255.255.255.0	
Default Gateway: 172.16.12.1	
DNS Server 1: 172.16.12.11	
DNS Server 2:	

Save Reboot Toggle Help

5.6 SIP Configuration

SIP configuration screen is used to configure the SIP registration parameters used by the CyberData SIP Intercom to register with 8x8 for paging purposes. The SIP User ID and Authentication ID are the same values which is the Device ID created in 8x8 configuration and assigned to the user. Authentication Password is only used if a SIP Proxy Password is required by the Generic SIP Device created in 8x8 configuration manager.

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Enable SIP Operation:

Checked

SIP Server: unsbc.8x8.com

Backup SIP Server 1: Not Used

Backup SIP Server 2: Not Used

Use Cisco SRST: Unchecked

Remote SIP Port: 5199

Local SIP Port: 5060

Outbound Proxy: must be left blank.

Outbound Proxy Port: 0

SIP User ID: The GUN ID provided by your 8x8 engineer.

Authentication ID: Same as User ID.

Authentication Password: The SIP Proxy Password for the Device as provided by your 8x8 engineer.

Register with a SIP Server: Checked

Re-registration Interval: 360

Terminate call after delay (in seconds): Type the desired number of seconds that you want to last before a call is terminated.

Note: A value of 0 will disable this function.

The screenshot displays a configuration interface for SIP and Nightringer settings. The interface is divided into two main sections: SIP Settings and Nightringer Settings. The SIP Settings section includes fields for enabling SIP operation, registering with a SIP server, using Cisco SRST, and configuring primary and backup SIP servers, user IDs, authentication IDs, and passwords. It also includes fields for remote and local SIP ports, outbound proxy, and outbound proxy port. The Nightringer Settings section includes fields for enabling Nightringer, SIP server, remote SIP port, local SIP port, outbound proxy, outbound proxy port, user ID, authentication ID, authentication password, and re-registration interval. Below these sections are RTP Settings, Jitter Buffer, Call Disconnection, and Codec Selection. The RTP Settings section includes a field for RTP Port (even). The Jitter Buffer section includes a field for Jitter Buffer. The Call Disconnection section includes a field for Terminate Call after delay. The Codec Selection section includes a dropdown menu for Force Selected Codec and a dropdown menu for Codec. At the bottom of the interface are buttons for Save, Reboot, and Toggle Help.

SIP Settings	
Enable SIP operation:	<input checked="" type="checkbox"/>
Register with a SIP Server:	<input checked="" type="checkbox"/>
Use Cisco SRST:	<input type="checkbox"/>
Primary SIP Server:	unsbc.8x8.com
Primary SIP User ID:	
Primary SIP Auth ID:	
Primary SIP Auth Password:	*****
Backup SIP Server 1:	
Backup SIP User ID 1:	
Backup SIP Auth ID 1:	
Backup SIP Auth Password 1:	
Backup SIP Server 2:	
Backup SIP User ID 2:	
Backup SIP Auth ID 2:	
Backup SIP Auth Password 2:	
Remote SIP Port:	5199
Local SIP Port:	5060
Outbound Proxy:	
Outbound Proxy Port:	0
Disable rport Discovery:	<input type="checkbox"/>
Re-registration Interval (in seconds):	300
Unregister on Boot:	<input type="checkbox"/>
Keep Alive Period:	10000

Nightringer Settings	
Enable Nightringer:	<input checked="" type="checkbox"/>
SIP Server:	unsbc.8x8.com
Remote SIP Port:	5199
Local SIP Port:	5061
Outbound Proxy:	
Outbound Proxy Port:	0
User ID:	
Authenticate ID:	
Authenticate Password:	*****
Re-registration Interval (in seconds):	360

RTP Settings	
RTP Port (even):	20000

Jitter Buffer	
Jitter Buffer:	60

Call Disconnection	
Terminate Call after delay:	0

Codec Selection	
Force Selected Codec:	<input type="checkbox"/>
Codec:	PCMU (G.711, u-law) ▼

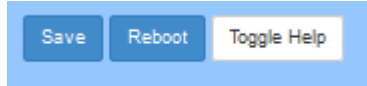
Save Reboot Toggle Help

Unregister on reboot:

Unchecked



Click on the Save button to save your configuration settings.



Note: You need to reboot for changes to take effect.



Click on the Reboot button to reboot the system.

5.7 Nightringer Configuration

Nightringer configuration screen is used to configure the SIP registration parameters used by the CyberData SIP Intercom to register with 8x8 for Night Bell or Nightringer purposes. The SIP User ID and Authentication ID are the same values which is the GUN ID provided by your 8x8 for the device in section 6 and assigned to the user created previously. Authentication Password is provided by your 8x8 Engineer.

Technical Publications

Enable Nightringer: Checked

SIP Server: unsbc.8x8.com

Remote SIP Port: 5199

Local SIP Port: 5061, must be Port 5061.

User ID: the GUN ID provided by your 8x8 engineer

Authentication ID: Same as User ID.


Authentication Password: The SIP Proxy Password for the Device as provided by your 8x8 engineer.

Re-registration Interval: 360

Relay rings to multicast: If you wish all multicast devices to receive the ringer page, CHECK this check box.

Multicast Address: the IP Address to send the nightringer page to.

Multicast Port: The Port Address to send the nightringer page to.

 Click on the Save button to save your configuration settings.



Note: You need to reboot for changes to take effect.

SIP Settings		Nightringer Settings	
Enable SIP operation:	<input checked="" type="checkbox"/>	Enable Nightringer:	<input checked="" type="checkbox"/>
Register with a SIP Server:	<input checked="" type="checkbox"/>	SIP Server:	unsbc.8x8.com
Use Cisco SRST:	<input type="checkbox"/>	Remote SIP Port:	5199
Primary SIP Server:	unsbc.8x8.com	Local SIP Port:	5061
Primary SIP User ID:		Outbound Proxy:	
Primary SIP Auth ID:		Outbound Proxy Port:	0
Primary SIP Auth Password:	*****	User ID:	
Backup SIP Server 1:		Authenticate ID:	
Backup SIP User ID 1:		Authenticate Password:	*****
Backup SIP Auth ID 1:		Re-registration Interval (in seconds):	360
Backup SIP Auth Password 1:			
Backup SIP Server 2:			
Backup SIP User ID 2:			
Backup SIP Auth ID 2:			
Backup SIP Auth Password 2:			
Remote SIP Port:	5199		
Local SIP Port:	5060		
Outbound Proxy:			
Outbound Proxy Port:	0		
Disable rport Discovery:	<input type="checkbox"/>		
Re-registration Interval (in seconds):	300		
Unregister on Boot:	<input type="checkbox"/>		
Keep Alive Period:	10000		

RTP Settings	
RTP Port (even):	20000

Jitter Buffer	
Jitter Buffer:	60

Call Disconnection	
Terminate Call after delay:	0

Codec Selection	
Force Selected Codec:	<input type="checkbox"/>
Codec:	PCMU (G.711, u-law) ▼

Save

Reboot

Toggle Help

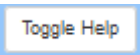
Save

Reboot

Toggle Help

A blue rectangular button with the word "Reboot" in white text.

Click on the Reboot button to reboot the system.

A blue rectangular button with the text "Toggle Help" in white text.

Click on the Toggle Help button to see a short description of some of the web page items. First click on the Toggle Help button, and you will see a question mark (?) appear next to some of the web page items. Move the mouse pointer to hover over a question mark to see a short description of a specific web page item.

5.8 Multicast Configuration

Multicast Configuration is used to create multiple zones that the CyberData SIP Intercom will listen to and relay pages that are received, configure each multicast zone to match the multicast Zone. If you are not using Multicast Paging, or do not want to include the Intercom in the paging zone this section can be skipped.

When playing multicast streams, audio on different streams will preempt each other according to their priority in the list. An audio stream with a higher priority will interrupt a stream with a lower priority.

If both SIP and Multicast is enabled, SIP audio streams are considered priority 4.5. SIP audio will interrupt multicast streams with priority 0 through 4 and will be interrupted by multicast streams with priority 5 through 9.

During priority 9 multicast streams, the analog volume control is bypassed and the volume level is set to maximum.

Ringtones all play at the same priority level. This means that it is possible to have a night ring tone and a normal ringtone playing at the same time.

Priority 9 will play the announcement at maximum volume.

Polycom will use a Default IP of 224.0.1.116 and a port of 5001 for its paging functions. 8x8 recommends that when using Polycom phones to set Priority 0 to be your Polycom Paging group by entering the IP of 224.0.1.116 and Port 5001 into Priority 0.

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Enable Multicast operation: Checked

Address: Enter the IP address of the Multicast Group.

- **Note:** To disable a relay on a group, use an IP address of 0.0.0.0.

Port: Enter the port number of the Multicast Group.

- **Note:** The port range can be from 2000 to 65534.

Name: Enter a name for the Multicast Group.

Beep: should a beep be played before page.

Relay: should the relay be engaged with this page.

Polycom Default Channel: 1

Polycom Priority Channel: 24

Polycom Emergency Channel: 25

Multicast Settings

Enable Multicast Operation: ☒

Priority	Address	Port	Name	Beep	Relay
9	239.168.3.10	11000	Emergency	<input type="checkbox"/>	<input type="checkbox"/>
8	234.2.1.1	10002	Office	<input type="checkbox"/>	<input type="checkbox"/>
7	239.168.3.8	9000	MG7	<input type="checkbox"/>	<input type="checkbox"/>
6	239.168.3.7	8000	MG6	<input type="checkbox"/>	<input type="checkbox"/>
5	239.168.3.6	7000	MG5	<input type="checkbox"/>	<input type="checkbox"/>
4	239.168.3.5	6000	MG4	<input type="checkbox"/>	<input type="checkbox"/>
3	239.168.3.4	5000	MG3	<input type="checkbox"/>	<input type="checkbox"/>
2	239.168.3.3	4000	MG2	<input type="checkbox"/>	<input type="checkbox"/>
1	239.168.3.2	3000	MG1	<input type="checkbox"/>	<input type="checkbox"/>
0	224.0.1.116	5001	Polycom Default	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Polycom Default Channel

1

Polycom Priority Channel

24

Polycom Emergency Channel

25

SIP calls are considered priority 4.5

Port range can be from 2000-65535

Priority 9 is the highest and 0 is the lowest

A higher priority audio stream will always supersede a lower one

Priority 9 streams will play at maximum volume

** You need to reboot for changes to take effect*

Save

Reboot



Click on the Save button to save your configuration settings.



Note: You need to reboot for changes to take effect.



Click on the Reboot button to reboot the system.

5.9 Sensor Configuration

The door sensor (pins 5 and 6) on the header can be used to monitor a door's open or closed state. There is an option on the Sensor Configuration page to trigger on an open or short

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condition on these pins. The door sensor alarm will be activated when the Door Open Timeout parameter has been met.

The intrusion sensor is an optical sensor installed on the Intercom board and will be activated when the Intercom is removed from the case. 8x8 Highly recommends implementing the Intrusion Sensor Settings.

For each sensor, there are five (5) actions the Intercom can take:

- Flash the LED until the sensor is deactivated (roughly 10 times/second)
- Activate the relay until the sensor is deactivated
- Loop an audio file out of the Intercom speaker until the sensor is deactivated
- Call an extension and play a pre-recorded audio file (once)
- Call an extension and establish a 2 way conversation

Door Sensor Normally Closed: Select the inactive state of the door sensors.

Door Open Timeout (in seconds): Select the number of seconds that you want to pass before the door sensor is activated.

Flash Button LED: Check this box to flash the LED until the sensor is deactivated (roughly 10 times/second).

Activate Relay: Check this box to activate the relay until the sensor is deactivated.

Play Audio Locally: Check this box to loop an audio file out of the Intercom speaker until the sensor is deactivated.

Make Call to Extension: Check this box to call a preset extension (one time).

Play recorded audio: Check this box to play a pre-recorded audio file (one time).

Dial Out Extension: Enter the desired dial-out extension number.

The screenshot displays the 'Door Sensor Settings' and 'Intrusion Sensor Settings' sections of the 8x8 SIP Intercom configuration interface. The 'Door Sensor Settings' section includes options for 'Door Sensor Normally Closed' (radio buttons for Yes/No, with 'No' selected), 'Door Open Timeout (in seconds)' (text input '0'), 'Flash Button LED' (checkbox), 'Activate Relay' (checkbox), 'Play Audio Locally' (checkbox), 'Make call to extension' (checkbox), 'Dial Out Extension' (text input '204'), 'Dial Out ID' (text input 'id204'), 'Play recorded audio' (checkbox), and 'Repeat Sensor Message' (text input '0'). The 'Intrusion Sensor Settings' section includes 'Flash Button LED' (checkbox), 'Activate Relay' (checkbox), 'Play Audio Locally' (checkbox), 'Make call to extension' (checkbox), 'Dial Out Extension' (text input '8041'), 'Dial Out ID' (text input '8089'), 'Play recorded audio' (checkbox), and 'Repeat Intrusion Message' (text input '0'). At the bottom, there are buttons for 'Save', 'Reboot', 'Toggle Help', 'Test Door Sensor', and 'Test Intrusion Sensor'.

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Dial Out ID: Enter in the GUN number associated with the Intercom User (64-character limit).

Test Door Sensor

: Use this button to test the door sensor.

Flash Button LED*: Check this box to flash the LED until the sensor is deactivated (roughly 10 times/second).

Activate Relay: Check this box to activate the relay until the sensor is deactivated.

Play Audio Locally: Check this box to loop an audio file out of the Intercom speaker until the sensor is deactivated.

Make call to extension: Check this box to call a preset extension (once).

Play recorded audio: Check this box to play a pre-recorded audio file (once).

Dial Out Extension: Enter the desired dial-out extension number.

Dial Out ID: Enter in the GUN number associated with the Intercom User (64-character limit).

Test Intrusion Sensor

Test Intrusion sensor.

Save

Click on the Save button to save your configuration settings.

Save

Reboot

Toggle Help



Note: You need to reboot for changes to take effect.

Reboot

Click on the Reboot button to reboot the system.

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5.10 Audio Files

CyberData SIP-enabled Outdoor Keypad Intercom allows you replace all the prompts used by the intercom with your own custom paging prompts. Custom prompts must be saved as

WAVE audio, Microsoft PCM, 16 bit, mono 8000 Hz

Custom files may be uploaded for all prompts played by the CyberData SIP-enabled Outdoor Keypad Intercom.

Save

The Save button will download a new user audio file to the board once you've selected the file by using the Browse button.

Delete

The Delete button will delete any user uploaded audio and restore the stock audio file.

Play

The Play button will play that audio file.

Browse...

The Browse button will allow you to navigate to and select an audio file.

Available Space: 30.18MB

Prompt	Status	Action
0:	Currently set to default	Browse... No file selected. Play Delete Save
1:	Currently set to default	Browse... No file selected. Play Delete Save
2:	Currently set to default	Browse... No file selected. Play Delete Save
3:	Currently set to default	Browse... No file selected. Play Delete Save