

Speakers with Talk-Back Operations Guide

Part #011394, 011396

Document Part #932055A
for Firmware Version 22.0

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Speaker with Talk-Back Operations Guide 932055A
Part # 011394, 011396

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CyberData

The IP Endpoint Company

Technical Support

The fastest way to get technical support for your VoIP product is to submit a VoIP Technical Support form at the following website:

<https://support.cyberdata.net/>

Phone: (831) 373-2601, Ext. 333



Fax: (831) 373-4193

Company and product information is at www.cyberdata.net.

Revision Information

Revision 932055A, which corresponds to firmware version 22.0, was released on November 19, 2024.

Pictorial Alert Icons

	<p>General Alert</p> <p><i>This pictorial alert indicates a potentially hazardous situation. This alert will be followed by a hazard level heading and more specific information about the hazard.</i></p>
	<p>Ground</p> <p><i>This pictorial alert indicates the Earth grounding connection point.</i></p>

Hazard Levels

Danger: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This is limited to the most extreme situations.

Warning: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Caution: Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It may also alert users against unsafe practices.




Notice: Indicates a statement of company policy (that is, a safety policy or protection of property).

The safety guidelines for the equipment in this manual do not purport to address all the safety issues of the equipment. It is the responsibility of the user to establish appropriate safety, ergonomic, and health practices and determine the applicability of regulatory limitations prior to use. Potential safety hazards are identified in this manual through the use of words Danger, Warning, and Caution, the specific hazard type, and pictorial alert icons.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
13. Prior to installation, consult local building and electrical code requirements.

14. WARNING: The Speaker with Talk-Back enclosure is not rated for any AC voltages!

 <p>GENERAL ALERT</p>	<p>Warning</p> <p><i>Electrical Hazard:</i> This product should be installed by a licensed electrician according to all local electrical and building codes.</p>
 <p>GENERAL ALERT</p>	<p>Warning</p> <p><i>Electrical Hazard:</i> To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.</p>
 <p>GENERAL ALERT</p>	<p>Warning</p> <p>The PoE connector is intended for intra-building connections only and does not route to the outside plant.</p>

Abbreviations and Terms

Abbreviation or Term	Definition
A-law	A standard companding algorithm, used in European digital communications systems to optimize, i.e., modify, the dynamic range of an analog signal for digitizing.
AVP	Audio Video Profile
Cat 5	TIA/EIA-568-B Category 5
DHCP	Dynamic Host Configuration Protocol
LAN	Local Area Network
LED	Light Emitting Diode
Mbps	Megabits per Second.
NTP	Network Time Protocol
PBX	Private Branch Exchange
PoE	Power over Ethernet (as per IEEE 802.3af standard)
RTFM	Reset Test Function Management
SIP	Session Initiated Protocol
SRTP	Secure Real Time Protocol
u-law	A companding algorithm, primarily used in the digital telecommunication
UC	Unified Communications
VoIP	Voice over Internet Protocol

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1 Installing the Speaker with Talk-Back

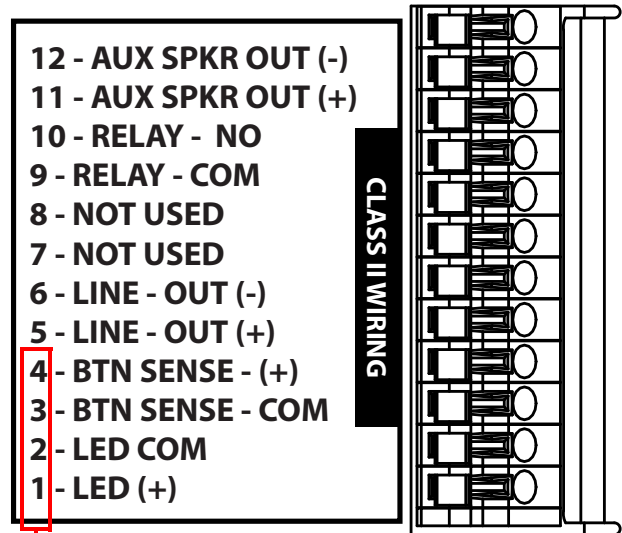
The installation template for the Speaker with Talk-Back is located on the Installation Quick Reference Guide that is included in the packaging with each Speaker.

Additional connections options are shown below.

1.1 Optional Connections

Figure 1-1. Optional Connections

Function	Connections
Auxiliary 8-Ohm speaker connection (not to be used when the Clock is connected)	AUX SPEAKER OUT(-) AUX SPEAKER OUT(+)
Relay contacts rated at 30 VDC @ 1A.	RELAY NO RELAY COM
NOT USED	LINE IN (+) LINE IN (-)
Audio line - level output to external audio amplifier. 2v P-P into 10k Ohms.	LINE OUT (-) LINE OUT (+)
Button positive sense connection Button negative sense connection	SENSE (+) SENSE- COM
LED negative connection LED positive connection	LED COM LED (+)

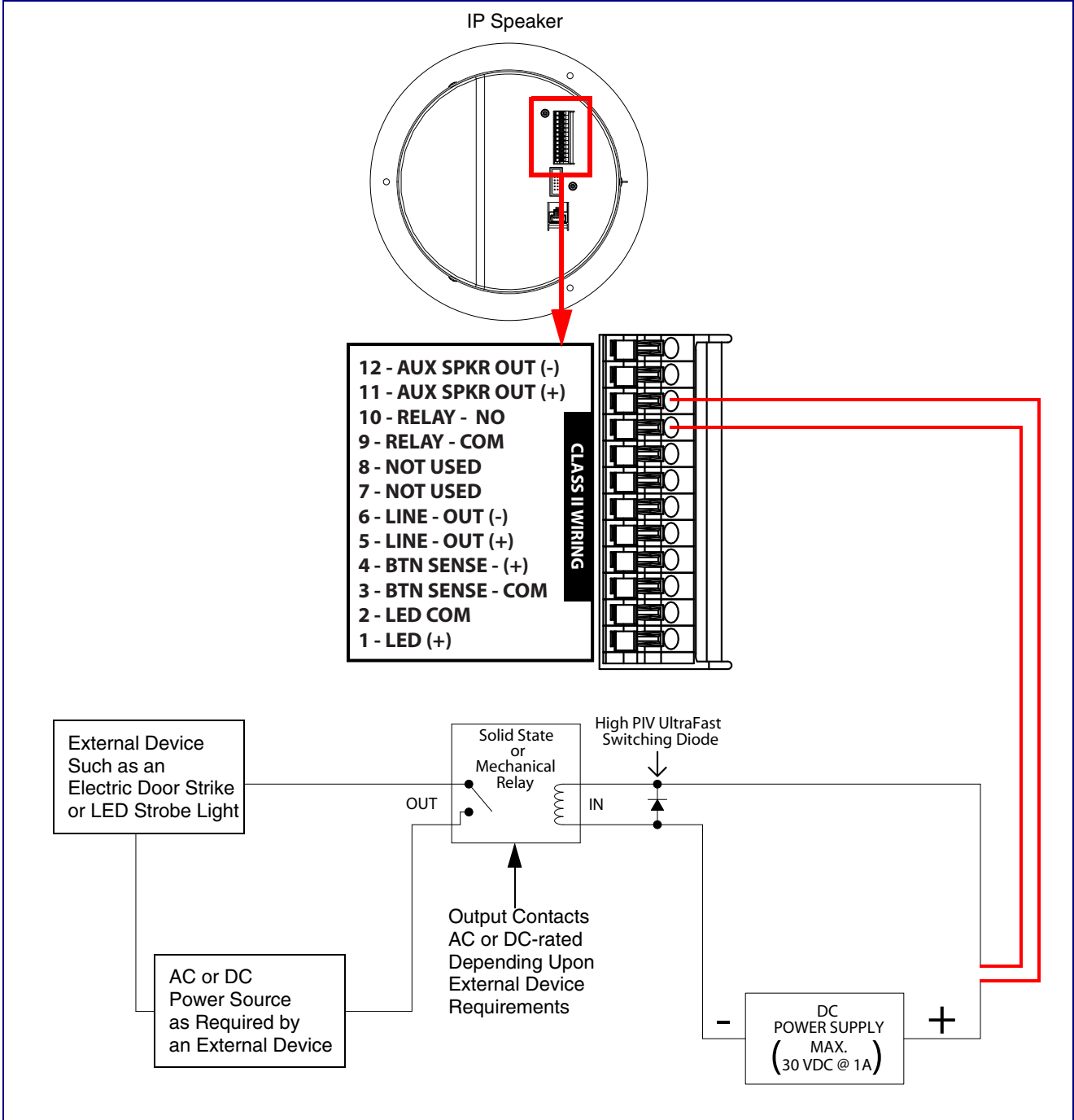


Connections 1 through 4 are intended for use with the [011508 Remote Call Button](#)

1.2 Speaker with Talk-Back with an External Device

In [Figure 1-2](#), when the Speaker with Talk-Back is called from a remote phone, the relay on the speaker can be programmed to drive an external device such as an alert strobe. This external device may also be addressed from a separate Unified Communication (UC) server.

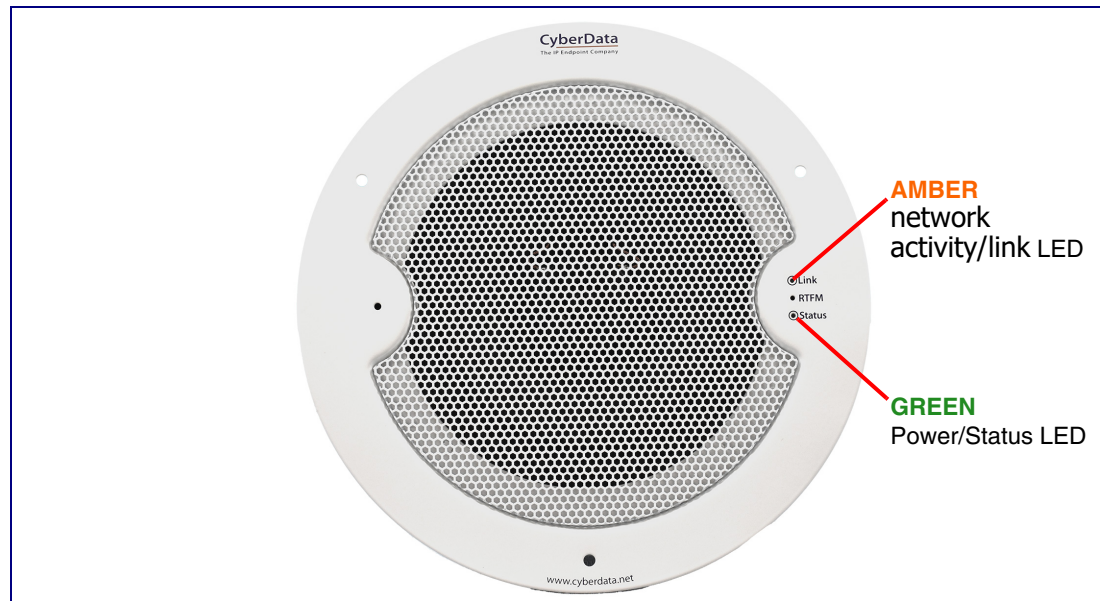
Figure 1-2. SIP Speaker with Talk-Back with an External Device



1.3 Confirm that the Speaker is Operational and Linked to the Network

After connecting the speaker to the 802.3af compliant Ethernet hub, the LEDs on the speaker face confirm that the speaker is operational and linked to the network.

Figure 1-3. Status and Activity LEDs



1.3.1 Status LED

After supplying power to the speaker:

1. The green power/status LED and the amber network activity/link LED comes on immediately.
2. After about 23 seconds with a static IP address (or 27 seconds if the board is set to use DHCP), the green LED will blink twice to indicate that the board is fully booted. The speaker will beep at this time if the **Beep on Init** option is enabled on the **Device Page** (see [Section 2.3, "Device"](#)).

Note If the board is set to use DHCP and there is not a DHCP server available on the network, it will try 12 times with a three second delay between tries and eventually fall back to the programmed static IP address (by default 192.168.1.23). This process will take approximately 80 seconds.

Note The front power/status LED will remain solid on during operation.

1.3.2 Link LED

- The **Link** LED is illuminated when the network link to the speaker is established.
- The **Link** LED blinks to indicate network traffic.

2 Configure the Device

2.1 Log In Page

1. Open your browser to the device IP address.

Note If the network does not have access to a DHCP server, the device will default to an IP address of 192.168.1.23.

Note Make sure that the PC is on the same IP network as the Speaker with Talk-Back.

Note You may also download CyberData's VoIP Discovery Utility program which allows you to easily find and configure the default web address of the CyberData VoIP products.

CyberData's VoIP Discovery Utility program is available at the following website address:

<https://www.cyberdata.net/pages/discovery>

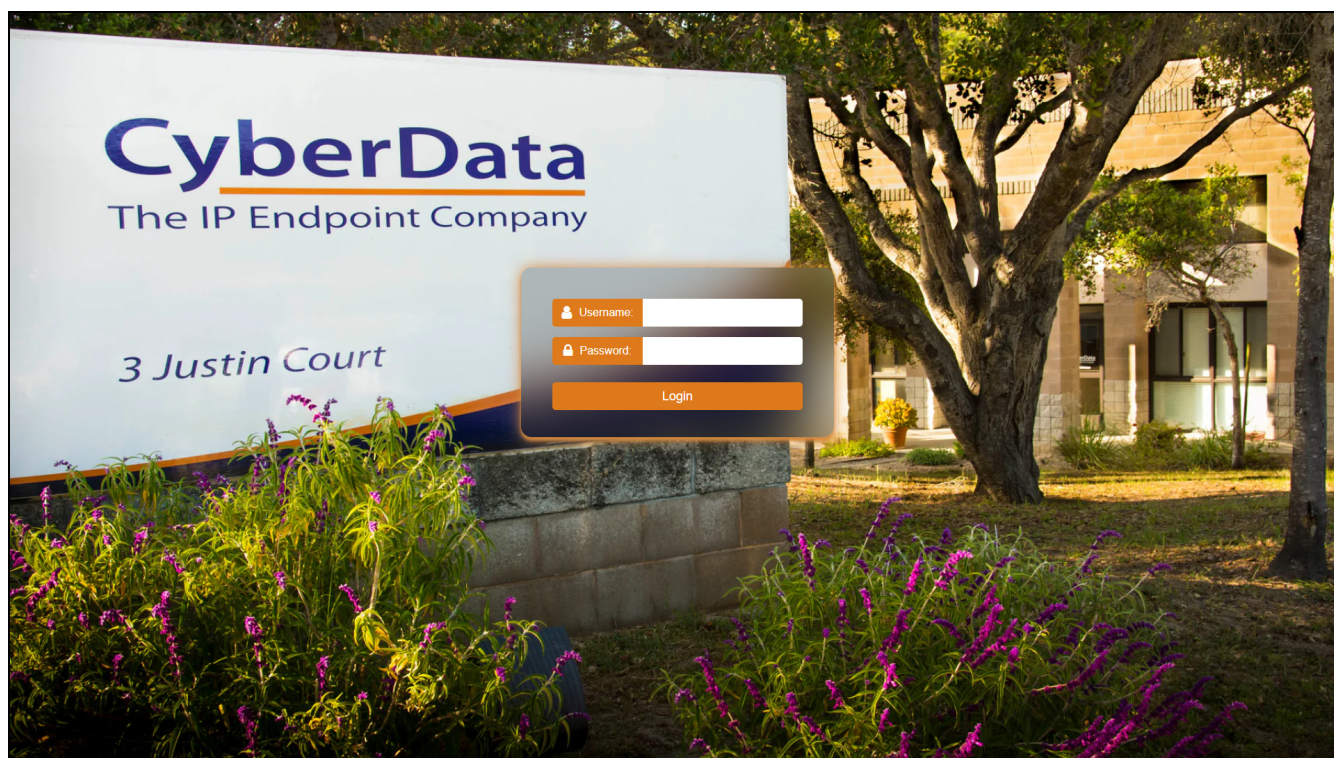
Note The Intercom ships in DHCP mode. To get to the **Home** page, use the discovery utility to scan for the device on the network and open your browser from there.

2. On the Log In Page (Figure 2-1), use the following default **Web Access Username** and **Web Access Password** to access the **Home Page** (Figure 2-3):

Web Access Username: **admin**

Web Access Password: **admin**

Figure 2-1. Log In Page

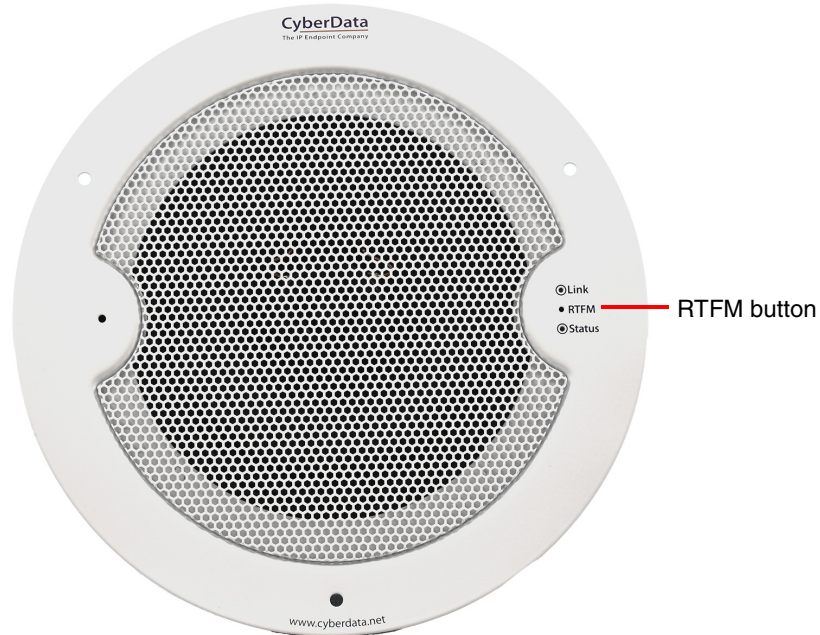


2.1.1 Announcing the IP Address

The RTFM button is located on the front of the each device (Figure 2-2). Use a paper clip to access the button through the hole.

Briefly pressing the RTFM button prompts the device to announce its IP address.

Figure 2-2. RTFM Button



2.1.2 Restoring Factory Defaults

To restore the device to its factory default settings (Table 2-1), hold the RTFM button for approximately seven seconds. After 15 to 20 seconds, "Restoring defaults, rebooting" is announced.

The device will default to DHCP to obtain an IP address, or will use 192.168.1.23 if a DHCP server is not present.

Table 2-1. Factory Default Settings

Parameter	Factory Default Setting
IP Addressing	DHCP
IP Address ^a	192.168.1.23
Web Access Username	admin
Web Access Password	admin
Subnet Mask ^a	255.255.255.0
Default Gateway ^a	192.168.1.1

a. Default if there is not a DHCP server present.

2.2 Home Page

The **Home** page provides device specific information such as Serial Number, Mac Address, and Firmware version. This page is designed as an initial landing page to provide general information on the status of the device.

Figure 2-3. Home Page

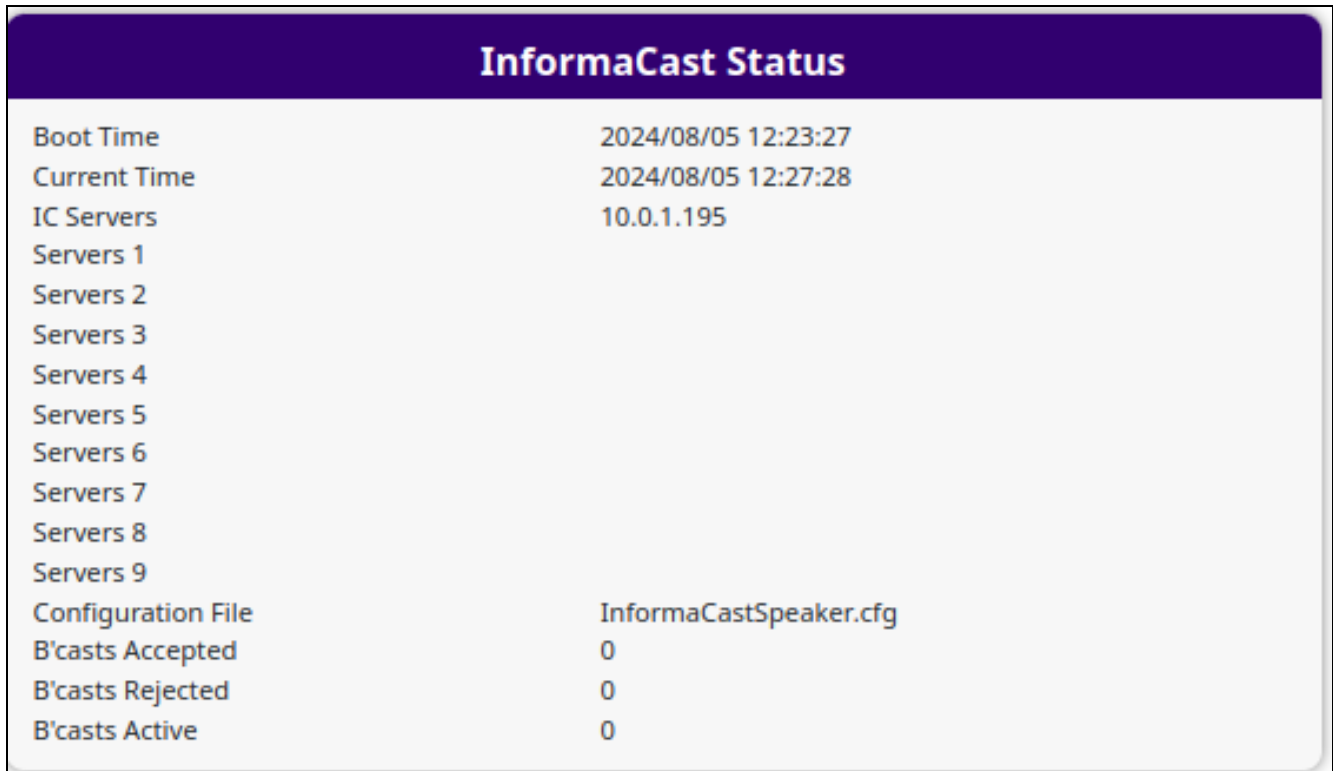
The screenshot displays the CyberData Home Page for a SIP Speaker device. The page is organized into a header section with device metadata and a main content area with six configuration panels. A sidebar on the left contains navigation icons, and a footer at the bottom provides support information.

Device Configuration	Network Status	SIP Registration
Serial Number: 394203569	IP Address Protocol: DHCP	SIP Mode: Enabled
Mac Address: 00:20:f7:05:7f4a	IP Address: 10.10.1.79	Primary Server: Not registered
Firmware Version: v22.0.0	Subnet Mask: 255.0.0.0	Backup Server 1: Not registered
Partition 2: v22.0.0	Default Gateway: 10.0.0.1	Backup Server 2: Not registered
Partition 3: v22.0.0	DNS Server 1: 10.0.1.56	Nighthringer Server: Not registered
Booting Partition: partition 3	DNS Server 2:	Monitor Server: Not registered

Audio Configuration	Sensor Status	System Configuration
SIP Volume: 1	Relay Status: Unknown	SIP Mode: Enabled
Multicast Volume: 1	Door Status: Unknown	Multicast Mode: Disabled
Ring Volume: 1	Intrusions: Unknown	Event Mode: Disabled
Sensor Volume: 1	RGB Strobe: Not Installed	
Push to Talk Volume: 4		
Volume Boost: None		
Microphone Gain: 4		
Push to Talk Microphone Gain: 4		

If you are using an InformaCast enabled device, you will see the following:

Figure 2-4. InformaCast enabled Device



InformaCast Status	
Boot Time	2024/08/05 12:23:27
Current Time	2024/08/05 12:27:28
IC Servers	10.0.1.195
Servers 1	
Servers 2	
Servers 3	
Servers 4	
Servers 5	
Servers 6	
Servers 7	
Servers 8	
Servers 9	
Configuration File	InformaCastSpeaker.cfg
B'casts Accepted	0
B'casts Rejected	0
B'casts Active	0

2.3 Device

The **Device** page allows for adjustment of settings that pertain to the physical device such as relay settings and time zone.

Figure 2-5. Device Page

CyberData The IP Endpoint Company

Product: SIP Speaker
Firmware: v22.0.0

Serial: 394203569
MAC: 00:20:F7:05:7F:4a

Available Storage: 1380MB
Device Status: Idle

Test Save Cancel Reboot Logout

Relay Settings

Control Relay with DTMF Code: OFF

DTMF Pulse Code: 123

DTMF Pulse Code Duration: 10 seconds

DTMF Activation Code: 456

DTMF Deactivation Code: 789

Relay During Ring: OFF

Relay During Night Ring: OFF

Relay While Call Active: OFF

Relay On Button Press: OFF

Relay On Button Press Duration: 5 seconds

Relay While Sensor Active: ON

Time Settings

NTP Server: north-america.pool.ntp.org

NTP Timezone: America/Los_Angeles (-8)

Current Time: Wed, 06 Nov 2024 14:53:32

Clock Kit Settings

Status: Not Installed

Ambient Light Sensor: OFF

Brightness: 5

Color Type: BLINK

Time Format: 24 hrs

DTMF Settings

Require Security Code: ENABLED

Security Code: ****

Monitor DTMF Toggle Key: * (Star Symbol)

Power Settings

802.3AT Mode: Not detected. Disabled.

Force 802.3AT Mode: OFF

Misc Settings

Device Name: new_1105

Beep on Init: OFF

Two Speakers Connected: OFF

CyberData • Support

If you are using an InformaCast enabled device, you will see the following:

Figure 2-6. InformaCast enabled Device

InformaCast Settings

InformaCast Server:

2.4 Audio

Figure 2-7. Audio Page

The screenshot displays the CyberData configuration interface for a SIP Speaker. At the top, the header includes the CyberData logo, product information (SIP Speaker, Firmware: v22.0.0), serial and MAC addresses (394203569, 00:20:f7:05:7f:4a), available storage (1380MB), and device status (Idle). Action buttons for Test, Save, Cancel, Reboot, and Logout are present.

The main content area is divided into three primary sections:

- Audio Settings:** Contains sliders for SIP Volume, Multicast Volume, Ring Volume, Sensor Volume, and Push to Talk Volume, all set to 4. It also includes Ambient Noise Compensation (OFF) and Volume Boost (None). Microphone Gain and Push to Talk Microphone Gain are also set to 4.
- Talkback Settings:** Features a Full-Duplex toggle set to OFF.
- Voice-Operated Switch:** Includes a Voice-Operated Switch toggle set to OFF.
- Push to Talk:** Includes Push to Talk (PTT) and DTMF Push to Talk (PTT) toggles, both set to OFF.
- Health Check Settings:** Shows a list of audio health check results. The 'Schedule Health Check' is currently OFF. The results list includes timestamps and similarity percentages for various reference tones, all of which passed the check.

Timestamp	Reference Tone	Similarity	Status
Wed Nov 6 15:06:44 2024	700Hz reference tone	73.26%	PASS
Wed Nov 6 15:06:46 2024	1000Hz reference tone	88.67%	PASS
Wed Nov 6 15:06:48 2024	2000Hz reference tone	95.38%	PASS
Wed Nov 6 15:06:50 2024	3000Hz reference tone	95.70%	PASS
Wed Nov 6 15:06:51 2024	5000Hz reference tone	97.19%	PASS
Wed Nov 6 15:06:52 2024	7000Hz reference tone	94.37%	PASS
Wed Nov 6 15:06:52 2024			AUDIO HEALTH CHECK FINISHED

At the bottom of the page, there is a footer with the text "CyberData • Support".

2.5 Network

The **Network** tab provides access to network-related settings. Assigning the device a static IP address or VLAN is done on this page.

Figure 2-8. Network Page

The screenshot displays the Network configuration page for a CyberData device. The interface includes a top navigation bar with the CyberData logo, product information (SIP Speaker, v22.0.0), serial and MAC addresses, storage status (1380MB available), and device status (Idle). Action buttons for Test, Save, Cancel, Reboot, and Logout are also present.

The main content area is divided into three panels:

- Network Status:** Shows the current configuration: IP Address Protocol: DHCP, IP Address: 10.10.1.79, Subnet Mask: 255.0.0.0, Default Gateway: 10.0.0.1, DNS Server 1: 10.0.1.56, and DNS Server 2: 10.0.1.56.
- Network Settings:** Allows configuration of: Addressing Mode (DHCP), Hostname (SipDevice0574a), 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 (60 seconds).
- VLAN Settings:** Allows configuration of VLAN ID (0) and VLAN Priority (0).

A vertical sidebar on the left contains navigation icons for various system functions. The footer includes the text "CyberData • Support".

2.6 SIP (Session Initiation Protocol)

This page sets the options for phone calls. Configure up to 3 servers, with 2 acting as backup, and a server for the nightringer. The nightringer is a second sip extension that only rings, never connects to a call. Many customers use the nightringer in a hunt group.

Use this page to configure the options for security, transport, codec, and others.

Note For specific server configurations, go to the following website address:

<https://www.cyberdata.net/pages/connecting-to-ip-pbx-servers>

Figure 2-9. SIP Page

If you are using an InformaCast enabled device, you will see the following:

Figure 2-10. InformaCast enabled Device

InformaCast SIP Config:	DISABLED ▼
-------------------------	---

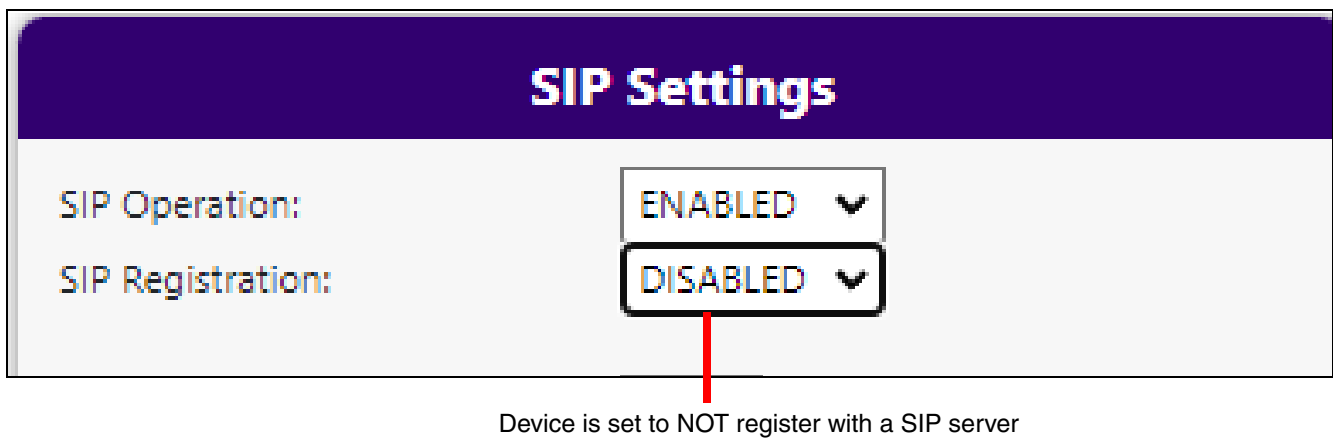
2.6.1 Dial Out Extension Strings and DTMF Tones (using rfc2833)

Outgoing calls support delayed DTMF (rfc2833) with the first comma pausing 2 seconds and subsequent commas pausing 1 second.

2.6.2 Point-to-Point Configuration

Dialing point-to-point allows the device to call and a single endpoint. All CyberData endpoints and many phones can use this option. To do this, enable **SIP Operation**, do not enable **SIP Registration**, and use the endpoint's IP address as the Dial Out extension. Delayed DTMF is supported. See [Figure 2-11](#).

Figure 2-11. SIP Page Set to Point-to-Point Mode



2.7 SSL

The **SSL** tab allows for the adjustment of certificates used by the device. The certificates used for the web server, SIP Client, and Autoprovisioning can be changed here. It is also possible to add additional CA certificates on this page. CA Certificates allow the device to authenticate servers that it contacts.

Figure 2-12. SSL Page (1 of 2)

The screenshot displays the CyberData SSL configuration interface. At the top, the header shows the device's product (SIP Speaker), serial number (394203569), and available storage (1380MB). Below the header are three main certificate configuration panels:

- Web Server Certificate:** Shows certificate details (subject, country, state, locality, organization, common name) and expiration dates. It includes buttons for 'Import Web Certificate' and 'Restore Web Certificate'.
- SIP Client Certificate:** Shows similar certificate details and includes buttons for 'Import SIP Certificate' and 'Restore SIP Certificate'.
- Autoprovisioning Client Certificate:** Shows certificate details and includes buttons for 'Import Autoprovisioning Certificate' and 'Restore Autoprovisioning Certificate'.

Below these panels is a 'List of Trusted CAs' section. It features an 'Upload CA Certificate' button and a table of existing certificates:

Index	CA Certificate Name	Info	Remove
1	CyberData_CA.pem	Info	Remove
2	DigiCert_Assured_ID_Root_CA.crt	Info	Remove
3	DigiCert_Assured_ID_Root_G2.crt	Info	Remove
4	DigiCert_Assured_ID_Root_G3.crt	Info	Remove
5	DigiCert_Global_Root_CA.crt	Info	Remove
6	DigiCert_Global_Root_G2.crt	Info	Remove
7	DigiCert_Global_Root_G3.crt	Info	Remove
8	DigiCert_High_Assurance_EV_Root_CA.crt	Info	Remove

At the bottom of the page, there are navigation links for 'CyberData' and 'Support'.

Figure 2-13. SSL Page (2 of 2)

The screenshot displays the SSL configuration interface for a CyberData device. At the top, the header includes the CyberData logo, product information (SIP Speaker, v22.0.0), serial and MAC addresses, storage status (1380MB available), and device status (Idle). Action buttons for Test, Save, Cancel, Reboot, and Logout are also present.

9	DigiCert_Trusted_Root_G4.crt	Info	Remove
10	GeoTrust_Global_CA.crt	Info	Remove
11	GeoTrust_Primary_Certification_Authority_.crt	Info	Remove
12	GeoTrust_Primary_Certification_Authority_-_G2.crt	Info	Remove
13	GeoTrust_Primary_Certification_Authority_-_G3.crt	Info	Remove
14	GeoTrust_Universal_CA.crt	Info	Remove
15	GeoTrust_Universal_CA_2.crt	Info	Remove
16	Go_Daddy_Class_2_CA.pem	Info	Remove
17	Go_Daddy_Root_Certificate_Authority_-_G2.pem	Info	Remove
18	VeriSign_Class_3_Public_Primary_Certification_Authority_-_G4.crt	Info	Remove
19	VeriSign_Class_3_Public_Primary_Certification_Authority_-_G5.crt	Info	Remove
20	VeriSign_Universal_Root_Certification_Authority.crt	Info	Remove
21	VeriSign_Class_1_Public_Primary_Certification_Authority.crt	Info	Remove
22	VeriSign_Class_1_Public_Primary_Certification_Authority_-_G3.crt	Info	Remove
23	VeriSign_Class_2_Public_Primary_Certification_Authority_-_G2.crt	Info	Remove
24	VeriSign_Class_2_Public_Primary_Certification_Authority_-_G3.crt	Info	Remove
25	VeriSign_Class_3_Public_Primary_Certification_Authority.crt	Info	Remove
26	VeriSign_Class_3_Public_Primary_Certification_Authority_-_G3.crt	Info	Remove
27	thawte_Primary_Root_CA.crt	Info	Remove
28	thawte_Primary_Root_CA_-_G2.crt	Info	Remove
29	thawte_Primary_Root_CA_-_G3.crt	Info	Remove

The footer of the interface shows 'CyberData • Support'.

2.8 Multicast

The Multicast page allows the device to join up to ten paging zones that will activate the strobe when a stream is sent to its address.

A paging zone can consist of one or many CyberData multicast group-enabled products. There is no limit to how many endpoints can be in a given paging zone. Each multicast group is defined by a multicast address and port number.

Each multicast group is assigned a priority, allowing simultaneously arriving pages to be serviced based on importance. Multicast groups are compatible with IGMP through version 3. The device supports simultaneous SIP and Multicast.

Figure 2-14. Multicast Page

CyberData
The IP Endpoint Company

Product: SIP Speaker
Firmware: v22.0.0

Serial: 394203569
MAC: 00:20:F7:05:7F:4a

Available Storage: 1380MB
Device Status: Idle

Test Save Cancel Reboot Logout

Multicast Settings

Relieve Multicast Audio:

Polycom Default Channel:

Polycom Priority Channel:

Polycom Emergency Channel:

Priority	Address	Port	Name	Buffer	Beep	Relay
0	239.168.3.1	2000	Background Music	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>
1	239.168.3.2	3000	MG1	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>
2	239.168.3.3	4000	MG2	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>
3	239.168.3.4	5000	MG3	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>
4	239.168.3.5	6000	MG4	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>
5	239.168.3.6	7000	MG5	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>
6	239.168.3.7	8000	MG6	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>
7	239.168.3.8	9000	MG7	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>
8	239.168.3.9	10000	MG8	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>
9	239.168.3.10	11000	Emergency	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>	<input type="text" value="DISABLED"/>

*SIP calls: Priority 4-5
Port range: 2000-65535
Priority: 9 is the highest, 0 is the lowest
Audio Streams: Higher priority supersedes lower ones
Priority 9: Plays at maximum volume*

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2.9 Sensor

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** page to trigger on an open or short 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.

Each sensor can trigger up to five different actions:

- 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 establish two way audio
- Call an extension and play a pre-recorded audio file

Note Calling a preset extension can be set up as a point-to-point call, but currently can't send delayed DTMF tones.

Figure 2-15. Sensor Page

The screenshot shows the CyberData web interface for configuring a SIP Speaker. The top navigation bar includes the CyberData logo, product information (SIP Speaker, v22.0.0), serial and MAC addresses, available storage (1380MB), and device status (Idle). Action buttons for Test, Save, Cancel, Reboot, and Logout are visible. The main content area is divided into two panels: Sensor Settings and Button Settings. The Sensor Settings panel includes fields for Sensor Type (Normally Open), Open Timeout (0 seconds), Play Audio Locally (Disabled), Call Extension (Disabled), Dial Out Extension (204), Dial Out ID (id204), Play Recorded Audio (Disabled), and Repeat Sensor Message (0). The Button Settings panel includes fields for Button Installed (OFF), Button LED Lit when Idle (ON), Button LED Brightness (255), Blink button LED on monitor call (OFF), Prevent Call Termination (OFF), Dial Out Extension (204), and Dial Out ID (id204). A vertical sidebar on the left contains various system icons, and the footer includes the CyberData logo and a Support link.

2.10 Audiofiles

The **Audiofiles** page is used to add custom audio to the board. User uploaded audio will take precedence over the audio files shipped with the device.

This device supports stored messages. When stored messages are enabled, the user will hear "Press 0 to page, press 1 to 9 to play stored message" when calling the device.

To configure stored messages, an audio file must be uploaded, using **Choose File** and **Save**. The number of repeats can be specified or set to infinite (where the message plays until cancelled by the # button during a phone call).

Figure 2-16. Audiofiles Page (1 of 3)

Audio File	Currently set to:	Choose File	No file chosen	Play	Save	Delete
0:	default	Choose File	No file chosen	Play	Save	Delete
1:	default	Choose File	No file chosen	Play	Save	Delete
2:	default	Choose File	No file chosen	Play	Save	Delete
3:	default	Choose File	No file chosen	Play	Save	Delete
4:	default	Choose File	No file chosen	Play	Save	Delete
5:	default	Choose File	No file chosen	Play	Save	Delete
6:	default	Choose File	No file chosen	Play	Save	Delete
7:	default	Choose File	No file chosen	Play	Save	Delete
8:	default	Choose File	No file chosen	Play	Save	Delete
9:	default	Choose File	No file chosen	Play	Save	Delete
Audio Test:	default	Choose File	No file chosen	Play	Save	Delete
Dot:	default	Choose File	No file chosen	Play	Save	Delete
Night Ring:	default	Choose File	No file chosen	Play	Save	Delete
Page Tone:	default	Choose File	No file chosen	Play	Save	Delete
Rebooting:	default	Choose File	No file chosen	Play	Save	Delete
Restoring Default:	default	Choose File	No file chosen	Play	Save	Delete
Ring Back:	default	Choose File	No file chosen	Play	Save	Delete
Ring Tone:	default	Choose File	No file chosen	Play	Save	Delete
Sensor Triggered:	default	Choose File	No file chosen	Play	Save	Delete
Stored Message File Not Found:	default	Choose File	No file chosen	Play	Save	Delete
Your IP Address Is:	default	Choose File	No file chosen	Play	Save	Delete

Figure 2-17. Audiofiles Page (2 of 3)

Menu Audio Files							
Cancel:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Currently Playing:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Invalid Entry:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Page:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Play Stored Message:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Pound (#):	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Press:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Through:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
To:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Enter Security Code Followed by Pound (#) key:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>

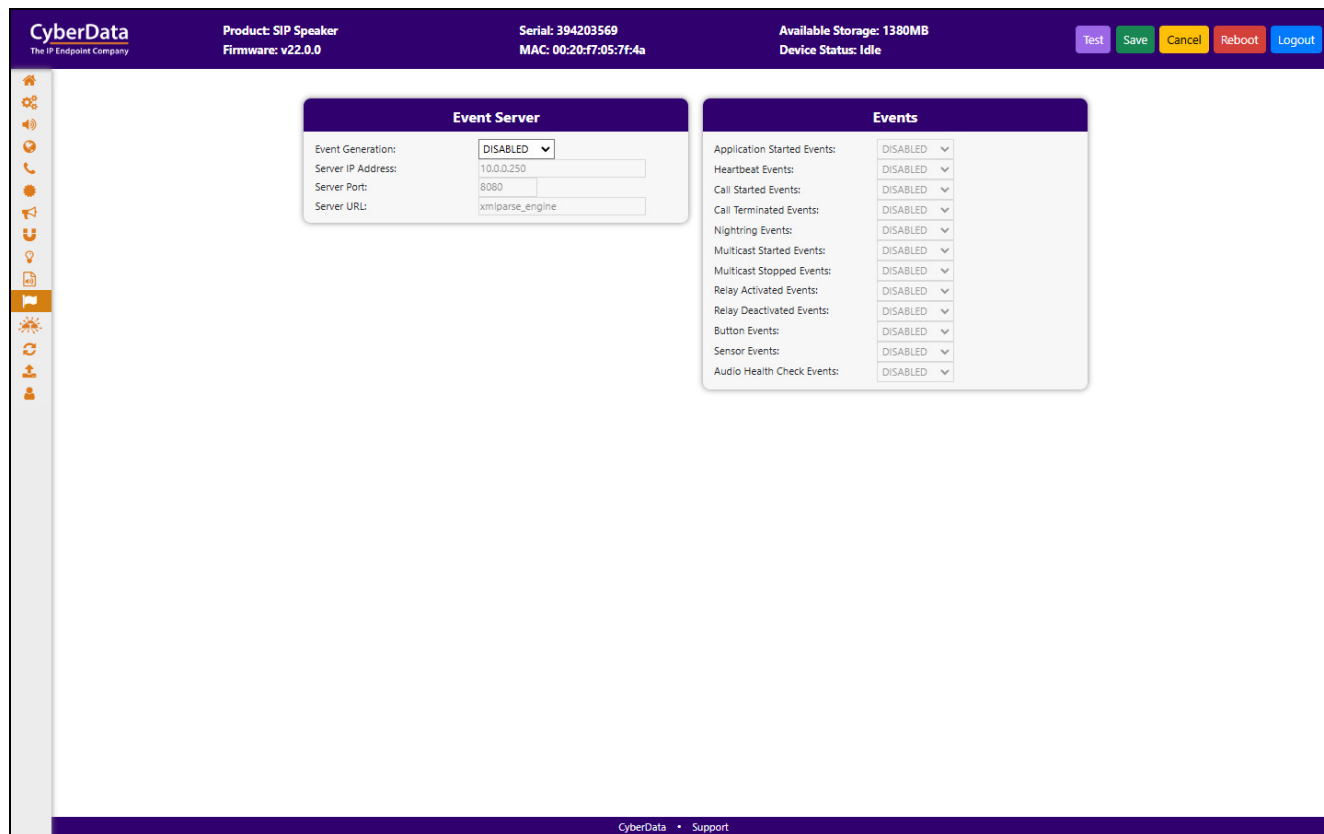
Figure 2-18. Audiofiles Page (3 of 3)

Stored Messages									
			<input type="button" value="Choose File"/>	No file chosen	<input type="button" value="Upload Message"/>	<input type="button" value="Delete All Messages"/>			
Stored Message 1:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	Repeat: <input type="text" value="0"/>	Infinite: <input type="button" value="OFF"/>	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Stored Message 2:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	Repeat: <input type="text" value="0"/>	Infinite: <input type="button" value="OFF"/>	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Stored Message 3:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	Repeat: <input type="text" value="0"/>	Infinite: <input type="button" value="OFF"/>	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Stored Message 4:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	Repeat: <input type="text" value="0"/>	Infinite: <input type="button" value="OFF"/>	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Stored Message 5:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	Repeat: <input type="text" value="0"/>	Infinite: <input type="button" value="OFF"/>	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Stored Message 6:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	Repeat: <input type="text" value="0"/>	Infinite: <input type="button" value="OFF"/>	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Stored Message 7:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	Repeat: <input type="text" value="0"/>	Infinite: <input type="button" value="OFF"/>	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Stored Message 8:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	Repeat: <input type="text" value="0"/>	Infinite: <input type="button" value="OFF"/>	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
Stored Message 9:	Currently set to:	default	<input type="button" value="Choose File"/>	No file chosen	Repeat: <input type="text" value="0"/>	Infinite: <input type="button" value="OFF"/>	<input type="button" value="Play"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>

2.11 Events

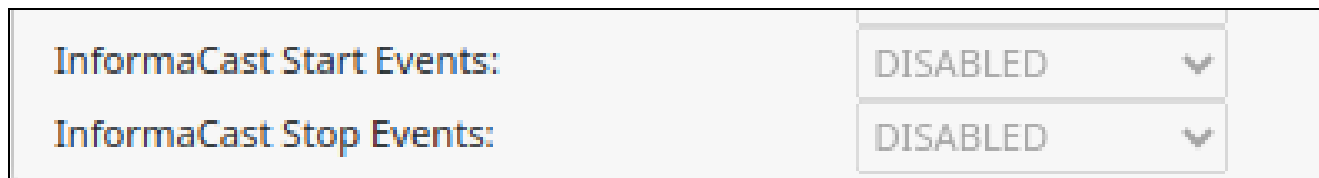
The **Events** page specifies a remote server that can be used to receive HTTP POST events when actions take place on the device.

Figure 2-19. Events Page



If you are using an InformaCast enabled device, you will see the following:

Figure 2-20. InformaCast enabled Device



2.11.1 Example Packets for Events

The server and port are used to point to the listening server and the 'Remote Event Server URL' is the destination URL (typically the script running on the remote server that's used to parse and process the POST events).

Note The XML is URL-encoded before transmission so the following examples are not completely accurate.

Here are example packets for every event:

```
POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 197
Content-Type: application/x-www-form-urlencoded
```

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>APPLICATION_STARTED</event>
</cyberdata>
```

```
POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 199
Content-Type: application/x-www-form-urlencoded
```

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>HEARTBEAT</event>
</cyberdata>
```

```
POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 196
Content-Type: application/x-www-form-urlencoded
```

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>BUTTON</event>
</cyberdata>
```

```
POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 201
Content-Type: application/x-www-form-urlencoded
```

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>CALL_ACTIVE</event>
</cyberdata>
```

```
POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 205
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>CALL_TERMINATED</event>
</cyberdata>

POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 197
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>RINGING</event>
</cyberdata>

POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 234
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>MULTICAST_START</event>
<index>8</index>
</cyberdata>

POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 233
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>MULTICAST_STOP</event>
<index>8</index>
</cyberdata>

POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 234
Content-Type: application/x-www-form-urlencoded
<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>RELAY_ACTIVATED</event>
</cyberdata>
```

```
POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 234
Content-Type: application/x-www-form-urlencoded
<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>RELAY_DEACTIVATED</event>
</cyberdata>
```

```
POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 234
Content-Type: application/x-www-form-urlencoded
<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>NIGHTRINGING</event>
</cyberdata>
```

2.12 Terminus

Terminus Cloud Control™ allows users to configure, monitor, and manage notification functions for CyberData's extensive VoIP product line, all from a single, easy-to-use platform. To learn more about Terminus Cloud Control™, go to <https://www.cyberdata.net/pages/terminus>.

The **Terminus** page allows for configuration of settings related to Terminus Cloud Control™.

Figure 2-21. Terminus Page

The screenshot displays the Terminus configuration page within the CyberData web interface. The interface features a purple header bar with the CyberData logo and device details. Below the header, there is a vertical sidebar with various icons. The main content area contains two configuration panels:

- Discovery Setting:**
 - Multicast Address:
 - Time to Live:
 - Discovery Interval: seconds
- Lockdown Settings:**
 - Lock Down Mode:
 - Relay:

At the bottom of the page, there is a footer with the text "CyberData • Support".

2.13 Autoprovisioning

Enabling autoprovisioning allows the device to download provisioning files from a server. It defaults to using DHCP, with options configured in `dhcpd.conf` on the DHCP server. The file name is `<mac address>.xml` and if not found, `000000cd.xml`.

If a server is named, DHCP is bypassed, and the device will look for a file on the named server.

If a file is named, it will be downloaded instead of `<mac address>.xml`.

If a server is named, **Use tftp** searches for the file on a tftp server instead of http. If the server is secured (with a password), use **Verify Server Certificate** (username/password) to access it. When using DHCP, these options are configured in `dhcpd.conf`.

Autoprov autoupdate, **Autoprov at time**, and **Autoprov when idle** options are available with either DHCP or a named server.

The template is an xml file with all options set to default values.

Figure 2-22. Autoprovisioning Page

The screenshot displays the CyberData Autoprovisioning configuration page. At the top, the device information is shown: Product: SIP Speaker, Serial: 394203569, Available Storage: 1380MB, Firmware: v22.0.0, MAC: 00:20:f7:05:7f:4a, and Device Status: Idle. Action buttons for Test, Save, Cancel, Reboot, and Logout are visible.

The main content area is divided into two panels:

- Autoprov Settings:** This panel contains the following configuration options:
 - Autoprov: **ENABLED** (dropdown)
 - Autoprov Server:
 - Autoprov Filename:
 - Use tftp: **DISABLED** (dropdown)
 - Verify Server Certificate: **DISABLED** (dropdown)
 - Username:
 - Password:
 - Autoprov autoupdate: minutes
 - Autoprov at time: HHMM
 - Autoprov when idle: minutesA **Download Template** button is located at the bottom of this panel.
- Autoprov Log:** This panel shows a list of events:
 - 2024-11-06 15:21:42 Autoprov: no autoprov triggers. Exiting...
 - 2024-11-06 15:21:47 Autoprovisioning on boot
 - 2024-11-06 15:21:47 Autoprov found server='http://10.0.0.242' in dhcp option 43
 - 2024-11-06 15:21:47 Autoprov looking for 0020f7057f4a.xml at http://10.0.0.242
 - 2024-11-06 15:21:47 Autoprov downloading http://10.0.0.242/0020f7057f4a.xml
 - 2024-11-06 15:21:47 Got autoprov file. Parsing "0020f7057f4a.xml"
 - 2024-11-06 15:21:47 Autoprov: dialout failed to parse /tmp/0020f7057f4a.xml
 - 2024-11-06 15:21:47 Autoprov: informcast failed to parse /tmp/0020f7057f4a.xml
 - 2024-11-06 15:21:47 Autoprov: multicast failed to parse /tmp/0020f7057f4a.xml

2.14 Firmware

Note CyberData strongly recommends that you do not upgrade the firmware when the device is likely to be in use.

To upgrade the firmware of your device:

1. Download the latest firmware from the following CyberData web site, and locate your device:

<https://www.cyberdata.net/collections/sip>

<https://www.cyberdata.net/collections/singlewire> (for InformaCast Enabled devices)

2. Unzip the firmware version file. This file may contain the following:

- Firmware file
- Release notes
- Autoprovisioning template


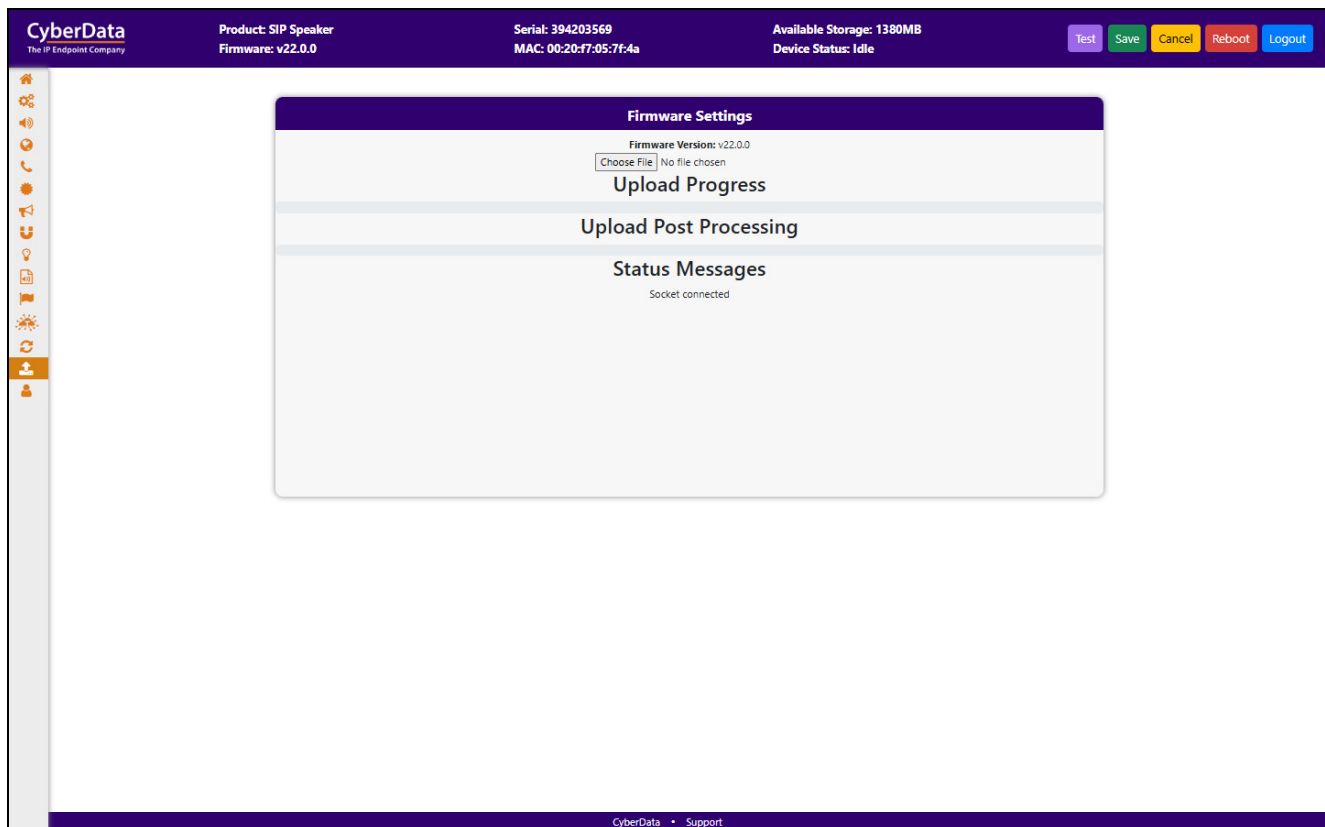
 <small>GENERAL ALERT</small>	<p>Caution</p> <p>Equipment Hazard: Do not reboot the device. It will reboot automatically when the process is complete.</p>
---	--

Figure 2-23. Firmware Page



2.15 Admin

The administrator uses the Users List to create new accounts, assigning user names and passwords, and granting access to specific web pages.

Figure 2-24. Admin Page

The screenshot displays the CyberData Admin interface. At the top, the header includes the CyberData logo, product information (SIP Speaker, v22.0.0), serial and MAC addresses, available storage (1380MB), and device status (Idle). Navigation buttons for Test, Save, Cancel, Reboot, and Logout are present.

The main content area is divided into several sections:

- Admin Settings:** Fields for Username (admin), Password, and Confirm Password.
- Logging Settings:** Debug Level (4) and Log Network Traffic (OFF). Buttons for Get/Remove Application, Network, and All Logs.
- Configuration Settings:** Partition information and buttons for Restore Default Config/Certificates, Import/Export Config, and Boot From Other Partition.
- Statistics:** Storage (1380MB), Boot Count (27), Reboot Count (23), and Uptime (up 4 minutes).
- Users List:** A table with columns for Username, Home, Device, Audio, Network, SIP, SSL, Multicast, Sensor, Strobe, Audiofiles, Events, Terminus, Autoprov, Firmware, and Admin. A single user named 'audio' is listed with Edit and Delete buttons.
- Log Viewer:** A section for viewing logs, with a Service dropdown (Application), Entries to get (250), and Sort (Oldest) options.

The footer contains the text 'CyberData • Support'.

2.16 Command Interface

Some functions on the device can be activated using simple POST commands to the web interface. The examples in [Table 2-2](#) use the free unix utility, **wget**, but any program that can send http POST commands to the device should work.

2.16.1 Command Interface Post Commands

These commands require an authenticated session (a valid username and password to work).

Table 2-2. Command Interface Post Commands

Device Action	HTTP Post Command ^a
Reboot	<code>wget --user admin --password admin --auth-no-challenge --quiet -O /dev/null --no-check-certificate "https://10.10.1.247/command" --post-data "request=reboot"</code>
Place call to extension (example: extension 600)	<code>wget --user admin --password admin --auth-no-challenge --quiet -O /dev/null --no-check-certificate "https://10.10.1.247/command" --post-data "request=call&extension=600"</code>
Terminate a calli	<code>wget --user admin --password admin --auth-no-challenge --quiet -O /dev/null --no-check-certificate "https://10.10.1.247/command" --post-data "request=terminate"</code>
Speak IP Address	<code>wget --user admin --password admin --auth-no-challenge --quiet -O /dev/null --no-check-certificate "https://10.10.1.247/command" --post-data "request=speak_ip_address"</code>
Test Audio	<code>wget --user admin --password admin --auth-no-challenge --quiet -O /dev/null --no-check-certificate "https://10.10.1.247/command" --post-data "request=test_audio"</code>
Swap Boot partitions	<code>wget --user admin --password admin --auth-no-challenge --no-check-certificate --quiet -O /dev/null "https://10.10.1.81/command" --post-data "request=swap_boot_partition"</code>

a.Type and enter all of each http POST command on one line.

Appendix A: Troubleshooting/Technical Support

A.1 Contact Information

Contact CyberData Corporation
3 Justin Court
Monterey, CA 93940 USA
www.cyberdata.net
Phone: 831-373-2601
Fax: 831-373-4193

Sales Sales 831-373-2601, Extension 334

Technical Support The fastest way to get technical support for your VoIP product is to submit a VoIP Technical Support form at the following website:

<https://support.cyberdata.net/>

The Support Form initiates a ticket which CyberData uses for tracking customer requests. Most importantly, the Support Form tells us which PBX system and software version that you are using, the make and model of the switch, and other important information. This information is essential for troubleshooting. Please also include as much detail as possible in the **Comments** section of the Support Form.

Phone: (831) 373-2601, Extension 333

A.2 Warranty and RMA Information

The most recent warranty and RMA information is available at the following website address:

<https://support.cyberdata.net/>

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