CyberData
The IP Endpoint Company

VoIP Singlewire-enabled Ceiling Speaker Operations Guide

Part Number
011102*, RAL 9002, Gray White, Standard
011103, RAL 9003, Signal White, Optional
*Replaces the 011065 number.

Document Part #*930320I*
for Firmware Version *3.0.1*

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VoIP Singlewire-enabled Ceiling Speaker Operations Guide 930320I
Part #
011102*, RAL 9002, Gray White, Standard
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The fastest way to get technical support for your VoIP product is to submit a VoIP Technical Support form at the following website:
http://support.cyberdata.net/

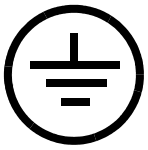
Phone: (831) 373-2601, Ext. 333
Email: support@cyberdata.net
Fax: (831) 373-4193
Company and product information is at **www.cyberdata.net**.

Revision History

Revision 930320I, released on September 25, 2015, corresponds to firmware version 3.0.1, and has the following changes:

- Updates Figure 2-6, "Running the V2 Speaker with Auxiliary Power"
- Updates Figure 2-7, "Singlewire-enabled Speaker with Extra Speaker Connection"
- Updates Figure 2-8, "Singlewire-enabled Speaker with Line Out"

Pictorial Alert Icons

GENERAL ALERT	General Alert *This pictoral alert indicates a potentially hazardous situation. This alert will be followed by a hazard level heading and more specific information about the hazard.*
	Ground *This pictoral alert indicates the Earth grounding connection point.*

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 Singlewire-enabled Speaker enclosure is not rated for any AC voltages!

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

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	Megabytes per Second.
NTP	Network Time Protocol
PBX	Private Branch Exchange
PoE	Power over Ethernet (as per IEEE 802.3af standard)
RTP	Real-time Transport Protocol
RTFM	Reset Test Function Management
SIP	Session Initiated Protocol
Talkback	Two-way communication enabled
TFTP	Trivial File Transfer 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 Product Overview

The CyberData Singlewire-enabled Speaker is a Power-over-Ethernet (PoE 802.3af) and Voice-over-IP (VoIP) public address loudspeaker that easily connects into existing local area networks with a single CAT5 cable connection. The speaker is compatible with Singlewire's InformaCast software. Its small footprint and low height allows the speaker to be discretely mounted almost anywhere.

Note The version of InformaCast needs to be 4.0 or higher.

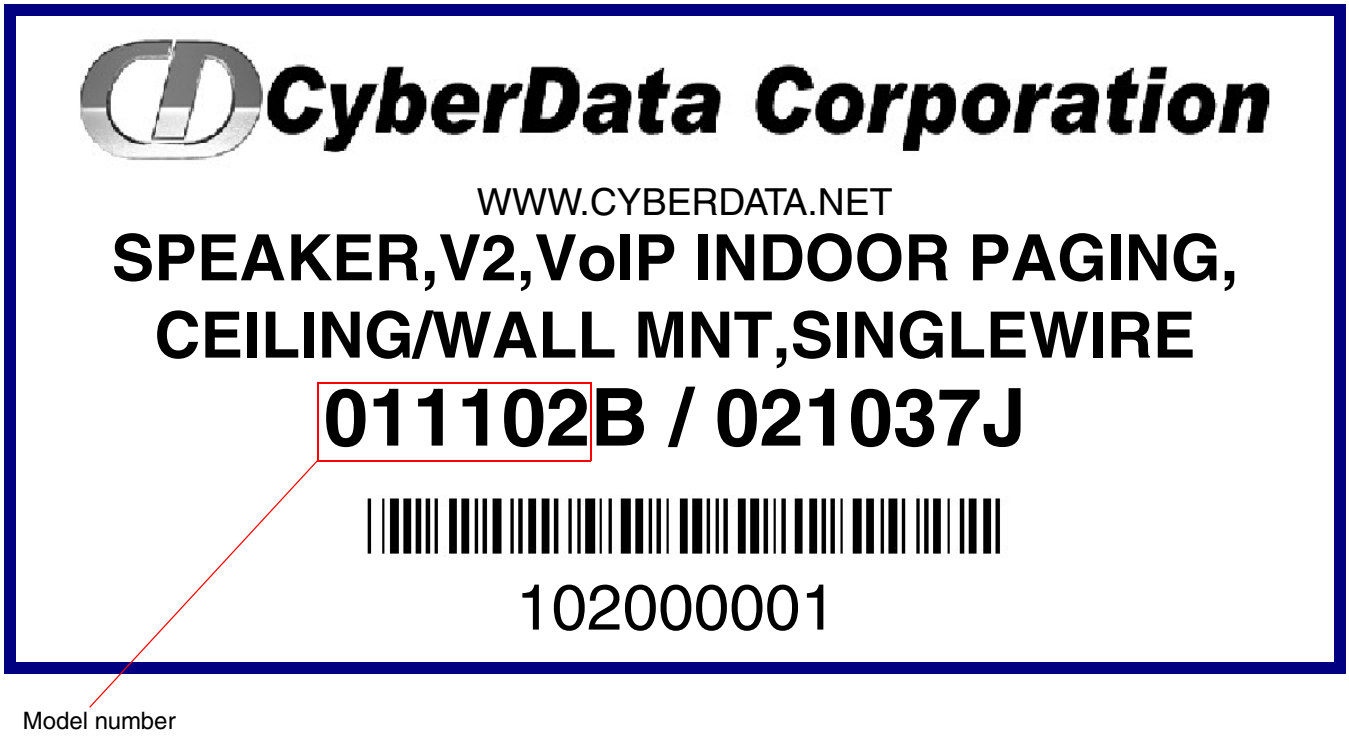
1.1 How to Identify This Product

To identify the VoIP Singlewire-enabled Ceiling Speaker, look for a model number label similar to the one shown in Figure 1-1. The model number on the label should be one of the following:

- **011102***, RAL 9002, Gray White, Standard Color
- **011103**, RAL 9003, Signal White, Optional Color

*Replaces 011065.

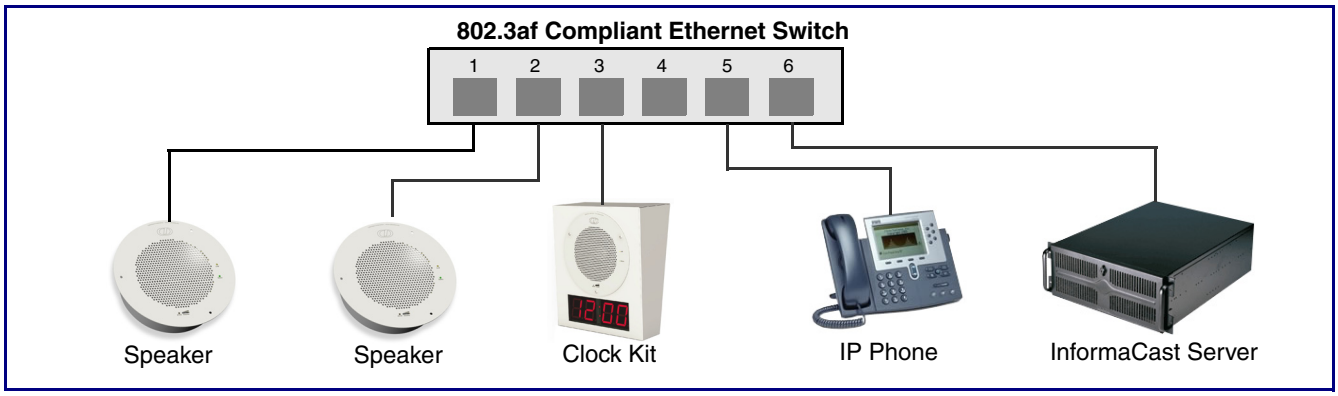
Figure 1-1. Model Number Label



1.2 Installation

Figure 1-2 illustrates a typical configurations for the Singlewire-enabled Speaker.

Figure 1-2. Typical Installation



See the following sections for other installation options:

- Section 2.2.1.3, "Running the Singlewire-enabled Speaker with Auxiliary Power"
- Section 2.2.2.1, "Singlewire-enabled Speaker with Extra Speaker Connection"
- Section 2.2.2.2, "Singlewire-enabled Speaker with Line Out"

Note Prior to installation, create a plan for the locations of your speakers.

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

1.3 Product Features

- Supports SingleWire/Informacast Server Resilience
- Web-based firmware upgradable
- Small footprint
- High efficiency speaker driver
- PoE 802.3af Enabled (Powered-over-Ethernet)
- Network and external speaker volume control
- Auto detect for CyberData Clock kit

1.4 Supported Protocols

The Singlewire-enabled Speaker supports:

- Multicast
- DHCP Client

  Dynamically assigns IP addresses in addition to the option to use static addressing.
- InformaCast Version 4.0 and greater
- TFTP Client

  Facilitates Web-based firmware upgrades of the latest speaker capabilities.
- RTP
- Audio Encodings

  PCMU (G.711 mu-law)

  PCMA (G.711 A-law)

  Packet Time 20 ms

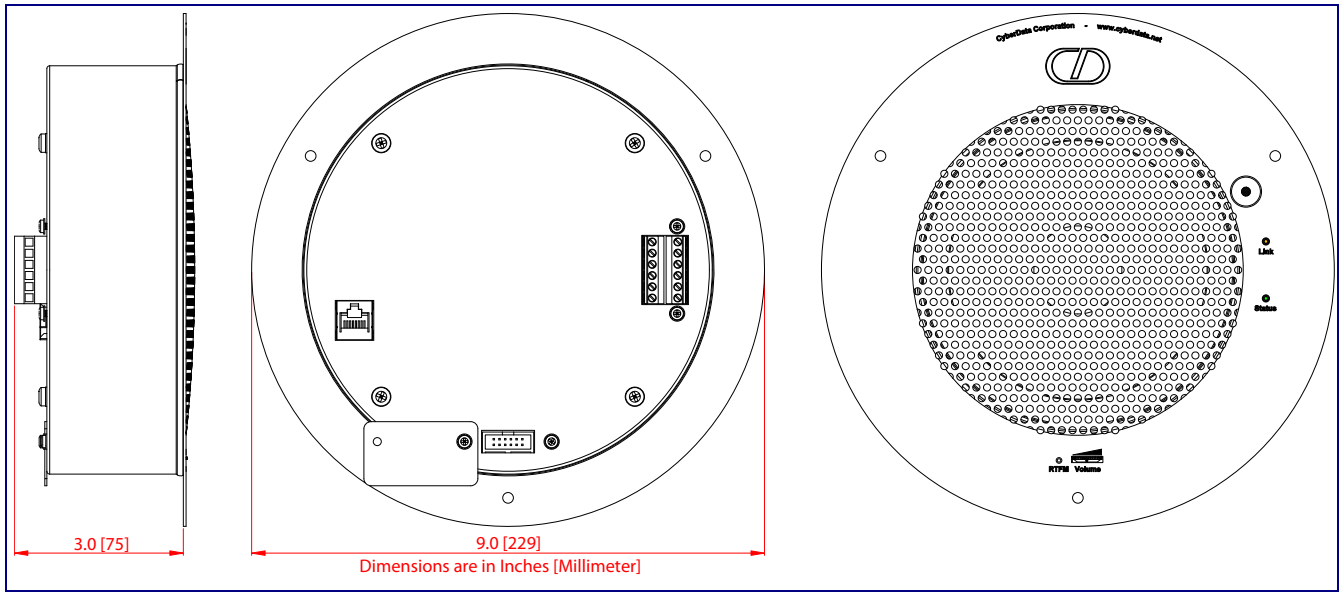
1.5 Product Specifications

Category	Specification
Sensitivity	96dB/1W/1M S.P. Level
Output	10 Watts Peak Power
Operating temperature	-30 to 55 C (-22 to 131 F)
Port baud rate	10/100 Mbps
Protocol	Singlewire InformaCast 4.0 and higher
Power Input	PoE 802.3af (as per IEEE 802.3af standard from a UL listed power source)
Payload types	G711, A-law and µ-law
Warranty	2 years limited
Dimensions	9” x 2.4”
Weight	2.8 lbs./shipping weight of 3.8 lbs. (1.3 kg/shipping weight of 1.7 kg)
Part number	011102

1.6 Dimensions

Figure 1-3 shows the dimensions for the Singlewire-enabled Speaker.

Figure 1-3. Dimensions



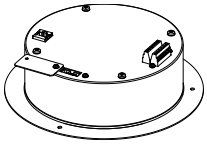
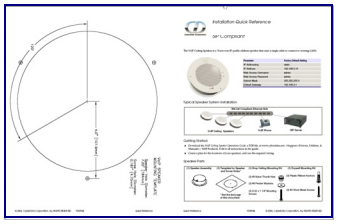
2 Installing the Singlewire-enabled Speaker

2.1 Parts List

Table 2-1 illustrates the parts for each speaker and includes kits for the drop ceiling and drywall mounting.

Note The installation template for the Singlewire-enabled Speaker is located on the *Installation Quick Reference Guide* that is included in the packaging with each speaker.

Table 2-1. Parts

Quantity	Part Name	Illustration
1	Singlewire-enabled Speaker Assembly	
1	Installation Quick Reference Guide	
1	Speaker Mounting Accessory Kit (Part #070054A)	

2.2 Set Up and Test the Speaker

Set up and configure each speaker *before* you mount it.

CyberData delivers each speaker with the following factory default values:

Table 2-2. Factory Network Default Settings—Default of Network

Parameter	Factory Default Setting
IP Addressing	DHCP
IP Address[a]	10.10.10.10
Web Access Username	admin
Web Access Password	admin
Subnet Mask[a]	255.0.0.0
Default Gateway[a]	10.0.0.1

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

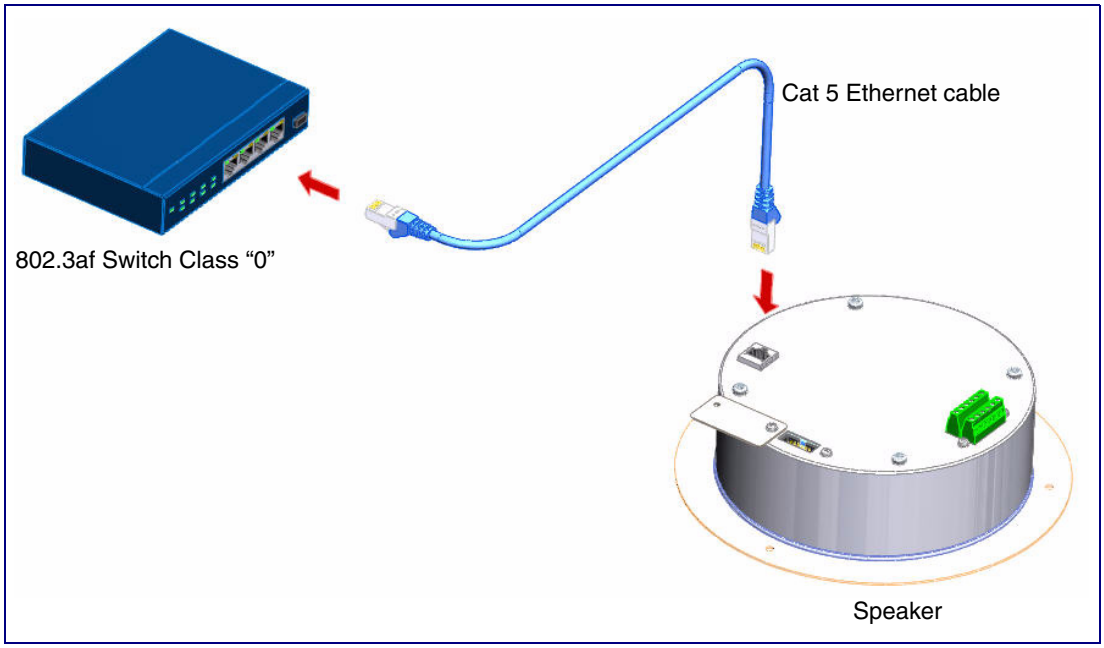
2.2.1 Connect Power to the Speaker

Figure 2-4 through Figure 2-6 illustrates how to connect power to the Singlewire-enabled Speaker.

2.2.1.1 Singlewire-enabled Speaker to a 802.3af Compliant PoE Switch

Figure 2-4 illustrates how to connect the Singlewire-enabled Speaker to a 802.3af compliant PoE switch via a Cat 5 Ethernet cable.

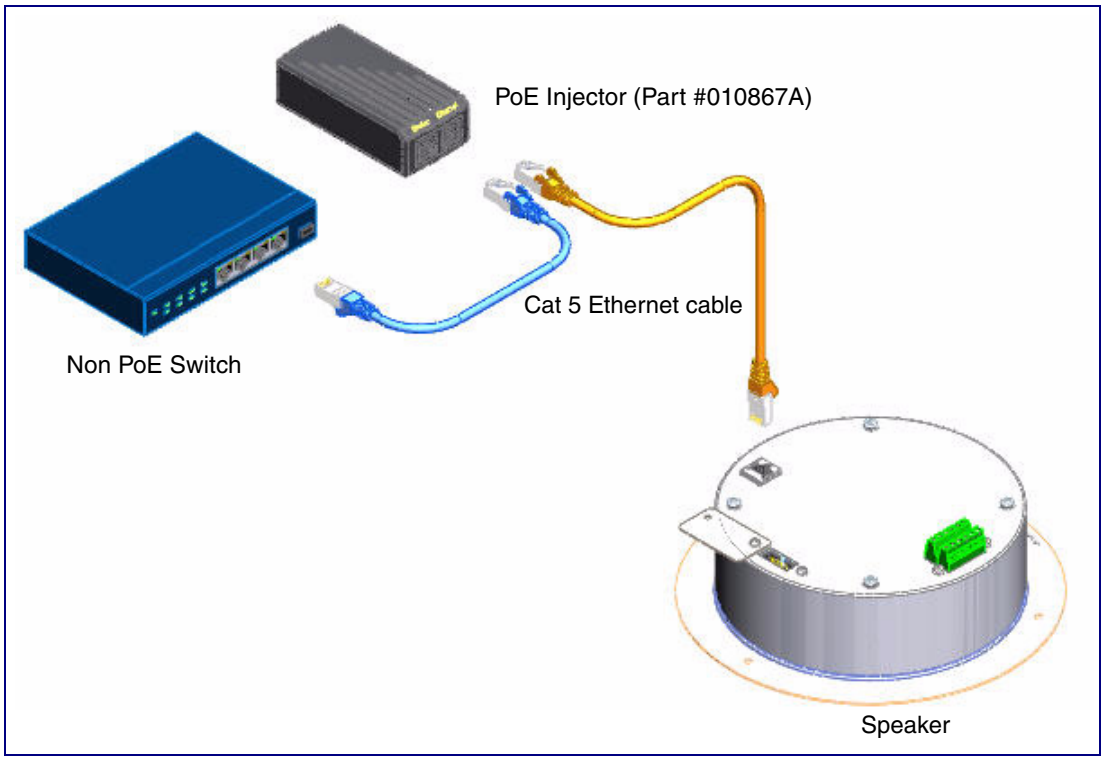
Figure 2-4. Singlewire-enabled Speaker to a 802.3af Compliant PoE Switch



2.2.1.2 Singlewire-enabled Speaker (with PoE Injector) to a 802.3af Compliant PoE Switch

In Figure 2-5, if a PoE switch is not available, you will need a PoE Injector, part #010867A (ordered separately). A PoE Injector is a power supply solution for those who have a standard Non PoE Switch.

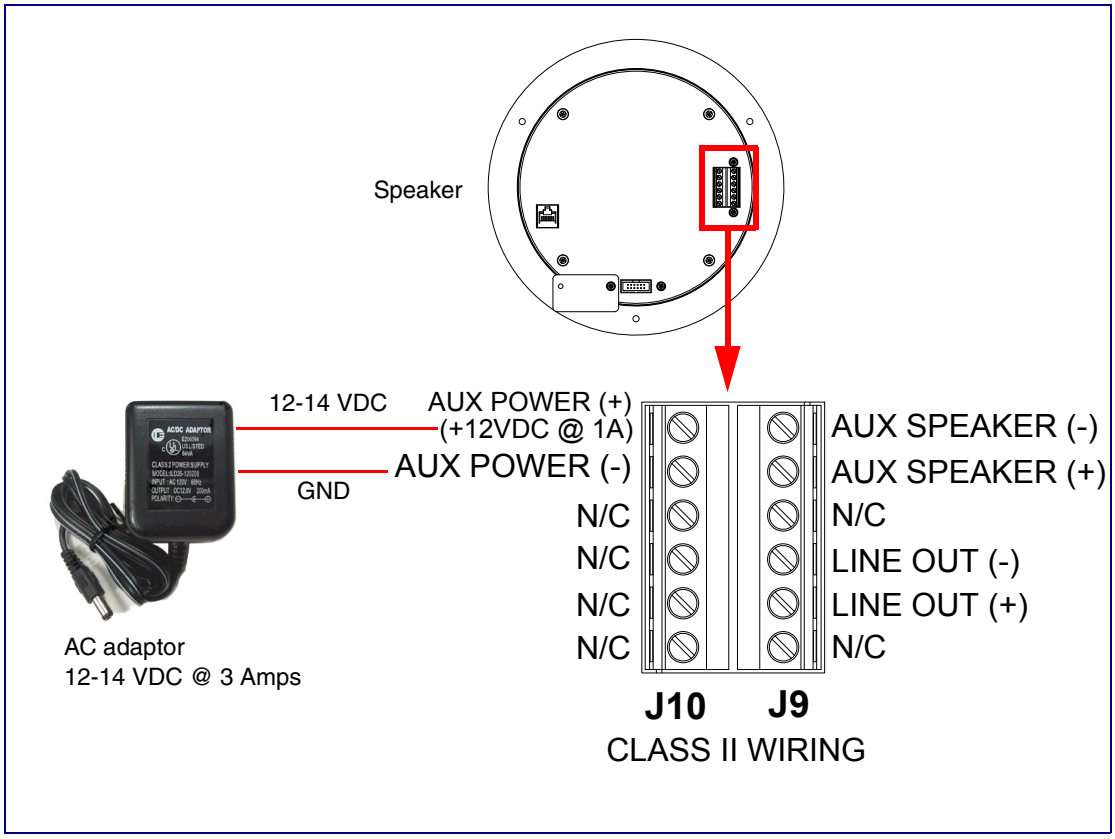
Figure 2-5. Singlewire-enabled Speaker Speaker (with PoE Injector) to a Non PoE Switch



2.2.1.3 Running the Singlewire-enabled Speaker with Auxiliary Power

In Figure 2-6, the power for the Singlewire-enabled Speaker can either come from an 802.3af Network connection or from an external source.

Figure 2-6. Running the V2 Speaker with Auxiliary Power



2.2.2 Installation Options

Figure 2-7 through Figure 2-8 illustrates various installation options for the Singlewire-enabled Speaker.

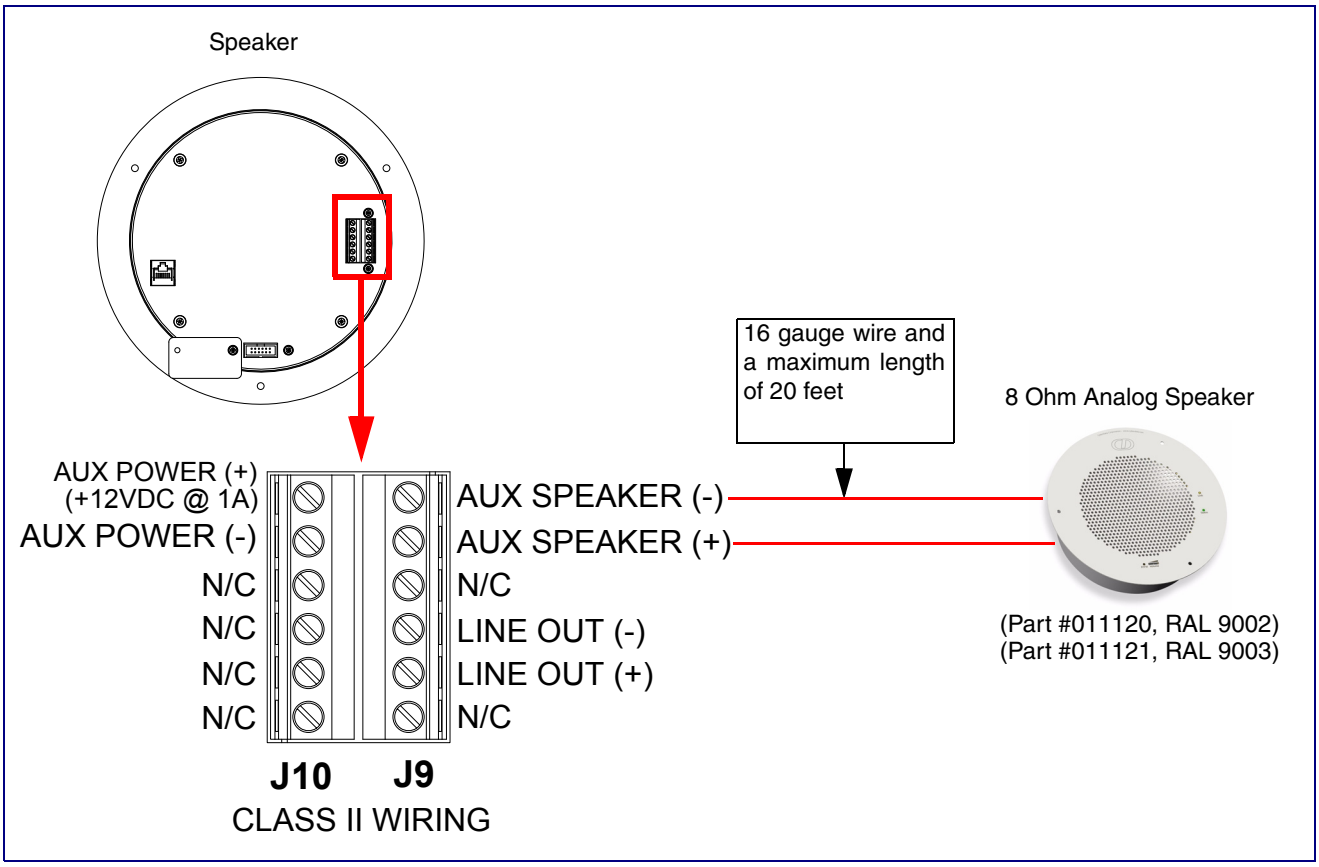
2.2.2.1 Singlewire-enabled Speaker with Extra Speaker Connection

In Figure 2-7, the Singlewire-enabled Speaker supports an amplified audio output for a second analog speaker. While the total speaker wattage is the same, by connecting a low cost analog speaker, additional coverage can be realized.

Speaker Setup

When using the second speaker connection, the digital volume control needs to be set to less than level **8** while making pages. Some adjustment of this value may be required depending on the specific PoE switch.

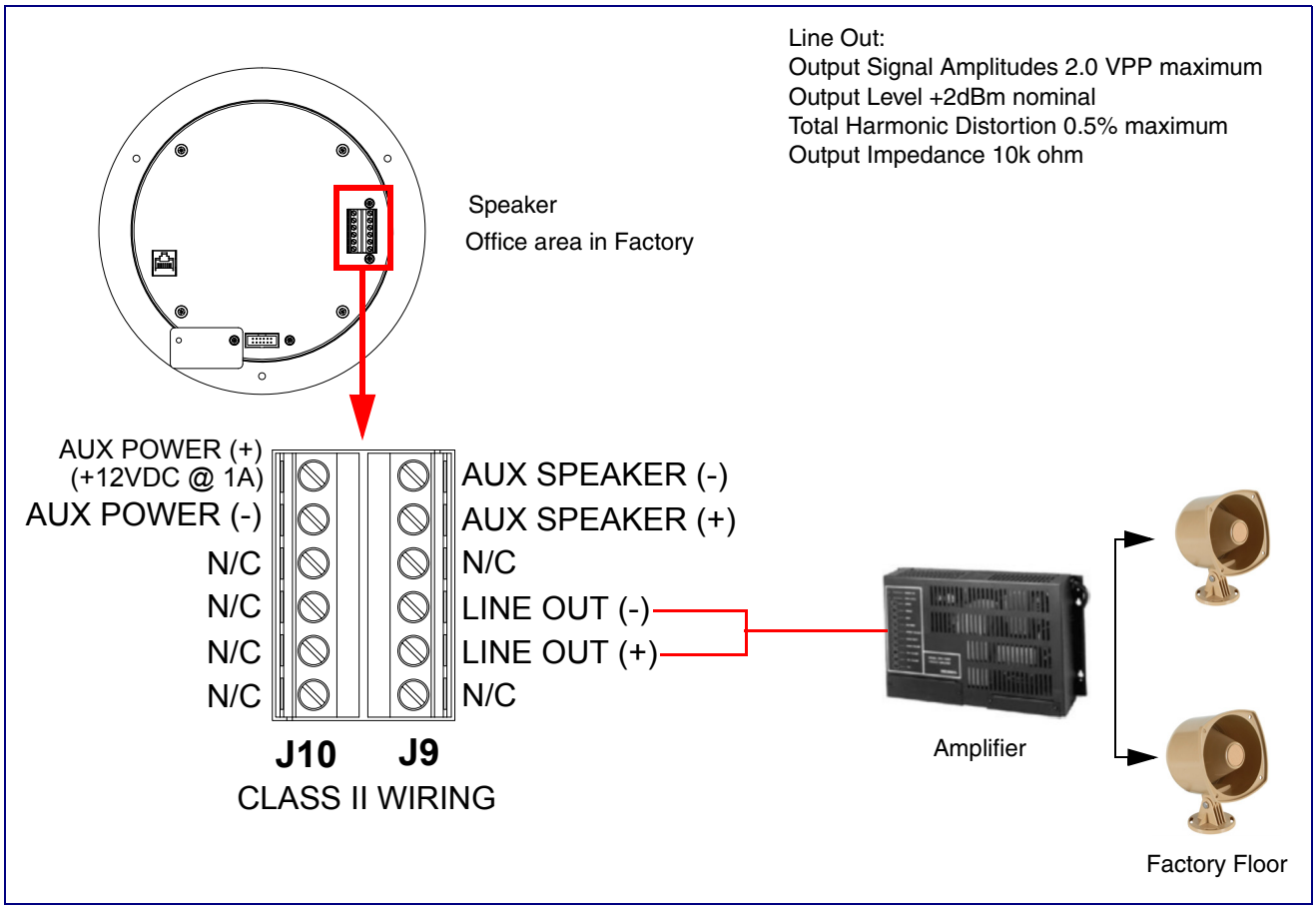
Figure 2-7. Singlewire-enabled Speaker with Extra Speaker Connection



2.2.2.2 Singlewire-enabled Speaker with Line Out

In Figure 2-8, for areas that require more speaker volume, the Singlewire-enabled Speaker can be connected directly to an auxiliary amplifier to drive additional horns or speakers. This is done through the line-out connection.

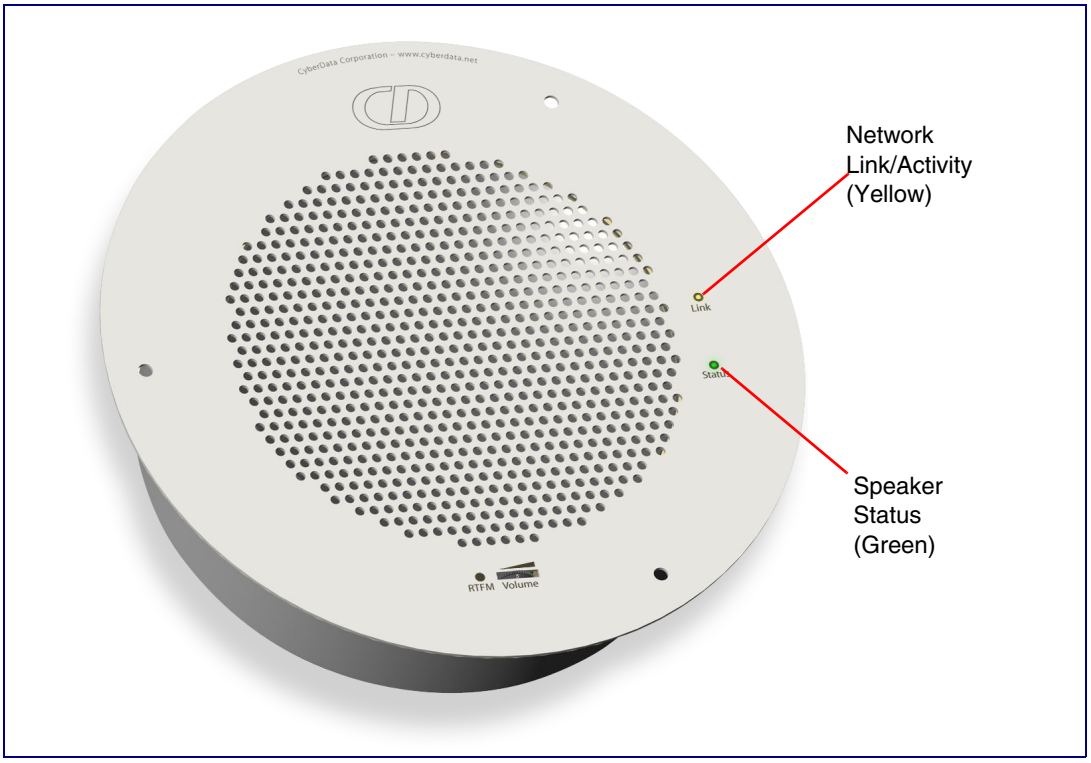
Figure 2-8. Singlewire-enabled Speaker with Line Out



2.2.3 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 2-9. Status and Activity LEDs



2.2.3.1 Status LED

After supplying power to the speaker:

1. The green power/status LED and the yellow network 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.

Note If the board is set to use DHCP and there is not a DHCP server available on the network, it will try five times with a three second delay between tries and eventually fall back to the programmed static IP address (by default 10.10.10.10). This process will take approximately 80 seconds.

2.2.3.2 Link LED

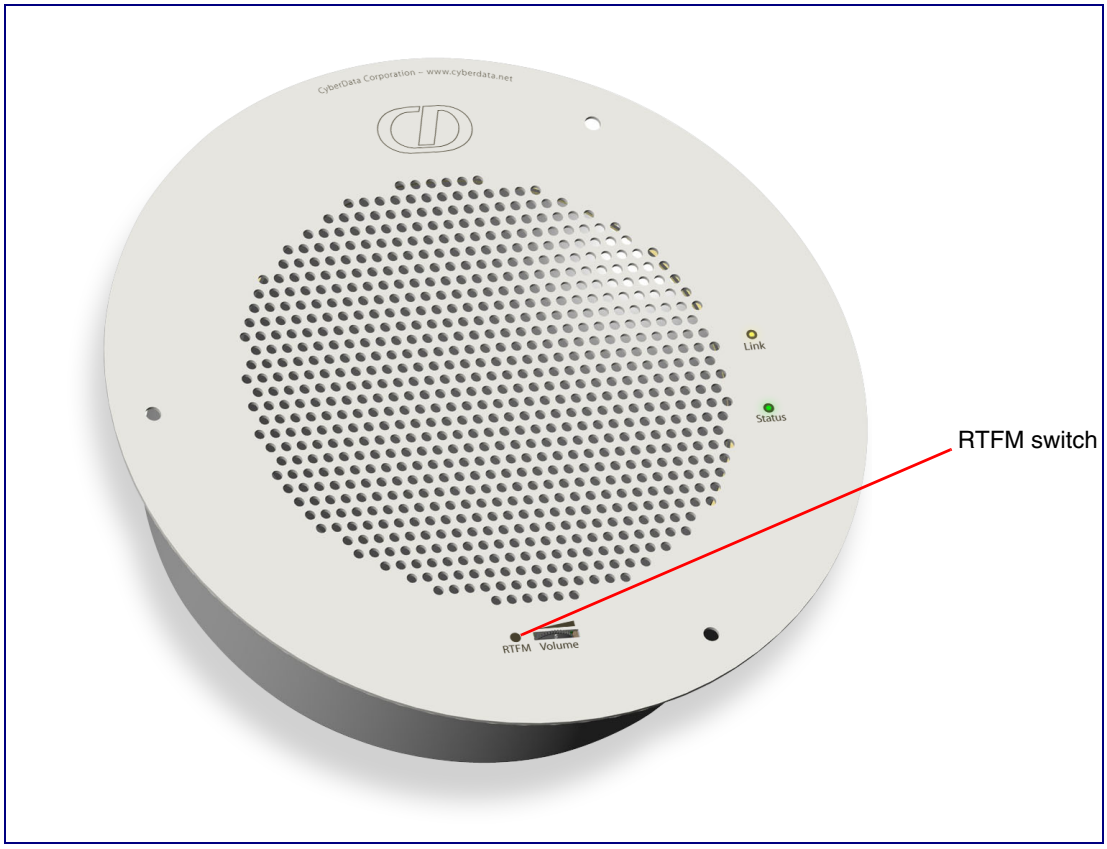
- The **Link** LED is illuminated when the network link to the speaker is established.
- The **Link** LED blinks to indicate network traffic.

2.2.4 Confirm the IP Address, Test the Audio, and Check the Volume

2.2.4.1 Reset Test Function Management (RTFM) Switch

When the speaker is operational and linked to the network, use the Reset Test Function Management (RTFM) switch (Figure 2-10) on the speaker face to announce and confirm the speaker's IP Address, test that the audio is working, and check the volume.

Figure 2-10. RTFM Switch



To announce a speaker's current IP address:

1. Press and release the RTFM switch within a five second window.
2. When you hear the IP address announcement, check the speaker volume.

Note The speaker will use DHCP to obtain the new IP address (DHCP-assigned address or default to 10.10.10.10 if a DHCP server is not present).

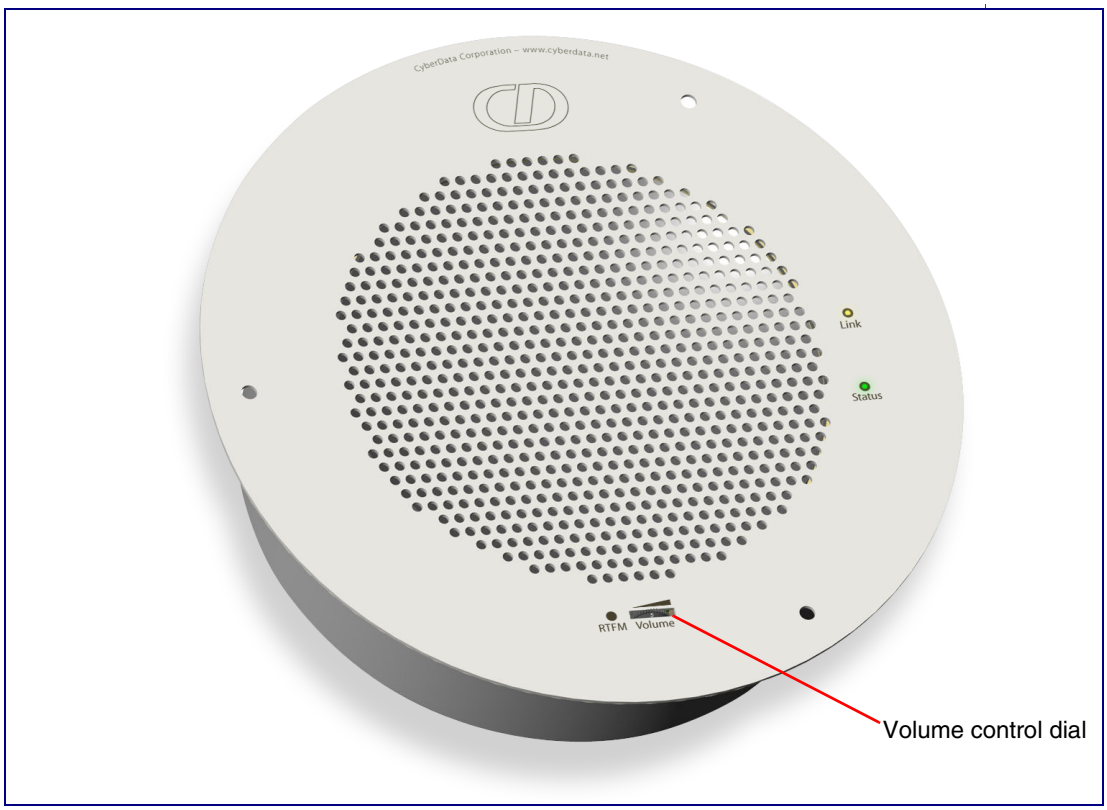
Note Pressing and holding the RTFM switch for longer than five seconds will restore the speaker to the factory default settings.

2.2.5 Adjust the Volume

To adjust the speaker volume, turn the **Volume** control dial (Figure 2-11) on the speaker face.

Note The Singlewire-enabled Speaker has two volume controls: **Networked-based** (as controlled by the Singlewire protocol from InformaCast) and **External** (volume knob).

Figure 2-11. Volume Control

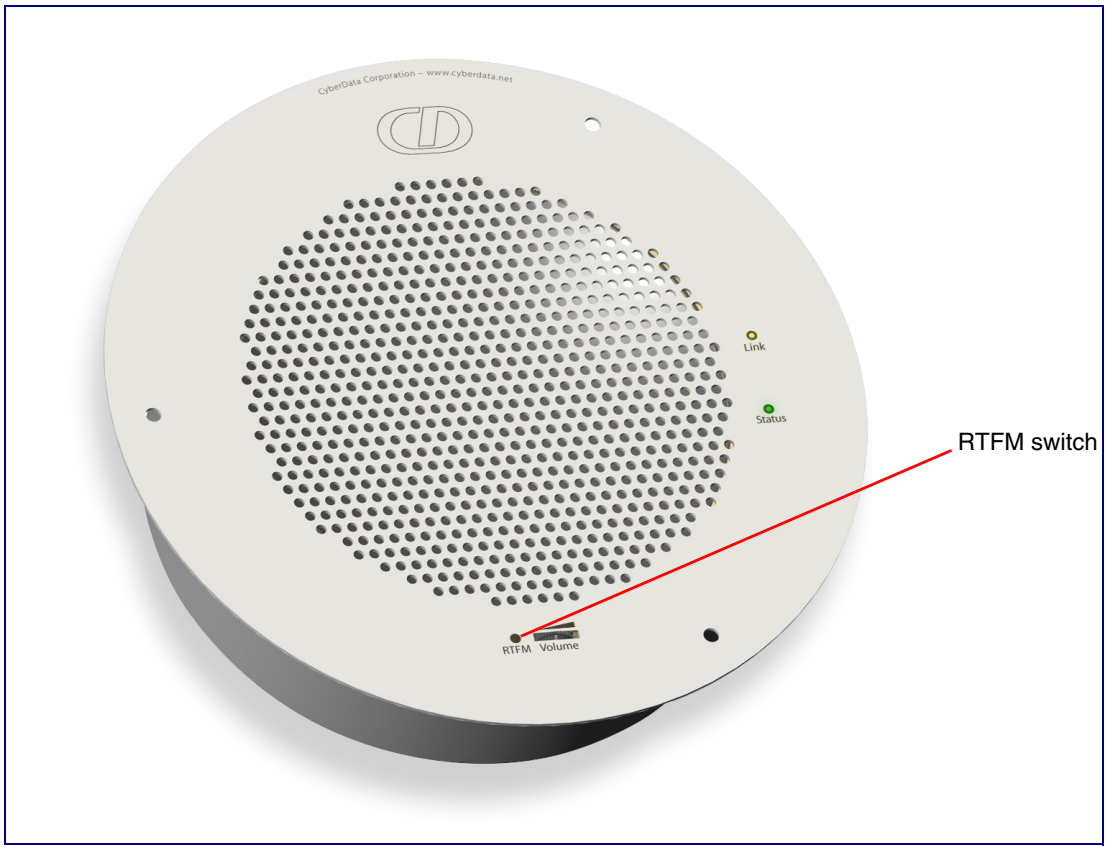


2.2.6 How to Set the Factory Default Settings

2.2.6.1 RTFM Switch

When the speaker is operational and linked to the network, use the Reset Test Function Management (RTFM) switch (Figure 2-12) on the speaker face to set the factory default settings.

Figure 2-12. RTFM Switch



To set the factory default settings:

1. Press and hold the **RTFM** switch for more than five seconds.
2. The speaker announces that it is restoring the factory default settings.

Note The speaker will use DHCP to obtain the new IP address (DHCP-assigned address or default to 10.10.10.10 if a DHCP server is not present).

2.3 Configure the Speaker Parameters

To configure the speaker online, use a standard web browser.

Configuration of the speaker is taken care of by the InformaCast server. If an InformaCast server can not be found, the speaker will return to factory defaults as shown in Table 2-3.

Table 2-3. Factory Network Default Settings—Default of Network

Parameter	Factory Default Setting
IP Addressing	DHCP
IP Address[a]	10.10.10.10
Web Access Username	admin
Web Access Password	admin
Subnet Mask[a]	255.0.0.0
Default Gateway[a]	10.0.0.1

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

2.3.1 Singlewire-enabled Speaker Web Page Navigation

Table 2-4 shows the navigation buttons that you will see on every Singlewire-enabled Speaker web page.

Table 2-4. V2 Paging Amplifier Web Page Navigation

Web Page Item	Description
	Link to the **Home** page.
	Link to the **Clock Configuration** page.[a]
	Link to the **Update Firmware** page.

a. This page is used only if the CyberData Clock Kit (part number 011023 [wall-mounted version] or 011024 [flush-mounted version]) is installed.

2.3.2 Log in to the Configuration Home Page

1. Open your browser to the Singlewire-enabled Speaker IP address. This can be found within the InformaCast Server Test Menu.

Note If the network does not have access to a DHCP server, the device will default to an IP address of 10.10.10.10.

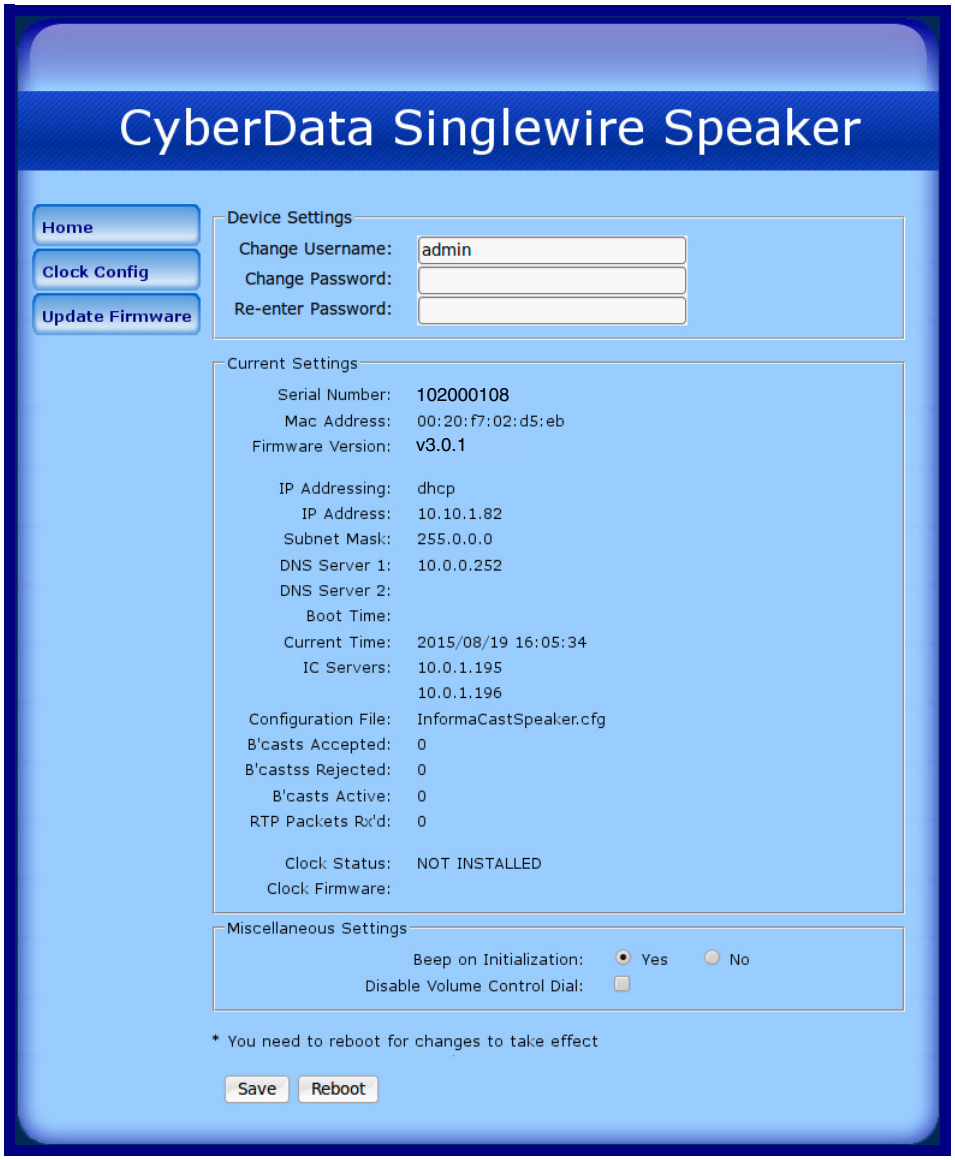
Note Make sure that the PC is on the same IP network as the Singlewire-enabled Speaker.

2. When prompted, use the following default **Web Access Username** and **Web Access Password** to access the **Home Page** (Figure 2-13):

   Web Access Username: **admin**

   Web Access Password: **admin**

Figure 2-13. Home Page



3. On the **Home Page**, review the setup details and navigation buttons described in Table 2-5.

Table 2-5. Home Page Overview

Web Page Item	Description
Device Settings	
Change Username	Type in this field to change the username (25 character limit).
Change Password	Type in this field to change the password (19 character limit).
Re-enter Password	Type the password again in this field to confirm the new password (19 character limit).
Current Settings	
Serial Number	Shows the device serial number.
Mac Address	Shows the device Mac address.
Firmware Version	Shows the current firmware version.
IP Addressing	Shows the current IP addressing setting (**DHCP** or **Static**).
IP Address	Shows the current IP address.
Subnet Mask	Shows the current subnet mask address.
DNS Server 1	Shows the current DNS Server 1 address.
DNS Server 2	Shows the current DNS Server 2 address.
Boot Time	Shows the boot time.
Current Time	Shows the current time.
I C Servers	Shows the InformaCast Server IP addresses.
Configuration File	Shows the configuration file.
B'casts Accepted	Shows the number of B'casts accepted.
B'casts Rejected	Shows the number of B'casts rejected.
B'casts Rejected	Shows the number of active B'casts.
RTP Packets Rx'd	Shows the number of RTP packets Rx'd.
Clock Status	Shows the current clock status.
Clock Firmware	Shows the current clock firmware version.
Miscellaneous Settings	
Beep on Initialization	Select either **Yes** or **No** to indicate if you want to hear a beep when the unit is powered up.
Disable Volume Control Dial	When selected, the volume control dial will be disabled.
Save	Click 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.

2.3.3 Configure the Clock Parameters

Click the **Clock Config** button to open the **Clock Configuration** page.
See Figure 2-14.

Note The **Clock Configuration** page is always visible. If a clock is not installed, the **Clock Status** will indicate **NOT INSTALLED**. Otherwise it shows **INSTALLED**.

Figure 2-14. Clock Configuration Page

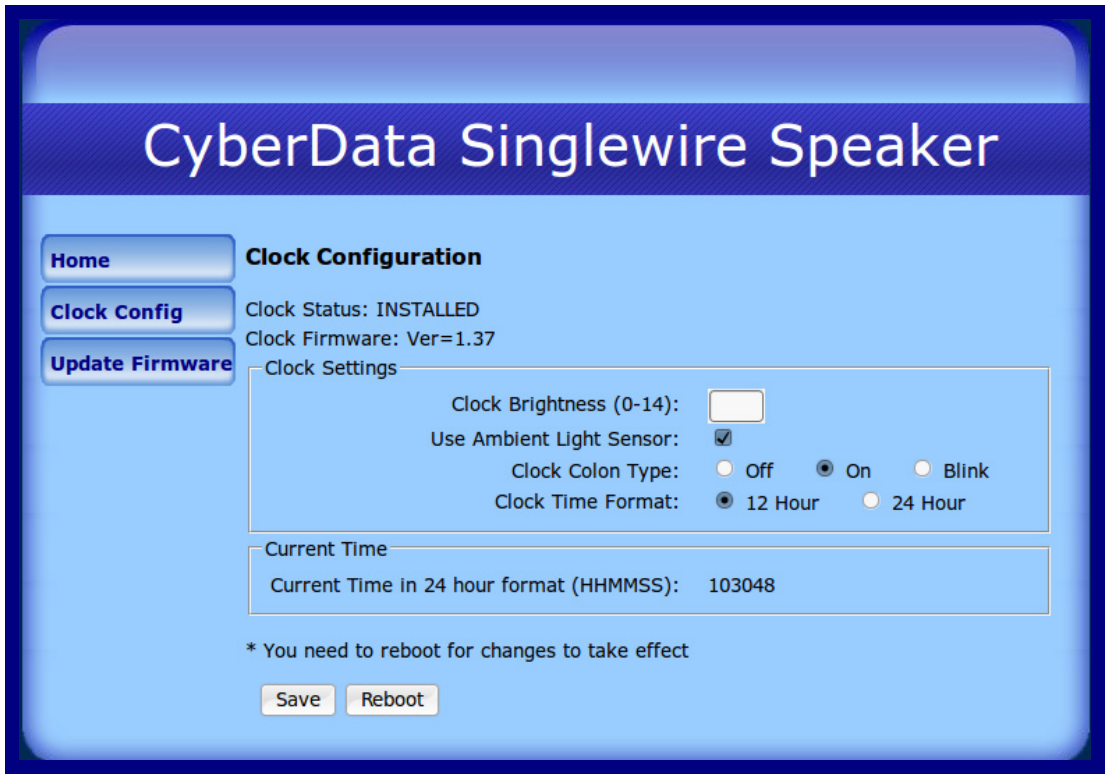
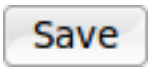
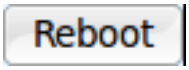


Table 2-6 shows the web page items on the **Clock Configuration** page.

Table 2-6. NTP Server and Clock Configuration

Web Page Item	Description
Clock Status	Displays the current clock status.
Clock Firmware	Displays the current clock firmware version.
Clock Settings	
Clock Brightness (0-14)	Allows you to select the clock brightness level (0-14) (2 character limit)
Use Ambient Light Sensor	Enables or disables the ambient light sensor.
Clock Colon Type	Allows you to select the clock colon type (**Off**, **On**, or **Blink**)
Clock Time Format	Allows you to select the clock format (12 or 24 hour)
Current Time	
Current Time in 24 hour format (**HHMMSS**)	Allows you to input the current time in the 24 hour format. (6 character limit)
	Click 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.

2.3.3.1 Time Zone Strings

The posix time zone string tells the internal date and time utilities how to handle daylight savings time for different time zones. Table 2-7 shows some common strings.

Table 2-7. Common Time Zone Strings

Time Zone	Time Zone String
US Pacific time	PST8PDT,M3.2.0/2:00:00,M11.1.0/2:00:00
US Mountain time	MST7MDT,M3.2.0/2:00:00,M11.1.0/2:00:00
US Eastern Time	EST5EDT,M3.2.0/2:00:00,M11.1.0/2:00:00
Phoenix Arizona[a]	MST7
US Central Time	CST6DST,M3.2.0/2:00:00,M11.1.0/2:00:00

a.Phoenix, Arizona does not use daylight savings time.

Table 2-8 shows a breakdown of the parts that constitute the following time zone string:

- ***CST6DST,M3.2.0/2:00:00,M11.1.0/2:00:00***

Table 2-8. Time Zone String Parts

Time Zone String Part	Meaning
CST6CDT	The time zone offset from GMT and three character identifiers for the time zone.
CST	Central Standard Time
6	The (hour) offset from GMT/UTC
CDT	Central Daylight Time
M3.2.0/2:00:00	The date and time when daylight savings begins.
M3	The third month (March)
.2	The 2nd occurrence of the day (next item) in the month
.0	Sunday
/2:00:00	Time of day to change
M11.1.0/2:00:00	The date and time when daylight savings ends.
M11	The eleventh month (November)
.1	The 1st occurrence of the day (next item) in the month
.0	Sunday
/2:00:00	Time of day to change

Time Zone String Examples

Table 2-9 has some more examples of time zone strings.

Table 2-9. Time Zone String Examples

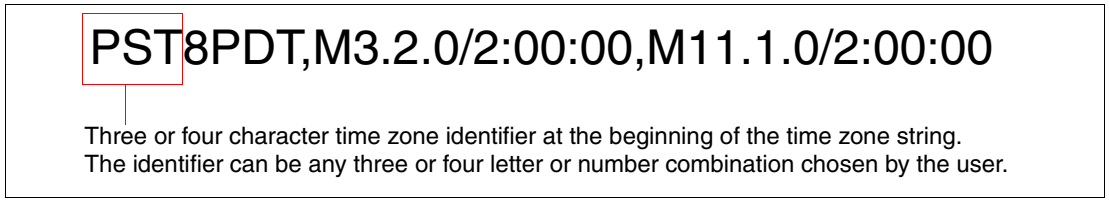
Time Zone	Time Zone String
Tokyo[a]	IST-9
Berlin[b]	CET-1MET,M3.5.0/1:00,M10.5.0/1:00

a.Tokyo does not use daylight savings time.
b.For Berlin, daylight savings time starts on the last Sunday in March at 01:00 UTC, and ends on the last Sunday in October at 01:00 UTC, and is one hour ahead of UTC.

Time Zone Identifier

A user-definable three or four character time zone identifier (such as PST, EDT, IST, MUT, etc) is needed at the beginning of the posix time zone string to properly set the time. However, the specific letters or numbers used for the time zone identifier are not important and can be any three or four letter or number combination that is chosen by the user. However, the time zone identifier cannot be blank.

Figure 2-15. Three or Four Character Time Zone Identifier



You can also use the following URL when a certain time zone applies daylight savings time:

http://www.timeanddate.com/time/dst/2011.html

World GMT Table

Table 2-10 has information about the GMT time in various time zones.

Table 2-10. World GMT Table

Time Zone	City or Area Zone Crosses
GMT-12	Eniwetok
GMT-11	Samoa
GMT-10	Hawaii
GMT-9	Alaska
GMT-8	PST, Pacific US
GMT-7	MST, Mountain US
GMT-6	CST, Central US
GMT-5	EST, Eastern US
GMT-4	Atlantic, Canada
GMT-3	Brazilia, Buenos Aries
GMT-2	Mid-Atlantic
GMT-1	Cape Verdes

Table 2-10. World GMT Table (continued)

Time Zone	City or Area Zone Crosses
GMT	Greenwich Mean Time, Dublin
GMT+1	Berlin, Rome
GMT+2	Israel, Cairo
GMT+3	Moscow, Kuwait
GMT+4	Abu Dhabi, Muscat
GMT+5	Islamabad, Karachi
GMT+6	Almaty, Dhaka
GMT+7	Bangkok, Jakarta
GMT+8	Hong Kong, Beijing
GMT+9	Tokyo, Osaka
GMT+10	Sydney, Melbourne, Guam
GMT+11	Magadan, Soloman Is.
GMT+12	Fiji, Wellington, Auckland

2.3.4 Updating the Firmware

Note Updating from firmware versions earlier than 2.0.0 require a factory reset after the update has been completed. This is due to a change in the way that the speaker stores its configuration file.

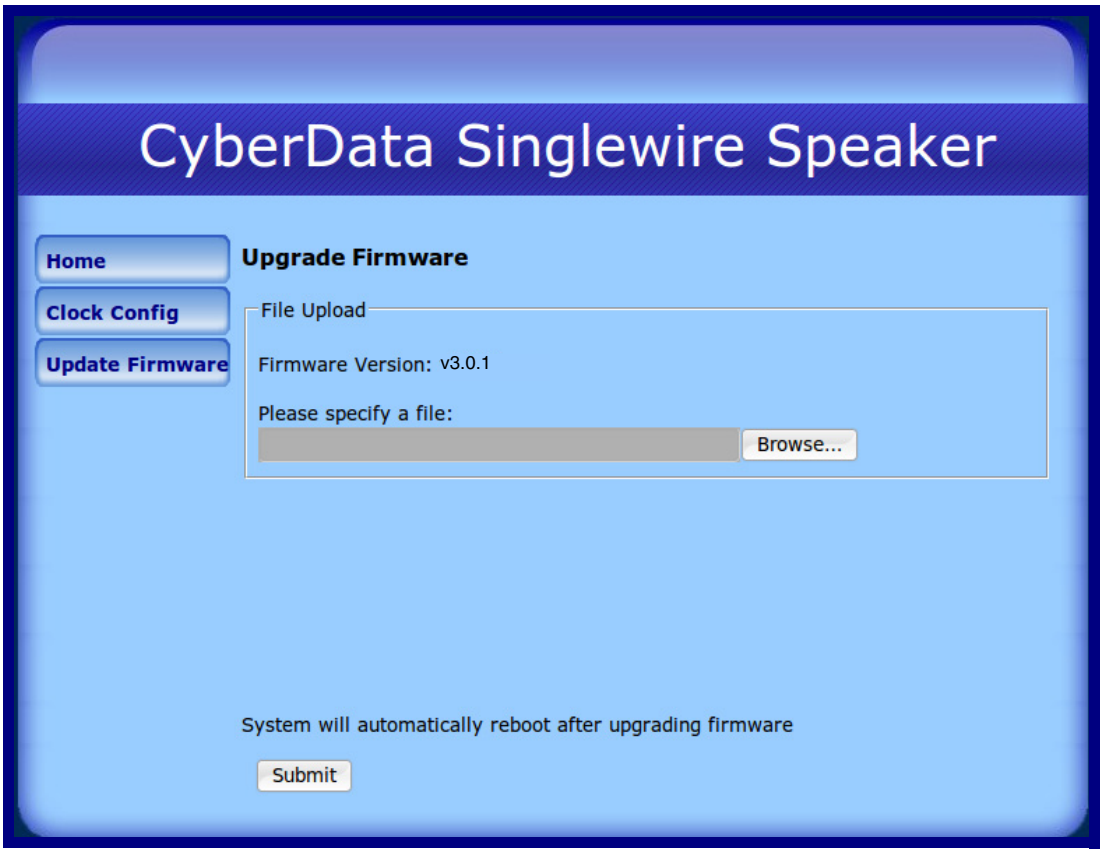
To update the firmware from your computer:

1. Please contact VoIP Technical Support to obtain the latest Singlewire-enabled Speaker firmware file by submitting a contact form at the following website:

   http://support.cyberdata.net/

2. Log in to the Singlewire-enabled Speaker home page as instructed in Section 2.3.2, "Log in to the Configuration Home Page".

Figure 2-16. Upgrade Firmware Page



3. Select **Browse**, and then navigate to the location of the Singlewire-enabled Speaker firmware file.

4. Click **Submit**.

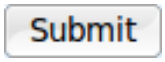
Note Do not reboot the board after pressing the **Submit** button.

Note This starts the update process. Once the Singlewire-enabled Speaker has updated the file, the **Firmware** countdown page appears, indicating that the firmware is being written to flash. The Singlewire-enabled Speaker will automatically reboot when the upload is

complete. When the countdown finishes, the **Upgrade Firmware** page will refresh. The uploaded firmware filename should be displayed in the system configuration (indicating successful upload and reboot).

Table 2-11 shows the web page items on the **Upgrade Firmware** page.

Table 2-11. Firmware Upgrade Parameters

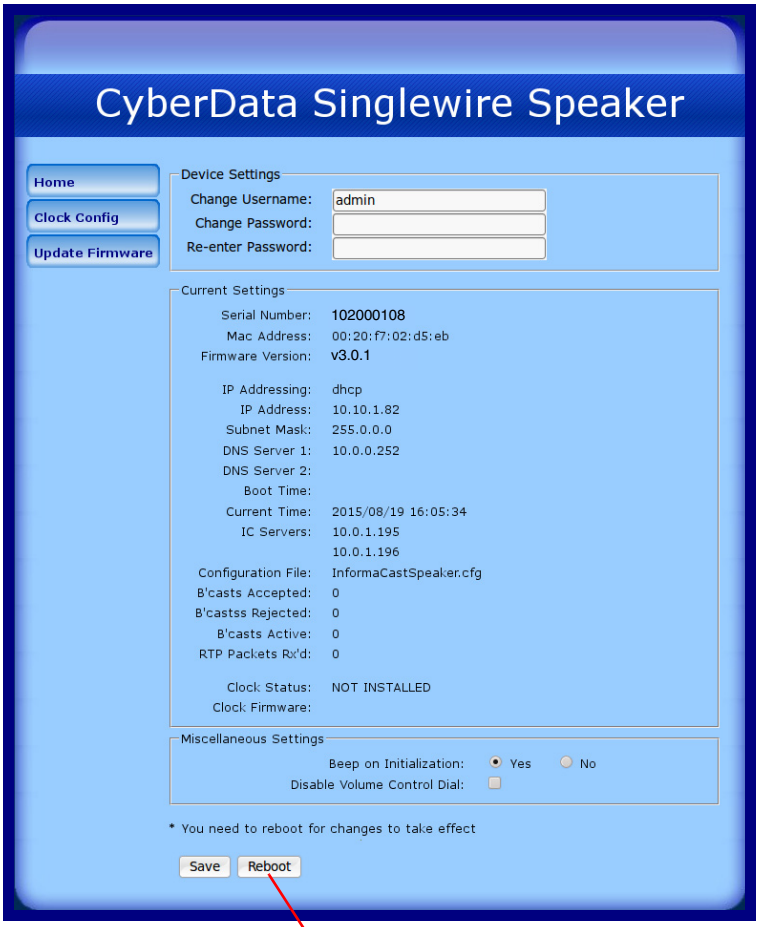
Web Page Item	Description
File Upload	
Firmware Version	Shows the current firmware version.
	Use the **Browse** button to navigate to the location of the firmware file that you want to upload.
	Click on the **Submit** button to automatically upload the selected firmware and reboot the system.

2.3.5 Reboot the Singlewire-enabled Speaker

To reboot a Singlewire-enabled Speaker, log in to the web page as instructed in Section 2.3.2, "Log in to the Configuration Home Page".

1. Click the **Reboot** button (Figure 2-17).

Figure 2-17. Reboot Button



Reboot button

2. Click **Reboot**. A normal restart will occur and you will see the following **Reboot** page.

Figure 2-18. Reboot Page

2.4 Identifying and Testing a Ceiling Speaker when Using InformaCast 4.0 or Later

This section describes the basic process for identifying and testing the CyberData IP Ceiling speaker when using Singlewire's InformaCast software version 4.0 or later.

Note If you have questions or need help, please consult your InformaCast documentation and or contact the CyberData support team.

Note CyberData's support is limited to IP endpoint functionality when used with an InformaCast system.

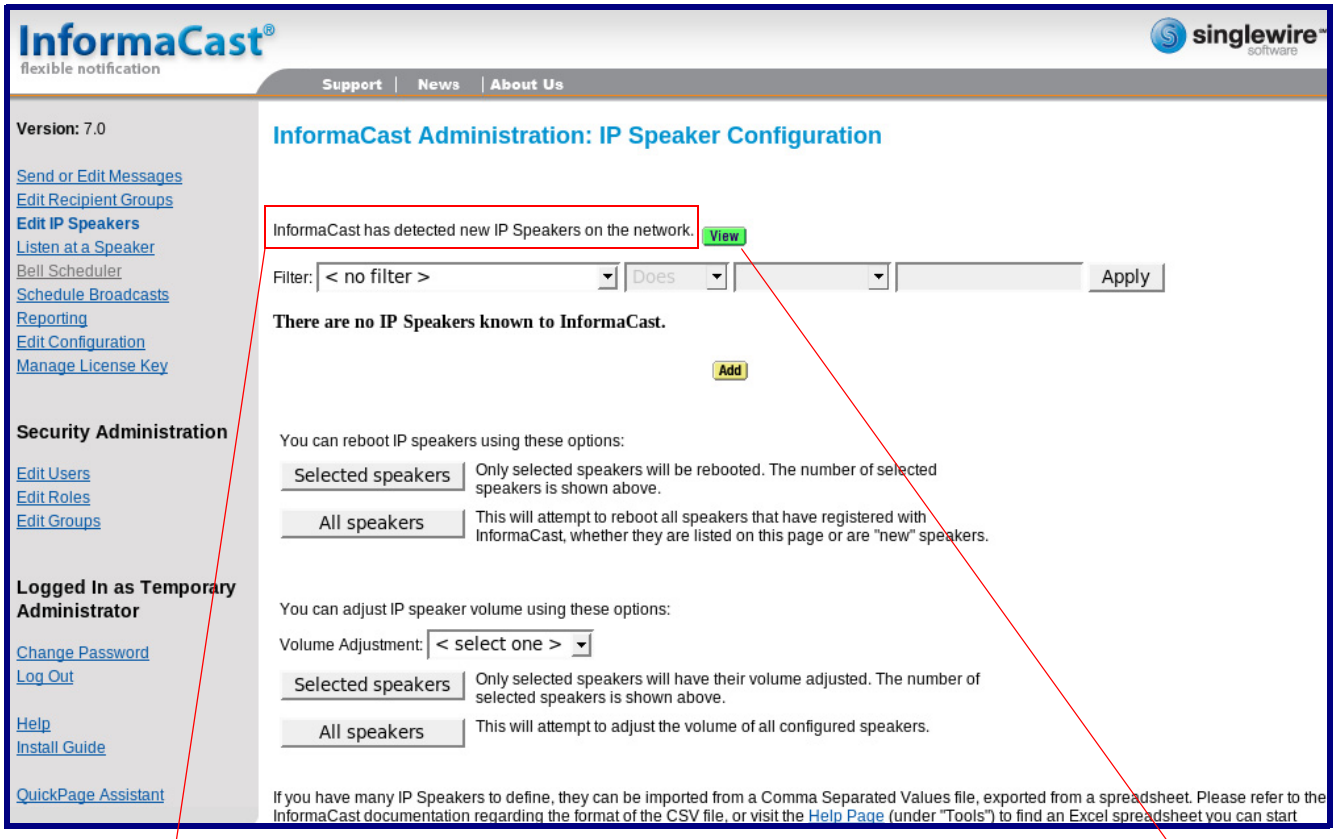
To add the Singlewire-enabled Speaker to the InformaCast server:

1. Click **Edit IP Speakers** on the **Main Screen** of the **Singlewire Informacast Server Web Interface**.

Figure 2-19. Main Screen of the Singlewire InformaCast Server Web Interface

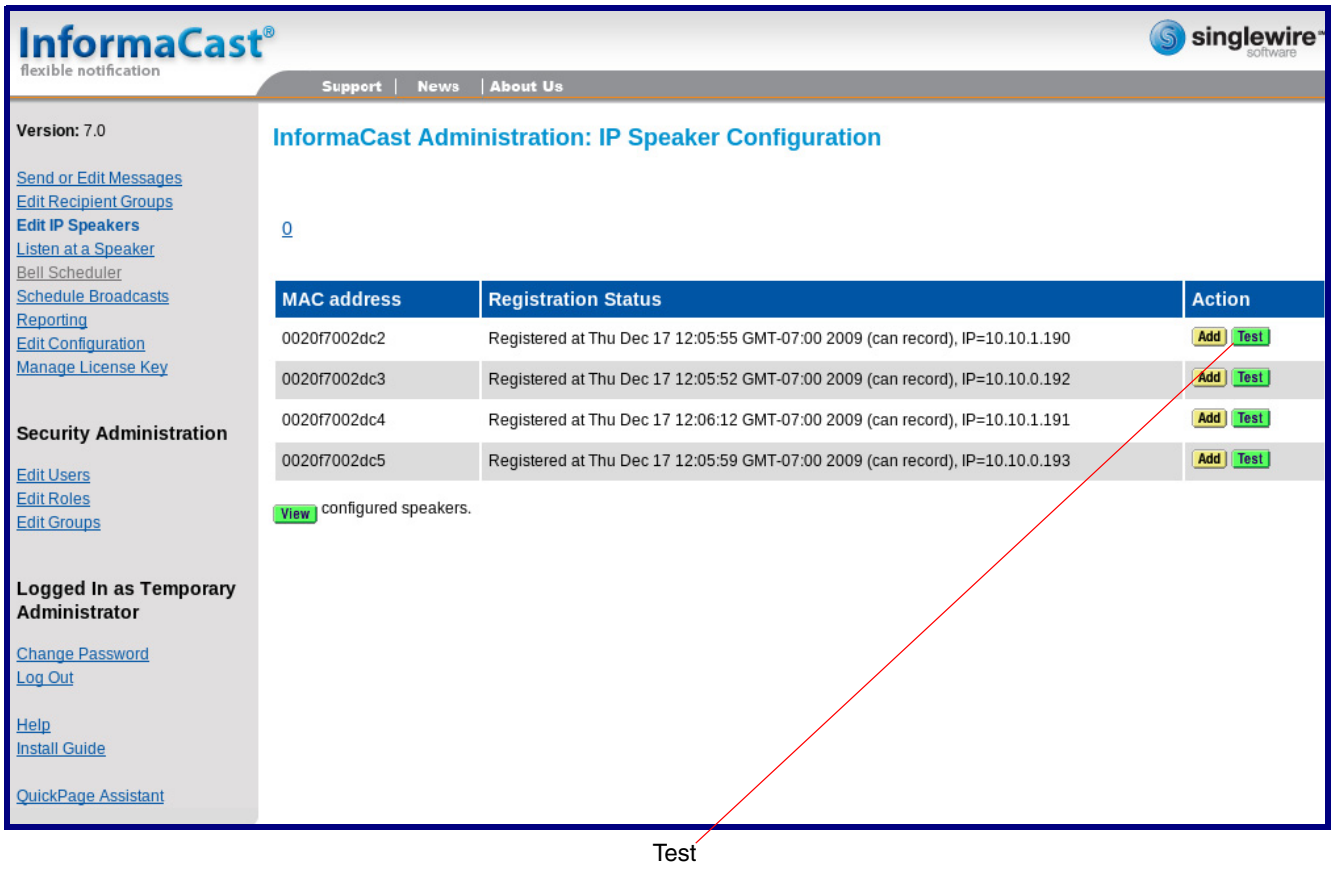
2. On the **IP Speaker Configuration** page, InformaCast will indicate that it has detected new speakers. Click **View**.

Figure 2-20. IP Speaker Configuration Page



3. The **IP Speaker Configuration** page will show four newly detected speakers. Click **Test**.

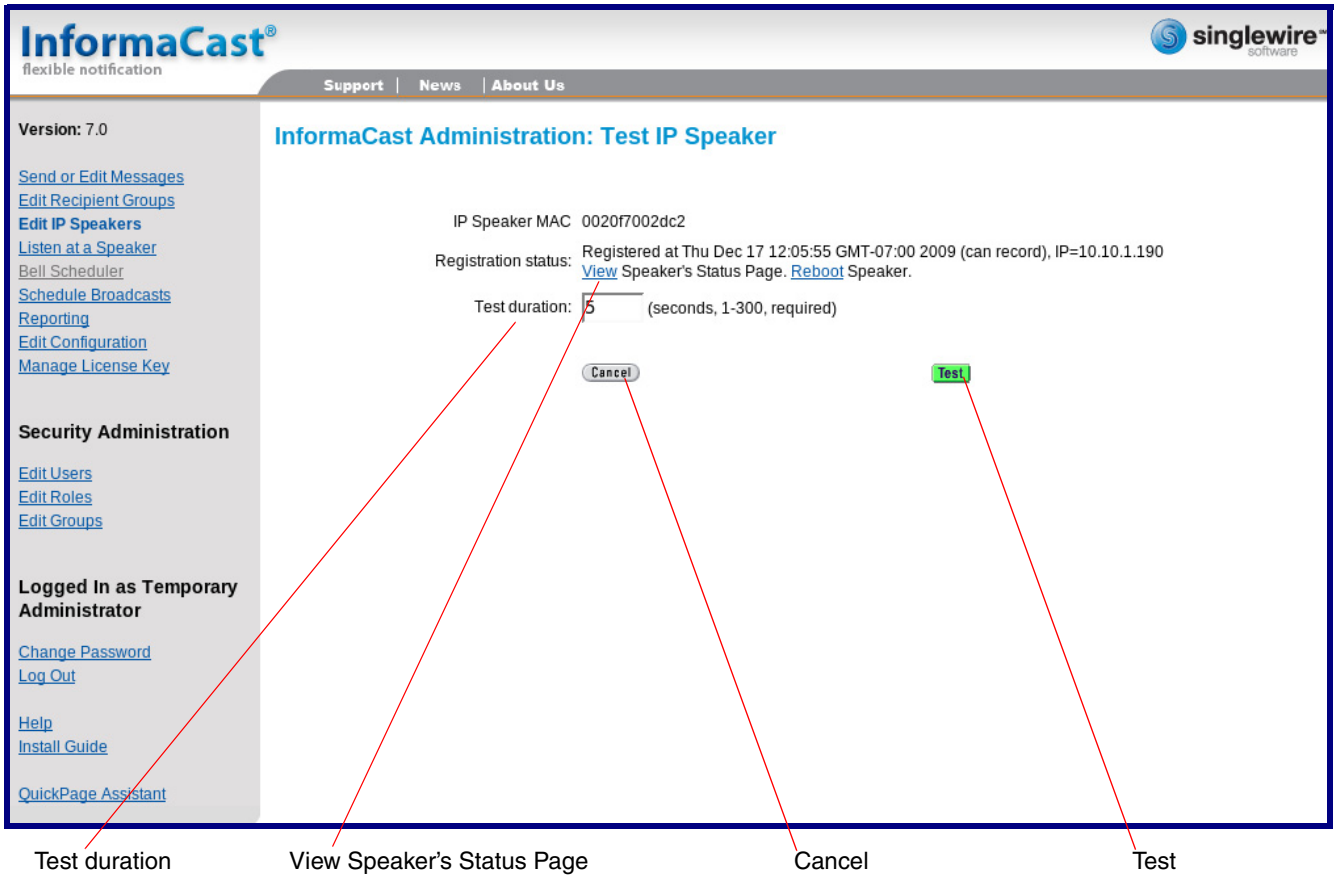
Figure 2-21. IP Speaker Configuration Page



4. On the **Test IP Speaker** page, Enter a number into the **Test duration** field.
5. Click **Test**.
6. You will hear a tone from the speaker being testing.

7. After the test, click **Cancel** to return to the **IP Configuration** page.

Figure 2-22. Test IP Speaker Page



Note When viewing the speaker's status page via Informacast, Informacast links to the wrong port and path.

Informacast expects our speaker's status page to be at:

http://<ipaddr>:10004/status.

The status page is actually at:

http://<ipaddr>/ (port 80)

Therefore, if a user clicks the link to view the status page and is directed to:

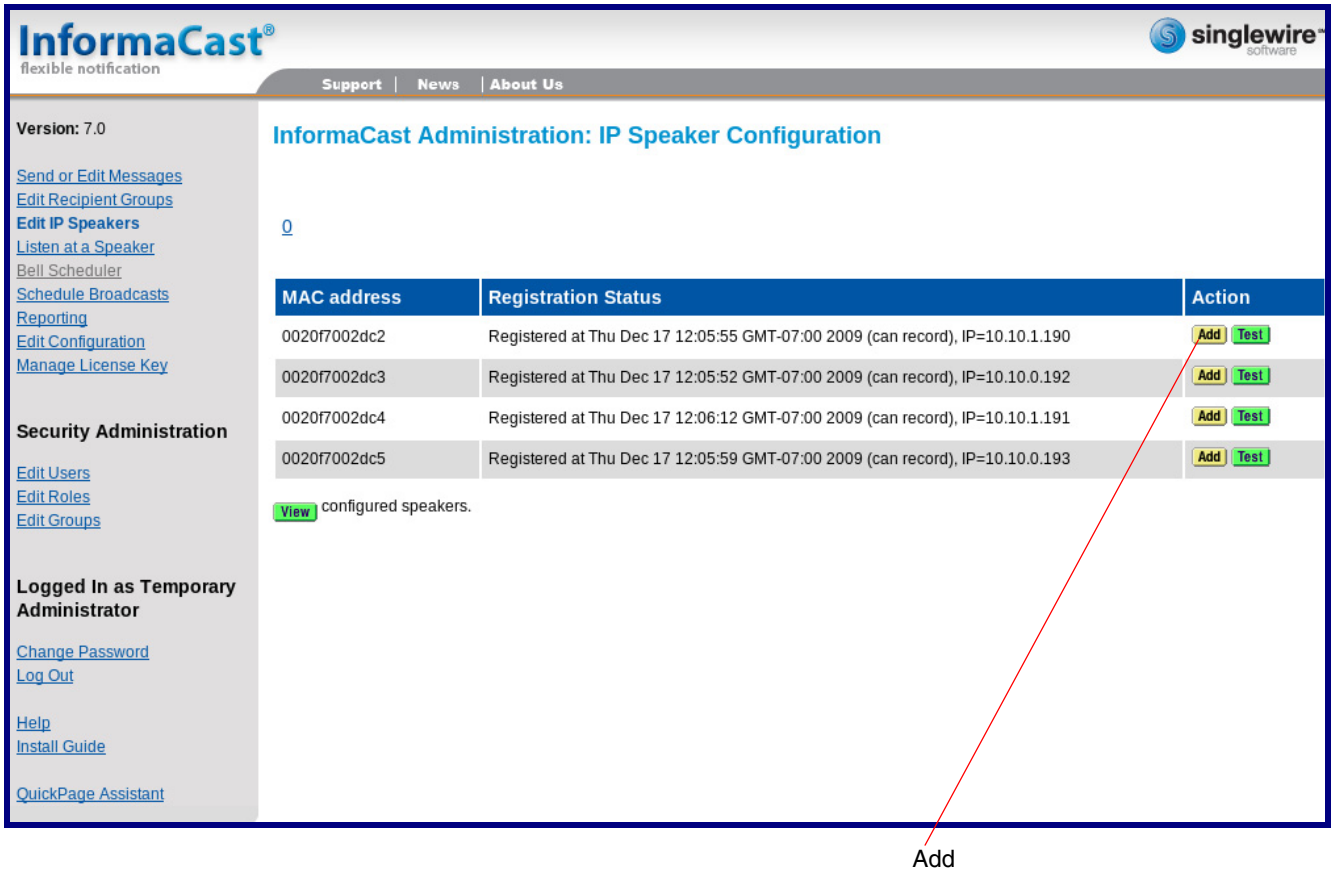
http://10.10.10.10:1004/status

The user will need to edit the url in the address bar to:

http://10.10.10.10/

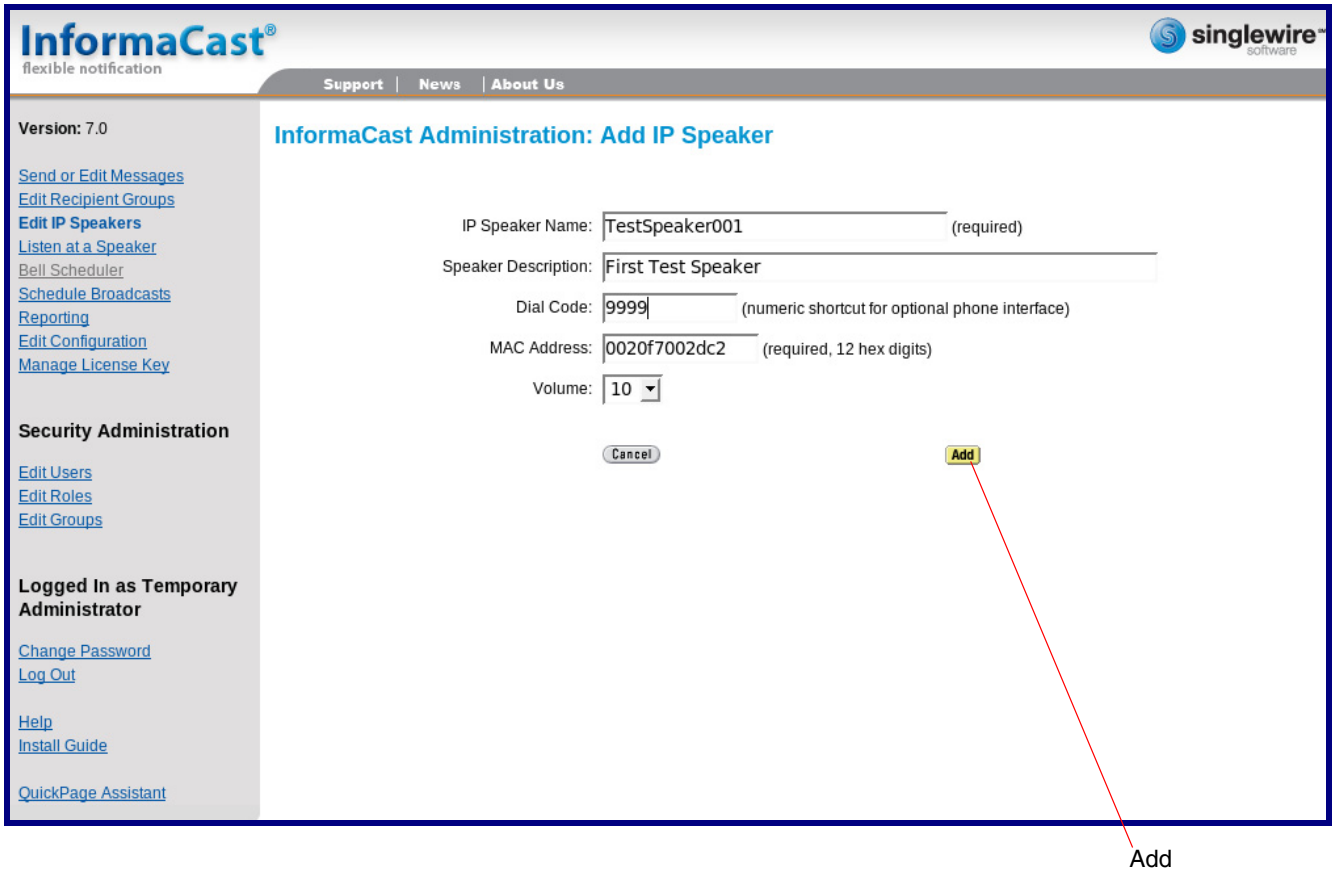
8. On the **IP Speaker Configuration** page, Click **Add** to add a speaker to the InformaCast server.

Figure 2-23. IP Configuration Page



9. On the **Add IP Speaker** page, Fill out appropriate fields and click **Add**.

Figure 2-24. Add IP Speaker Page



Your speaker is now registered to the InformaCast server. You now can configure this device as part of the InformaCast system setup as required.

Appendix A: Mounting the Speaker

A.1 Mount the Speaker

Before you mount the speaker, make sure that you have received all the parts for each speaker. Refer to Table A-1 and Table A-2.

Table A-1. Drop Ceiling Mounting Components (Part of the Accessory Kit)

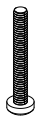
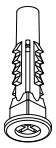
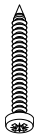
Quantity	Part Name	Illustration
3	#8 Nylon Thumb Nuts	
3	#8 Fender Washers	
3	8-32 x 1 1/4" Mounting Screws	

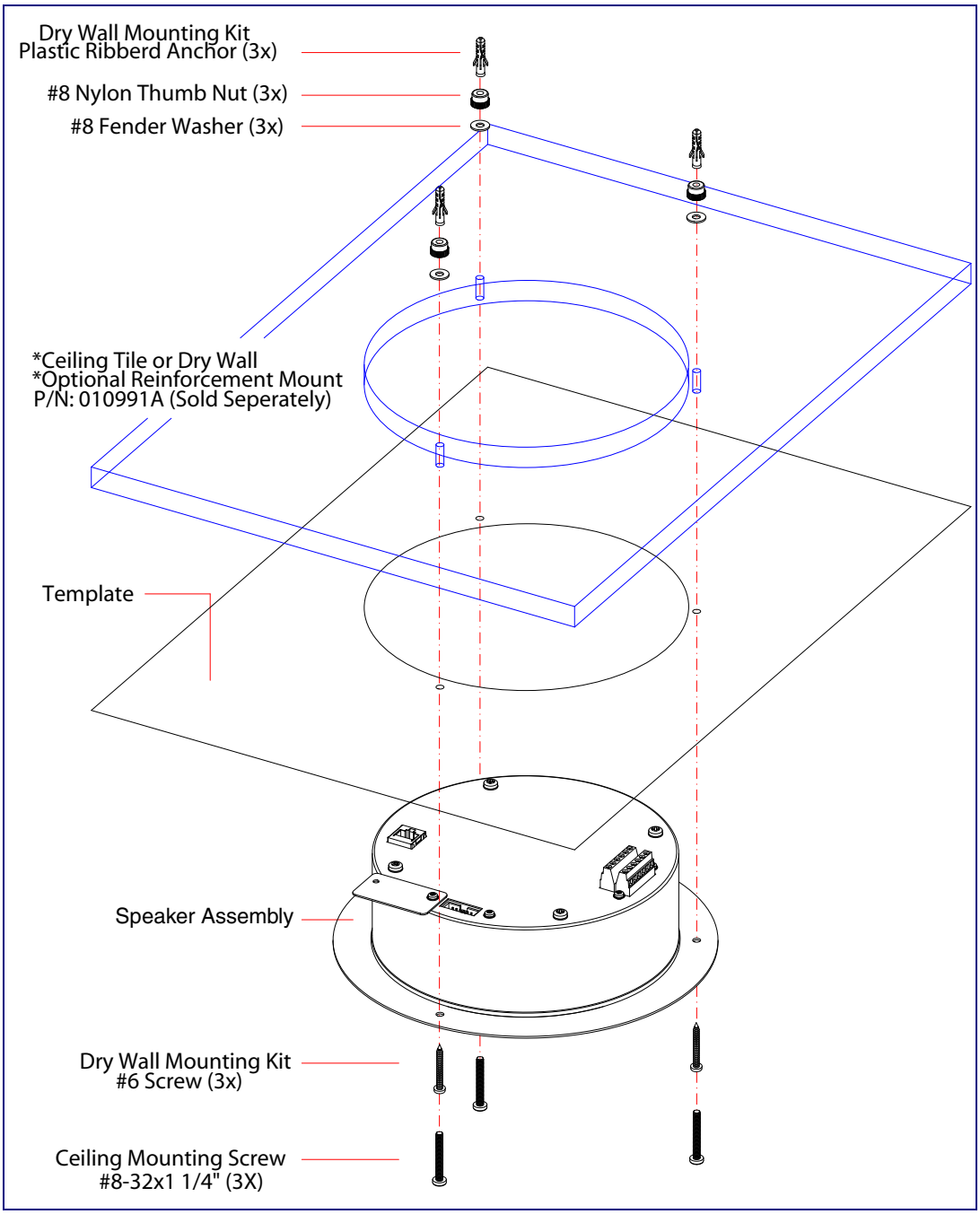
Table A-2. Drywall Mounting Components (Part of the Accessory Kit)

Quantity	Part Name	Illustration
3	Plastic Ribbed Anchors	
3	#8 Sheet Metal Screws	

To mount the speaker:

1. Use the **TEMPLATE** to cut the speaker hole and prepare holes for the screws (Figure A-1). This template is located on the back page of the *Installation Quick Reference Guide* that is delivered with each speaker.

Figure A-1. VoIP Speaker Assembly



2. Plug the Ethernet cable into the Speaker Assembly. Section 2.2.3, "Confirm that the Speaker is Operational and Linked to the Network" explains how the **Link** and **Status** LEDs work.

3. At this point:
   - For *drop ceiling mounting*, position the **VoIP SPEAKER ASSEMBLY** in the ceiling so that its screw holes align with those you prepared.
   - For *drywall mounting*, place the three **PLASTIC RIBBED ANCHORS** in the holes you prepared, and position the **VoIP SPEAKER ASSEMBLY** over them, aligning the screw holes in the assembly with the anchors.

4. To fasten the speaker:
   - For *drop ceiling mounting*, use the three **8-32 x 1 1/4" MOUNTING SCREWS**, **#8 NYLON THUMB NUTS**, and **#8 FENDER WASHERS** to secure the speaker.

Note For weak ceiling tile, CyberData offers a reinforcing mount (CyberData part number 010991A).

   - For *drywall mounting*, use the three **#8 SHEET METAL SCREWS** to secure the speaker.

Appendix B: Setting up a TFTP Server

B.1 Set up a TFTP Server

Upgrading the firmware requires a TFTP server on which you access the Web interface where you can upload the firmware files.

B.1.1 In a LINUX Environment

To set up a TFTP server on LINUX:

1. Create a directory dedicated to the TFTP server, and move the files to be uploaded to that directory.
2. Run the following command where `/tftpboot/` is the path to the directory you created in Step 1: the directory that contains the files to be uploaded. For example:

   ```
   in.tftpd -l -s /tftpboot/your_directory_name
   ```

B.1.2 In a Windows Environment

You can find several options online for setting up a Windows TFTP server. This example explains how to use the Solarwinds freeware TFTP server, which you can download at:

http://www.cyberdata.net/support/voip/solarwinds.html

To set up a TFTP server on Windows:

1. Install and start the software.
2. Select **File**/**Configure**/**Security** tab/**Transmit Only**.
3. Make a note of the default directory name, and then move the firmware files to be uploaded to that directory.

Appendix C: Troubleshooting/Technical Support

C.1 Frequently Asked Questions (FAQ)

To see a list of frequently asked questions, go to the following URL:

http://www.cyberdata.net/products/voip/digitalanalog/singlewirespeaker/faqs.html

C.2 Documentation

The documentation for this product is released in an English language version only. You can download PDF copies of CyberData product documentation by going to the following URL:

http://www.cyberdata.net/products/voip/digitalanalog/singlewirespeaker/docs.html

C.3 Contact Information

Contact

CyberData Corporation
3 Justin Court
Monterey, CA 93940 USA
www.CyberData.net
Phone: 800-CYBERDATA (800-292-3732)
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:

http://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, Ext. 333
Email: support@cyberdata.net

Returned Materials Authorization

To return the product, contact the Returned Materials Authorization (RMA) department:

Phone: 831-373-2601, Extension 136
Email: RMA@CyberData.net

When returning a product to CyberData, an approved CyberData RMA number must be printed on the outside of the original shipping package. Also, RMA numbers require an active VoIP Technical Support ticket number. A product will not be accepted for return without an approved RMA number. Send the product, in its original package, to the following address:

CyberData Corporation
3 Justin Court
Monterey, CA 93940
Attention: RMA "your RMA number"

RMA Status Form

If you need to inquire about the repair status of your product(s), please use the CyberData RMA Status form at the following web address:

http://support.cyberdata.net/

C.4 Warranty and RMA Information

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

http://support.cyberdata.net/

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