



# wahsega

## Carina Wall Mount IP Speaker

### *User's Guide*



### **Getting Started**

This step-by-step guide will help you setup and install your Wahsega Carina Wall Mount IP Speaker.

### **Important Notice**

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The Wahsega product line offers the highest quality two-way audio and durability in the industry today. Each and every Wahsega product is designed, developed and manufactured in the USA, ensuring a superior product at the best price available in the market.

## Carina Wall Mount IP Speaker Functionality

The initial functions of Wahsega's Carina Wall Mount IP Speaker include:

### Centralized Event Manager configuration

- Event Manager auto-detects each Carina IP Speaker on the network
- All configuration options accessible via Carina Event Manager's centralized HTTP Web interface
- Bulk configuration options available for quick and easy setup
- Mic and speaker volume control within configuration webpages
- Remote firmware upgradeable
- Able to receive live or pre-recorded audio from Event Manager
- Can play scheduled bell and event alerts from Event Manager

### SIP intercom

- IP paging speaker
- Crystal clear audio
  - Multiple mono audio codecs to choose from
  - Environmental noise suppression
- Extensive interoperability with most SIP servers and PBXs
- Peer-to-peer (P2P) mode available for decentralized communication

### Simple installation

- Power-over-Ethernet (PoE 802.3af) powered
- Simple surface-mount installation with included wall bracket

**Indoor temperature range (-40°C to +60°C)**

**Industry-leading standby power of < 2W**

## Primary inputs

- Built-in microphone
  - Available push-button override for sound reinforcement
- Two onboard relays for door lock control

## Secondary inputs

- Second RJ45 connector for easy installation and expansion
- Able to drive second, auxiliary Wahsega speaker (WL-SPKR-22-A, WL-SPKR-SMT-A, WL-SPKR-22-2R or WL-SPKR-SMT-2R) up to 20m away via Cat5e or Cat6 cable
- Compatible with standard call buttons
  - Advanced call button functionality, designed to reduce false alarm triggers (short press vs. long press)
- Classroom sound reinforcement via optional audio input wallplate
  - Audio input
  - Volume control
  - Activation button
  - LED indicator
  - Line-in microphone

## Quality Standards

- Wahsega products achieve the highest standards of performance in the market by utilizing our complete quality assurance program encompassing software testing, product design and a multistage automated factory test program.
- Wahsega’s ultimate goal is to provide a solution that is both cost effective and unsurpassed in quality. By leveraging existing relationships with suppliers to guarantee premium components at the lowest possible prices, we are able to ensure Wahsega products are the finest quality in the market while still offered at highly competitive prices directly to installers.
- In order to achieve the greatest possible voice clarity, all voice and related algorithms have been individually tested to ensure the highest potential MOS score. The accumulated error syndrome, which can cause poor voice quality, is mitigated through this testing process.
- Wahsega’s engineering team utilizes a wide array of dedicated test servers to pull and build the various software projects multiple times per day. Each automatic build is then run through an extensive set of automated test cases to ensure the highest performance of each and every firmware version released. This test case coverage is expanded on a continual basis.
- All Wahsega products are 100% factory tested at the board level through a bed of nails full functional test, not just an “is it close enough?” flying probe test. Every finished product is 100% tested again after the final assembly via an automated test station to ensure the highest production quality product for installers.
- To assure the highest quality standards, all Wahsega products are designed, developed and manufactured in the USA.

The Carina Wall Mount IP Speaker receives and plays audio broadcasts from the Carina Event Manager via multicast and can also place and answer two-way SIP calls using an IP PBX such as Wahsega's Paging Intercom Server (PICS).

The Carina Wall Mount IP Speaker works with standard call buttons or the Wahsega Call Button. Advanced functionality can reduce the number of false alarms from that call button, as a brief button press places a SIP call to one preconfigured number—such as the front office—while a longer press-and-hold will call a second preconfigured number, such as a security desk.

An optional room sound reinforcement panel allows users to play audio from a local source such as a computer or smartphone. Incoming broadcasts and calls mute the local audio, making sure users never miss an alert or announcement.

The Carina Wall Mount IP Speaker also has the ability to drive a second, independent and lower-cost Wahsega speaker up to 20 meters away via Cat5e or Cat6 cable. For larger classrooms where a second speaker is needed, the Wahsega Extension Speaker (WL-SPKR-xx-A) can be used to increase audio coverage without the need for a second PoE homerun. Alternately, the Carina Wall Mount IP Speaker can be used in conjunction with the Wahsega Second Room Speaker (WL-SPKR-xx-2R) for independent control of two separate rooms, using only one PoE port and cable homerun.

The Carina Event Manager automatically discovers and registers the Carina Wall Mount IP Speaker at startup, and all programming and configuration can be handled individually or in bulk through the Carina Event Manager dashboard. This greatly simplifies the installation process and makes it easy to manage the system once installed.

## Software Capabilities

Wahsega's Carina IP Speaker is configured centrally at the Carina Event Manager, which allows bulk configuration as well as individual customization. This allows access to various settings such as network/IP address, SIP account and Event Manager configuration, intercom/speaker and display behavior, panic button call numbers, and administrative functions such as firmware upgrade and configuration backup/restore. The configuration is stored in a .JSON file, which is human readable and can be edited by site administrators.

The Carina IP Speaker configuration is also accessible using an HTTP Web interface, viewable from any Web browser on the same LAN. However, all Carina devices should be configured within the Carina Event Manager's configuration webpages whenever possible. Any configuration changes to the IP Display's individual webpages will be overwritten by the Event Manager.

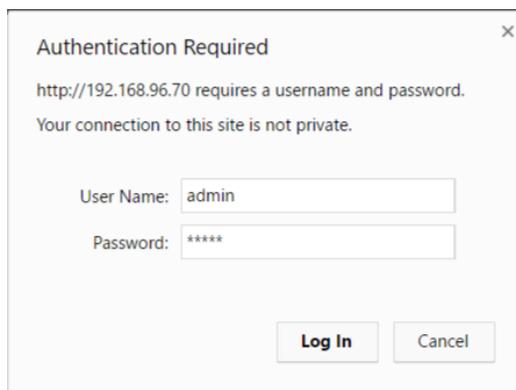
## Getting Started

1. All Carina devices should be configured within the Carina Event Manager's configuration webpages. While it is possible to make changes at the device's own webpages, any configuration changes to the device's webpages will be **overwritten** by the Event Manager.
2. Locate and note your Wall Mount IP Speaker's MAC address. It is printed on a white sticker located on the rear of the device.
3. Connect the Wall Mount IP Speaker's main Ethernet port—labeled *LAN*—to a network using a Power-over-Ethernet (PoE) Ethernet connection. When connected, it will power on immediately, and the *LINK/ACTV* status LED will begin to blink.
4. Your Carina Event Manager will automatically detect the Wall Mount IP Speaker when you power up and connect to the network via PoE.
5. On the Event Manager's Web interface, navigate to the Devices page to discover your Wall Mount IP Speaker's IP address. Look for the device matching the MAC address you just noted.
6. Following the instructions in the next sections, change Event Manager settings for your Wall Mount IP Speaker as needed.
7. To apply changes and settings to your Wall Mount IP Speaker, ***save changes*** and ***reprovision*** your speaker. This is an important step! ***Your changes in Event Manager will not take effect until you have reprovisioned the endpoint.***

## Endpoint Configuration Without Carina Event Manager

If needed, individual endpoint configuration is available via the Wall Mount IP Speaker's individual webpages. **However, if users choose to make configuration changes in the speaker's webpages, those changes will not be recognized by the Event Manager and will be overwritten by any configuration changes made to the endpoint in the Event Manager.** For best results, all configuration changes should be made at the Event Manager and not at the speaker's individual configuration webpage.

1. To access an individual speaker's webpages, navigate to its IP address in your Web browser (for example, <http://123.456.78.9>). Wahsega recommends using Chrome or Firefox for best results.
2. When you access the configuration webpages, the speaker will ask for a username and password. The default username and password are *admin* and *admin*.



Authentication Required

http://192.168.96.70 requires a username and password.  
Your connection to this site is not private.

User Name:

Password:

3. On the left side of the page is the Status bar. It shows the speaker's current *System* information such IP address, MAC address, system time and uptime. The speaker's SIP account status (default status is *unconfigured* and *unregistered*) is listed under *Accounts*.

4. To change the IP address settings, go to the *Network* page and modify settings in the *WAN* section. To set the network for DHCP, click the *Dynamic IP* radio button. For static IP addressing, click the *Static IP* radio button and fill in the relevant IP address fields with values from your network administrator.
5. Set time and date and change username or password on the *System* page. Please note that the Carina Event Manager may be used as a system NTP server for consistent date and time across the network. Simply enter *carina.wahsega.local* as the NTP server and make sure that NTP is enabled for this endpoint.
6. To change the SIP account settings, go to the *Accounts* page and modify settings in the account. Most users will only need to set *Username/Number* (the phone number or extension assigned to this speaker), *Domain* (the hostname or IP address of your SIP server) and *Password* (password for this SIP extension, if needed). You may also provide a *Display Name*, which may be used by your SIP server depending on its configuration.

If your SIP server or proxy server requires an authentication username that is different from the name entered in *Username/Number*, enter it under the *Authentication Username* field.

7. Load new firmware, backup configuration, or restore a configuration file on the *Management* page.

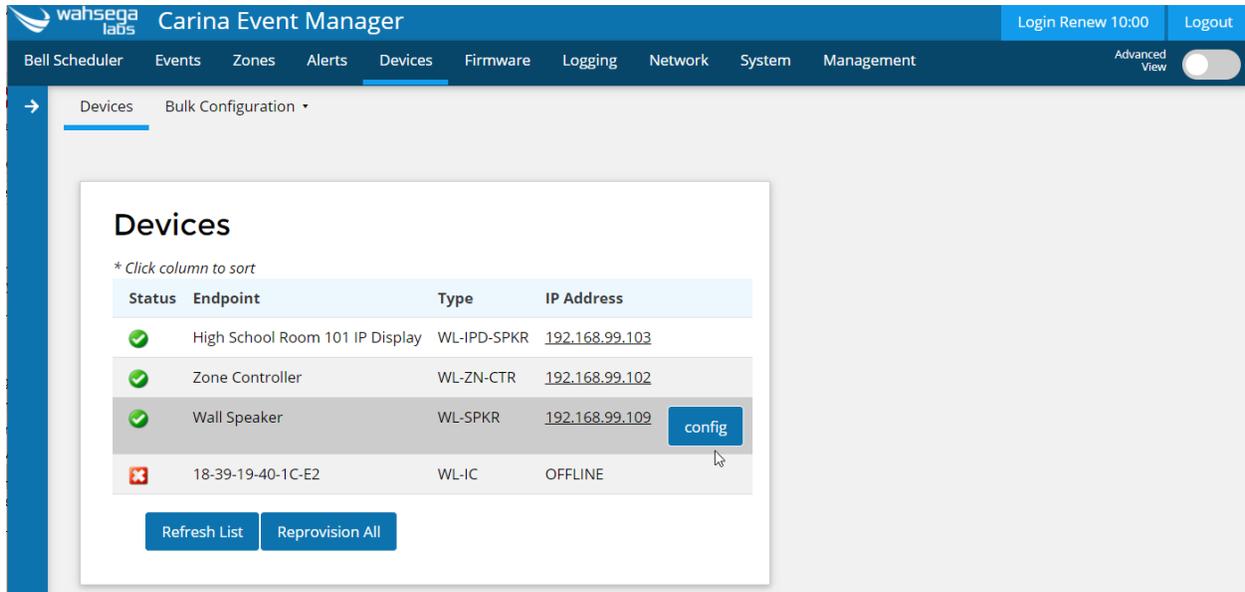
## Chapter 3

# Configuration in Event Manager

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The Carina Wall Mount IP Speaker should be configured within the Carina Event Manager's configuration webpages. Event Manager automatically detects each Carina IP Speaker on the same network, and it provides bulk or individual configuration options. Wahsega recommends using a Chrome or Firefox browser for best results.

# Individual Device Configuration



Carina Event Manager

Login Renew 10:00 Logout

Bell Scheduler Events Zones Alerts Devices Firmware Logging Network System Management

Advanced View

Devices Bulk Configuration

### Devices

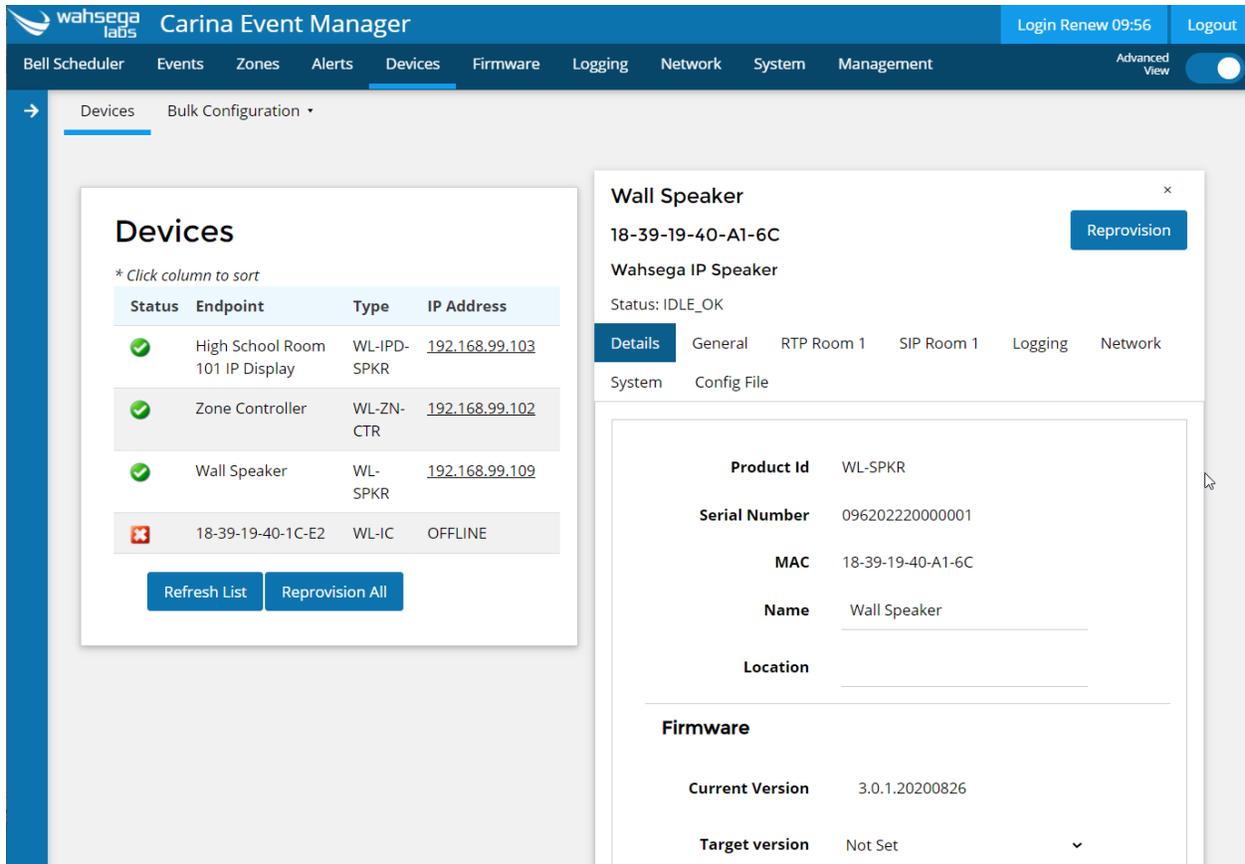
\* Click column to sort

| Status | Endpoint                        | Type        | IP Address  |
|--------|---------------------------------|-------------|---|
| ✓      | High School Room 101 IP Display | WL-IPD-SPKR | <a href="#">192.168.99.103</a>                        |
| ✓      | Zone Controller                 | WL-ZN-CTR   | <a href="#">192.168.99.102</a>                        |
| ✓      | Wall Speaker                    | WL-SPKR     | <a href="#">192.168.99.109</a> <a href="#">config</a> |
| ✗      | 18-39-19-40-1C-E2               | WL-IC       | OFFLINE   |

Refresh List Reprovision All

Navigate to the *Devices* page on your Event Manager and click the button next to the device you'd like to configure.





The screenshot shows the 'Carina Event Manager' interface. The top navigation bar includes 'wahsega labs', 'Carina Event Manager', 'Login Renew 09:56', and 'Logout'. Below this is a menu with 'Bell Scheduler', 'Events', 'Zones', 'Alerts', 'Devices', 'Firmware', 'Logging', 'Network', 'System', and 'Management'. The 'Devices' section is active, showing a 'Bulk Configuration' dropdown. A 'Devices' table lists several items, with one 'Wall Speaker' selected. A modal window titled 'Wall Speaker' displays details for the selected device, including its ID, serial number, MAC address, name, location, and firmware version.

| Status | Endpoint                           | Type            | IP Address                     |
|--------|------------------------------------|-----------------|--------------------------------|
| ✓      | High School Room<br>101 IP Display | WL-IPD-<br>SPKR | <a href="#">192.168.99.103</a> |
| ✓      | Zone Controller                    | WL-ZN-<br>CTR   | <a href="#">192.168.99.102</a> |
| ✓      | Wall Speaker                       | WL-<br>SPKR     | <a href="#">192.168.99.109</a> |
| ✗      | 18-39-19-40-1C-E2                  | WL-IC           | OFFLINE                        |

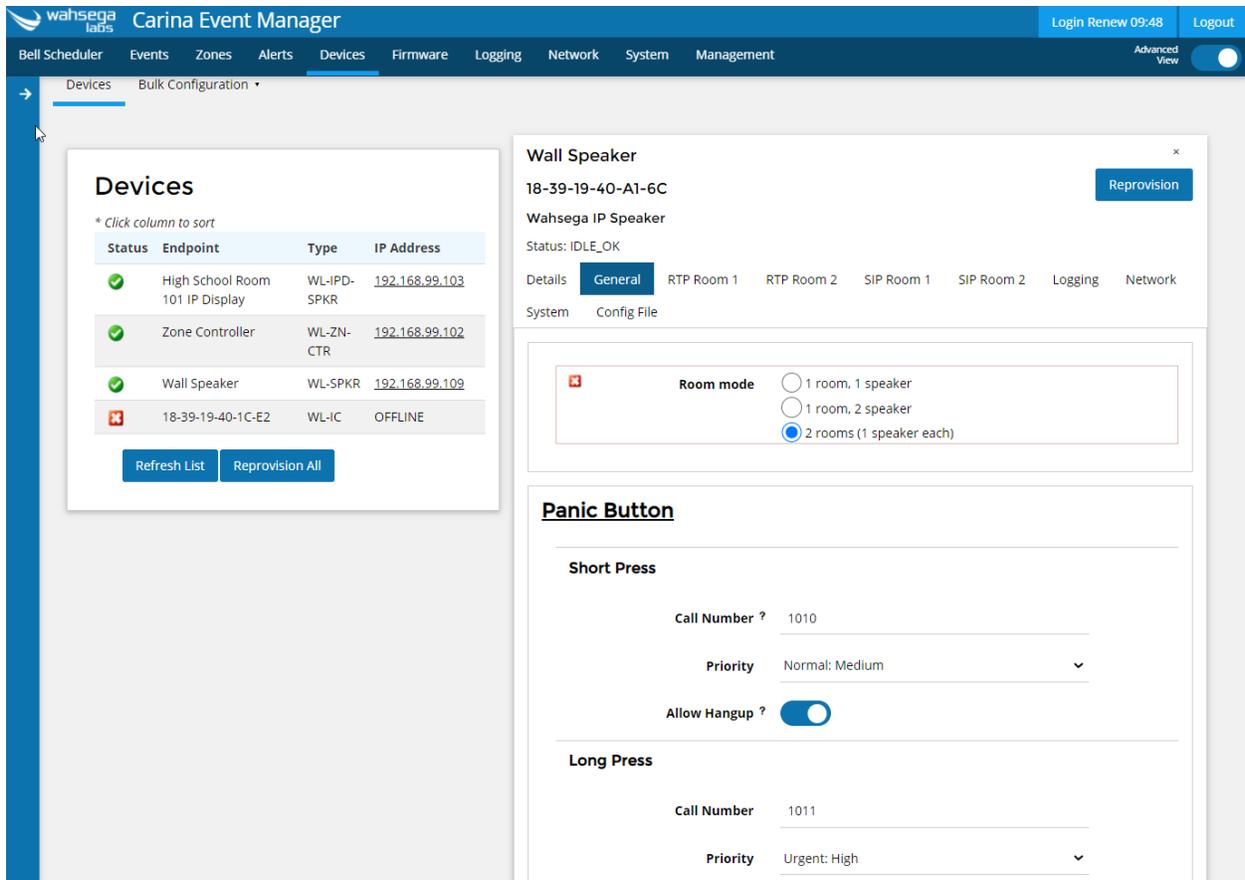
**Wall Speaker**  
 18-39-19-40-A1-6C  
 Wahsega IP Speaker  
 Status: IDLE\_OK  
 Reprovision

**Details** | General | RTP Room 1 | SIP Room 1 | Logging | Network  
 System | Config File

**Product Id** WL-SPKR  
**Serial Number** 096202220000001  
**MAC** 18-39-19-40-A1-6C  
**Name** Wall Speaker  
**Location**  
**Firmware**  
**Current Version** 3.0.1.20200826  
**Target version** Not Set

## Details

- **Name** – Give this IP Speaker a unique name for your reference.
- **Location** – Physical location of speaker, for user reference.
- **Firmware**
  - **Current Version** – Firmware version this speaker is currently running
  - **Target Version** – Firmware version this speaker should be running currently or upon next reprovisioning cycle. Target version “Not Set” will keep this device at Current Version upon reprovisioning.



The screenshot shows the 'Carina Event Manager' interface. On the left, a 'Devices' table lists various components:

| Status | Endpoint                           | Type            | IP Address     |
|--------|------------------------------------|-----------------|----------------|
| ✓      | High School Room<br>101 IP Display | WL-IPD-<br>SPKR | 192.168.99.103 |
| ✓      | Zone Controller                    | WL-ZN-<br>CTR   | 192.168.99.102 |
| ✓      | Wall Speaker                       | WL-SPKR         | 192.168.99.109 |
| ✗      | 18-39-19-40-1C-E2                  | WL-IC           | OFFLINE        |

The main configuration panel for the 'Wall Speaker' (ID: 18-39-19-40-A1-6C) is shown on the right. It includes a 'Reprovision' button and tabs for 'General', 'RTP Room 1', 'RTP Room 2', 'SIP Room 1', 'SIP Room 2', 'Logging', and 'Network'. The 'Room mode' section has three radio button options: '1 room, 1 speaker', '1 room, 2 speaker', and '2 rooms (1 speaker each)', with the last option selected. Below this is the 'Panic Button' configuration, which is divided into 'Short Press' and 'Long Press' sections. The 'Short Press' section has a 'Call Number' of 1010, a 'Priority' of 'Normal: Medium', and an 'Allow Hangup' toggle that is turned on. The 'Long Press' section has a 'Call Number' of 1011 and a 'Priority' of 'Urgent: High'.

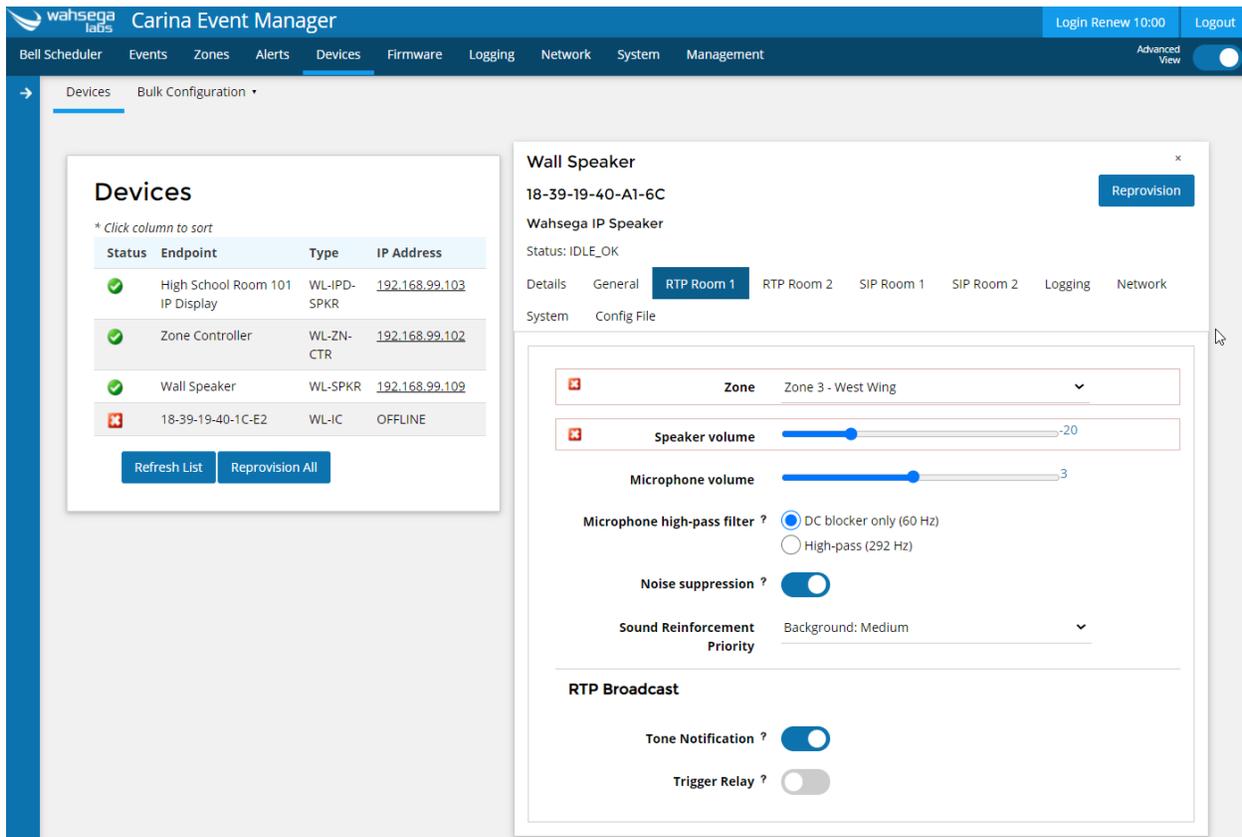
## General

- **Room Mode**

- **1 room, 1 speaker** – Single IP speaker, no Extension speaker
- **1 room, 2 speaker** – IP speaker with connected Extension Speaker (WL-SPKR-xx-A) for additional audio coverage
- **2 rooms (1 speaker each)** – IP speaker with connected Second Room Speaker (WL-SPKR-xx-2R) for independent control of a second room. Room 1 and Room 2 are configured separately on their respective tabs.

- **Panic/Call Button**

- **Short-press** – Configure speaker behavior for the outbound SIP call when a connected call/panic button is pressed for *less than two (2) seconds*.
  - **Call Number** – The number or extension to call with a short button press.
  - **Priority** – Set priority level for this call.
  - **Allow Hangup?** – A button press during an active call or call attempt will hang up the call if allowed here. The call will continue until the remote party hangs up if not allowed.
- **Long Press** – Configure speaker behavior for the outbound SIP call when a connected call/panic button is pressed for *two (2) or MORE seconds*.
  - **Call Number** – The number or extension to call with a long button press.
  - **Priority** – Set priority level for this call.
  - A button press during an active call or call attempt will NEVER hang up a long press call. The call will continue until the remote party hangs up.



The screenshot shows the 'Carina Event Manager' web interface. On the left, a 'Devices' table lists several endpoints. The main panel displays the configuration for a 'Wall Speaker' (ID: 18-39-19-40-A1-6C). The configuration includes a dropdown for 'Zone' (set to 'Zone 3 - West Wing'), sliders for 'Speaker volume' (-20) and 'Microphone volume' (3), radio buttons for 'Microphone high-pass filter' (set to 'DC blocker only (60 Hz)'), a toggle for 'Noise suppression' (checked), a dropdown for 'Sound Reinforcement Priority' (set to 'Background: Medium'), and a section for 'RTP Broadcast' with toggles for 'Tone Notification' (checked) and 'Trigger Relay' (unchecked).

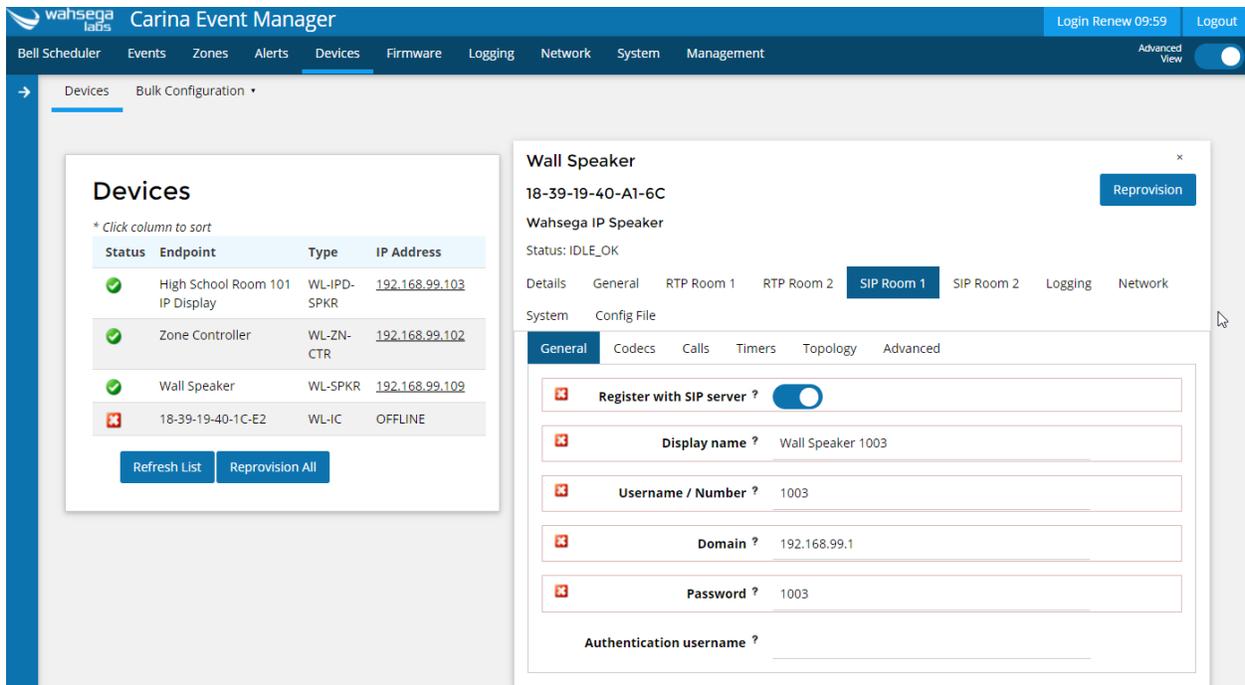
| Status | Endpoint                        | Type        | IP Address     |
|--------|---------------------------------|-------------|----------------|
| ✓      | High School Room 101 IP Display | WL-IPD-SPKR | 192.168.99.103 |
| ✓      | Zone Controller                 | WL-ZN-CTR   | 192.168.99.102 |
| ✓      | Wall Speaker                    | WL-SPKR     | 192.168.99.109 |
| ✗      | 18-39-19-40-1C-E2               | WL-IC       | OFFLINE        |

## RTP

Configure RTP multicast broadcast settings and audio for pages and announcements. If in Two Room Mode, settings for both Room 1 and Room 2 both need to be configured.

- **Zone** – Which preconfigured Event Manager Zone will this IP Speaker belong to? Each endpoint may belong to *one* Zone as well as the All-Call group.
- **Speaker Volume** – Volume level of speaker for incoming SIP calls and RTP multicast broadcasts.
- **Microphone Volume** – Volume level of the integrated microphone, used in SIP calls.

- **Microphone high-pass filter** – Eliminates low-frequency noise that can make speech difficult to understand during SIP calls.
  - **DC blocker only** eliminates hum from power lines, while leaving other low-frequency sounds intact.
  - **High-pass** mode eliminates most noise below standard telephone frequencies.
- **Noise suppression** – Eliminates background noise (such as a steady hum, people or noises in the background, or machinery) from the device's microphone during a SIP call. This only affects audio on the remote side of the call; the local side is unaffected.
- **Sound Reinforcement Priority** – The priority level of local audio from the Sound Reinforcement Panel, if connected and in use.
- **RTP Broadcast** – Settings specifically for incoming RTP multicast broadcasts
  - **Tone Notification** – When enabled, a tone is played before the RTP broadcast begins.
  - **Trigger Relay** – When enabled, the IP Speaker's onboard relay will be triggered for the duration of the RTP broadcast.



The screenshot shows the 'Carina Event Manager' interface. On the left, a 'Devices' table lists various endpoints. On the right, a configuration window for a 'Wall Speaker' (ID: 18-39-19-40-A1-6C) is open, showing the 'SIP Room 1' configuration tab. The configuration includes a toggle for 'Register with SIP server', and input fields for 'Display name', 'Username / Number', 'Domain', and 'Password'.

| Status | Endpoint                        | Type        | IP Address     |
|--------|---------------------------------|-------------|----------------|
| ✓      | High School Room 101 IP Display | WL-IPD-SPKR | 192.168.99.103 |
| ✓      | Zone Controller                 | WL-ZN-CTR   | 192.168.99.102 |
| ✓      | Wall Speaker                    | WL-SPKR     | 192.168.99.109 |
| ✗      | 18-39-19-40-1C-E2               | WL-IC       | OFFLINE        |

**Wall Speaker Configuration (SIP Room 1):**

- Register with SIP server ?
- Display name ? Wall Speaker 1003
- Username / Number ? 1003
- Domain ? 192.168.99.1
- Password ? 1003
- Authentication username ?

## SIP

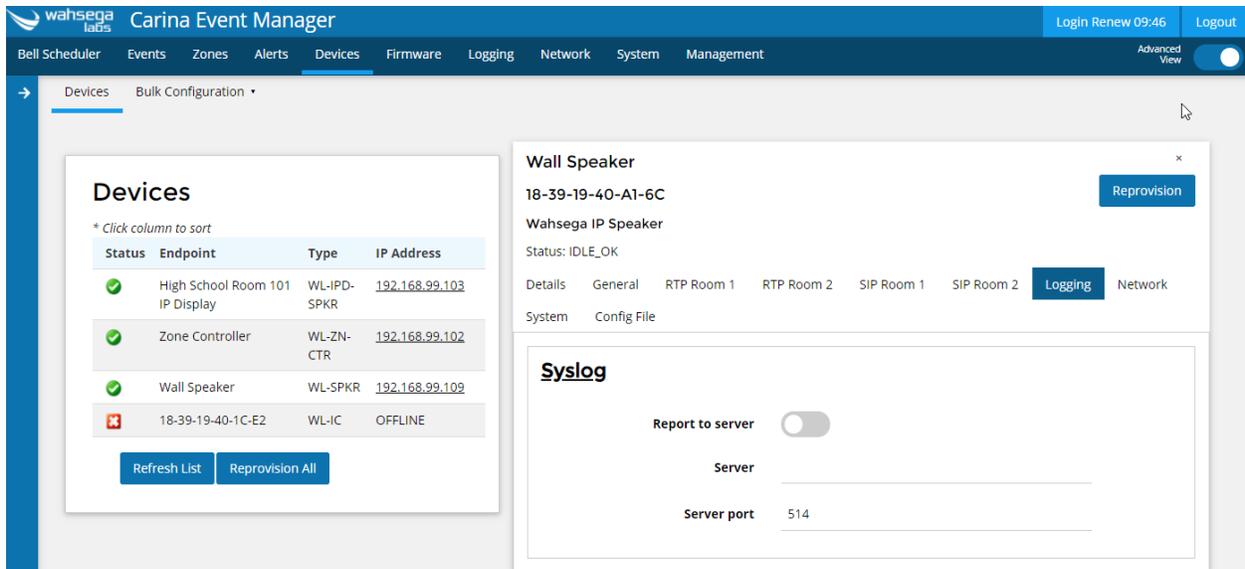
Configure registration and for two-way SIP calls. If in Two Room Mode, settings for both Room 1 and Room 2 both need to be configured.

### ▪ General

- **Register with SIP server** – Enable to register this speaker’s SIP extension with your SIP server.
- **Display name** – Name to be displayed as the caller ID.
- **Username/Number** – Username, phone number or extension of the SIP account.
- **Domain** – Domain of the account (e.g., IP address of your SIP server).
- **Password** – The password used to register this account with the SIP server, if needed.
- **Authentication username** – By default, authentication is done with the Username/Number above. Fill in the Authentication Username if a different username is needed.

- **Codecs** – The Codec List is shown in preferred order from top to bottom. This list may be rearranged by dragging and dropping the codecs within the list.
  - Available codecs are: G.722 HD, DVI4 HD, G.726 fixed payload, DVI4 Narrowband, G.711 uLaw, G,711 aLaw, G.729, OPUS.
- **Calls** – Configure display behavior for inbound and outbound calls.
  - **Relay control** – When enabled, the speaker’s onboard relay will be triggered for the duration of an active SIP call.
  - **Inbound** – Adjust settings for inbound calls.
    - **Allowed** – When inbound calls are set to “not allowed,” the calls will be rejected immediately.
    - **Priority** – Priorities determine which audio event will take precedence over other audio events. A higher priority event will take over a lower priority event. If two events of the same priority occur, they will be handled in the order received.
    - **Auto-Answer** – When Auto-Answer is not enabled, an inbound call will continue ringing until the Incoming Call Timeout occurs. Auto-answer is enabled by default when inbound calls are allowed.
    - **Tone Notification** – When enabled, a tone will be played out the speaker just before a call goes active.
  - **Outbound** – Adjust settings for outbound calls, if a call/panic button is connected to this speaker.
    - **Allowed** – When disabled, outbound calls by any means from this speaker are prevented.
- **Timers**
  - **Call Attempt Timeout** – An unanswered outbound call attempt will be automatically cancelled when this timer expires. Default is 180 seconds.

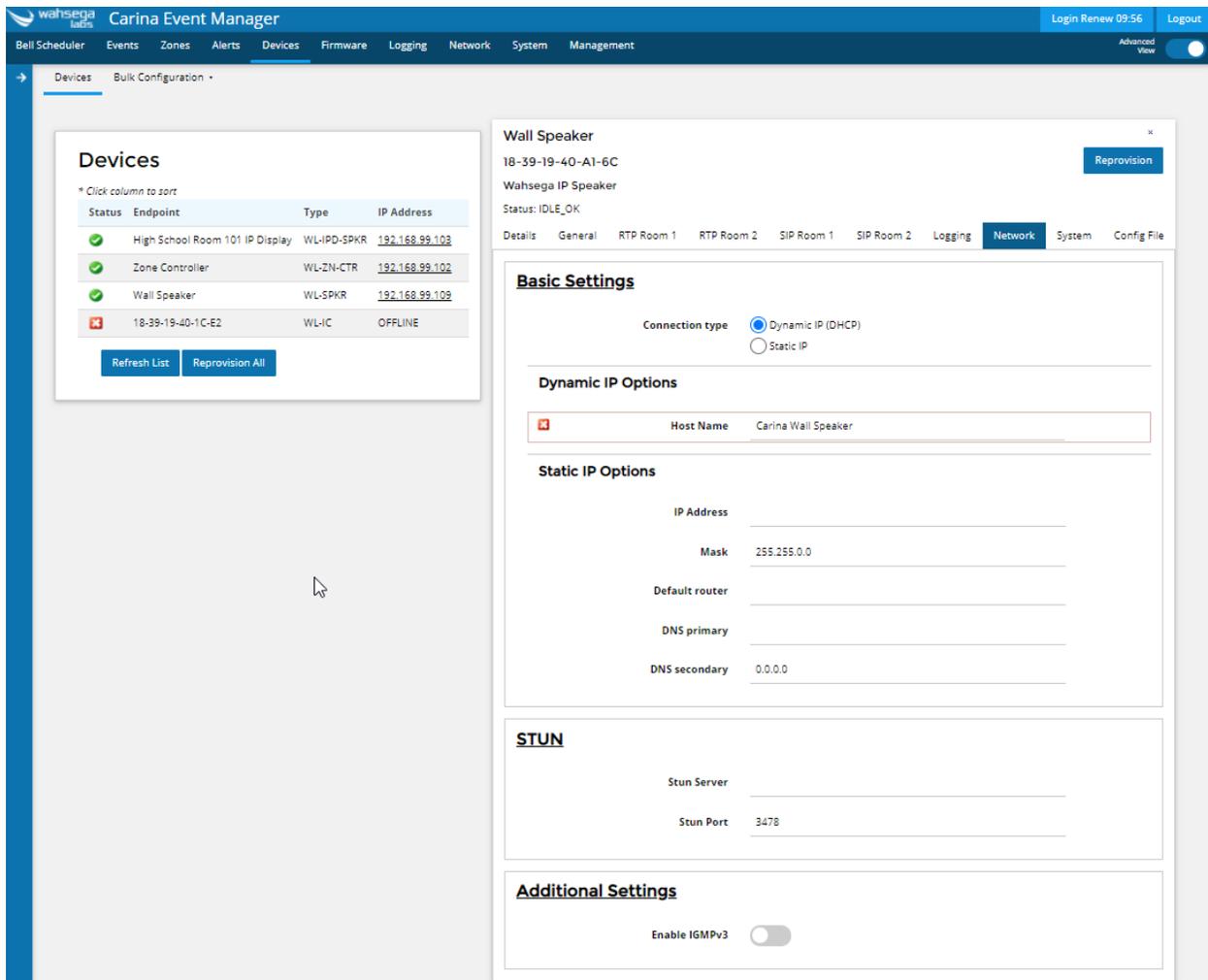
- **Incoming Call Timeout** – An unanswered inbound call attempt will be automatically cancelled when this timer expires.
- **Call Active Timeout** – An active call will be automatically terminated when this timer expires.
- **Topology**
  - **SIP transport mode** – Select mode to match your SIP server’s SIP transport mode.
  - **Secure RTP** – Disabled by default.
  - **Local Port** – Enter local port if needed.
  - **Use STUN** – When enabled, the SIP client will use the public IP address of this device when communicating with the SIP server instead of its private IP address. *Note: STUN must also be configured on the Network page if this is checked.*
- **Advanced**
  - **Proxy** – When set, all SIP traffic will be sent through the proxy server, no matter the Domain setting.
  - **Proxy port** – If set to 0, the default proxy port of 5060 will be assumed. Default value is 0.
  - **Registration lifetime** – Interval, in seconds, the SIP client will re-register with the SIP server. Default value is 3600.
  - **Keep-alive** – When enabled, the SIP client will periodically send a keep-alive message to the server. This is useful when connecting to a server across a NAT connection, or in keeping a TCP connection to the SIP server active.
  - **Silence suppression** – When enabled, RTP packets are not sent when silence is detected.



The screenshot shows the Carina Event Manager web interface. The top navigation bar includes 'wahsega iAPS', 'Carina Event Manager', 'Login Renew 09:46', and 'Logout'. Below the navigation bar are tabs for 'Bell Scheduler', 'Events', 'Zones', 'Alerts', 'Devices', 'Firmware', 'Logging', 'Network', 'System', and 'Management'. The 'Devices' tab is active, showing a 'Bulk Configuration' dropdown and a 'Devices' table. The table has columns for Status, Endpoint, Type, and IP Address. Below the table are 'Refresh List' and 'Reprovision All' buttons. A configuration window for a 'Wall Speaker' (ID: 18-39-19-40-A1-6C) is open, showing 'Wahsega IP Speaker' details, status 'IDLE\_OK', and various configuration tabs. The 'Logging' tab is selected, showing a 'Syslog' section with a 'Report to server' toggle (disabled), a 'Server' input field, and a 'Server port' field set to '514'.

## Logging

- **Syslog** – Syslog is a network protocol to enable system logging from a device to a network server. This may be used to aid in diagnosing the behavior of a device.
  - **Report to server** – Enable to begin logging to a network server. Default value: Disabled.
  - **Server address** – The IP address or URL of the syslog server.
  - **Server port** – The port (if needed) for the syslog server.



The screenshot shows the 'Carina Event Manager' interface. On the left, a 'Devices' table lists several devices. The main panel shows the configuration for a 'Wall Speaker' (ID: 18-39-19-40-A1-6C). The configuration is divided into sections: 'Basic Settings' (with 'Dynamic IP (DHCP)' selected), 'Dynamic IP Options' (with 'Host Name' set to 'Carina Wall Speaker'), 'Static IP Options' (with fields for IP Address, Mask, Default router, DNS primary, and DNS secondary), 'STUN' (with 'Stun Server' and 'Stun Port' fields), and 'Additional Settings' (with an 'Enable IGMPv3' toggle).

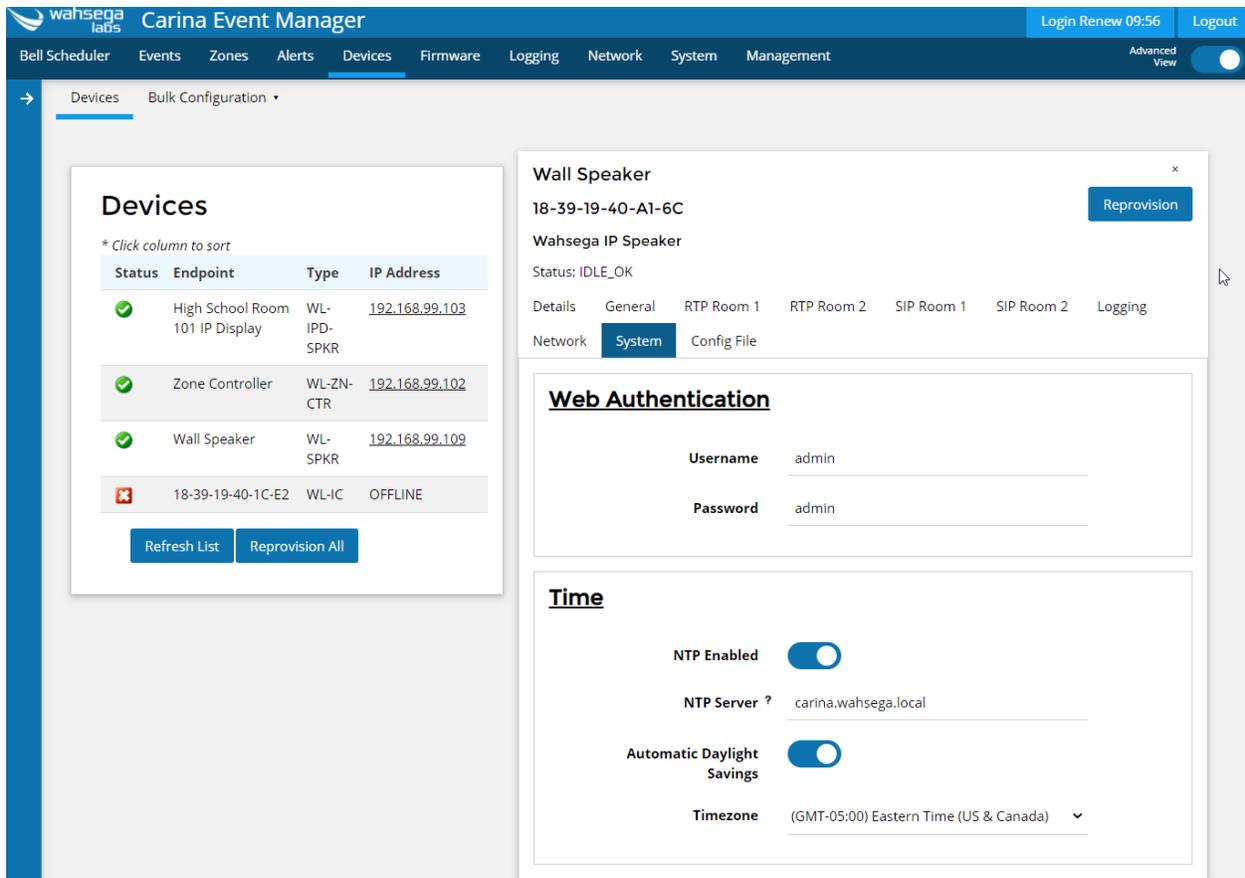
| Status | Endpoint                        | Type        | IP Address     |
|--------|---------------------------------|-------------|----------------|
| ✓      | High School Room 101 IP Display | WL-IPD-SPKR | 192.168.99.103 |
| ✓      | Zone Controller                 | WL-ZN-CTR   | 192.168.99.102 |
| ✓      | Wall Speaker                    | WL-SPKR     | 192.168.99.109 |
| ✗      | 18-39-19-40-1C-E2               | WL-IC       | OFFLINE        |

## Network

- **Basic Settings**

- **Connection Type** – Choose DHCP or Static IP.
- **Dynamic IP Options** – If you choose to use DHCP to assign an address automatically. Note that when using DHCP, the IP address for your IP Speaker may change. However, a new IP address will not affect configuration settings made through your Event Manager.
  - **Host Name** – Set host name to change how this device is listed in your DHCP server, if desired.

- **Static IP** – Choose this to enter IP address settings manually.
  - *Warning: If you enter a configuration that is not accessible from your network, you may be unable to communicate with the IP Speaker! Double-check that the settings you enter are correct before reprovisioning the IP Speaker to apply them.*
  
- **STUN**
  - **Server/Port** – Enter your STUN server here if applicable. STUN servers may be required to operate with a public SIP server from behind a NAT or router.
  
- **Additional Settings (advanced)**
  - **Enable IGMPv3** – Check to enable IGMP version 3 on your IP Speaker. If unchecked, IGMP version 2 (IGMPv2) will be used. Default setting is *disabled*. If you know that your routers have IGMPv3 enabled, you can safely enable this setting. *If unsure, leave disabled* to ensure support with routers that only use IGMPv2.
  - **MTU size** – Maximum transmission unit allowed on the Ethernet connection. The standard for Ethernet networks is 1500, and you *should not change this value* unless directed by your network administrator.



The screenshot shows the 'Carina Event Manager' web interface. The top navigation bar includes 'Bell Scheduler', 'Events', 'Zones', 'Alerts', 'Devices', 'Firmware', 'Logging', 'Network', 'System', and 'Management'. The 'Devices' tab is active, showing a list of devices and a detailed configuration window for a 'Wall Speaker'.

**Devices List:**

| Status | Endpoint                           | Type                | IP Address                     |
|--------|------------------------------------|---------------------|--------------------------------|
| ✓      | High School Room<br>101 IP Display | WL-<br>IPD-<br>SPKR | <a href="#">192.168.99.103</a> |
| ✓      | Zone Controller                    | WL-ZN-<br>CTR       | <a href="#">192.168.99.102</a> |
| ✓      | Wall Speaker                       | WL-<br>SPKR         | <a href="#">192.168.99.109</a> |
| ✗      | 18-39-19-40-1C-E2                  | WL-IC               | OFFLINE                        |

**Wall Speaker Configuration (18-39-19-40-A1-6C):**

- Wahsega IP Speaker
- Status: IDLE\_OK
- Web Authentication:
  - Username: admin
  - Password: admin
- Time:
  - NTP Enabled:
  - NTP Server: carina.wahsega.local
  - Automatic Daylight Savings:
  - Timezone: (GMT-05:00) Eastern Time (US & Canada)

## System

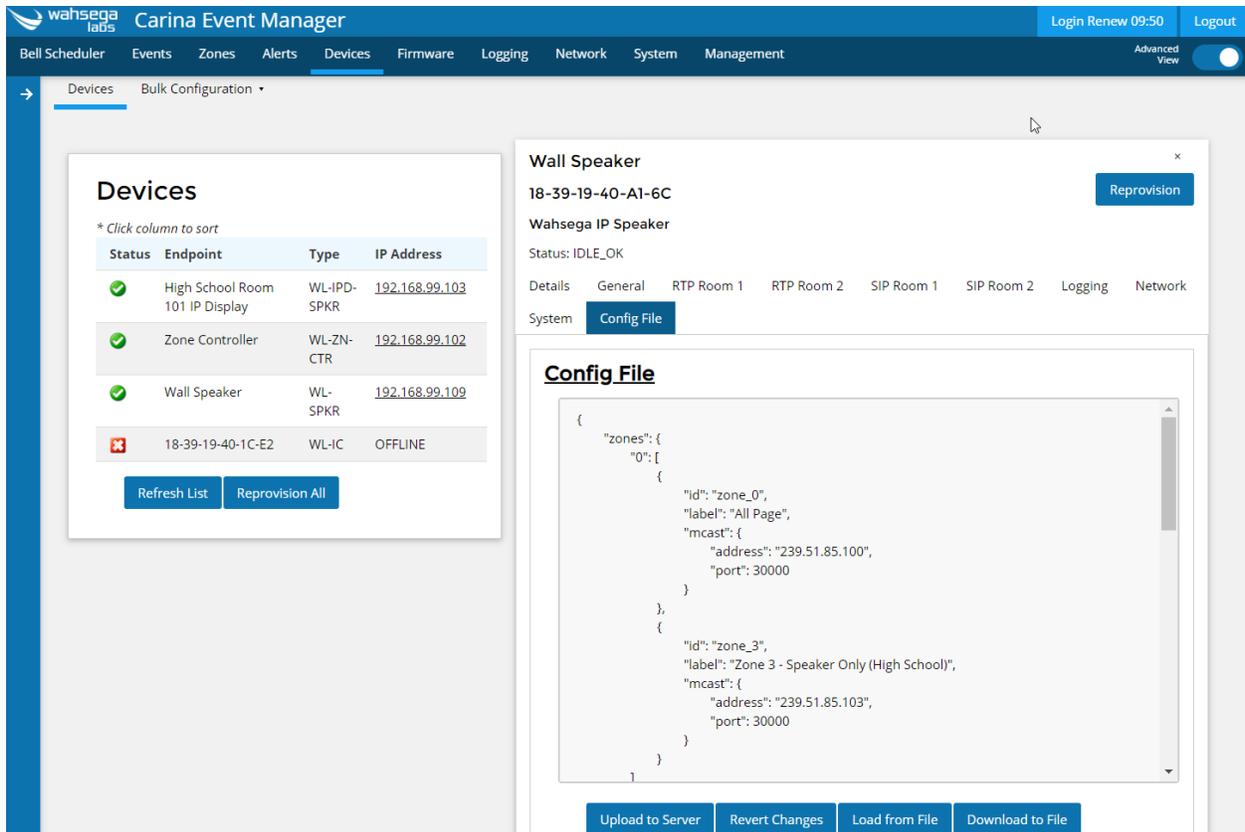
- **Web Authentication**

- **Username** – Change username for this IP Speaker, if desired. Default username is *admin*.
- **Password** – Change password for this IP Speaker, if desired. Default password is *admin*.

- **Time**

- **NTP Enabled** – When enabled, the system will query the NTP (network time protocol) server for the current time. The timezone and daylight savings time configuration is handled separate from the NTP time. Default value: Enabled

- **NTP Server** – The Wahsega Event Manager can behave as an NTP server. To take advantage of this, endpoints are best configured to use the default value.  
Default value: *carina.wahsega.local*
- **Automatic Daylight saving time** – Select this only if daylight saving time is currently in effect in your location.  
For more information about DST rules and dates, see <http://www.nist.gov/pml/div688/dst.cfm>.
- **Time zone** – Select the region that most closely matches your time zone. (Note that daylight saving time is *not* automatically applied based on region.)



The screenshot shows the Carina Event Manager interface. On the left, a 'Devices' table lists various endpoints. On the right, a 'Wall Speaker' configuration window is open, showing a 'Config File' section with a JSON configuration.

| Status | Endpoint                           | Type            | IP Address     |
|--------|------------------------------------|-----------------|----------------|
| ✓      | High School Room<br>101 IP Display | WL-IPD-<br>SPKR | 192.168.99.103 |
| ✓      | Zone Controller                    | WL-ZN-<br>CTR   | 192.168.99.102 |
| ✓      | Wall Speaker                       | WL-<br>SPKR     | 192.168.99.109 |
| ✗      | 18-39-19-40-1C-E2                  | WL-IC           | OFFLINE        |

```

{
  "zones": {
    "0": [
      {
        "id": "zone_0",
        "label": "All Page",
        "mcast": {
          "address": "239.51.85.100",
          "port": 30000
        }
      },
      {
        "id": "zone_3",
        "label": "Zone 3 - Speaker Only (High School)",
        "mcast": {
          "address": "239.51.85.103",
          "port": 30000
        }
      }
    ]
  }
}

```

## Config File

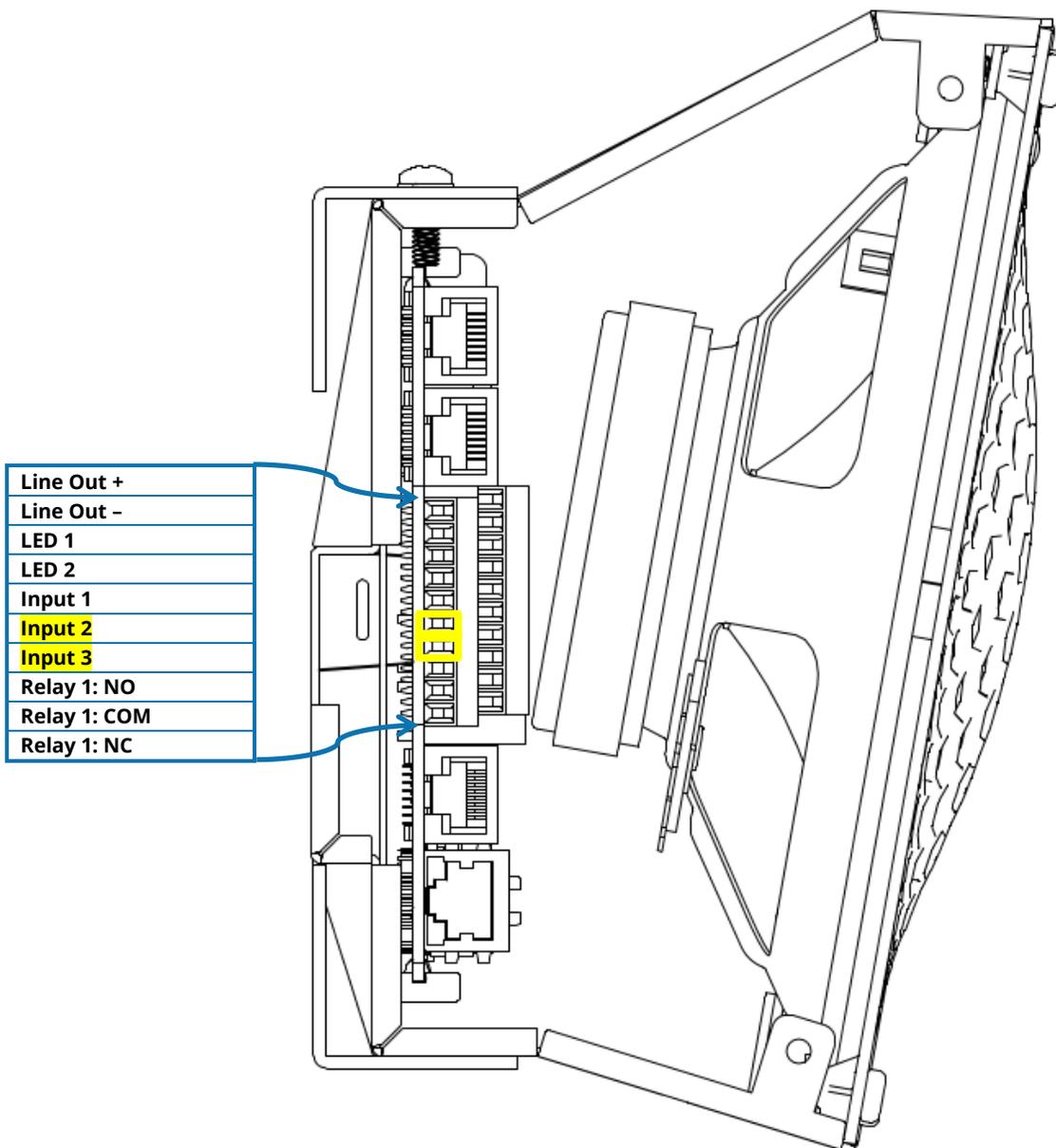
Users may choose the advanced option to manually edit or load a JSON configuration file here.

- **Upload to Server** – Loads changes made here to the Event Manager server, to take effect immediately.
- **Revert Changes** – Delete any changes made in this session and revert to currently loaded configuration file.
- **Load from File** – Load a JSON configuration file for a Carina IP Speaker into this speaker.
- **Download to File** – Download this IP Speaker’s current info.json configuration file.

## Appendix A Restoring Factory Settings

### Software-based Factory Reset

If you need to erase the configuration settings in your Wahsega Wall Mount IP Speaker, you can do so by following the steps below.



### Steps for activating a full factory reset:

1. Start with the PoE cable unplugged and the IP Speaker powered **off**.
2. Jumper Input 3 and Input 4 (highlighted in yellow, above).
3. While jumper is in place, plug in the PoE cable and apply power to your IP Speaker.
4. Once power is applied, continue to hold the jumper in place for **at least five (5) seconds**.
5. After 5 seconds, the status light will flash to indicate that the file system has been reformatted and all data has been erased from the device.
6. Remove jumper and restart your IP Speaker for the new settings to take effect.
7. If you have previously changed the IP address of your IP Speaker to a static IP address, keep in mind that restoring factory default settings will return your IP Speaker to dynamic IP (DHCP) mode. You will need to use the new, dynamic IP address to gain access to your IP Speaker's configuration webpages once again.



# Carina Wall Mount IP Speaker

WL-SPKR-SMT-CAR

User's Guide

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