

# BellCommander Configuration Guide –Trixbox/Asterisk

**Overview:** BellCommander works with Trixbox, Asterisk, and Asterisk based systems to provide a complete scheduled audio, paging, and emergency notification solution. Audio can be sent via a multicast or SIP configuration. This guide covers making calls/pages via SIP through Asterisk/Trixbox to page to phones and other endpoints. Our CyberData and Valcom guides can be referenced for sending audio via multicast (<http://www.acrovista.com/bellcommander/sip-version.html>)

## SIP Setup Guide

BellCommander can interface to Asterisk/Trixbox for paging as one or more SIP endpoints. BellCommander will communicate over the network and will register with Asterisk/Trixbox as a generic SIP endpoint, like a SIP phone. At scheduled times, BellCommander would make calls to paging extensions, which would broadcast audio to phones, IP speakers, and other endpoints assigned to the paging group.

For the SIP configuration of BellCommander, an extension will need to be added to Trixbox and to BellCommander. This extension will allow BellCommander to make outgoing calls through Trixbox to CyberData speakers and IP phones. To add the extension,

1. Open the Trixbox Control Panel in admin mode (web-based).
2. Click on PBX on the menu.
3. Click Extensions on the left side of the page.
4. Click Add Extension.
5. Select “Generic SIP Device”
6. In the Add Extension page, enter the following:
  - User Extension: A number for the extension. Can be any valid extension number.
  - Display Name: Name to identify the extension as in Trixbox. Can be any name.
  - SIP Alias: Typically the same as the extension number.
  - Call Waiting: Disable
  - Secret: Numeric password that will be used by BellCommander to register the extension.
  - Click Submit
7. Click Apply Configuration Changes

### Add Extension

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User Extension	<input type="text" value="500"/>
Display Name	<input type="text" value="BellCommander SIP"/>
CID Num Alias	<input type="text"/>
SIP Alias	<input type="text" value="500"/>

### Extension Options

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Direct DID	<input type="text"/>
DID Alert Info	<input type="text"/>
Music on Hold	<input type="text" value="default"/>
Outbound CID	<input type="text"/>
Ring Time	<input type="text" value="Default"/>
Call Waiting	<input type="text" value="Enable"/>
Emergency CID	<input type="text"/>

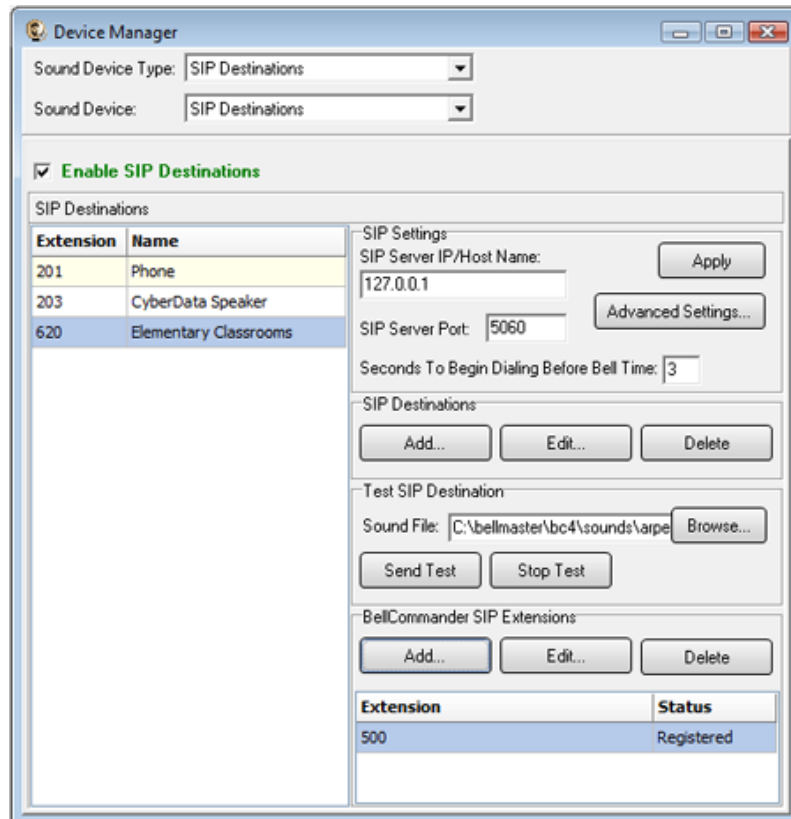
### Device Options

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This device uses sip technology.

secret	<input type="text" value="500pass"/>
dtmfmode	<input type="text" value="rfc2833"/>

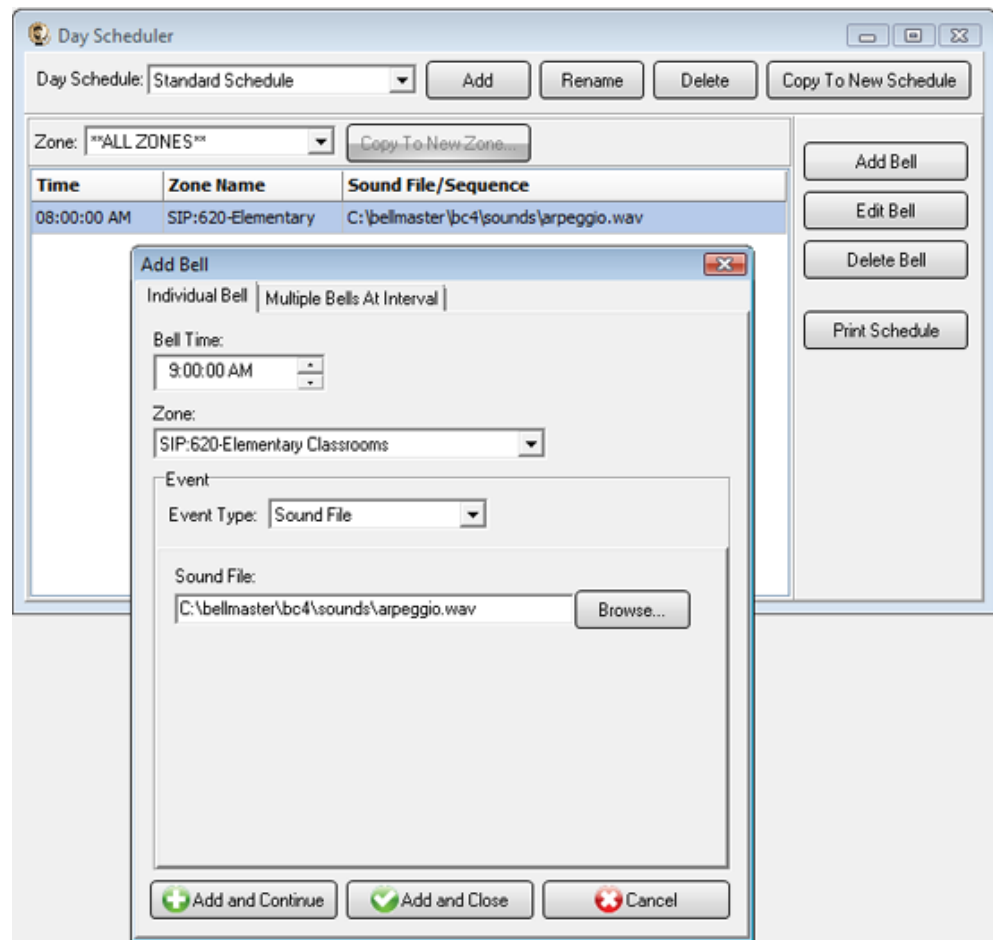
8. Add the new extension to BellCommander:
  - a. Open the BellCommander Device Manager and select SIP Destinations from the Sound Device Type drop-down.
  - b. Enter the SIP Server IP. This should be the IP of the system running Trixbox. Enter the corresponding SIP port. This should normally be 5060. Click the Apply button.
  - c. Click the Add... button under BellCommander SIP Extensions to add the extension that BellCommander will register. Enter the extension number, password (secret from Trixbox), and a local port number. Typically, the default local port number can be used. After adding the extension, the extension should appear in the list with a status of "Registered"
  - d. Click the Add... button under SIP Destinations and add the Trixbox extensions that BellCommander will call.
  - e. Test each SIP destination, by selecting a SIP destination from the SIP Destinations list. Then, click the Browse... button to locate a WAV file and click the Play Audio File button to play the WAV file. BellCommander will then call the extension through Trixbox and play the WAV file.



## Scheduling for SIP Extensions:

BellCommander automatically creates a zone for each SIP destination that allows different schedules to be sent to different extensions. To create a schedule, follow the steps below:

1. Create a day schedule. A day schedule represents a single day's 24 hour schedule that can be applied to dates on the BellCommander calendar. To create a Day Schedule:
  - a. Click the Day Scheduler button.
  - b. Click the top Add button to add a new day schedule. Enter a name to identify the schedule, ex. Standard Schedule
  - c. Click the Add Bell button to add a new bell to the schedule. In the Add Bell window,
    - i. Select the time for the bell.
    - ii. Select the zone that the bell should play to. SIP zones will have a name of "SIP:" followed by the extension number and name.
    - iii. For a single sound file select, select "Sound File" for the event type and select a WAV audio file.



2. Assign the day schedule(s) to the Calendar Scheduler. To assign schedules to the Calendar Scheduler:
  - a. Click the Calendar button to view the Calendar Scheduler window.
  - b. Click the Set Default Weekly schedule button to set the default schedule and set the following values:

**Weeks in the schedule:**

If schedule is the same every week, select “Same schedule every week”.

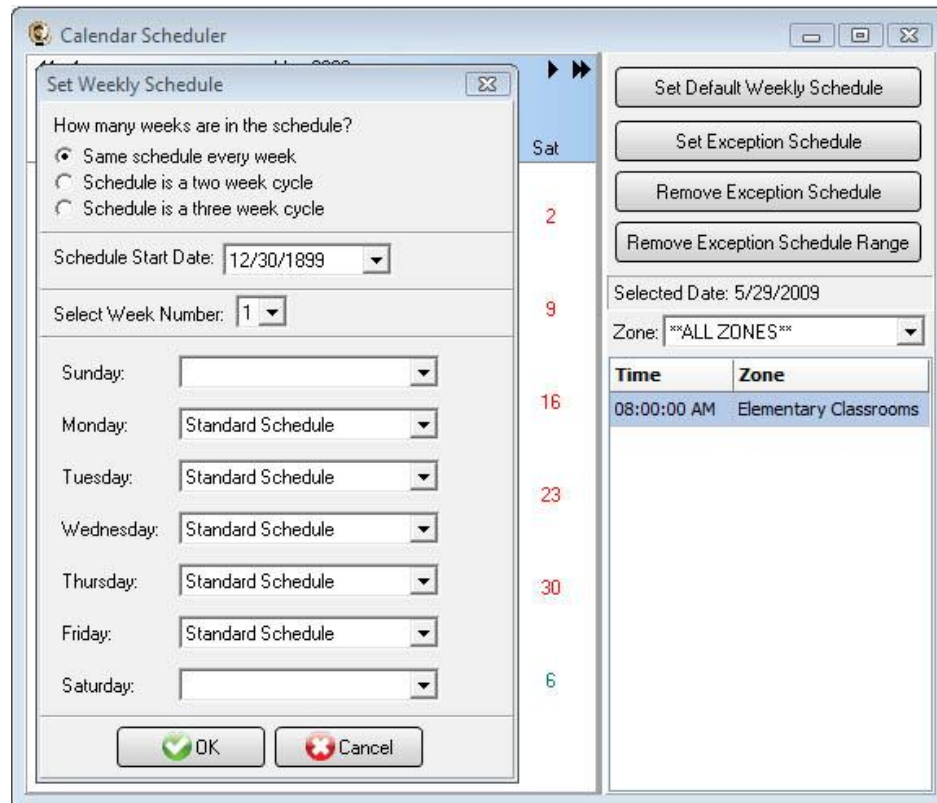
If schedule repeats bi-weekly, select “Schedule is a two week cycle”.

If schedule repeats tri-weekly, select “Schedule is a three week cycle”.

**Schedule Start Date** – If schedule starts in the future select a future date; otherwise, the default value (12/30/1899) will start the schedule immediately.

**Select Week Number** – If using a bi-weekly or tri-weekly schedule, this allows the first, second, or third week to be selected for the days of the week listed. Select 1 to program the first week, 2 to program the second week, 3 to program the third week.

**Days of the week** – Use the drop-down for each day of the to select a schedule. If no audio should be scheduled for the day of the week, leave the day name blank.



- c. To set different schedules by date, add additional schedules in the Day Scheduler and select dates on the calendar and click the Set Exception Schedule button to set different schedules by date.

**Special Considerations for SIP Scheduling:**

If two or more audio events will be scheduled at the same time, then additional SIP extensions will need to be registered by BellCommander. This will require adding the additional extensions in Trixbox and having BellCommander register the SIP extensions.

## SIP Extensions for Emergency Notification

SIP Extensions for Emergency Notification allows Trixbox phones to dial BellCommander for emergency notifications. Emergency notifications loop audio alerts for several weather, school lockdowns, and other emergencies. Emergency notifications can be triggered by clicking emergency buttons in the BellCommander interface or by dialing emergency codes.

To setup emergency notifications:

1. Open the Trixbox Control Panel in admin mode (web-based).
2. Click on PBX on the menu.
3. Click Extensions on the left side of the page.
4. Click Add Extension.
5. Select "Generic SIP Device"
6. In the Add Extension page, enter the following:  
User Extension: A number for the extension. Can be any valid extension number.  
Display Name: Name to identify the extension as in Trixbox. Can be any name.  
SIP Alias: Typically the same as the extension number.  
Call Waiting: Disable  
Secret: Numeric password that will be used by BellCommander to register the extension.  
Click Submit
7. Click Apply Configuration Changes

### Add Extension

User Extension	<input type="text" value="900"/>
Display Name	<input type="text" value="BellCommander Ext"/>
CID Num Alias	<input type="text"/>
SIP Alias	<input type="text" value="900"/>

### Extension Options

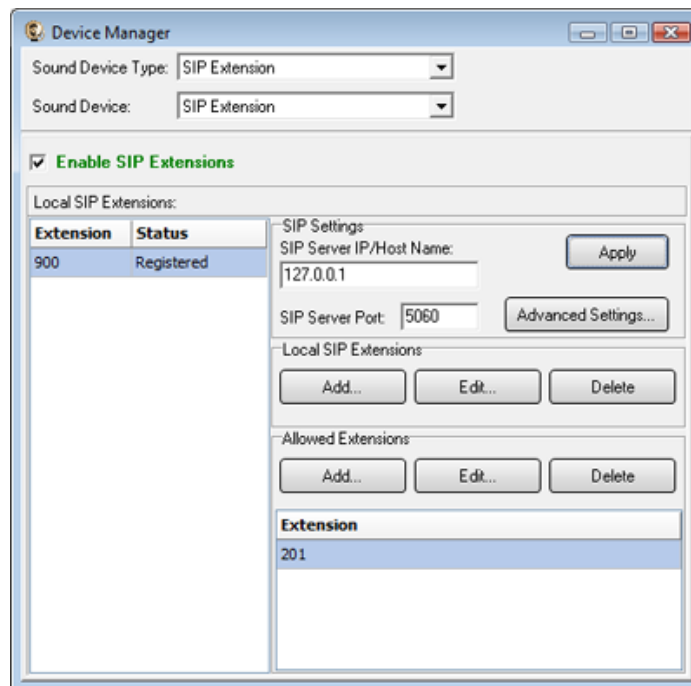
Direct DID	<input type="text"/>
DID Alert Info	<input type="text"/>
Music on Hold	<input type="text" value="default"/>
Outbound CID	<input type="text"/>
Ring Time	<input type="text" value="Default"/>
Call Waiting	<input type="text" value="Disable"/>
Emergency CID	<input type="text"/>

### Device Options

This device uses sip technology.

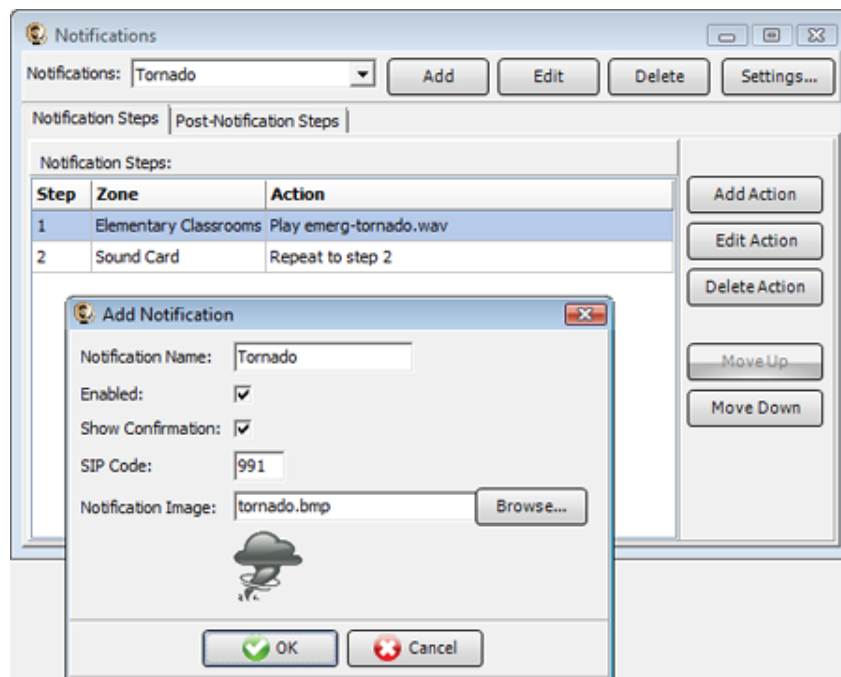
secret	<input type="text" value="900pass"/>
dtmfmode	<input type="text" value="rfc2833"/>

1. Add SIP extension to BellCommander:
  - a. Open the BellCommander Device Manager by clicking the Devices button.
  - b. In the Sound Device Type drop-down select "SIP Extension"
  - c. Check "Enable SIP Extensions"
  - d. Enter the Trixbox server IP and port number. Port number should normally by 5060.
  - e. Click the Apply button.
  - f. Add a SIP extension for BellCommander to register:
    - i. Click the Add... button under Local SIP Extensions.  
 SIP Extension - Extension that was added to Trixbox.  
 Extension Password – Password for the extension that was added to Trixbox.  
 Local Port Number – Can typically use the default value  
 Map To Zone – Leave this blank for emergency notification.  
 SIP Server Options – Select "Connect to default SIP server"
    - ii. After adding the extension, the extension should appear in the Local SIP Extension list with a status of "Registered"
  - g. Add the extensions that are allowed to call BellCommander for emergency notification.
    - i. Click the Add... button under Allowed Extensions.
    - ii. Enter a Trixbox extension that will be allowed to call BellCommander.
    - iii. Repeat for additional extensions. BellCommander is licensed by the number for allowed extensions, so the number of allowed extensions may be restricted by the license.





2. Define emergency notifications in BellCommander:
  - a. Click the Notifications button to view the Notifications window.
  - b. Click the top Add or Edit button to add or edit a notification. For the example, we'll edit the tornado notification.
  - c. In the edit window, note the SIP code. This is the code that the phone user should dial to trigger the emergency notification. The Show Confirmation option is for clicking notifications in the BellCommander interface. If Show Confirmation is checked, a message will popup to request confirmation of an emergency alert.
  - d. Assign actions to the emergency notification. Use the Add Action and Edit Action to add and edit actions in the alert scripts. Typically, a sound file would be played and looped. In the action, the zone should be set to a zone that broadcasts to all areas that should receive the notification.



3. To trigger an emergency notification by phone, first call the BellCommander extension, in the example above this would be 900. Wait for BellCommander to answer, then dial the emergency code followed by the # key. In the example above 991#. To stop the alert, dial 999# while connected to BellCommander. The alert can also be stopped by dialing the BellCommander extension again and entering 999#.