

*User Manual*  
*Nyquist C4000 Series*

Version 2.0

**BOGEN<sup>®</sup>**  
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740-00126A

191211

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# 1

## Introducing the C4000 System

**Note:** Your system administrator should have already configured your system for your environment and created a login account for you. Depending on the role and permissions that your system administrator has assigned to you, you may not be able to perform all of the tasks described in this guide. For information about configuring the C4000 system, refer to the *Nyquist C4000 System Administrator Manual*.

Nyquist C4000 is an IP-based solution for commercial paging and audio distribution applications. It provides a powerful way for you to manage background and foreground music, paging, announcements, and clock and message displays and can easily be configured to meet your facility's unique needs.

C4000 features an easy to use web-based graphical user interface (GUI) that is accessible through almost any personal computer (PC), tablet, or mobile device from any location in the connected world. It provides convenient communication, control, and interoperability with third-party devices and systems such as access control, fire alarm, clock, and PBX systems.

C4000 also features a built-in streaming Internet radio service – air-able and optional custom-tailored music selections from SOUNDMA-CHINE, the premier music subscription service for business. Both services are perfect for a wide variety of background music applications.

# 1.1 Using the Web-Based User Interface

The web-based UI is an interactive dashboard that you can use to perform paging, audio distribution, and other tasks from a personal computer, tablet, or cell phone. The web-based UI presents system information and parameters in an easy to read and use format. The view of the dashboard varies depending upon the permissions (the role) you are assigned.

## 1.1.1 Accessing the Dashboard

**Note:** Do not use third-party Chrome browser extensions with the Nyquist C4000 user interface.

To access your dashboard:

- Step 1 From your Chrome browser, type the C4000 server's IP address in the address bar (for example, https://192.168.1.0) and press **Enter**.
- Step 2 On the Login page, type your username and password.

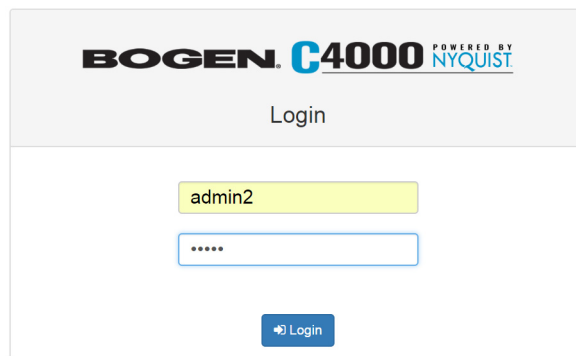
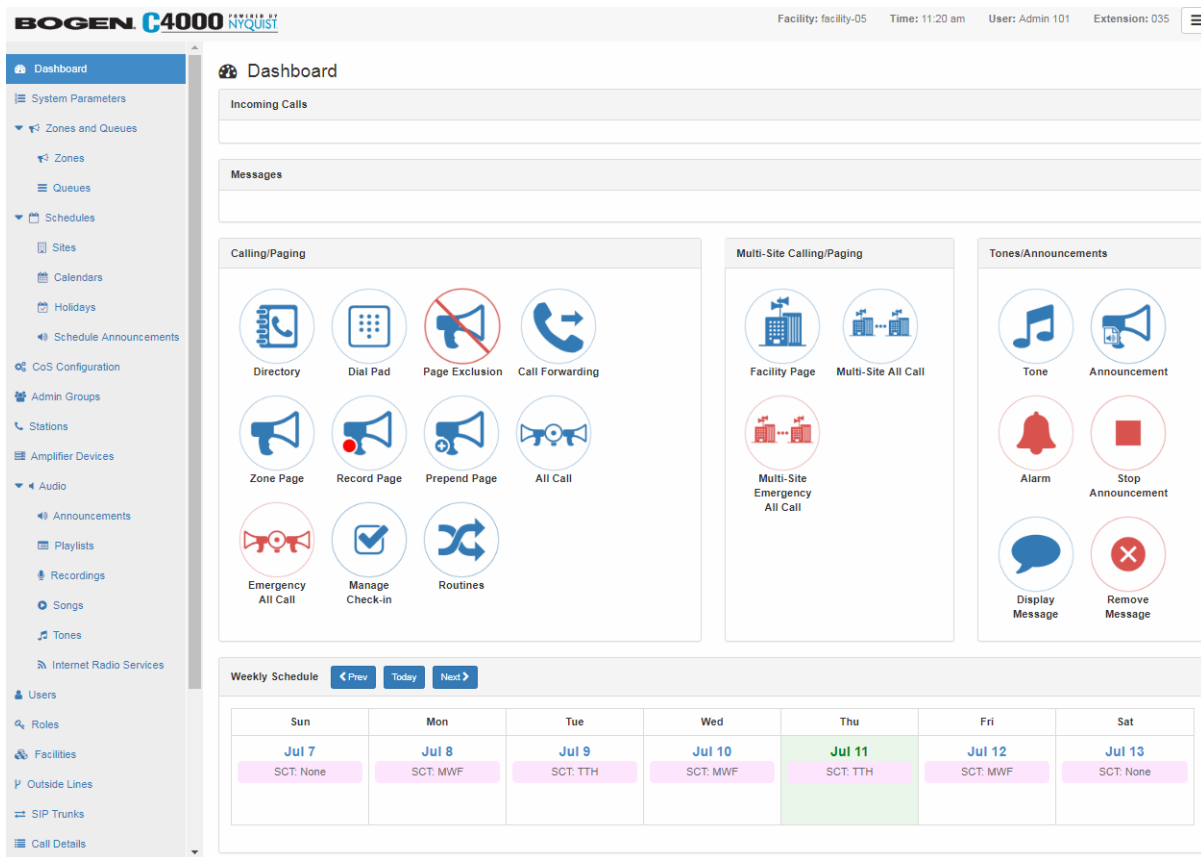


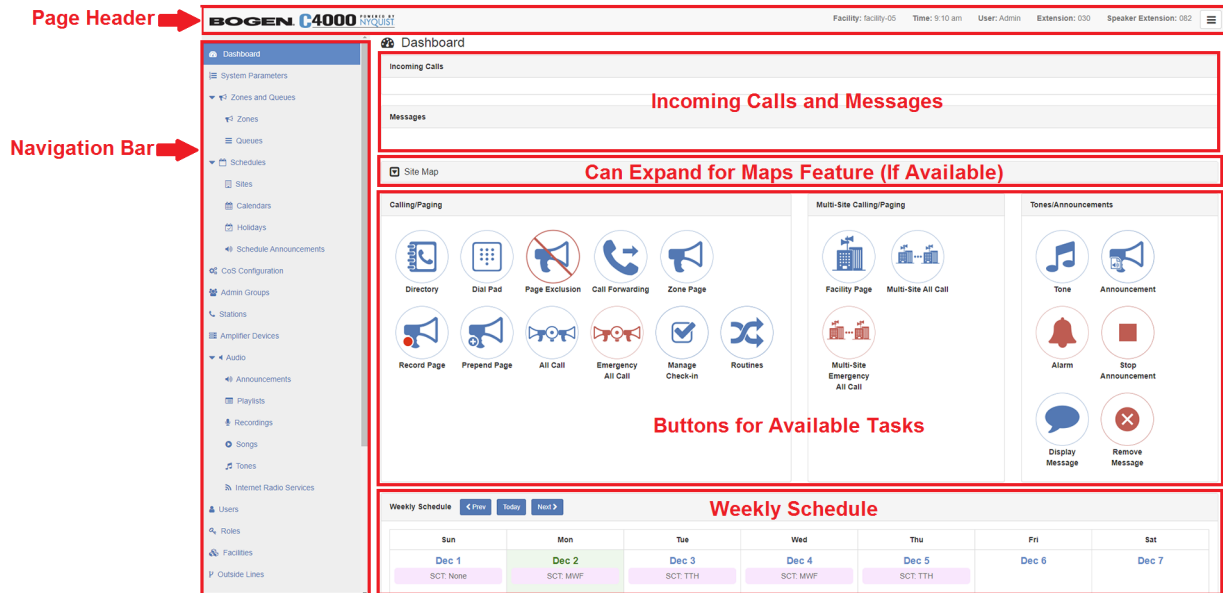
Figure 1-1, Login Page

### Step 3 Select **Login**.



**Figure 1-2, C4000 Dashboard**

**Note:** The Nyquist system does not support opening multiple instances, or tabs, of the Nyquist Web UI for the same user.



**Figure 1-3, Dashboard Areas**

The left side, or navigation bar, of the dashboard ("Figure 1-3, Dashboard Areas" on page 4), lists the areas of the C4000 system that you can access. Accessibility to C4000 features and functionality is controlled by your assigned role.

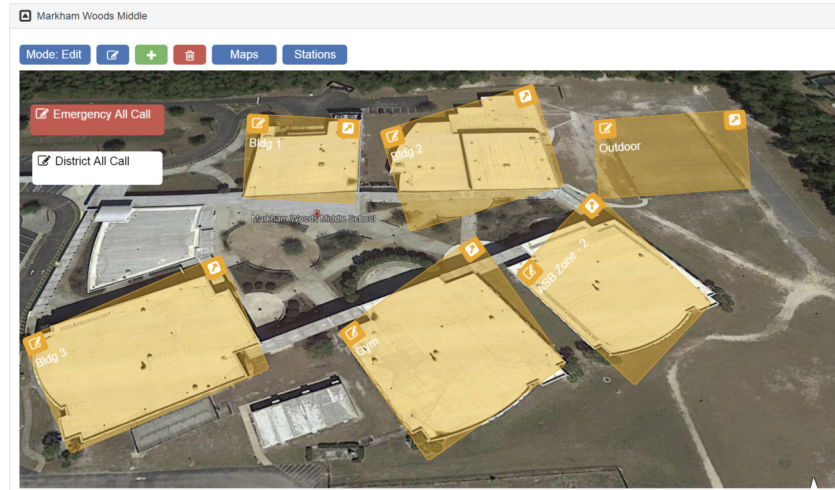
**Note:** The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Instead, you see only common tasks, such as making a page. If you are authorized to make changes to the C4000 configuration, refer to the *Nyquist C4000 System Administrator Manual* for information about performing these tasks.

The top right section of the page header provides the facility name, server time in hours and minutes, the username for the account and the extension for the station. The facility name and time will not appear if the screen is reduced in size, such as when viewing from a phone or tablet.

Incoming Calls and Messages appear in the message page of the dashboard.



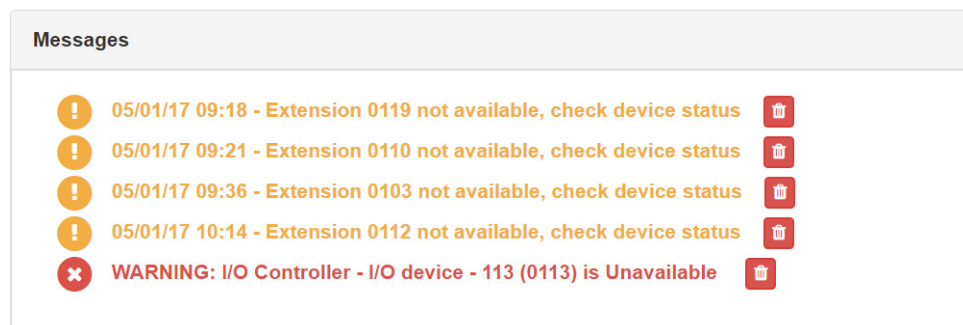
When Maps is licensed and configured for a C4000 system and you have the proper permissions, you can view the Maps Pane from the Dashboard. The panel appears below the Messages Pane.



**Figure 1-4, Maps Pane**

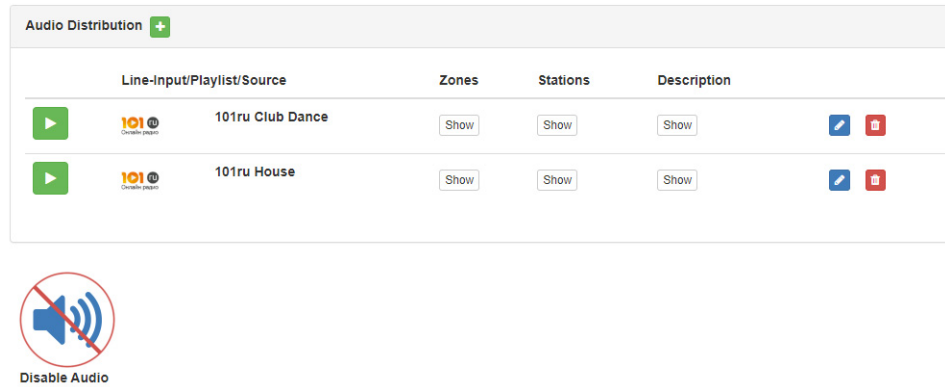
The majority of the dashboard is set up to allow you to perform communications activities, view this week's scheduled events, and perform audio distribution.

At the top of the dashboard, messages appear that can provide information about your system, such as notifying you when any registered stations or devices have stopped responding to the server.



**Figure 1-5, Dashboard Messages**

On the lower part of the dashboard are options for Audio Distribution and an **Enable/Disable Audio** button that you can toggle to enable or disable audio throughout the system.



**Figure 1-6, Audio Distribution Section of Dashboard**

### 1.1.2 Making UI Selections

You can navigate and make UI selections by either using a mouse click or using touchscreen functionality. The UI provides buttons, which appear with a name and a graphic, and icons, which are graphics only.

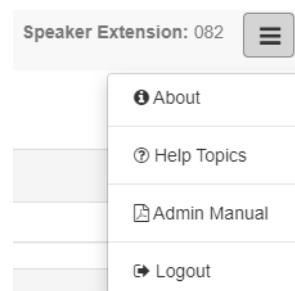
**Table 1-1, UI Icons**

Icon	Description
	<b>Add</b> icon – Selecting this icon allows you to add an item.
	<b>Edit</b> icon – Selecting this icon allows you to edit an item.
	<b>Delete</b> icon – Selecting this icon allows you to delete an item.
	<b>Information</b> icon – Selecting this icon provides additional information, such as viewing release notes for firmware.

## 1.2 Getting Help

Help is available through the C4000 Admin Web UI and through Bogen's Technical Support. Technical Support is available between 8:30 am and 6:00 pm, and on-call until 8 pm, Monday through Friday. Technical Support contact information is as follows:

Tel: 1-800-999-2809  
Fax: 201-934-6532  
Email: support@bogen.com



**Figure 1-7, Help Menu**

Online help is accessed from the menu that appears in the top right portion of the Admin Web UI's navigation pane. The menu contains the following options:

- **About** – Selecting this option displays the version number and contact information for Bogen Communications, Inc.
- **Help Topics** – Selecting this option
- **Admin Manual** – Selecting this option displays the *Nyquist C4000 System Administrator Manual*. The *Nyquist C4000 System Administrator Manual* provides configuration and task information that you may not be authorized to perform.
- **Logout** – Selecting this option logs you out of C4000.



# 2

## Managing Audio Distribution

*Note:* Before using the Audio Distribution feature, make sure that stations and zones have been configured and that the station you are using to launch Audio Distribution has the appropriate permissions (that is, Class of Service (CoS) parameters set). The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.

The Audio Distribution feature is used to create various audio distribution configuration setups (known as "entries" in the Audio Distribution pane) that take a selected audio source and "targets it" for play to specific zones and stations or both. The system supports an unlimited number of such Audio Distribution entries.

Suppose you want to play an audio source, such as an airable Internet radio station, in a cafeteria but not in an adjacent conference room. You can create a zone containing just the speakers and/or stations within the cafeteria and then set up an Audio Distribution entry.

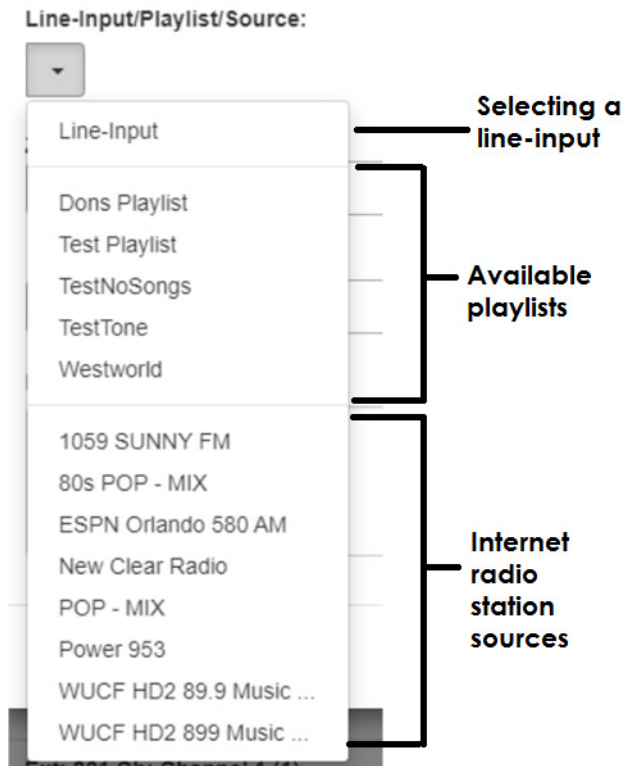
Audio programs for distribution to stations or zones can include line-inputs from various Nyquist appliances (such as MMPA, Nyquist 2-channel or 4-channel amplifiers), user supplied songs or playlists, and Internet Radio Services. The Audio Distribution, tones, and announcement files added through the audio file management feature can be set through the Schedules feature to automatically play during specified times.

Through the airable Internet radio service, you can listen to live radio stations and add media catalogs and music services without updating devices or software.

White noise and pink noise Tone files are included with the system and can be used to help level-set Audio Distribution volumes during system setup.

Audio Distribution involves creating a playlist or selecting an input source and specifying which zones hear the playlist or input source.

Through the Scheduled Audio feature, Audio Distribution can be tied to a specific event in a schedule. (For information about creating events, refer to the *Nyquist C4000 System Administrator Manual*.)



**Figure 2-1, Audio Distribution Sources**

Audio Distribution sources can include:

- Audio from any Nyquist appliance with one or more Line Inputs, such as MMPAs, audio power amplifiers, and paging amplifiers
- User supplied music (songs and playlists)
- airable Internet radio service
- SoundMachine Stations

## 2.1 Managing Line-Input Sources

Create an Audio Distribution

---

**Line-Input/Playlist/Source:**

Line-Input ▾

- A2060 - 1 - 2CH (0190)
- A2120 - 1 - 2CH (0192)
- A2300 - 1 - 2CH (0194)
- A4060 ()
- A4120 - 1 - 2CH (0196)
- MMPA (0117)
- 0118 - MMPA (0118)

MMPA (0117) ▾

**Input Channel:**

▴

**Description:**

---

**Figure 2-2, Line-Input Sources**

If your Nyquist system uses any Nyquist appliance with one or more line inputs, these stations will appear as sources for Line-Input when creating Audio Distribution.

## Create an Audio Distribution

Line-Input/Playlist/Source:  
Line-Input ▾

Zones:  
Add Zones ...

Stations:  
Add Stations ...

Amplifiers/Matrix Mixers:  
MMPA (0117) ▾

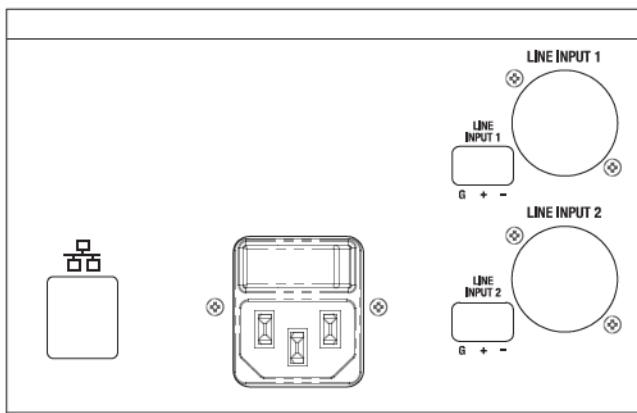
Description:

Channel 1 (1)  
Channel 2 (2)  
Channel 3 (3)  
Channel 4 (4)

Close Save

**Figure 2-3, Available Channels for an MMPA**

The available Input Channel selections can range from 1 or 2 for an amplifier or 1 to 4 for an MMPA.



**Figure 2-4, Line Input for NQ-A4300 Audio Power Amplifier**



The amplifiers and MMPAs must be configured at the device, using either XLR or Phoenix (but not both) as the input.

The Amplifiers/Matrix Mixers and Input Channel selections are made when creating an audio distribution.

## 2.2 Managing Songs

The songs feature allows you to select songs that can be added to a playlist; the playlist can then be selected to play manually or during scheduled events such as lunch time. You can store songs on a USB memory stick; these songs can then be played via the playlists feature (see *"Playing Songs Directly from a USB Memory Stick"* on page 14).

By default, white noise and pink noise songs are provided to help tune the volume of an Audio Distribution zone. (Refer to the *Nyquist C4000 System Administrator Manual*.)

### 2.2.1 Viewing the Song List

From the Songs page, you can add, edit, or delete a song. If you delete a song that is in a Playlist, the song is automatically removed from the Playlist.



The screenshot shows the 'Songs' page interface. At the top left, there is a 'Songs' label with a plus icon and a help icon. On the right, there is a 'Filter' input field and a list icon. Below this is a table with the following data:

	Title	Artist	Album	Track Number	Length	Genre	Year	Playback
 	Come Together	Aerosmith	Aerosmith's Greatest Hits	09	03:46	Rock	1993	   
 	Dream On	Aerosmith	Aerosmith's Greatest Hits	01	04:27	Rock	1993	   
 	Fins	Jimmy Buffett	Songs You Know By Heart	3/13	03:25	Rock	1985	   
 	Shake Me Like A Monkey	Dave Matthews Band	Big Whiskey and the GrooGrux King	2/13	04:01	Rock	2009	   

Figure 2-5, Songs Page

To view the song list:

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Songs**.

The following table describes the information provided about each song:

**Table 2-1, Songs Page Parameters**

<b>Title</b>	Displays the user provided song title.
<b>Artist</b>	Displays the name of the musician performing the song.
<b>Album</b>	Displays the name of the album the song is from.
<b>Track Number</b>	Displays the track on the album for the song.
<b>Length</b>	Provides the length of the song in seconds.
<b>Genre</b>	Displays the music genre, or category, for the song.
<b>Year</b>	Displays the year the song was recorded.
<b>Playback</b>	Allows you to manually play the song. Selecting the <b>Menu</b> icon in this field also allows you to download and save the song.

### 2.2.2 Playing Songs Directly from a USB Memory Stick

You can use a USB memory stick as storage for songs that can be played via the playlists feature.

To add songs and create a playlist for a USB memory stick, you must create a root file on the USB memory stick called MusicLibrary.txt. This file can contain the following entries:

- playlistname= <text entered by customer>
- createplaylist=no
- useexistingplaylist=yes

If **createplaylist=no** is found in MusicLibrary.txt, a playlist is not created for the imported files.

If **useexistingplaylist=yes** is used, new songs will be added to the playlist defined by the playlistname option.

Music files must be on the root directory of the USB memory stick. Valid formats for these files are mp3, wav, and aac.

The Nyquist server automatically mounts the USB memory stick, adds all songs found in the root directory to the songs list, and creates a playlist for the added songs. The default name for the playlist is **USB Music Library**.

*Note:* If you use a USB memory stick as storage for songs on a playlist and the USB memory stick is removed from the USB drive, the meta data for the songs and the playlist still resides in the C4000 song list and playlist, but Audio Distribution cannot play. For this reason, we recommend never removing the memory stick from the computer.

### 2.2.3 Uploading Songs from a USB Memory Stick

You can upload songs to the Nyquist system from a USB memory stick.

*To upload songs from a USB memory stick:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Songs**.
- Step 3 Select the **Add** icon.
- Step 4 From the Add Song page, ensure **Multiple Songs** is set to **Yes**.
- Step 5 Insert the memory stick.
- Step 6 For the **File Upload** parameter, select **Choose file** and navigate to the USB memory stick.
- Step 7 Select **Save**.
- Step 8 Select **Save**.

### 2.2.4 Adding Songs

You can add songs from your local computer or from removable media, such as a Flash drive. You can add a song to playlists as part of the Add Song process or you can add a song to a playlist later through the **Playlists** menu.

You can select to add one song or multiple songs.

C4000 can use any ID3 tag data and save that automatically. An ID3 tag acts as a container file within an MP3 audio file and commonly contains the title, artist name, album, track data, year, and genre.

➤ Add Song ?

---

Multiple Songs:  
 No

Title:

Artist:

Album:

Track Number: ⓘ

Year:

Genre:

Playlists:

File Upload:

---

**Figure 2-6, Add Song Page**

*To add a song file:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Songs**.
- Step 3 On the Songs page, select the **Add** icon.

*Note:* If the imported song file contains meta data, Nyquist automatically fills in the Title, Artist, Album, Track Number, Year, and Genre after you press the **Save** button. If no meta data exists, the song **Title** is set to **Untitled** and the other parameters are left blank. Most MP3 files do contain meta data. You can also choose to not fill in the parameters.

- Step 4 On the Add Song page, complete the parameters. If you want to add multiple songs, ensure that you select **Yes** for **Multiple Songs**. Then, use the Shift or Control

keys when selecting multiple files. Parameters do not appear when using the **Multiple Songs** option.

▶ Add Song ?

---

Multiple Songs:  
Yes

File Upload:  
Choose files ... Choose Files

✕ Cancel Save

**Figure 2-7, Adding Multiple Songs**

Step 5 After completing all changes, select **Save**. The song or songs will be copied onto the Nyquist system.

**Table 2-2, Add Song Page Parameters**

<b>Multiple Songs</b>	Allows you to select multiple songs.
<b>Title</b>	Displays the user provided song title.
<b>Artist</b>	Displays the name of the musician performing the song.
<b>Album</b>	Displays the name of the album the song is from.
<b>Track Number</b>	Displays the track on the album for the song.
<b>Year</b>	Displays the year the song was recorded.
<b>Genre</b>	Displays the music genre, or category, for the song.
<b>File Upload</b>	Allows you to select the song that you want to upload.
<b>Playlists</b>	Select the playlists that you want to add the song to. You can select multiple playlists, select all playlists by selecting <b>Add All</b> , or use the <b>Clear</b> button to remove the playlists.
<b>File Upload</b>	Select <b>Choose file</b> and navigate to select the file to upload. This option allows you to select files not only from your computer but also from a USB flash drive inserted in your computer.

## 2.2.5 Editing Song Information

Through the Edit Song page, you can edit the information that appears on the Songs page for a particular song or replace the downloaded file with another.

*To edit the information associated with the song file:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Songs**.
- Step 3 On the Songs page, select the **Edit** icon next to the song that you want to edit information for.
- Step 4 On the Edit Song page, make changes to the parameters.
- Step 5 After completing all changes, select **Save**.

**Table 2-3, Edit Song Page Parameters**

<b>Title</b>	Displays the user provided song title.
<b>Artist</b>	Displays the name of the musician performing the song.
<b>Album</b>	Displays the name of the album the song is from.
<b>Track Number</b>	Displays the track on the album for the song.
<b>Year</b>	Displays the year the song was recorded.
<b>Genre</b>	Displays the music genre, or category, for the song.
<b>File Upload</b>	Allows you to select the song that you want to upload.
<b>Playlists</b>	Allows you to add or remove the song from playlists.

## 2.2.6 Deleting a Song

Through the Songs page, you can delete a song from your C4000 system. If you delete a song that is in a Playlist, the song is automatically removed from the Playlist.

*To delete a song:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Songs**.
- Step 3 On the Songs page, select the **Delete** icon next to the song that you want to delete.

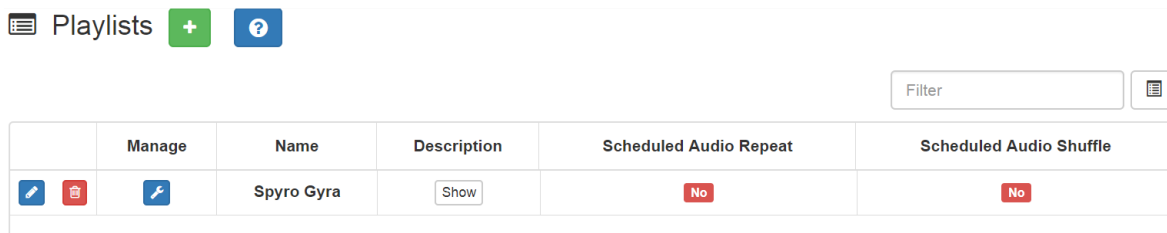
Step 4 When prompted, select **Delete**.







## 2.3 Managing Playlists

You can create and manage playlists that contain multiple songs to use for scheduled events and dashboard Audio Distribution entries. You can select a playlist when creating an event. (For information about creating events, refer to the *Nyquist C4000 System Administrator Manual*.)

### 2.3.1 Viewing Playlists

Through the Playlists page, you can view all playlists available to your C4000 system and create, delete, and manage a playlist. With the Manage Playlist feature, you can add, delete, or change the order of a playlist's songs.



	Manage	Name	Description	Scheduled Audio Repeat	Scheduled Audio Shuffle
  		Spyro Gyra			

**Figure 2-8, Playlists Page**

*To view playlists:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Playlists**.

The Playlists page appears. The following table describes the information that appears on this page:



**Table 2-4, Playlists Page Parameters**

<b>Manage</b>	When selected, this option displays the songs that can be dragged and dropped to and from the playlist.
<b>Name</b>	Displays the user provided name for the playlist.  <i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: <b>!@\$*?-. ,</b> .
<b>Description</b>	When <b>Show</b> is selected, the user provided description of the play list appears.  <i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: <b>!@\$*?-. ,</b> .
<b>Scheduled Audio Repeat</b>	When enabled, the playlist audio will be repeated after all songs have been played. When disabled, Scheduled Audio will automatically stop after the last song has been played from the playlist. When disabled, a corresponding stop event is not needed when Scheduled Audio is started via the schedule.  <i>Note:</i> When playlists are being used by the Audio Distribution feature, the Scheduled Audio options are ignored.
<b>Scheduled Audio Shuffle</b>	When enabled, the order in which the songs are played is shuffled. When disabled, the playlist songs will be played in the order that they appear in the playlist.  <i>Note:</i> When playlists are being used by the Audio Distribution feature, the Scheduled Audio options are ignored.

### **2.3.2 Creating a Playlist**

When you add a playlist, you first create the playlist container and then you use the Manage tool to add songs to the playlist. To add songs to a playlist, you must have access to songs that have been downloaded to your C4000 network or to removable media, such as a Flash drive.



 Add Playlist 

---

Name:

Scheduled Audio Repeat:  
 Yes

Scheduled Audio Shuffle:  
 Yes

Description:

---

**Figure 2-9, Add Playlist Page**

*To add a playlist:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Playlists**.
- Step 3 Select the **Add** icon.
- Step 4 On the Add Playlist page, complete parameters for this playlist. (See "Add Playlist Parameters" on page 22.)
- Step 5 Select **Save**.

**Table 2-5, Add Playlist Parameters**

<b>Name</b>	<p>Displays the user provided name for the playlist.</p> <p><i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: <b>!@\$*?-. ,</b>.</p>
<b>Scheduled Audio Repeat</b>	<p>When enabled, the playlist audio will be repeated after all songs have been played. When disabled, Scheduled Audio will automatically stop after the last song has been played from the playlist. When disabled, a corresponding stop event is not needed when Scheduled Audio is started via the schedule.</p> <p><i>Note:</i> When playlists are being used by the Audio Distribution feature, the Scheduled Audio options are ignored.</p>
<b>Scheduled Audio Shuffle</b>	<p>When enabled, the order in which the songs are played is shuffled. When disabled, the playlist songs will be played in the order that they appear in the playlist.</p> <p><i>Note:</i> When playlists are being used by the Audio Distribution feature, the Scheduled Audio options are ignored.</p>
<b>Description</b>	<p>When <b>Show</b> is selected, the user provided description of the play list appears.</p> <p><i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: <b>!@\$*?-. ,</b>.</p>

### 2.3.3 Adding Songs to a Playlist

After you create a playlist, use the Manage tool to add songs to the playlist.

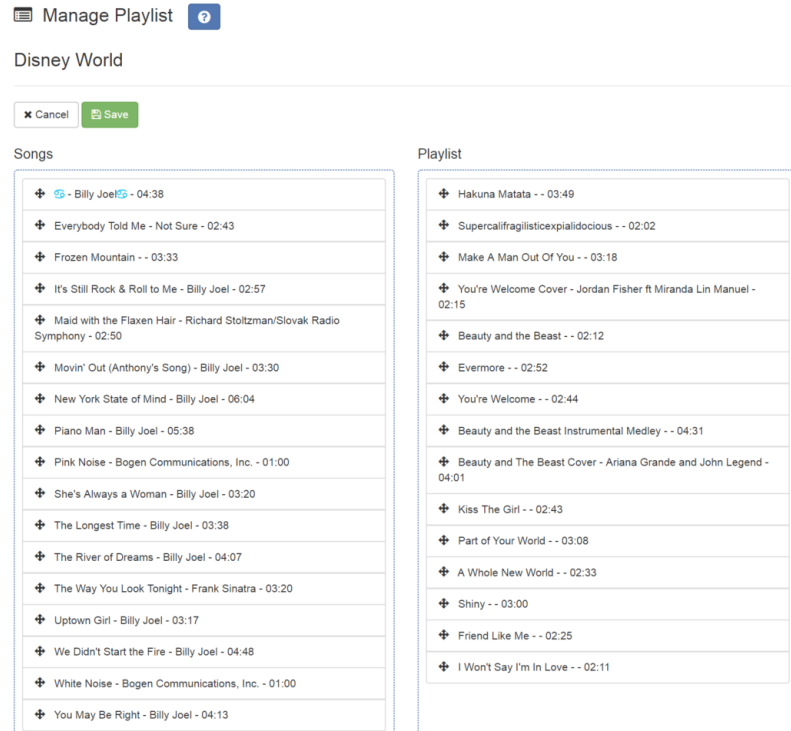


Figure 2-10, Manage Playlist Page

To add songs to a playlist:

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Playlists**.
- Step 3 On the Playlists page, select the **Manage** icon next to the playlist that you want to add songs to.
- Step 4 On the Manage Playlists page, drag and drop the song you want to add from the Songs field to the Playlist field.
- Step 5 After all desired songs have been added to the Playlist, select **Save**.

### 2.3.4 Changing Song Order in a Playlist

You can use the Manage tool to change the order of songs in a playlist.

*To change the song order:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Playlists**.
- Step 3 On the Playlists page, select the **Manage** icon next to the playlist for which you want to change song order.
- Step 4 On the Manage Playlists page, drag and drop the songs into the order that you want.
- Step 5 Select **Save**.

### 2.3.5 Deleting a Song from a Playlist

You can use the Manage tool to remove a song from a playlist.

*To delete a song from a playlist:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Playlists**.
- Step 3 On the Playlists page, select the **Manage** icon next to the playlist.
- Step 4 Drag and drop the song from the Playlist field to the Songs field.
- Step 5 After all desired changes are completed, select **Save**.

### 2.3.6 Editing a Playlist

The **Edit** icon allows you to edit the parameters for a playlist. To change the order of songs in a playlist, see "*Adding Songs to a Playlist*" on page 23. To delete a song from a song list, see "*Deleting a Song from a Playlist*" on page 24.

*To edit a playlist:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Playlists**.
- Step 3 Select the **Edit** icon next to the playlist.

Step 4 On the Edit Playlist page, make desired changes to the parameters. (For more information about the parameters, see "Add Playlist Parameters" on page 22.)

Step 5 Select **Save**.

### 2.3.7 Deleting a Playlist

You can delete a playlist provided the playlist is not being used with an I/O Controller Input or Output Rule.

*To delete a playlist:*

Step 1 On the navigation bar, expand **Audio**.

Step 2 Select **Playlists**.

Step 3 Select the **Delete** icon next to the playlist.

Step 4 When prompted, select **Delete**.

## 2.4 Using Internet Radio Services

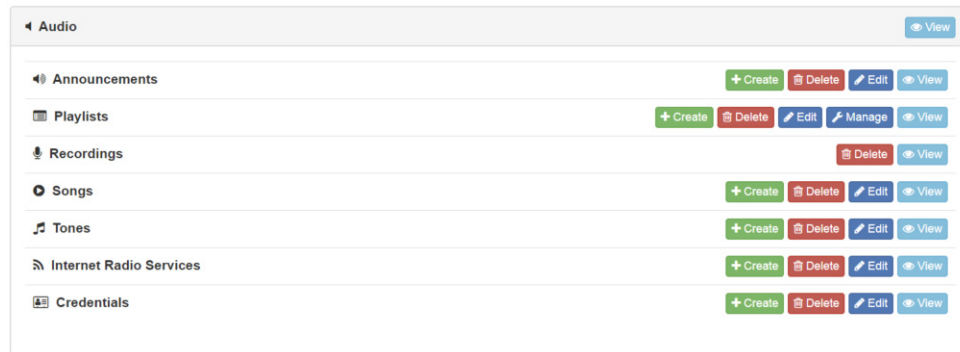
Through the Internet Radio Services, you can add online content, such as music services and Internet radio, using Airable by TuneIn. With this service, you can listen to live radio stations and add media catalogs and music services without updating devices or software.

You can navigate through the catalog of radio stations by:

- Genre
- Language
- Location
- Quality
- Popularity

You can also search the catalog for particular artists or songs.

Being able to use the Internet Radio Services feature depends on the permissions assigned to the role you are associated with.

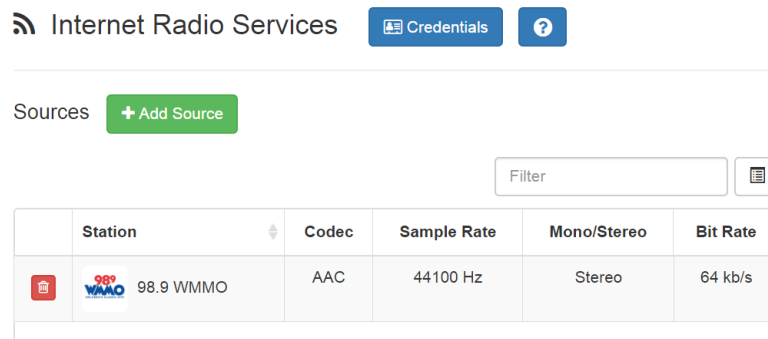


**Figure 2-11, Internet Radio Services Permissions**

For information about assigning permissions to roles, refer to the *Nyquist C4000 System Administrator Manual*.

## 2.4.1 Viewing Internet Radio Services

If you have **View** permission for the Internet Radio Services, you can view a list of radio stations that can be accessed through your system as well as information about each station. Through the Internet Radio Services page, you can also select to manage credentials for services such as SOUNDMACHINE. (See "Managing Credentials" on page 30.)



**Figure 2-12, Internet Radio Services View**

To view Internet Radio Services added to your system:

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Internet Radio Services**.

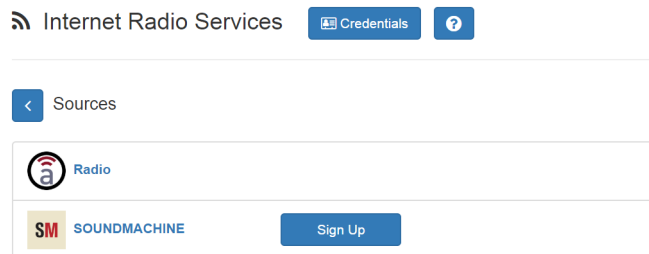
The following parameters appear for each source configured for your C4000 system:

**Table 2-6, Internet Radio Services**

<b>Station</b>	Displays the icon, name, and description of the radio station.
<b>Codec</b>	Displays how the streaming media is compressed and decompressed.
<b>Sample Rate</b>	Displays the number of samples of audio carried per second.
<b>Mono/Stereo</b>	Displays if the signal is being transmitted by a single channel (mono) or by two channels (stereo).
<b>Bit Rate</b>	Displays the bit rate used to transmit the streaming media.

## 2.4.2 Adding a Source

You can select to add an Internet radio source or a service, such as SOUNDMACHINE. The screen that appears when you select **Add Sources** also allows you to manage credentials or sign up for SOUNDMACHINE.



**Figure 2-13, Add Source Page**

*To add a source:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Internet Radio Services**.
- Step 3 On the Internet Radio Services window, select **Add Sources**.
- Step 4 Select from the list of Sources.
- Step 5 If you select **Radio**, do the following:
  - a Select how you want to select a source. Options are:

**Table 2-7, Radio Source Parameters**

<b>Local stations</b>	Select to view a list of stations near your location.
<b>Popular stations</b>	Select to view stations considered to be the most popular.
<b>Trending</b>	Select to view the stations that are gaining momentum.
<b>High quality</b>	Select to view the stations with a high sound quality.
<b>New stations</b>	Select to filter the list of stations by new stations added to Internet Radio Services.
<b>Filter</b>	Select to filter the list of stations by <b>Location</b> , <b>Language</b> , or <b>Genre</b> .
<b>Search</b>	Select to enter a search term.

- b When the list of stations that meet the selected criteria appear, select the station that you want.
- c Select **Add Source** for each source (aac or mp3) that you want.

- Step 6 If you select **SOUNDMACHINE**, do the following:
- a Select how you want to open a source. Selections are:



<b>Genres</b>	Displays a list of genres, such as <b>Blues</b> and <b>Pop</b> , which you can select to drill down genre choice even further.
<b>Stations</b>	Displays categories for stations, such as <b>Country</b> , which you can select to drill down to select a specific album or song.
<b>My Stations</b>	Displays radio stations that you added through the SOUNDMACHINE web site.
<b>Mixes</b>	Displays categories of stations that combine, or mix, music genres. You can select to drill down to a specific album or song.
<b>Music Selection Schedules</b>	<p>Displays the Schedules that have been created through SOUNDMACHINE. (See "<i>Using SOUNDMACHINE Music Selection Schedules</i>" on page 34.)</p> <p>Schedules allow the playing of specific stations or mixes during specific times of the day. For example, you can play soft jazz music during morning hours and select a different genre mix for mid-day.</p> <p>When you create a Music Selection Schedule, you cannot have any empty time periods or Audio Distribution will stop when the empty time period is encountered.</p> <p>The Music Selection Schedules that you create appear as <b>Line-Input/Playlist/Source</b> selections for Audio Distribution.</p>
<b>Logout</b>	Select to log out of SOUNDMACHINE.

- b Drill down until you can select a specific album or song.
- c Select **Add Source**.

## 2.4.3 Deleting a Source

*To delete a source:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Internet Radio Services**.
- Step 3 On the Internet Radio Services window, select the **Delete** icon next to the source that you want to delete.
- Step 4 When prompted, select **Delete**.

## 2.4.4 Managing Credentials

If you have been assigned permissions, you can view, add, edit, and delete logon credentials needed to access the SOUNDMACHINE service.

For information about roles and permissions, refer to the *Nyquist C4000 System Administrator Manual*.

### 2.4.4.1 Viewing Credentials

The Credentials list allows a quick view of the users who have logon credentials.

*To view the Credentials list:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Internet Radio Services**.
- Step 3 Select **Credentials**.

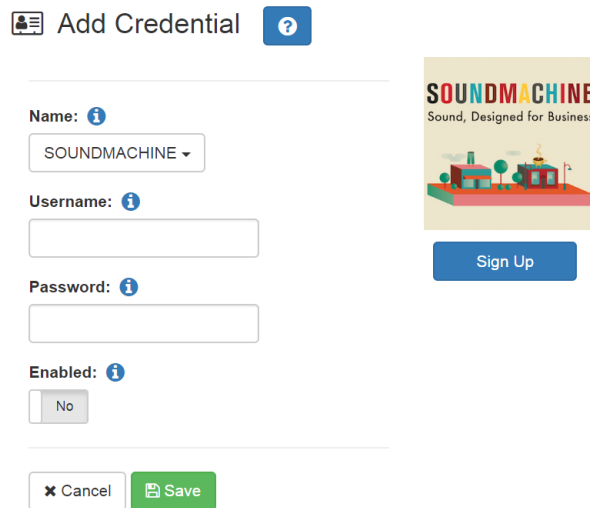
The Credentials list displays the following information:

**Table 2-8, Credentials Parameters**

<b>Name</b>	Displays the name of the service, such as SOUNDMACHINE.
<b>Enabled</b>	Indicates if the account is enabled for this service.
<b>Username</b>	Provides the <b>Username</b> for the account.

## 2.4.4.2 Add Credentials

You can create a user account that allows a user to use an Internet Radio Service, such as SOUNDMACHINE. You can also use the Add Credential page to sign up for SOUNDMACHINE.



The screenshot shows a web interface for adding a credential. At the top, there is a header "Add Credential" with a question mark icon. Below this, there are four labeled input fields: "Name:" with a dropdown menu showing "SOUNDMACHINE"; "Username:" with an empty text box; "Password:" with an empty text box; and "Enabled:" with a radio button set where "No" is selected. To the right of these fields is a graphic for "SOUNDMACHINE" with the tagline "Sound, Designed for Business" and a "Sign Up" button. At the bottom of the form are two buttons: "Cancel" and "Save".

**Figure 2-14, Add Credential**

*To create an account:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Internet Radio Services**.
- Step 3 Select **Credentials**.
- Step 4 Select the **Add** icon.
- Step 5 Complete the following parameters:

**Table 2-9, Add Credential Parameters**

<b>Name</b>	Use the drop-down arrow to select the name of the service.
<b>Username</b>	Enter the username for this account.
<b>Password</b>	Enter the password for this account.
<b>Enabled</b>	Select <b>Yes</b> to enable this account.

### 2.4.4.3 Edit Credential

If you have the appropriate permissions, you can edit a user's credentials for accessing SOUNDMACHINE, including viewing or changing a user's password and enabling or disabling their use of the service.

**Edit Credential** ?

Name: ⓘ  
SOUNDMACHINE ▾

Username: ⓘ  
jdisalvo@bogen.com

Password: ⓘ  
 Show Saved Password

Enabled: ⓘ  
 Yes

✕ Cancel Save

**Figure 2-15, Edit Credential**

*To edit an account:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Internet Radio Services**.
- Step 3 Select **Credentials**.
- Step 4 Select the **Edit** icon next to the account that you want to edit.
- Step 5 Make the desired changes. (See "*Edit Credentials Parameters*" on page 32.)
- Step 6 Select **Save**.

**Table 2-10, Edit Credentials Parameters**

<b>Name</b>	Use the drop-down arrow to select the name of the service.
<b>Username</b>	Enter the username for this account.

**Table 2-10, Edit Credentials Parameters**

<b>Password</b>	Enter the password for this account.  Select <b>Show Saved Password</b> to view an existing password for the account being edited.
<b>Enabled</b>	Select <b>Yes</b> to enable this account.

#### **2.4.4.4 Delete Credentials**

You can delete a user's credentials to access SOUNDMACHINE.

*To delete an account:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Internet Radio Services**.
- Step 3 Select **Credentials**.
- Step 4 Select the **Delete** icon next to the account that you want to edit.
- Step 5 When prompted, select **Delete**.

#### **2.4.5 SOUNDMACHINE Sign Up**

You can sign up for SOUNDMACHINE via the Add Source (see "Adding a Source" on page 27) or Add Credential (see "Add Credentials" on page 31) windows.

*To sign up for SOUNDMACHINE:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Internet Radio Services**.
- Step 3 Do one of the following:
  - Select **Add Source**.
  - Select **Credentials** and then select the **Add** icon.
- Step 4 Select **Sign Up**.
- Step 5 When the SOUNDMACHINE and BOGEN page appears, follow the on-screen instructions.

## 2.4.6 Using SOUNDMACHINE Music Selection Schedules

**Schedules** that you create using the SOUNDMACHINE web-based user interface appear as **Music Selection Schedules** in the C4000 Admin Web UI. You can select a Music Selection Schedule to play as Audio Distribution.

When you create a Music Selection Schedule, you cannot have any empty time periods or Audio Distribution will stop when the empty time period is encountered.

You cannot name a Music Selection Schedule using all special characters; the name must contain at least one alpha or numeric character or the Music Selection Schedule will not appear.

Scheduled Audio takes priority over a Music Selection Schedule.

## 2.5 Creating an Audio Distribution

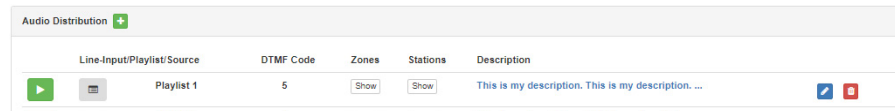
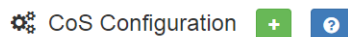


Figure 2-16, Audio Distribution Portion of Dashboard

To use the Audio Distribution feature, you must have the proper CoS configuration on your station.













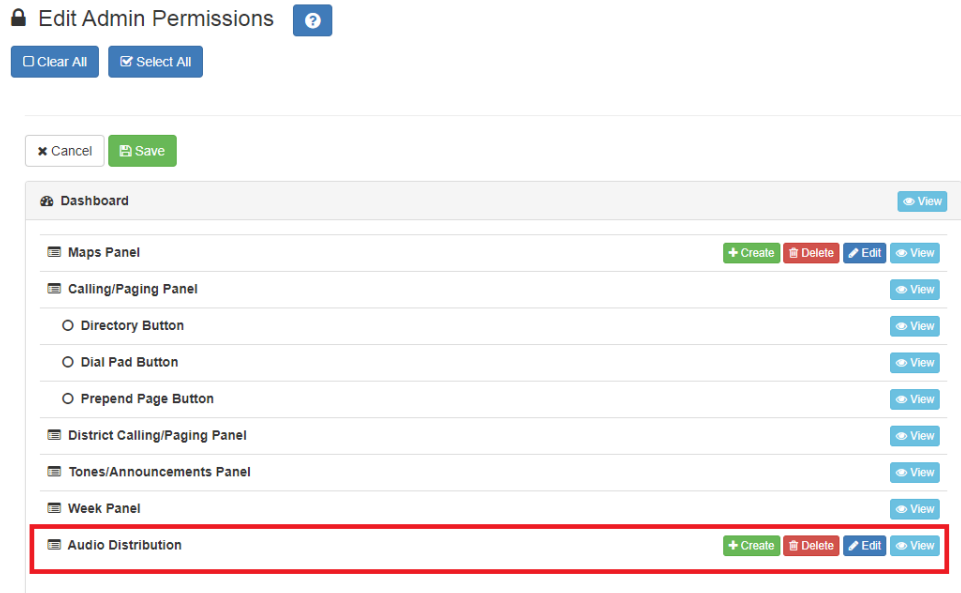
	Name	Call in Level	Zone Paging	All-Call Paging	Emergency All-Call	Inter-Facility Call/Page	Audio Distribution
 	Admin	Urgent+Emergency	Yes	Yes	Yes	Yes	Yes
 	Station	Normal+Emergency	No	No	No	No	No
 	No Privs	Normal+Emergency	No	No	No	No	No
 	Chrome	Normal+Emergency	Yes	Yes	No	No	No
 	tomtest	Normal+Emergency	Yes	Yes	Yes	Yes	Yes

Figure 2-17, Audio Distribution Set in CoS

You must also be assigned a Role that has permissions to create Audio Distribution.



**Figure 2-18, Role Permissions for Audio Distribution**

Create an Audio Distribution

---

Line-Input/Playlist/Source:

Zones:

Stations:

Description:

---

**Figure 2-19, Create an Audio Distribution**

To create an Audio Distribution:

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Select the **Add** icon next to **Audio Distribution**.
- Step 3 Complete the Create an Audio Distribution parameters (see "Create an Audio Distribution Parameters" on page 36).

*Note:* If you are using at least one C4000 Matrix Mixer Pre-Amp, Line-Input appears as a Line-Input/Playlist/Source option.

- Step 4 Select the **Zones** and **Stations**.
- Step 5 If you select **Line-Input** as the Input Source/Playlist, select the **Amplifiers/Matrix Mixers** and **Input Channel**.
- Step 6 If you select a playlist and want to shuffle the song order, set **Shuffle** to **Yes**.
- Step 7 Select **Save**.
- Step 8 To end the playing of audio, select the **Stop** icon next to the playlist.

**Table 2-11, Create an Audio Distribution Parameters**

<b>Line-Input/Playlist/Source</b>	Use the <b>Line-Input/Playlist/Source</b> drop-down menu to select the audio source. Audio sources can include a line-input from an MMPA or amplifier, available playlists previously created for your system, or Internet radio station sources.
<b>Zones</b>	Select <b>All Speakers</b> or a specific zone or zones where you want the audio to play.
<b>Stations</b>	Select the stations where you want the audio to play.



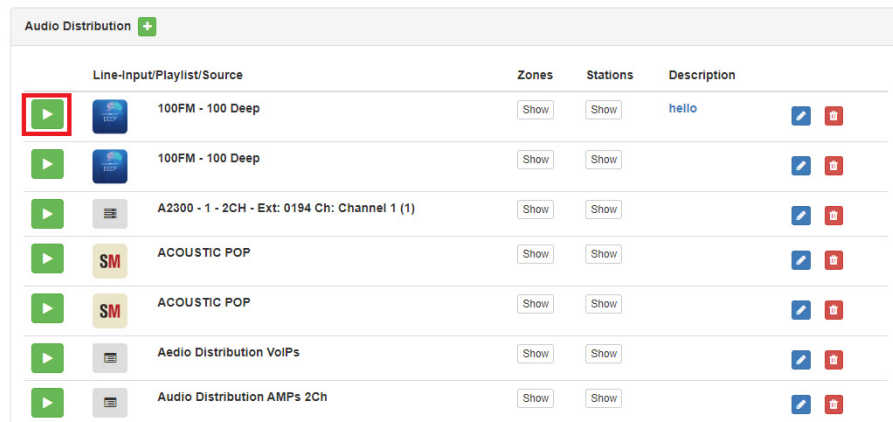
**Table 2-11, Create an Audio Distribution Parameters (Continued)**

<b>Shuffle</b>	If you select a playlist and want to shuffle the song order, set <b>Shuffle</b> to <b>Yes</b> .
<b>Description</b>	Add a description for the Audio Distribution. For example, you may want to note that the audio is for lunchtime.

## 2.6 Starting and Stopping Audio Distribution

Starting and stopping Audio Distribution can be done either manually via your dashboard or automatically either through scheduled events or routines.

A list of existing Audio Distributions appears on the dashboard. An existing Audio Distribution can be edited or deleted, provided it is not currently playing, by selecting the **Edit** or **Delete** icon next to the Audio Distribution.



**Figure 2-20, Audio Distribution Play Icon**

*To manually start and stop Audio Distribution:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Select the **Play** icon next to the Audio Distribution that you want to launch.

Step 3 To end the playing of audio, select the **Stop** icon next to the playlist.

The screenshot shows the 'Add Event' configuration window. At the top, there is a '+ Add Event' button and a help icon. The 'Name' field contains 'Lunch Time Music'. The 'Signal Time' section has three dropdown menus for 'Hour' (11), 'Minute' (30), and 'Second' (0). The 'Zones' section contains two selected zones: 'Zone-120: Zone 20 - VoIPs' and 'Zone-132: Zone 32 - Amplifiers 2Ch', with 'Clear' and 'Add All' buttons to the right. The 'Tone' dropdown is set to '1-Second'. The 'Scheduled Audio' dropdown is open, showing a list of options: 'None', 'Start Line-Input', 'Stop Line-Input', 'Stop Playlist', 'Stop 100FM - 100 Deep (Z: Zone 32 - Amplifiers 2Ch)', 'Stop Chill (Z: Zone 20 - VoIPs)', 'Aedio Distribution VoIPs', 'Audio Distribution AMPs 2Ch', 'Audio Distribution AMPs 4Ch', 'Audio Distribution ASBs', 'Disney World', and 'Fiddle Faddle'.

**Figure 2-21, Adding Scheduled Audio**

To automatically schedule audio as part of an event, follow the steps for creating an event, ensuring that you set the **Scheduled Audio** for the playlist, Matrix Mixer Pre-Amp channel, or amplifier to be used for this event. For information about creating an event, refer to the *Nyquist C4000 System Administrator Manual*.

You can also select to stop the **Scheduled Audio** by selecting **Stop Playlist** or **Stop Line-Input**.

If an Airable/SOUNDMACHINE source is selected, the Scheduled Audio list includes selections to start or stop the audio stream. This list only includes Airable/SOUNDMACHINE selections that apply to the specific zone. If the Audio Distribution zone selected includes a time zone and another zone type, such as Paging, that is not for time, the audio distribution does not appear in this **Scheduled Audio** list.

⊕ Edit Trigger - Lunch Time Music ⓘ

Name: ⓘ  
New Trigger

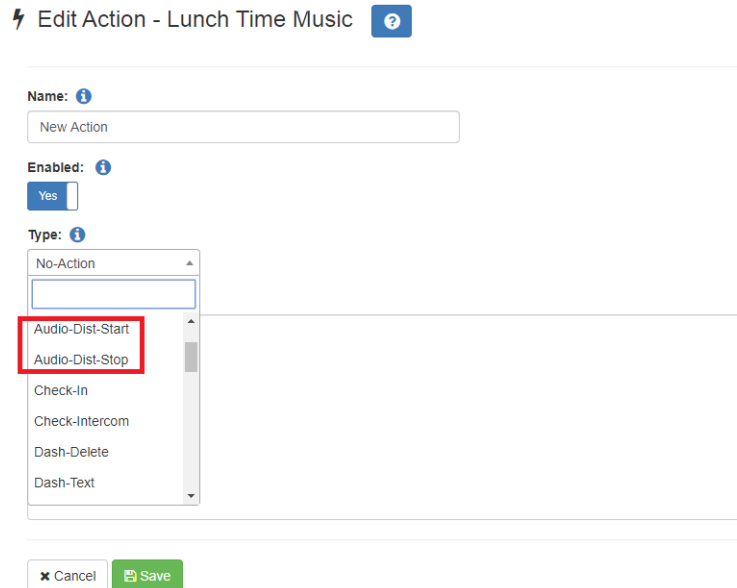
Enabled: ⓘ  
 Yes

Type: ⓘ  
911  
911  
Alarm  
All-Call  
Announcement  
**Audio-Dist**  
Audio-Disabled

✕ Cancel Save

**Figure 2-22, Adding Audio-Dist Trigger**

The Routines feature lets you automatically launch one or more actions using Audio Distribution (Audio-Dist) as a trigger. For example, maybe you want a bell or tone to sound in the kitchen when the lunchtime music begins to alert kitchen staff that orders will soon be coming. To do this, you can create a routine, add an **Audio-Dist** trigger **Type**, and then create an action that plays a tone. For information about creating a routine, refer to the *Nyquist C4000 System Administrator Manual*.



**Figure 2-23, Audio Distribution Actions**

You can create a routine with an action of either **Audio-Dist-Start** to start audio distribution or **Audio-Dist-Stop** to stop audio distribution.

You can also allow third-party systems, such as access control systems, to launch a routine via I/O Controller Input Contact closure, or you can remotely launch a routine using the Routines API.

### **2.6.1 Other Features and Audio Distribution**

Audio Distribution will be paused automatically by higher priority feature activation (for example, All-Call Page, Paging, Tones) and will automatically resume when the higher priority feature is finished.

Audio Distribution volume to all speakers can be changed by setting **Audio Distribution Cut Level (dB)**, available in **System Parameters**. The Audio Distribution volume to zones can be changed by setting **Audio Distribution Cut Level (dB)** in **Edit Zone**. For more information, refer to the *Nyquist C4000 System Administrator Manual*.

All C4000 stations are pre-programmed to receive Audio Distribution to All Stations. To disable Audio Distribution to a specific station, change **Multicast Audio Distribution** to **No** on the Edit Station page (refer to the *Nyquist C4000 System Administrator Manual*).

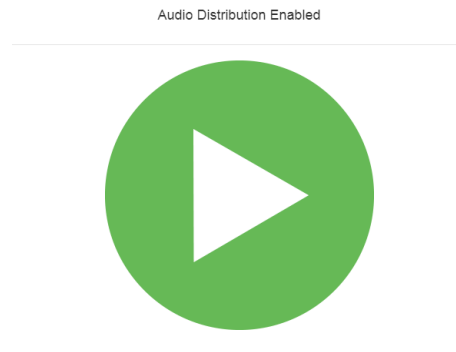
Any Admin web UI user may stop the Audio Distribution if his or her station has the **Audio Distribution** CoS Configuration parameter enabled.

Scheduled Audio has a higher priority than Audio Distribution. If you are playing Audio Distribution and an event with Scheduled Audio interrupts, the Audio Distribution briefly plays between the tone and the Scheduled Audio.

A playlist will continue playing until manually stopped.

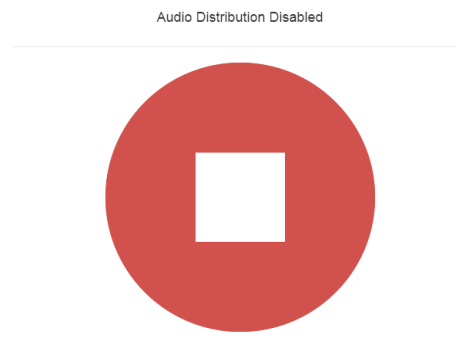
## 2.6.2 Audio Distribution Status

When you start Audio Distribution, a popup window appears letting you know that Audio Distribution was enabled.



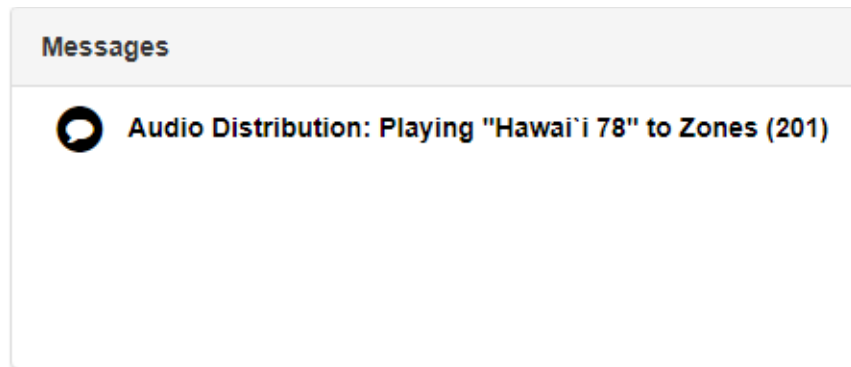
**Figure 2-24, Audio Distribution Enabled**

A popup window also appears when you stop Audio Distribution.



**Figure 2-25, Audio Distribution Disabled**

When Audio Distribution is enabled, an informational message appears in the Messages window of the Admin Web UI dashboard, indicating the song that is currently playing and to which speakers (all or selected) and to which zones audio is playing to.



**Figure 2-26, Audio Distribution Status**

# 3

## Managing Announcements

*Note:* Make sure that stations and zones have been configured and that the station you are using to launch an announcement has the appropriate Class of Service (CoS) parameters set. The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.

Announcements are pre-recorded audio files that can be scheduled to play during specific times and in specific zones, played manually via the dashboard or played via routine actions. Announcements can be either normal announcements, such as pre-recorded announcements about upcoming site events, or emergency announcements, such as pre-recorded shelter in place announcements that can be played during events such as tornado warnings or active shooter scenarios.

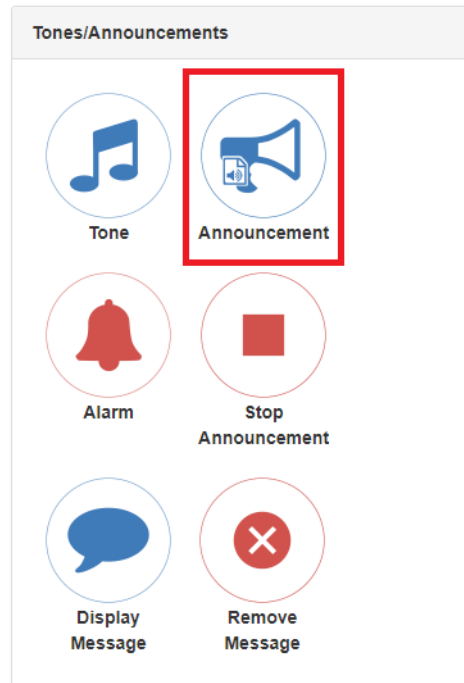
Announcements can also precede a page.

### 3.1 Starting and Stopping Announcements

You can launch previously recorded announcements from the dashboard and select the zone where the announcement will play.

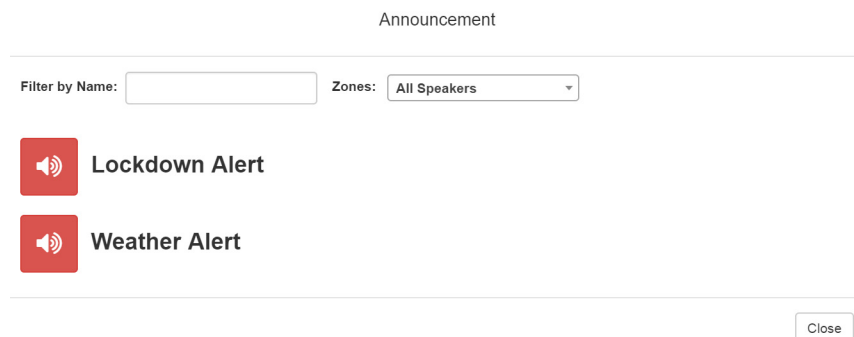
To start and stop an announcement:

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 3-1, Announcement Icon**

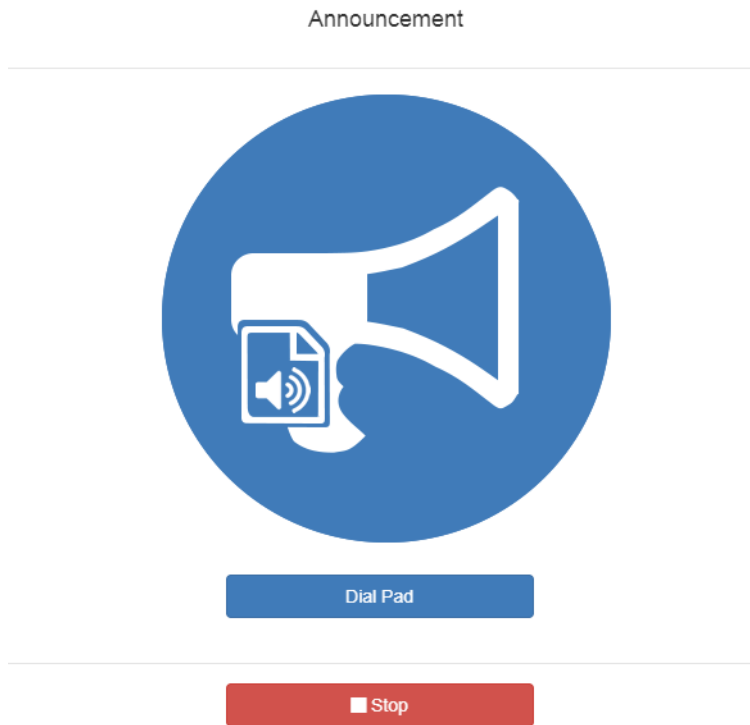
- Step 2 Under **Tones/Announcements**, select **Announcement**.



**Figure 3-2, Announcement Page**



- Step 3 On the Announcement page, use the **Zones** drop-down menu to select the zone where the announcement will play.
- Step 4 Select the announcement that you want to launch.



**Figure 3-3, Announcement Page With Stop Button**

- Step 5 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.
- Step 6 If prompted, enter 1 for confirmation.
- Step 7 To end the announcement, select **Stop**.
- Step 8 You can also stop an announcement by performing the following steps:
- a Under **Tones/Announcements**, select **Stop Announcement**.
  - b Follow screen prompts.

An announcement will end automatically after it has reached its number of times to play.

If multiple announcements are playing, you can select to stop a specific announcement or to stop all active announcements.

*To stop an announcement when multiple announcements are running:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Under **Tones/Announcements**, select **Stop Announcement**.
- Step 3 On the Stop Announcement page, select the announcement that you want to stop or select **Stop All Announcements**.
- Step 4 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.

## 3.2 Announcements, Zones, and Priorities

You can select a zone for an announcement to play or select to play an announcement to all speakers. The C4000 system also supports the simultaneous playing of multiple announcements to different zones.

However, there are some set rules and priorities that govern how and when announcements play. For example, announcements played via an I/O controller can be played to a selected zone but not to **All Speakers**.

When you attempt to play a non-emergency, or **Normal**, announcement to a zone, you will receive a busy signal if any of the following are true:

- An announcement, page, or recorded page is being played on the zone.
- An announcement is being played to **All Speakers**.
- An Alarm, Tone, All-Call, or Emergency All-Call is being played.

A **Normal** announcement plays to **All Speakers** only if all zones are idle and no higher level audio is playing. You will receive a busy signal if any of the following are true:

- A **Normal** or **Emergency** announcement is already playing to **All Speakers**.
- An announcement is already playing to a zone.

- A page or queued page is already playing to a zone.
- An Emergency-All-Call, All-Call, Alarm, or Tone is already playing.

If you attempt to play an emergency announcement to a zone or to **All Speakers**, you will receive a busy signal if any of the following are true:

- An emergency announcement is already playing to the zone or to **All Speakers**.
- An Emergency All-Call is already playing.

If you attempt to play an emergency announcement to a zone or to **All Speakers** that is already playing a non-emergency announcement, an alarm or tone, a page or queued page, or an All-Call, the emergency announcement takes priority. A currently playing non-emergency announcement, alarm or tone, page or queued page, or All-Call will stop playing.

An **Emergency** announcement can be played on a zone while a Normal announcement plays on a different zone. Multiple **Emergency** and **Normal** announcements can be played to different zones (but not to **All Speakers**).

### 3.3 Adding an Announcement

If the permission and CoS settings allow, you can upload an announcement, which can be an audio recording, such as a message or tone. The announcement can be scheduled to play at certain times and in certain zones.

Through the Add Announcement page, you can also enter text to be converted into speech provided you have the feature license that allows this option.

*Note:* The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.

🔊 Add Announcement ?

---

**File Upload** Text-to-Speech

Name:

Type:  
Normal ▾

DTMF Code:

File Upload:  
Choose a file ... **Choose File**

Times to Play: 1 ⓘ

Time Between Repeats (seconds): 1.0

Play to Zone: ⓘ

Description:

**Figure 3-4, Add Announcement Page**

*To upload an announcement file:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Announcements**.
- Step 3 On the Announcements page, select the **Add** icon.
- Step 4 Complete the parameters on the Add Announcement page. (See "Add Announcement Page Parameters" on page 49.)
- Step 5 Select **Save**.

**Table 3-1, Add Announcement Page Parameters**

<b>Name</b>	<p>Provide a name for the announcement.</p> <p><i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: <b>!@\$*?-. ,</b>.</p>
<b>Type</b>	<p>Use the drop-down menu to select if the announcement is Normal or Emergency.</p>
<b>DTMF Code</b>	<p>Provide a DTMF code for this announcement to use when manually starting the announcement from an Admin Phone. The number can have from 1 to 10 digits. You cannot assign the same DTMF code to multiple announcements.</p> <p><i>Note:</i> When you record an announcement by dialing *990 or by selecting <b>Record Announcement</b> on the Admin phone's <b>Announce</b> menu, the initial DTMF Code for the recorded and saved announcement will be set to the announcement's row ID. You can change the DTMF Code after the announcement is saved by editing the announcement in the Admin Web Interface <b>Announcements</b> view.</p> <p>The saved announcement has <b>Play to Zone</b> set to blank (no zone selected). This means that when you play an announcement via an IP phone <b>Announcement</b> menu selection, you will be asked to enter a zone number (where 0 = All Speakers). You can define a permanent zone number for the saved announcement by updating <b>Play to Zone</b> after the recorded announcement has been saved.</p>
<b>File Upload</b>	<p>Select <b>Choose File</b>, navigate to the audio file for this announcement, and then select the file. C4000 supports both WAV and MP3 file formats.</p> <p><i>Note:</i> This option only appears if you have selected the <b>File Upload</b> tab.</p>
<b>Times to Play</b>	<p>Select the number of times the announcement will play. Parameters are between 0 and 10.</p> <p><i>Note:</i> A setting of 0 results in the playing continuously until it is manually stopped via the dashboard.</p>

**Table 3-1, Add Announcement Page Parameters (Continued)**

<b>Time Between Repeats (seconds)</b>	Select the time in seconds between replaying of the announcement. You can select between 0.5 to 5 in 0.5 increments.
<b>Text-To-Speech</b>	Type the text that you want converted to speech for this announcement. Ensure that the <b>File Upload</b> parameter is blank. The system will generate a .wav file.  <i>Note:</i> This field only appears if you have the Text-To-Speech feature license.
<b>Play to Zone</b>	Select either <b>All Speakers</b> or a specific zone for this announcement to play.  <i>Note:</i> If the <b>Type</b> for the station is set to <b>Admin Web Interface, Admin Phone, IP Phone, Analog Phone, or Mobile Device</b> and an <b>Announcement Zone</b> was set for the station, the <b>Announcement Zone</b> overrides the <b>Play to Zone</b> .
<b>Description</b>	Provide a description of the announcement.  <i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: !@\$*?-. ,.

## 3.4 Using SSML for Text-to-Speech Entries

You can use Speech Synthesis Markup Language (SSML), an XML-based markup language for speech synthesis applications, when typing text that you want converted to speech for announcements. You can use SSML formatting to insert pauses, adjust speech rate, adjust voice pitch, adjust output volume, add emphasis to speech, or spell words phonetically. The following table provides examples of SSML formats that can be used when adding announcements.

**Table 3-2, SSML Formats for Text-to-Speech Entries**

**Insert Silence/Pauses**

- This is not `<break strength='none' />` a pause.
- This is a `<break strength='x-weak' />` phrase break.
- This is a `<break strength='weak' />` phrase break.
- This is a `<break strength='medium' />` sentence break.
- This is a `<break strength='strong' />` paragraph break.
- This is a `<break strength='x-strong' />` paragraph break.
- This is a `<break time='3s' />` three second pause.
- This is a `<break time='4500ms' />` 4.5 second pause.
- This is a `<break />` sentence break.

**Adjust Speech Rate**

- I am now `<prosody rate='x-slow'>`speaking at half speed.`</prosody>`
- I am now `<prosody rate='slow'>`speaking at 2/3 speed.`</prosody>`
- I am now `<prosody rate='medium'>`speaking at normal speed.`</prosody>`
- I am now `<prosody rate='fast'>`speaking 33% faster.`</prosody>`
- I am now `<prosody rate='x-fast'>`speaking twice as fast`</prosody>`
- I am now `<prosody rate='default'>`speaking at normal speed.`</prosody>`
- I am now `<prosody rate='.42'>`speaking at 42% of normal speed.`</prosody>`
- I am now `<prosody rate='2.8'>`speaking 2.8 times as fast`</prosody>`
- I am now `<prosody rate='-0.3'>`speaking 30% more slowly.`</prosody>`
- I am now `<prosody rate='+0.3'>`speaking 30% faster.`</prosody>`

**Table 3-2, SSML Formats for Text-to-Speech Entries (Continued)**

**Adjust Voice Pitch**

- `<prosody pitch='x-low'>This is half-pitch</prosody>`
- `<prosody pitch='low'>This is 3/4 pitch.</prosody>`
- `<prosody pitch='medium'>This is normal pitch.</prosody>`
- `<prosody pitch='high'>This is twice as high.</prosody>`
- `<prosody pitch='x-high'>This is three times as high.</prosody>`
- `<prosody pitch='default'>This is normal pitch.</prosody>` `<prosody pitch='-50%'>This is 50% lower.</prosody>`
- `<prosody pitch='+50%'>This is 50% higher.</prosody>`
- `<prosody pitch='-6st'>This is six semitones lower.</prosody>`
- `<prosody pitch='+6st'>This is six semitones higher.</prosody>`
- `<prosody pitch='-25Hz'>This has a pitch mean 25 Hertz lower.</prosody>`
- `<prosody pitch='+25Hz'>This has a pitch mean 25 Hertz higher.</prosody>`
- `<prosody pitch='75Hz'>This has a pitch mean of 75 Hertz.</prosody>`



**Table 3-2, SSML Formats for Text-to-Speech Entries (Continued)**

<b>Adjust Output Volume</b>	<ul style="list-style-type: none"><li>• <code>&lt;prosody volume='silent'&gt;This is silent.&lt;/prosody&gt;</code></li><li>• <code>&lt;prosody volume='x-soft'&gt;This is 25% as loud.&lt;/prosody&gt;</code></li><li>• <code>&lt;prosody volume='soft'&gt;This is 50% as loud.&lt;/prosody&gt;</code></li><li>• <code>&lt;prosody volume='medium'&gt;This is the default volume.&lt;/prosody&gt;</code></li><li>• <code>&lt;prosody volume='loud'&gt;This is 50% louder.&lt;/prosody&gt;</code></li><li>• <code>&lt;prosody volume='x-loud'&gt;This is 100% louder.&lt;/prosody&gt;</code></li><li>• <code>&lt;prosody volume='default'&gt;This is the default volume.&lt;/prosody&gt;</code></li><li>• <code>&lt;prosody volume='-33%'&gt;This is 33% softer.&lt;/prosody&gt;</code></li><li>• <code>&lt;prosody volume='+33%'&gt;This is 33% louder.&lt;/prosody&gt;</code></li><li>• <code>&lt;prosody volume='33%'&gt;This is 33% louder.&lt;/prosody&gt;</code></li><li>• <code>&lt;prosody volume='33'&gt;This is 33% of normal volume.&lt;/prosody&gt;</code></li></ul>
<b>Add Emphasis to Speech</b>	<ul style="list-style-type: none"><li>• This is <code>&lt;emphasis level='strong'&gt;stronger&lt;/emphasis&gt;</code> than the rest.</li><li>• This is <code>&lt;emphasis level='moderate'&gt;stronger&lt;/emphasis&gt;</code> than the rest.</li><li>• This is <code>&lt;emphasis level='none'&gt;the same as&lt;/emphasis&gt;</code> than the rest.</li></ul>
<b>Spell Words Phonetically</b>	<p>You say <code>&lt;phoneme ph='t ah0 m ey1 t ow0'&gt;tomato&lt;/phoneme&gt;</code>, I say <code>&lt;phoneme ph='t ah0 m aa1 t ow0'&gt;tomato&lt;/phoneme&gt;</code></p>

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## 3.5 Viewing Announcements

*Note:* The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.

Through the Announcements page, you can view a list of all announcements that are available for scheduling, delete an announcement, and select to edit or add an announcement.

	Name	Type	DTMF Code	Creation Date/Time	Created By	Times to Play	Time Between Repeats (seconds)	Play to Zone	Description	Playback
	Lockdown Alert	Emergency	55	Jul 08, 2019 - 9:37am	0	Continuously	1.0	All Speakers	Show	▶ 0:00 / 0:04
	Weather Alert	Emergency	66	Jul 08, 2019 - 9:37am	0	Continuously	1.0	All Speakers	Show	▶ 0:00 / 0:06
	Test	Normal	77	Sep 17, 2019 - 11:00am	0100	1	1.0		Show	▶ 0:00 / 1:00

**Figure 3-5, Announcements Page**

To view a list of all announcements that are available for scheduling:

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Announcements**.

The following parameters appear for each announcement file:

**Table 3-3, Announcements Page Parameters**

<b>Name</b>	Displays the user provided name of the announcement file.  <i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: <b>!@\$*?-. ,</b> .
<b>Type</b>	Displays if the announcement is a <b>Normal</b> or an <b>Emergency</b> announcement.
<b>DTMF Code</b>	Displays the DTMF code used with manual dial pad announcement or tone activation.

**Table 3-3, Announcements Page Parameters (Continued)**

<b>Creation Date/Time</b>	Displays when the announcement was created.
<b>Created By</b>	Displays the extension that is to be considered the source of the announcement for CoS considerations.
<b>Times to Play</b>	Displays the number of times the announcement will play. This number can range from 0 through 10.  <i>Note:</i> A setting of 0 results in the announcement playing continuously until it is manually stopped via the dashboard.
<b>Times Between Repeats (seconds)</b>	Displays the time in seconds before replaying the announcement.
<b>Play to Zone</b>	Displays either <b>All Speakers</b> or a specific zone for this announcement to play.  <i>Note:</i> If the <b>Type</b> for the station is set to <b>Admin Web Interface, Admin Phone, IP Phone, Analog Phone, or Mobile Device</b> and an <b>Announcement Zone</b> was set for the station, the <b>Announcement Zone</b> overrides the <b>Play to Zone</b> .
<b>Description</b>	Provides a description of the announcement.  <i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: <b>!@\$*?-. ,</b> .
<b>Playback</b>	Allows you to manually play the announcement. Selecting the <b>Menu</b> icon and then the down arrow in this field also allows you to download and save the announcement.

## 3.6 Editing Announcements

*Note:* The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.

From the Edit Announcement page, you can edit an audio file's parameters such as times to play.

To edit an announcement:

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Announcements**.
- Step 3 On the Announcements page, select the **Edit** icon next to the announcement that you want to edit.
- Step 4 Make the desired changes.
- Step 5 Select **Save**.

**Table 3-4, Edit Announcement Page Parameters**

<b>Name</b>	<p>Displays the user provided name of the announcement file.</p> <p><i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: <b>!@\$*?-. ,</b>.</p>
<b>Type</b>	<p>Indicates if the announcement is a <b>Normal</b> or an <b>Emergency</b> announcement.</p>
<b>DTMF Code</b>	<p>DTMF code for this announcement to use when manually starting the announcement from an Admin Phone. The number can have from 1 to 10 digits. You cannot assign the same DTMF code to multiple announcements.</p> <p><i>Note:</i> When you record an announcement by dialing *990 or by selecting <b>Record Announcement</b> on the Admin phone's <b>Announce</b> menu, the initial DTMF Code for the recorded and saved announcement will be set to the announcement's row ID. You can change the DTMF Code after the announcement is saved by editing the announcement in the Admin Web Interface <b>Announcements</b> view.</p> <p>The saved announcement has <b>Play to Zone</b> set to blank (no zone selected). This means that when you play an announcement via an IP phone <b>Announcement</b> menu selection, you will be asked to enter a zone number (where 0 = All Speakers). You can define a permanent zone number for the saved announcement by updating <b>Play to Zone</b> after the recorded announcement has been saved.</p>
<b>Created By</b>	<p>Displays the number for the station used to create or download the announcement.</p> <p><i>Note:</i> This field cannot be edited.</p>

**Table 3-4, Edit Announcement Page Parameters (Continued)**

<b>Times to Play</b>	Select the number of times the announcement will play. Parameters are between 0 and 10.  <i>Note:</i> A setting of 0 results in the playing continuously until it is manually stopped via the dashboard.
<b>Times Between Repeats (seconds)</b>	Select the time in seconds between replaying of the announcement. You can select between 0.5 to 5 in 0.5 increments.
<b>Play to Zone</b>	Select either <b>All Speakers</b> or a specific zone for this announcement to play. You can leave this field blank if you want the Nyquist server to prompt for a zone number to use whenever an announcement is started from an IP phone. This will allow callers to direct the announcement to any zone desired at the time it is played.  <i>Note:</i> If the <b>Type</b> for the station is set to <b>Admin Web Interface, Admin Phone, IP Phone, Analog Phone, or Mobile Device</b> and an <b>Announcement Zone</b> was set for the station, the <b>Announcement Zone</b> overrides the <b>Play to Zone</b> .
<b>Description</b>	Provides a description of the announcement.  <i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: !@\$*?-. ,.

## 3.7 Deleting an Announcement

*Note:* You cannot delete an announcement that is used in a routine with an **Announcement** action **Type**. (For more information about routines, refer to the *Nyquist C4000 System Administrator Manual*.)

To delete an announcement that is associated with a schedule, you must delete the schedule announcement first and then delete the announcement. To delete a schedule, contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.

*Note:* The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.

*To delete an announcement:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Announcements**.
- Step 3 On the Announcements page, select the **Delete** icon next to the announcement that you want to delete.
- Step 4 When prompted, select **Delete**.

# 4

## Managing Alarms and Tones

*Note:* Make sure that stations and zones have been configured and that the station you are using to launch an alarm or tone has the appropriate Class of Service (CoS) parameters set. The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.

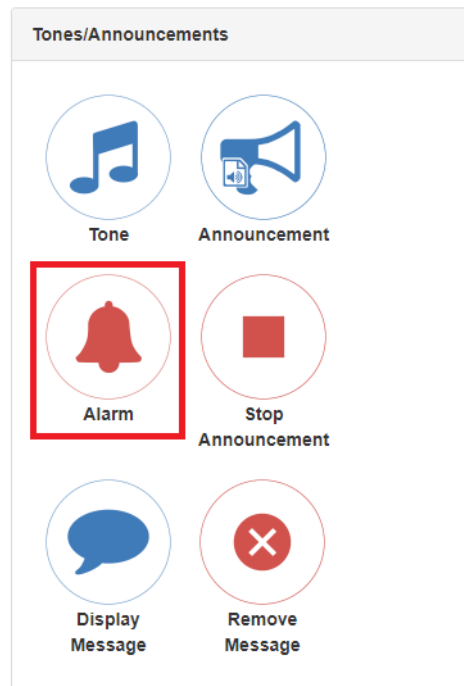
C4000 provides tones that can be used with events, such as schedules, or as audio indicators, such as alarms. You can also download and generate customized tones or select to use a line input channel as the tone source. Default tones include white noise and pink noise that you can use to tune paging volumes for time-based zones.

### 4.1 Stopping and Starting Alarms

Alarms are audio files used to indicate a situation, such as a fire. When you elect to sound an alarm, only the tones with a type of **Alarm** appear in the selection list.

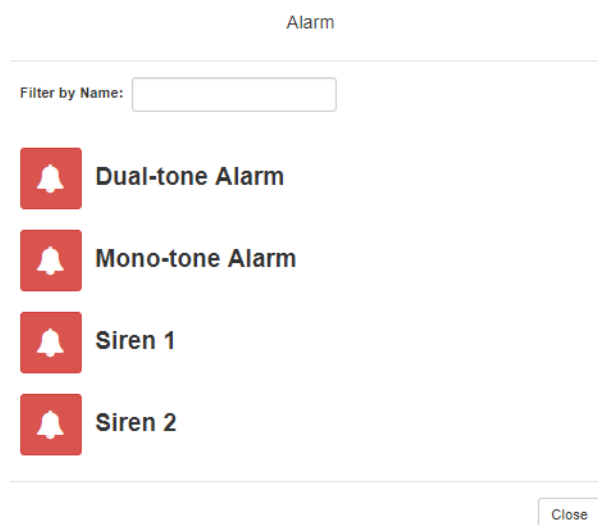
*To start and stop an alarm:*

Step 1 On the navigation bar, select **Dashboard**.



**Figure 4-1, Alarm Button**

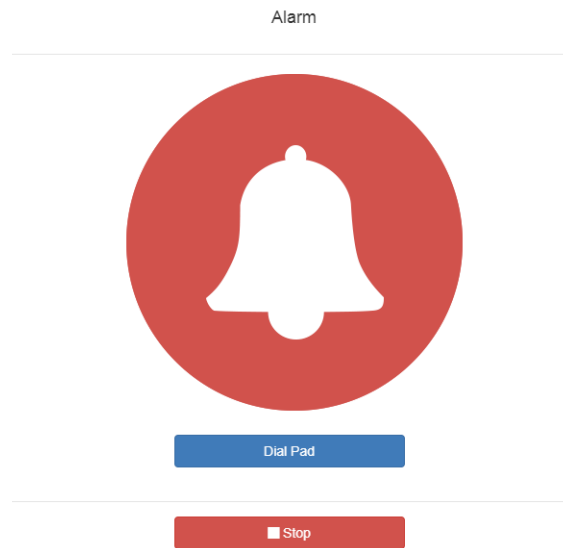
Step 2 Under Tones/Announcements, select **Alarm**.



**Figure 4-2, Alarm Page**



- Step 3 On the Alarm page, select the alarm that you want to sound.



**Figure 4-3, Alarm Page With Stop Option**

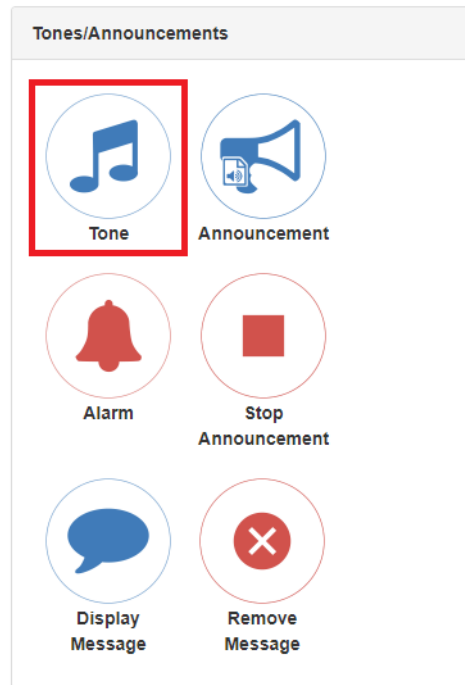
- Step 4 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.
- Step 5 If prompted, enter 1 for confirmation.
- Step 6 To end the alarm, select **Stop**.

## 4.2 Starting and Stopping Tones

Tones are similar to alarms, but are usually used to signal an announcement or a time-based event. Launching a tone, sends a tone to all zones with a **Type** of **Time** or a combination of **Time** and **Paging, Audio**, or both.

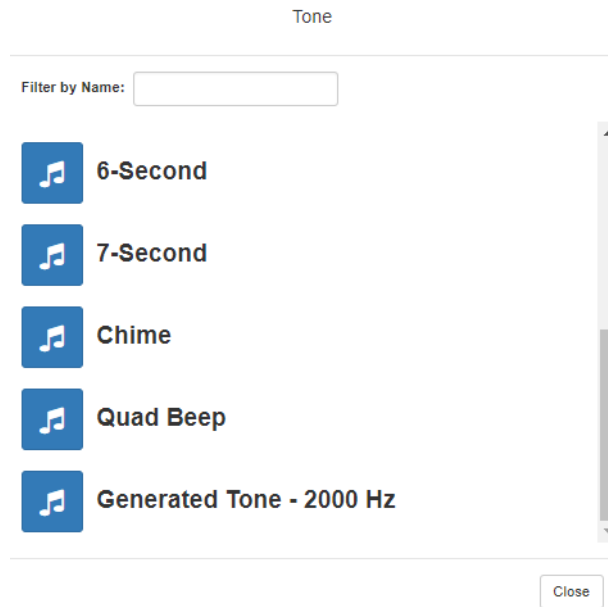
*To start and stop a tone:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 4-4, Tone Icon**

- Step 2 Under Tones/Announcements, select **Tone**.

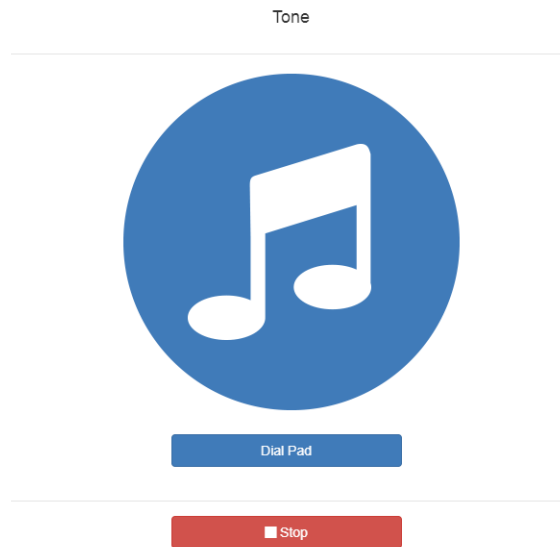


**Figure 4-5, Tone Page**

Step 3 On the Tone page, select the tone that you want to sound.

Only tones that have not been hidden appear.

*Note:* Tones play continuously if one of three conditions exist: Its **Type** is **Alarm**, times to play is set to 0, or length is set to 0.



**Figure 4-6, Tone Page With Options**

- Step 4 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.
- Step 5 If prompted, enter 1 for confirmation.
- Step 6 Select the **Tone** icon to end the tone. A tone will stop playing automatically after it has reached its number of times to play.

## 4.3 Viewing Available Tones

*Note:* The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.

Through the Tones page, you can view a list of available tones, delete user-provided tones, or select to add or edit a tone. You cannot delete a default tone, but you can prevent it from being viewed on the dashboard or on Admin Phones that have a tones/alarms menu. A hidden tone still appears on the Tones page.

	Name	Type	Hide	DTMF Code	Length	Times to Play	Time Between Repeats (seconds)	Playback
<input checked="" type="checkbox"/>	1-Second	Normal	<input type="checkbox"/>	1	1	Continuously	1.0	
<input checked="" type="checkbox"/>	2-Second	Normal	<input type="checkbox"/>	2	2	Continuously	1.0	
<input checked="" type="checkbox"/>	3-Second	Normal	<input type="checkbox"/>	3	3	Continuously	1.0	
<input checked="" type="checkbox"/>	4-Second	Normal	<input type="checkbox"/>	4	4	Continuously	1.0	
<input checked="" type="checkbox"/>	5-Second	Normal	<input type="checkbox"/>	5	5	Continuously	1.0	
<input checked="" type="checkbox"/>	6-Second	Normal	<input type="checkbox"/>	6	6	Continuously	1.0	
<input checked="" type="checkbox"/>	7-Second	Normal	<input type="checkbox"/>	7	7	Continuously	1.0	
<input checked="" type="checkbox"/>	Chime	Normal	<input type="checkbox"/>	8	2	Continuously	1.0	
<input checked="" type="checkbox"/>	Quad Beep	Normal	<input type="checkbox"/>	9	1	Continuously	1.0	
<input checked="" type="checkbox"/>	Siren 1	Alarm	<input type="checkbox"/>	10	1	Continuously	0.0	
<input checked="" type="checkbox"/>	Siren 2	Alarm	<input type="checkbox"/>	11	1	Continuously	0.0	
<input checked="" type="checkbox"/>	Mono-tone Alarm	Alarm	<input type="checkbox"/>	12	1	Continuously	0.0	
<input checked="" type="checkbox"/>	Dual-tone Alarm	Alarm	<input type="checkbox"/>	13	1	Continuously	0.0	
<input checked="" type="checkbox"/>	Bells	Normal	<input type="checkbox"/>	23123	6	Continuously	1.0	

**Figure 4-7, Tones Page**

To view tones:

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Tones**.

The following table describes the tones parameters that appear.

**Table 4-1, Tones Page Parameters**

<b>Name</b>	Provides a name for the announcement file.  <i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: <b>!@\$*?-. ,</b> .
<b>Type</b>	Displays the tone type as Normal or Alarm.
<b>Hide</b>	Specifies if the tone should be hidden from the dashboard view or Admin Phone menu.
<b>DTMF Code</b>	Provides the DTMF code used with manual dial pad announcement or tone activation.
<b>Length</b>	Time in seconds that the tone plays.

**Table 4-1, Tones Page Parameters (Continued)**

<b>Times to Play</b>	Displays the number of times the tone plays. Parameters are 0 to 10.  <i>Note:</i> A setting of 0 results in the tone playing continuously until it is manually stopped via the dashboard.
<b>Time Between Repeats (seconds)</b>	Displays the time in seconds before the tone is replayed. You can select between 0.5 to 5 in 0.5 increments.
<b>Playback</b>	Allows you to manually play the tone. Selecting the <b>Menu</b> icon in this field also allows you to download and save the announcement.

## 4.4 Uploading Tones

C4000 provides three ways of adding a tone:

- Uploading a file that has been copied to a location on your network, local computer, or to removable media, such as a Flash drive, that you have access to
- Generating a one frequency tone that can be saved (See "*Generating Tones*" on page 68.)
- Selecting a two-channel or four-channel audio power amplifier or MMPA and the input channel to generate a tone

In each scenario, you are adding a tone to your C4000 system that can be used later via either a schedule or manual tone activation.

*Note:* The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.

## 🎵 Add Tone ?

**Upload File** Generate Tone Line Input

Name:

Type:

Normal ▾

Hide: i

No

Times to Play: 1 i

Time Between Repeats (seconds): 1.0

DTMF Code:

File Upload:

Choose a file ...

📁 Choose File

✕ Cancel

💾 Save

**Figure 4-8, Add Tone – Upload File**

*To upload a tone:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Tones**.
- Step 3 On the Tones page, select the **Add** icon.
- Step 4 On the Add Tone page, ensure **Upload File** is selected.
- Step 5 Complete the parameters.
- Step 6 Select **Save**.

**Table 4-2, Add Tone Page Parameters (Upload)**



<b>Name</b>	Provide a name for this tone.  <i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: <b>!@\$*?-. ,</b> .
<b>Type</b>	Use the drop-down menu to select if the tone is <b>Normal</b> or <b>Alarm</b> .
<b>Hide</b>	Specify if the tone is to be hidden or displayed on the dashboard view.
<b>Times to Play</b>	Select the number of times the tone will play. Parameters are 0 through 10.  <i>Note:</i> A setting of 0 results in the tone playing continuously until it is manually stopped via the dashboard.
<b>Time Between Repeats (Seconds)</b>	Select the time in seconds between replaying of the tone. You can select between 0.5 to 5 in 0.5 increments.
<b>DTMF Code</b>	Provide the DTMF code used with manual dial pad announcement or tone activation.
<b>File Upload</b>	Select <b>Choose File</b> , navigate to the audio file, and then select the file.

#### **4.4.1 Generating Tones**

Generating a one frequency tone is another way add a tone if you do not want to use the default tones and do not have a way to upload a tone from a network or removable media location.

*Note:* The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.




 Add Tone 


---

Upload File **Generate Tone** Line Input


Name:

Type:  
Normal ▲

Hide:   
 No

Frequency (Hz): 

Duration (seconds): 1.0

Times to Play: 1 

Time Between Repeats (seconds): 1.0

DTMF Code:

---

**Figure 4-9, Add Tone – Generate Tone**

*To generate a tone:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Tones**.
- Step 3 On the Tones page, select the **Add** icon.
- Step 4 On the Add Tone page, select **Generate Tone**.
- Step 5 Complete the parameters.
- Step 6 Select **Save**.

**Table 4-3, Add Tone Page Parameters (Generate)**

<b>Name</b>	Provide a name for this tone.  <i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: !@\$*?-..,.
<b>Type</b>	Select if the announcement to follow is a normal or an emergency announcement.
<b>Hide</b>	Specify if the tone is to be hidden or displayed on the dashboard view.
<b>Frequency (Hz)</b>	Enter the frequency for the tone. You can select a frequency from 300 to 2000 Hz.
<b>Duration (seconds)</b>	Enter the time in seconds that the tone is to play.
<b>Times to Play</b>	Select the number of times the file will play. Parameters are 0 through 10.  <i>Note:</i> A setting of 0 results in the file playing continuously until it is manually stopped via the dashboard.
<b>Time Between Repeats (seconds)</b>	Select the time in seconds between replaying of the file. You can select between 0.5 to 5 in 0.5 increments.
<b>DTMF Code</b>	Provide the DTMF code used with manual dial pad announcement or tone activation.

#### **4.4.2 Using Line Input for Tones**

Selecting Line Input from the Add Tone page allows you to select a two-channel or four-channel audio power amplifier or MMPA channel to use as a source for a tone.

*Note:* The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.

## 🎵 Add Tone ?

---

Upload File Generate Tone **Line Input**

Name:

Type:  
Normal ▾

Hide: i  
No

Length: i

DTMF Code:

Amplifiers/Matrix Mixers: ▾      Input Channel: ▾

---

✕ Cancel 💾 Save

**Figure 4-10, Add Tone – Line Input**

*To add a line input tone:*

- Step 1      On the navigation bar, expand **Audio**.
- Step 2      Select **Tones**.
- Step 3      On the Tones page, select the **Add** icon.
- Step 4      On the Add Tone page, select **Line Input**.
- Step 5      Complete the parameters.
- Step 6      Select **Save**.



**Table 4-4, Add Tone Page Parameters (Line Input)**

<b>Name</b>	Provide a name for this tone.  <i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: !@\$*?-..,.
<b>Type</b>	Select if the announcement to follow is a normal or an emergency announcement.
<b>Hide</b>	Specify if the tone is to be hidden or displayed on the dashboard view.
<b>Length</b>	Enter the number of seconds for the tone to play. The length can range from 0 to 999999.  <i>Note:</i> A setting of 0 results in the file playing continuously until it is manually stopped via the dashboard.
<b>DTMF Code</b>	Provide the DTMF code used with manual dial pad announcement or tone activation.
<b>Amplifiers/Matrix Mixers</b>	Use the drop-down menu to select the two-channel or four-channel audio power amplifier or MMPA and its associated station number.
<b>Input Channel</b>	Specify the matrix channel being used for input.

## 4.5 Editing Tones

You can edit parameters of existing tones, but which parameters can be changed depends on whether the tone is a default tone or a user added tone. For example, you cannot change the **Name** for a default tone, but you can change that parameter for a tone that you added. Some parameters only appear for Line Input tones.

*Note:* The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. Contact your system administrator or refer to the *Nyquist C4000 System Administrator Manual*.


 Edit Tone 

---

Name:


Type:

Hide:



Times to Play: 0 

Time Between Repeats (seconds): 1.0

DTMF Code:

Length: 

---

 Edit Tone 


---

Name:

Type:

Hide:

DTMF Code:

Length: 

Amplifiers/Matrix Mixers:

Input Channel:

---

**Figure 4-11, Edit Tone Pages**

*To edit a tone:*

- Step 1 On the navigation bar, expand **Audio**.
- Step 2 Select **Tones**.
- Step 3 On the Tones page, select the **Edit** icon.
- Step 4 On the Edit Tone page, make changes to the parameters.
- Step 5 After completing all changes, select **Save**.

**Table 4-5, Edit Tone Page Parameters**

<b>Name</b>	<p>Displays the name for this tone.</p> <p><i>Note:</i> This parameter cannot be changed for default system Tones.</p> <p><i>Note:</i> Valid characters include uppercase letters (A-Z), lowercase letters (a-z), numerals (0-9), space, and the following special characters: <b>!@\$*?-. ,</b>.</p>
<b>Type</b>	<p>Use the drop-down menu to select if the tone is Normal or Alarm.</p>
<b>Hide</b>	<p>Specifies if the tone is to be hidden from the dashboard view.</p>
<b>Times to Play</b>	<p>Displays the number of times the tone will play. Parameters are 0 through 10.</p> <p><i>Note:</i> A setting of 0 results in the tone playing continuously until it is manually stopped via the dashboard. This parameter does not appear for Line Input tones.</p>
<b>Time Between Repeats (second)</b>	<p>Displays the time in seconds between replaying of the tone. You can select between 0.5 to 5 in 0.5 increments.</p> <p><i>Note:</i> This parameter does not appear for Line Input tones.</p>
<b>DTMF Code</b>	<p>Provides the DTMF code used with manual dial pad announcement or tone activation.</p>
<b>Length</b>	<p>Provides the length of the tone.</p> <p><i>Note:</i> This parameter cannot be changed except for Line Input tones.</p>
<b>File Upload</b>	<p>Select <b>Choose File</b>, navigate to the audio file, and then select the file if you want to choose a new file.</p> <p><i>Note:</i> This parameter only appears for user-provided tones but not for Line Input tones.</p>

**Table 4-5, Edit Tone Page Parameters (Continued)**

<b>Amplifiers/Matrix Mixers</b>	Specifies the two-channel or four-channel audio power amplifier or MMPA and its associated station number. <i>Note:</i> This parameter only appears for Line Input tones.
<b>Input Channel</b>	Specifies the matrix channel being used for input. <i>Note:</i> This parameter only appears for Line Input tones.





# 5

## Making Pages and Calls

Paging and telephone call features appear in the Calling/Paging section of the dashboard.

The dashboard is titled "Dashboard" and includes sections for "Incoming Calls", "Messages", and "Site". The "Site" section is expanded to show three main categories of features:

- Calling/Paging:** Directory, Dial Pad, Page Exclusion, Call Forwarding, Zone Page, Record Page, Prepend Page, All Call, Emergency All Call, Manage Check-in, and Routines.
- Multi-Site Calling/Paging:** Facility Page, Multi-Site All Call, and Multi-Site Emergency All Call.
- Tones/Announcements:** Tone, Announcement, Alarm, Stop Announcement, Display Message, and Remove Message.

At the bottom, there is a "Weekly Schedule" section with navigation buttons for "Prev", "Today", and "Next". The schedule table shows dates from Sunday, August 18, to Saturday, August 24, with Friday, August 23, highlighted in green.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Aug 18	Aug 19	Aug 20	Aug 21	Aug 22	Aug 23	Aug 24

Figure 5-1, C4000 Dashboard

## 5.1 Managing Calls

*Note:* Placing intercom calls requires an Intercom License.

C4000 provides two ways to place a call via the dashboard:

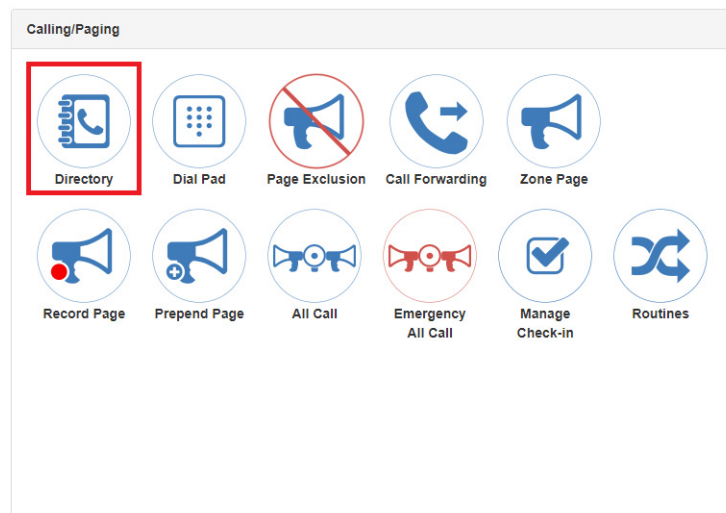
- Through the use of a directory
- Through the use of a dial pad

### 5.1.1 Placing Call Using Directory

The C4000 directory is a list of all stations that can receive calls. These can include computers with the Admin Web UI, computers with the Web UI, telephones, VoIP speakers, or digital call switches and speakers.

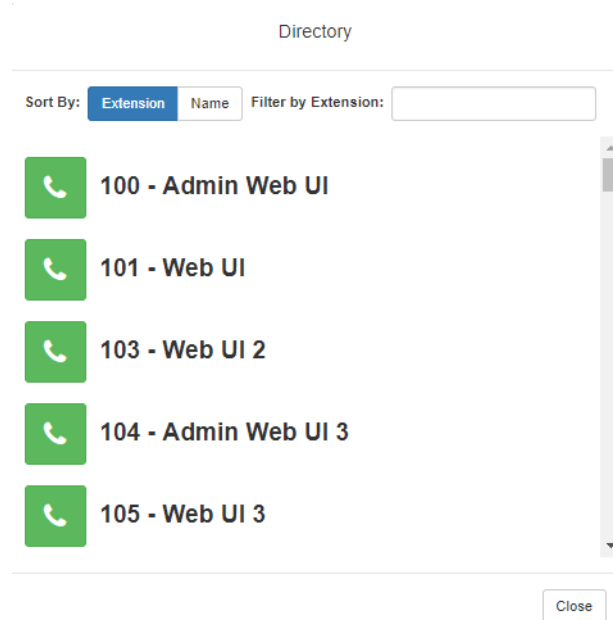
*To place a call using the directory:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 5-2, Directory Button**

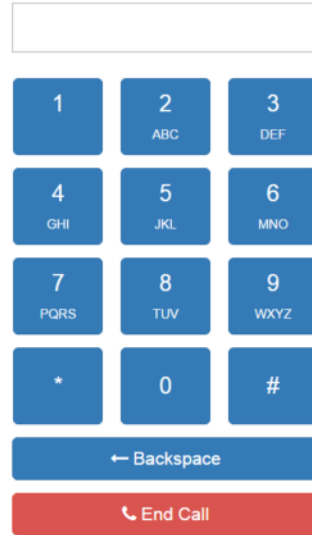
- Step 2 Under Calling/Paging, select **Directory**.



**Figure 5-3, Directory Page**

- Step 3 On the Directory popup, select the extension that you want to call.  
Note that you can sort the list of extensions by extension number or name.

Calling 103



Close

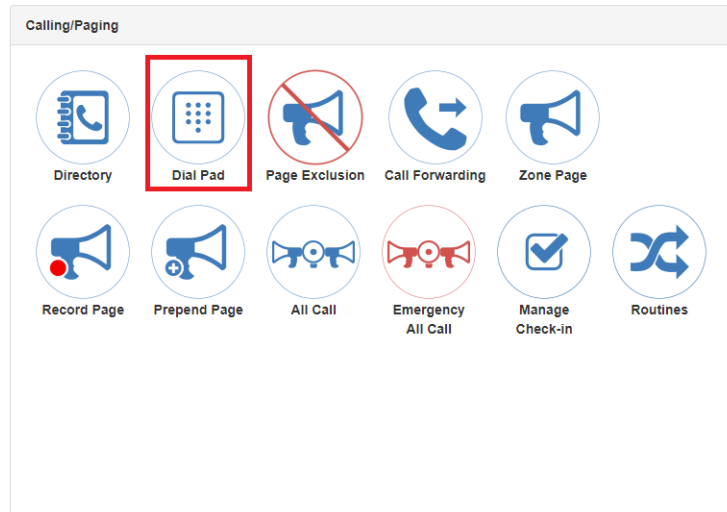
**Figure 5-4, Calling Extension**

Step 4 Select **End Call** to end the call.

## 5.1.2 Placing Call Using Dial Pad

To place a call using the Dial Pad:

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 5-5, Dial Pad Button**

- Step 2 Under Calling/Paging, select **Dial Pad**.



**Figure 5-6, Dial Pad**

Step 3 Dial the extension or number that you want and select **Send**.

Step 4 Select **End Call** to end the call.

*To answer a call from another extension:*

Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.

Step 2 Select **Answer**.

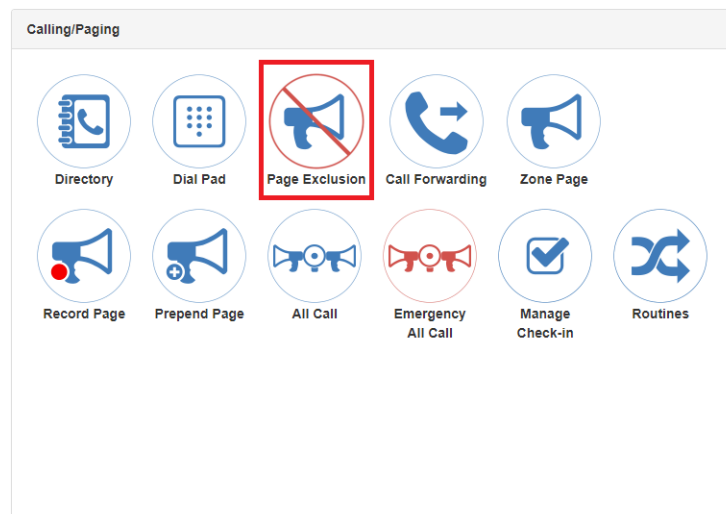
Step 3 Select **End Call** to end the call.

## 5.2 Using Page Exclusion

You can exclude stations from paging except for Emergency-Level All-Call pages. Emergency-Level-All-Call pages will be sent and heard at the station even if that station is set to exclude paging.

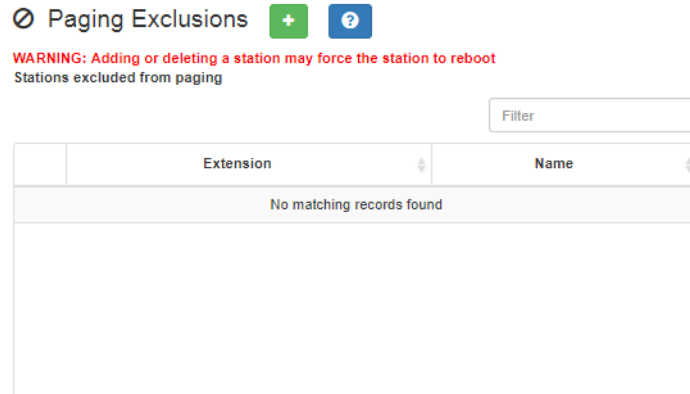
*To exclude a station from paging via the dashboard:*

Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



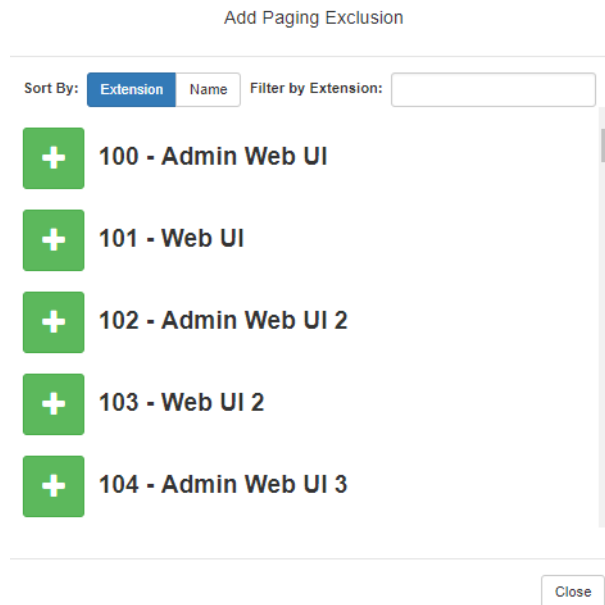
**Figure 5-7, Page Exclusion Button**

Step 2 Under Calling/Paging, select **Page Exclusion**.



**Figure 5-8, Paging Exclusions Page**

Step 3 Select the **Add** icon to add a station to the page exclusion list.



**Figure 5-9, Add Paging Exclusion Page**

**Warning** Adding or deleting a station from the page exclusions list may force the station to reboot.

### 5.2.1 Deleting From Page Exclusion List

*To delete an extension from the Page Exclusion list:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Under Calling/Paging, select **Page Exclusion**.
- Step 3 Select the **Delete** icon next to the page that you want to remove from the Paging Exclusions list.
- Step 4 When prompted, select **Delete**.

## 5.3 Using Call Forwarding

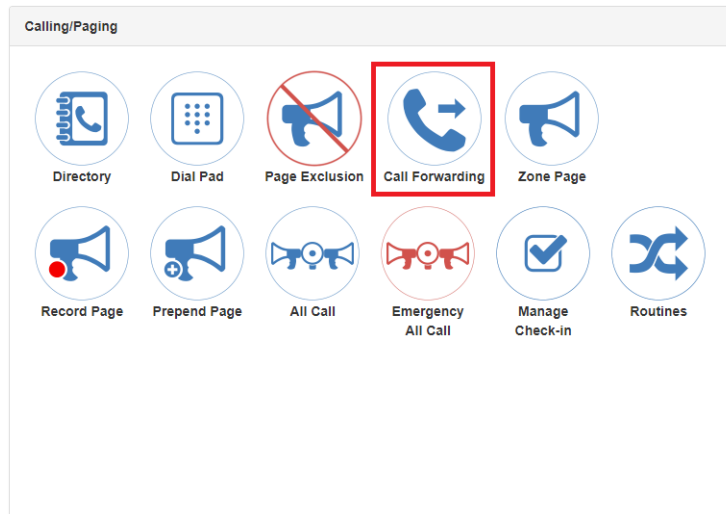
If your station has been configured for call forwarding, you can forward your calls to another extension.

Note that call forwarding is not the same as having your extension set to ring at an Admin Station during day or night hours. Your Nyquist system administrator sets the Day Admin and Night Admin for your station. Call forwarding is an option that you can set for your station.



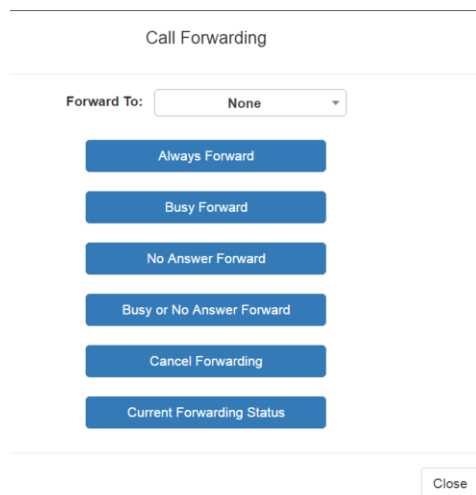
To forward calls to another extension:

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 5-10, Call Forwarding Button**

- Step 1 Under Calling/Paging, select **Call Forwarding**.



**Figure 5-11, Call Forwarding Popup Menu**

- Step 2 If prompted that the station wants to use your microphone, select **Allow**.

**Warning** If you turn off the microphone on your computer, then you cannot launch audio distribution, tones, alarms, and so on. When attempting to making a call with the computer's microphone turned off, Nyquist automatically hangs up the call. If you make a second call, the dashboard displays a message that the phone is in use. Also, when the microphone is off and a bell tone comes in, Nyquist rings as opposed to auto answering.

Step 3 Use the drop-down menu to select the extension where you want calls to be forwarded.

Step 4 Select one of the following options:

- Always Forward
- Busy Forward
- No Answer Forward
- Busy or No Answer Forward
- Cancel Forwarding
- Current Forwarding Status

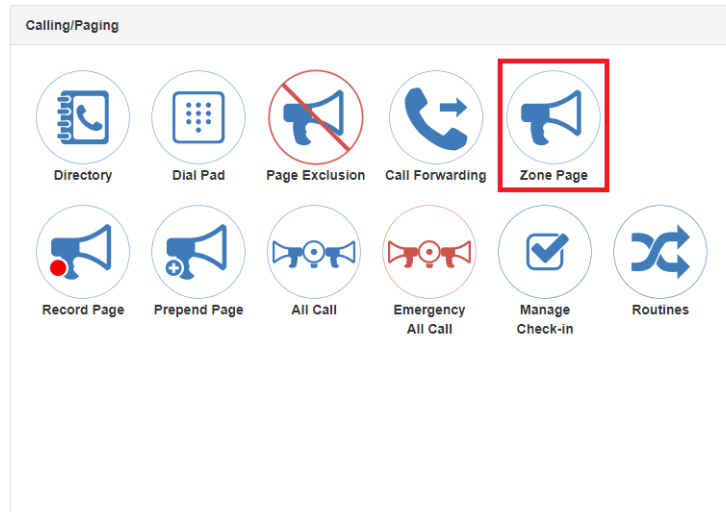
## 5.4 Launching Pages

Depending on how your C4000 system is set up, you can launch Normal, All Call, and Emergency All Call pages for a specific zone, the entire facility, or multiple sites. You can also select an announcement to play before you make a page.

## 5.4.1 Single-Zone Paging

To make a single-zone page via the dashboard:

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



- Step 2 Under Calling/Paging, select **Zone Page**.

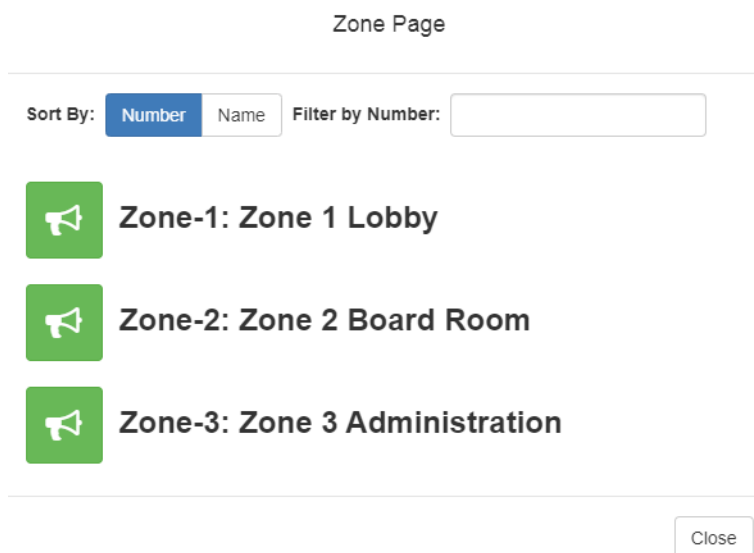


Figure 5-12, Paging Single Zone

Step 3 On the Page popup, select the zone that you want to page.

*Note:* You can sort the zones by Name or Number.

Step 4 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.

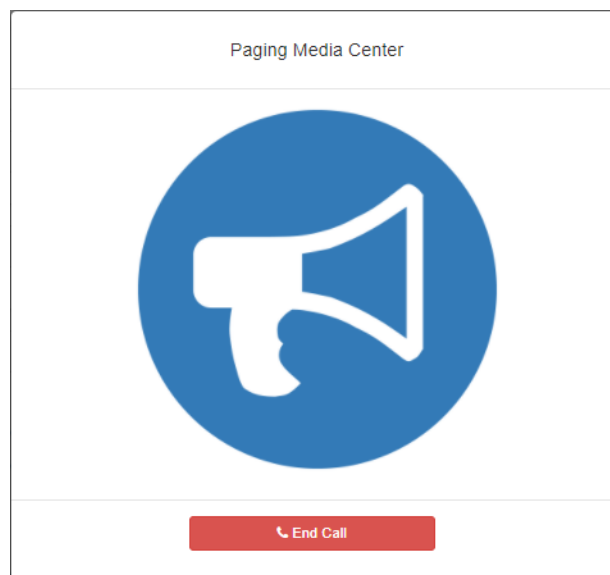
Step 5 If prompted, enter 1 for confirmation.

Step 6 If prompted, allow C4000 to use the microphone associated with your station.

**Warning** If you turn off the microphone on your computer, then you cannot launch audio distribution, tones, alarms, and so on. When attempting to making a call with the computer's microphone turned off, C4000 automatically hangs up the call. If you make a second call, the dashboard displays a message that the phone is in use. Also, when the microphone is off and a bell tone comes in, C4000 rings as opposed to auto answering.

Step 7 After you hear the tone, speak into the microphone.

Step 8 Select **End Call** to end the page.



**Figure 5-13, End Call**

## 5.4.2 Record Page

You can record a page to be added to a zone queue. The maximum recording time for a page is 60 minutes; if the recording exceeds 60 minutes, it will time out and not be saved. If the recording is silent for 60 seconds, it will time out and not be saved.

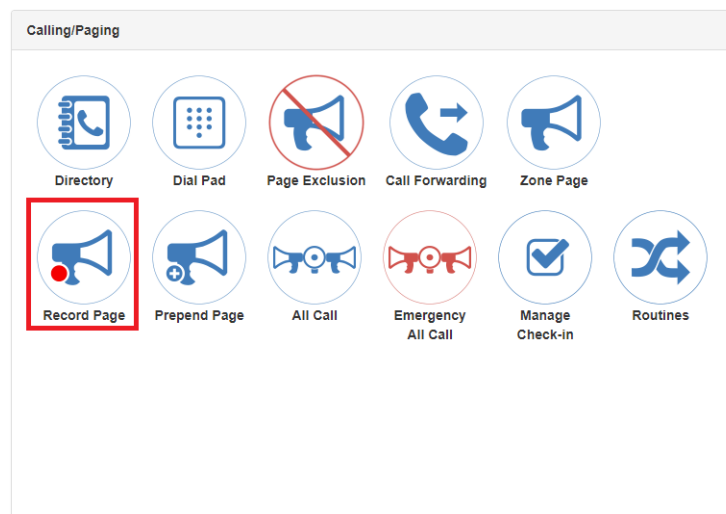
The pages in the zone's queue are played in the order that they are placed in the queue.

A live page started on a zone that is playing a recorded page will cause the recorded page to be terminated and sent back to the queue. The interrupted message will play again, from the beginning of the message, when the zone becomes idle. Multi-Site Emergency-All-Call, Multi-Site All-Call, Emergency All-Call, All-Call, Alarm, Tone, and Emergency Announcement will also interrupt any playing recorded zone messages. All re-queued interrupted messages will play again, from the beginning of the message, when the zones becomes idle.

Selecting **Disable Audio** will cause all recorded messages to stop. The messages will resume play from the beginning when audio is re-enabled.

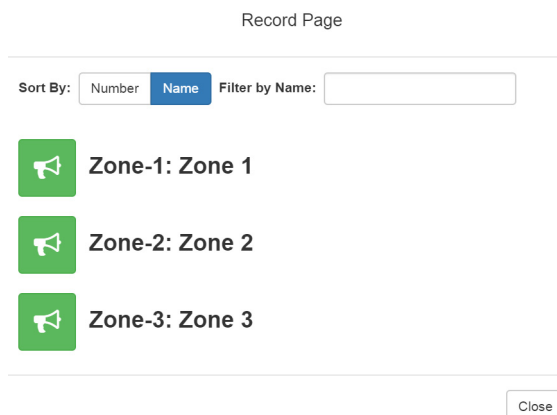
*To record a page for page queuing:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 5-14, Record Page Button**

Step 2 Under Calling/Paging, select **Record Page**.



**Figure 5-15, Record Page**

Step 3 On the Record Page popup, select the queue that you want to page.

*Note:* You can sort the queues by Name or Number.

Step 4 Wait for the tone and then record your message.

Step 5 Hang up to end the recording.

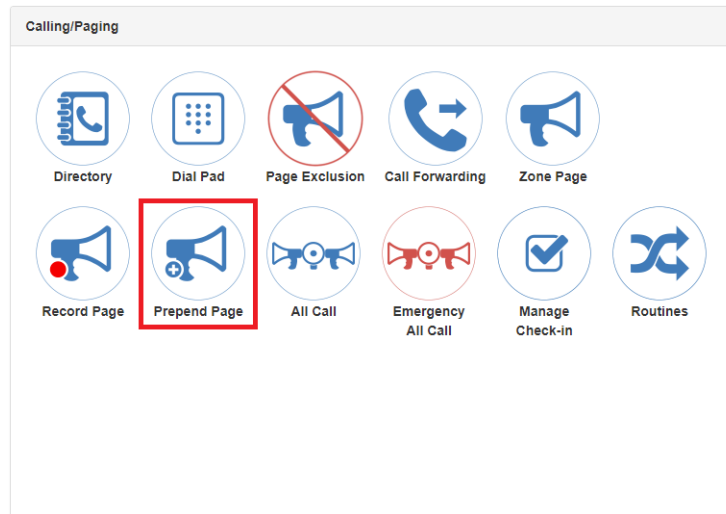
*Note:* Pressing any key terminates the recording without adding the page to the queue.

### 5.4.3 Prepend Page

You can prepend a page with a special announcement. For example, if you have a pre-recorded weather alert announcement, you can prepend that announcement file so that it plays first as you prepare to make a page.

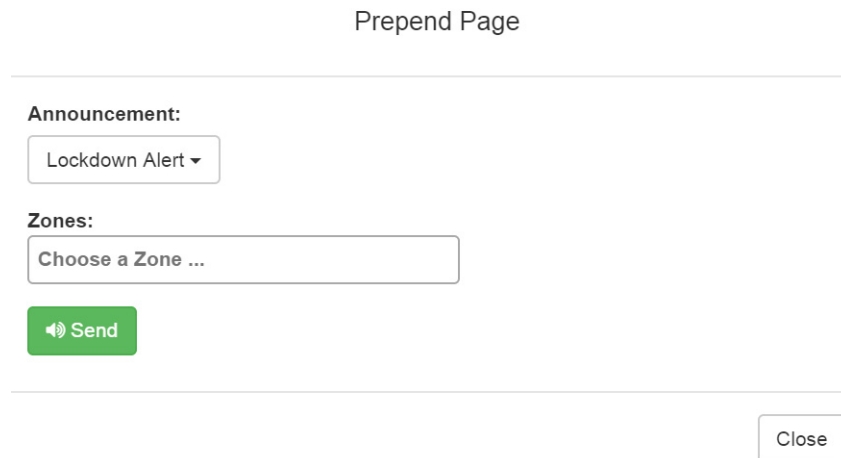
To prepend a page:

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 5-16, Prepend Page Button**

- Step 2 Under Calling/Paging, select **Prepend Page**.



**Figure 5-17, Prepend Page**

Step 3 On the Prepend Page popup, select the zone that you want to page.

*Note:* You can sort the zones by Name or Number.

Step 4 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.

Step 5 If prompted, enter 1 for confirmation.

Step 6 If prompted, allow C4000 to use the microphone associated with your station.

Step 7 After the prepend announcement ends, speak into the microphone.

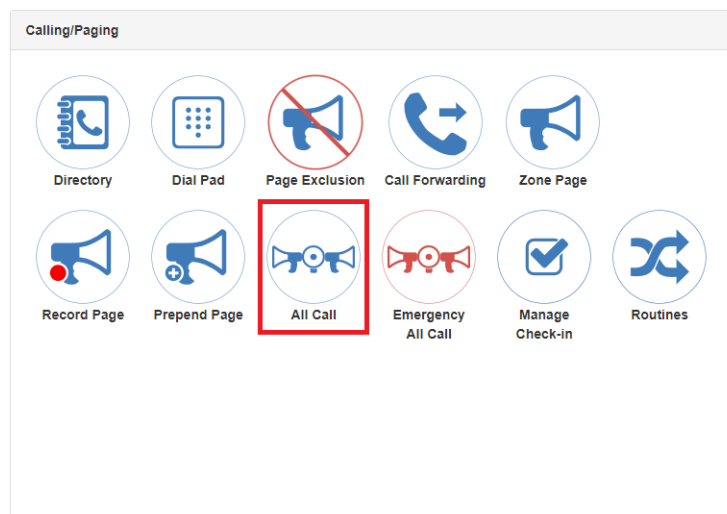
Step 8 Select **End Call** to end the page

#### 5.4.4 All Call Paging

All Call paging is a simultaneous page to all facility stations, unless the station has been excluded from pages. An All Call page takes higher priority over normal paging.

*To launch an All Call page:*

Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 5-18, All Call Button**



Step 2 Under Calling/Paging, select **All Call**.



**Figure 5-19, All Call**

- Step 3 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.
- Step 4 If prompted, enter 1 for confirmation.
- Step 5 If prompted, allow C4000 to use the microphone associated with your station.

**Warning** If you turn off the microphone on your computer, then you cannot launch audio distribution, tones, alarms, and so on. When attempting to making a call with the computer's microphone turned off, C4000 automatically hangs up the call. If you make a second call, the dashboard displays a message that the phone is in use. Also, when the microphone is off and a bell tone comes in, C4000 rings as opposed to auto answering.

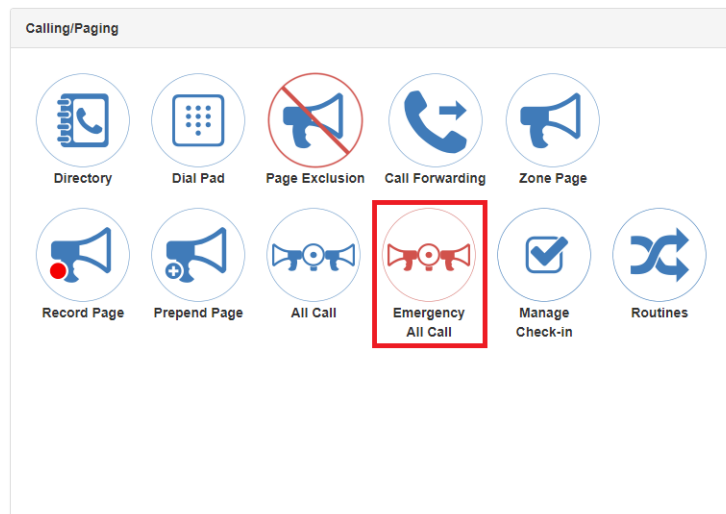
- Step 6 After you hear the tone, speak into the microphone.
- Step 7 Select **End Call** to end the page.

## 5.4.5 Emergency All Call Paging

An Emergency All Call page is a high priority page that is transmitted to all stations, even those stations that have been set up for page exclusion.

*To launch an Emergency All Call page:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 5-20, Emergency All Call Button**

- Step 2 Under Calling/Paging, select **Emergency All Call**.



**Figure 5-21, Emergency All Call**

- Step 3 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.
- Step 4 If prompted, enter 1 for confirmation.
- Step 5 If prompted, allow C4000 to use the microphone associated with your station.

**Warning** If you turn off the microphone on your computer, then you cannot launch audio distribution, tones, alarms, and so on. When attempting to making a call with the computer's microphone turned off, C4000 automatically hangs up the call. If you make a second call, the dashboard displays a message that the phone is in use. Also, when the microphone is off and a bell tone comes in, C4000 rings as opposed to auto answering.

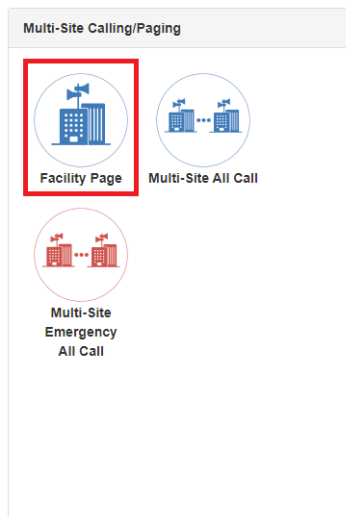
- Step 6 After you hear the tone, speak into the microphone.
- Step 7 Select **End Call** to end the page.

## 5.4.6 Facility Paging

If your system is configured to use multiple facilities, you can launch a Facility Page.

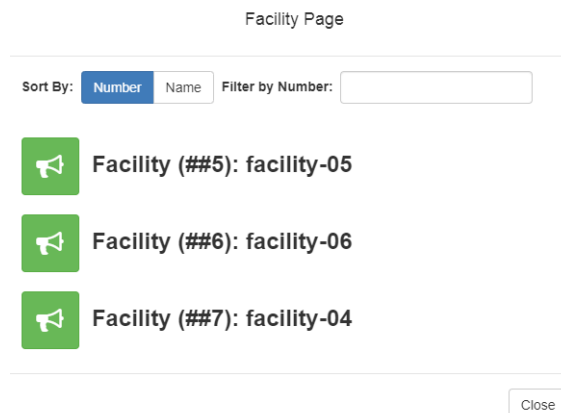
*To launch a facility page:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 5-22, Facility Page Button**

- Step 2 Under Multi-Site Calling/Paging, select **Facility Page**.



**Figure 5-23, Facility Page**

- Step 3 On the Facilities page, select the facility that you want to page. Note that you can sort the facilities by Name or Number.
- Step 4 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.
- Step 5 If prompted, enter 1 for confirmation.
- Step 6 If prompted, allow C4000 to use the microphone associated with your station.

**Warning** If you turn off the microphone on your computer, then you cannot launch audio distribution, tones, alarms, and so on. When attempting to making a call with the computer's microphone turned off, C4000 automatically hangs up the call. If you make a second call, the dashboard displays a message that the phone is in use. Also, when the microphone is off and a bell tone comes in, C4000 rings as opposed to auto answering.

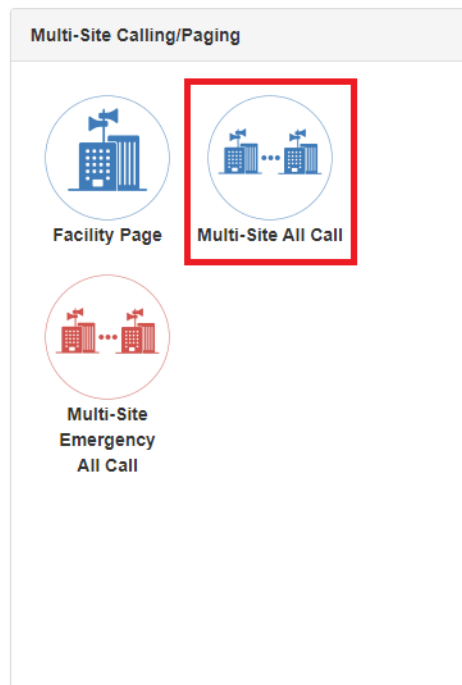
- Step 7 After you hear the tone, speak into the microphone.
- Step 8 Select **End Call** to end the page.

## 5.4.7 Multi-Site All Call Paging

If your station's CoS allows multi-site paging, you can launch a Multi-Site All Call page.

To launch a Multi-Site All Call page:

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 5-24, Multi-Site All Call Button**

- Step 2 Under Multi-Site Calling/Paging, select **Multi-Site All Call**.
- Step 3 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.
- Step 4 If prompted, enter 1 for confirmation.
- Step 5 If prompted, allow C4000 to use the microphone associated with your station.

**Warning** If you turn off the microphone on your computer, then you cannot launch audio distribution, tones, alarms, and so on. When attempting to making a call with the computer's microphone turned off, C4000

automatically hangs up the call. If you make a second call, the dashboard displays a message that the phone is in use. Also, when the microphone is off and a bell tone comes in, C4000 rings as opposed to auto answering. After you hear the tone, speak into the microphone.

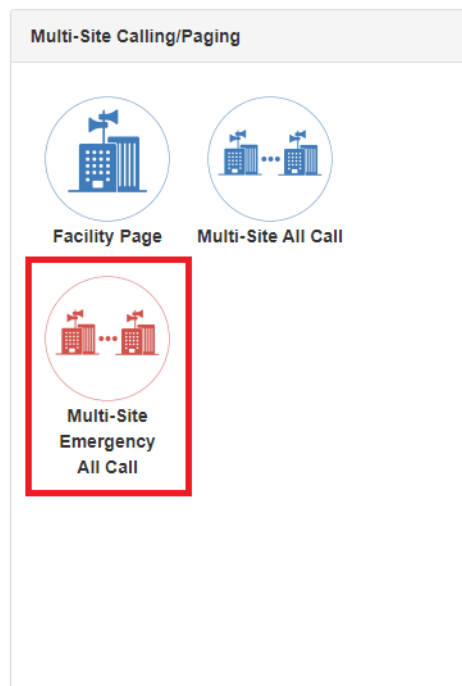
Step 6 Select **End Call** to end the page.

## 5.4.8 Multi-Site Emergency All Call

If your station's CoS allows multi-site paging, you can launch a Multi-Site Emergency All Call page. A Multi-Site Emergency All Call page has priority over any other pages.

*To launch a Multi-Site Emergency All Call page:*

Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 5-25, Multi-Site Emergency All Call Button**

Step 2 Under Multi-Site Calling/Paging, select **Multi-Site Emergency All Call**.

- Step 3 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.
- Step 4 If prompted, enter 1 for confirmation.
- Step 5 If prompted, allow C4000 to use the microphone associated with your station.

**Warning** If you turn off the microphone on your computer, then you cannot launch audio distribution, tones, alarms, and so on. When attempting to making a call with the computer's microphone turned off, C4000 automatically hangs up the call. If you make a second call, the dashboard displays a message that the phone is in use. Also, when the microphone is off and a bell tone comes in, C4000 rings as opposed to auto answering.

- Step 6 When the Emergency page appears, select **OK**.
- Step 7 After you hear the tone, speak into the microphone.
- Step 8 Select **End Call** to end the page.



# 6

## Managing Check-In

Manage Check-In allows staff to quickly verify (via a normal call to the Admin Station) that they are aware that a check-in situation is underway and are reporting check-in status for their assigned classrooms or areas. Examples of check-in events include:

- Weather related lockdown
- Safety related lockdown

During Check-In, a Normal call placed by a station to the Admin Station places a station in check-in status. Additional Normal calls are placed as Normal calls to the Admin Station.

You can also elect to use audio feedback that tells the staff member they have successfully checked in.

Calls placed to perform **Manage Check-In** are not processed as part of the call count. Urgent and Emergency calls can still be placed by stations and are not included as part of Manage Check-In.

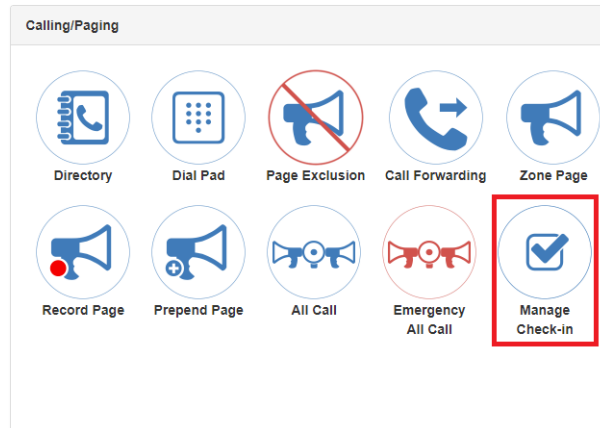
As long as Privacy Mode is not enabled and a room's device allows two-way transmission, you can select to use Spy Mode (listen to) the room.

### 6.1 Viewing Check-In Status

For administrators, the Manage Check-In feature provides a color-coded view of what classrooms have checked in, classrooms or stations that are not part of the check-in process, and those that should check-in but have not yet done so.

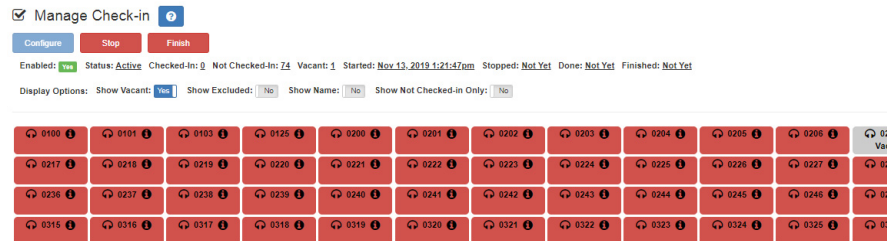
To view check-in status:

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 6-1, Manage Check-In Button**

- Step 2 Under Calling/Paging, select **Manage Check-In**.



**Figure 6-2, Manage Check-In**

A separate tab appears so that you can toggle the dashboard and Manage Check-in views.

The status of each station appears in a color-coded box. The following table explains the use of colors to describe status:

**Table 6-1, Color-coded Check-In Status**

Color	Status
Green	Checked in

**Table 6-1, Color-coded Check-In Status (Continued)**

<b>Color</b>	<b>Status</b>
Red	Not checked in
Gray	Check-in is not expected because the station is either on the vacant or excluded lists.

You can also select the following **Display Options**:

**Table 6-2, Check-In Display Options**

<b>Show Vacant</b>	When enabled, stations in the Vacancy List appear in the color-coded display.
<b>Show Excluded</b>	When enabled, stations in the Exclusion List appear in the color-coded display.
<b>Show Name</b>	When enabled, the station's name appears along with the station's extension number. Displaying the name is useful if you are not sure where a station is located when only the extension number is displayed.
<b>Show Not Checked In Only</b>	<i>Note:</i> <b>Show Vacant</b> and <b>Show Excluded</b> options are disabled when this option is selected.  When enabled, only the stations that have not checked in are listed. This option may be preferable if a large number of stations are managed by your Nyquist server, and you want to quickly view which stations have not checked in.

Additional information that appears on the Manage Check-In window includes:

- Status of check-in process such as **Active**
- Number of stations that have checked in
- Number of stations that have not yet checked in
- Number of vacant stations
- Date and time check-in started
- If check-in has been manually stopped or is done.

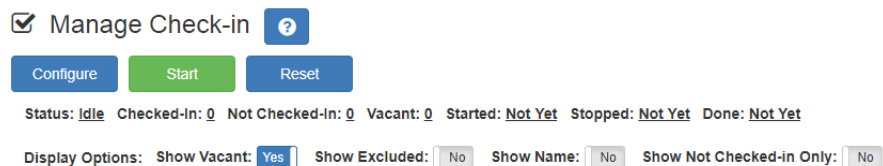
Manage Check-in also allows you to use Spy Mode on a station or room, provided the privacy feature has not been activated and the station device allows two-way transmission.

Stations that are not part of the check-in process would include stations assigned to hallway speakers or amplifiers or areas that were scheduled to be vacant when the check-in procedure began. For more information, see *"Managing Exclusion and Vacancy Lists"* on page 108.

### 6.1.1 Starting Check-In

You can manually start the Check-In procedure from the dashboard. Check-In can also be started via the Routines feature.

Check-In does not play any audio instruction announcements or send any text instructions to web interface stations or GA10PV display stations. If you want audio instruction announcements or text instructions on web interface stations or GA10PV display stations, refer to the *Nyquist C4000 System Administrator Manual* for instructions on setting up a routine that includes audio instructions in an announcement or text instructions to be sent to web interface dashboards and GA10PV displays. The routine can be triggered by a Check-in **Start**, or the Check-in can be started by the routine.



**Figure 6-3, Manage Check-In When Idle**

*To manually start Check-In:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Under Calling/Paging, select **Manage Check-In**.
- Step 3 On the Manage Check-In page, select **Start**.

When Check-In starts, the **Start** button changes to a **Stop** button and the red squares that represent occupied classrooms or areas begin changing to green squares as staff members begin checking in.

### 6.1.1.1 Station Check-In

During Check-In, a Normal call placed by a station to the Admin Station places a station in check-in status. If two-part check-in is used, a second Normal call verifies the check-in status.

After a station has successfully checked in, additional Normal calls will go through as normal calls to the Admin station. Stations can still place Urgent or Emergency calls during the Check-in process, even if the station has not checked in.

If audio prompt feedback is enabled and a station checks in, the caller hears a confirmation prompt. If audio feedback is disabled, stations checking in with digital call switches will still see a ringing status (flashing green) for about 2 seconds while checking in. Stations checking in with IP phones will notice a call lasting about 2 seconds before automatic hang up.

A **VoIP Speaker Only** station that does not have a call switch can still participate in the check-in process if an I/O controller Input contact is connected to a switch present in the room that contains the **VoIP Speaker Only** station. In this case, the I/O controller Input contact closure can trigger a Routine that performs a check-in.

If a station with call switch is configured to only place Urgent or Emergency calls, the station cannot participate in the Check-in process. This station should either be added to the Exclusion List (see *"Managing Exclusion and Vacancy Lists"* on page 108). Or if you wish to include the station in the Check-in process, the station's CoS configuration should be changed to allow Normal calls to be placed by the station.

### 6.1.1.2 Check-In Done and Finish

After all stations included in the Check-In process have checked in, the Manage Check-In **Status** changes to **Done**.

Since stations that were not expected to check in may do so, check-in is not completed until you select the **Finish** button.

Selecting the **Finish** button can trigger a routine if you have a routine that uses **Check-In** as the trigger **Type** and **Finished** as **Check-In**.

## 6.1.2 Stopping the Check-In Process

You can end an active Check-In process by selecting the **Stop** button on the Station Check-in view. An active Check-In process can also be stopped by a Routine action.

After the Check-in process has been stopped, all Normal station calls resume as normal calls to the Admin Station, and the Check-in process **Status** becomes **Idle**.

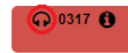
### 6.1.3 Resetting the Check-In Process

During either an active or idle Check-In process, you can clear all station check-in statuses and allow all Normal calls to resume as normal calls to the Admin Station by selecting the **Reset** button on the Station Check-in view.

### 6.1.4 Using Spy Mode

You can use Spy Mode to listen to a station as long as Privacy Mode is not enabled and the station device allows two-way transmission.

This feature adds another step toward verifying that the room's occupants are safe.



**Figure 6-4, Listen In, or Spy Mode, Button**

*To activate Spy Mode:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Under Calling/Paging, select **Manage Check-In**.
- Step 3 On the Manage Check-In page, select the **Listen In** icon for the station you want to monitor.
- Step 4 When the dial pad appears, dial 978.

---

*Note:* Spy Mode monitoring cannot be used on a station that has been set to Privacy Mode.

---

## 6.2 Configuring Check-In

To use the check-in process, the user must have appropriate permissions assigned.

☑ Configure Check-in ?

Enabled:  
 Yes

Enable Audio Prompts and Confirmation Messages:  
 Yes

Vacancy List:

Exclusion List:

**Figure 6-5, Configure Check-in**

*To configure check-in options:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Under Calling/Paging, select **Manage Check-In**.
- Step 3 On the Manage Check-In page, select **Configure**.
- Step 4 Complete the configuration options.
- Step 5 Select **Save**.

**Table 6-3, Check-In Configuration Options**

<b>Enabled</b>	Specifies if Manage Check-In can be used. If <b>Disabled</b> , you can configure Manage Check-In options but you cannot start the check-in process.
<b>Enable audio prompts and confirmation messages</b>	<p>Specifies if audio files will be used as part of Manage Check-In.</p> <p>When enabled, audio prompts and audio feedback play at stations when the stations perform check-in. If disabled, no audio prompts or audio feedback are played on the station.</p> <p>When feedback is disabled, stations checking in with digital call switches will see a ringing status (flashing green) for about 2 seconds while checking in. Stations checking in with IP phones will notice a call lasting about 2 seconds.</p>
<b>Vacancy List</b>	Specifies the stations to be added to the Vacancy List (see " <i>Managing Exclusion and Vacancy Lists</i> " on page 108).
<b>Exclusion List</b>	Specifies the stations to be added to the Exclusion List (see " <i>Managing Exclusion and Vacancy Lists</i> " on page 108).

---

### **6.2.1 Managing Exclusion and Vacancy Lists**

A station added to the Vacancy List and a station added to the Exclusion List both appear gray on the Admin Station's Check-In page if the Check-In page is configured to display these lists. The difference between the two lists, though, is that stations on the Exclusion List should always be excluded from the check-in process. Those on the Vacancy List, are stations (classrooms or areas) that normally would be checking in but may be vacant when the check-in process is started.

A station on the vacancy list can still check in. This could occur during an emergency situation where a normally vacant classroom becomes



the closest temporary shelter. An occupant could perform a check-in to let administrators know that the room is occupied and secure.

Excluded stations should include stations not physically located in a classroom, such as speakers located in a hallway. Excluded stations also include stations assigned to appliances, such as power amplifiers and MMPAs.

You can add or delete a station to the Exclusion or Vacancy Lists by:

- Using **Manage Check-In** via the dashboard
- Using the **Routines** feature

For information about using Routines to add or delete a station from a list, refer to the *Nyquist C4000 System Administrator Manual*.

*To add a station to the Exclusion List via dashboard:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Under Calling/Paging, select **Manage Check-In**.
- Step 3 On the Manage Check-In page, select **Configure**.
- Step 4 Add desired station or stations to the Exclusion List.
- Step 5 Select **Save**.

*To remove a station from the Exclusion List via the dashboard:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Under Calling/Paging, select **Manage Check-In**.
- Step 3 On the Manage Check-In page, select **Configure**.
- Step 4 Remove the desired station or stations from the Exclusion List.
- Step 5 Select **Save**.

*To add a station to the Vacancy List via the dashboard:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Under Calling/Paging, select **Manage Check-In**.
- Step 3 On the Manage Check-In page, select **Configure**.

- Step 4 Add desired station or stations to the Exclusion List.
- Step 5 Select **Save**.

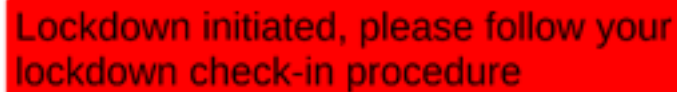
*To delete a station from the Vacancy List via the dashboard:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Under Calling/Paging, select **Manage Check-In**.
- Step 3 On the Manage Check-In page, select **Configure**.
- Step 4 Select the stations that you want to remove from the Vacancy List.
- Step 5 Select **Save**.

# 7

## Managing Display Messages

The Display Message option allows you to create messages that will display on monitors connected to NQ-GA10PV devices in a selected zone, in multiple zones, or to specific devices. When creating the message, you can set several options, including when and how long the message is displayed and the appearance of the message. You can also remove messages from the message queue.



Lockdown initiated, please follow your lockdown check-in procedure

**Figure 7-1, Example of Priority Message in Fullscreen**

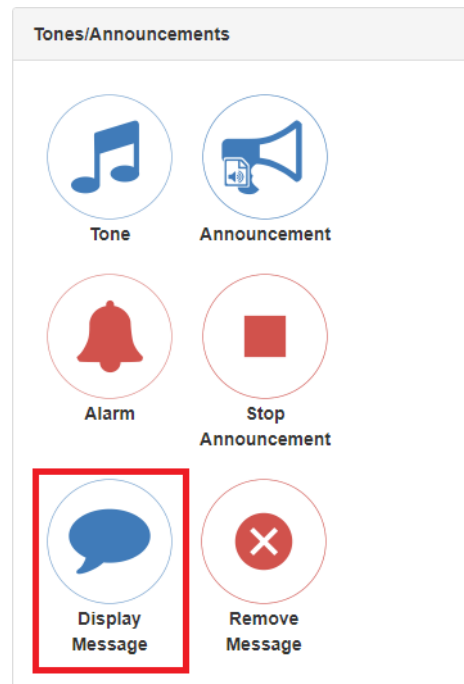
The station's **Display Configuration** option controls the overall appearance of the display (for example, what type of clock appears, whether an event or the date appears, and the background color of the screen). For information about setting the display configuration for an NQ-GA10PV, refer to the *Nyquist C4000 System Administrator Manual*.

### 7.0.1 Creating a Display Message

*Note:* You can also add display messages through routine actions. For information about creating routines, refer to the *Nyquist C4000 System Administrator Manual*.

*To create a display message:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 7-2, Display Message Button**

Step 2 Under **Tones/Announcements**, select **Display Message**.

Display Message

---

<p><b>Text:</b> ⓘ <input type="text"/></p> <p><b>Expiration Mode:</b> ⓘ <span style="border: 1px solid #ccc; padding: 2px;">Display Time</span> <span style="border: 1px solid #ccc; padding: 2px; margin-left: 10px;">Manually Removed</span> <span style="border: 1px solid #ccc; padding: 2px; margin-left: 10px;">Date/Time</span></p> <p><b>Display Time (seconds):</b> ⓘ <input type="text" value="60"/></p> <p><b>Zones:</b> ⓘ <input type="text" value="Add Zones ..."/></p> <p><b>Stations:</b> ⓘ <input type="text" value="Add Stations ..."/></p> <p><b>Identifier:</b> ⓘ <input type="text"/></p>	<p><b>Priority:</b> ⓘ <input type="text" value="0 (Lowest)"/></p> <p><b>Background Color:</b> ⓘ <input type="text" value="rgb(0,255,0)"/> <span style="display: inline-block; width: 15px; height: 15px; background-color: #00ff00; border: 1px solid #ccc; margin-left: 5px;"></span></p> <p><b>Font:</b> ⓘ <input type="text" value="Liberation Sans"/></p> <p><b>Font Size:</b> ⓘ <input type="text" value="70"/></p> <p><b>Font Color:</b> ⓘ <input type="text" value="rgb(0,0,0)"/> <span style="display: inline-block; width: 15px; height: 15px; background-color: #000; border: 1px solid #ccc; margin-left: 5px;"></span></p> <p><b>Font Styles:</b> ⓘ <input type="text" value="Add Styles ..."/></p>
---	---

---

Close Send

**Figure 7-3, Display Message**

Step 3 On the Display Message page, complete the options for the new message.

Step 4 Select **Send**.

*Note:* The options set through the Display Message page are for the message only. If you want to change how the clock, date, and other display features appear, you must set configuration options for the NQ-GA10PV station. Refer to the *Nyquist C4000 System Administrator Manual*.

**Table 7-1, Display Message Options**

<b>Text</b>	<p>Type the message that is to appear on the display monitor.</p> <p>You can format text using basic HTML tags, such as:</p> <ul style="list-style-type: none"><li>• &lt;b&gt; for bold</li><li>• &lt;i&gt; for italic</li><li>• &lt;u&gt; for underline</li></ul>
<b>Expiration Mode</b>	<p>Select the mode for setting the message's expiration. Options are:</p> <ul style="list-style-type: none"><li>• <b>Display Time.</b> Uses <b>Display Time (seconds)</b> to set the expiration.</li><li>• <b>Manually Removed.</b> Sets the expiration time to Never. You must use the <b>Remove Message</b> button remove a message from the message queue, or the message can be removed by a Routine Action using the display message <b>Identifier</b>.</li><li>• <b>Date/Time.</b> By default, the current date and time appears in the <b>Date/Time</b> field.</li></ul>
<b>Display Time (seconds)</b>	<p>Appears only if <b>Expiration Mode</b> is set to <b>Display Time</b>. Sets the length of time for the message to be displayed before it expires. Time can range from 1 to 99999.</p>
<b>Date/Time</b>	<p>Appears only if <b>Expiration Mode</b> is set to <b>Date/Time</b>. By default is set to the current date and time. To change the date, select the calendar and pick the date and time.</p>
<b>Zones</b>	<p>Select the zone or zones. Messages will be sent to the display devices in the selected zones.</p>
<b>Stations</b>	<p>The message is sent to the specified stations and any stations that belong to the specified zones.</p>
<b>Identifier</b>	<p>Used to identify the message so it can be deleted by a Routine action.</p>

**Table 7-1, Display Message Options (Continued)**

<b>Priority</b>	Select the message priority, which can range from <b>0 (Lowest)</b> to <b>6 - (Fullscreen)</b> . Priority <b>6 - (Fullscreen)</b> is the highest priority, and when a message is assigned this priority, only the messages with this priority appear on the display with the Scheduled Event Name and Date being temporarily removed. If Priority <b>5 (Exclusive)</b> is selected, the Scheduled Event Name and Date remain on the display, but all other messages with lower priorities are removed.
<b>Background Color</b>	Select the color for the message background. You can select a color by: <ul style="list-style-type: none"><li>• Using the color picker</li><li>• Entering a hex color (for example: #000000, for black)</li><li>• Entering an RGB color (for example: rgb(0,0,0) for black)</li><li>• Entering a color alias name (for example: red, blue, etc.)</li></ul> For more information, see " <i>Using Color in Display Messages</i> " on page 116.
<b>Font</b>	Select the down arrow to view a list of available fonts and then select the desired font for the message text. Available fonts are: <ul style="list-style-type: none"><li>Comic-Relief</li><li>Courier-Prime</li><li>Gelasio</li><li>Liberation Sans</li><li>Linux Libertine</li></ul>
<b>Font Size</b>	Enter the desired font size.

**Table 7-1, Display Message Options (Continued)**

<b>Font Color</b>	<p>Select the color for the message text.</p> <p>You can select a color by:</p> <ul style="list-style-type: none"><li>• Using the color picker</li><li>• Entering a hex color (for example: #000000, for black)</li><li>• Entering an RGB color (for example: rgb(0,0,0) for black)</li><li>• Entering a color alias name (for example: red, blue, etc.)</li></ul> <p>For more information, see "<i>Using Color in Display Messages</i>" on page 116.</p>
<b>Font Styles</b>	<p>Place your cursor in the <b>Add Styles</b> box to select <b>Bold</b> or <b>Italic</b>. Otherwise, the <b>Font Style</b> remains at Regular.</p>

## 7.1 Using Color in Display Messages

You can select colors for display messages three different ways:

- Background, text, and time colors via GA10PV **Display Configuration**
- Background and font colors for individual messages by selecting **Display Message** from the dashboard
- Background and font colors for individual messages via the **Display-Msg** routine action **Type**

You can select colors by:

- Using the color picker
- Entering a hex color (for example: #000000, for black)
- Entering an RGB color (for example: rgb(0,0,0) for black)
- Entering a color alias name (for example: red, blue, etc.)

When you enter a color alias name, the corresponding hex color code appears in the text portion of the color field and the swatch (color



box) portion changes to the selected color. When entering a color alias, you cannot use spaces, and the system only accepts the default color alias listed in the following table:

**Table 7-2, Default Color Alias**

<b>Color Alias</b>	<b>Corresponding Hex Code</b>	<b>Color Alias</b>	<b>Corresponding Hex Code</b>
aliceblue	f0f8ff	antiquewhite	faebd7
aqua	00ffff	aquamarine	7fffd4
azure	f0ffff	beige	f5f5dc
bisque	ffe4c4	black	#000000
blanchedalmond	ffebcd	blue	#0000ff
blueviolet	8a2be2	brown	a52a2a
burlywood	deb887	cadetblue	5f9ea0
chartreuse	7fff00	chocolate	d2691e
coral	ff7f50	cornflowerblue	6495ed
cornsilk	fff8dc	crimson	dc143c
cyan	00ffff	darkblue	00008b
darkcyan	008b8b	darkgoldenrod	b8860b
darkgray	a9a9a9	darkgreen	006400
darkkhaki	bdb76b	darkmagenta	8b008b
darkolivegreen	556b2f	darkorange	ff8c00
darkorchid	9932cc	darkred	8b0000
darksalmon	e9967a	darkseagreen	8fbc8f
darkslateblue	483d8b	darkslategray	2f4f4f
darkturquoise	00ced1	darkviolet	9400d3
deeppink	ff1493	deepskyblue	00bfff
dimgray	696969	dodgerblue	1e90ff
firebrick	b22222	floralwhite	fffaf0
forestgreen	228b22	fuchsia	ff00ff
gainsboro	dcdcdc	ghostwhite	f8f8ff

**Table 7-2, Default Color Alias (Continued)**

<b>Color Alias</b>	<b>Corresponding Hex Code</b>	<b>Color Alias</b>	<b>Corresponding Hex Code</b>
gold	ffd700	goldenrod	daa520
gray	#808080	green	#00ff00
greenyellow	adff2f	honeydew	f0fff0
hotpink	ff69b4	indianred	cd5c5c
indigo	4b0082	ivory	fffff0
khaki	f0e68c	lavender	e6e6fa
lavenderblush	fff0f5	lawngreen	7cfc00
lemonchiffon	fffacd	lightblue	add8e6
lightcoral	f08080	lightcyan	e0ffff
lightgoldenrodyellow	fafad2	lightgreen	90ee90
lightgrey	d3d3d3	lightpink	ffb6c1
lightsalmon	ffa07a	lightseagreen	20b2aa
lightskyblue	87cefa	lightslategray	778899
lightsteelblue	b0c4de	lightyellow	ffffe0
lime	00ff00	limegreen	32cd32
linen	faf0e6	magenta	ff00ff
maroon	800000	mediumaquamarine	66cdaa
mediumblue	0000cd	mediumorchid	ba55d3
mediumpurple	9370d8	mediumseagreen	3cb371
mediumslateblue	7b68ee	mediumspringgreen	00fa9a
mediumturquoise	48d1cc	mediumvioletred	c71585
midnightblue	191970	mintcream	f5fffa
mistyrose	ffe4e1	moccasin	ffe4b5
navajowhite	ffdead	navy	000080
oldlace	fdf5e6	olive	808000
olivedrab	6b8e23	orange	#ffa500

**Table 7-2, Default Color Alias (Continued)**

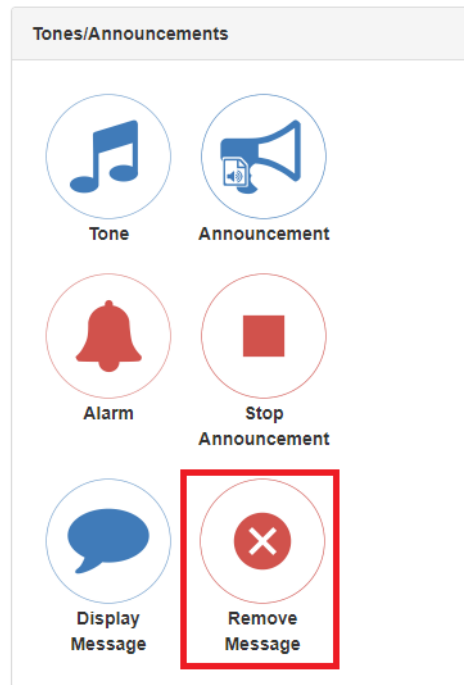
<b>Color Alias</b>	<b>Corresponding Hex Code</b>	<b>Color Alias</b>	<b>Corresponding Hex Code</b>
orangered	ff4500	orchid	da70d6
palegoldenrod	eee8aa	palegreen	98fb98
paleturquoise	afeeee	palevioletred	d87093
papayawhip	ffefd5	peachpuff	ffdab9
peru	cd853f	pink	ffc0cb
plum	dda0dd	powderblue	b0e0e6
purple	#800080	red	#ff0000
rosybrown	bc8f8f	royalblue	4169e1
saddlebrown	8b4513	salmon	fa8072
sandybrown	f4a460	seagreen	2e8b57
seashell	fff5ee	sienna	a0522d
silver	c0c0c0	skyblue	87ceeb
slateblue	6a5acd	slategray	708090
snow	fffafa	springgreen	00ff7f
steelblue	4682b4	tan	d2b48c
teal	008080	thistle	d8bfd8
tomato	ff6347	transparent	transparent
turquoise	40e0d0	violet	ee82ee
wheat	f5deb3	white	#ffffff
whitesmoke	f5f5f5	yellow	#ffff00
yellowgreen	9acd32		

### **7.1.1 Removing Messages**

The Remove Message window allows you to remove any message from the display message queue. It is also the only way to expire a message that was created using **Manually Removed** as the **Expiration Mode**.

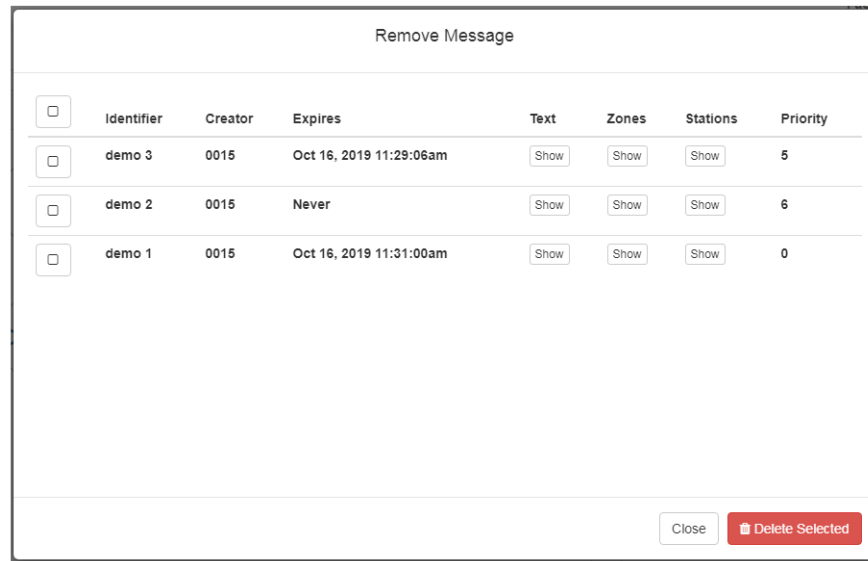
To remove a message:

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 7-4, Remove Message Button**

- Step 2 Under **Tones/Announcements**, select **Remove Message**.



**Figure 7-5, Remove Message**

- Step 3 Select the **Remove** icon next to the message that you want to delete.
- Step 4 Select **Delete Selected**.



# 8

## Routines and Other Tasks

Other tasks that you can perform from the dashboard include:

- Starting or stopping routines
- Viewing schedules
- Manually controlling output contacts

### 8.1 Starting and Stopping Routines

A routine automatically launches a procedure, or sequence of actions, that the Nyquist system executes as a result of an input trigger. Routines can support your crisis plans for situations such as site lockdown, weather events, or emergency evacuation.

If you have the proper permissions and your station has the necessary CoS parameter set, you can manually launch a routine via the dashboard.

*Note:* Routines are created from the Routines selection on the navigation bar. The navigation bar does not appear if you are not authorized to make changes to the C4000 configuration. For more information, refer to the *Nyquist C4000 System Administrator Manual*.

A routine can also be automatically launched:

- By an event, such as playing a specific announcement
- Via third-party switch contact closures recognized by the Nyquist I/O Controller

- Via a Routines API that can be used by third-party systems, including fire systems, access control systems, and video security systems

A routine that has **Allow DTMF** enabled does not need a trigger. However, most routines will have at least one associated trigger and one or more actions. For example, if an administrator manually triggers a lockdown routine, several actions could result, such as:

- Play a lockdown announcement
- Display lockdown instructions on monitors connected to NQ-GA10PV devices.
- Close I/O controller output contacts to trigger third-party systems that lock doors
- Initiate the check-in process
- Launch an emergency all call announcement

To allow a third-party system to launch a routine via the Routines API, you must enable **Allow API** for the routine.

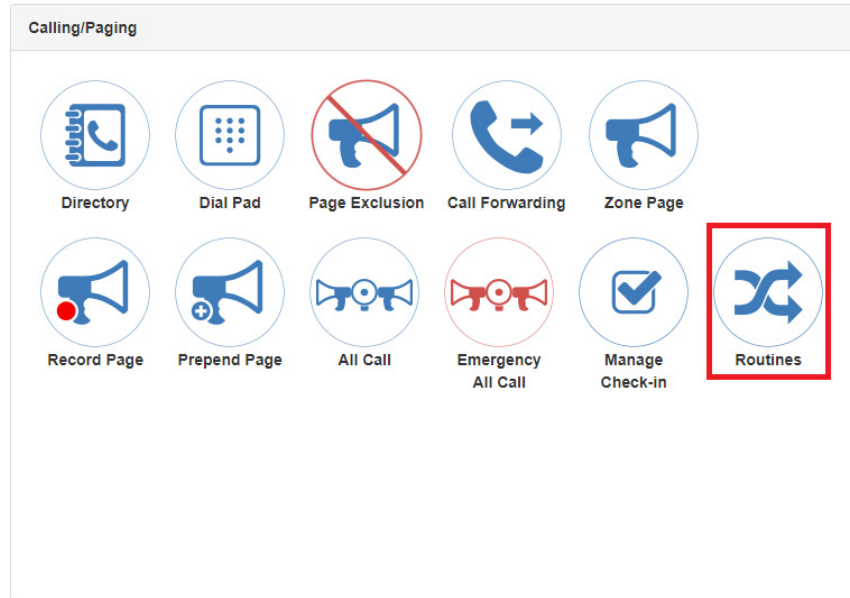
You can manually launch a routine that has **Allow DTMF** enabled and stop a running routine from the dashboard.

In addition to the routine needing **Allow DTMF** enabled, the dashboard must have **Execute Routines** CoS enabled.



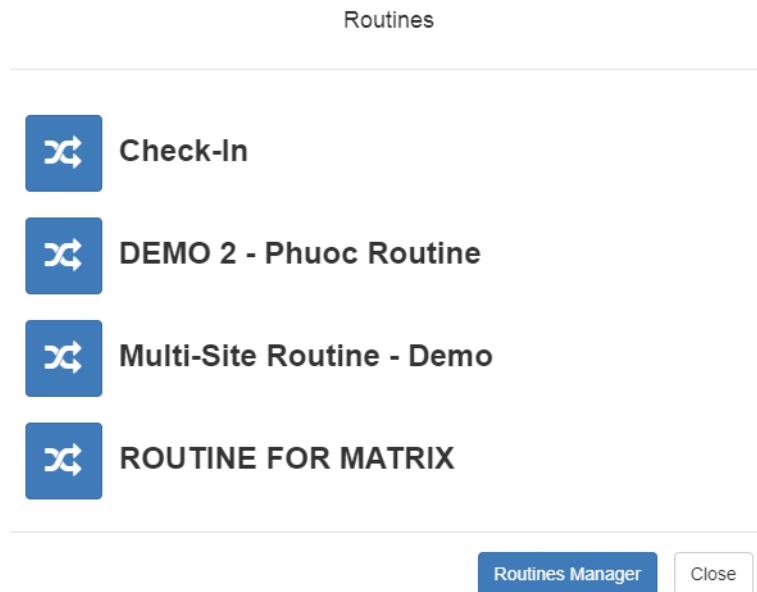
To launch a routine from the dashboard:

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.



**Figure 8-1, Routines Button**

- Step 2 Under Calling/Paging, select **Routines**.



**Figure 8-2, Routines List**

Step 3      Select one of the listed routines.



Dial Pad

End Call

---

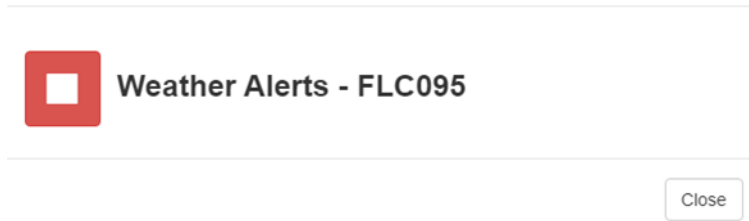
**Figure 8-3, Routine Page**

- Step 4 If you must enter a password to complete this task, select **Dial Pad** and enter the 4-digit password.
- Step 5 If prompted, enter 1 for confirmation.
- Step 6 To end the routine, select **Stop**.

You can also stop a routine using the Routines Manager.

*To stop a routine via the Routines Manager:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 Under Calling/Paging, select **Routines**.
- Step 3 Select **Routines Manager**.



**Figure 8-4, Routines Manager**

Step 4 Select the routine that you want to stop.

*Note:* Stopping a routine does not reverse any actions that the routine has already started. You may need to clear the actions manually.

Step 5 Select **Yes**.

## 8.2 Viewing the Schedule for the Week

From the dashboard, you can view this week's schedule or use the **Prev** and **Next** buttons to view the schedule for other weeks. If you select a specific schedule for a day, you can also view details of that schedule.

*To view this week's schedule:*

Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Oct 13 SCT: None	Oct 14 Columbus Day	Oct 15 SCT: TTH	Oct 16 SCT: MWF	Oct 17 SCT: TTH	Oct 18 SCT: Demo Days	Oct 19 SCT: None

**Figure 8-5, Weekly Schedule Section of Dashboard**

Step 2 Scroll to the Weekly Schedule section.

Step 3 To view details of a schedule, select a schedule listed for a day or use the **Prev** or **Next** buttons to navigate to the desired schedule and select that schedule.

The Schedule page appears.

Schedule

---

Magic Kingdom - EDITING Schedule Testing Autom  
Thursday August 23, 2018

Time	Name	Zones	Tone	Scheduled Audio
2:17:30 pm	Happily Ever After	Amp Time Zone	Triumphal Fanfare	Disney World
2:18:00 pm	Magic Parade	Amp Time Zone	Caramel	Stop Playlist
2:39:00 pm	Let the Magic Begin	A2120 - MONO, A2300 - 504, A2300 - 505, All Time Zone, Amp Time Zone, Time zone - 1, Zone 10	Triumphal Fanfare	Disney World
2:39:49 pm	Closing Hours	A2120 - MONO, A2300 - 504, A2300 - 505, All Time Zone, Amp Time Zone, Time zone - 1, Zone 10	Caramel	Stop Playlist

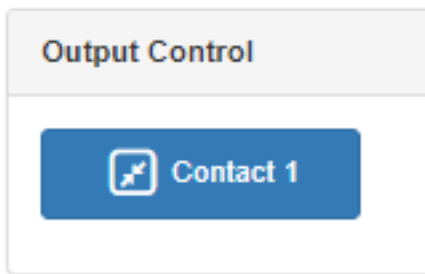
**Figure 8-6, Schedule Page**

Step 4 Select **Close** when done viewing.

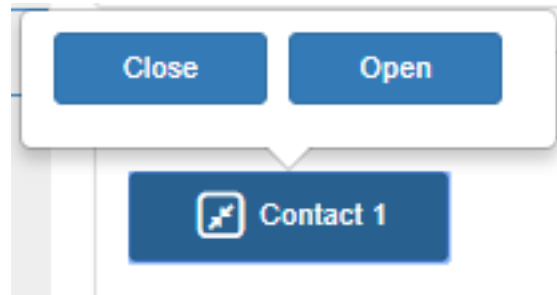
## 8.3 Manually Controlling Output Contacts

If you are using the C4000 I/O Controller to recognize third-party contact closures, you can manually control output contacts.

Prerequisites for using manual controls are adding an I/O Controller as a station and configuring a controller rule for at least one output contact with the Action set as Manual.



**Figure 8-7, Output Control Section**



**Figure 8-8, Manual Control Buttons**

*To manually control an output contact:*

- Step 1 If not already on your dashboard, select **Dashboard** from the navigation bar.
- Step 2 In the Output Contact Control section, select the desired contact.

*Note:* If you have set up a rule with a duration of 0, then selecting the contact displays two buttons—one for opening and one for closing the circuit. If duration is set to a number other than 0, you can only close the circuit.

- Step 3 Select the button for the action that you want. The button labels are set in the rule for the output contact.

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