VoIP Speaker Configuration Guide

NQ-S1810CT, NQ-S1810WT

BOGEN
COMMUNICATIONS, INC.

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Configuring the Nyquist VoIP Speakers

The Nyquist VoIP Ceiling Speaker (NQ-S1810CT) and Nyquist VoIP Wall Baffle Speaker (NQ-S1811WT) are VoIP talkback speakers designed to work with the Nyquist Series IP network-based intercom and paging solution.

The ceiling talkback speaker assembly consists of an 8" cone speaker and VoIP module preassembled onto a 13" steel ceiling grille painted with bright white enamel.

The VoIP wall baffle talkback speaker assembly consists of an 8" cone speaker and VoIP module preassembled onto a bright white injection-molded wall baffle speaker enclosure.

Both types of speakers are 802.3af-compliant and are designed to facilitate rapid and efficient deployment using existing network Power over Ethernet (PoE) ports. These VoIP speakers enable ease of placement wherever needed within a facility.

The Nyquist server can automatically discover and configure the Nyquist VoIP speakers, but you can also manage the device and manually configure some settings through the web-based user interface (web UI). The following sections describe the process for manual configuration. For information about using Nyquist's automatic configuration process, refer to the *Nyquist System Administrator Guide*.
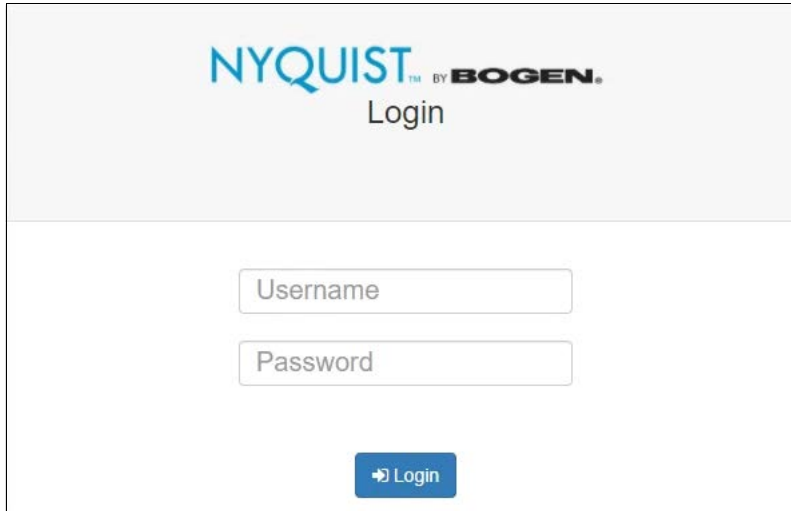

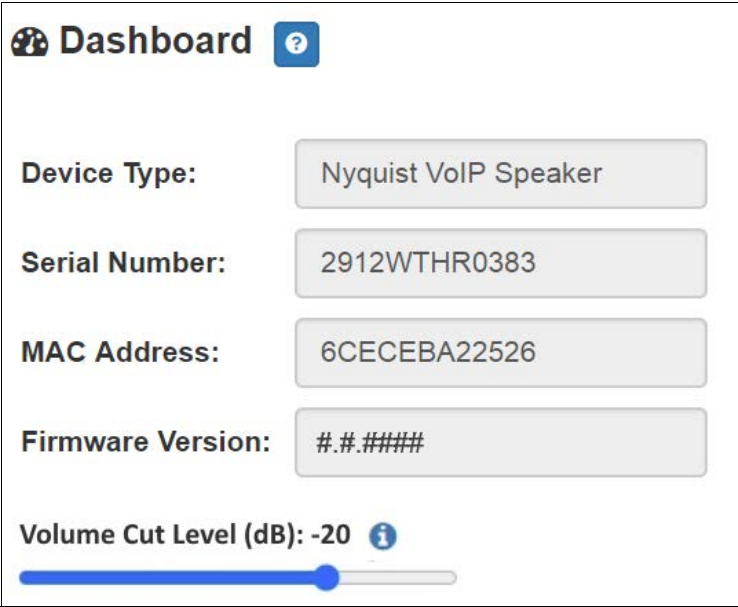**Figure 1. Nyquist Appliance Login**

To access the appliance's UI:

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

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1 Access the appliance's web UI by doing one of the following:

   a) On your web browser, enter the IP address for the appliance as the URL.

   b) From the Nyquist web UI navigation bar, select **Stations**, select **Stations Status**, navigate to the device that you want to configure, and then select the **Link** icon.

2 At the Nyquist Appliance Login page, enter username and password, and then select **Login**.

   The default username is **admin**; the default password is **bogen**.

   The dashboard for the selected appliance appears.

Using the Dashboard

Figure 2. Nyquist Speaker Dashboard

The dashboard displays the following fields:

Table 1. Appliance Dashboard Fields

Device Type	Identifies the model of this device.
Serial Number	Identifies the serial number for the device.
MAC Address	Identifies the Media Access Control (MAC) address, which is a unique identifier assigned to network interfaces for communications on the physical network segment.
Firmware Version	Identifies the firmware version installed on the station.
Volume Cut Level (dB)	Specifies a temporary volume setting for the speaker during the current intercom call or page.
	Note: This is a temporary adjustment that allows the user to experiment with the loudness of the speaker and will be reset to the normal setting on subsequent calls. To make permanent adjustments, change the station-specific cut level settings on the Nyquist System Controller.
	The value can be adjusted between -42 and 0 dB.

The following buttons are available at the top of all pages in the application.

Table 2. Appliance Dashboard Buttons

Dashboard	Displays the dashboard.
Configuration Settings	Accesses the Configuration Settings page where you can view various options or select to receive configuration settings from the server.
Network Settings	Accesses the Network Settings page where you can view and set network settings, such as the static IP address.
Firmware Update	Accesses the Firmware Update page where you can view the current Nyquist version, update firmware to a new version, the configuration to factory defaults, and reboot the appliance.
Logs	Accesses log files, which record either events or messages that occur when software runs and are used when troubleshooting the appliance.
Help	Accesses the appliance's online help.

Table 2. Appliance Dashboard Buttons (Continued)

Manual	Displays the *appliance's configuration manual.*
Logout	Logs out of the appliance's dashboard.

Updating Firmware

When you select **Firmware Update** from the appliance's web UI, the Firmware Update page appears. From this page you can determine which Nyquist firmware version the appliance is using and if an update is available. You can also load a firmware release, install the loaded firmware, restore the configuration to factory defaults, and reboot the appliance.

Note: A Nyquist appliance connected to the Nyquist network receives a configuration file from the Nyquist server that includes the latest firmware available from the server. If the firmware is different from the one installed on the appliance, an automatic firmware update occurs unless the **Firmware** parameter for the station is left blank. Refer to the *Nyquist System Administrator Guide* for more information.
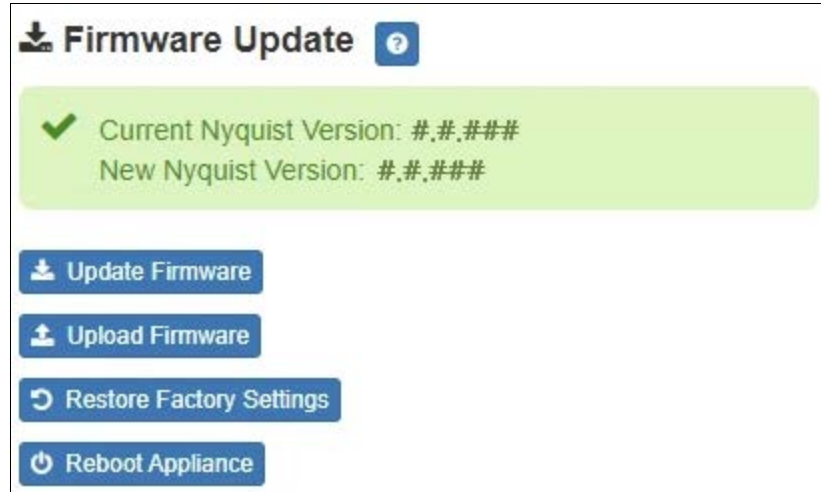

Figure 3. Firmware Update Page

To use the Firmware Update page:

1 On the appliance web UI's main page, select **Firmware Update** to view or update the firmware version.

2 If you already have a firmware file you would like to install to the appliance, select **Upload Firmware** to upload the firmware file from your computer to the appliance. A

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popup screen appears that allows you to select the file that you want to upload. You can navigate to the file's location. After you select the file, select **Upload**.

3   The page displays the uploaded firmware version ("New Nyquist Version") and an **Update Firmware** button appears. Select this button if you want to update the appliance's firmware to the uploaded version.

4   If you want to return your appliance to its original factory configuration, select **Restore Factory Settings**.

5   Select **Reboot Appliance** to restart your appliance.

Table 3. Firmware Update settings

Current Nyquist Version	Shows the version of the appliance's currently installed firmware.
New Nyquist Version	Shows the version of the firmware that has been loaded, though not installed, onto the appliance.
Update Firmware	Available only when a new firmware version has been loaded onto the appliance (as specified in New Nyquist Version).
	Installs the loaded firmware. A reboot may be required after installation.
Upload Firmware	Prompts the user to specify a firmware file, which will then be loaded (though not installed) onto the appliance.
	Note: To obtain the firmware file for a specific version, please contact Bogen Customer Service.
Restore Factory Settings	Returns the appliance to its original factory configuration.
	Note: This does not install the original appliance firmware. The firmware will not be changed.
Reboot Appliance	Restarts the appliance.

Network Settings Tab Parameters

Network settings can be configured dynamically by the Nyquist server or manually by using the appliance's web UI.

To manually configure network settings:

1   On the appliance web UI's main page, select **Network Settings**.

2   Select your desired network settings.

3   Select **Save**.

Figure 4. Network Settings

Network settings are described in the following table:

Table 4. Network Settings

IP Address	Identifies the IP address assigned to the appliance.
Netmask	Identifies the subnetwork subdivision of an IP network.
Gateway	Identifies the address, or route, for the default gateway.
VLAN ID	Identifies the Virtual Local Area Network (VLAN) for this appliance. Values range from 0 to 4094.

Table 4. Network Settings (Continued)

VLAN Priority	Identifies the priority of the network traffic on the VLAN. Priority can range from 0 through 7.
NTP Server	Identifies the IP address or the domain name of the Network Time Protocol (NTP) Server.
TFTP Server	Identifies the host name or IP address of the Trivial File Transfer Protocol (TFTP) server.
	The specified TFTP server can be used to automatically set this device's **Configuration** settings via the **Get Configuration from Server** button.
	If **TFTP Server from DHCP** (see below) is set to "Yes", this value will be auto-configured via DHCP option 66, assuming the DHCP server has been configured to provide option 66. For details, see the documentation for your DHCP server.
	Note: A TFTP server runs on the Nyquist server on port 69 (the standard TFTP port) and the optional Nyquist DHCP service automatically provides this TFTP address via option 66.
	If this value is unspecified, the **TFTP Server from DHCP** will automatically be set to "Yes", this field will become read-only, and DHCP will be used to configure this setting. To change this value, the **TFTP Server from DHCP** setting must be set to No, which makes the field editable.
TFTP Server from DHCP	"Yes" means the device will use the DHCP option 66 value to retrieve an address for the TFTP Server from DHCP.
	"No" means the device will ignore the DHCP option 66 value and use the manually configured value of the TFTP Server (see above).
DHCP Enabled	Indicates if the device is enabled to use DHCP to retrieve its IP configuration.
Reboot Appliance	Indicates that this appliance should reboot when the Save button is clicked.

Configuration Settings Tab Parameters

The easiest way to configure Nyquist appliances is to obtain configuration settings from the Nyquist server by selecting **Get Configuration From Server**.

To view the Nyquist appliance configuration:

1 On the appliance Web UI's main page, select **Configuration Settings**.

2 View the settings as described in Table 5 on page 8 for normal configuration.

Figure 5. Appliance Configuration Settings

The following table describes the **Configuration Settings** tab settings:

Table 5. Configuration Settings

Get Configuration from Server	Retrieves configuration settings (i.e., web username, server, and local port) from the TFTP server specified in the Network Settings (see "*Network Settings Tab Parameters" on page 5*).
Web Username	Identifies the username of the current user.
Emergency-All-Call	Identifies the IP address, port number, cut level (volume), and station list used for emergency all-call pages.

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Table 5. Configuration Settings

All-Call	Identifies the IP address, port number, cut level (volume), and station list used for all-call pages.
Audio Distribution	Identifies the IP address, port number, cut level (volume), and station list used for audio distribution.
Multicast #	Identifies the IP address, port number, cut level (volume), and station list used for the multicast audio stream of one (or more) zones.

The **Configuration Settings** tab also displays the following information for each **Device Station** attached to the amplifier:

Port Number	Identifies the port number of the appliance.
Port Type	Identifies the device type to which the port connects.
Account ID	Identifies the SIP account (IP address) associated with the device preceded by the extension of the device associated with this port.
Local Port	Identifies the port used for SIP.
Username	Identifies the username or extension for the station associated with the port.

Accessing Log Files

A log file records events and messages that occur when software runs, to be used when troubleshooting the appliance. From the appliance's web-based UI, log files can be viewed directly or exported via download to your PC, Mac, or Android device, where they can be copied to removable media or attached to an email for technical support.

To view a log file:

1   On the appliance Web UI's main page, select **Logs**.

2   From the drop-down menu, select the log that you want to view.
   Multiple versions of the same log, and zipped copies of the log, may be available.

3   To export the file, select **Export**.
   A link to a .txt file appears in the browser's lower left corner.

Figure 6. Logs

Available logs are described in the following table. If a log file is empty, however, it will not appear in the drop-down list of available logs.

Table 6. Logs

Log	Description
ampws.log	Contains information about protection status and logs protection events with temperature information at the time of event.
auth.log	Contains system authorization information, including user logins and authentication methods that were used.
btmp	Contains information about failed login attempts.
daemon.log	Contains information logged by the various back-ground daemons that run on the system.
debug	Contains errors and debug information.
dpkg.log	Contains information that is logged when a package is installed or removed using dpkg command.
faillog	Contains user failed login attempts.
kern.log	Contains information logged by the kernel and recent login information for all users.
lastlog	Contains information on the last login of each user.
messages	Contains messages generated by Nyquist.
php5-fpm.log	Contains errors generated by the PHP script.
syslog	Contains list of errors that occur when the server is running and server start and stop records
user.log	Contains information about all user level logs.
wtmp	Contains historical record of users logins at which terminals, logouts, system events, and current status of the system, and system boot time.