Nyquist Gen 2 VoIP Speakers Configuration Manual

NQ-S1810CT-G2, NQ-S1810WT-G2

BOGEN®
COMMUNICATIONS, INC.

Contents

Configuring Nyquist Gen2 VoIP Speakers

The Nyquist VoIP Ceiling Speaker Gen 2 (NQ-S1810CT-G2) and Nyquist VoIP Wall Baffle Speaker Gen 2 (NQ-S18110WT-G2) 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 pre-assembled 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 pre-assembled onto a bright white injection molded wall baffle speaker enclosure.

Both types of speakers have a Form-C relay for controlling third-party devices, 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 the ease of placement wherever needed within a facility.

A short press of the appliance's **Reset** button reboots the device. If you press the **Reset** button for 10 seconds, the appliance returns to the factory default configuration settings. Returning to the default configuration settings does not change the appliance's firmware.

You can let the Nyquist server automatically discover and configure the Nyquist VoIP speakers, or you can manually configure the speakers through their 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 appropriate *Nyquist System Administrator Manual*.

Figure 1, Nyquist Appliance Login

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

To access the appliance's UI:

Step 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.

Step 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.

1 Using the Dashboard
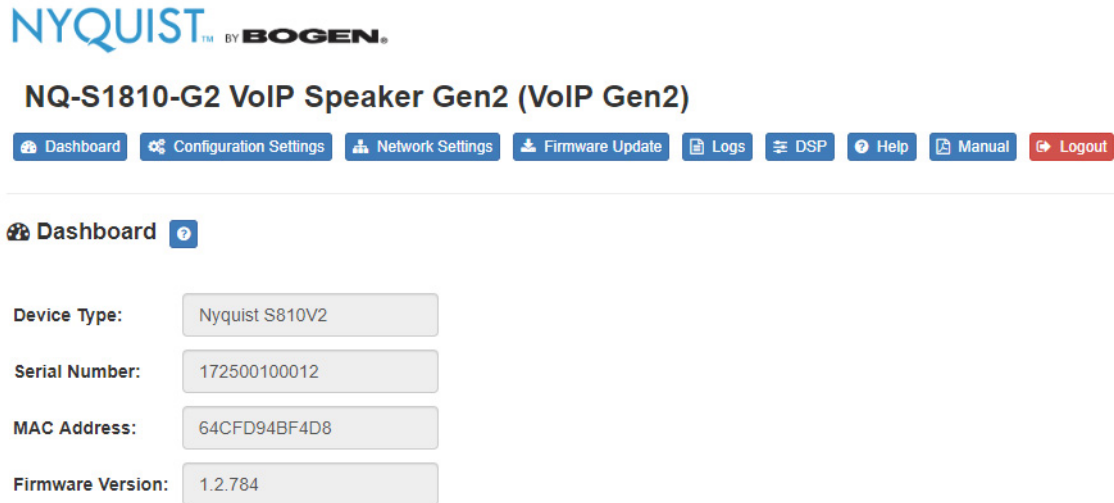
Figure 2,

The dashboard displays the following read-only fields:

Table 1, Appliance Dashboard Read-Only Fields

Device Type	Identifies the physical device used by the station.
Serial Number	Identifies the serial number for the device.
MAC Address	Specifies the Media Access Control (MAC) address, which is a unique identifier assigned to network interfaces for communications on the physical network segment.
Firmware Version	Provides the firmware version installed on the station.

The dashboard also contains the following buttons:

Table 2, Appliance Dashboard Buttons

Dashboard	Refreshes the dashboard.
Configuration Settings	Accesses the Configuration Settings page where you can either manually set various options, such as the SIP Username, 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, check for updates, restore factory settings, 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.
DSP	Accesses the DSP page where you can view and set parameters for Digital Signal Processing (DSP).
Help	Accesses the appliance's online help.
Manual	Displays the *Nyquist VoIP Speaker Configuration Manual*.
Logout	Logs out of the appliance's dashboard.

2 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 version the appliance is using and if an update is required. You can also use this page to restore factory settings and to 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 later than 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 Manual* for more information.

Figure 3, Firmware Update Page

To use the Firmware Update page:

Step 1   On the appliance web UI's main page, select **Firmware Update** to ensure you have the latest firmware version.

Step 2   Select **Upload Firmware** to upload firmware from the server to the appliance.

If you select this option, a 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**. If Nyquist discovers a new firmware version, the Firmware Update page displays an **Update Firmware** button. Select this button if you want to update the appliance's firmware to the new version.

Step 3   If you want to return your appliance to its original state (undoing firmware updates), select **Restore Factory Settings**.

Step 4   Select **Reboot Appliance** to restart your appliance.

3   Setting Network 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:

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

Step 2   Select your desired network settings.

Step 3   Select **Save**.

Figure 4, Network Settings

Network settings are described in the following table:

Table 3, Network Settings

Static IP	Identifies the fixed IP address assigned to the appliance by a system administrator.
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 3, 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. This field is read only.
TFTP Server	Identifies the IP address of the Trivial File Transfer Protocol (TFTP) server. TFTP is used by Nyquist VoIP phone and appliance provisioning. A TFTP server runs on the Nyquist server on port 69 (the standard TFTP port #). Device provisioning files are stored on the Nyquist server in directory: `/srv/tftp.` This is the only directory exposed by the TFTP server.
DHCP Server Override	Indicates if you want to override the TFTP server information provided by the Dynamic Host Configuration Protocol (DHCP) via option_66. DHCP supplies IP addresses to the Nyquist server and associated devices. It also supplies the TFTP server IP address or name via option_66.
DHCP Enabled	Indicates if the device is enabled to use DHCP.
Reboot Appliance	Allows you to save the network options and reboot the appliance.

4   Setting Configuration Tab Parameters

The easiest way to configure Nyquist appliances is to obtain configuration settings from the Nyquist server by selecting **Get Configuration From Server**. However, you can manually configure an appliance through the appliance's Web UI.

Note: Manual configuration will be overwritten by the server once the appliance is connected and discovered by the server.

To manually configure your Nyquist appliance:

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

Step 2   Select your desired settings.

Step 3   Select **Save**.

The following table describes the Configuration tab settings:

Table 4, Configuration Settings

Web Username	Provide a web username for this appliance.
Web Password	Provide a web password for logging into the appliance.
Web Confirm Password	Re-enter the password used to log into the appliance.
SIP Username	Provide the username used for Session Initiation Protocol (SIP) device registration.
SIP Password	Provide the password used for SIP device registration.
SIP Confirm Password	Re-enter the password used for SIP device registration.
Server	Identifies the IP address of the Nyquist server.

Local Port	Identifies the local port.
Emergency-All-Call	Identifies the IP address, port number, and volume used for emergency all-calls pages.
All-Call	Identifies the IP address, port number, and volume used for all-calls pages.
Audio Distribution	Identifies the IP address, port number, and volume used for audio distribution.
Multicast #	Identifies the multicast IP address for a zone that the speaker is included in. If a speaker is added to multiple zones, the multicast IP address for each zone appears.

5   Accessing Log Files

A log file records either events or messages that occur when software runs and is 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 and then copied to removable media or attached to an email to technical support.

To view a log file:

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

Step 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.

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

Figure 5, Logs

Available logs are described in the following table:

Table 5, Logs

| Log	Description
alternatives.log	Contains information by the update-alternatives, which maintain symbolic links determining default commands.
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.
bootstrap.log	Contains information actions, errors, and warnings that occur during booting of the appliance.
btmp	Contains information about failed login attempts.

Table 5, Logs (Continued)

Log	Description
daemon.log	Contains information logged by the various background daemons that run on the system.
debug	Contains errors and debug information.
dmesg	Contains kernel ring buffer information. When the system boots up, the screen displays information about the hardware devices that the kernel detects during the boot process. These messages are available in the kernel ring buffer, and whenever a new message comes, the old message gets overwritten.
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.
wvdialconf.log	Contains basic information about the modem port, speed, init string, and Internet Service Provider (ISP).

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6   Setting DSP Parameters

When you select DSP from the appliance's web UI, the DSP page appears.
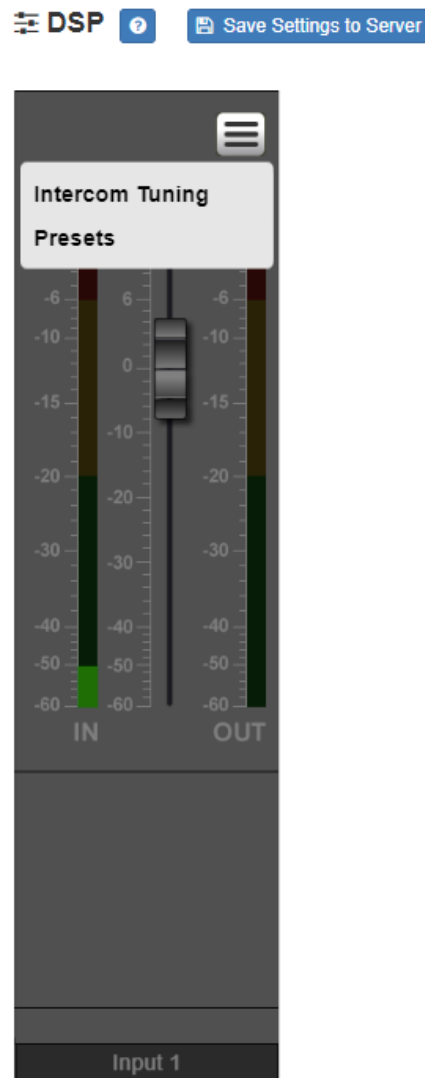
Figure 6, DSP Page with Popup Menu

From this page, you can set parameters for DSP, which is a form of processing that uses bit data to simulate characteristics found in analog circuits. With DSP, you can alter analog signals, such as audio or video signals, that have been converted to a digital format.

You can also select **Save Settings to Server** to back up all configuration settings to the Nyquist server.

The DSP page shows the Level selections for the Output channel. Selecting the **Menu** icon above the Output channel displays a menu that allows you to select DSP parameters. that are described in the following table:

Table 6, DSP Parameters

Intercom Tuning	Allows you to set settings used in intercom calls.
Presets	Allows you to use preset DSP settings for the selected Speaker Type.

6.1 Intercom Tuning

Selecting **Intercom Tuning** from the **Menu** icon on the DSP page displays the Intercom Tuning dialog box.
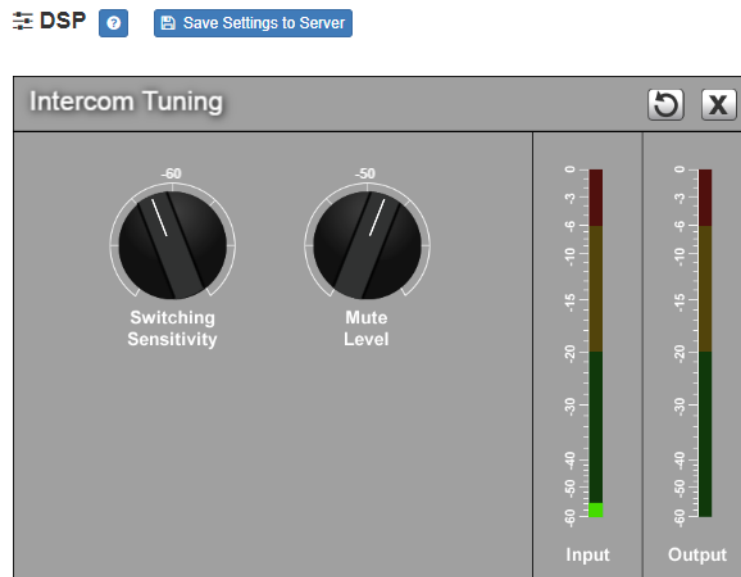

Figure 7, Intercom Tuning

The Intercom Tuning dialog box has LEDs for input and output sig-
nals and contains two settings.

Table 7, Intercom Tuning Settings

Switching Sensitivity	Specifies the input level at which point the Admin Phone takes over for the speaker. The range is -90 to -20 dB.
Mute Level	Specifies the negative gain applied to the microphone when in talkback mode. The range is -90 to -20 dB.

6.2   Presets

Selecting **Presets** from the **Menu** icon on the DSP page displays the
Presets dialog box.
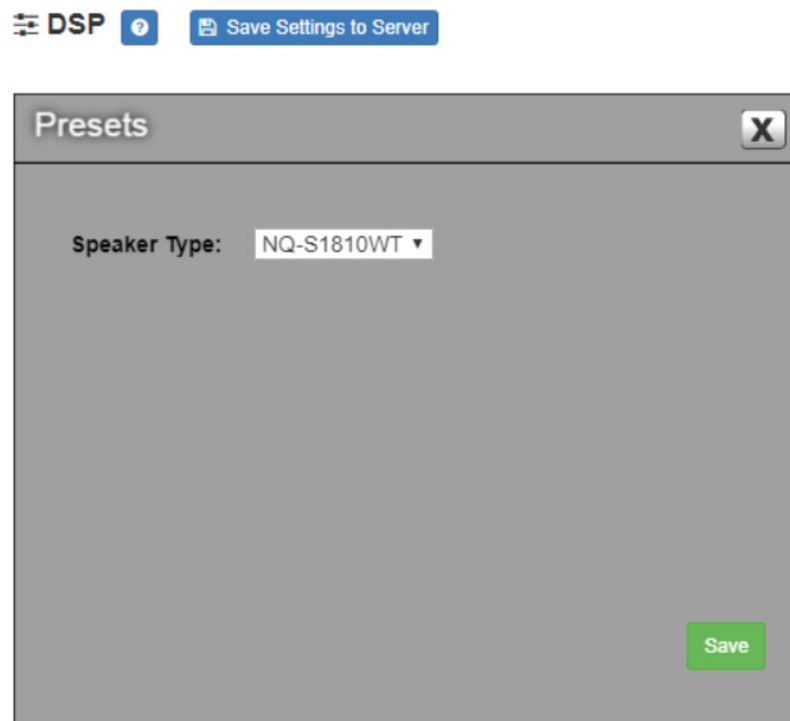
Figure 8, Presets

The Presets dialog box allows you to select the **Speaker Type**.
Options are: **NQ-S1810WT** or **NQ-S1810CT**.