# BOSE WORK CONFIGURATION

User Guide



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# INTRODUCTION

The Bose Work Configuration application allows you to control the digital pan-tilt-zoom (PTZ) camera, perform software updates, and configure settings for the Bose Videobar. The main configuration options include:

Video settings (pan-tilt-zoom, brightness, contrast, etc.)

User settings (autoframe, microphone, etc.)

Administration settings (network parameters, *Bluetooth* connectivity, etc.)

Firmware updates (included in Administration settings)

#### **Notes**

Basic settings, such as PTZ and camera presets, can be configured by any user and do not require a password to make changes. The remaining configuration options, including software updates, are available only to administrators and require a password for access.

To use the HDMI Display port output on the Bose Videobar VB1, you must open the **Configuration** tab, select the **User Access** page, and enable the **DisplayLink®** setting. If you are using Windows, you must first download and install the latest DisplayLink driver from **displaylink.com/downloads**.

If you are using the Bose Work Configuration app in a browser (the WebUI app), you will also need a USB connection if you wish to see the camera image.

# **System and Browser Requirements**

The Bose Work Configuration app works with the following operating systems and browsers:

#### **Operating Systems**

Microsoft Windows 8 (and higher)
macOS® 10.12 (and higher)

#### **Browsers**

Google Chrome<sup>™</sup>, Version 75 (and higher)

Microsoft Edge, Version 44 (and higher)

Safari®. Version 12.1.1 (and higher)

Mozilla Firefox, Version 67 (and higher)

## **Trademark and Licensing Information**

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## **User Agreement and Privacy Information**

To view the Bose Work Configuration application user agreement or the Bose Privacy Policy, click the desired link on the <u>Settings</u> page.

# HOME SCREEN (USB app only)

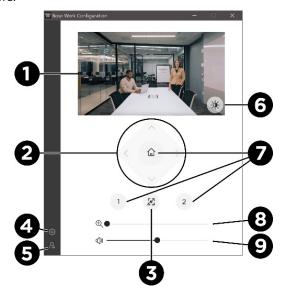
When you connect your computer to the USB-C port on the Bose Videobar, you can open the Bose Work Configuration app. The initial screen will be the Home screen where you can adjust camera settings.

Click the **Home Screen** icon to access this screen from elsewhere in the app.



**Note:** If the USB connection is not established, the screen will show a message prompting you to check that the device is connected to a power outlet and to your computer's USB port.

The Home screen is accessible to all users. There are some additional password-protected settings that are available only to system administrators.



1. **Video Stream:** Live video stream from the Bose Videobar camera.

**Note:** The camera streams to only one app at a time. If you see a message that the video stream is not available, you may have another app open that is using the camera.

- 2. **Camera Pan and Tilt:** Click a button once to pan or tilt the camera in increments, or click and hold a button for continuous pan or tilt.
- 3. **Autoframe:** Turns the autoframe feature on or off. Autoframe automatically adjusts pan-tilt-zoom (PTZ) settings to continuously frame all participants in the room. When autoframe is off, the icon appears with a slash through it.



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**Note:** Autoframe will be automatically turned off when any of the PTZ camera controls or preset buttons are selected.

4. **Settings:** Click the **Settings** icon to open the <u>Settings</u> screen. Click the **Home Screen** icon to return to the Home screen.



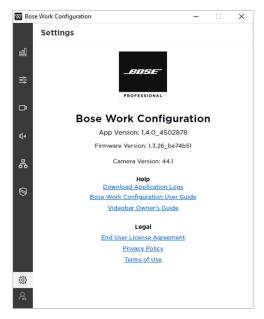
 Administration: Click the Administration icon to access to the password-protected configuration settings in the Bose Work Configuration app. These settings are available only to system administrators.



- 6. **Low Light Compensation:** Enables or disables automatic low-light compensation to optimize video in dim lighting conditions.
- 7. **Presets:** There are 3 Preset buttons (**Home**, **1**, and **2**) that you can use to quickly position the camera at predefined pan, tilt, and zoom settings.
- 8. **Zoom:** Move the slider to the right to zoom the camera in, or to the left to zoom out.
- 9. **Volume:** Move the slider to the right to increase the audio volume, or to the left to decrease the volume.

# **SETTINGS**

The Settings page provides version information for the app itself and the Bose Videobar firmware. Links to the latest app and firmware versions are also provided if updates are available.



You can access the following documentation by clicking its link:

**Bose Work Configuration User Guide** (user documentation for this app)

**Videobar Owner's Guide** (user documentation for the Bose Videobar)

Bose Work Configuration app **End User License Agreement** and **Terms of Use** 

**Bose Privacy Policy** 

Click the **Settings** icon in the left pane of any page in the app to access the Settings page.

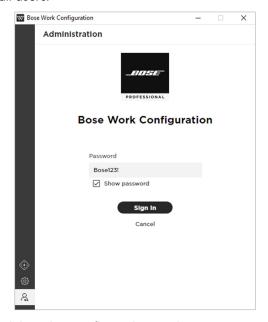


Click the **Home Screen** icon to return to the Home screen.



# **Administration Settings**

The app contains some password-protected settings that are available only to system administrators. These settings can be accessed from the **Home** screen that includes the camera control settings that are accessible to all users.



To access Administration configuration settings:

Click the **Administration** icon in the navigation panel.
 The Administration screen will appear.



2. Enter your Administration password and then click **Sign In**.

Select or deselect Show Password to show or hide the password.

The first time you access the Administration settings of a Bose Videobar, you must enter the factory default password: **Bose123!** 

After 5 unsuccessful login attempts, you must restore the factory default settings (after which it can accept the factory default password again). To restore all settings of the Bose Videobar to their factory defaults, do one of the following:

On the remote control, press and hold the **Home** button and **Autoframe** button simultaneously for 5 seconds.

On the side of the Bose Videobar VB1, press and hold the **Mute** button and **Bluetooth** button simultaneously for 5 seconds.

As a best practice, you should change the password. See **Configuration Tab > System > Device Password** for password requirements and instructions on changing the password.

The Administration area of the app includes the following tabs on the left side of the window:

<u>Status</u>: Device information, access to available firmware updates, and audio, video, and connection status. This tab appears automatically after you have successfully logged into the Administration area.



**Configuration:** Install firmware; configure user access to certain video, audio, and connectivity settings; configure profiles, system settings, and identification settings. (If a newer version of Bose Videobar firmware is available, a red dot will appear next to this icon.)



<u>Video</u>: Save or recall camera presets and restore factory default camera settings; Enable or disable autoframe access and configure autoframe settings; and Enable or disable automatic low-light compensation and configure low-light compensation settings.



**Audio:** Configure the linear microphone array, control access to microphone and other audio settings, and view audio input and output levels.



**Network:** Enable or disable wired and wireless connections, configure Internet Protocol (IP) settings for network connections, and configure wireless network security settings.



<u>Security - Certificates</u> (VB1 only): Create new certificate signing request (CSR), view pending CSRs, install new certificate, view existing certificate.



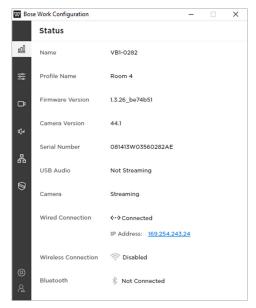
If there is no activity in the app for 30 minutes, a message appears to indicate that you will be logged out after 2 minutes for security purposes. Click **Continue** to remain in the app, or click **Log Out** to close the app.

To return to the camera controls and Home screen, click the **Administration** icon and then click **Sign Out**.



# **STATUS**

The Status tab provides information about the Bose Videobar device and connection status.



**Name:** The name that was assigned to the device (on the <u>Identity</u> page of the Configuration tab).

**Profile Name:** The unique name of the saved configuration <u>profile</u> that was uploaded to the device.

**Firmware Version:** The version number of the installed firmware.

**Update Firmware:** This button appears only when an update is available. Click the button to go to the Firmware page.

**Camera Version** (VB1 only): The version number of the Bose Videobar VB1 camera software.

Serial Number: The serial number of the device.

**USB Audio:** The *Bluetooth* audio streaming status: **Streaming** or **Not Streaming**.

Camera: The camera (video) status: Streaming or Not Streaming.

**Wired Connection** (VB1 only): The status of the wired connection:

If a wired connection has not been set up, the status is **Disabled**.

When a wired connection is established, the status is **Connected** and the IP address is displayed as an active link. Click the link to open a browser connection to the device.

If a wired connection is established and the signal is lost, the status is **Disconnected**.

#### Wireless Connection: The status of the wireless connection:

If the wireless connection has not been set up, the status is **Disabled**.

When a wireless connection is established, the name of the wireless network appears and the IP address is displayed as an active link.

If a wireless connection is established and the signal is lost, the status is **Disconnected**.

**Bluetooth:** The *Bluetooth* connection status: **Connected** or **Not Connected**. If connected, the name of the device that is paired to the Bose Videobar is displayed along with the **BT Audio** and **BT Call** status as either **Streaming** or **Not Streaming**.

# CONFIGURATION

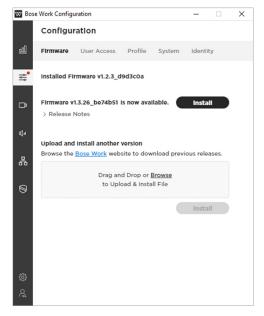
The Configuration tab includes firmware information and updating features; user access to certain video, audio, and connectivity settings; controls to manage profiles, system settings, and identification settings.

**Note:** If a newer version of the firmware is available, a red dot will appear next to the Configuration icon.



#### **Firmware**

The Firmware page shows the currently installed firmware version. If a newer version of the firmware is available, a red dot will appear next to the Configuration icon and a message will appear next to an **Install** button.



To install the latest firmware:

- 1. Click the active **Install** button.
  - You can click the **Release Notes** arrow to show or hide the release notes for the new firmware.
- Confirm whether you wish to proceed with the firmware update by clicking either Cancel or Continue.

#### **Installing Firmware Manually**

The Firmware page also allows you to install a firmware directly. To do this:

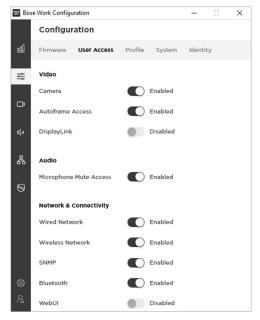
- Under Upload and Install another version, click the Bose Work link to locate and download the firmware version you wish to install.
- In the gray box on the **Firmware** page, drag and drop or click
   **Browse** to locate and select the .swu file for the desired firmware, and then click **Install** below the gray box.

If the installation fails, you will see a message that an error occurred during the installation. Click **OK** to close the dialog box.

## **User Access**

The User Access page enables you to specify whether to grant user access to certain settings for video, audio, and network and connectivity.

Click the toggle to enable or disable access to the following **Video**, **Audio**, and **Network & Connectivity** features.



#### Video

**Camera:** Enables or disables the Bose Videobar camera.

**Autoframe Access:** Enables or disables user access to the autoframe feature (via remote control or the Bose Work app on a mobile device). (This setting is identical to the **Autoframe Access** setting on the Autoframing page of the Video tab.)

**Note:** When disabled, autoframe will remain in the off state on the **Home** screen.

**DisplayLink** (VB1 only): Enables or disables the HDMI Display port output on Bose Videobar VB1. The default setting is **Disabled**. If you are using Windows, you must first download and install the latest DisplayLink driver from **displaylink.com/downloads**.

#### **Audio**

**Microphone Mute Access:** Enables or disables the ability to mute the Bose Videobar microphone.

#### **Network & Connectivity**

**Wired Network** (VB1 only): Enables or disables wired network connection.

Wireless Network: Enables or disables wireless network connection.

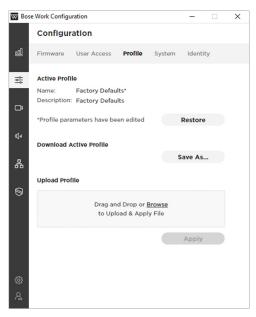
**SNMP:** Enables or disables simple network management protocol (SNMP) over the network.

**Bluetooth:** Enables or disables Bluetooth connectivity.

**WebUI:** Enables or disables the ability to access the Bose Work Configuration WebUI.

## **Profile**

The Profile page allows you to upload, download, and restore profiles. A profile contains a unique profile name and may also include an identifying description.



#### **Restoring a Profile**

The installed profile, whether it is the factory default or a newly updated version, appears with an asterisk (\*) if it has been modified (one or more parameters within the profile have been changed).

**Note:** Examples of changes include disabling *Bluetooth* connectivity or changing the wireless network mode from DHCP to static.

You can restore a profile to discard all changes by clicking the **Restore** button in the **Active Profile** section. A message will ask if you want to override the current profile with your changes. Click **Cancel** to keep your changes, or click **Restore** to discard the changes and revert to the previous settings.

#### Saving the Current Profile

After you change any settings, you can save your changes in a new profile. You can then upload that profile to other Bose Videobar devices to save configuration time.

To save configuration changes in a new profile, click the **Save As** button in the **Download Active Profile** section. You can then add an identifying description of the profile to the **Profile Description** field that appears. This field has a 256-character limit.

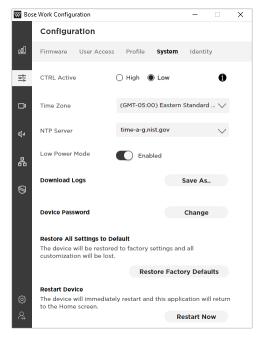
## **Uploading a Profile**

To upload a profile to a device, in the gray box in the **Upload Profile** section, drag and drop or click **Browse** to locate and select the file you want to upload, and then click **Apply**.

**Note:** Uploading a profile will override any current device settings.

## **System**

The System page contains system settings, system logs, and password settings as well as controls to restore factory default settings and restart the Bose Videobar.



**CTRL Active** (VB1 only): Specify the active state of the connected alarm system: **High** or **Low**. The default setting is **Low**. When the system detects an active signal, it will automatically mute the Bose Videobar VB1 loudspeaker so facility alarms or announcements can be heard.

**Note:** If the Bose Videobar loudspeaker is unexpectedly muted and cannot be unmuted, this setting may be incorrect (the alarm system may be detecting the inactive/idle state of Bose Videobar as an active signal and therefore muting its loudspeaker).

Time Zone: Select the local time zone.

**NTP Server:** Select or enter the IP address of a Network Time Protocol (NTP) server. You must be connected to the network to use an NTP server.

**Low Power Mode:** Enable or disable Low Power Mode. When enabled, the device will enter a standby mode with low power consumption after being idle for 2 hours.

**Download Logs:** Download system log files.

**Device Password:** Click **Change** to reset the device password. Enter the new password in both the **New Password** and **Confirm Password** fields, and then click **Save**.

Passwords must contain:

- 8-12 characters
- an uppercase letter
- a lowercase letter
- a number
- a special character

After 5 unsuccessful login attempts, you must restore the factory default settings (after which it can accept the factory default password again). To restore all settings of the Bose Videobar to their factory defaults, do one of the following:

On the remote control, press and hold the **Home** button and **Autoframe** button simultaneously for 5 seconds.

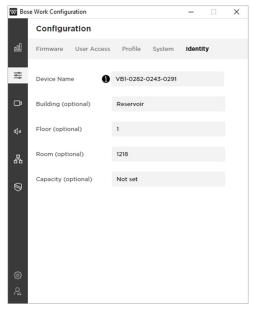
(VB1 only) On the side of the Bose Videobar VB1, press and hold the **Mute** button and **Bluetooth** button simultaneously for 5 seconds.

**Restore All Settings to Default:** Click **Restore Factory Defaults** to restore the device to its factory default settings.

**Restart Device:** Click **Restart Now** to immediately restart the device. (You may need to scroll down to see this button.)

# Identity

The Identity page includes user-editable location names for the Bose Videobar. These names are useful when viewing and sorting multiple devices (in multiple locations) in the Bose Work Management app.



You can edit the following fields to provide the identifying information for the device:

**Device Name** (The device name may contain case-sensitive alphabetical characters [A–Z], numbers [0–9], or hyphens [-]. Spaces and other special characters are not allowed.)

Building

Floor

Room

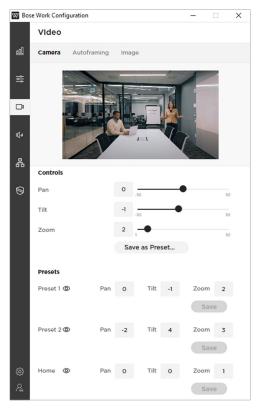
Capacity

# **VIDEO**

The Video tab includes controls for directing the camera, autoframing, and image processing.

#### Camera

The Camera page provides pan-tilt-zoom (PTZ) controls for the camera and the ability to save camera presets. These presets allow users to quickly change the position of a camera.



## **Saving New Presets or Changing Presets**

In the **Controls** section, adjust the **Pan**, **Tilt**, and **Zoom** settings, click **Save as Preset**, and then specify if you want to save it as **Preset 1**, **Preset 2**, or **Home**.

**Note:** Users can also save Preset 1 or 2 by pressing and holding the corresponding preset button on the remote control for 3 seconds, but the Home preset can be saved only in the Administration area of the app.

#### **Viewing Existing Presets**

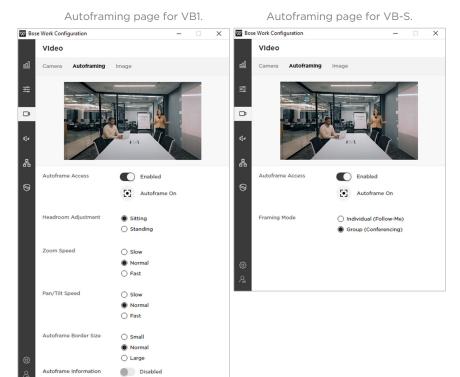
You can view or recall any existing presets by clicking the **View** icon that appears when you hover the mouse over the preset name. This icon will not be shown if no preset exists.



**Note:** If you try to exit the page without saving changes you have made, a message will appear warning you about your unsaved changes. Click **Cancel** to return to the **Camera** page where you can save your changes, or click **Leave** to exit and discard changes.

# **Autoframing**

The Autoframing page allows you to configure all autoframing settings, including **Autoframe Access**, which allows users to turn the autoframe feature on and off.



**Autoframe Access:** Enable or disable user access to the autoframe feature (via remote control or the Bose Work app on a mobile device). (This setting is identical to the **Autoframe Access** setting on the User Access page of the Configuration tab.)

**Autoframe On / Autoframe Off:** Click the autoframe icon to turn autoframe on or off.



**Note:** When **Autoframe Access** is set to **Disabled** or if **Autoframe** is off, the other settings on this page will be grayed out.



**Framing Mode** (VB-S only): Select the autoframing mode: **Individual** (Follow-Me) for faster tracking or **Group** (Conferencing) for slower, more deliberate tracking. (**Group** is the default setting for VB1.)

**Headroom Adjustment** (VB1 only): Select **Standing** or **Sitting** to specify the amount of space between the top of the camera frame and a subject's head. Select **Standing** for stand-up meetings and **Sitting** for all others.

**Zoom Speed** (VB1 only): Select how quickly the camera zooms in and out when people move in the room: **Slow, Normal**, or **Fast**.

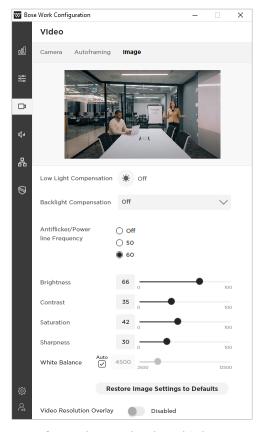
**Pan/Tilt Speed** (VB1 only): Select how quickly the camera pans and tilts when people move in the room: **Slow, Normal**, or **Fast**.

**Autoframe Border Size** (VB1 only): Adjusts the border size of the framed image: **Small**, **Normal**, or **Large**. For minimal border (maximum zoom), select **Small**.

**Autoframe Information** (VB1 only): Click this switch to enable or disable this troubleshooting feature. When set to **Enabled**, autoframe objects will be superimposed on the video image. These will be visible to the farend meeting participants and in the self-view.

## **Image**

The Image page provides the following camera image settings.



**Low Light Compensation:** Select or deselect this button to turn automatic low-light compensation on or off. When set to **On**, low-light compensation optimizes video in dim lighting conditions. (You can set Low Light Compensation to **On** only when Backlight Compensation is set to **Off**.)

**Backlight Compensation:** This setting adjusts the image exposure in conditions with bright light sources. For example, Backlight Compensation will better illuminate people who are silhouetted in front of bright lighting. (When Backlight Compensation is enabled, Low Light Compensation will be set to **Off** automatically.)

For VB1, select **Low**, **Medium**, or **High** to set the level of Backlight Compensation or select **Off** to disable it.

For VB-S, select **On** or **Off** to enable or disable Backlight Compensation.

**Antiflicker/Power Line Frequency:** Select **50** or **60** specify the AC frequency (in Hz) of lighting in the room; this feature will compensate for any flickering seen in the video image. Select **Off** to disable this feature.

**Brightness:** Set the overall lightness or darkness of the image.

**Contrast:** Set the difference between the light and dark areas of the image.

**Saturation:** Set the depth of colors in the image.

**Sharpness:** Set the image clarity.

**White Balance:** Set the balance of color temperature of the light source. Select **Auto** to set the balance automatically.

**Restore Image Settings to Defaults:** Restore these settings to their factory defaults.

**Video Resolution Overlay:** Select or deselect this to enable or disable this troubleshooting feature. When enabled, the screen resolution will be superimposed on the video image. This will be visible to the far-end meeting participants and in the self-view.

## **AUDIO**

The Audio tab provides access to microphone array settings, audio settings, and audio input and output levels.

# **Microphones**

The Microphones page allows you to specify the microphone **Beam Type** and set beams (depending upon the beam type) to optimize the detection of people speaking in the room. You can also set exclusion zones to minimize unwanted noise.

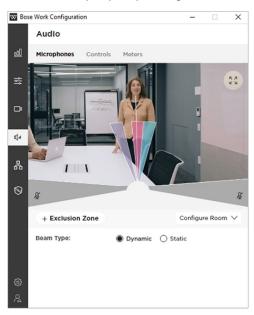
The microphone beams are overlaid on the live video stream to provide a visual representation of the microphone beam coverage.

To view the image in full-screen mode, click the **Expand** icon.



#### **Dynamic Beams**

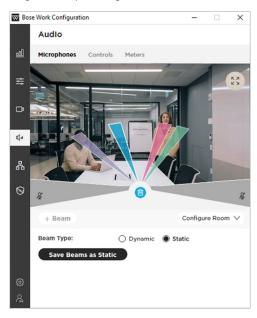
The default beam type is **Dynamic**, which includes a single beam (a white line) that freely searches for the loudest sound in the room, and additional dynamic beams (translucent colored shapes) that are automatically directed at the people speaking in the room.



If you have already saved static beams and want to return to dynamic beams, set the **Beam Type** to **Dynamic**, and then click **Save Beams as Dynamic** once it appears.

#### Static Beams

In some situations, you can achieve better performance by aiming static beams at designated speaking locations. In this case, set the **Beam Type** to **Static**, click **+Beam** to manually add a beam, and then click and drag the beam to a designated speaking location in the room.



To save these beams, click **Save Beams as Static**.

To cancel, set the **Beam Type** back to **Dynamic** or exit the Microphones page.

## Adding and Deleting Beams

To add a beam, click +Beam.

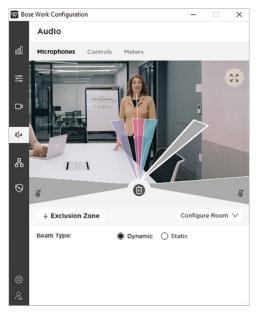
To delete a beam, click to select it, and then click the **Delete** icon (which appears only when you select a beam and is the same color as the selected beam).



**Note:** You can create a maximum of 4 beams. The **+Beam** button will be active only when there are fewer than 4 beams.

#### **Exclusion Zones**

Exclusion zones can help minimize unwanted noise by designating areas in which dynamic microphone beams will never be directed.



By default, 2 exclusion zones exist and are represented by the gray areas at the lower-left and lower-right sides of the room image.

**Note:** You cannot delete the default exclusion zones or make them smaller, but you can make them larger.

To add another exclusion zone, click **+Exclusion Zone**, which adds a gray beam to the image.

**Note:** There is a maximum of 3 exclusion zones. The **+Exclusion Zone** button will active only when there are fewer than 3 exclusion zones.

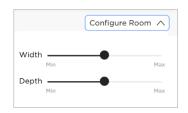
To increase or decrease the coverage of an exclusion zone, click and drag the edge of an exclusion zone to the desired angle.

To delete an exclusion zone, click to select it, and then click the **Delete** icon (which appears only when you select an exclusion zone).



#### **Configure Room**

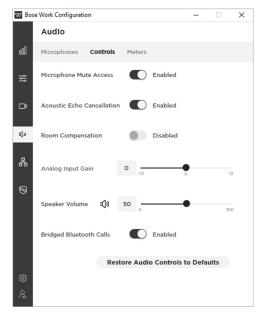
The Configure Room settings do not affect the actual Bose Videobar microphone beams. They change only the length of the visual representation of the beams as they appear in the image. You can adjust the **Width** and **Depth** to shorten or lengthen the beams, which may help when viewing how the beams intersect with presenters in the room.



**Note:** Click **Restore Defaults** to restore these settings to their factory defaults.

#### **Audio Controls**

The Controls page enables you to configure the following features.



**Microphone Mute Access:** Enable or disable users' ability to mute the Bose Videobar microphone.

**Acoustic Echo Cancellation:** Enable or disable Acoustic Echo Cancellation (AEC).

**Room Compensation** (VB1 only): Enable or disable audio processing for rooms that are more reverberant. Enable this feature to improve microphone intelligibility if used in a reverberant room (e.g., with glass walls). The default is **Disabled**.

**Analog Input Gain** (VB1 only): Adjust the gain as needed to balance the volume of an external source with the other audio sources (USB and *Bluetooth* audio signal).

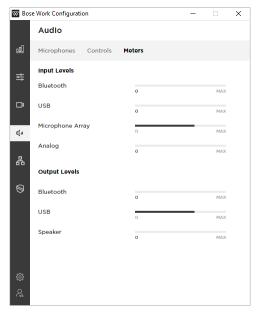
**Speaker Volume:** Set the audio level of the Bose Videobar loudspeaker. This setting can also be adjusted using the computer's volume control, the remote control, or the volume control on a paired mobile device.

**Bridged** *Bluetooth* **Calls:** Enable or disable the ability of *Bluetooth* calls and media to bridge to the active UC call.

**Restore Audio Controls to Defaults:** Restore these settings to their factory defaults.

#### Meters

The Meters page includes audio **Input Levels** for *Bluetooth* audio, USB audio, and the Bose Videobar microphone array as well as **Output Levels** for *Bluetooth* audio, USB audio, and the Bose Videobar loudspeaker.

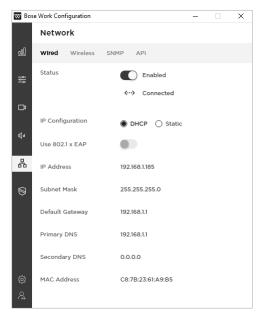


# **NETWORK**

The Network tab provides access to wired, wireless SNMP, and REST API configuration settings.

#### Wired

Click the **Status** switch on the **Wired** page to enable or disable the wired network. (This page is available for Bose Videobar VB1 only.)



You can view and configure the following IP settings when the wired network is enabled:

**IP Configuration:** Select the IP configuration type: **DHCP** or **Static**.

**DHCP** (Dynamic Host Configuration Protocol) dynamically assigns the **IP Address**, **Subnet Mask**, and other network parameters (when applicable) for the device.

Select **Static** to manually enter an **IP Address** and **Subnet Mask**. When you are finished configuring settings, click **Apply**.

The **Apply** button (for Static IP configuration) remains inactive until you enter the minimum required information: the **IP Address** and **Subnet Mask**. Changes do not take effect until you click **Apply**.

**Use 802.1 x EAP:** Click this switch to enable or disable connection to an 802.1 x EAP network with advanced security settings. When enabled, use the menus and fields that are shown to specify the settings:

**EAP Method:** Select **PEAP**, **TLS**, or **TTLS** 

Phase 2 Authentication: Select None, MSCHAPV2, or MD5.

Identity

**Anonymous Identity** 

**Password** (Select or deselect the **Show Password** checkbox to show or hide the password.)

The following optional settings can only be configured when the **IP Configuration** is set to **Static**. These settings are read-only when the **IP Configuration** is set to **DHCP**. The **MAC Address** is always read-only.

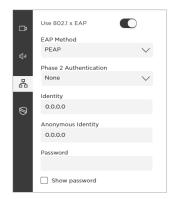
**Default Gateway:** The IP address for the device used to forward traffic to other networks.

**Primary DNS:** The IP address of the primary DNS server that assigns an IP address to a device.

**Secondary DNS:** The IP address of the primary DNS server that assigns an IP address to a device when the Primary DNS server is not available.

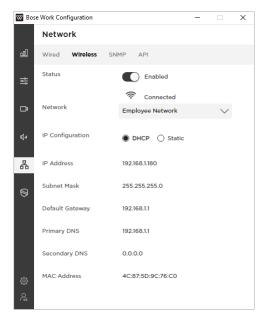
MAC Address: The media access control address, which is a unique identifying number assigned to the network interface controller (NIC).

**Note:** Bose Videobar also supports auto-IP. If **IP Configuration** is set to **DHCP** and no DHCP server is found, the device will automatically assign itself an IP address in the auto-IP range.



## **Wireless**

Click the **Status** switch on the **Wireless** page to enable or disable the wireless network.



The **Network** menu includes a list of available networks, the signal strength of each network, and a lock icon if the network is password-protected. If you select a WPA2 network, enter the password in the field that appears, and then click **Join** to connect to the network.

If you select **Join Other Network**, a **Find and Join a Wireless Network** message will open and prompt you to enter the **Network Name** and select the security type from the **Security** menu. Upon selecting a security type, additional configuration fields for the associated security settings will appear.

After the wireless connection is established, the **Status** will appear as **Connected**.

You can view and configure the following IP settings when the wireless network is enabled:

**IP Configuration:** Select the IP configuration type: **DHCP** or **Static**.

**DHCP** (Dynamic Host Configuration Protocol) dynamically assigns the **IP Address**, **Subnet Mask**, and other network parameters (when applicable) for the device.

Select **Static** to manually enter an **IP Address** and **Subnet Mask**. When you are finished configuring settings, click **Apply**.

The **Apply** button (for Static IP configuration) remains inactive until you enter the minimum required information: the **IP Address** and **Subnet Mask**. Changes do not take effect until you click **Apply**.

The following optional settings can only be configured when the **IP Configuration** is set to **Static**. These settings are read-only when the **IP Configuration** is set to **DHCP**. The **MAC Address** is always read-only.

**Default Gateway:** The IP address for the device used to forward traffic to other networks.

**Primary DNS:** The IP address of the primary DNS server that assigns an IP address to a device.

**Secondary DNS:** The IP address of the primary DNS server that assigns an IP address to a device when the Primary DNS server is not available.

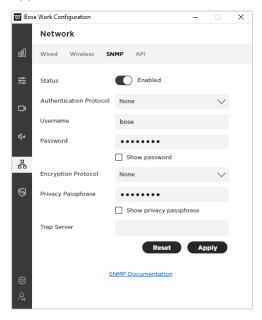
**MAC Address:** The media access control address, which is a unique identifying number assigned to the network interface controller (NIC).

**Note:** Bose Videobar also supports auto-IP. If **IP Configuration** is set to **DHCP** and no DHCP server is found, the device will automatically assign itself an IP address in the auto-IP range.

#### **SNMP**

Bose Videobar supports the Simple Network Management Protocol (SNMP) for network management and monitoring. Click **Reset** to restore this page its previous settings or click **Apply** to apply your changes.

Click the **SNMP Documentation** link to see the SNMP Admin Guide, which contains information on the SNMP variables and operations that Bose Videobar supports.



Status: Enable or disable device to accept SNMP polls and traps.

**Authentication Protocol:** Bose Videobar supports SNMP v3. Select an optional authentication protocol to ensure the identity of users.

**Username:** Enter the username of the user who can access SNMP v3 information (maximum of 32 characters).

**Password:** Enter the password for the user who can access SNMP v3 information (maximum of 32 characters). This password is sometimes referred to as the **authentication passphrase**. Select or deselect the **Show Password** checkbox to show or hide the password.

**Encryption Protocol:** Select an optional privacy protocol to ensure the confidentiality of SNMP v3 information.

**Privacy Passphrase:** Enter the privacy passphrase for the user who can access SNMP v3 information. You cannot enable privacy without enabling authentication. Select or deselect the **Show Privacy Passphrase** checkbox to show or hide the privacy passphrase.

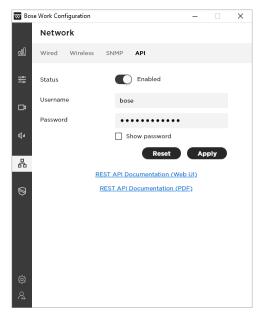
**Trap Server:** Enter the IP address of the SNMP server. The device will send traps and event notifications to this address per the MIB.

**Note:** Please see the SNMP Admin Guide for detail on specific polls and traps supported by Bose Videobar via SNMP.

## API

Bose Videobar supports representational state transfer application programming interface (REST API) for network management and monitoring. Click **Reset** to restore this page to its previous settings or click **Apply** to apply your changes.

Click the **REST API Documentation** link to see the REST API Guide, which contains information on the REST API variables and operations that Bose Videobar supports. Click the **(Web UI)** link to open it in your browser, or click the **(PDF)** link to open it as a PDF.



Status: Enable or disable the device to accept REST API communication.

**Username:** Enter the username of the user who can access REST API information (maximum of 32 characters).

**Password:** Enter the password for the user who can access REST API information (maximum of 32 characters). Select or deselect the **Show Password** checkbox to show or hide the password.

## **SECURITY - CERTIFICATES**

The Security - Certificates tab provides access to certificate management settings. Digital certificates contain information needed to authenticate identities of users, devices, organizations, servers, etc. This tab is available for Bose Videobar VB1 only.

You can use the Bose Work Configuration app to perform the following actions while managing certificates:

Create a certificate signing request (CSR)

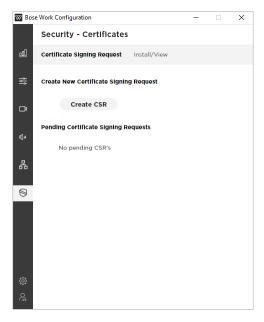
Transfer a CSR to a host for certificate authority (CA) generation

Deploy or install a CA certificate

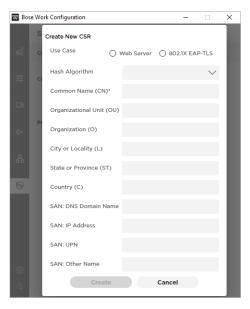
View, activate, or delete a certificate

# **Certificate Signing Request**

The Certificate Signing Request page lets you create certificate signing requests (CSRs).



To create a new CSR, click **Create CSR**. You can create only one CSR at a time.



In the **Create New CSR** window that appears, configure the following settings:

Use Case: Select the use case: Web Server or 802.1X EAP-TLS.

**Hash Algorithm:** Select the hash algorithm: **SHA-256**, **SHA-384**, or **SHA-512**.

Enter any of the following information:

**Common Name (CN)** (This is the only required field.)

**Organizational Unit (OU)** 

Organization (O)

City or Locality (L)

State or Province (ST)

Country (C)

**SAN: DNS Domain Name** 

**SAN: IP Address** 

**SAN: UPN** 

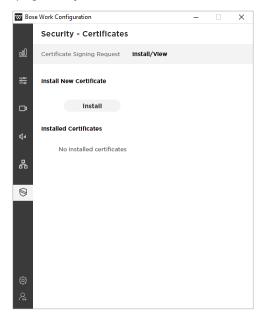
**SAN: Other Name** 

Click Create to create the CSR or click Cancel to close the window.

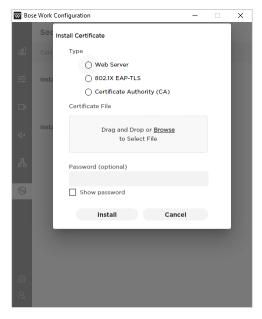
Pending CSRs will be shown under **Pending Certificate Signing Requests**.

# Install/View

The Install/View page lets you install certificates.



To install or view a new certificate, click Install.



In the **Install Certificate** window that appears, configure the following settings:

**Type:** Select the type of certificate: **Web Server**, **802.1X EAP-TLS**, or **Certificate Authority**.

**Certificate File:** In the gray box under **Certificate File**, either drag and drop the desired certificate file or click **Browse** to locate and select the desired certificate file.

**Password:** Enter the password for the user who can access the certificate (maximum of 32 characters). Select or deselect the **Show Password** checkbox to show or hide the password.

Click **Install** to install the certificate or click **Cancel** to close the window.

Installed certificates will be shown under Installed Certificates.

