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RoboSHOT 12/12E/30E USB Cameras

Current Release

RoboSHOT® 12/12E/30E USB 3.3.0

May 4, 2020

Improvements

- Telnet commands to set hostnames and other user-definable strings now accept hyphens.
- The Telnet command `camera ccu get` now returns all camera ccu settings if no parameter is specified.
- The Telnet command `camera ccu set` now uses the correct ranges of gamma and iris values for all cameras in this model family.
- On some mobile devices, the "Exit Standby" button was not accessible. This has been fixed.
- After updating firmware, the Telnet enabled/disabled status shown in the web interface could become out of sync with device behavior. This has been fixed.
- In some cases, firmware updates could fail. This has been fixed.

Release History

RoboSHOT 12E USB 3.2.0

March 16, 2020

Notes

- Initial release.

RoboSHOT 12/30E USB 3.2.0

December 16, 2019

New Features

- If you restore factory defaults, the camera now requires an initial setup step to make the administrative controls and other functionality available. In this initial step, you must set the admin password. This is also required for initial access to cameras that ship with this version of firmware. See Initial Set-Up Procedure. After completing the initial setup, you have the option of enabling streaming and other disabled features. At this time, setting the admin password is the only task in the initial setup procedure.

  Note: You can operate the camera with the remote even if no password is set.

- Preliminary support for far-end access to camera presets in certain soft conferencing clients.
- When static IP addressing is selected, the administrator can specify a DNS server.
- Added support for long press right-clicking on iOS devices.
- Added Telnet command `camera ptz-position {{pan | tilt | zoom} <position> [no_wait]}` to specify multiple-axis movements to absolute positions. The optional `no_wait` parameter allows the command to return the command prompt immediately, while the requested camera movement is still in progress. The command `camera ptz-position get` returns the camera's current pan, tilt, and zoom positions.
- Added Telnet command `camera icr { get | on | off }` to control the camera's IR cut filter. When the filter is on, the video image is black and white.

Improvements

- Security improvements include changes to the default settings for:
  - HTTP access is disabled. To connect using HTTPS, type `https://` followed by the IP address. Because Vaddio uses self-signed certificates, your browser will present warning messages indicating that you are trying to access an unsafe website; however, this is a secure connection to the camera and traffic will be encrypted.
  - Streaming is disabled.
  - Telnet access is disabled.
- Disabled TLS v1.1 protocol. More recent protocols continue to be supported.
- The Telnet command `network settings get` now includes the camera's hostname in the information it returns.
- The default setting for UVC mode has been changed to Client Custom for better out-of-the-box compatibility with major soft conferencing clients. This does not change your camera's stored settings; however, if you need to restore factory defaults, you may need to change this setting afterward.
- In some cases, the camera reported its zoom position inaccurately after a very small change in zoom level. This has been fixed.
- The top speeds for Global Preset Non-Tri-Sync Speeds have been reduced to provide better control in certain conferencing applications.
- If the camera was rebooted while the LED was disabled, and the LED was subsequently enabled, it could display incorrect status indications. This has been fixed.
- If a custom home preset was stored while the camera was in manual focus mode, and the home preset was subsequently cleared, attempting to select the home preset could generate an error message. This has been fixed.
- Improved out-of-range error messages for Telnet commands specifying movements by absolute position.
- Querying the Telnet command `camera ccu set` for the iris value range (`camera ccu set iris ?`) now returns the correct range.
- The RS-232/VISCA-type command CAM_Freeze now behaves as expected.
- When streaming at resolutions with aspect ratios other than 16:9, the image could be displayed at an incorrect aspect ratio. This has been fixed.
- Exporting data to an Android device now works properly.

Notes

- (RoboSHOT 30E USB only) Telnet commands may present incorrect ranges of values for certain camera settings, such as iris. The full range of values is available in the web interface.
- If controlling this camera with any of the following devices, the device may require a firmware update to be able to control the camera via IP.
  - PCC Premier
  - RoboTRAK
  - AV Bridge MATRIX PRO
  - AV Bridge MatrixMIX

RoboSHOT 12/30E USB 3.1.0
May 13, 2019

New Features

- (RoboSHOT 30E USB only) The previously unused Position 0 on the rotary switch now enables software control of video output resolution. When the switch is set to software control mode, the administrator sets video resolution via the web interface, on the General tab of the System page.

Improvements

- In the admin web interface, various camera behavior settings have moved from soft DIP switches to the General tab of the System page.
- Some parameters were incorrectly stored in CCU scenes and in presets stored with color information. This has been fixed.
- Executing several pan, tilt, or zoom to absolute position commands in quick succession could generate error messages. This has been fixed.

RoboSHOT 30E USB 3.0.0
March 27, 2019

- Initial release.

RoboSHOT 12 USB 3.0.0
March 29, 2019

New Features

- Added support for RTMP streaming. This is configured in the admin web interface and can be enabled/disabled in both the admin and the user web interface.
- Telnet command to manage IP Streaming Enabled status:
  `streaming ip enable {get | on | off | toggle}`
  This capability is also available in the web interface.
- Ability to configure MTU setting for IP streaming packets.
- Added codec compatibility mode for Polycom® 3xx/5xx/7xx series codecs.
- Added codec compatibility mode for Cisco® SX-20 and SX-80 series codecs. (For SX-20 codecs, Vaddio recommends the codec's firmware be updated to latest "CE" series firmware for best operation.)
- One Push White Balance can now be executed through the web interface.
- Telnet command to set or get camera module gamma values:
  `camera ccu set gamma <value>`
  `camera ccu get gamma`
- Added the Manual Standby/USB Standby soft DIP switch to allow the system to automatically stand by when the USB cable is disconnected.
- Telnet command to control the front LED:
  `camera led  {get | set { on | off }}`
  A soft DIP switch in the admin web interface provides the same capability.
- HTTPS access to the camera is now supported and the HTTPS certificate can now be configured from the admin web interface.
- HTTP access to the camera can now be disabled by an admin. When this is disabled, HTTPS must be used to connect to the web interface.
- Added ability for the administrator to disable the camera's Telnet server through the web interface.
- Serial command to retrieve the camera's IP address: [81 09 08 4E 00 00 FF].
- Added initial public REST API.
- Support for DNS Service Discovery.

Improvements

- Configuration settings can now be imported from previous versions of software.
- The front LED can now be turned off during standby.
- Added USB streaming notifications to the web interface.
- Improved the camera's responsiveness to far-end pan and tilt control in conferencing applications.
- Improved IP streaming performance and corrected a number of issues related to IP streaming settings.
- Main navigation bar of the web interface now has tooltips when collapsed.
- The admin web interface now provides the ability to rename the browser tab.
- Telnet commands for pan and tilt now support absolute position control:
  `camera pan set <-156.3..151.7>`
  `camera tilt set <-30.0..92.5>`
  Note that if the camera is inverted and Image Flip is selected, the tilt range is inverted as well: -92.5 to 30. A negative value always represents a downward tilt.
- The `camera zoom set` Telnet command now allows zoom to be specified as a floating-point value, which is then rounded off to two decimal places. Similarly, the `camera zoom get` command returns the current zoom level to two decimal places.
- Enhanced support for USB joystick control.
- When the camera is in standby mode, the web interface no longer permits changes using the soft DIP switches in the admin web interface.

- Soft DIP switches and read-outs of physical switches are now available from the Camera page of the admin web interface, via the Camera Settings button. They are still available on the DIP Switches tab of the System page as well.
- Standardized the DIP switch combination to set the camera to respond to the remote on IR channel 3. The camera is set as Camera 3 when switch 1 is up and switch 2 is down.
- On receiving a reboot instruction, the RoboSHOT camera now ensures your most recent configuration changes have been saved successfully before rebooting.
- Improved camera behavior during lengthy camera operations.
- In the event that IP streaming stops working properly and a reboot is needed, the admin web interface prompts the user to reboot the camera.
- Improved camera behavior when an operator rapidly and repeatedly cancels and restarts camera operations.
- When video is muted, changing from the Pro A/V LED color scheme to the UC LED color scheme now causes the LED to start blinking to indicate video mute is on.
- Improved handling of HDMI hot-plug events.
- Improved support for Microsoft® Internet Explorer®.
- Improved internal firewall settings.
- Discontinued support for DES and 3DES cyphers and TLS v1.0 protocol. More recent cyphers and protocols continue to be supported.
- Corrected an issue that could cause the camera to be left out of focus when under the control of certain third-party codecs.
- Corrected the response syntax for the `network ping count` Telnet command.
- Corrected an issue that occasionally resulted in error messages when updating firmware from a significantly older version.
- Corrected a page loading issue that could affect the web interface when viewed using Chrome.
- After certain operations such as changing HDMI resolution or changing the Super-Wide Mode setting, the camera's zoom position was not reported correctly. This has been fixed.
- When changing camera settings from a connected device, in some cases the camera's web interface did not immediately reflect the change. This has been fixed.
- In some cases, the web interface did not load properly if the computer had recently accessed another Vaddio device at the same IP address. This has been fixed.
- Fix for some serial commands not completing correctly.
- Updated the system time zone table.
- Various improvements to the web interface.

Notes

- If the currently selected time zone name is not present in the new time zone table, the time zone setting reverts to Universal. The administrator will need to select the appropriate time zone.
- If the home preset takes an extremely long time to execute (over 45 seconds), the camera may not fully exit standby. Storing the Home preset with a faster speed will solve this issue.

RoboSHOT 12 USB 2.2.0

September 1, 2017

New Features

- Initial support for AVBridge MatrixMIX and PCC MatrixMIX.

Improvements

- The custom home position can be successfully stored with or without associated color information.
- Admin access is now required for editing preset and CCU scene labels.
- Custom CCU scenes can now be cleared from the web interface in a similar manner to custom camera presets.
- The camera's Wide Dynamic Range setting can now be changed from a connected device over a serial connection as well as via the device's web interface.
- In some cases, the web interface did not render properly in Chrome. This has been fixed.
- Improved camera performance and behaviors related to USB streaming.
- Reduced the need for camera reboots following changes to streaming settings.
- If the USB stream was disabled while the camera was streaming over USB, the stream was stopped but the web interface did not display streaming status correctly. This has been fixed.
- Improved camera behavior related to entering and returning from standby mode.
- When the camera is in standby mode and receives a command that requires it to be active, the camera now returns a message indicating that it is in standby mode.
- CCU sliders show the correct values after being adjusted when the camera is in standby.
- Restoring factory defaults now resets the admin password as expected.
- Improved alert and error message behavior in the web interface.
- Improved error messages for Telnet commands.
- Hostname changes are now properly handled for DHCP.
- Various cosmetic improvements in the web interface.
- General stability improvements.

RoboSHOT 12 USB 2.1.2

December 9, 2016

New Features

- Camera settings now include Wide Dynamic Range as an option in auto-iris mode. Note that backlight compensation cannot be used in Wide Dynamic Range mode.
- A new soft DIP switch on the System page of the web interface allows UVC-compliant or custom mode to provide more flexibility in supporting web conferencing applications.

Improvements

- Colors now appear more natural.
- The Telnet command streaming settings get now returns USB streaming settings as well as IP streaming settings.
- We have improved the product's performance in applications that comply with the UVC 1.1 specification.
- While using UVC absolute PTZ controls, quick changes of direction could result in the camera stopping at an unexpected position. This has been fixed.

RoboSHOT 12 USB 2.1.0 and 2.1.1

September 28, 2016

New Features

- USB streaming at 1080p/60 is now supported.
- Constant bit rate (CBR) streaming option is now available for IP streaming in the web interface.

Improvements

- The camera has been updated to work with RoboTRAK.
- Default streaming settings have been changed to optimize streaming performance under most conditions.

- Improved pan, tilt, and zoom performance when the camera is controlled by a conferencing application.
- Cameras now reach the full 90° upward tilt stated in the technical specifications.
- In some cases, turning the video output resolution switch, pausing momentarily, and turning it again could cause errors. This has been fixed.
- In some cases, the camera could continue to respond to joystick movements from a camera controller while going into standby mode. This could result in the camera standing by in an unexpected position. This has been fixed. The camera moves to the standby position and does not process any commands during the standby sequence.
- In some cases, custom home presets were not retained properly through firmware updates. This has been fixed.
- The `ccu scene store` command now works as documented.
- In a few instances during testing, using the camera's web interface to enable its IP stream caused an associated PCC Premier to lose the stream for its local video output. This only happened if the camera was in an address book group currently selected as Control A or Control B. This has been fixed..

RoboSHOT 12 USB 2.0.2
June 27, 2016

Improvements

- This release addresses a video issue related to a recent hardware change. On very rare occasions, this issue has also been observed in older hardware.

RoboSHOT 12 USB 2.0.1
May 19, 2016

Improvements

- Changing the IP streaming settings no longer requires the camera to reboot. However, if the camera is connected to a PCC Premier camera controller, the camera controller will not respond properly to the change of settings until you reboot the camera manually. The upcoming release of 1.1.1 firmware for PCC Premier will address this.
- This release also includes other improvements to the process of saving IP streaming settings.
- For RoboSHOT USB cameras connected to a Chromebox, power-cycling or rebooting the Chromebox caused issues in the camera's USB stream, sometimes requiring the camera to be rebooted. This has been addressed.
- In some installations where RoboSHOT cameras were connected to an AV Bridge MATRIX PRO, occasionally camera or video errors occurred, sometimes in connection with RS-232 camera control issues. Performance has been improved, but requires the MATRIX PRO to be at 1.0.4 and all connected cameras to be at the related version (2.0.2 for RoboSHOT and RoboSHOT HDMI, 2.0.1 for RoboSHOT USB and RoboSHOT HD-SDI).

Notes

- In installations where RoboSHOT cameras are connected to an AV Bridge MATRIX PRO, flooding the MATRIX PRO with large numbers of camera commands in a very short time – for example, when sending numerous commands via Telnet or web interface – occasionally causes the attached cameras' tally indications stop functioning properly. When this happens, the diagnostic log shows errors stating that the tally command is not executable.

RoboSHOT 12 USB 2.0.0
January 15, 2016

New Features

- Added real-time IP-based control for the PCC Premier.
- Enabled control over the USB connection. This is disabled by default, but can be enabled under the Streaming tab in the Web UI.

- Default starting position preset and CCU scene has been replaced with a customizable home preset. This can be set like any other preset.

Improvements

- Added ability to import/export configurations for camera settings. This feature will only work when importing to the same firmware version as the exported file.
- Addition of two Telnet Commands for focus mode and standby state inquiry. Commands are:
  ```
  camera focus mode get
  camera standby get
  ```
- Visual indication on Web UI of unsaved parameter which requires saving.

Notes

- Some Apple computers with OSX 10.9.x have issues handling USB 3.0 video, including video freezing. The issues seen in OSX 10.9.x have not been seen in OSX 10.10 or 10.11.

RoboSHOT 12 USB 1.0.2
November 13, 2015

Improvements

- Under certain circumstances, sustained fast motion in the field of view could cause USB streaming to freeze. This has been resolved..

Notes

- When recalling a tri-sync preset stored with CCU Scene information ProductionVIEW Controllers and Switchers can incorrectly report Auto White Balance and Auto Iris status, this will be addressed in an upcoming ProductionVIEW Controller release, along with additional enhancements.
- Some Apple computers with OSX 10.9.x have issues handing USB 3.0 video, including video freezing. The issues seen in OSX 10.9.x have not been seen in OSX 10.10.

RoboSHOT 12 USB 1.0.1
September 11, 2015

New Features

- USB gamepad support has been added. See the Application Note for more information.

Improvements

- Pan and Tilt controls fully support inverted operation.
- Increased web session timeout from 10 to 30 minutes – gives users more flexibility when configuring or
- operating RoboSHOT via Web UI.
- Additional streaming resolutions – Allows users to select different easy and custom IP streaming configurations beyond 1080p, for maximum flexibility and greater control network bandwidth usage.
- Adjusted iris gain values – range of acceptable Iris Gain values is now 0-11. Previously it was 0-15.
- Streaming resolutions with 4:3 aspect ratios are now handled properly.
- RoboSHOT 12 USB ends the USB stream as expected when a Mac-based application is done with the USB stream.

Notes

- When recalling a Tri-Synchronous Motion preset stored with CCU scene information ProductionVIEW controllers and switchers can incorrectly report Auto White Balance and Auto Iris status, this will be addressed in an upcoming ProductionVIEW controller release, along with additional enhancements.
- Some Apple computers with OSX 10.9.x have issues handing USB 3.0 video, including video freezing. The issues seen in OSX 10.9.x have not been seen in OSX 10.10.

RoboSHOT 12 USB 1.0.0
June 28, 2015

- Initial release.

Initial Set-Up Procedure

Recent security improvements to Vaddio products have changed the way you interact with this product when you set it up for the first time.

What's new
- The product now defaults to the more secure HTTPS protocol, rather than HTTP. HTTPS was previously an option. You can still enable HTTP after completing the initial setup.
- You must set the admin password using the web interface. Until the admin password is set and any other initial tasks are completed, the control and administrative interfaces are not available.
- You will not be able to open a Telnet session to this product until you set the password using the web interface.
- You will need to set the admin password again if you restore factory defaults.

Refer to the product's manual for specific instructions to discover its IP address and access its web interface.

Connect using HTTPS

Before the product is configured, HTTP access is disabled. To access the web interface, type **`https://`** followed by the IP address. Otherwise, you may encounter this message:
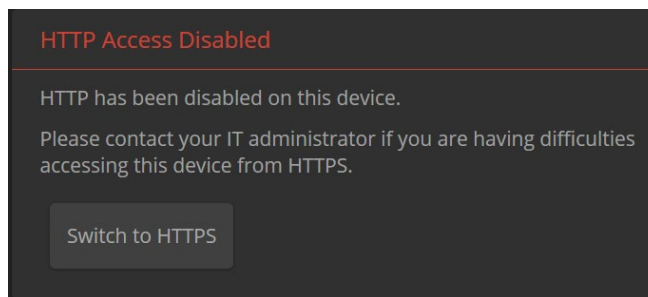
Switch to HTTPS if you see this message.

Expect a security warning from your browser

Different browsers will respond with different messages and options. Your browser will probably present a message indicating one of these things:

- The connection is not private
- The site is not secure
- The site is not trusted
- The site poses a security threat

This is because the certificate (the product's website security credential) is self-signed rather than being issued by an external certificate authority. Despite the security warning, this is a secure connection to the camera and traffic will be encrypted.
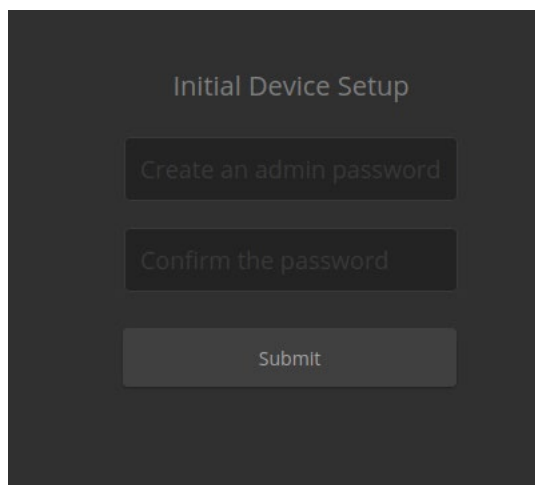
To proceed to the product's web interface, you will need to make the selections that your browser's security message discourages. The security warning page may present an option to learn more, view details, or go to the "Advanced" page. When you select the applicable option, your browser provides a button or link to continue to the IP address you entered, with a reminder that it may be unsafe. Select this option.

After you have accessed the product's web interface once, your browser remembers its IP address and will not present the security message again.

Device set-up

The first time the product's web interface is accessed, it presents a landing page for initial set-up tasks. You will also encounter this page after restoring factory defaults. After you complete the initial set-up, you will be able to work with the product.

Create and confirm the admin password, and complete any other required tasks such as accepting agreements. Then select Submit. The main administrative web interface opens.

In the administrative web interface, you can configure product security features to conform to the IT policies for your environment. Except where otherwise noted, these settings are on the Security page.

- Create a user password – Allow password-protected, non-administrative access to the operator's web interface.
- Enable guest access – Allow non-administrative access to the operator's web interface without requiring a login.
- Choose whether to expire idle sessions – By default, the web interface automatically logs you out after 30 minutes of inactivity.
- Enable HTTP access – Enable connections to the product's web interface using the less-secure HTTP protocol.
- Enable Telnet access – This is disabled by default.
- Enable streaming – This is disabled by default. You can enable it on the Streaming page.

Firmware Update Instructions – RoboSHOT USB

Requirements

- Network access to the camera.
- The web interface's admin password.
- The .p7m firmware file for the camera – download this from https://www.legrandav.com/. It is available on the product page's Resources tab.

Step-By-Step Process

Note: Your camera's web interface may display different model and firmware information from the screen shots in this document. The process for updating firmware is the same for all cameras in the RoboSHOT family.

1. Enter the IP address for the camera into the address bar of a web browser.
   You can obtain the IP address for the camera using the remote. Aim at the camera and press the Data Screen button. The connected display shows the camera's IP address.
2. Log in as admin.
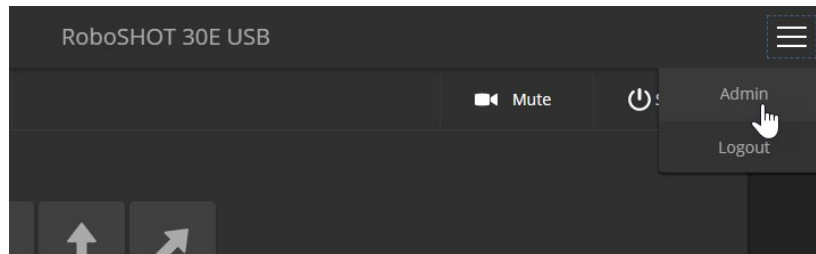
3. Navigate to the System page. Your camera's System page will present different information than shown in the screen shot.
4. Select Choose File, then browse to the downloaded firmware and select it. The filename ends with .p7m.
5. Select Begin Firmware Update.
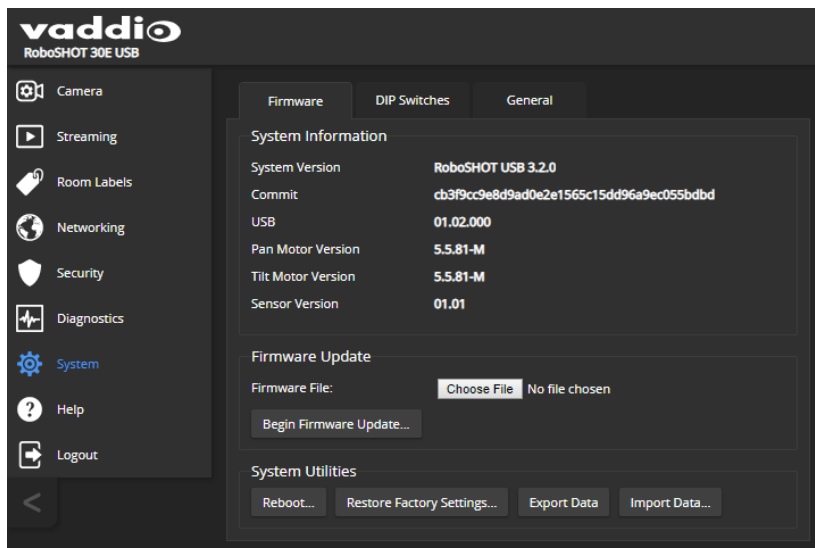
6. Read and understand the information in the Confirm dialog box. It's dull, but it could save you some time and aggravation.
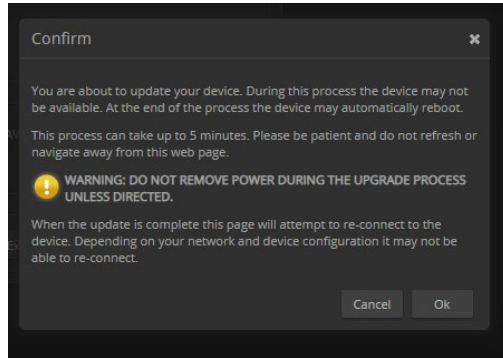
7. Select Continue. A progress message box opens and the indicator light on the front of the camera turns yellow. If the update process presents warnings or error messages, read them carefully.

8. The camera reboots when the update is complete.

Caution
The camera must remain connected to power and to the network during the update. Interrupting the update could make the camera unusable.

This update can take up to 5 minutes to complete; the pop-up message window will identify the progress of the update.

While you're waiting, you could try the following:

- Design an imaginary animal that ought to exist.

- Choose a name and superpowers for your superhero alter-ego.

- Make up a new superstition. (If a striped cat crosses your path, you'll have an ordinary day.)

After the update is complete, the System page will display the new firmware version under System Information. Enjoy that 'New Firmware Smell'!

If the update procedure is interrupted for any reason the product may need to be returned to Vaddio for updating. If the update does not seem to run, DO NOT TURN OFF THE PRODUCT OR UNPLUG IT. CALL TECH SUPPORT IMMEDIATELY.

If you have any questions, call Vaddio Technical Support: (+1) 763-971-4428 or 1-800-572-2011