Configuration and Administration Guide for the

RoboSHOT 12 USB

Enterprise-Class PTZ Conferencing Camera

Document 411-0000-32 Rev A

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Contents

Overview

This guide covers the RoboSHOT™ 12 USB enterprise-class PTZ conferencing camera:

- RoboSHOT 12 USB (silver and black), North America – 999-9920-000
- RoboSHOT 12 USB (silver and black), Europe and UK – 999-9920-001
- RoboSHOT 12 USB (silver and black), Australia and New Zealand – 999-9920-009

What's in this Guide

This guide covers

- The camera's physical features
- Controlling the camera using the remote
- Using the camera's web interface
- Troubleshooting and maintenance

It does not include installation or connection instructions; these are available in the **Installation Guide for RoboSHOT 12 USB PTZ Cameras**.

For complete product information, see the **Integrator's Complete Guide for RoboSHOT 12 USB PTZ Cameras**. It includes unpacking and installation as well as specifications and reference sections on Telnet and RS-232 commands.

Features

- PTZ camera for huddle rooms and small to medium conference rooms
- 2.38 Megapixel (effective), full HD (native 1080p/60) image sensor
- 12x optical zoom, horizontal field of view of 73° in super-wide mode
- Simultaneous uncompressed USB 3.0 and IP (H.264) streaming outputs
- HDMI video output for local display
- Smooth, silent direct-drive motors for precise pan and tilt movements at up to 120° per second
- Tri-Synchronous Motion™ simultaneous-arrival pan/tilt/zoom movement
- Universal Video Class (UVC) drivers supported in Windows®, Mac® OS, and Linux operating systems, compatible with most UC conferencing applications
- Presenter-friendly IR remote control
- Integration-ready Telnet or serial RS-232 control
- Full administrative control via web interface; manage remotely while monitoring the stream separately.

A Quick Look at the Camera

- **Camera and Zoom Lens:** The RoboSHOT 12 USB camera features a 12X optical zoom lens (12X in Super-Wide mode, 10X in normal mode)
- **IR sensors:** Sensors in the front of the camera base receive signals from the remote. Make sure there's nothing directly in front of the camera base, and point the remote at the camera.
- **Status light:** The multi-colored LED indicates the camera's current state.

Back of the Camera

- **12 VDC, 3.0 Amp power connector** – Connect only the power supply shipped with the camera.
- **Ethernet RJ-45** – Connect to the PoE+ (Power over Ethernet) Gigabit Ethernet port for power and network access for IP streaming and camera control via web interface or Telnet
- **USB 3.0 video device connector** – Streams uncompressed UVC standard video
- **HDMI video select switch** – Select the appropriate HDMI video output resolution for the near-end video display.
- **DIP switches** – Set IR frequency, IR on/off, image flip (camera is invertible), normal or Super-Wide mode, RS-232 baud rate, and color space for the HDMI output.
- **HDMI output** – Connect to the near-end video display.
- **RS-232 port** – Connect to a controller to manage the camera using a modified VISCA protocol.

Using the Vaddio IR Remote Commander

The remote provides basic camera control.

Quick Reference

What do you need to do?	Button(s)
Power on or standby	**Power** (green button at top right)
Select the camera to control (if this remote controls more than one)	**Camera Select** buttons 1 through 3 (second row on the remote)
Discover the camera's IP address	**Data Screen** button (top left) – press and hold for 3 seconds
Move the camera	Arrow buttons and **Home** button (dark red)
Move the camera to a preset position	**Position Preset** buttons 1 through 6 (bottom two rows)
Focus the camera	**Auto Focus** button (near arrow buttons) **Manual Focus** buttons **Near** and **Far** (below Zoom Speed buttons)
Change zoom speed	**Zoom speed** buttons – Slow **T** and **W** or Fast **T** and **W** for telephoto and wide-angle modes (center)
Adjust for excess light behind the camera's subject	**Back Light** button (top center)

Details

The Vaddio remote provides the following functions:

Data Screen – Press and hold for 3 seconds to display the camera's IP address and MAC address on the near-end display. Press momentarily to dismiss the information.

Back Light – Use or turn off back light compensation.

Power – Switch the selected camera on or off.

Power indicator – Shows power on, IR transmission, and battery level.

Camera Select – In multi-camera installations, selects the camera to be controlled. See DIP Switch Settings for information on configuring the camera as camera 1, 2, or 3.

Pan/Tilt (arrow button) controls and Home button – Control the camera's position.

Std. Pan and Rev. Pan – Control how the camera responds to the arrow buttons. Helpful for ceiling-mounted cameras.

Pan/Tilt Reset – Not used.

Auto Focus – Switch the camera to Auto-Focus mode.

Zoom Speed – Select Slow or Fast movements for telephoto and wide-angle shots.

- **T** (slow and fast) – Telephoto
- **W** (slow and fast) – Wide-angle

Manual Focus – Switch the camera to Manual Focus mode.

Near (-) adjustment – Moves the focus nearer when in manual focus mode.

Far (+) adjustment – Moves the focus farther when in manual focus mode.

Position Presets 1 through 6 – Move the camera to a predefined position.

Preset – Save the camera's current position as one of the numbered presets.

Reset – Clear the saved position presets.

The web interface offers greater control over camera movements to presets (such as setting the speed for Tri-Synchronous Motion), and provides additional presets.

Storing a Preset Using the IR Remote Commander

Position the camera. Then hold down the **Preset** button and press one of the numbered preset buttons.

Clearing a Preset Using the IR Remote Commander

Press and hold the **Reset** button while pressing the preset number you want to clear.

Web Interface

The camera provides a web interface to allow control via an Ethernet network connection, using a browser. The web interface gives the user more control over the camera than the IR remote offers.

The web interface allows user-level camera control and password-protected administrative access to tasks such as setting passwords, changing the IP address, viewing diagnostics, and installing firmware updates.

If the LAN has a DHCP server, the camera will get its IP address, gateway and routing information automatically and you will be able to browse to it. In the absence of a DHCP server, the camera's default IP address is 169.254.1.1 and its subnet mask is 255.255.0.0.

You can configure the camera's static IP address either through the network or from a computer connected directly to its Ethernet port. You may need a crossover cable.

To display the camera's IP address:

Press and hold the Data Screen button on the remote. After 3 seconds, the room display presents the information.

Compatible Web Browsers

Supported web browsers:

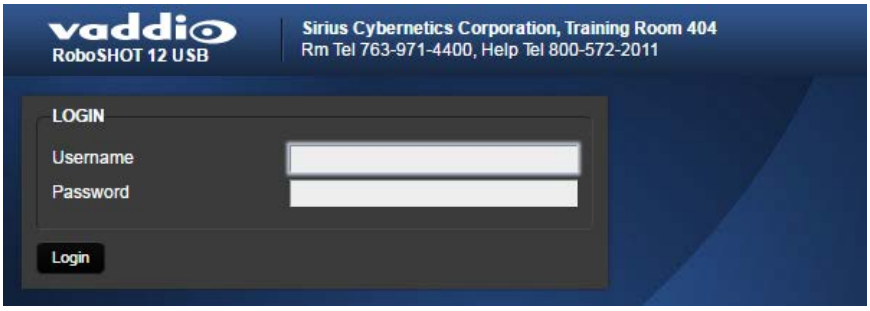
- Chrome® (latest version),
- Firefox® (latest version),
- Microsoft® Internet Explorer® (versions 8 through 11)
- Safari® (versions 6 and 7)
- Microsoft® Edge

Other browsers may also work.

User Access

By default, the web interface opens to the Camera Controls page without requiring a login. If the administrator has changed the guest access setting, you will need to log in.

The default user password is `password`. Only the camera control page is available with user-level access.



If you are not logged in using the admin account, the Admin button on the Camera Controls page opens the admin login dialog. The default admin password is `password`. The admin has access to all pages of the web interface.

Administrative Access

If you are on the Camera Control screen and no other screens are available, you're logged in at the user level, or guest access is enabled and you're not logged in at all. Use the Admin button to open the login dialog.

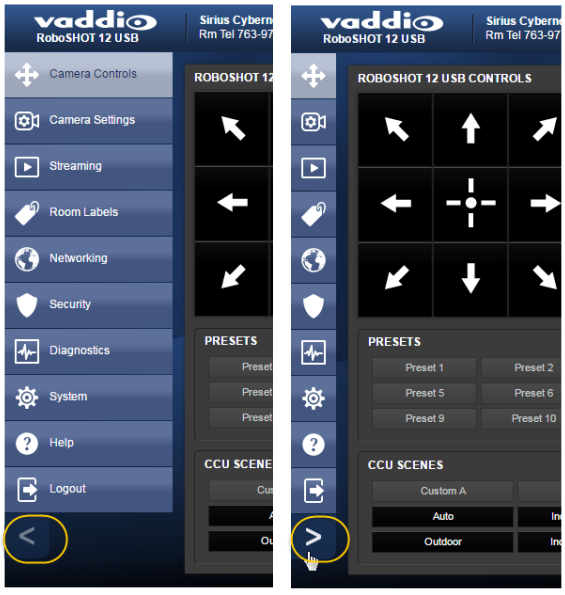
When you log in as Admin, all the admin navigation buttons appear on the left side of the screen. In addition to Camera Controls, you also have access to:

- Camera Settings – Additional control over camera behavior related to camera movement and color management.
- Streaming – USB device settings and IP (H.264) streaming.
- Room Labels – Information to display on the web interface screens, including the conference room name and phone number and the in-house number for AV assistance.
- Networking – Ethernet configuration.
- Security – Set passwords and manage guest access.
- Diagnostics – View or download logs when troubleshooting issues.
- System – View firmware version and switch settings, reboot, restore factory defaults, and run firmware updates.
- Help – Tech support contact information and a link to the product information library on the Vaddio website.
- Logout – Leave the web interface in a password-protected state. If guest access is on, this returns the web interface to the Camera Controls page at guest access level.

Compact Menu View

By default, the navigation buttons display an icon and a text label.

For RoboSHOT 12 USB cameras using version 2.1.1 or newer firmware, the web interface provides a compact view of the menu buttons along with the standard view. The button at the bottom of the menu toggles between the two views.



Web Interface Quick Reference

Where to find the controls you need right now.

What do you need?	Go to this page
Camera operation ■ Move or zoom the camera ■ Set the speed for pan, tilt, or zoom motions ■ Focus the camera (Focus button reveals the focus control) ■ Move to a camera preset ■ Put the camera into or bring it out of standby mode	Camera Controls (guest access page)
Camera behavior ■ Set motors for inverted operation (Settings button reveals the control) ■ Set or clear camera presets ■ Select the appropriate lighting adjustments (CCU Scenes section)	Camera Controls (guest access page)
Camera behavior ■ Specify whether to use automated adjustments (auto-iris, auto white balance, backlight compensation)	Camera Settings
Camera behavior ■ Status light color scheme (Pro A/V or UC) ■ UVC-Compliant or Client Custom USB streaming	System: DIP Switches
Camera adjustments ■ Color settings (Iris, iris gain, red gain, blue gain, detail, chroma, gamma) ■ Store and label custom color settings as CCU scenes ■ Specify global speed settings for camera movements that do not use Tri-Synchronous Motion	Camera Settings
Access management ■ Guest access ■ Account passwords ■ Automatic logout for idle sessions	Security
USB and IP streaming settings	Streaming
Other IP settings ■ Hostname ■ DHCP or static addressing ■ Static: IP address, subnet mask, gateway	Networking
Date and time, time zone, and NTP server	Networking

What do you need?	Go to this page
Information about the camera ■ Room location and phone number ■ Help desk phone number	Room Labels
Reboot or reset to factory defaults	System: Firmware
Firmware ■ Current version information ■ Save (export) and restore (import) configuration ■ Firmware update	System: Firmware
Vaddio Technical Support contact information	Help
Diagnostic logs	Diagnostics

Web Tasks for All Users: Camera Controls

CAMERA CONTROLS PAGE

The Camera Controls page provides most of the same controls as the IR Remote Commander, along with some that are not available from the remote:

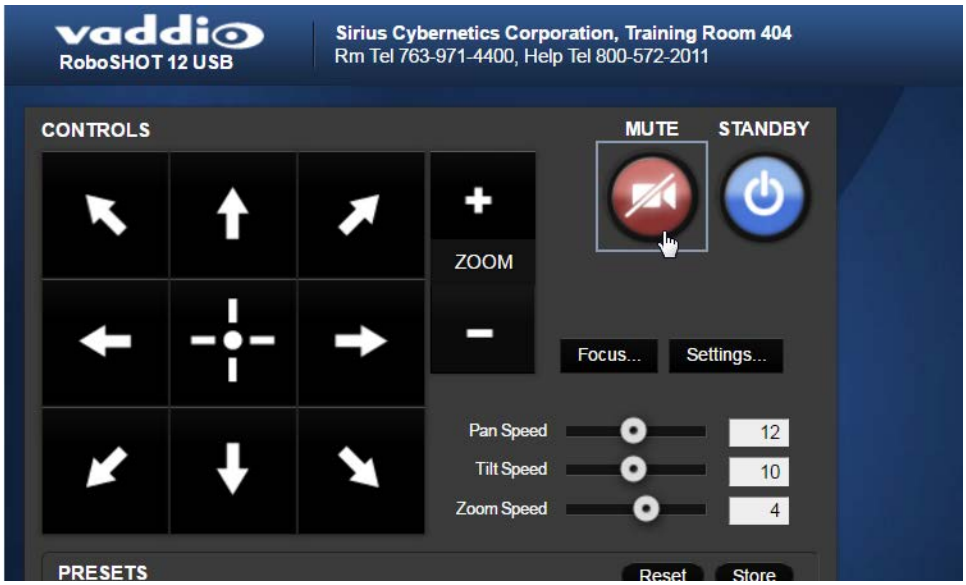
- Pan, tilt, zoom, or return to "home" position
- Stop or resume transmitting live camera video (video mute)
- Put the camera in standby or bring it back to the ready state
- Focus manually or set auto-focus
- Set speeds for camera movements
- Set or move to camera presets
- Select one of the stored lighting adjustments
- Set the way the camera responds to the arrow buttons on the remote

Note

Administrators can also customize the camera's home position from this page. See Store a Camera Preset.

Stop or Resume Sending Video

Use the Mute button to temporarily stop video from the camera without placing it in standby - for example, when you need to confer privately with another person in the room. Remember that the mute button does not mute the room's microphones. In video mute mode, the camera transmits blue or black video, with a message that the video is muted.



Manage the Camera Ready State

Use the Standby button to switch between low-power (standby) and ready states.

In standby mode, the button is red and the screen presents the message “Device is in standby.” On entering standby mode, the camera pans 90° from center and 30° downward. Ceiling-mounted cameras also point downward in standby mode; this keeps dust from collecting on the lens.

Move the Camera

Use the arrow buttons for camera pan and tilt. The center button moves the camera to the home position.

Zoom In or Out

Use the Zoom + button to zoom in and the Zoom - button to zoom out.

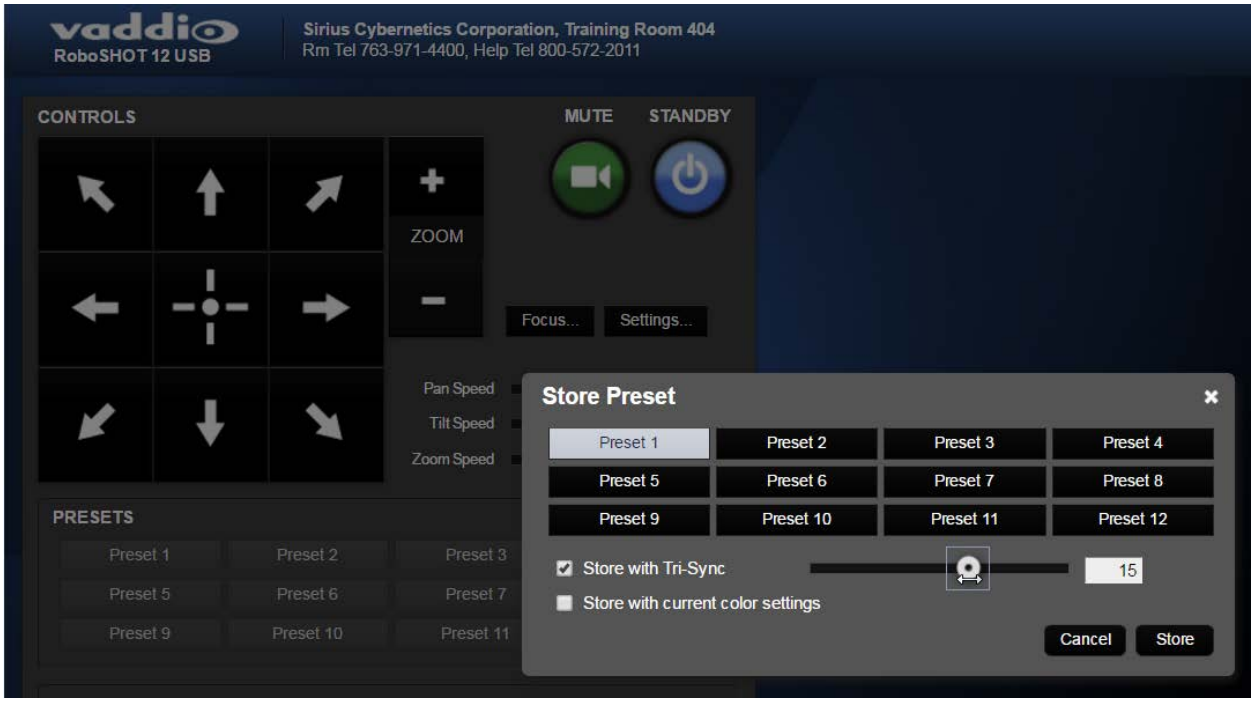
Move the Camera to a Preset Position

Use the numbered Preset buttons to move the camera to any of its programmed positions. If you select a preset that has not yet been programmed, nothing happens.

Store a Camera Preset

1. Set up the camera shot, then use the Store button to open the Store Preset box.
2. Click one of the preset buttons. If you are logged in as admin, this box provides the option to store the shot as a numbered preset or as the Home position.
3. Check Save with Tri-Sync to allow the pan, tilt, and zoom motors to move simultaneously from other presets to this position.
4. If necessary, use the speed slider to set Tri-Sync speed. For tight shots, slower is better.
5. To save the current CCU settings along with the camera position, check Save with Current Color Settings.
6. Store the preset.

Note:
The Tri-Synchronous Motion algorithm works best for on-air shots requiring significant movement. It is not useful when moving the camera less than 10° or when the camera is not on the air.



Using Tri-Synchronous Motion

The Tri-Synchronous Motion algorithm calculates the pan, tilt and zoom speeds needed for the camera to move from one preset to the next so that all three movements begin together and arrive at the same time.

You may need to experiment to find the best Tri-Sync speed setting. Here is a simple method:

1. Store a preset, checking Save with Tri-Sync and setting the speed slider about a third of the way along the scale.
2. Move the camera to a different pan, tilt, and zoom position, and save this position as another preset. Again, check Save with Tri-Sync; but set the speed slider to about the halfway point.
3. Move the camera from one preset to the other to evaluate which movement is closer to the speed you want. Use the Tri-Sync speed associated with that preset, or adjust it as needed.
4. Store all the presets you will need.
5. Switch among the presets to determine whether any of them should use a different Tri-Sync speed.

Change the Focus

Open the Focus control to select Auto-focus, or set manual focus with the + (near) and – (far) buttons. These buttons are not recognized when the Auto Focus box is checked.

Change the Speed of Camera Movements

Use the speed sliders to adjust the speed of movements that you control with the buttons for pan, tilt and zoom. For tight shots, slower is usually better.

Set Pan Direction

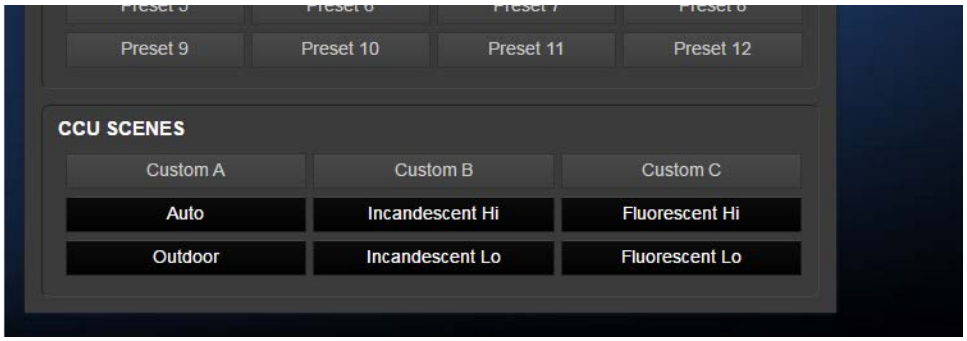
By default, the arrow buttons move the camera in the direction that viewers at the far end would see. If you face the camera and use the left arrow button, the camera pans to your right.

To switch the camera pan direction to the near end point of view, use the Settings button to open the pan and tilt direction box. Then set Pan Direction to Inverted.

Select the Appropriate Color Settings

Adjust the camera for the lighting in use by selecting the CCU scene that best fits your environment. The camera provides presets for common lighting scenarios – Incandescent Hi, Incandescent Lo, Fluorescent Hi, Fluorescent Lo and Outdoor. The Auto setting allows the camera to determine the appropriate adjustments.

The first three settings in this area of the web interface (initially labeled Custom A through Custom C) can be set and renamed from the Camera Settings page, accessible to admin users.



Web Tasks for Administrators: Managing Access and Passwords

SECURITY PAGE

Things you can do on this page:

- Change the password for the admin account (default is `password`)
- Change the password for the user account (default is `password`)
- Allow people to access the Camera Control screen without logging on (Allow Guest Access) – by default, guest access is permitted
- Set whether inactive sessions log off automatically or not – by default, inactive sessions expire after 30 minutes

Note

For best security, Vaddio strongly recommends changing the user and admin passwords. *Using the default passwords leaves the product vulnerable to tampering.*

Web Tasks for Administrators: Adding Room Information to the Screen

ROOM LABELS PAGE

Enter your organization's name, the conference room name and phone number, and the number for people to call for in-house A/V support. This information is displayed on every page of the web interface.

Web Tasks for Administrators: Configuring Network and Time/Date Settings

NETWORKING PAGE

Things you can do on this page:

- Specify time zone and NTP server
- Assign the camera's hostname
- Specify DHCP or static IP address
- Set up other networking information (if using static IP addressing)

Network Configuration

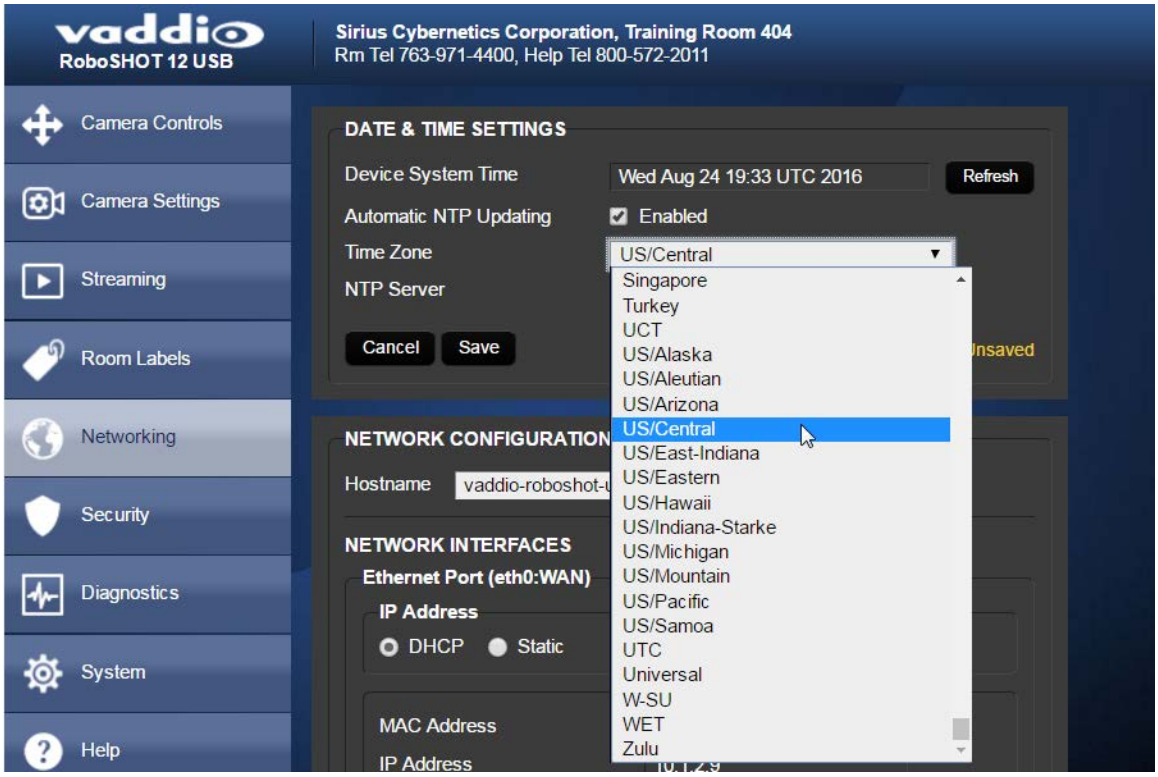
You will be able to enter the IP address, subnet mask, and gateway only if you set IP Address to Static.

Note

DHCP is the default setting, but the camera will use the default address of 169.254.1.1 if no DHCP server is available.

Specifying Time Zone and NTP Server

1. To make the time zone and NTP server editable, enable Automatic NTP Updating.
2. Select the desired time zone from the list.
3. If desired, specify the NTP server to use. If you are not sure about this, use the default.

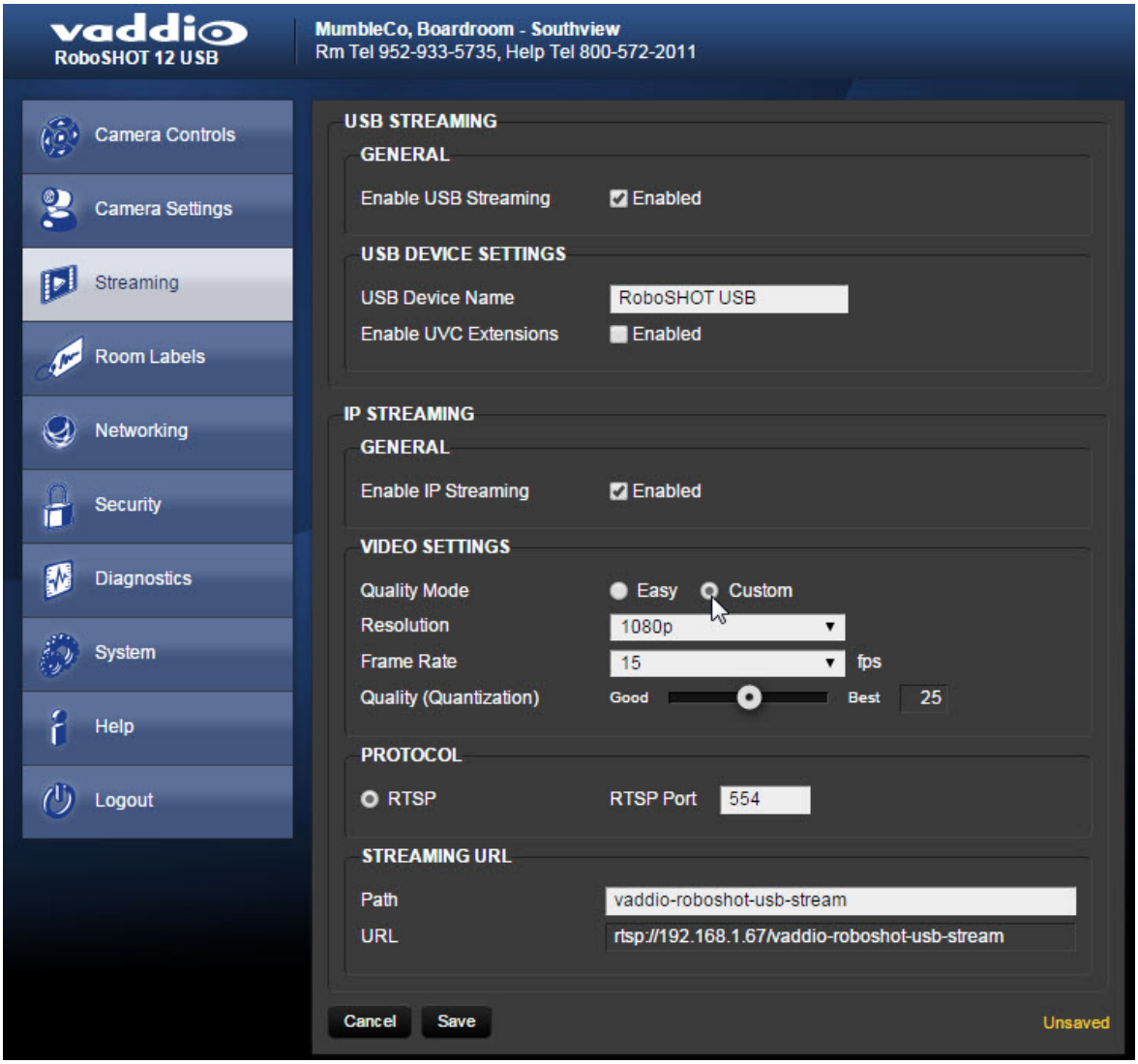


Web Tasks for Administrators: Configuring Streaming Settings

STREAMING PAGE

Things you can do on this page:

- Edit the USB device name
- Allow soft client control of the camera
- Enable/disable IP streaming and USB streaming separately
- Set the resolution, video quality, and frame rate for IP streaming
- Specify the IP streaming port and path/URL



After making changes on this page, save them.

Edit the USB Device Name

To change the way the camera shows up in your soft client's camera selection list, edit the USB Device Name.

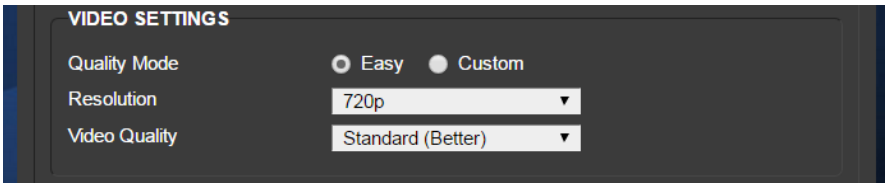
Enable or Disable Streaming

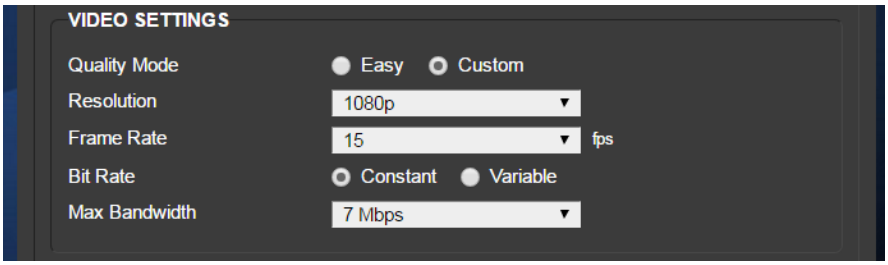
IP and USB streaming are enabled by default. Use the Enable USB Streaming and Enable IP Streaming checkboxes to change this.

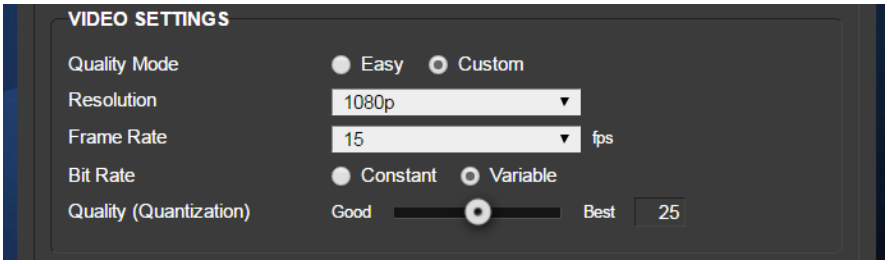
Set IP Streaming Settings

If you are not sure about these settings, start with the defaults.

1. Select the video Quality Mode: Easy or Custom. Easy automatically sets the recommended frame rate; Custom provides additional control.
2. Select the desired IP streaming resolution.
3. Easy quality mode only: Select Video Quality.
4. Custom quality mode only: Select the desired IP streaming frame rate.
5. Custom quality mode only: Select Constant or Variable bit rate.
6. Custom quality mode, Variable bit rate only: Set the Quality (Quantization) slider.







Note

USB streaming resolution and frame rate are automatically negotiated between the camera and the conferencing application.

Advanced IP Streaming Settings

RTSP port: Vaddio strongly recommends using the default RTSP port number unless you need to change it.

Streaming URL: Edit the path to change the portion of the streaming URL that appears after the IP address.

Web Tasks for Administrators: Color, Lighting, and Speed Adjustments

The Camera Settings page lets you do these things:

- Set up and name custom color/lighting settings.
- Set the pan, tilt, and zoom speeds that will be used when not using Tri-Synchronous Motion

Adjust the Color and Lighting Settings

1. Click any of the CCU scene buttons to load one of the CCU scenes into the camera, then fine-tune it as needed using the Color Settings controls.
2. To allow the camera to compensate automatically for the light level, check the Auto Iris box. Leave it unchecked to adjust iris and gain manually.
3. Auto Iris adjustments – these adjust contrast between the brightest and darkest areas of the image.
   - If there is bright light behind the main subject of the shot, check the box for Back Light Compensation.
   - To increase contrast between the brightest and darkest areas, check the box for Wide Dynamic Range.

   Because Backlight Compensation reduces the contrast between extremes and Wide Dynamic Range increases it, they cannot be used together.
4. To allow the camera to adjust the white balance automatically, check the Auto White Balance box. Leave it unchecked to adjust red gain and blue gain manually.
5. Detail – adjust the slider as required for the right image sharpness.

   Note
   If the video looks grainy or "noisy," try a lower Detail setting.
6. Chroma – adjust the slider as needed for the right level of color intensity.
7. Gamma – adjust the slider as needed for the desired range between bright areas and shadows.
8. When the scene looks the way you want it to, click Store CCU Scene.
9. In the Store CCU Scene dialog box, select which custom scene to store (Custom A, B, or C) and optionally give it a descriptive name. You can rename it later if necessary.
10. Name and save your custom scene.

If you make a change that you don't like, start over by selecting and then deselecting Auto White Balance.

Rename a Custom CCU Scene

In the Custom CCU Scene Labels section, edit the text for the desired CCU scene label.

Set Pan, Tilt, and Zoom Speeds

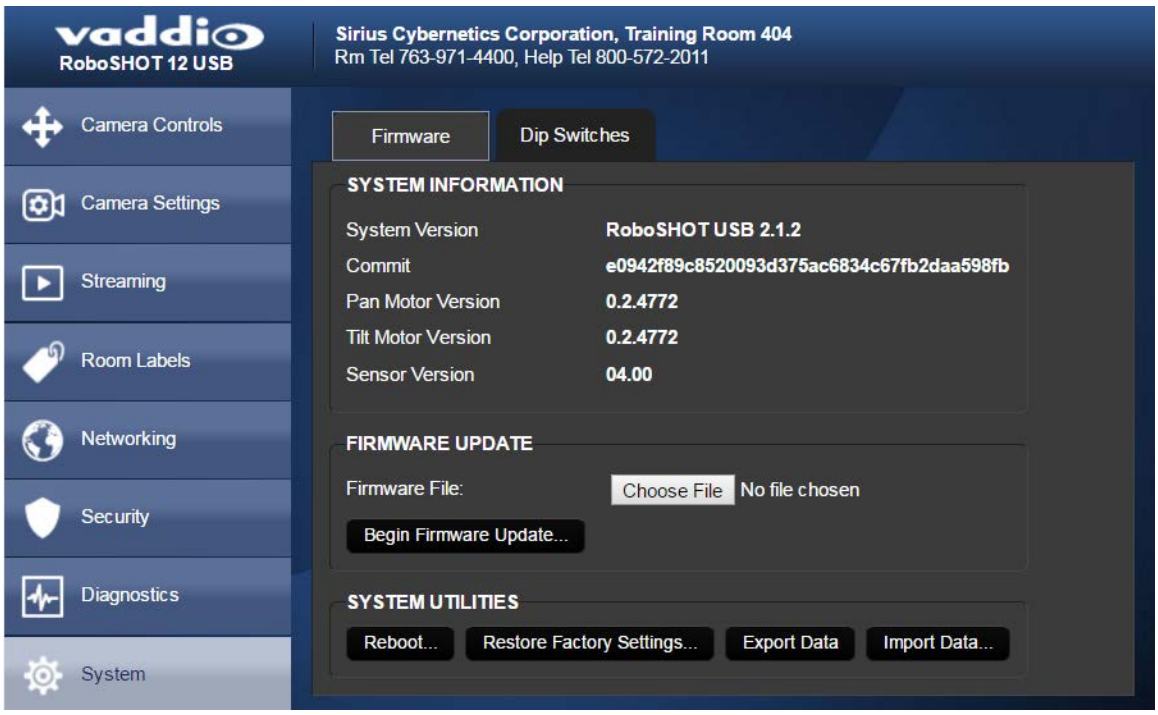
In the Global Preset Non-Tri-Sync Speeds section, set the speeds for movements to presets that do not use Tri-Synchronous Motion.

Web Tasks for Administrators: Reboots and Updates

The System page opens to the Firmware tab, where you can:

- Run a firmware update
- Reboot the camera
- Set the camera back to its original factory settings
- Save the current configuration (Export Data) or restore a configuration (Import Data)

The DIP Switches tab provides access to the soft DIP switches, and shows the current positions of the switches on the back of the camera.



Reboot the Camera

This can help if the camera stops responding as you expect. In the System Utilities section, click Reboot.

Save and Import or Restore a Configuration

If you need to configure several cameras the same way, you can configure the first one, export its configuration, and then import the configuration to the other cameras. The export downloads to your computer as a `.dat` file. The filename is the camera's hostname.

Note

The camera cannot import a .dat file that was exported from a camera using a different version of software.

Start a Firmware Update

1. Be sure you have downloaded the appropriate update file to your computer.
2. Click Choose File and select the update file.
3. Click Begin Firmware Update.
4. READ the information in the Confirm dialog box and be sure you understand it. It may seem boring, but it could save you some time and aggravation.
5. When you are ready to start the update, click Continue. A progress message box opens and the indicator light on the front of the camera turns yellow to show the firmware update is in progress. If the update process presents warnings or error messages, read them carefully.

   The camera reboots when the update is complete.
6. Contact Vaddio technical support if you encounter any problems with the update.

Caution

Do not remove power or reset the camera while the indicator is yellow, showing a firmware update in progress. Interrupting a firmware update can make the camera unusable.

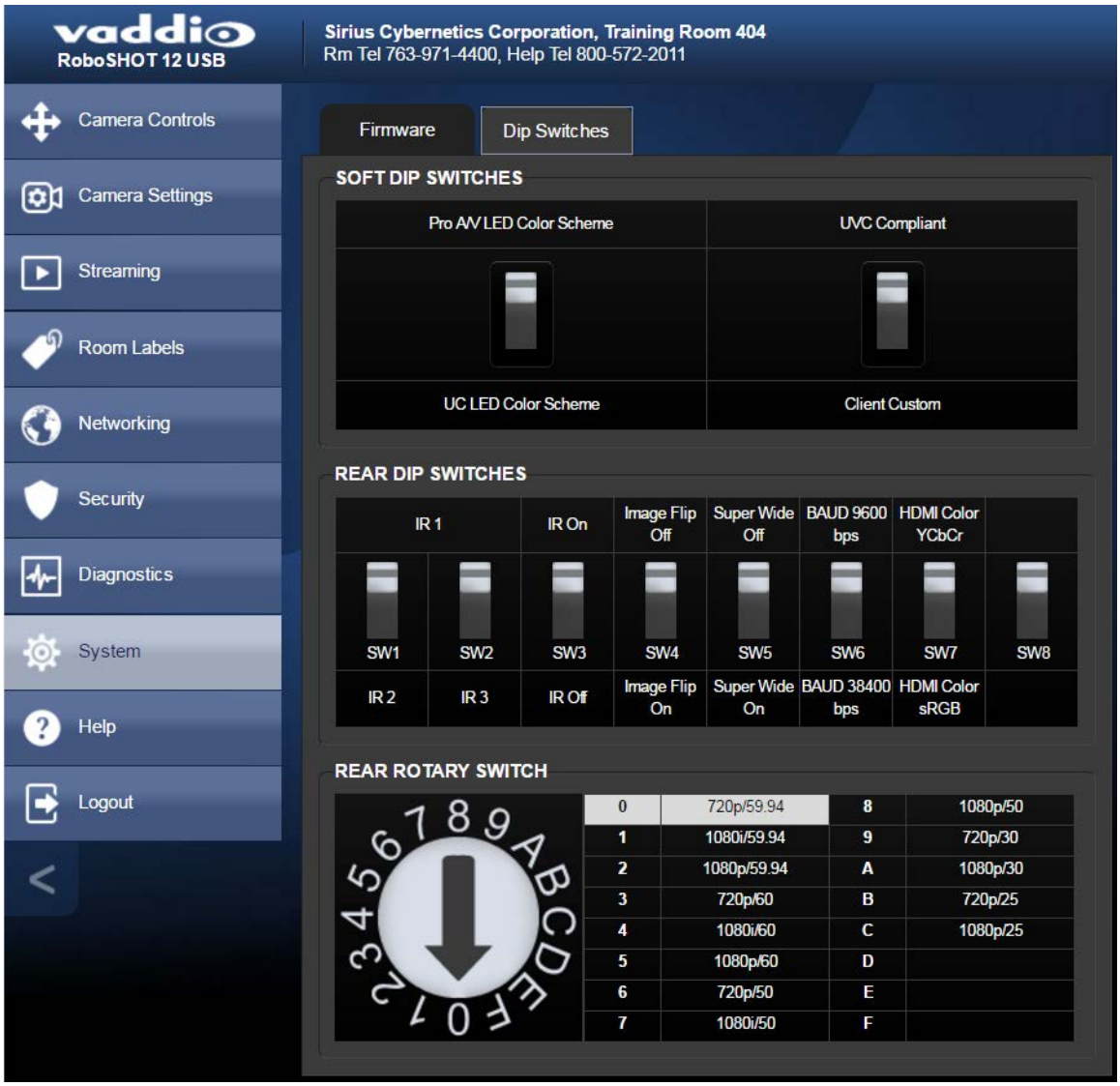
Camera Switch Settings

The DIP Switches tab of the System page provides access to these features:

Status light color scheme (Pro AV or UCC) – Select the status light color scheme that meets your needs. The Pro AV color scheme matches the color scheme used in Vaddio's non-USB cameras.

USB stream format (UVC Compliant or Client Custom) – Client Custom enables far-end camera control when used with the Zoom soft client.

The Rear DIP Switches and Rear Rotary Switch sections show the current positions of the switches on the back of the camera. If you need to change any of these settings, you will need to physically change the position of the switch.



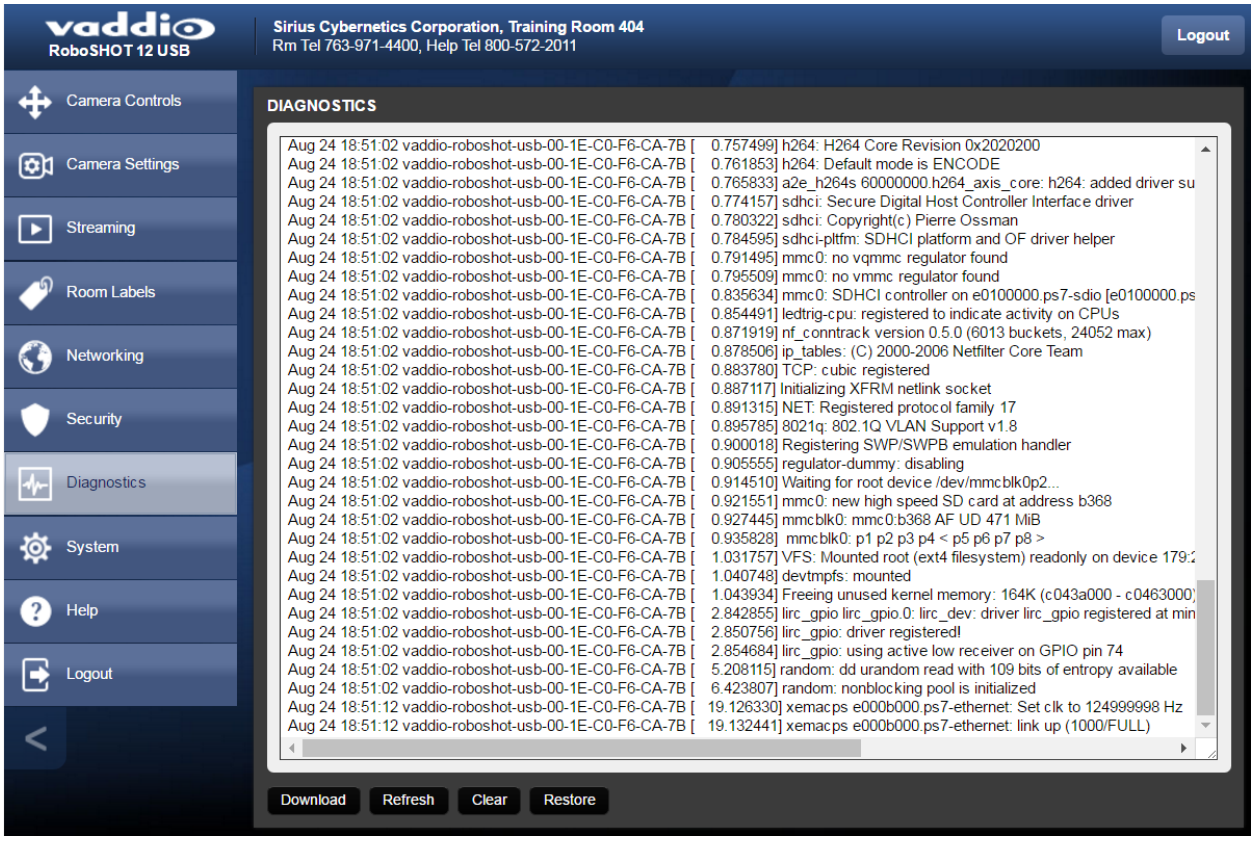
Web Tasks for Administrators: Contacting Vaddio Technical Support

If you can't resolve an issue using your troubleshooting skills (or the Troubleshooting table in this manual), we are here to help.

You'll find information for contacting Vaddio Technical Support on the Help screen.

Web Tasks for Administrators: Viewing Diagnostic Logs

If you encounter a problem that you can't solve, your Vaddio technical support representative may ask you to download and email the log file available from the Diagnostics screen.



Troubleshooting and Care

When the camera doesn't behave as you expect, check the indicator light on the front before you do anything else.

Use this table to determine whether it's time to call Vaddio Technical Support.

What is it doing?	Possible causes	Check and correct
Nothing. The light on the front is off.	At least one of the cables is bad.	Check using known good cables.
	The wall outlet is not active. (Check by finding out if it powers something else, such as a laptop or phone charger.)	Use a different outlet.
	The camera or its power supply is bad.	Contact your reseller or Vaddio Technical Support.
The camera is not responding to the remote and the light is yellow.	A firmware update is in progress.	Wait a few minutes, and try again when the light turns blue.
The camera does not respond to the remote, but the web interface is available	The remote is not using the same IR channel as the camera.	Push the Camera Select 1 button on the remote.
	The batteries in the remote are dead.	Put new batteries in the remote.
The camera responds to the remote but the web interface is not available.	The camera is not using the IP address you browsed to.	Press the Data Screen button on the remote to see camera information.
The camera's web UI is available but the camera does not respond to commands via RS-232 connection.	The RS-232 cable is not connected, or is bad.	Connect a known good cable.
	The camera's RS-232 settings don't match the settings on the controlling device.	Check the settings at both ends to be sure they match. The camera's baud rate can be viewed but not changed on the System page in the web UI.
The camera loses all its settings when power is cycled.	All the DIP switches are in the ON (down) position. (Verify on the DIP Switches tab of the System page.)	Set the DIP switches to their proper positions. Default is all OFF (up). See Switch Settings for more information.
No H.264 video stream.	IP streaming is not enabled.	Enable IP streaming: Streaming page in the web interface.
No USB video stream.	USB streaming is not enabled.	Enable USB streaming: Streaming page in the web interface.

Status Light

The light in the camera's base indicates its current state.

- Blue – Camera is active
- Purple – Standby mode or booting
- Yellow – Firmware update is in progress
- Blinking blue – Video mute is on (Pro A/V color scheme) or USB cable is disconnected (UC color scheme)
- Blinking purple – Error

Caution

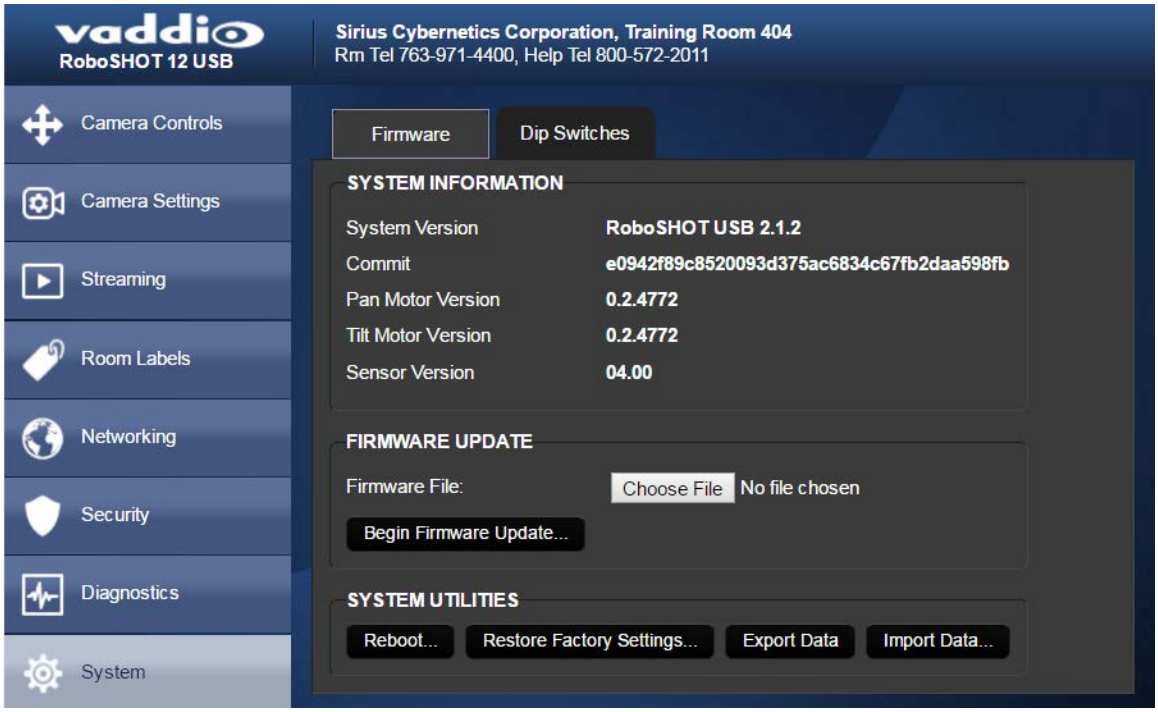
Do not remove power or reset the camera while the indicator is yellow, showing a firmware update in progress. Interrupting a firmware update can make the camera unusable.

Restoring Default Camera Settings

Factory reset clears most settings and returns soft DIP switches (on the DIP Switches tab of the System page) to their default positions.

Using the switches on the back of the camera: Set all DIP switches DOWN and cycle the power to reload the default camera settings. Then return all DIP switches to the desired settings.

From the web interface: Log on using the admin account, go to the System page's Firmware tab, and click Restore Factory Settings.



Operation, Storage, and Care

For smears or smudges on the product, wipe with a clean, soft cloth. Use a lens cleaner on the lens. Do not use any abrasive chemicals.

Keep this device away from food and liquids.

Do not operate or store the device under any of the following conditions:

- Temperatures above 40°C (104°F) or below 0°C (32°F)
- High humidity, condensing or wet environments
- Inclement weather
- Severe vibration
- Between converging tectonic plates
- Dry environments with an excess of static discharge

Do not attempt to take this product apart. There are no user-serviceable components inside.

Compliance Statements and Declarations of Conformity

Compliance testing was performed to the following regulations:

FCC Part 15 (15.107, 15.109), Subpart B	Class A
ICES-003, Issue 54: 2012	Class A
EMC Directive 2004/108/EC	Class A
EN 55022: December 2010	Class A
EN 55024: November 2010	Class A
KN22 2008 (CISPR 22: 2006)	Class A
KN24 2008 (CISPR 24: 1997 + A1: 2000 + A2: 2002)	Class A
IEC 60950-1:2005 (2nd Edition); Am 1: 2009 + Am 2: 2013	Safety
EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013	Safety

FCC Part 15 Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15, Subpart B, of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by Vaddio can affect emission compliance and could void the user's authority to operate this equipment.

ICES-003 Compliance

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'emet pas de bruits radioélectriques dépassant les limites applicables aux appareils numeriques de la classe A préscrites dans le Règlement sur le brouillage radioélectrique édicte par le ministère des Communications du Canada.

European Compliance

This product has been evaluated for electromagnetic compatibility under the EMC Directive for Emissions and Immunity and meets the requirements for a Class A digital device. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Standard(s) To Which Conformity Is Declared: CE

EMC Directive 2004/108/EC	
EN 55022: December 2010	Conducted and Radiated Emissions
EN 55024: November 2010	Immunity
EN 61000-4-2: 1995 + Amendments A1: 1998 + A2: 2001	Electrostatic Discharge
EN 61000-4-3: 2006 + A1: 2008	Radiated Immunity
EN 61000-4-4: 2004 + Corrigendum 2006	Electrical Fast Transients
EN 61000-4-5: 2006	Surge Immunity
EN 61000-4-6: 2009	Conducted Immunity
EN 61000-4-8: 2010	Power Frequency Magnetic Field
EN 61000-4-11: 2004	Voltage Dips, Interrupts and Fluctuations
KN22 2008 (CISPR 22: 2006)	Conducted and Radiated Emissions
KN24 2008 (CISPR 24: 1997 + A1: 2000 + A2: 2002)	IT Immunity Characteristics
EN 61000-4-2	Electrostatic Discharge
EN 61000-4-3	Radiated Immunity
EN 61000-4-4	Electrical Fast Transients
EN 61000-4-5	Surge Immunity
EN 61000-4-6	Conducted Immunity
EN 61000-4-8	Power Frequency Magnetic Field
EN 61000-4-11	Voltage Dips, Interrupts and Fluctuations
IEC 60950-1: 2005 (2nd Edition); Am 1: 2009 + Am 2: 2013	Safety
EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013	Safety

Warranty Information

See Vaddio Warranty, Service and Return Policies posted on support.vaddio.com for complete details.

Hardware* warranty: Two (2) year limited warranty on all parts and labor for Vaddio manufactured products. Vaddio warrants its manufactured products against defects in materials and workmanship for a period of two years from the day of purchase, to the original purchaser, if Vaddio receives notice of such defects during the warranty. Vaddio, at its option, will repair or replace products that prove to be defective. Vaddio manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry standard practices.

Exclusions: The above warranty shall not apply to defects resulting from improper or inadequate maintenance by the customer, customers applied software or interfacing, unauthorized modifications or misuse, mishandling, operation outside the normal environmental specifications for the product, use of the incorrect power supply, modified power supply or improper site operation and maintenance. OEM and special order products manufactured by other companies are excluded and are covered by the manufacturer's warranty.

Vaddio Customer Service: Vaddio will test, repair, or replace the product or products without charge if the unit is under warranty. If the product is out of warranty, Vaddio will test then repair the product or products. The cost of parts and labor charge will be estimated by a technician and confirmed by the customer prior to repair. All components must be returned for testing as a complete unit. Vaddio will not accept responsibility for shipment after it has left the premises.

Vaddio Technical Support: Vaddio technicians will determine and discuss with the customer the criteria for repair costs and/or replacement. Vaddio Technical Support can be contacted by email at support@vaddio.com or by phone at one of the phone numbers listed on support.vaddio.com.

Return Material Authorization (RMA) number: Before returning a product for repair or replacement request an RMA from Vaddio's technical support. Provide the technician with a return phone number, e-mail address, shipping address, product serial numbers and original purchase order number. Describe the reason for repairs or returns as well as the date of purchase. See the General RMA Terms and Procedures section for more information. RMAs are valid for 30 days and will be issued to Vaddio dealers only. End users must return products through Vaddio dealers. Include the assigned RMA number in all correspondence with Vaddio. Write the assigned RMA number clearly on the shipping label of the box when returning the product. All products returned for credit are subject to a restocking charge without exception. Special order product are not returnable.

Voided varranty: The warranty does not apply if the original serial number has been removed or if the product has been disassembled or damaged through misuse, accident, modifications, use of incorrect power supply, use of a modified power supply or unauthorized repair.

Shipping and handling: Vaddio will not pay for inbound shipping transportation or insurance charges or accept any responsibility for laws and ordinances from inbound transit. Vaddio will pay for outbound shipping, transportation, and insurance charges for all items under warranty but will not assume responsibility for loss and/or damage by the outbound freight carrier. If the return shipment appears damaged, retain the original boxes and packing material for inspection by the carrier. Contact your carrier immediately.

Products not under warranty: Payment arrangements are required before outbound shipment for all out of warranty products.

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Vaddio is a brand of Milestone AV Technologies · www.milestone.com
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Visit us at support.vaddio.com for firmware updates, specifications, drawings, manuals, technical support information, and more.