



Configuration and Administration Guide for

# **RoboSHOT 12 HDBT and RoboSHOT 30 HDBT**

High-Performance PTZ Cameras

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## Overview

This guide covers the RoboSHOT™ 12 and 30 HDBT PTZ cameras:

- RoboSHOT 12 HDBT (silver), North America – 999-9960-000
- RoboSHOT 12 HDBT (silver), Europe and UK – 999-9960-001
- RoboSHOT 12 HDBT (silver), Australia and New Zealand – 999-9960-009
- RoboSHOT 30 HDBT (black), North America – 999-9963-000
- RoboSHOT 30 HDBT (black), Europe and UK – 999-9963-001
- RoboSHOT 30 HDBT (black), Australia and New Zealand – 999-9963-009
- RoboSHOT 30 HDBT (white), North America – 999-9963-000W
- RoboSHOT 30 HDBT (white), Europe and UK – 999-9963-001W
- RoboSHOT 30 HDBT (white), Australia and New Zealand – 999-9963-009W



## 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 and connection instructions; these are available in the **Installation Guide for RoboSHOT HDBT High-Performance PTZ Cameras**.

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

Download manuals, dimensional drawings, and other information from [www.vaddio.com/support](http://www.vaddio.com/support).

## Camera Features

- RoboSHOT 12 HDBT: Exmor® 1/2.8 type, high-speed, low-noise image sensor; 12X optical zoom; 73° horizontal field of view in wide mode – perfect for small to medium rooms
- RoboSHOT 30 HDBT: Exmor R™ back-lit 1/2.8 type, high-speed, low-noise image sensor; 30X optical zoom; 65° horizontal field of view for medium to large venues – houses of worship, lecture theaters, IMAG systems
- 2.38 megapixels total, full HD (native 1080p/60)
- Improved color mapping for true, vivid color
- IP H.264 streaming – view real-time video from the camera using any standards-based media viewer
- Tri-Synchronous Motion™ simultaneous 3-axis pan/tilt/zoom movement between presets
- Smooth, silent direct-drive motors – ultra-accurate positioning, from 120° per second down to 0.35° per second
- Designed for use with the Vaddio OneLINK™ HDMI extension module for HDBaseT Cameras
- Web interface for remote administration and operation, integration-ready Telnet or RS-232 control, presenter-friendly IR remote control

## A Quick Look at the Camera

The RoboSHOT 12 and 30 models are similar. The RoboSHOT 12 is the camera on the left in the photo.

### Front of the Camera



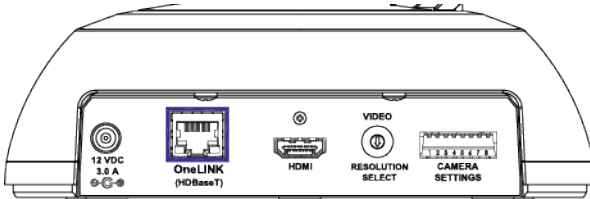
- **Camera and Zoom Lens:** The 12 and 30 models use different optical components.
  - RoboSHOT 12 HDBT: 12X optical zoom lens (12X in Super-Wide mode and 10X in normal mode), Exmor 1/2.8-type, high-speed, low noise image sensor
  - RoboSHOT 30 HDBT: 30X optical zoom lens, Exmor-R 1/2.8 type, backlit, high-speed, low-noise, image sensor
- **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 indicator:** The multicolored LED indicates the camera's current state.
  - **Blue:** Normal operation (blinks off momentarily when the camera receives a command from the remote)
  - **Purple:** In standby mode or booting
  - **Yellow:** Firmware update in progress
  - **Flashing purple:** Error
  - **Red:** On-air tally

#### **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.*

## Back of the Camera

Rear panel connections are identical for both models.



From left to right:

- **Power connector:** If not using a OneLINK HDMI extension module, use the 12 VDC, 3.0 A power supply shipped with the camera.
- **OneLINK HDBaseT/Network RJ-45 connector:** If not using a OneLINK HDMI extension module, connect to the network.
- **HDMI connector:** HDMI video output; connect to a display if not using a OneLINK HDMI extension module.
- **Video Resolution Select switch:** Select the video output resolution.
- **Camera Settings DIP switches:** Settings for IR remote frequency, baud rate and image flip.

## Vaddio IR Remote Commander

The IR remote provides basic camera control for end users.

### IR Remote Cheat Sheet

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

## IR Remote Details

The Vaddio remote provides the following functions:

**Power** – Switch the selected camera on or off.

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

**Back Light** – Use or turn off Back Light Compensation.

**Data Screen** – Display the camera's IP address and MAC address. Press this button again to dismiss the display.

**Camera Select** – In multi-camera installations, selects the camera to be controlled. See [Camera 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.

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

**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.

## Getting the Camera's IP Address

1. Press the Data Screen button on the remote. The room display presents the camera's IP address and MAC address.
2. Press the Data Screen button again to dismiss the information.

You can access the camera's web interface by entering the camera's IP address in the address bar of your browser.



## 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.

- Administrative access – The default password is `password`. The admin has access to all pages of the web interface.
- User access – The default password is `password`. Only the camera control page is available with user-level access.

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 255.255.255.0.

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.

### **Note**

*If the camera is used with a OneLINK device, the two devices have separate IP addresses and each has its own web interface.*

## Compatible Web Browsers

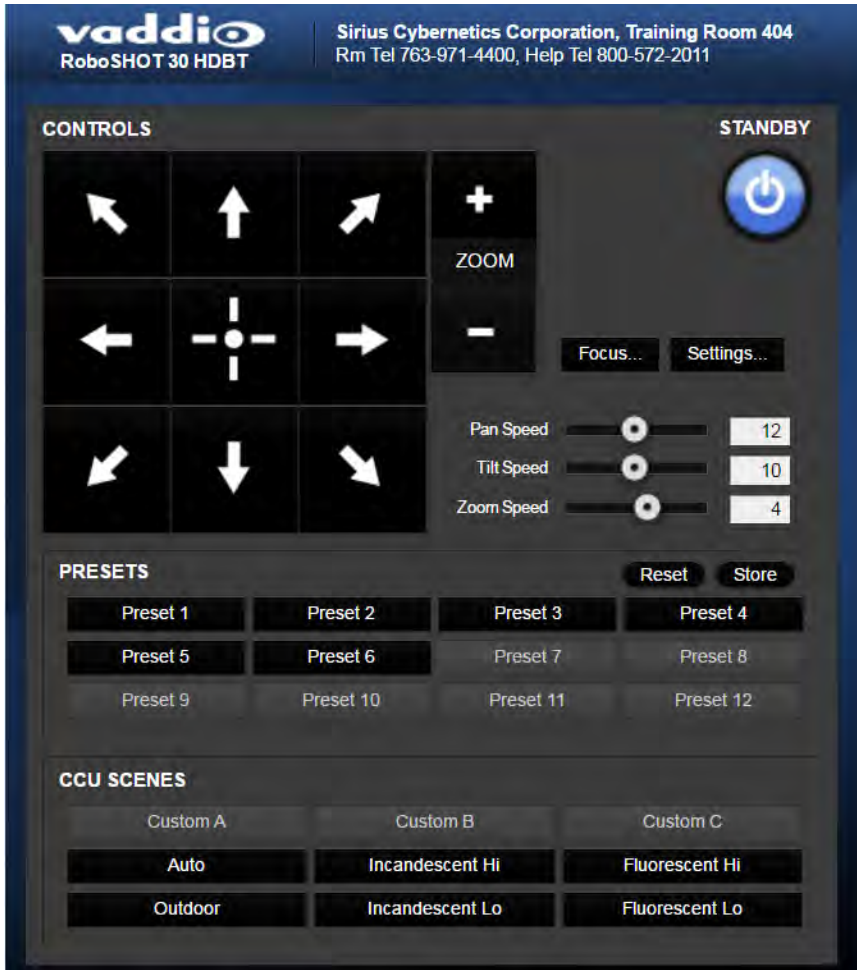
We have tested this product with these web browsers:

- Chrome®
- Microsoft® Internet Explorer®
- Safari®
- Firefox®

We test using the browser version available from the vendor at that time. Older versions of these browsers are likely to work, and other browsers may also work.

## User Access

If the admin sets up automatic guest access, no login is needed – the system starts at the Camera Control page, rather than the login page. The administrative login dialog is accessible from the Camera Control page, to allow access to administrative tasks.



## 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 on at all. Use the Admin button to open the login screen.

When you log in as Admin, all the admin menu 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 – Set up IP (H.264) streaming.
- Room Labels – Add helpful information the web interface screens, such as conference room name and the in-house number for AV assistance.
- Networking – Ethernet configuration.
- Security – Set passwords and manage guest access.
- Diagnostics – Access to logs for troubleshooting.
- System – Reboot, restore defaults, view switch settings, and run updates.
- Help – Tech support contact information.

## Web Interface Cheat Sheet

Where to find the camera controls you need right now.

What do you need?	Go to this screen
Camera operation <ul style="list-style-type: none"> <li>■ Move or zoom the camera</li> <li>■ Set the speed for pan, tilt, or zoom motions</li> <li>■ Focus the camera (Focus button reveals the focus control)</li> <li>■ Move to a camera preset</li> <li>■ Put the camera into or bring it out of standby mode</li> </ul>	Camera Controls
Camera behavior <ul style="list-style-type: none"> <li>■ Set motors for inverted operation (Settings button reveals the control)</li> <li>■ Set or clear camera presets</li> <li>■ Select the appropriate lighting adjustments (CCU Scenes section)</li> </ul>	Camera Controls
Camera behavior <ul style="list-style-type: none"> <li>■ Define custom lighting adjustments (CCU scenes)</li> <li>■ Specify whether to use automated adjustments (auto-iris, auto white balance, backlight compensation)</li> </ul>	Camera Settings
Camera adjustments <ul style="list-style-type: none"> <li>■ Color settings (Iris, iris gain, red gain, blue gain, detail, chroma, gamma)</li> <li>■ Store and label custom color settings as CCU scenes</li> <li>■ Specify global speed settings for camera movements that do not use Tri-Synchronous Motion</li> </ul>	Camera Settings
Access management <ul style="list-style-type: none"> <li>■ Guest access</li> <li>■ Account passwords</li> </ul>	Security
IP streaming settings <ul style="list-style-type: none"> <li>■ Quality</li> <li>■ Resolution</li> <li>■ Frame rate</li> <li>■ Streaming URL and path</li> </ul>	Streaming
IP settings <ul style="list-style-type: none"> <li>■ Hostname</li> <li>■ DHCP or static addressing</li> <li>■ Static: IP address, subnet mask, gateway</li> </ul>	Networking
Information about the camera's current hardware switch settings	System
Time zone and NTP server (source for system time/date)	Networking
Diagnostic logs	Diagnostics
Information about the camera location	Room Labels
Helpdesk phone number for end users	Room Labels
Vaddio Technical Support contact information	Help

## Web Tasks for All Users: Controlling the Camera

### CAMERA CONTROLS PAGE

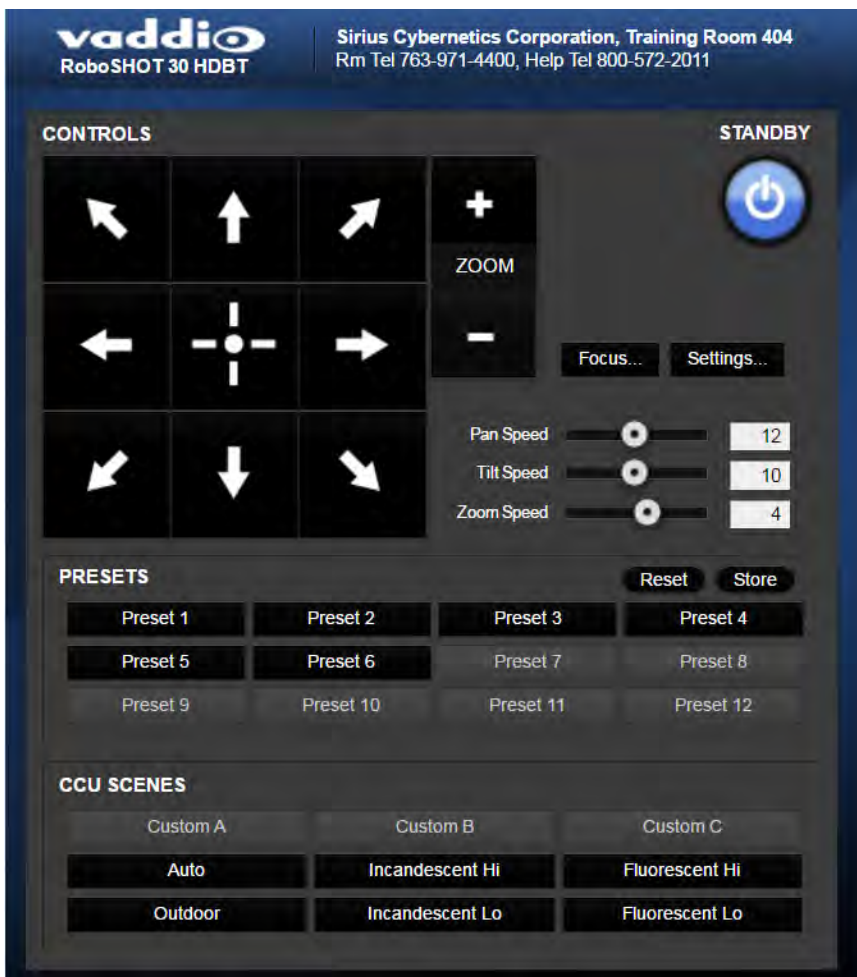
The Camera Controls page provides most of the same controls as the IR Remote Commander, along with some that are not available from the remote:

- Pan, tilt, zoom, or return to "home" position
- Put the camera in standby or bring it back to the ready state
- Set speeds for camera movements
- Focus manually or set auto-focus
- 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

Since the web interface is specific to the camera you are working with, it does not offer camera selection.

#### Note

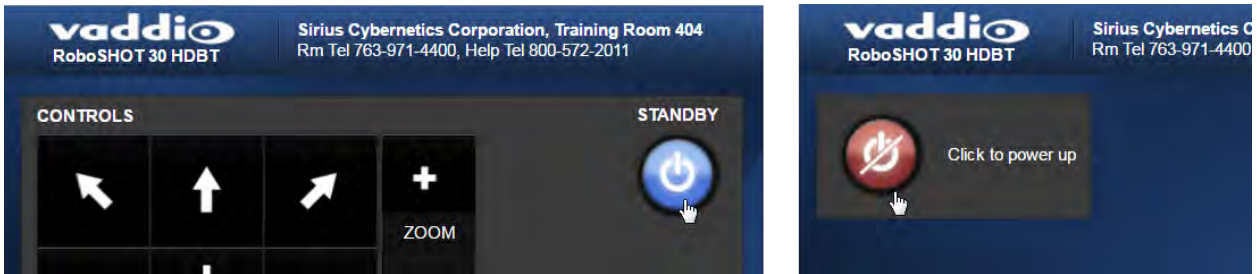
Administrators can also customize the camera's home position from this page.



## Switching the Camera Off or On

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

On entering standby mode, the camera moves to its standby position.



## Moving the Camera

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

## Zooming In or Out

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



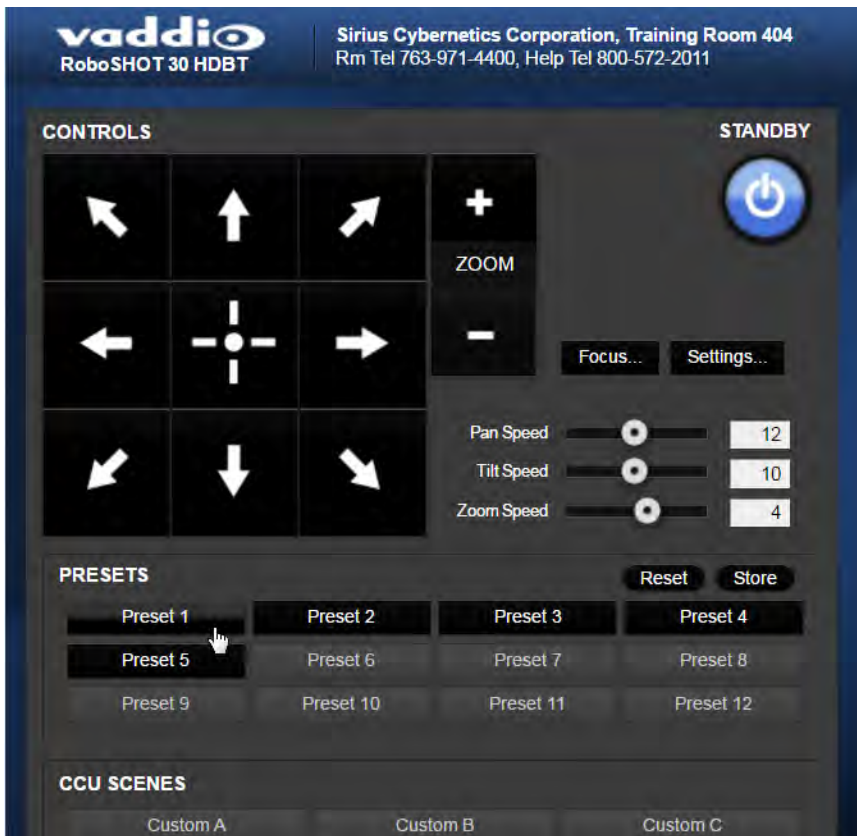
## Changing the Focus

Open the Focus control to select Auto-focus, or set manual focus with the + (near) and – (far) buttons. I know you get this, but I'm going to say it anyway: The + and – buttons don't work when the Auto Focus box is checked.



## Moving 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.

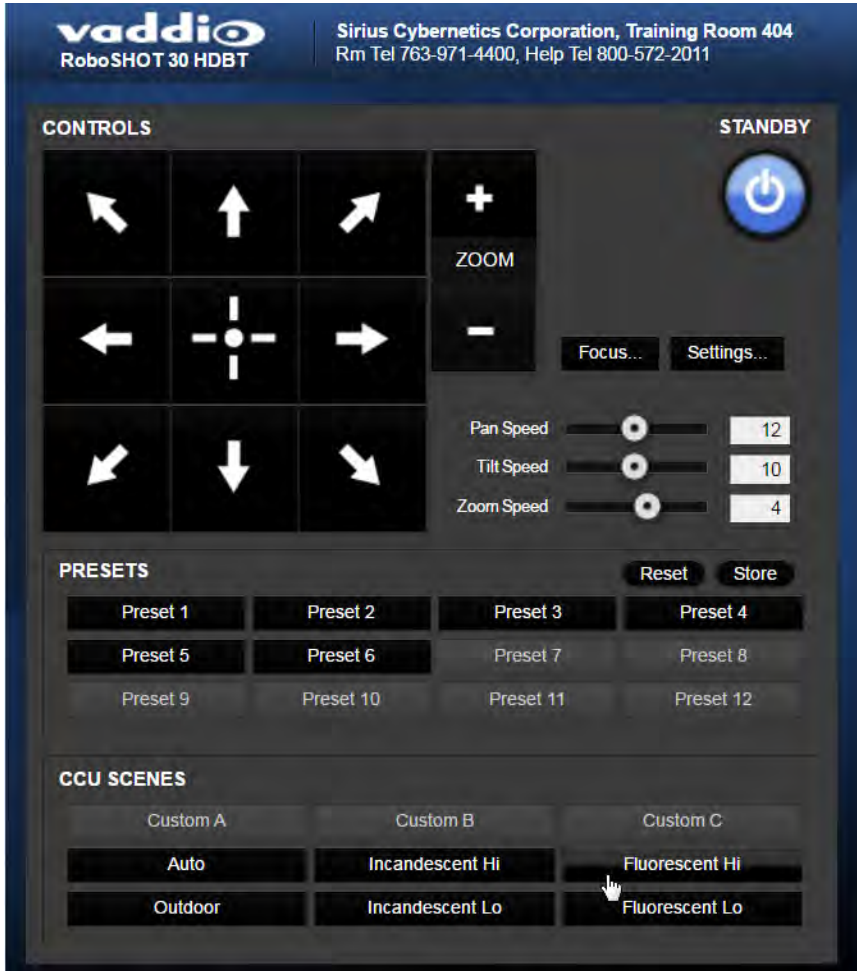




## Selecting the Appropriate Color Settings

Adjust the camera for the lighting in use by selecting the CCU scene that best fits your environment. The technical folks at Vaddio (Scott, to be specific) have already set up 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.

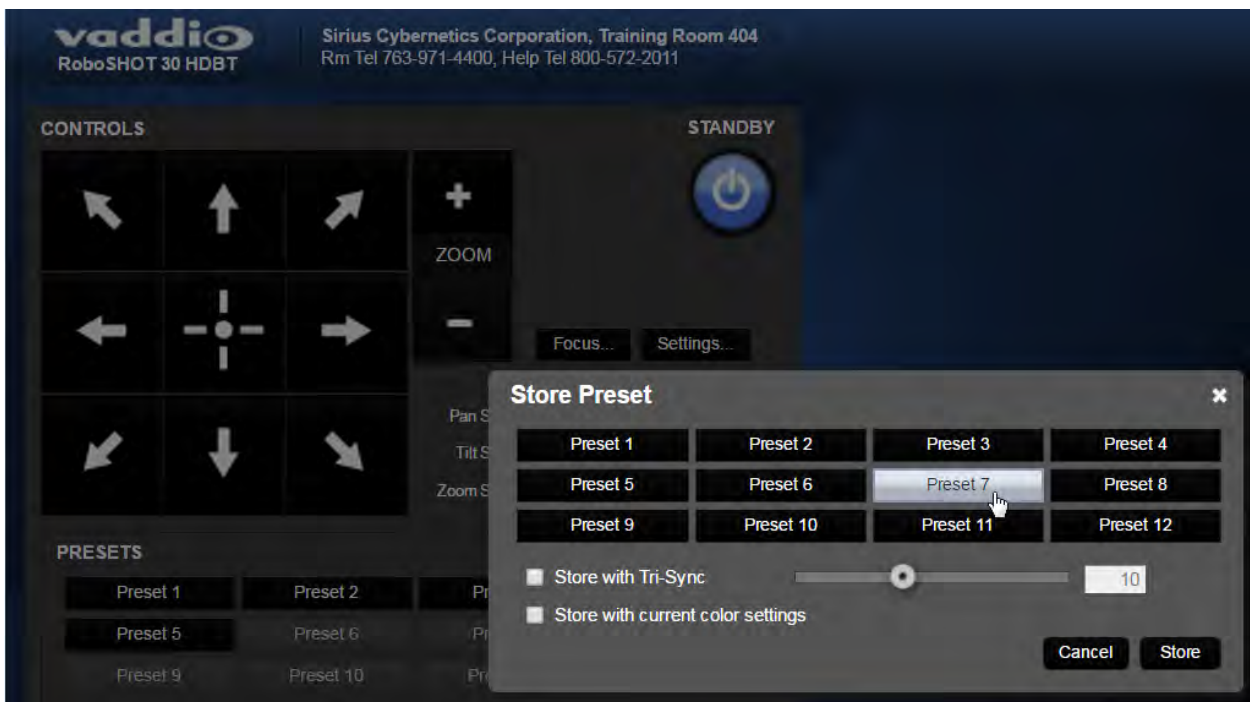


## Storing a Camera Preset

1. Set up the camera shot, then use the Store button to open the Store Preset box.
2. Click one of the numbered preset buttons.
3. Check Save with Tri-Sync to allow the pan, tilt, and zoom motors to move simultaneously.
4. If necessary, use the speed slider to set Tri-Sync speed. For tight shots, slower is better.
5. To save the current color settings along with the camera position, check Save with current color settings.
6. Save the preset.

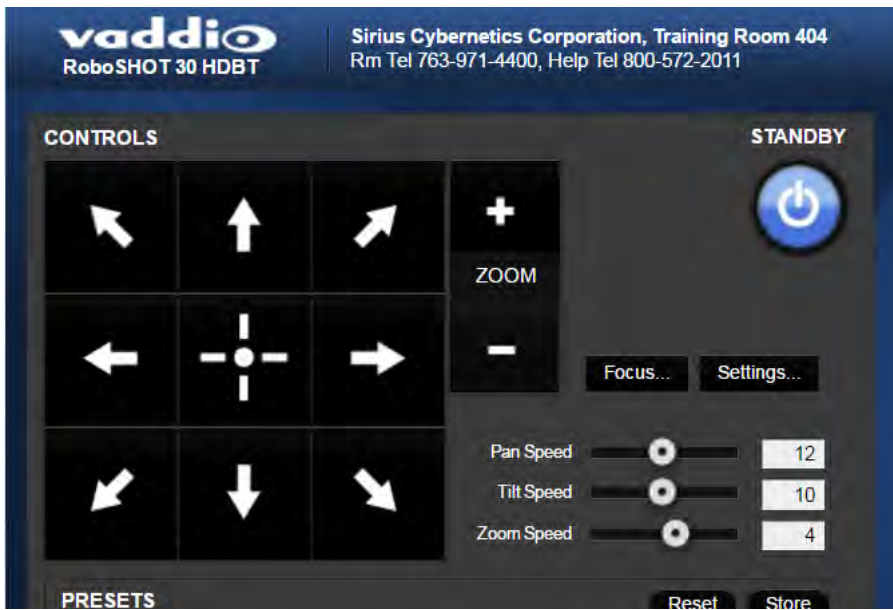
**Note:**

*The Tri-Synchronous Motion algorithm works best for on-air shots requiring significant movement in more than one axis. It is not useful when moving the camera less than 10° or when the camera is not on the air. You may need to experiment with the Tri-Sync setting.*



## Changing 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.



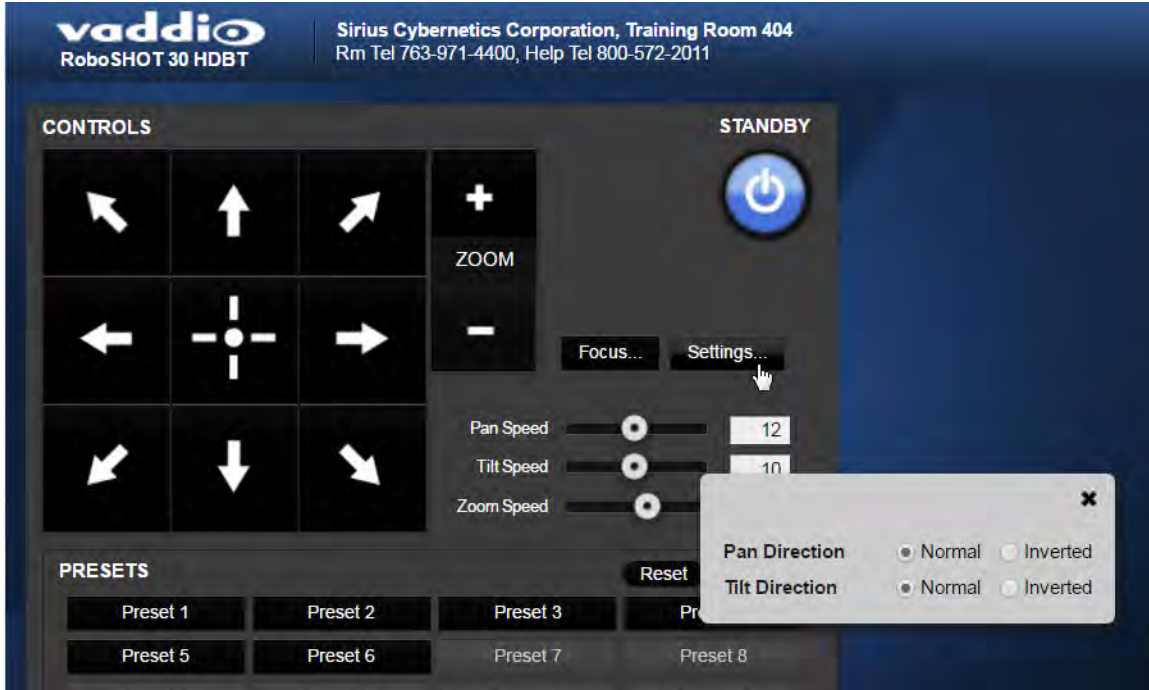
## Setting Pan Direction

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.

## Setting Tilt Direction

Tilt direction can also be normal or inverted. Set it according to what will be the most intuitive for the people most likely to be controlling the camera.



## Web Tasks for Administrators: Setting a Custom Home Position

### CAMERA SETTINGS PAGE

If you are logged in as admin, you can set a custom Home preset in place of the camera's default home position (0° pan and 0° tilt). The Home preset is not available in the Store Preset box if you are not logged in as admin.

Set up the shot and store the custom Home position as you would for any other preset. Like other presets, the custom Home preset can include color, speed, and Tri-Synchronous Motion settings.



## Web Tasks for Administrators: Managing Access and Passwords

### SECURITY PAGE

Things you can do on this page:

- Allow people to access the Camera Control screen without logging on (Allow Guest Access)
- Set whether inactive sessions log off automatically or not (Automatically Expire Idle Sessions)
- Change the password for the admin account
- Change the password for the user account

#### Note

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



## Web Tasks for Administrators: Adding Room Information to the Web Interface

### ROOM LABELS PAGE

To display your company name, conference room name and phone number, and the number for meeting hosts to call for in-house A/V support, enter this information on the Room Labels page.



## Web Tasks for Administrators: Configuring Network 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

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

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

#### Caution

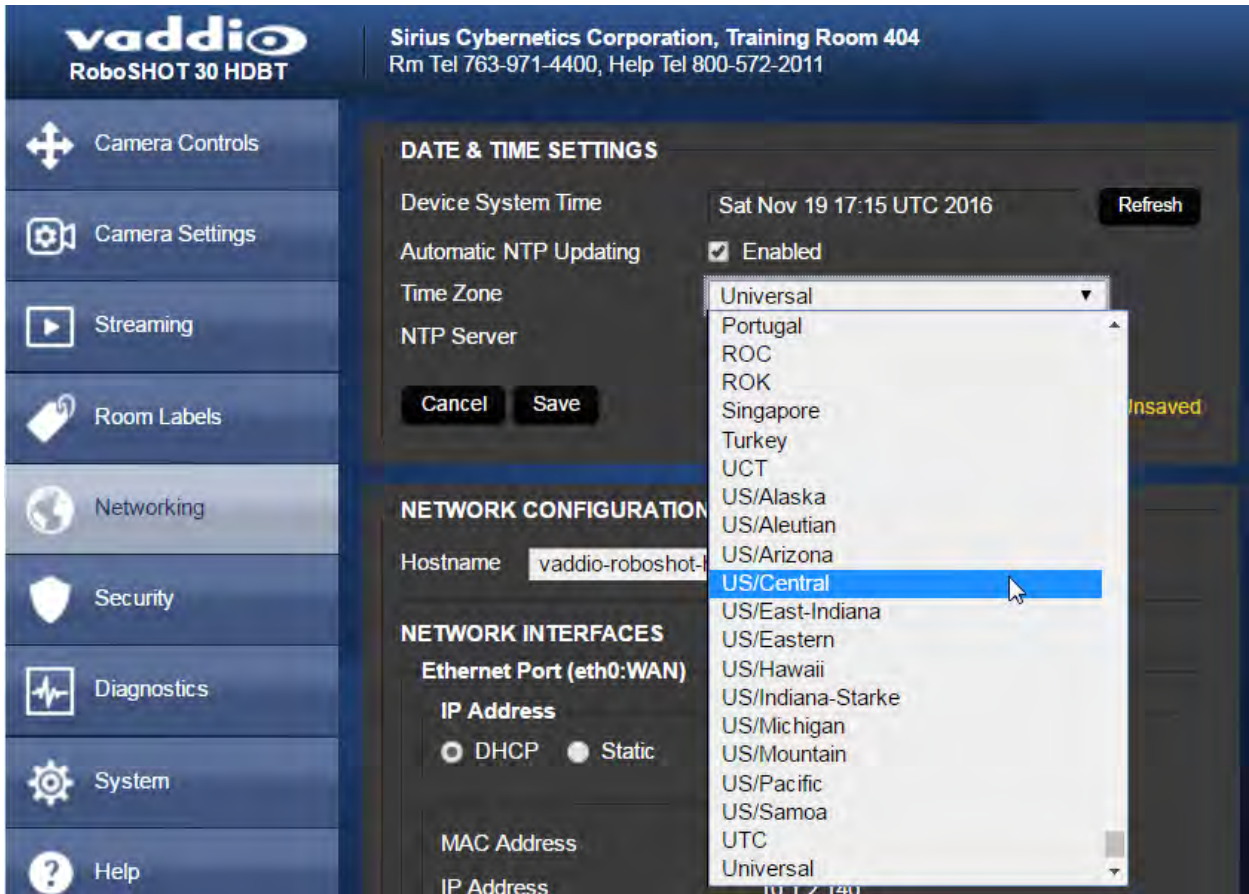
*Do not change DHCP/Static addressing, IP address, subnet mask, or gateway unless you are very familiar with the characteristics and configuration of the network where you install the camera. Errors in network configuration can make the camera and its IP stream inaccessible from the network.*



## 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. Otherwise, use the default.

You may need to refresh the system time display.





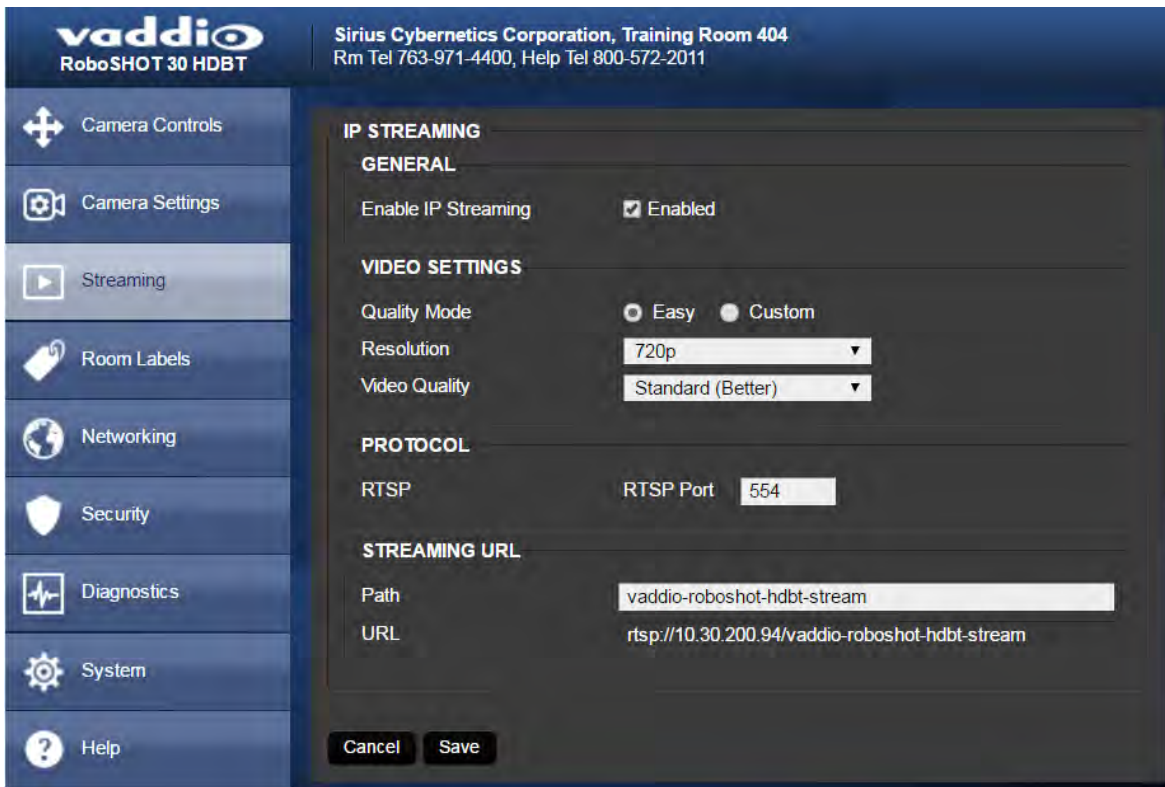
## Web Tasks for Administrators: Configuring Streaming Settings

### STREAMING PAGE

Things you can do on this page:

- Enable or disable IP streaming
- Set the resolution, video quality, and frame rate for IP streaming
- Specify the IP streaming port and path/URL

The camera uses the RTSP protocol for H.264 streaming. Resolutions range from 1080p down to CIF; frame rates are 30/25/15 for 1080p and 60/30/25/15 for all other resolutions.



### Enabling or Disabling Streaming

IP streaming is enabled by default. Use the Enable IP Streaming checkbox to change this. Save the change before you leave this page of the web interface.

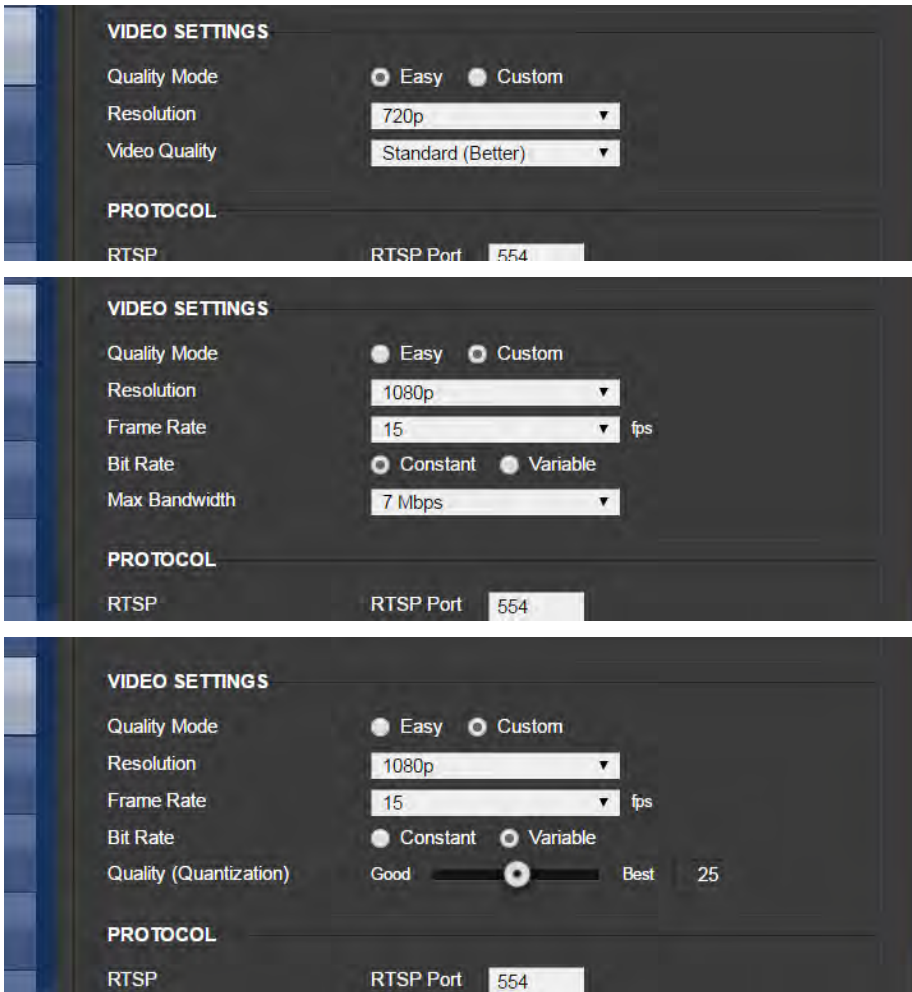
## Editing IP Streaming Settings

### Note

The web interface presents all the possible streaming resolutions values, but the IP stream cannot be higher than the value set with the video resolution switch on the back of the camera. (See [Video Resolution](#) for information on setting the switch.) If the selected value is out of range, the camera will automatically adjust the streaming resolution.

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.
7. Save your changes.



## Advanced IP Streaming Settings

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

**Streaming URL:** If necessary, edit the path to change the portion of the streaming URL that appears after the IP address.

Save your changes.

## Web Tasks for Administrators: Setting Camera Behaviors and Adjustments

### CAMERA SETTINGS PAGE

Things you can do on this page:

- Set up and name custom color and lighting settings.
- Set the pan, tilt, and zoom speeds that will be used for movements other than recalling presets saved with Tri-Synchronous Motion.

**vaddio**  
RoboSHOT 30 HDBT

Sirius Cybernetics Corporation, Training Room 404  
Rm Tel 763-971-4400, Help Tel 800-572-2011

**CCU SCENES**

Custom A	Custom B	Custom C
Auto	Incandescent Hi	Fluorescent Hi
Outdoor	Incandescent Lo	Fluorescent Lo

**COLOR SETTINGS**

Auto Iris

Backlight Compensation

Auto White Balance

Detail (Sharpness)  8

Chroma (Saturation)  3

Gamma  10

Store CCU Scene

**CUSTOM CCU SCENE LABELS**

Custom A

Custom B

Custom C

**GLOBAL PRESET NON-TRI-SYNC SPEEDS**

Global Pan Speed  20

Global Tilt Speed  17

Global Zoom Speed  7

## Setting Up Custom Color and Lighting Settings

You can customize the camera's color and lighting settings as a one-time adjustment, or save the adjustments as one of the three custom CCU scenes.

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.

### **Note**

*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. As in conversation, too much detail is bad.*

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.

## Renaming a Custom CCU Scene

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

## Setting 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: Rebooting, Updating, and Resetting

### SYSTEM PAGE

Things you can do on this page:

- Reboot the camera
- Back up or restore the camera configuration
- Run a firmware update
- Set the camera back to its original factory settings
- Read (but not change) the current settings of the switches on the back of the camera
- Set the camera's soft DIP switch to specify the LED color scheme

The screenshot shows the vaddio RoboSHOT 30 HDBT web interface. The top header includes the vaddio logo and contact information for Sirius Cybernetics Corporation. A left sidebar contains navigation menus for Camera Controls, Camera Settings, Streaming, Room Labels, Networking, Security, Diagnostics, System, and Help. The main content area is divided into two tabs: Firmware and Dip Switches. The Firmware tab is active, displaying the following system information:

SYSTEM INFORMATION	
System Version	RoboSHOT HDBT 1.0.1
Commit	b92edddb9cc260339abd9a13ed1c336d73c17a08
Pan Motor Version	0.2.4772
Tilt Motor Version	0.2.4772
Sensor Version	07.00
HDLink	TX4.6.1*0.03
PSoC Version	1.1

Below the system information is the FIRMWARE UPDATE section, which includes a 'Firmware File:' label, a 'Choose File' button, and the text 'No file chosen'. A 'Begin Firmware Update...' button is located below this section. At the bottom of the page is the SYSTEM UTILITIES section, which contains four buttons: 'Reboot...', 'Restore Factory Settings...', 'Export Data', and 'Import Data...'.

### Rebooting the Camera

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

### Saving (Exporting) or Restoring (Importing) a Configuration

If you need to configure several cameras the same way, you can configure the first one, export its configuration (Export Data button), and then import the configuration to the other cameras (Import Data button in each camera's web interface). The export downloads to your computer as a `.dat` file. The filename is the camera's hostname.

Certain information is not included in the configuration, such as hostname and passwords.

#### Note

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

## Starting a Firmware Update

If you prefer more detail than this procedure, please refer to the Release Notes for step-by-step instructions with screen shots.

1. Locate and download the firmware and its release notes.
2. Select Choose File, then browse to the firmware that you downloaded and select it. The filename ends with .p7m.
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 process may take a few minutes.

### **Caution**

*Ensure that the camera stays powered on and connected to the network during the update. Interrupting the update could make the camera unusable.*

The camera reboots when the update is complete.

## Restoring Factory Settings

Sometimes it's easiest to just start over. To restore the original factory settings...click Restore Factory Settings. This will overwrite anything you have customized, such as custom CCU scenes and presets.

## Reading the Camera's Back Panel Switches

Open the DIP Switches tab to see the camera's current switch settings.

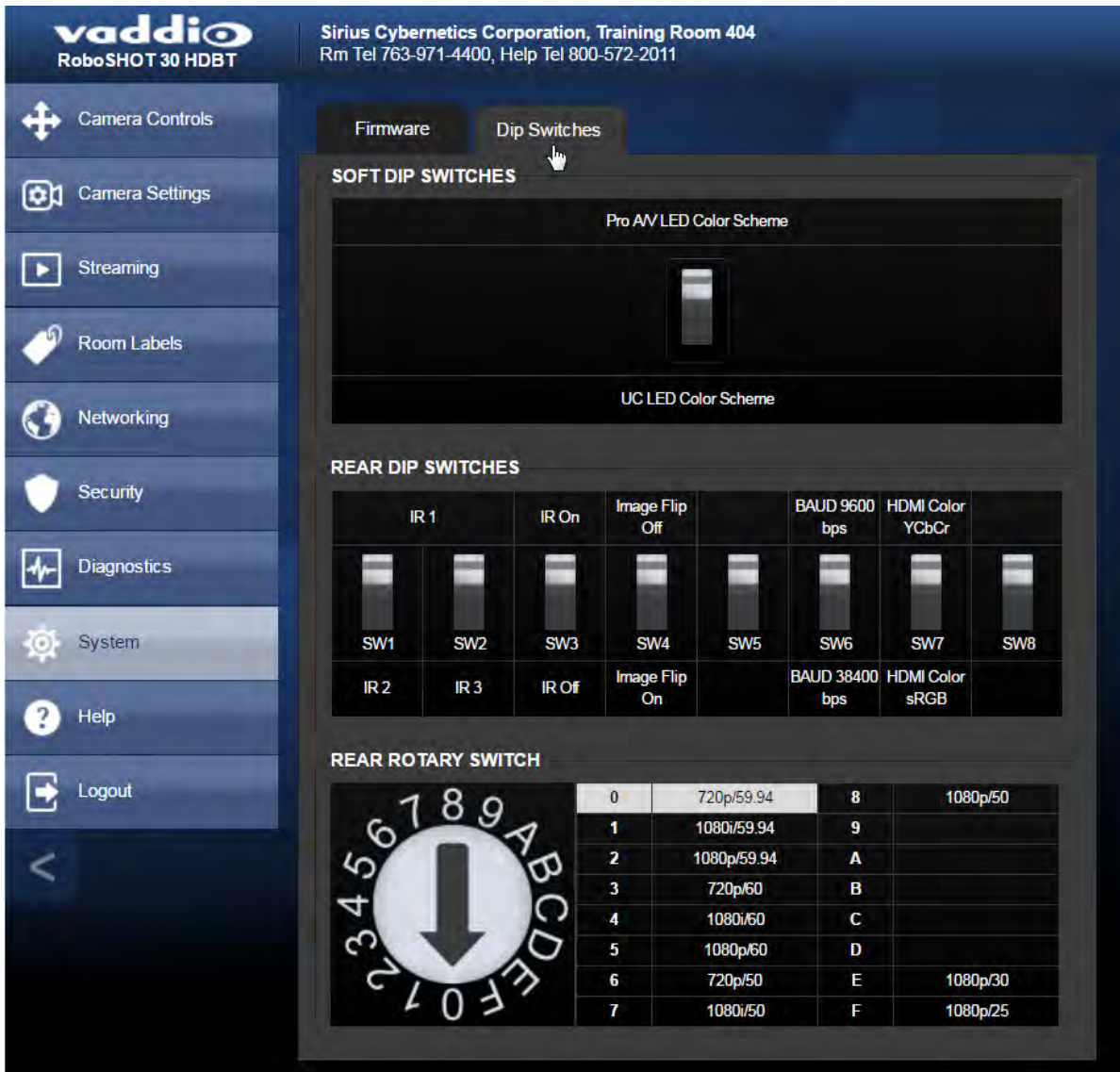
**Note:**

*Sorry, you have to physically move the switches on the back of the camera if you need to change the hardware settings.*

## Setting the LED Color Scheme

### DIP SWITCHES TAB

Use the camera's soft DIP switch to set the LED color scheme (Pro A/V or UCC). At this time, they are functionally identical on this camera.



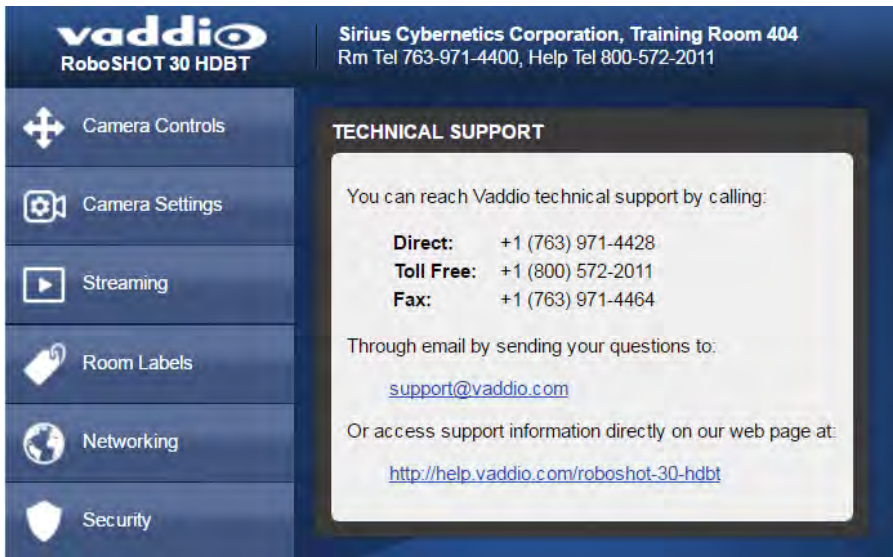


## Web Tasks for Administrators: Contacting Vaddio Technical Support

### HELP PAGE

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 page.



The screenshot shows the Vaddio RoboSHOT 30 HDBT web interface. The top left features the Vaddio logo and the product name. The top right displays the company name, Sirius Cybernetics Corporation, and contact information for Training Room 404. A left-hand navigation menu includes options for Camera Controls, Camera Settings, Streaming, Room Labels, Networking, and Security. The main content area is titled 'TECHNICAL SUPPORT' and provides contact details for technical support, including phone numbers for direct, toll-free, and fax, an email address, and a web page URL.

**vaddio**  
RoboSHOT 30 HDBT

Sirius Cybernetics Corporation, Training Room 404  
Rm Tel 763-971-4400, Help Tel 800-572-2011

**TECHNICAL SUPPORT**

You can reach Vaddio technical support by calling:

**Direct:** +1 (763) 971-4428  
**Toll Free:** +1 (800) 572-2011  
**Fax:** +1 (763) 971-4464

Through email by sending your questions to:  
[support@vaddio.com](mailto:support@vaddio.com)

Or access support information directly on our web page at:  
<http://help.vaddio.com/roboshot-30-hdbt>

## Web Tasks for Administrators: Viewing Diagnostic Logs

### DIAGNOSTICS PAGE

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 page.

The screenshot shows the Vaddio web interface for a RoboSHOT 30 HDBT camera. The top navigation bar includes the Vaddio logo, the device name, and the location: Sirius Cybernetics Corporation, Training Room 404. A 'Logout' button is in the top right. The left sidebar contains a menu with options: Camera Controls, Camera Settings, Streaming, Room Labels, Networking, Security, Diagnostics (highlighted), System, Help, and Logout. The main content area is titled 'DIAGNOSTICS' and displays a log window with the following text:

```

Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.000014] sched_clock: 64 bits at 333MHz, resolution 3ns, wraps every
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.000286] ps7-ttc #0 at d8804000, irq=43
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.000690] Calibrating delay loop... 1332.01 BogoMIPS (lpj=6660096)
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.090233] pid_max: default: 32768 minimum: 301
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.090431] Mount-cache hash table entries: 1024 (order: 0, 4096 bytes)
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.090448] Mountpoint-cache hash table entries: 1024 (order: 0, 4096 byt
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.091222] CPU: Testing write buffer coherency: ok
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.091533] missing device node for CPU 0
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.091561] missing device node for CPU 1
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.091576] CPU0: thread -1, cpu 0, socket 0, mpidr 80000000
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.091623] Setting up static identity map for 0x345a28 - 0x345a5c
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.091856] L310 cache controller enabled
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.091874] l2x0: 8 ways, CACHE_ID 0x410000c8, AUX_CTRL 0x72760
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.150222] Brought up 1 CPUs
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.150232] SMP: Total of 1 processors activated.
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.150241] CPU: All CPU(s) started in SVC mode.
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.150780] devtmpfs: initialized
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.152785] VFP support v0.3: implementor 41 architecture 3 part 30 varie
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.153755] regulator-dummy: no parameters
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.154358] NET: Registered protocol family 16
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.155366] DMA: preallocated 256 KiB pool for atomic coherent allocator
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.165103] syscon f8000000.ps7-slcr: regmap [mem 0xf8000000-0xf8000
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.173546] hw-breakpoint: found 5 (+1 reserved) breakpoint and 1 watch
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.173561] hw-breakpoint: maximum watchpoint size is 4 bytes.
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.173683] zynq-ocm f800c000.ps7-ocmc: ZYNQ OCM pool: 256 KiB @
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.183865] bio: create slab <bio-0> at 0
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.187765] Switched to clocksource arm_global_timer
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.190982] NET: Registered protocol family 2
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.191543] TCP established hash table entries: 4096 (order: 2, 16384 byt
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.191599] TCP bind hash table entries: 4096 (order: 3, 32768 bytes)
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.191677] TCP: Hash tables configured (established 4096 bind 4096)
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.191724] TCP: reno registered
Jan 18 17:36:01 vaddio-roboshot-hdbt-D8-80-39-A4-F7-98 [ 0.191728] UDP: v6: no hash table present
    
```


At the bottom of the log window, there are four buttons: Download, Refresh, Clear, and Restore.

## Troubleshooting and Care

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

- **Blue:** Normal operation (blinks off momentarily when the camera receives a command from the remote)
- **Purple:** In standby mode or booting
- **Yellow:** Firmware update in progress
- **Flashing purple:** Error
- **Red:** On-air tally

Stuff happens – we get it. Use this table to determine whether it's time to call Vaddio Technical Support.

What is it doing?	Possible causes	Check and correct
<p>Nothing. The light on the front is off.</p> 	If a OneLINK extension module is used: The camera is not connected to the OneLINK module.	Plug the OneLINK module into the camera.
	If a OneLINK extension module is used: The OneLINK power supply is not connected.	Plug the OneLINK module's power supply into a wall outlet.
	If a OneLINK extension module is used: The OneLINK module is not working properly.	Test by connecting the camera directly to <b>the 12VDC power pack</b> that was shipped with it.  <b>Caution</b> <i>Do not connect the camera to the 48 VDC OneLINK power pack. This will damage the camera and void its warranty.</i>  If the camera works when it is connected to its 12 VDC power supply, but not when connected to the the OneLINK module, the OneLINK is bad. Contact your reseller or Vaddio Technical Support.
	Insufficient power using a PoE injector.	Use a PoE+ power injector – PoE does not deliver enough power.
	At least one of the cables is bad.	Check using known good cables.
	The camera or its power supply is bad.	Contact your reseller or Vaddio Technical Support.
	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 never finishes initializing and the light is purple.	Insufficient power using a PoE injector.	Use a PoE+ power injector instead. PoE does not deliver enough power.

What is it doing?	Possible causes	Check and correct
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. Try the other Camera Select buttons if necessary.
	IR is switched off (DIP switch 3 down)	Turn IR on (DIP switch 3 up) - see <a href="#">Camera Settings</a> for more information.
	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 web interface has stopped responding.	Reboot the camera.
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 current settings can be viewed on the System page in the web UI. Correct the settings where it's more convenient to do so.
The camera loses all its settings when power is cycled.	All the DIP switches are in the ON (down) position.	Set the DIP switches to their proper positions. Default is all OFF (up). See <a href="#">Switch Settings</a> for more information.
No H.264 video stream.	Streaming is not enabled.	Enable streaming: Streaming page in the web interface.

## 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 A 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'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté 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:



**EMC Directive 2004/108/EC**

**EN 55022: December 2010**

**EN 55024: November 2010**

EN 61000-4-2: 1995 + Amendments A1: 1998 + A2: 2001

EN 61000-4-3: 2006 + A1: 2008

EN 61000-4-4: 2004 + Corrigendum 2006

EN 61000-4-5: 2006

EN 61000-4-6: 2009

EN 61000-4-8: 2010

EN 61000-4-11: 2004

**KN22 2008 (CISPR 22: 2006)**

**KN24 2008 (CISPR 24: 1997 + A1: 2000 + A2: 2002)**

EN 61000-4-2

EN 61000-4-3

EN 61000-4-4

EN 61000-4-5

EN 61000-4-6

EN 61000-4-8

EN 61000-4-11

**IEC 60950-1: 2005 (2nd Edition); Am 1: 2009 + Am 2: 2013**

**EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013**

Conducted and Radiated Emissions

Immunity

Electrostatic Discharge

Radiated Immunity

Electrical Fast Transients

Surge Immunity

Conducted Immunity

Power Frequency Magnetic Field

Voltage Dips, Interrupts and Fluctuations

Conducted and Radiated Emissions

IT Immunity Characteristics

Electrostatic Discharge

Radiated Immunity

Electrical Fast Transients

Surge Immunity

Conducted Immunity

Power Frequency Magnetic Field

Voltage Dips, Interrupts and Fluctuations

Safety

Safety

## Warranty Information

See Vaddio Warranty, Service and Return Policies posted on [support.vaddio.com](http://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](mailto:support@vaddio.com) or by phone at one of the phone numbers listed on [support.vaddio.com](http://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 warranty:** 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.vaddio.com](http://www.vaddio.com) · Phone 800.572.2011 / +1.763.971.4400 · Fax +1.763.971.4464 · Email [info@vaddio.com](mailto:info@vaddio.com)

Visit us at [support.vaddio.com](http://support.vaddio.com) for firmware updates, specifications, drawings, manuals, technical support information, and more. Vaddio, RoboSHOT, and OneLINK are trademarks or registered trademarks of Milestone AV Technologies. HDBaseT™ and the HDBaseT Alliance logo are trademarks of the HDBaseT Alliance. Exmor® is a trademark of Sony Corporation. All other brand names or marks are used for identification purposes and are trademarks of their respective owners. In British Columbia, Milestone AV Technologies ULC carries on business as MAVT Milestone AV Technologies ULC.

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The logo for Vaddio, featuring the word "vaddio" in a bold, blue, sans-serif font. The letter "o" at the end is stylized as a circle with a smaller circle inside, resembling an eye or a camera lens.