



Installation 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:

- Unpacking the camera
- Tips for a successful installation
- Instructions for installing the camera mount
- Information on connecting and mounting the camera
- Camera power-on

Complete product information is available in the **Integrator's Complete Guide to RoboSHOT HDBT High-Performance PTZ Cameras**.

Download manuals, dimensional drawings, and other information from 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)
- 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

Unpacking the Camera

Make sure you received all the items you expected. Here are the packing lists for the RoboSHOT HDBT cameras.



Caution

Always support the camera's base when picking it up. Lifting the camera by its head or mounting arm will damage it.

RoboSHOT 12 HDBT, North America – 999-9960-000

- RoboSHOT 12 HDBT Camera (998-9960-000)
- Thin Profile Wall Mount with Mounting Hardware (535-2000-240)
- Vaddio IR Remote Commander (998-2100-000)
- 12 VDC, 3.0 Amp Switching Power Supply
- AC Cord Set for North America
- Quick-Start Guide (342-1219)



RoboSHOT 12 HDBT, Europe and UK – 999-9960-001

- RoboSHOT 12 HDBT Camera (998-9960-000)
- Thin Profile Wall Mount with Mounting Hardware (535-2000-240)
- Vaddio IR Remote Commander (998-2100-000)
- 12 VDC, 3.0 Amp Switching Power Supply
- Euro Power Cord
- UK Power Cord
- Quick-Start Guide (342-1219)



RoboSHOT 12 HDBT, Australia and New Zealand – 999-9960-009

- RoboSHOT 12 HDBT Camera (998-9960-000)
- Thin Profile Wall Mount with Mounting Hardware (535-2000-240)
- Vaddio IR Remote Commander (998-2100-000)
- 12 VDC, 3.0 Amp Switching Power Supply
- Power Cord for Australia and New Zealand
- Quick-Start Guide (342-1219)



RoboSHOT 30 HDBT, North America, black – 999-9963-000

RoboSHOT 30 HDBT, North America, white – 999-9963-000W

- RoboSHOT 30 HDBT Camera (998-9963-000 or 998-9963-000W)
- Thin Profile Wall Mount with Mounting Hardware, black or white depending on camera color (535-2000-240 or 535-2000-240W)
- Vaddio IR Remote Commander (998-2100-000)
- 12 VDC, 3.0 Amp Switching Power Supply
- AC Cord Set for North America
- Quick-Start Guide (342-1219)



OR



RoboSHOT 30 HDBT, Europe and UK, black – 999-9963-001

RoboSHOT 30 HDBT, Europe and UK, white – 999-9963-001W

- RoboSHOT 30 HDBT Camera
- Thin Profile Wall Mount with Mounting Hardware, black or white depending on camera color (535-2000-240 or 535-2000-240W)
- Vaddio IR Remote Commander (998-2100-000)
- 12 VDC, 3.0 Amp Switching Power Supply
- Euro Power Cord
- UK Power Cord
- Quick-Start Guide (342-1219)



OR



RoboSHOT 30 HDBT, Australia and New Zealand, black – 999-9963-009

RoboSHOT 30 HDBT, Australia and New Zealand, white – 999-9963-009W

- RoboSHOT 30 HDBT Camera
- Thin Profile Wall Mount with Mounting Hardware, black or white depending on camera color (535-2000-240 or 535-2000-240W)
- Vaddio IR Remote Commander (998-2100-000)
- 12 VDC, 3.0 Amp Switching Power Supply
- Power Cord for Australia and New Zealand
- Quick-Start Guide (342-1219)



OR



Download manuals, dimensional drawings, and other information from www.vaddio.com/support.

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



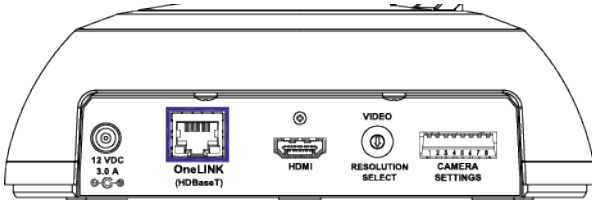
- **Camera and Zoom Lens:** The 12 and 30 models use different optical components.
 - RoboSHOT 12 HDBT: 12X optical zoom lens (12X in Super-Wide mode and 10X in normal mode), Exmor 1/2.8-type, high-speed, low noise image sensor
 - RoboSHOT 30 HDBT: 30X optical zoom lens, Exmor-R 1/2.8 type, backlit, 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.

Switch Settings

RoboSHOT cameras use a rotary switch to set the video resolution and a set of DIP switches that determine certain camera functions. A label on the bottom of the camera provides a quick reference for setting the switches.

Note

Set the switches appropriately before mounting the camera.

Video Resolution

Set the desired output resolution for the camera with the rotary switch. Switch positions 9 through D are not used.

Switch position	Resolution
0	720p/59.94
1	1080i/59.94
2	1080p/59.94
3	720p/60
4	1080i/60
5	1080p/60
6	720p/50
7	1080i/50
8	1080p/50
9 – D	Not used
E	1080p/30
F	1080p/25

Camera Settings

Use the DIP switches to set camera behaviors.

Note

When the camera is right side up, switches are in their default positions when they are up.

IR Frequency Selection: The IR Remote Commander can control up to three cameras in the same room independently, if they are configured with different IR frequencies. Use **switches 1 and 2** to select the frequency to identify the camera as camera 1, 2, or 3; then use the Camera Select buttons at the top of the remote to select the camera you want to control.

IR: Leave **switch 3** in the default UP position if the IR remote will be used.

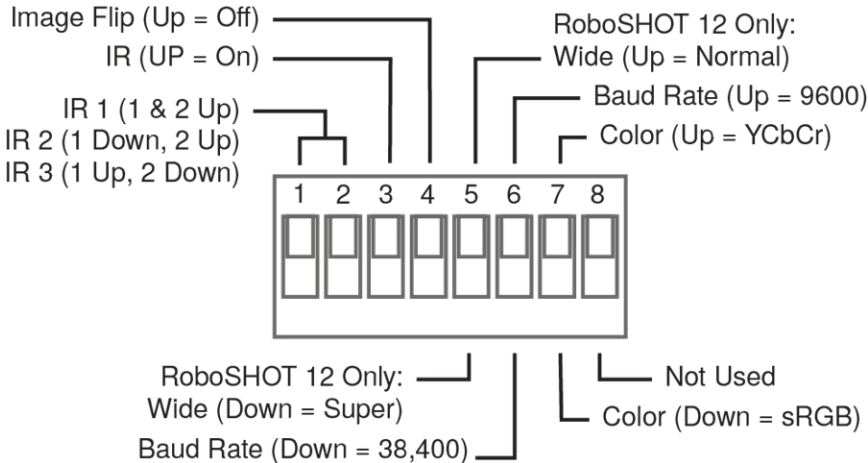
Image Flip: If mounting the camera upside-down, set **switch 4** to the DOWN position: IMAGE FLIP ON.

Super Wide Mode (RoboSHOT 12 HDBT only): To use Super-wide mode, set **switch 5** to the DOWN position. This gives 12X zoom with a 73° horizontal angle of view. Normal mode provides 10X zoom with a 67.2° horizontal field of view (HFOV).

Baud Rate: Set the baud rate for RS-232 communication using **switch 6**. Most applications use 9600 bps (switch 6 UP), which is recommended when using long cable runs. Use the 38,400 bps setting (switch 6 DOWN) for short control lines only.

Leave **Switch 7** in the default UP position unless sRGB color output is needed.

Switch 8 is not currently used.



Pro Tip

Double-check switch settings before you mount the camera.

Installation

This section covers

- Siting the camera
- Installing the mount
- Connecting the camera
- Installing the camera

Before You Install the Camera

- Choose a camera mounting location that will optimize camera performance. Consider camera viewing angles, lighting conditions, line-of-sight obstructions, and in-wall obstructions where the camera is to be mounted.
- If the IR Remote Commander will be used, ensure that nothing blocks the IR lens in the camera's base.
- Ensure that the camera body can move freely and point away from the ceiling and lights.
- Follow the installation instructions included with the camera mount.

Don't Void Your Warranty!

Caution

This product is for indoor use. Do not install it outdoors or in a humid environment without the appropriate protective enclosure. Do not allow it to come into contact with any liquid.

Use only the power supply included with this product. Using a different one will void the warranty, and could create unsafe operating conditions or damage the product.

Do not install or operate this product if it has been dropped, damaged, or exposed to liquids. If any of these things happen, return it to Vaddio for safety and functional testing.

DomeVIEW enclosures are available to allow outdoor installation of RoboSHOT cameras. Learn more at www.vaddio.com/products.

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.

Cabling Notes

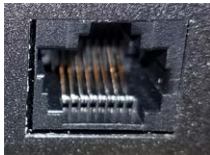
Use Cat-5e or better cable and standard RJ-45 connectors (568B termination). We recommend using high-quality connectors and a high-quality crimping tool.

Caution

Check Cat-5 cables for continuity before using them. Using the wrong pin-out may damage the camera system and void the warranty.

Note

Use standard RJ-45 connectors and a good crimping tool. Do not use pass-through RJ-45 connectors. Poorly crimped connectors can damage the connectors on the product, cause intermittent connections, and degrade signal quality. Test cable pin-outs and continuity before connecting them.



Intact – Contact fingers will make reliable contact with the cable connector



Damaged – Some contact fingers are bent and will NOT make reliable contact with the cable connector



Pro Tip

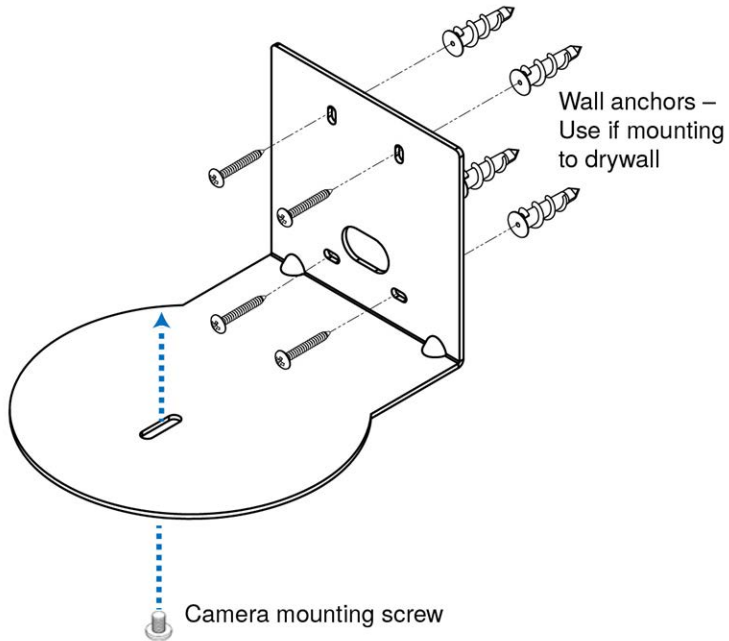
To prevent tragic mishaps, label both ends of every cable.

Installing the Wall Mount

All RoboSHOT cameras include a Thin Profile Wall Mount. Other mounting options are available as well. Contact us if you don't have the camera mount you need.

You can install the camera wall mount to a 2-gang wall box or directly to the drywall.

- If you mount it to drywall, use the wall anchors provided with the wall mount.
- If you mount it to a wall box, use the cover plate screws supplied with the wall box.



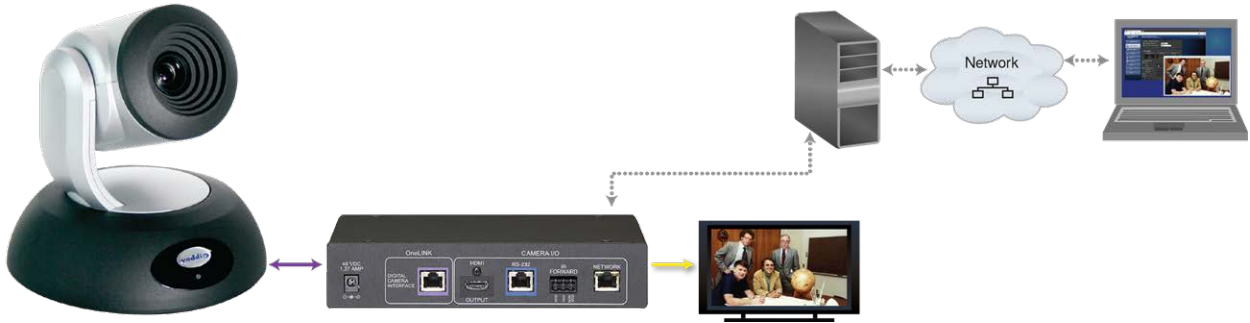
About Ceiling-Mounted Cameras

If you use an inverted mount, set the camera's Image Flip DIP switch ON for inverted operation.

See [Camera Settings](#) for more information.

Basic Connection Diagram

The Quick-Start Guide for RoboSHOT HDBT Cameras provides additional information.



Note

The OneLINK™ HDMI extension module is not required; the camera can be connected directly to the network.

Options for Power and Other Connections

Connect the camera to a OneLINK HDMI camera extension module – a single Cat-5e (or better) cable provides power to the camera, along with HDBaseT network and video connectivity. Network, HDMI output, and RS-232 control are connected at the OneLINK module. Do not use the camera's 12 VDC power supply in this configuration.

Use the provided 12 VDC power supply – use the camera's OneLINK port to connect to the network, and connect the HDMI video output to a display.

Use a PoE+ power injector – Connect to the network through a PoE+ power injector, and connect the HDMI video output to a display. Do not use the camera's 12 VDC power supply in this configuration.

Installing the Camera

Caution

Before you start, be sure you can identify all cables correctly. Connecting a cable to the wrong port can result in equipment damage.

Caution

Check Cat-5 cables for continuity before using them. Using the wrong pin-out may damage the camera system and void the warranty.

1. Route the cables to the camera location.
2. Route the cables through the mount, and install the mount on the wall or attach it to the wall box. Leave the screws loose enough to adjust the position of the mount.
3. Level the mount and tighten the mounting screws.
4. Check the level again.
5. Connect the cables to the camera.

Caution

If using local power rather than connecting to a OneLINK extension module or using PoE+, use the power supply shipped with the camera. Using a different power supply may create an unsafe operating condition or damage the camera, and will void the warranty.

6. Ensure that the video resolution switch and the DIP switches are set appropriately. See [Switch Settings](#).
7. Place the camera on the mount.
8. Attach the camera to the mount using the ¼"-20 x .375 mounting screw supplied with the camera.

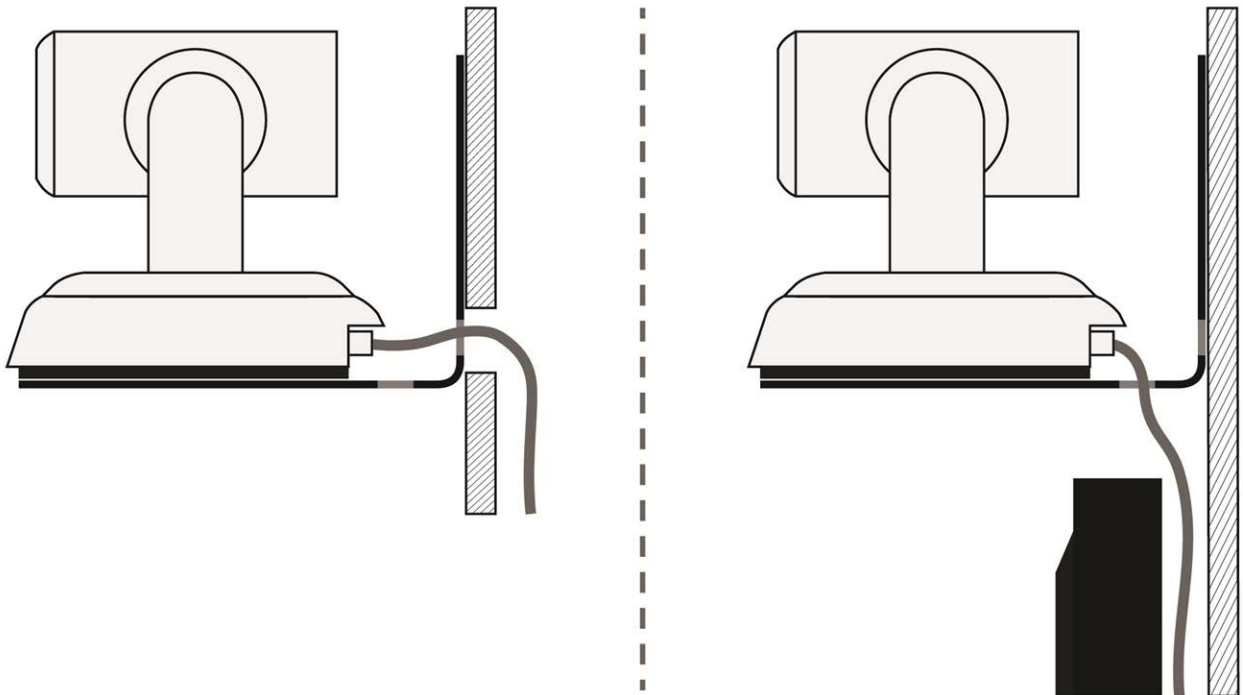


Image for illustration only; not to scale. Camera and mount details may differ.

Powering Up the Camera

Connect camera power.

The camera will wake up and initialize. This will take a few seconds. When the camera is initialized and ready, its front indicator is blue. At this point, it is ready to accept control information.

Note

Wait until the camera finishes initializing before trying to control it using the IR remote or other command input.

Next Steps

The camera is now ready to configure and use. This information is available in the **Configuration and Administration Guide for RoboSHOT HDBT High-Performance PTZ Cameras**. It is also included in the **Integrator's Complete Guide to RoboSHOT HDBT High-Performance PTZ Cameras**.

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