vaddio

Installation Guide for the

HuddleSHOT

All-in-One Conferencing Camera

Contents

Overview

This guide covers the HuddleSHOT all-in-one conferencing camera – a fixed camera with integrated audio:
- HuddleSHOT camera, North America – 999-50707-000 (black); 999-50707-000G (gray)
- HuddleSHOT camera, Europe and UK – 999-50707-001 (black); 999-50707-001G (gray)
- HuddleSHOT camera, Australia and New Zealand – 999-50707-009 (black); 999-50707-009G (gray)

What's in this Guide

This guide covers:
- Unpacking the camera
- Tips for a successful installation
- Instructions for installing the camera mount
- Camera power-on

Complete product information is available in the **Complete Manual for the HuddleSHOT All-in-One Conferencing Camera**.

Note
If you are responsible for configuring the equipment after installing it, please use the Complete Manual instead of this guide. *The product's Complete Manual includes all the information in this guide, plus information on system administration, operation, and troubleshooting.*

Features

- Intuitive operation with attractive, streamlined remote control
- Simultaneous uncompressed USB 3.0 and IP (H.264) video at resolutions up to 1080p/60 with full-duplex audio streaming
- 110° HFOV at 1x with full dewarping; 125° HFOV with no dewarping
- Selectable 1x, 1.5x, or 2x zoom with dewarping option
- Easy configuration, system administration, and remote management via web interface
- Integrated stereo speakers and phased microphone array
- Advanced network security features
- Audio input for Vaddio TableMIC or other microphone with EasyMic connectivity
- Universal Video Class (UVC) and Universal Audio Class (UAC) drivers supported in Windows®, Mac® OS, and Linux operating systems, compatible with most UC conferencing applications

Unpacking the Camera

Make sure you have received all the items you expected.

Download manuals, dimensional drawings, and other information from www.legrandav.com.

HuddleSHOT, North America – 999-50707-000 (black), 999-50707-000G (gray)
HuddleSHOT, Europe/UK – 999-50707-001 (black), 999-50707-001G (gray)
HuddleSHOT, Australia/New Zealand – 999-50707-009 (black), 999-50707-009G (gray)

- HuddleSHOT camera
- Bluetooth remote control
- AAA batteries, qty. 2
- PoE/PoE+ power injector with AC cord set(s)
- USB 3.0 Type A to Type C cable, 6 ft. (1.8m)
- Cat-5e cable, 10 ft. (3 m)
- Wall mount with mounting hardware
- Quick Start Guide
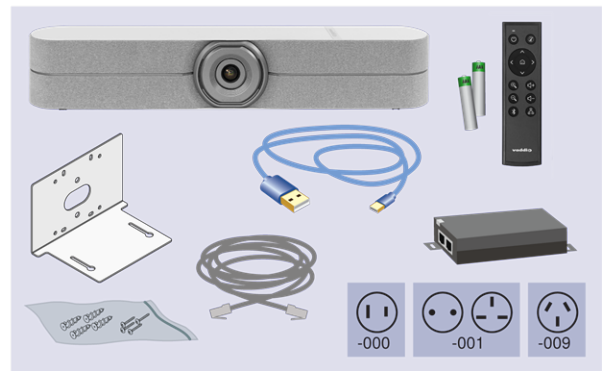
A Quick Look at the Camera

This section covers the physical features of the camera.

Front of the Camera

Camera – The HuddleSHOT camera offers 1x, 1.5x, and 2x zoom levels.

Status light – The illuminated ring around the lens bezel indicates the camera's current state. The status light can be turned off in the administrative web interface.

Note
By default, the camera's status indicator light is active during normal operation; however, it can be configured to remain off when the camera is powered up. The camera may be sending video even if the light is off.

Left and right speakers – Far-end audio, or content audio when using Sound Bar Mode.

Integrated microphones – No external microphone needed in the typical huddle room, interview room, or other small space. Echo-canceling microphones pick up the voices of participants up to 10 ft. (3 m) away.

Back of the Camera

Network/PoE+ – RJ-45 connector. Connect to the Power and Data Out port of the PoE+ power injector.

USB 3.0 – USB type C connector. Connect to a computer for use with soft conferencing applications. Provides uncompressed USB 3.0 stream.

EasyMic – RJ-45 connector. Connect to a TableMIC or other microphone with EasyMic connectivity.

Multifunction button – Momentary pushbutton; used to return from standby, display IP address, pair with a remote, and restore factory defaults.

Installation

This section covers:
- Selecting the location for the camera
- Installing the mount
- Connection diagrams
- Connecting and mounting the camera

And a required safety note here:

Note
PoE type networks connected to this equipment are for intra-building use only and should not be connected to lines that run outside of the building in which this product is located.

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.

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.

Before You Install the Camera

Things to keep in mind when deciding where to install the camera:
- Consider camera viewing angles, lighting conditions, line-of-sight obstructions, and in-wall obstructions where the camera is to be mounted.
- Ensure that the camera will point away from the ceiling and lights. The camera will not perform well if it is pointed toward a light source such as a light fixture or window.

Prepare for a successful installation:
- Be sure you can identify all cables correctly.
- Check Cat-5 cables for continuity.
- Talk to the network administrator. If installing the camera in a non-DHCP network (one that does not automatically assign IP addresses), you will need to configure the camera with a static IP address as directed by the network administrator.

Installing the Wall Mount

The camera is shipped with a 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.

If you install the camera wall mount to drywall, use the wall anchors provided with the mount.

Wall anchors –
Use if mounting
to drywall
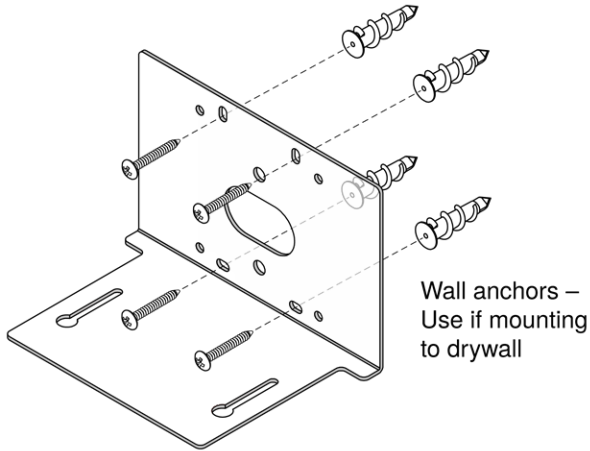
Cabling Notes

Caution
When building cables for Vaddio products, do not use pass-through RJ-45 connectors. If they are crimped incorrectly, they can cause intermittent connections and degrade signal quality. Incorrectly crimped pass-through connectors can also damage the connectors on the product, which will void your warranty.

Intact – will make reliable contact with cable connector
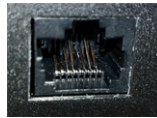
Damaged – Bent contact fingers will NOT make reliable contact with cable connector

Use Cat-5e or better cable. We recommend using high-quality connectors and a high-quality crimping tool.

We recommend shielded cabling if the cables will be coiled, run tightly with other cables, or placed close sources of electromagnetic interference such as power lines.

Caution
Check your cables. Connecting a cable to the wrong port or using the wrong pin-out can result in equipment damage and will void the warranty.

Pro Tip
*Label all cables at both ends.*

About Echo Cancellation

When a microphone picks up the audio from a speaker (far-end audio) during a conference, it sends the far-end audio back to the participants at the far end, creating an echo. Acoustic echo cancellation prevents this.

Here's how it works:

1. The speaker feeds the far-end audio into the room. This signal also goes to the audio processor as the reference that needs to be canceled.
2. The audio processor inverts the signal and sends it to the microphone.
3. The sum of the audio that the microphone picks up from the speaker and the inverted signal is 0: The echo is canceled.
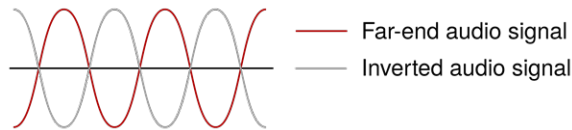
With the audio from the speaker canceled out, the audio from the microphone includes only the sounds originating at your end of the conference.

Basic Connections for Conferencing or Sharing Content

This diagram shows a basic conferencing configuration for the HuddleSHOT all-in-one conferencing camera. A participant's laptop provides USB connectivity and the HDMI output to the room's display. The optional TableMIC microphone, shipped with a 25 ft (7.6 m) cable, allows for more flexibility in the room layout. This system provides acoustic echo cancellation, with or without the TableMIC microphone.
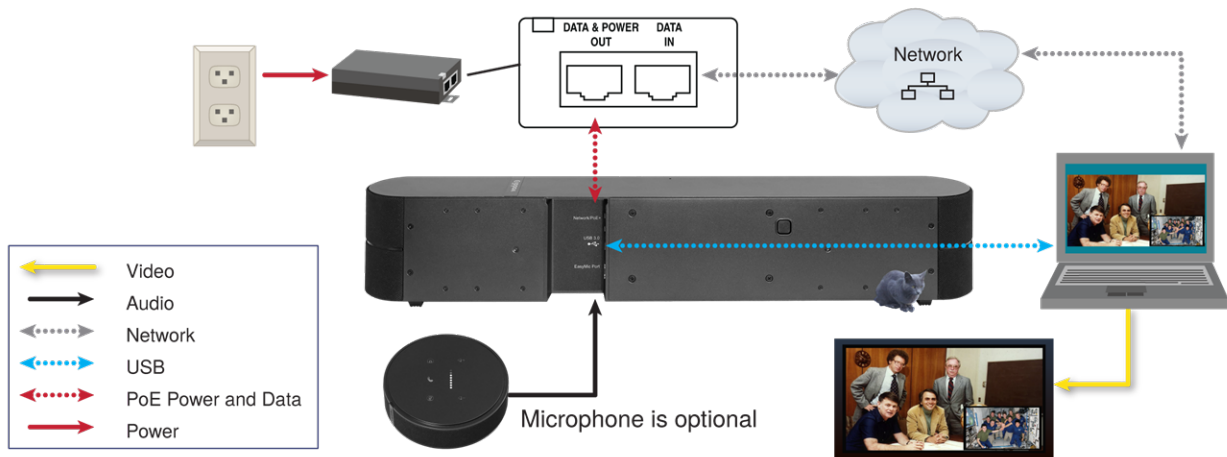
Connections for Conferencing Using a Room Audio System

This diagram shows a setup for a room with an audio system. The HuddleSHOT camera's built-in microphones are used and far-end audio is routed to the room's speakers, using the HuddleSHOT EasyMic adapter.
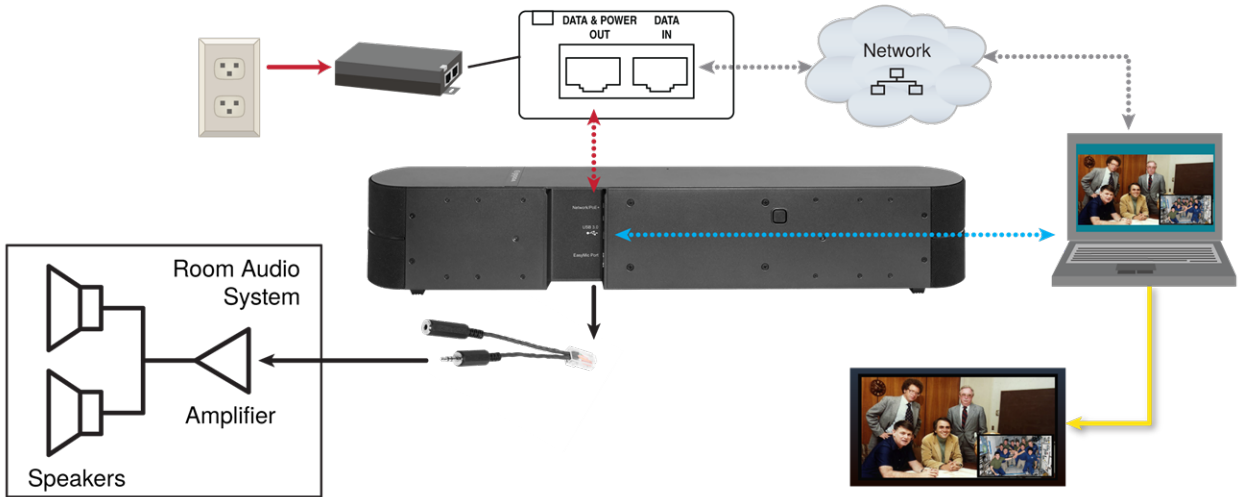


Connections for Using the Camera as a Sound Bar

This diagram shows the HuddleSHOT camera used as a sound bar for the display. Audio from the DVD or other external device is routed from the display to the camera's speakers using the HuddleSHOT EasyMic adapter. The display's built-in speakers are not used.

Note
The computer in this connection diagram is not required for sound bar mode.
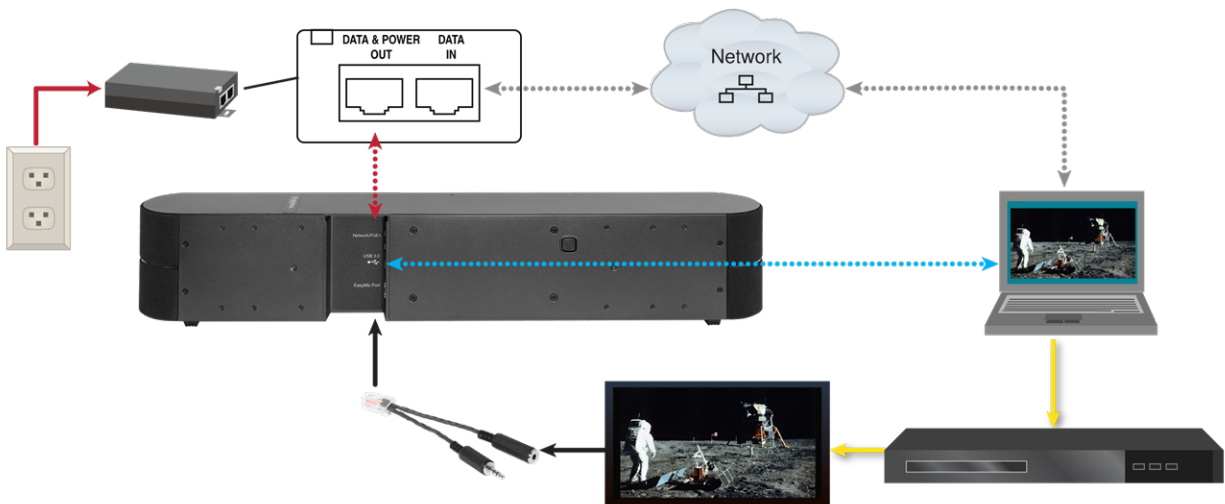
Installing the Camera

Do not tighten the screws securing the camera to the wall mount until you are able to access the camera's web interface. You will need access to the button on the back of the camera to pair the remote and camera or to display the camera's IP address in the USB stream.

Caution
If installing a TableMIC microphone with the camera, be sure you can identify the cables correctly. Connecting a cable to the wrong port can result in equipment damage and void the warranty.

1. Route the cables through the opening in the mounting shelf and connect them to the camera.
2. Place the camera on the mount.
3. Attach the camera to the mount using the mounting screws supplied with the camera, but do not fully tighten the screws.

Powering Up the Camera

Connect camera power. The camera will initialize. This takes a minute or two. When an image is available, the camera is ready to accept control information.

Status Indicator Light

The light in the camera's base indicates its current state.
- Purple – Initializing
- White – Camera is active
- Red – Audio is muted
- Blinking red – Video is muted
- Yellow/green – Firmware update is in progress
- Blinking cyan – Remote pairing mode
- Blinking blue – Bluetooth error
- Different color on each blink – Disco mode! Everybody dance!
  (We have never actually observed this mode. If your camera does this, please contact us and describe how you induced this behavior.)

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

Note
By default, the camera's status indicator light is active during normal operation; however, it can be configured to remain off when the camera is powered up. The camera may be sending video even if the light is off.

Multifunction Button

The button on the back of the camera provides these functions:
- **To display the camera's IP address in the video output:** Press momentarily. Press again to dismiss the IP address.
- **To pair the remote with the camera:** Press and hold until the light blinks cyan. Then press the Bluetooth button on the remote.
- **To restore factory default settings:** Press and hold for about 10 seconds during power-up.
- **To return from standby mode:** When the camera is in standby (purple indicator light, or no light), press momentarily to return to the active, full-power state.

Next Steps

The camera will need to be configured for your network before it can be used. This will require knowing the camera's IP address. To get this information, the remote will need to be paired with the camera. Refer to the Complete Manual for the HuddleSHOT All-in-One Conferencing Camera for these tasks.

Compliance and Conformity Statements

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 2014/30/EU	Class A
EN 55032: 2015	Class A
EN 55024: November 2010	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
IEC 62368-1:2014 (2nd Edition)	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'emet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A préscrites 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 2014/30/EU

EN 55032: 2015 – Conducted and Radiated Emissions

EN 55024: November 2010 – Immunity

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

IEC 62368-1: 2014 (2nd Edition) – Safety

Warranty and Return Policy

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 products 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.

General RMA Terms and Procedures: RMA's are valid for 30 days and will be issued to Vaddio dealers only.

- End users must return products through Vaddio dealers.
- Before a defective product can be authorized to send in for repair, it must first go through the troubleshooting process with a member of the Vaddio Technical Support team.
- Products authorized for repair must have a valid RMA (Return Material Authorization) number.
  - Vaddio RMA Team will issue the RMA number.
  - An RMA number is to be included in all correspondence with Vaddio.
  - The RMA number must appear clearly on the shipping label (not the box) when the product is returned.
  - A packing slip must be included on the inside of the box with the RMA number listed and reason for RMA return.
- Products received at Vaddio that do not have a valid RMA number clearly marked on the outside of the shipping container may be refused and returned to sender.
- Boxes showing external damage will be refused and sent back to the sender regardless of the clearly marked RMA number and will remain the responsibility of the sender.

RMA Charges (Restocking): All qualified returns must be made in unopened, original packaging with all original materials.

- Initial shipments of equipment that are refused upon attempted delivery, for any reason, are subject to restocking charges.
- The Dealer has up to 60 days from the date of purchase to return Vaddio product for credit for future purchases of Vaddio product only.
- The Dealer has 61 to 90 days from the date of purchase to return Vaddio product with a 15% restocking fee or $50.00 fee, whichever amount is greater
- The Dealer has up to 30 days from the date of purchase to return OEM and other manufacturer's products with a 15% restocking fee or $50.00 fee, whichever amount is greater.
- NOTE: Special Order products from other manufacturers (identified in the Vaddio Price Guide as noncancelable, nonreturnable and not refundable) are not eligible for advance replacement from Vaddio.

Advance Replacement Policies: For Vaddio manufactured products, advance replacement will be provided for up to one (1) year after the initial shipment of products.

- NOTE: OEM and other manufacturer's products are excluded from the Vaddio advance replacement policy. Advance replacement will be provided for up to 30 days after initial shipment of OEM products. Thereafter, a return to Vaddio and factory repair is offered during the other manufacturer's warranty period. Vaddio will determine if the returned product is qualified for the OEM warranty.
- NOTE: Special Order products from other manufacturers (identified in the Vaddio Price Guide as noncancelable, nonreturnable and not refundable) are not eligible for advance replacement from Vaddio.

Advance Replacement Procedures: The Vaddio Dealer must submit a non-revocable purchase order for advance replacement equipment at normal dealer pricing. Credit shall be issued upon complete product return (including all accessories) for dealers with Net 30 terms. For credit card accounts, charges will be assessed to the credit card for the replacement and credited back upon complete product return.

- Returns must be made in the original Vaddio packaging with all original materials if at all possible. Vaddio products with missing original materials will be billed to the dealer at dealer price.
- NOTE: OEM products must be returned in the original packaging with all materials and the RMA number written on the shipping label only and not on the OEM box. If the return is incomplete and/or the OEM box is defaced, the product shall be returned to the dealer and the RMA will not be credited.
- Equipment returned with "No Trouble Found" after advanced replacement will be assessed a full 15% or $50.00 restocking fee (whichever is greater) for each item and may also be assessed for additional charges to compensate for wear, damages and reconditioning.
- All returns must be accompanied by RMA # as stated above.
- All Advanced Replacement products are sent via 2-day service in the continental USA. If the product is requested to be sent via priority or overnight shipping, the Dealer shall pay shipping costs. The dealer can elect to supply their preferred shipping account number.
- International customers are responsible for all freight charges for equipment returned to Vaddio, including international shipping, taxes, and duties, insurance and all other associated logistic charges.

Warranty Repair Terms and Procedures: Vaddio will repair any product free of charge, including parts and labor, within the terms outlined in the warranty agreement for that product.

- Customers must provide proof of the product's purchase date.
- Product that is within the warranty period will be repaired under the non-warranty terms if:
  - The equipment has been damaged by negligence, accident, act of God, mishandling, used with the incorrect, modified or extended power supply or has not been operated in accordance with the procedures described in the operating and technical instructions.
  - The equipment has been altered or repaired by other than the Manufacturer or an authorized service representative.
  - Adaptations or accessories other than those manufactured or provided by the Manufacturer have been made or attached to the equipment, which in the determination of the Manufacturer, shall have affected the performance, safety of reliability of the equipment; or the equipment's original serial number has been modified or removed.
- Customer is responsible for shipping charges to send defective product under warranty to Vaddio. Vaddio will pay ground service return shipping charges during the 2nd year of the warranty period.
- Standard return shipping method for products under warranty, but out of the advance replacement warranty period, is ground shipment. Extra charges associated with priority shipping, when requested, will be the responsibility of the customer.

Non-Warranty Repair Terms: Vaddio will repair any non-obsolete product that does not meet the terms of the warranty. Non-warranty repair terms are as follows:

- The customer is responsible for, and agrees to pay, all parts and labor costs associated with the repair. Standard non-warranty repair charges are outlined below.
- Customers must provide payment method and one of the following, prior to receiving an RMA:
  - Hard copy of a PO, for dealers with Net 30 terms and in good standing with Vaddio.
  - Valid credit card number - Credit card will be charged upon shipping repaired product back to customer.
- Request for COD: Customers will be notified of COD charges prior to shipping repaired unit.
- Customer is responsible for all shipping charges both to and from Vaddio, and may use their own carrier.
- Customers will receive a courtesy call notifying them of total repair charges prior to return shipping.

Non-Warranty Repair Charges: Total repair charges (per unit) for a non-warranty repair consist of the following:

- Cost of any replacement parts needed to repair the defect.
- Labor costs billed per hour after minimum charges/time.
- Labor charges include troubleshooting and repair time only.
- Burn-in time and final test time is not included in the labor charges.
- Labor time is rounded to the nearest quarter hour.
- Labor charges are billed at the prevailing rate for the category of equipment repaired, after minimum charges/time. For prevailing labor rates, please contact the Vaddio technical support.
- All shipping and handling costs are the responsibility of the customer for non-warranty repairs.

Minimum Labor Charges: All non-warranty repairs are subject to a minimum evaluation/repair labor charge even if there is no problem found. Please contact Vaddio technical support for the current applicable rate.

Repair Charge Estimates: Estimates on repair charges for a specific problem will not be given before an RMA is issued and the actual product has been evaluated by a Vaddio technician. Repair estimates will be given after the repair department receives and evaluates the unit.

- Customers requesting an estimate on repair charges must do so up front when they call in for an RMA. The RMA team will call or email with the estimate after evaluating the unit and before proceeding with the repair.
- Any product evaluated for a repair estimate is still subject to the minimum labor charges even if the customer decides not to proceed with the repair.
- Vaddio does not guarantee estimates given on repair charges. Actual repair costs may exceed the estimate.
- Customer is responsible for actual repair charges, regardless of estimate.

Repair Policy Notes:

- **Duration of Repair:** Products are repaired on a first come first serve basis. The turn-a-round time of a particular repair is dependent upon circumstances such as product type, the nature of the problem and current repair volumes. Requests for expedited repair service will be considered on a case-by-case basis.
- **Repair Warranty:** Vaddio guarantees all of its repair work, performed on non-warranty items, for 90 days from the day the repaired product is shipped back to the customer. If the original problem described was not resolved or reoccurs within the 90-day period, Vaddio will repair the unit free of labor charges. However additional material charges may apply unless the parts used to affect the repair are again deemed defective.

Photo Credits

This guide may include some or all of these photos.

European Space Agency (ESA) astronaut Samantha Cristoforetti, a Flight Engineer with Expedition 42, photographs the Earth through a window in the Cupola on the International Space Station
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Carl Sagan, Bruce Murray, Louis Friedman (founders) and Harry Ashmore (advisor), on the occasion of signing the papers formally incorporating The Planetary Society
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Main Control Room / Mission Control Room of ESA at the European Space Operations Centre (ESOC) in Darmstadt, Germany
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Expedition 42 on orbit crew portrait, International Space Station, Mar. 7, 2015 – Barry Wilmore (Commander) Top, Upside down, to the right cosmonaut Elena Serova, & ESA European Space Agency Samantha Cristoforetti. Bottom center US astronaut Terry Virts, top left cosmonauts Alexander Samokutyaev and Anton Shkaplerov.
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European Space Agency astronaut Luca Parmitano, Expedition 36 flight engineer, outside the International Space Station
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Chris Cassidy, Luca Parmitano, and Karen Nyberg, ISS, 2013. Photo Credit: NASA

Nicolas Altobelli, Rosetta Scientist at ESA's European Space Astronomy Centre, Villanueva de la Cañada, Madrid, Spain
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Andrea Accomazzo, ESA Rosetta Spacecraft Operations Manager, providing a live update from the Main Control Room at ESA's European Space Operations Centre, Darmstadt, Germany during the Rosetta wake-up day.
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Sleeping goose
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Photo AS11-40-5948, Aldrin assembles seismic experiment, by National Aeronautics and Space Administration, courtesy of the NASA History Office and the NASA JSC Media Services Center

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