



Operator's Guide to the

AV Bridge MATRIX PRO

Multimedia Room Solution

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Overview

This guide provides information about the AV Bridge MATRIX PRO multimedia room solution:

- 999-8230-000 – North America
- 999-8230-001 – Europe and UK
- 999-8230-009 – Australia and New Zealand

About this Guide

This guide covers:

- The controller's physical features
- Console operation
- Basic troubleshooting

It does not include installation or system administration and setup. The **Configuration and Administration Guide for the AV Bridge MATRIX PRO** covers system administration. For complete product information, see the **Integrator's Complete Guide to the AV Bridge MATRIX PRO Multimedia Room Solution**, which includes unpacking and installation, system administration, configuration, and technical specifications.

Features

Inputs and Outputs:

- Quick-Connect inputs for three Vaddio cameras
- Video input for computer or other video source
- HDMI and proprietary Quick-Connect video outputs
- Four EasyMic microphone inputs
- Four additional balanced mic/line inputs with 48 V phantom power
- Four balanced audio outputs
- Simultaneous USB and IP streaming
- External RS-232 control input

Cameras and Video:

- Automatically identifies and configures for Vaddio cameras
- Access to settings stored on each connected camera
- Independently configurable output resolutions
- Configurable picture-in-picture (PIP) for conferencing
- Split screen – top/bottom or quad split showing all four video inputs simultaneously
- Seamless video transitions with software adjustable transition time - cross-fades and straight cuts

Audio:

- Automatic audio mixing with controls to manage audio levels manually if desired
- Acoustic echo cancellation with selectable AEC reference
- Assignable chairman priority gives one microphone a 3dB boost over the others
- Crosspoint gain configurable separately for each point in the audio matrix

Control

- Browser-based web interface for operation, configuration and system administration
- Triggers for programmed actions such as changing the video source, moving a camera to one of its presets, and most other operations:
 - Up to 10 external hardware trigger inputs
 - Up to 50 software triggers
 - Up to four EasyMIC MicPOD One Touch triggers

Product Compatibility

The AV Bridge MATRIX PRO is compatible with the following products.

Vaddio Cameras

May require an update to the camera's firmware.

Product	RS-232	IP
RoboSHOT Series (may use Quick-Connect or OneLINK device)	Yes	Yes*
ConferenceSHOT Series**	Yes	Yes
ClearVIEW HD 20SE	Yes	No
PowerVIEW HD 22/30	Yes	No
ZoomSHOT 20	Yes	No
WideSHOT	Yes	No
DocCAM 20 HDBT with OneLINK device	Yes	Yes

* IP control always uses the camera's IP address, not the address of its extension device (if one is used).

** Includes cameras marked ClearSHOT 10 USB.

Non-Vaddio Cameras

Product	RS-232	IP
Sony BRC Z330, Z700, H700, H900	Yes	No
Sony EVI-H100S	Yes	No
Sony SRG 120, SRG 300	Yes	No
Panasonic AW-HE 40, AW-HE 130	Yes	No

Control Devices

USB joysticks

Audio

- EasyMIC series tabletop and ceiling microphones
- EasyUSB mixers and I/O devices
- Audio-Technica AT U891R boundary microphone

Trigger Devices

- PresenterPOD devices
- StepVIEW mats

A Quick Look at the Multimedia Room Solution



- 8-line illuminated display – View basic operation and configuration menu and system information
- Menu knob – Navigate the operation/configuration menu
- Select and Cancel buttons – Work with the operation/configuration menu
- Video Mute button – Stop sending video. Press the button again to resume sending video from the selected source. When video is muted, the AV Bridge MATRIX PRO sends a black screen or color bar pattern instead.
- Audio Mute button – Stop sending audio. Press the button again to resume sending audio.
- Dimensionally enhanced puffy badge – We have spared no expense to provide a lovely, dimensionally enhanced, puffy badge to enhance your visual experience. It's quite shiny. We hope you'll enjoy it.

Web Interface

The multimedia room solution provides a web interface to allow configuration via the IP network connection, using a browser. The web interface allows you to:

- Set idle session behavior and passwords
- Manage network and streaming settings
- Add identifying information to the web interface
- Back up, reboot, reset, or update the device
- View information about the device's firmware and current settings
- Operate the device

When connected to a LAN that has a DHCP server, the multimedia room solution 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 switcher's default IP address is 169.254.1.1 and its subnet mask is 255.255.0.0.

You can configure a static IP address either through the network or from a computer connected directly to the Ethernet port.

To see the current IP address, dial to the Network menu on the front panel and press the Select button. Browse to this address to access the web interface.

Compatible Web Browsers

Supported web browsers:

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

Other browsers may also work.

We recommend Chrome or Firefox.

User Access

You can access the web interface using the device's IP address. If your network supports hostname resolution, you can use the hostname instead.

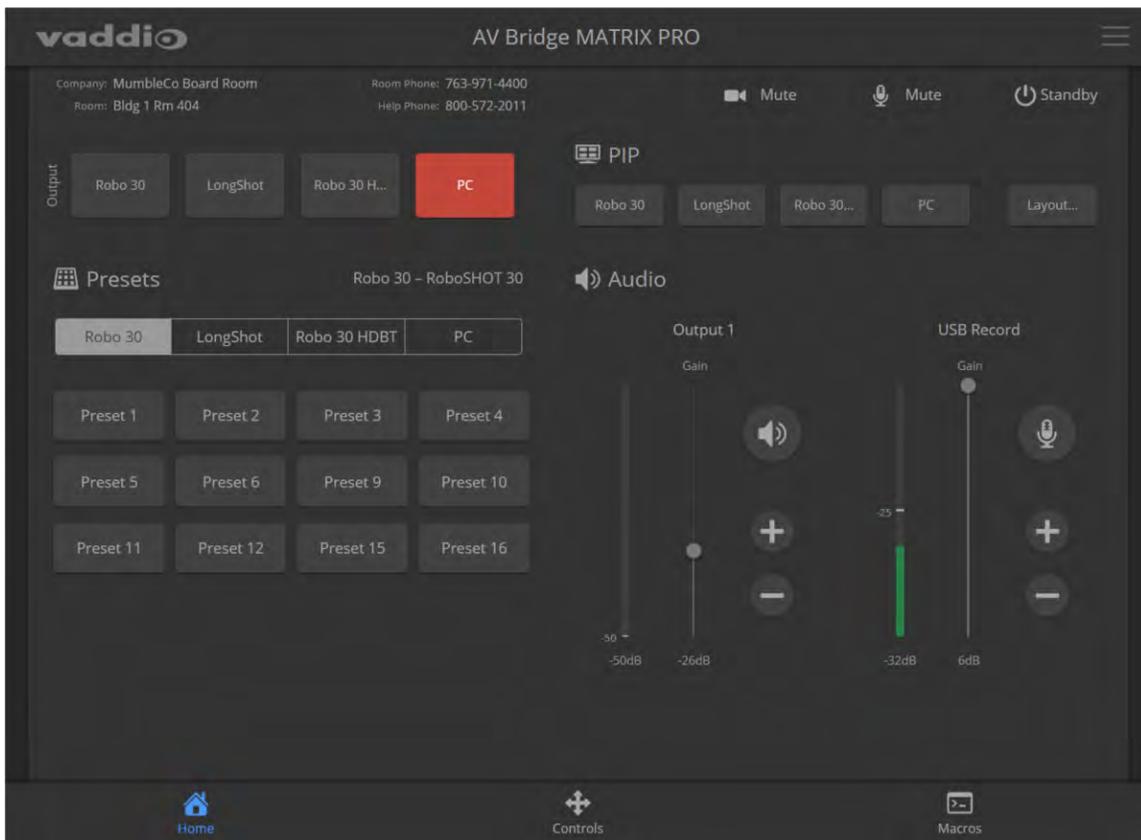
Note

Only the operator's pages are available with user or guest access.

1. The IP address is available on the front panel display. If it is not currently visible, dial to the Network menu on the front panel and press Select.
2. Enter the IP address or hostname in your browser's address bar. If you use the hostname, you may need to enter `http://` as a prefix to keep the browser from treating it as a search query.

If the system is configured for guest access, you will not need to log in.

If a login is required, the username is `user`. Contact the system administrator if you do not know the current password.



Operating the Multimedia Room Solution

The AV Bridge MATRIX PRO provides a web-based operator interface in addition to the front panel controls for basic functions. To access the web interface, you may need to log in with the User account credentials, depending on how the device is configured. The admin login is not required.

Using the Front Panel for Basic Operation

The front panel provides basic information and controls.

Note

The administrator has the option to lock the front panel.

Muting Audio and Video from the Front Panel

You may choose to mute audio, video, or both for privacy, or while preparing the room for a meeting or other event.

Audio mute disables the microphone inputs and the audio portion of the stream. It does not disable PC audio input or HDMI audio output; if you mute audio while playing content from a PC, the audio portion of the content is not muted.

Video mute disables all video outputs and sends the selected video mute pattern – either black video or color bars.

Front Panel Display Menu

The illuminated display presents a menu of basic information and controls, including:

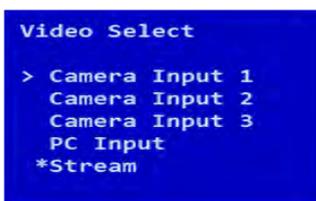
- Video source for the program output
- Volume settings for audio inputs and outputs
- Information on streaming, network settings, and firmware versions

To work with the front panel display menu:

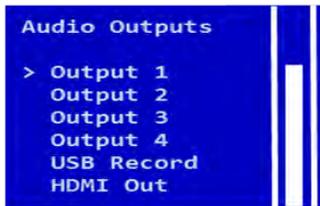
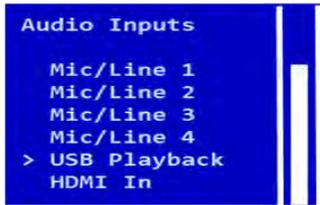
- Use the menu knob to navigate through the menu. The > symbol shows what will be selected when you press the Select button.
- Press the Select button to open the desired sub-menu or select the desired option.
- To return to the main menu, press the Cancel button.



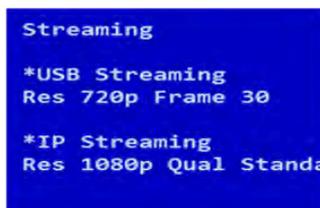
Video Select: Control. This menu indicates the current source of the program output with the * symbol. Use the menu knob and Select button to select a different program source



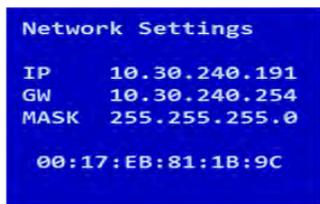
Audio Inputs and **Audio Outputs**: Control. These menus display the current volume setting for the selected item. Use the menu knob and Select button to adjust the volume.



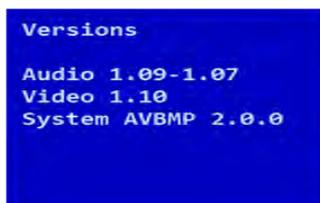
Streaming: Information only. This menu displays the resolution for each stream, along with the frame rate for the USB stream and the quality setting for the IP stream. USB streaming resolution is auto-negotiated; IP streaming is configured in the web interface.



Network Settings: Information only. This menu displays the IP address, gateway address, subnet mask, and MAC address.



Versions: Information only. This menu displays the firmware versions in use.



About Viewing Streams

You will need additional information and software to view the IP and USB streams from the AV Bridge MATRIX PRO.

To view the IP stream:

- You will need to know the streaming URL for the IP stream. This information is available on the front panel, under the Network menu.
- The AV Bridge MATRIX PRO must be configured to enable IP streaming.
- You will need a stream viewer application such as VLC Media Player.

To view the USB stream:

- The AV Bridge MATRIX PRO must be configured to enable USB streaming.
- You will need to use a soft conferencing application to view the USB stream.

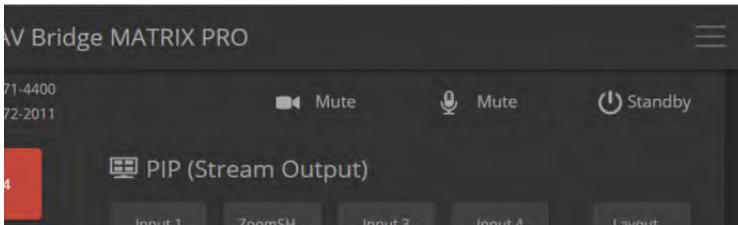
When viewing either stream, keep in mind that there is always inherent latency and network-dependent latency, so the video and audio may not be synchronized. An audio delay adjustment is available to administrators on the Audio page of the web interface.

Muting Audio or Video from the Web Interface

Audio and video mute controls are available on the front panel and at the top of each page of the web interface.

Audio mute disables the microphone inputs and the audio portion of the stream. It does not disable PC audio input or HDMI audio output; if you mute audio while playing content from a PC, the audio portion of the content is not muted.

Video mute disables all video outputs and sends the selected video mute pattern – either black video or color bars.



Selecting Cameras

OPERATOR'S HOME PAGE

The web interface shows the active video sources in red. Depending on the current configuration, you may be able to set Stream and Program outputs separately. If the device is configured to route the stream to the Program output, the web interface displays only one row of buttons for the video output.

Note

The IP and USB streams use the same video source.

Select the desired source for the available output(s).



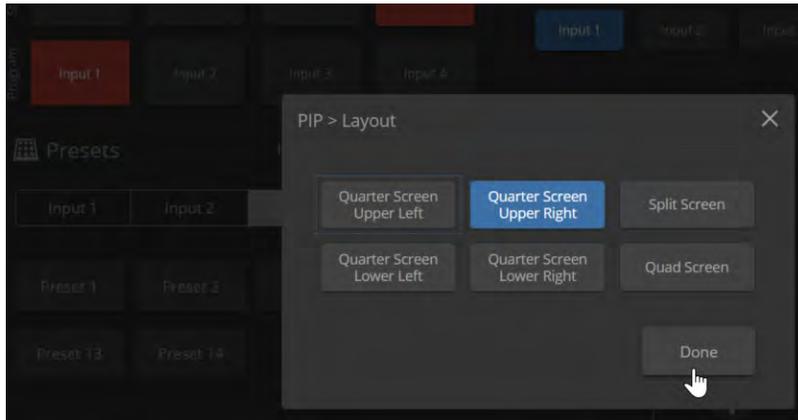
Selecting a PIP Source and Layout

ALL OPERATOR PAGES

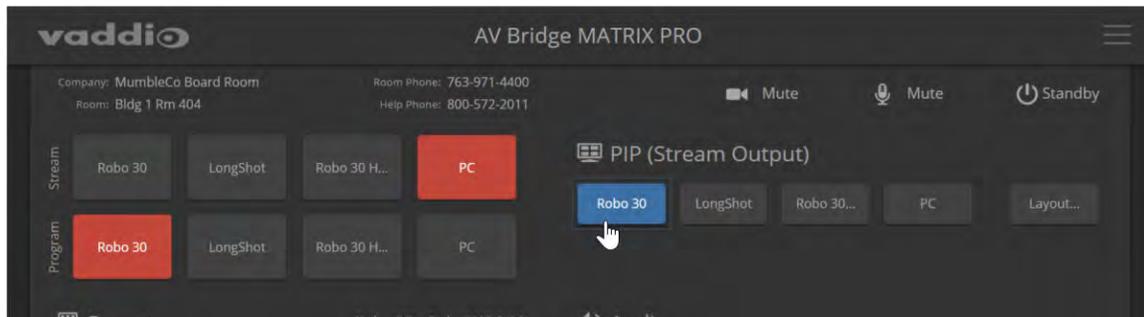
The PIP is only available in the stream.

In the web interface, the button for the active PIP source is highlighted. If all four PIP source buttons are highlighted, the stream is using the quad screen layout; if no buttons are highlighted, there is no PIP.

1. Select Layout to check or change the PIP layout.



2. Select the desired PIP source, if not using the Quad Screen layout.

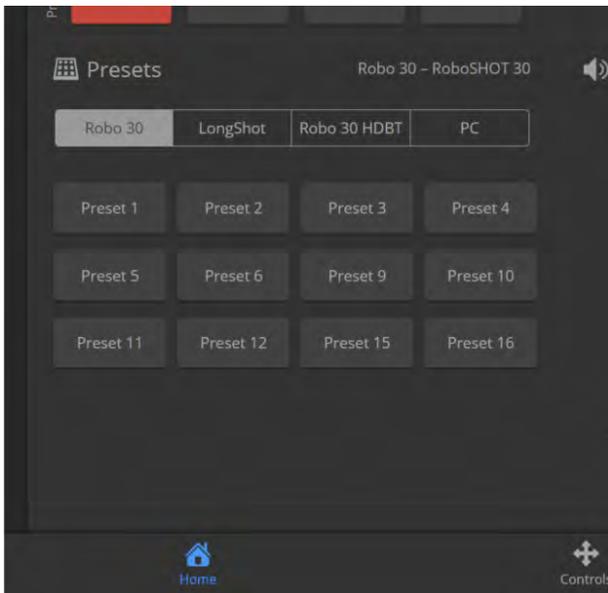


Moving to Camera Presets

OPERATOR'S HOME PAGE

If presets have been defined for the selected video input, they are available on the Home page. The administrator has the option to customize the labels for the video inputs and the presets for each.

Select the video input to work with, then select the desired preset.

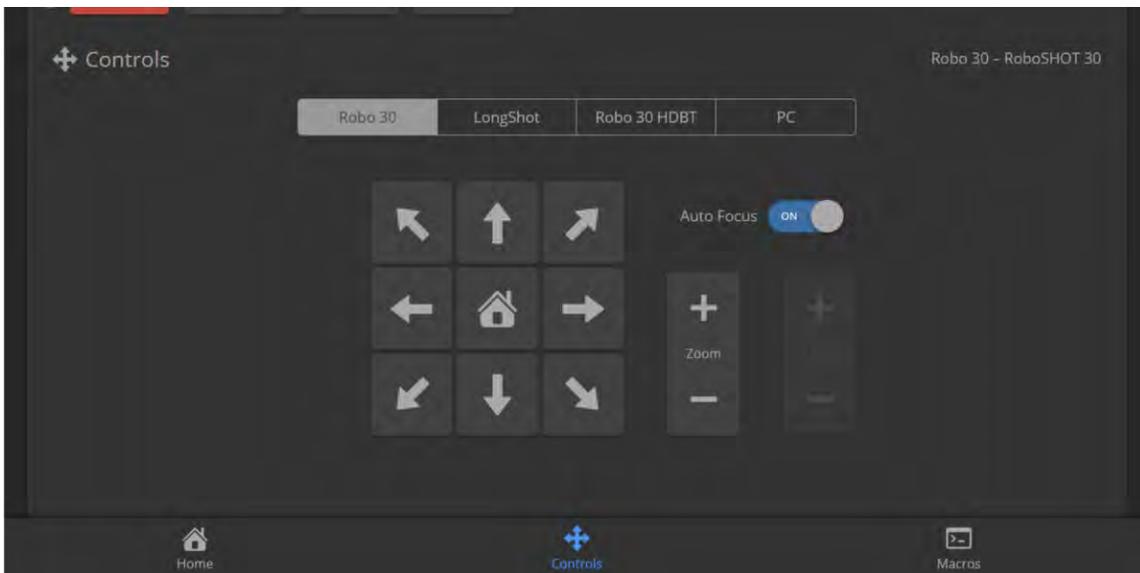


Controlling Pan, Tilt, Zoom, and Focus

OPERATOR'S CONTROLS PAGE

The Controls page presents the same controls that are available from the selected video input's web interface. No controls are available for Input 4 unless the connected device is a camera.

Select the video input to work with, then move or focus the camera as needed.



Working with Audio

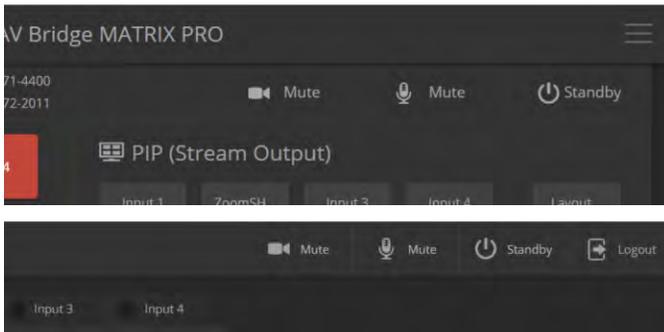
OPERATOR'S HOME PAGE

Audio controls include mute/unmute buttons, volume read-outs, and volume slider controls for the audio output currently used as the master/AEC reference and for USB Record (the audio originating at your end of a conference).



Going to Standby (Low Power) Mode

The standby control is available at the top of each page of the web interface.



Depending on how the device is configured, connected cameras may also go to standby mode.

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.

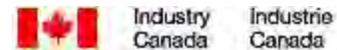
Changes or modifications not expressly approved by Vaddio can affect emission compliance and could void the user's authority to operate this equipment.



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 Service Department: 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. Special order product are non-cancelable and 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 · Phone 800.572.2011 / +1.763.971.4400 · Fax +1.763.971.4464 · Email info@vaddio.com

Visit us at support.vaddio.com for firmware updates, specifications, drawings, manuals, technical support information, and more.

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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, lowercase sans-serif font. The final letter "o" is stylized as a thick blue circle with a smaller solid blue circle inside it, resembling an eye or a target. A registered trademark symbol (®) is located at the top right of the "o".

vaddio®