VADDIO™ WEBBi™

Web based Room Control System for Vaddio EasyUSB™ Tools

Part Numbers:
999-8700-000: WEBBi Web Controller (North America)
999-8700-001: WEBBi Web Controller (International)

Inside Front Cover - Blank

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Overview

The WEBBi is an inexpensive room A/V control system for use with the EasyUSB Tools product family. The WEBBi is a complete room control system for the EasyUSB™ Tools devices including EasyMic™ MicPODs, EasyUSB Mixer/Amp, ClearVIEW™ HD-USB PTZ Camera and AutoPresenter™ products. Simply connect to the WEBBi's web server with a PC browser and control the room's camera, display and audio.

The WEBBi control functions are intended to be used with any device equipped with a web browser and internet access providing an intuitive user interface for control of the room audio and video devices. An embedded web server serves the room's user interface control page to a connected client like a PC, tablet, or smartphone.

The room UI includes interactive user controls for room audio volume, microphone mute, camera PTZ and preset execution, and LCD display power control via IR probe. The WEBBi is easily configured from administration pages allowing the installer the flexibility to select Vaddio EasyUSB devices used in application, communication interfaces, and button labeling.

Intended Use:

Before operating the device, please read the entire manual thoroughly. The system was designed, built and tested for use indoors, and with the provided power supply and cabling. The use of a power supply other than the one provided or outdoor operation has not been tested and could damage the device and/or create a potentially unsafe operating condition.

Important Safeguards:

Read and understand all instructions before using. Do not operate any device if it has been dropped or damaged. In this case, a Vaddio technician must examine the product before operating. To reduce the risk of electric shock, do not immerse in water or other liquids and avoid extremely humid conditions. Do not connect Ethernet or Power over Ethernet (POE) cables directly to the RJ-45 ports on the device as damage may result.

> **Use only the power supply provided with the system. Use of any unauthorized power supply will void any and all warranties.**

> Please do not use "pass-thru" type RJ-45 connectors. These pass-thru type connectors do not work well for professional installations and can be the cause of intermittent connections which can result in the RS-232 control line failing and locking up. For best results please use standard RJ-45 connectors and test all cables for proper pin-outs prior to use.

Save These Instructions:

The information contained in this manual will help you install and operate your product. If these instructions are misplaced, Vaddio keeps copies of Specifications, Installation and User Guides and most pertinent product drawings for the Vaddio product line on the Vaddio website. These documents can be downloaded from www.vaddio.com free of charge.

Unpacking

All components within the shipping box are individually packaged as described in the sections below. Carefully remove all parts included in the individual packaging.

WEBBi - Part Number 999-8700-000 for North America
North American Pack-out includes:
- One (1) WEBBi Web Controller Appliance
- One (1) 12 VDC 1.0 Amp PowerRite™ Switching Power Supply
- One (1) Power Cord for North America
- One (1) 6' (1.83m) USB Type A to Type B Cable (Black)

WEBBi - Part Number 999-8700-001 for International
International Pack-out includes:
- One (1) WEBBi Web Controller Appliance
- One (1) 12 VDC 1.0 Amp PowerRite Switching Power Supply
- One (1) Euro Power Cord
- One (1) UK Power Cord
- One (1) 6' (1.83m) USB Type A to Type B Cable (Black)

Option: Rack Mounting Kit
The rack kit provides a method for the WEBBi to be installed in a 1-RU space within a rack. The rack kit includes two rack ears (one long and one short). The rack ears are mounted in the sides of the WEBBi enclosure using the existing screws included on the device.

Rack Kit Part Number 998-6000-004

Equipment Descriptions and Call-outs

Diagram: WEBBi Front Panel
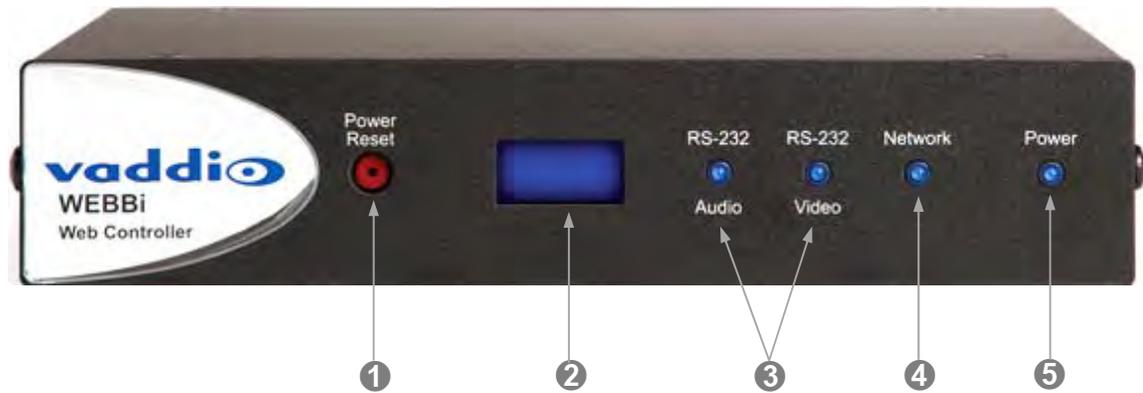
1) **Recessed Power/Reset Button**: Resets and reboots the WEBBi device with push button activation.
2) **LCD Display:** Scrolls current IP Address across the screen when the unit is plugged in.
3) **RS-232 LED Indicators:** Blue LED indicators for both the Audio & Video port connection to the EasyUSB Tool devices.   LED will flash when communication activity is detected with the device under control.
4) **Network LED Indicators:** LEDs will flash blue to indicate detection of Ethernet activity between web server and attached browser client.
5) **Power LED Indicator:** This LED will illuminate blue when power is detected.

Diagram: WEBBi Rear Panel
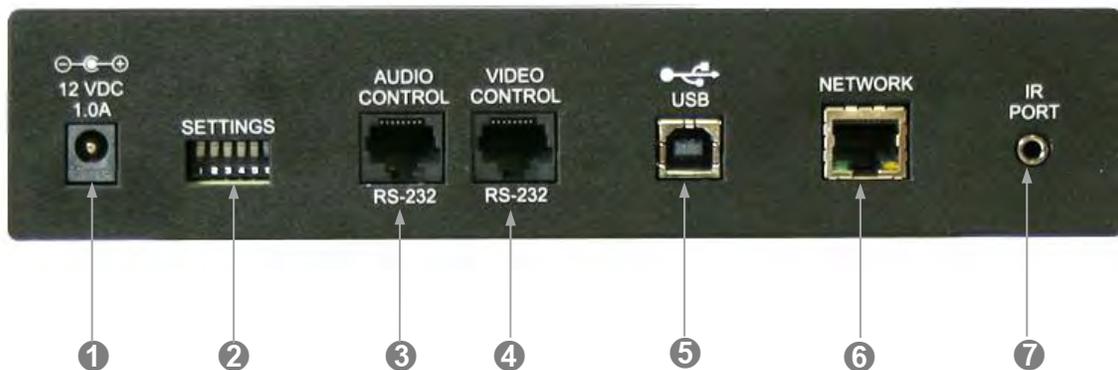
1) **Power Connector:** 5.5mm OD x 2.5mm ID coaxial connector, positive center for supplying power to device. Use with 12 VDC, 1.0A power supply included in package only.
2) **DIP Switches:** Used to reset device to factory defaults. Setting all dip switches to the off-position will reset the unit to factory defaults on the next power cycle. User will lose all programmed configurations on the factory default operation.
3) **Audio Control:** RJ-45 connector with RS-232 functionality (see appendix for pin-out). RS-232 Control port for use with Vaddio EasyUSB Mixer/Amp.   .
4) **Video Control:** RJ-45 connector with RS-232 functionality (see appendix for pin-out). RS-232 Control port for use with Vaddio HD-USB PTZ Camera or AutoPresenter.
5) **USB:** For future use.
6) **Network:** 10/100 Ethernet port for connection to the Local Area Network.
7) **IR Port:** For future use.

Connecting the WEBBi

WEBBi System Connection Diagrams
The WEBBi control system is for use with Vaddio A/V equipment providing a plug & play connection scheme using standard RJ-45 connectors and CAT-5 cable for the physical connection between devices. Supported devices include the EasyUSB Mixer/Amp, ClearVIEW HD-USB PTZ Camera, and AutoPresenter products. The applications below depict common applications that can be supported with the WEBBi control system.

WEBBi Configuration with EasyUSB and HD-USB Camera
Below are the connections for enabling web control of an EasyTalk Audio solution and an HD-USB PTZ Camera. Web pages will be served up via the Ethernet connection.

Diagram: WEBBi with EasyUSB Mixer/Amp and HD-USB PTZ Camera
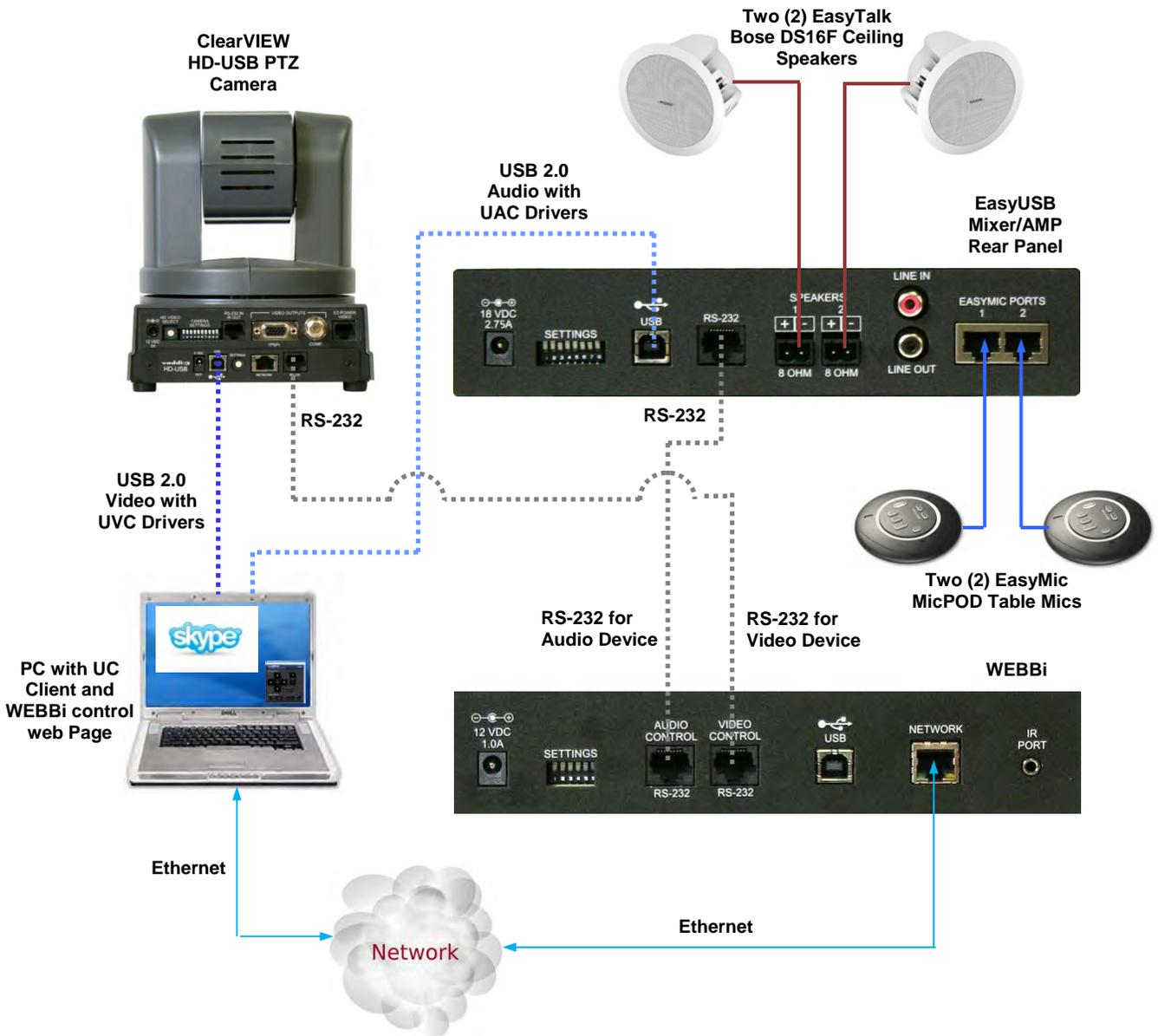
WEBBi with AutoPresenter

The WEBBi can be used with the AutoPresenter providing camera controls, video input selection, preset activation, and PIP controls from the embedded Web Pages. The physical connection is a simple RJ-45 with CAT-5 cable along with a 9-pin (DE-9 or DB-9 for the conventionalists) to RJ-45 adapter for use on the AutoPresenter RS-232 back panel connector. The WEBBi will serve up web pages via the network connection.

Diagram: WEBBi with Multiple Cameras and Auto Presenter

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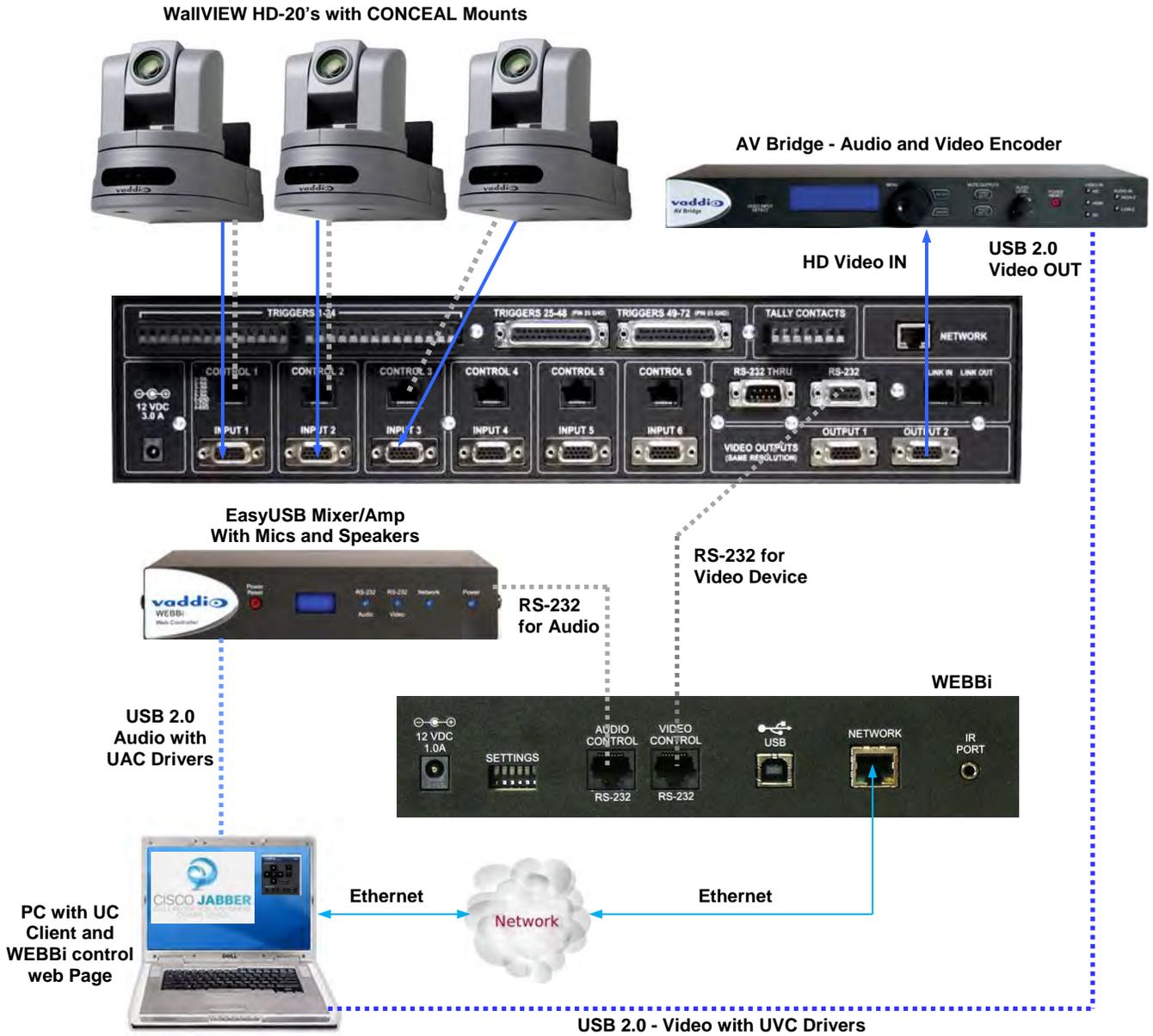
Installation Instructions

WEBBi
Locate the WEBBi near a Network jack for control over the Local Area Network. Follow the steps below to install all of the devices.

Diagram: WEBBi Installation Steps

WEBBI - Web Controller

STEP 1: Plug 12 VDC, 1.0 Amp power supply included in package into the WEBBi. Power LED on the front panel should light solid blue when powered.

STEP 2: Connect RJ-45 using CAT-5 or better cable between WEBBi audio control RS-232 RJ-45 jack and EasyUSB Mixer/Amp RS-232 RJ-45 jack for audio control via web pages.

STEP 3: Connect RJ-45 using CAT-5 or better cable between WEBBi video control RS-232 RJ-45 jack and ClearVIEW HD-USB PTZ Camera (RJ-45 jack) or AutoPresenter RS-232 9-pin jack.

STEP 4: Connect WEBBi to the LAN for serving web pages over an IP address configured by the administrator**.

Note: The WEBBi can be directly connected to a PC using a network crossover cable for initial installation configuration purposes. In absence of a DHCP server in this scenario, the WEBBi will default to a static IP address of 169.254.1.1. Once connected with the Network crossover cable, the installer can use this static IP address in the browser to navigate to the web pages.

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System Configuration and Programming

WEBBi Administrator Pages
The WEBBi is configured by the administrator pages accessible by log-in to the Admin account on the embedded web server.

A/V Configuration Page
The A/V Configuration page allows the installer to select the Audio, Video, and Display device to be controlled by the WEBBi. These selections automatically generate the room user interface web pages that are served to the user allowing room audio & video controls of the devices. A "none" selection will eliminate that control feature from the room user interface (UI). Supported audio devices are limited to the EasyUSB Mixer/Amp. Supported video devices include the ClearVIEW HD-USB camera and the AutoPresenter.   Only one device for each type is available for selection.

Diagram: A/V Configuration Page
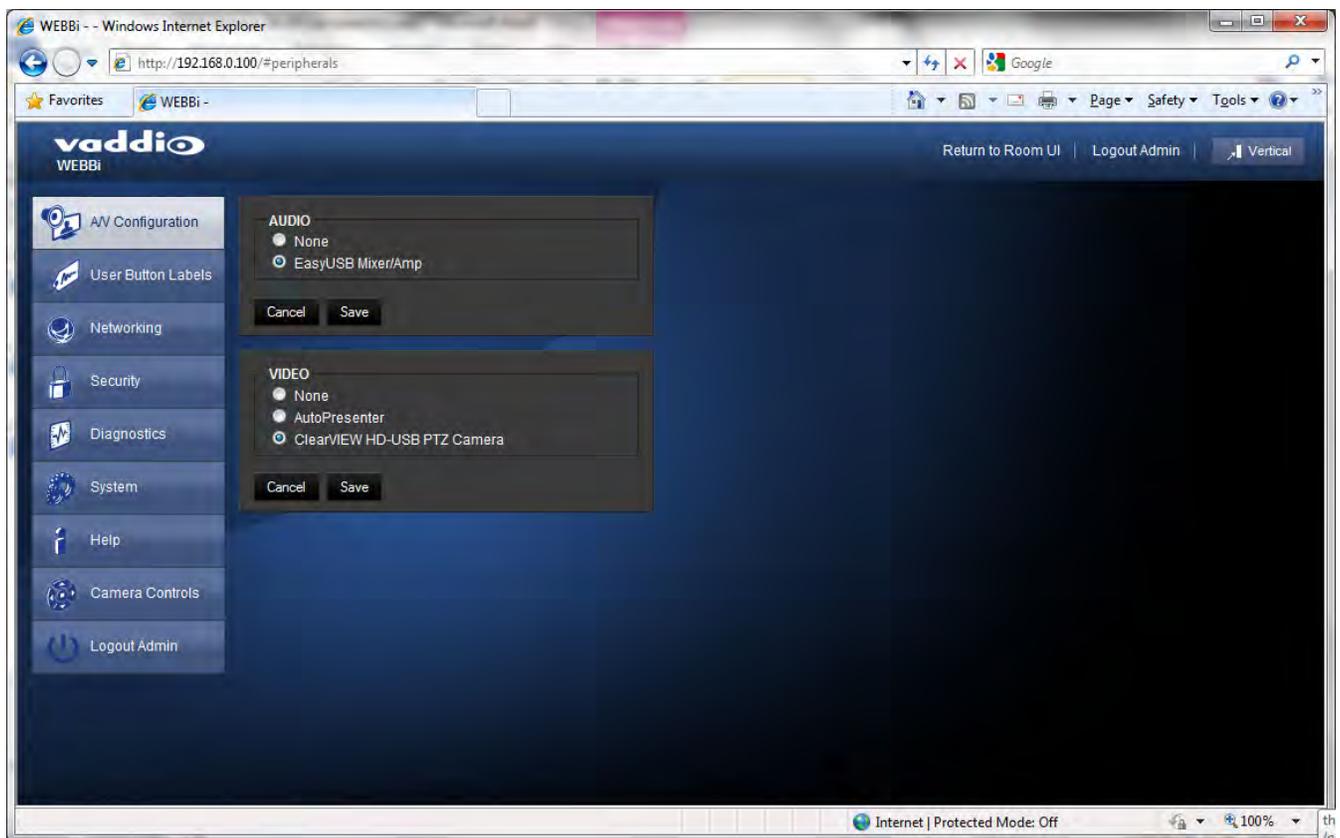
UI (user interface) Selections:
Audio:
- None
- EasyUSB Mixer/Amp

Video:
- None,
- AutoPresenter and
- ClearVIEW HD-USB PTZ Camera

Today there is a limited amount of UI's available, but more will be added in future releases. The combinations will be covered later in the manual.

User Button Label Page
The WEBBi has the ability to define custom button labels for select functions on the Room UI page. Custom labeling capabilities include room information that is displayed on the top header of the room UI page. Room information can include company name, room name/number, phone number, and help desk phone number.

In addition to the room labels, the installer has the ability to label camera presets and the video source input selection when used with AutoPresenter product. Most labels are a maximum of 10 characters, but the Room labels can have a maximum of 32 letters.

Diagram: Example User Button Label Page with AutoPresenter
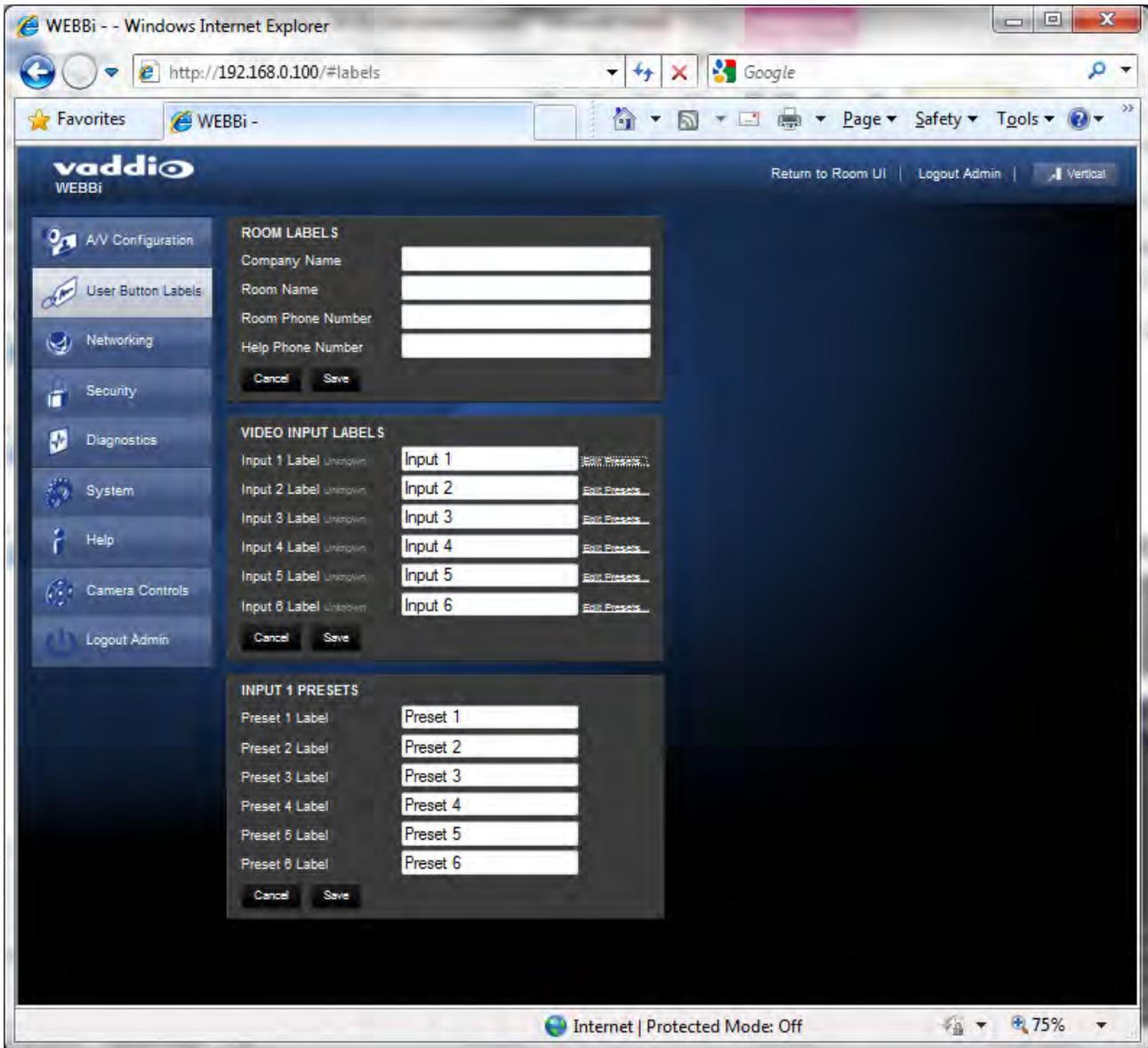
Networking Page
The Networking page is used to configure the WEBBi IP address. It supports either DHCP or Static IP addresses along with a Host name.   .

Diagram: Networking Page
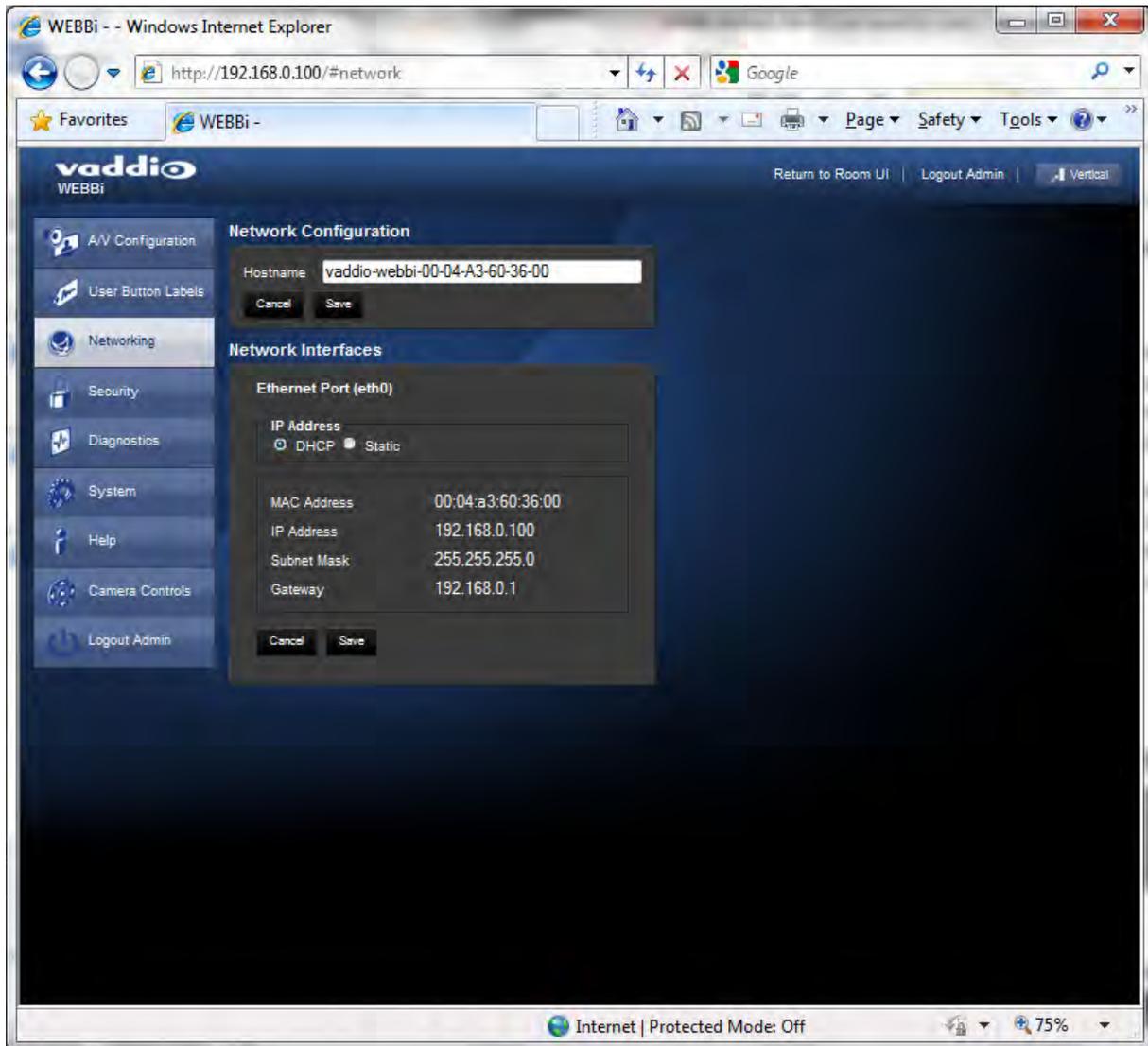
Security

The WEBBi supports two independent user accounts with varying levels of access. The "user" (lower case) account is intended for end-users within the conference room that only require access to audio and video room control functions. The 'User' account only has access to the Room UI pages within WEBBi. The second account is the 'admin'. The admin account has full access to all configuration pages.

Each user account has a password for login security. The administrator has the ability to set the passwords for either the user or admin account. If the user account is configured without a password, the login sequence will be bypassed. The admin account will always require a password entry for login to the administrator pages on the WEBBi. The WEBBi ships with a factory default password of….. 'password'.

- Factory Default Admin Password: password

Diagram: Security Page
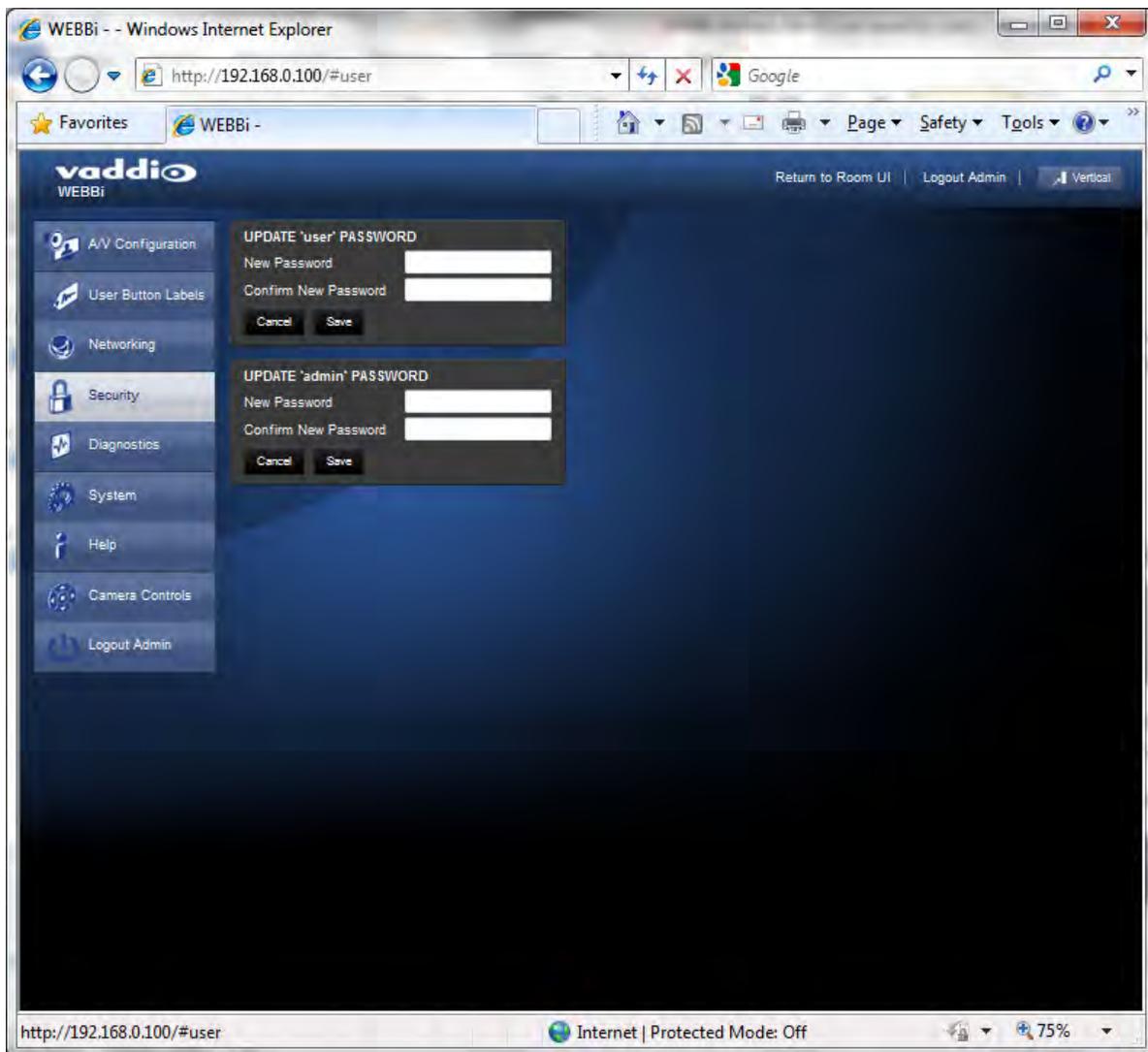
Diagnostics
The diagnostics function within the WEBBi is intended for advanced troubleshooting. It includes logging capabilities of key events and error reporting during normal operations. The internal logging function is setup as a revolving FIFO with estimated internal storage capabilities for up to one week. The administrator has the ability to refresh the log or download the Log to a local PC for further analysis by Vaddio Programmers.

Diagram: Diagnostics Page
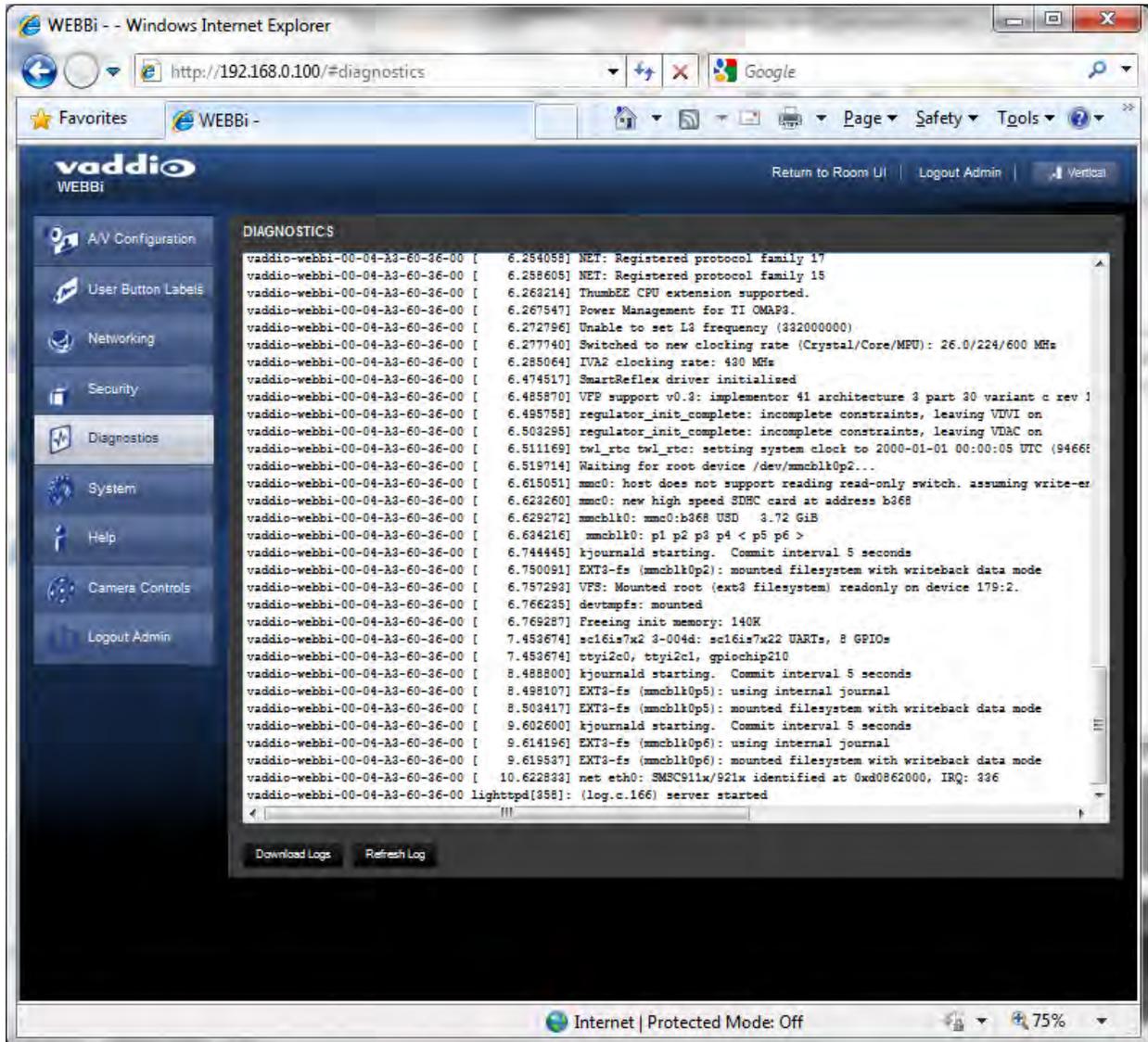
System
The system menu is intended for firmware update operations associated with the WEBBi. The administrator can select the new firmware file from a local or network drive. The 'begin firmware update' button is actuated once desired firmware file is selected. The update process will include user notification of status.

Diagram: System Menu
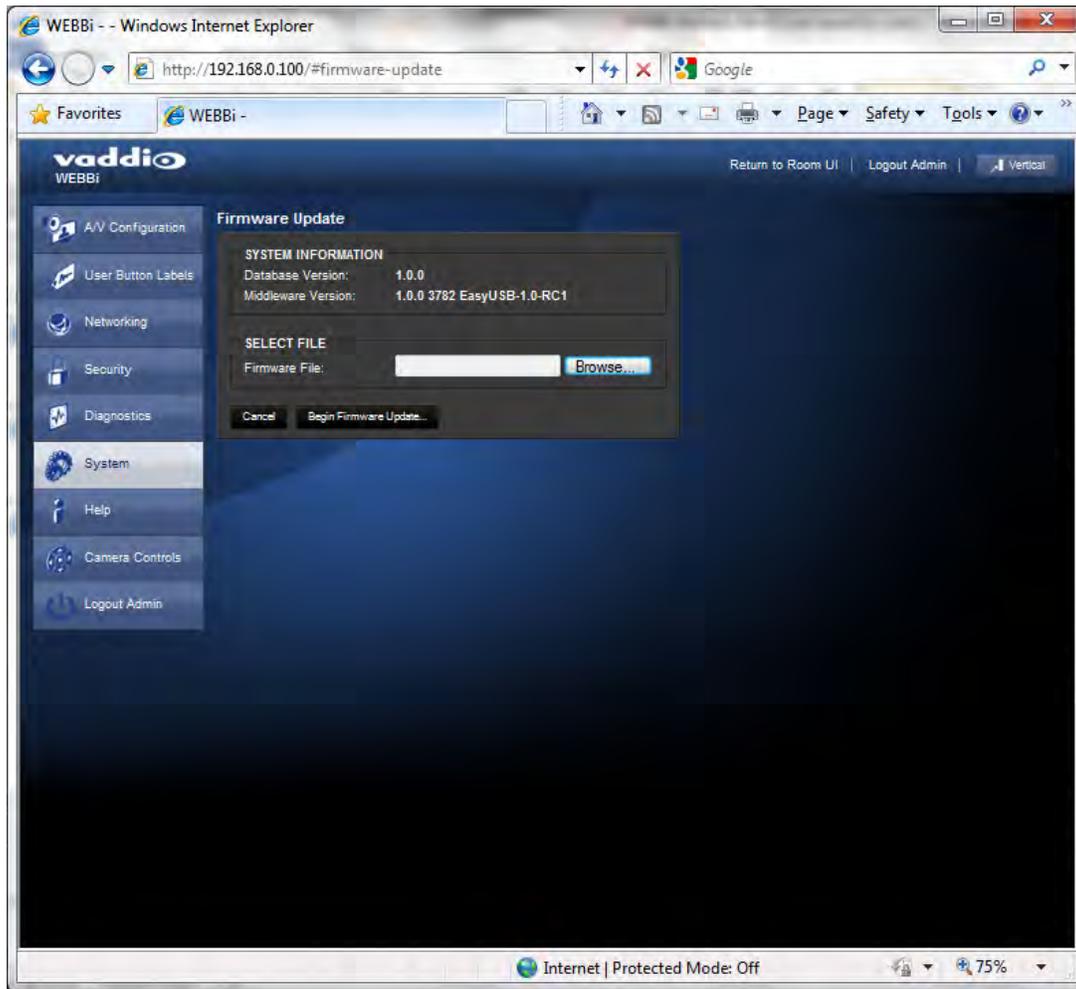
Help: The help menu provides general information on the WEBBi and is intended to assist the installer in configuration and programming of the WEBBi. The help menu also includes information on the current firmware release loaded on the device.

Camera Controls: The Camera Controls page allows the installer to position the PTZ camera and store camera presets within the Administrative pages. The camera controls page will mimic that of the Room UI page presented to the user after installation.

Logout: The logout menu function exists from the administrator pages within the web server.

Factory Default: The WEBBi can be restored to factory defaults with the dip switches on the rear of the device.
        Process for defaulting WEBBi to factory settings is:
    Step 1: Place all dip switches to the off position (down).
        Warning: Current settings will be erased.
    Step 2: Press Reset on the front panel of the WEBBi. Device will reboot to factory settings.

User Operations

Room User Interface (UI)
The WEBBi web server includes a graphical user interface page intended for end-user operations of the Vaddio EasyUSB Tools product family. The UI page includes all audio and video controls needed by the user during a meeting or conference call. The user can access the Room UI page by opening a browser on a PC or tablet and typing in the URL or IP address of the WEBBi. If a user password was configured by the administrator, a login screen will be presented to the user. If a user password was not programmed, the Room UI page with automatically be served upon connection to the URL address.

Diagram: Log-in Screen

WEBBi automatically generates Room UI webpages based upon the EasyUSB Tools products connected. The following UI screen Shot is for the EasyUSB Mixer/Amp and the ClearVIEW HD-USB PTZ Camera.

Diagram: UI Web Page for EASYUSB Mixer/Amp and ClearVIEW HD-USB PTZ Camera

Diagram: UI Web Page for EasyUSB and AutoPresenter
The video input buttons were added on the bottom of the page and the PIP functions were added to the top of the page in order to better control the AutoPresenter's key features.

Audio Controls
The user audio controls include microphone mute, microphone gain, and speaker volume controls. The microphone mute applies to all EasyMic devices in a global fashion. The microphone icon changes visual representation (RED with NOT ICON) to depict the mute state. Microphone gain can be modified with the up and down buttons. This gain represents the USB audio level (RECORD) being set to the Host PC. The loudspeaker volume can be modified with the second set of Up/Down buttons.   The Volume change applies to the EasyUSB Mixer/Amp loudspeakers and Line Outputs.

Camera Controls

The user has full Pan/Tilt/Zoom controls from the Room UI page. In addition, the user has the ability to execute six camera presets represented by buttons at the bottom of the panel.   Pan/Tilt and Zoom speed can be toggled between fast and slow by selecting the radio button in the center of the display.   This sets the camera's PTZ speed.
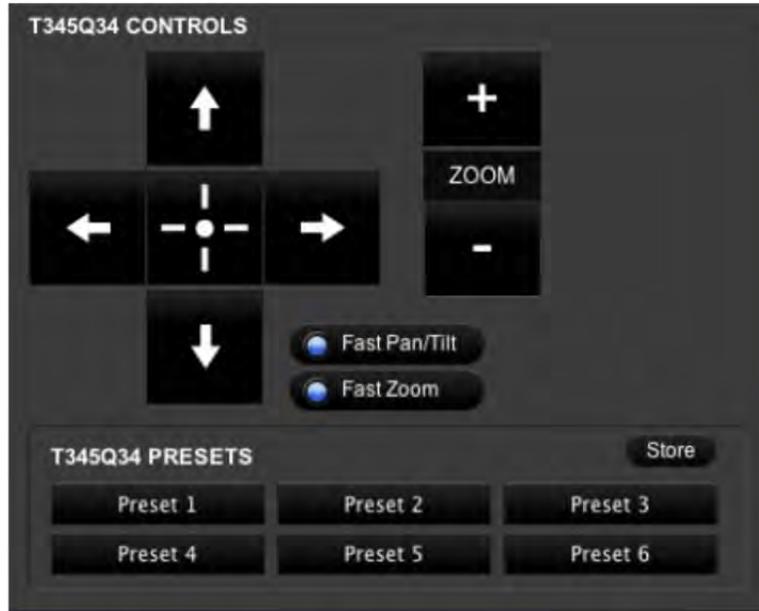
The user also has the ability to set and store camera presets from this page. Steps for setting a camera preset are as follows:

- **STEP 1:** Position camera to desired location within the room.
- **STEP 2:** Press 'Store' button. A pop-up will be presented. Select the desired preset to store the current camera position. Pop-up will disappear upon selection.

- **STEP 3:** Operation complete. Camera will go to stored position when "Preset 4" button is pressed.

AutoPresenter Controls
Additional control features will be presented to the user when WEBBi is used with the AutoPresenter. Controls will include Video Inputs and Picture-In-Picture.

Video Input Select allows the user to switch between up to 5 additional video source inputs connected to the AutoPresenter.   If the selected Video Input source is a Vaddio PTZ camera, the PTZ controls will be switched to that source allowing camera controls from the Room UI.

VIDEO INPUTS					
Input 1	Input 1	Input 3	Input 4	EF	t345q34

The PIP Controls provides the user with the ability to create a mosaic image from two independent video input sources.   Steps for creation and operations of the PIP function are:

STEP 1: Press the PIP On/Off Button

PICTURE-IN-PICTURE

On/Off   Move   Resize   Swap

STEP 2:   Upon turning the PIP on, a pop-up will be presented allowing the user to select the second video source to be used for the PIP output.   Once selected a PIP mosaic output will be created with the current video input source and the selected PIP video input source.

SELECT PIP INPUT					
Input 1	Input 1	Input 3	Input 4	EF	t345q34

Cancel
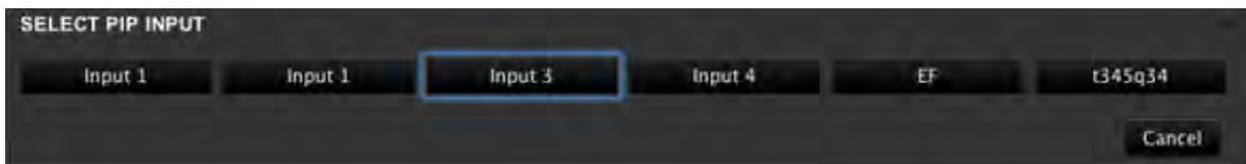
STEP 3:   Additional PIP controls allow the user to format the video output as desired.   PIP control functions include:

Move — Move will position the PIP video input into one of the five (5) positions; four corners and lower center of the main video image. Pushing the button will toggle the PIP image between the five locations.

Resize — Resize changes the PIP image size. Pushing the button will toggle between the available three (3) images sizes.

Swap — Swap will automatically switch the main video input and the PIP video input within the mosaic image.

Warranty Information: (See Vaddio Warranty, Service and Return Policies posted on vaddio.com for complete details):

Hardware* Warranty: One year limited warranty on all parts. Vaddio warrants this product against defects in materials and workmanship for a period of one year from the day of purchase from Vaddio. If Vaddio receives notice of such defects during the warranty period, they will, at their option, repair or replace products that prove to be defective. Please see Vaddio's Service Terms and Conditions at vaddio.com for specific details and policies.

Exclusions: The above warranty shall not apply to defects resulting from: improper or inadequate maintenance by the customer, customer applied software or interfacing, unauthorized modifications or misuse, operation outside the normal environmental specifications for the product, use of the incorrect power supply, improper installation (plugging things in wrong), improper extension of the power supply cable or improper site operation and maintenance.

Vaddio Customer Service: Vaddio will test, repair, or replace the product or products without charge if the unit is under warranty and is found to be defective. 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 will only advance replace out of box failures or random equipment failures up to 30 days after the purchase date (not the install date).

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 through one of the following resources: e-mail support at support@vaddio.com or online at www.vaddio.com.

Return Material Authorization (RMA) Number: Before returning a product for repair or replacement, request an RMA from Vaddio's technical support. Provide a technician with a return phone number, e-mail address, shipping address, and product serial numbers and describe the reason for repairs or returns as well as the date of purchase and proof of purchase. Include your assigned RMA number in all correspondence with Vaddio. Write your assigned RMA number on the clearly on the shipping label when returning the product. All products returned for credit are subject to a restocking charge without exception.

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, or unauthorized repair. Cutting the power supply cable on the secondary side (low voltage side) to extend the power to the device voids the warranty for that device.

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.

*Vaddio manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry standard practices.

Other General Information:
Care and Cleaning
Do not attempt to take this product apart at any time. There are no user-serviceable components inside.
- Do not spill liquids in the product
- Keep this device away from food and liquid
- For smears or smudges on the product, wipe with a clean, soft cloth
- Use a lens cleaner on the lens, but no lens is on the WEBBi, so it's one less thing to remember.
- Do not use any abrasive chemicals.

Operating and Storage Conditions:
Do not store or operate the device under the following conditions:
- Temperatures above 40°C (104°F) or temperatures below 0°C (32°F)
- High humidity, condensing or wet environments
- In Bear Caves and Cliff Dwellings
- In inclement weather
- Dry environments with an excess of static discharge
- In an loosely organized system of nominally oxygenated amino acids
- Under severe vibration

Technical Specifications

WEBBi	
Part Numbers	WEBBi 999-8700-000 (North America) WEBBi 999-8700-001 (International)
USB Port	Future
Network Port	Connector: RJ-45 10/100 Base-T
Audio Control Port	Connector: RJ 45 Interface: RS-232 ,38.4K baud Max Distance: 100' (30.48m)
Video Control Port	Connector: RJ-45 Interface: RS-232, 9600 Baud Max Distance: 100' (30.48m)
IR Port	Future
Settings	6-Position Dip Switch (Factory Default)
Power Supply	5.5mm OD x 2.5mm ID Coax Connector 12 VDC, 1.0 Amp, Auto-switching
General Information	
Operating Temp	32° to 104° F (0° to 40° C)
Power Consumption	< 12 watts
Dimensions	8.375" (212.73mm) W x 6.0" (152.4mm) x 1.72" (43.688mm) H
Weight	1.4 lbs (0.635Kg)

Customer Support Contact Information

Address: Vaddio
             9433 Science Center Drive
             New Hope, MN 55428

Email: support@vaddio.com

Website: www.vaddio.com

Toll Free: +1 (800) 572-2011
Phone: +1 (763) 971-4400
Fax: +1 (763) 971-4464

Compliance and CE Declaration of Conformity: **WEBBi - Web Controller**

Compliance testing was performed to the following regulations:

* FCC Part15, Sections 15.107, 15.109 Subpart B   Class A
* ICES-003 ISSUE 4, 2004   Class A
* EN55022 A1 2007   Class A
* EMC Directive 2004/108/EC   Class A
* IEC 60950-1:2005 (2nd Edition); Am 1:2009   Class A
* EN 60950-1:2006+A11:2009+A1:2010+A12:2011   Class A

* **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.
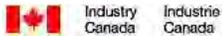
ICES-003 Compliance
ICES-003, Issue 4: 2004
This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.
Le présent appareil numérique n'emet pas de bruits radioélectriques dépassant les limites applicables aux appareils numeriques de la classe B préscrites dans le Règlement sur le brouillage radioélectrique édicte par le ministère des Communications du Canada.

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

Standard(s) To Which Conformity Is Declared:
EMC Directive 2004/108/EC

EN55024/A2:2003 Information Technology Equipment
Immunity Characteristics Limits and Methods of Measurement
* EN 61000-4-2: 1995 + Amendments A1: 1998 + A2: 2001   Electrostatic Discharge
* EN 61000-4-3: 2006 + A1: 2008   Radiated Immunity
* EN 61000-4-4: 2004 + Corrigendum 2006   Electrical Fast Transients
* EN 61000-4-5: 2006   Surge Immunity
* EN 61000-4-6: 2009   Conducted Immunity
* EN 61000-4-8: 2010   Power Frequency Magnetic Field
* EN 61000-4-11: Second Edition: 2004   Voltage Dips, Interrupts and Fluctuations
* IEC 60950-1:2005 (2nd Edition); Am 1:2009   Information technology equipment - Safety
* EN 60950-1:2006+A11:2009+A1:2010+A12:2011   Information technology equipment - Safety

Appendix 1- Connectors Pin Outs

Audio Control Port (RS-232) on WEBBi
Baud Rate: 36.4 kbps

Pin #	Audio Control Port (RS-232)
1	Unused
2	Unused
3	Unused
4	Unused
5	Unused
6	GRD
7 *	TXD
8*	RXD
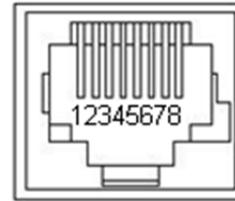
Video Control Port (RS-232) on WEBBi
Baud Rate: 9600 kbps

Pin #	Video Control Port (RS-232)
1	Unused
2	Unused
3	Unused
4	Unused
5	Unused
6	GRD
7	TXD
8	RXD
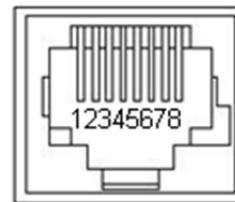
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Toll Free: 800-572-2011 ▪ Phone: 763-971-4400 ▪ FAX: 763-971-4464
www.vaddio.com