



Camera and Electronic Products for Integrators

Installation and User Guide

The Vaddio™ ProductionVIEW™

Operator Camera Control System with Automated Control Functionality



ProductionVIEW Overview

The Vaddio ProductionVIEW camera control System was designed to provide system integrators with an easy to operate fully featured and ultra flexible operator tended camera control system. The overall capability and value of the ProductionVIEW is unmatched in today's camera control and switching market.



Figure 1:
ProductionVIEW

- The ProductionVIEW's unique attributes start with joystick control of up to six (6) PTZ cameras directly (without daisy chaining) and the six discrete camera control ports auto-sense the PTZ camera attached. Whether it is Sony® or Canon® or Vaddio PTZ cameras, the ProductionVIEW senses the cameras attached and provides for seamless control of camera functions.
- The inclusion of an internal 6 x 2 Video Switcher (for Preview and Main) and a built-in 4" LCD Video screen set the ProductionVIEW apart allowing monitoring of both Main and Preview sources at the touch of a button. Both the Main and Preview outputs are given S-Video, Composite Video outputs and Stereo Audio outputs for Audio-follow-Video applications.
- Each of the six camera inputs has been supplied with up to twelve (12) camera presets that are stored internally to the ProductionVIEW. Each input also has S-Video or Composite video Inputs and Inputs 5 & 6 have stereo Audio inputs for DVD or VCR inputs.
- Each of the six connected cameras can also be adjusted individually for the environment in which it operates with auto/manual focus, auto/manual brightness, backlight compensation and one-push automatic white balance.
- The camera control ports are RJ-45F and are easily connected to the Vaddio camera packages using the Vaddio Cat. 5 wiring standard.
- The ProductionVIEW is equipped with an Automatic Camera Switching Mode like the Vaddio ControlVIEW products. Cameras 1 and 2 can have six presets each assigned to input triggers like TouchVIEW™ buttons, StepVIEW™ Mats or AutoVIEW™ Active IR ceiling mount sensors. Or, Camera 1 can be configured to respond to all 12 input triggers alone. Cameras 3 through 6 are configured for response to accept a single trigger for preset activation as well.
- The ProductionVIEW also has 4 assignable Logic outputs for controlling external A/V or RGB switchers.

Key Technical Features:

- **Camera Auto-Sensing** - The ProductionVIEW is capable of identifying through auto-sensing of each camera attached. Control codes for the following cameras are built-in:
 - Vaddio WallVIEW Series Cameras
 - Vaddio CeilingVIEW 70 PTZ Series Cameras
 - Vaddio HideAway Series Cameras
 - Vaddio CeilingVIEW & CeilingVIEW Mega-Pro
 - Vaddio Model Series and PTZCam Series Cameras
 - Sony EVI-D30, EVI-D100 & EVI-D70 & Sony BRC-300 3-CCD Camera
 - Canon VC-C50i & VC-C50iR

Key Technical Features (continued):

- **3-Axis Hall-Effect Joystick** - High quality Hall-Effect joystick allows for control of Pan/Tilt (X/Y coordinates) and the Zoom function (twist for Z or zoom axis). This non-contacting joystick uses industrial quality magnets and sensors, providing solid, consistent performance throughout its entire lifetime.
- **Operator (manual) and Presenter (automatic) modes** - In addition to a manual or “operator” mode, an Automatic Camera Switching mode for switching to camera presets assigned to Vaddio input triggers like the StepVIEW mats, AutoVIEW IR or TouchVIEW buttons is provided.
- **Camera Control** - Each camera input has individual control for Pan/Tilt/Zoom and auto/manual focus, auto/manual brightness, backlight compensation and one-push automatic white balance.
- **72 Total Camera Presets** – 12 Presets per each camera input are stored internally and are not dependent on the internal presets of the camera itself.
- **Master RS-232 Control Port** - In addition to the six (6) discrete camera control ports, the Master control port can be used to control any of the internal functions of the ProductionVIEW or for software updates.

Intended Use:

Before operating the Vaddio ProductionVIEW, 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 camera and/or create a potentially unsafe operating condition.

Save These Instructions:

The information contained in this manual will help you install and operate your Vaddio ProductionVIEW. 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.

Important Safeguards:

Read and understand all instructions before using. Do not operate any PTZ cameras if the camera has been dropped or damaged. In this case, a Vaddio technician must examine the product, if purchased from Vaddio) before operating. To reduce the risk of electric shock, do not immerse in water or other liquids and avoid extremely humid conditions.



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

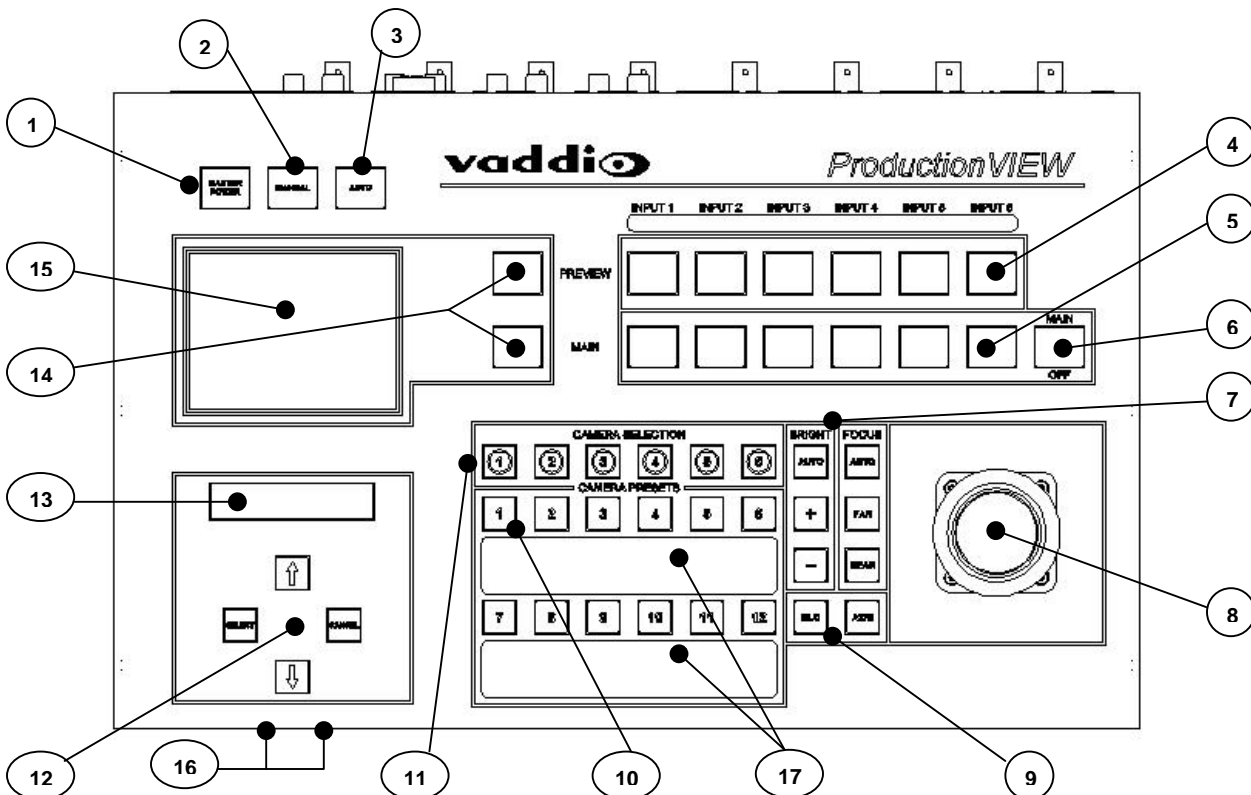
UNPACKING:

Carefully remove the device and all of the parts from the packaging.

Unpack and identify the following parts:

- One (1) ProductionVIEW Camera Control Console
- One (1) Vaddio PowerRite 15VDC Power Supply
- One (1) Vaddio AC Adapter Cable
- Documentation and Manuals

Figure 2:
ProductionVIEW Front Panel Controls



- 1) **System Power Switch** (system on/off)
- 2) **Manual Mode Switch**
 - a. Console is in manual or “Operator Mode” and all video switching is manual
- 3) **Automatic Mode Switch**
 - a. Console is in automatic or “Presenter Mode” and the video switching is handled with the trigger inputs
- 4) **PREVIEW Input Select**
 - a. Selects the camera input to be sent to the PREVIEW Output
- 5) **MAIN Input Select Switch**
 - a. Selects the camera input to be sent to the MAIN Output
- 6) **MAIN OFF Switch**
 - a. Turns MAIN output off (outputs black)
- 7) **Camera Controls**
 - a. Brightness (+, -)
 - b. Focus (Far, Near)
- 8) **3-Axis Hall-Effect Joystick controller**
 - a. Pan (left, right), Tilt (up, down), Zoom (twist +, -)
- 9) **Camera Controls**
 - a. BLC – Back Light Compensation
 - b. AWB – Automatic White Balance
- 10) **Camera Preset Switches**
 - a. Twelve (12) camera presets per camera can be saved under the Camera Preset switches
- 11) **Camera Selection Switches**
 - a. Selects camera to be controlled by Joystick and camera controls (brightness, focus, BLC, AWB)
- 12) **Menu Controls**
 - a. Select, up, down and Cancel used to navigate menu system
- 13) **LCD Display for Menu Control**
 - a. See Appendix 1 for detailed description

Front Panel Controls (continued)

14) PREVIEW and MAIN Selection Switches

- PREVIEW assigns the PREVIEW camera input to be displayed on the 4" Monitor
- MAIN assigns the MAIN camera input to be displayed on the 4" Monitor
- NEITHER picked ***IMPORTANT NOTE:** with no panel selection switch selected, the LCD Monitor will turn off.

15) 4" Diagonal LCD Monitor

- (10.16cm diagonal) switches between PREVIEW, MAIN and NEITHER (black)

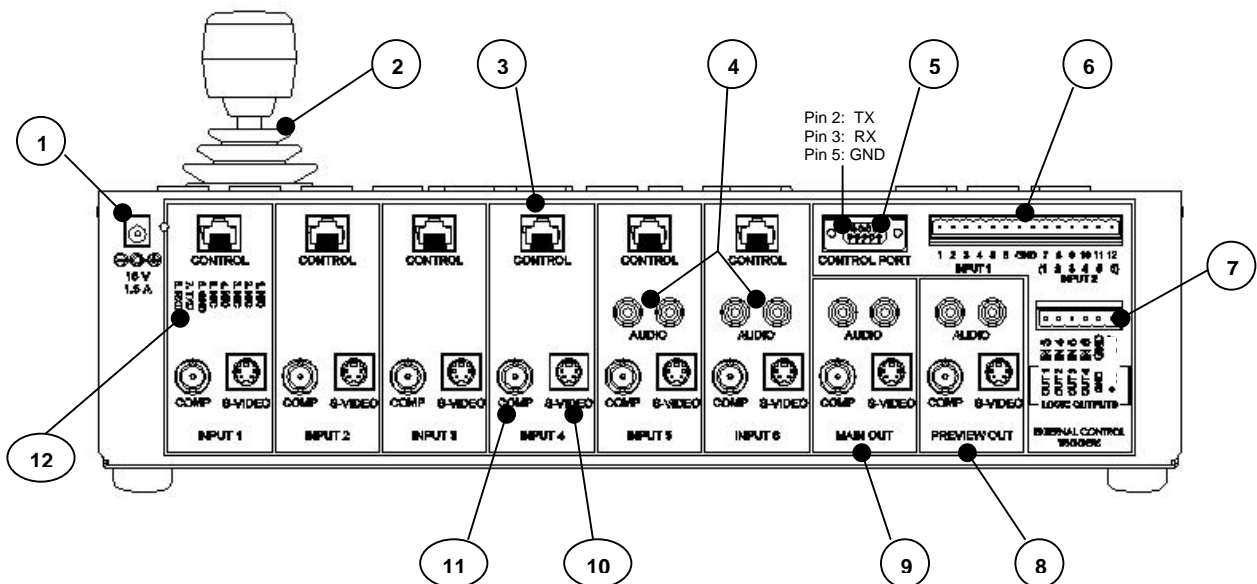
16) LCD Display Controls (recessed mini screw driver adjustments) on front edge panel

- Left – Color Saturation (up, down)
- Right – Brightness (up, down)

17) Dry Erase - White labeling areas

- To notate positions, presets, functions, etc...

Figure 3:
Back Panel I/O and Controls



1) Power Input

- (Note: Use only the power supply provided with the ProductionVIEW)

2) 3-Axis Hall-Effect Joystick

- Side view - shown with rubber boot

3) Camera Control Ports on RJ-45 connectors

- One camera control port per camera (no daisy-chaining required)

4) Input 5 and 6 Stereo Audio Inputs

- Inputs 5 and 6 have line level stereo audio inputs for use with DVD, VCR, computers etc...

5) Control Port Input

- DB-9 for RS-232 control of internal functions (Pin 2=TX, Pin 3=RX & Pin 5 GND)

6) Input Triggers for use in AUTOMATIC mode

- Input Triggers for input channels 1 and 2
- Configurable in two modes (6 triggers for Input 1 and 6 triggers for Input 2, or 12 triggers for input 1 only)
- Supports Vaddio AutoVIEW IR, StepVIEW, TouchVIEW and MicVIEW trigger inputs

7) Multifunction Triggers (assignable either as input triggers or logic outputs)

- Input Triggers for input channels 3, 4 5 & 6 with GND
 - Memory locations 3-1, 4-1, 5-1, 6-1
- Logic outputs follows MAIN Outputs 1 through 4 with GND
- Additional GND connector for multiple trigger configurations

Back Panel I/O and Controls (continued)

8) PREVIEW OUT

- a. Outputs S-Video, composite Video and Stereo Audio of selected PREVIEW Input on Front Panel

9) MAIN OUT

- a. Outputs S-Video, composite Video and Stereo Audio of selected MAIN Input on Front Panel

10) S-Video Input

- a. Each Input channel (1 through 6) has an S-Video Input

11) Composite Video Input

- a. Each Input channel (1 through 6) has an composite video Input

12) RJ-45 Pin-out diagram

- a. Pin-out reference for RS-232 control over Cat-5 (Cat. 5e) cabling

First Time Set-up with the ProductionVIEW:

Vaddio' ProductionVIEW was designed to be exceptionally easy to use and operate right out of the box. The controls are intuitive and logical and the connectivity or pin-outs are printed on the back panel for most product connections (especially the Vaddio cabling standard using Cat. 5 cabling.) All of the Vaddio standards for using video, power and control over Cat. 5 cabling are also well documented and are available free of charge from the Vaddio website.

Getting Started:

Generally the best way to understand a product is start using it. With ProductionVIEW, it's that easy. Connect a couple of cameras to the ProductionVIEW using the Cat. 5 cable for control, and connect your choice of S-Video or composite video from the Quick Connect box or (Quick Connect 4) to the video input on the ProductionVIEW. Connect power to the cameras with the Quick Connect system. Then, when the cameras have power, turn on the ProductionVIEW. The ProductionVIEW will auto-detect the cameras that are on and connected and program itself to control, store presets and change settings like brightness and focus for that specific camera attached.

Figure 4: Basic Quick Configuration

Showing a two (2) camera system using different Quick connect systems

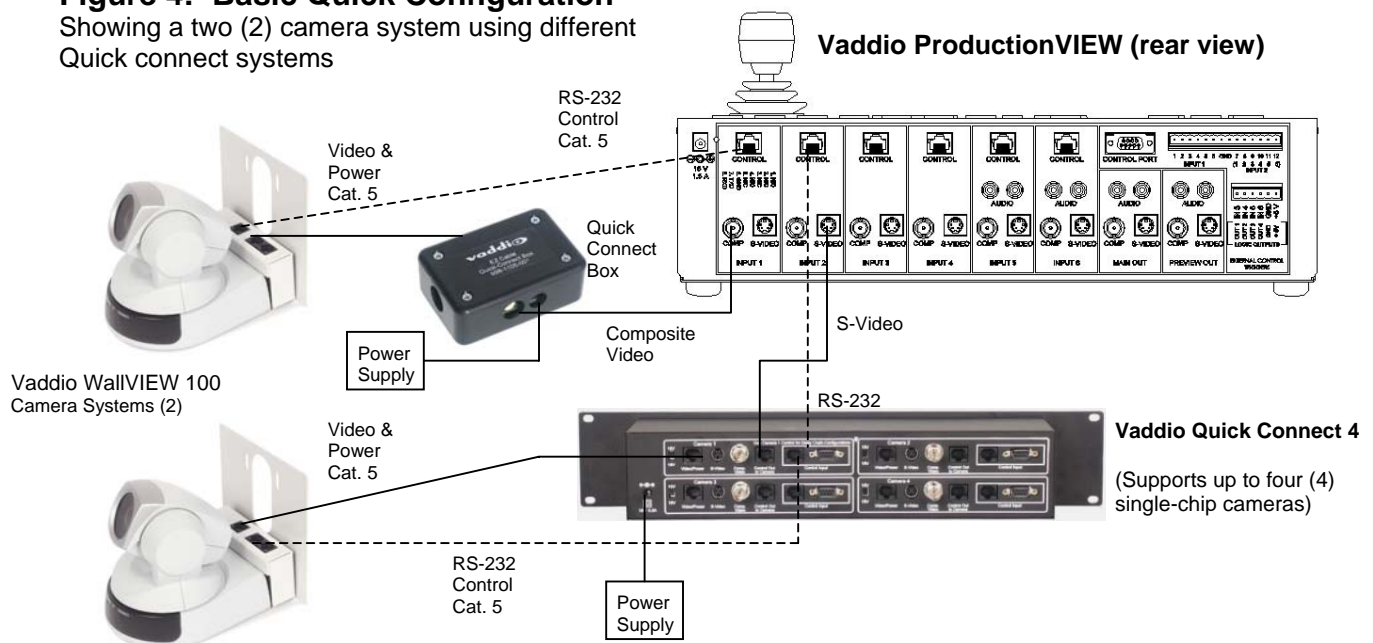
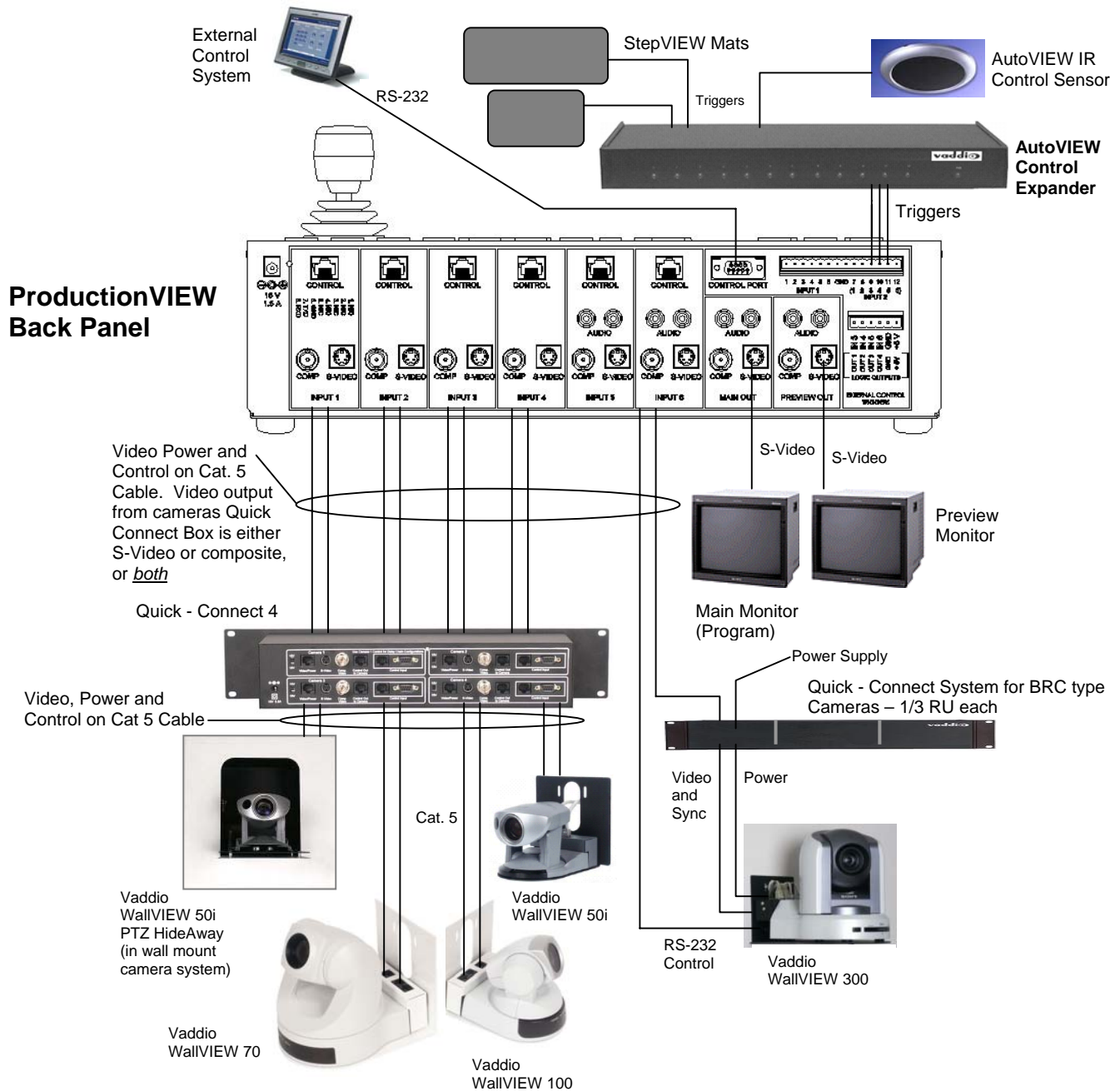


Figure 5: In-depth ProductionVIEW camera control system examples. The ProductionVIEW is ideal for controlling a few cameras or more complicated systems (i.e. five (5) PTZ base cameras with external triggers) as outlined below.



Operating the ProductionVIEW:

Most of the console functions and controls are easy and intuitive. However, there are some more involved procedures here listed below.

Master Power Switch

- When the Master Power Switch is powered down, all of the attached cameras will be placed in standby.
- When the Master Power Switch is powered up, all attached cameras will activate and select default camera and preset information as defined in the menu.

Setting Camera Presets per Channel:

- Press and hold the desired camera selection button for 4 seconds.
- The unused camera presets and camera selection button will flash at this time.
- Touching a flashing camera preset button, the unit will store all the information available via the camera at this time. A non-flashing or already saved preset location (not-flashing camera preset button) can be overwritten.

Camera presets contain all the camera information besides just the Pan/Tilt/Zoom but also brightness, focus, backlight, zoom-speed and others as well. The particular control saved under each camera preset is a function of the parameters available on a per camera basis.

Using the onboard 4" (10.16cm) LCD monitor

The LCD monitor is a convenience feature and the ProductionVIEW is generally expected to be used with additional higher resolution monitors. When the LCD is in PREVIEW mode, PREVIEW cameras or inputs from one to six will be displayed when lit. When the LCD is in MAIN mode, MAIN cameras or inputs from one to six will be displayed when lit. When the MAIN Out is turned off, then no main signal will be present. Also, if neither PREVIEW nor MAIN switch is backlit, then no signal is sent to the LCD monitor.

The 3-Axis Joystick

The joystick included is programmable for directional control (to avoid stage right vs, stage left positional issues). The joystick is programmable within the menu section.

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 ProductionVIEW
- Keep this device away from food and liquid
- For smears or smudges on the sensor, wipe with a clean, soft cloth with a light duty household cleaner that leaves no residue. Repeated use of a "Windex®" type product with vigorous pressure may remove some of the silk screening and this will void the warranty.
- Do not use any abrasive chemicals.

Operating and Storage Conditions:

Do not store or operate the ProductionVIEW System under the following conditions:

- Temperatures above 40°C (104°F) or temperatures below 0°C (32°F)
- High humidity, condensing or wet environments
- Dusty environments
- In inclement weather
- Under severe vibration

Compliance and CE Declaration of Conformity

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 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 EN 55103-1/2 standards for Emissions and Immunity and meets the requirements for E4 environment.

This product complies with Class A (E4 environment). 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 89/336/EEC (EMC)

EN 55103-1 Class A

EN 55022 A

EN 55103-2 Class A

EN 61000-3-2:1995

EN 61000-3-3:1995

EN 61000-4-2:1995/A1:1998/A2:2001

EN 61000-4-3:2002

EN 61000-4-4:1995/A1:2001/A2:2001

EN 61000-4-5:1995/A1:2001

EN 61000-4-6:1996/A1:2001

EN 61000-4-11: Second Edition: 2004

Warranty Information:

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 if Vaddio receives notice of such defects during the warranty. They will, at its option, repair or replace products that prove to be defective.

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, operation outside the normal environmental specifications for the product, use of the incorrect power supply, 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. 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 through one of the following resources: e-mail support at vaddio_support@photo-control.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. Describe the reason for repairs or returns as well as the date of purchase. Include your assigned RMA number in all correspondence with Vaddio. Write your assigned RMA number on the outside of the box when returning the product.

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.

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 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.

Appendix 1

A) RS-232 Control

For RS-232 control purposes, there is no longer any need for the often times confounding “Daisy-Chain” control configuration. Each ProductionVIEW Channel will automatically set up the channel for optimum use for the camera attached. And of course, the need to run some cables back to the head end and daisy-chain other cables between in-room equipment has long been a thorn in the integrator’s side. ProductionVIEW alleviates these concerns as well as many others.

As with all programming, Vaddio uses very simple means to accomplish custom programming with the ProductionVIEW.

Communication Specification

Communication Speed: 9600 bps (default)
 Start bit: 1
 Stop bit: 1
 Data bits: 8
 Parity: None

Female DB-9 Control Port Pin-outs

Pin 2: TXD
 Pin 3: RXD
 Pin 5: GND

API and Programming Language (Revision A)

Vaddio ProductionVIEW	
?	- This menu
----- System -----	
SetDefault x-	Set Default Preset(1-12)
DefaultCam x-	Set Default Camera(1-6)
ExtCombine x-	Ext Combine Cam1&2(Yes/No)
ExtDir x-	Ext Preset Dir(In/Out)
TimeDelay x-	Default Timer(0-60)
Power x-	Power(On/Off)
Display x-	Display (Main/Preview/Off)
CamFolPrv x-	CamSel->Preview (Yes/No)
SysMode x-	(Manual/Auto)
DspCams x-	List connected cameras
----- Pan, Tilt, Zoom -----	
InvertPan x-	Invert pan Dir(Yes/No)
InvertTilt x-	Invert Tilt Dir(Yes/No)
InvertZoom x-	Invert Zoom Dir(Yes/No)
----- Camera -----	
Camera x-	Switch to Camera(1-6)
Zoom x-	Zoom (In/Out/Stop)
Focus x-	Focus(Auto/Near/Far)
Bright x-	Bright(Auto,Up,Down)
Move x-	Move(Up,Down,Stop,Left,Right)
Config	- List Config Settings
ClearAll	- Clear all presets
Reset	- 'CPU'Reset
Rescan	- Re-Scan for Cameras
Version	- Firmware Version
PreviewIn x-	Preview Source (1-6)
MainIn x-	Main Src(0,1-6)0=Off
SerialEcho x-	Echo Serial (Yes/No)
SerialInfo x-	Status (On/Off)
CBIdleDsp x-	CB No Src(On/Off)
Preset x-	Go to Preset(1-12)
Store x-	Store Preset(1-12)
BLC x-	BacklightComp(On,Off)
AWB x-	AutoWhiteBal(On,Off)
Pass(cr)	(Camera command string)

B) Command Structure

Command Description

AWB x (On/Off) Turns auto white balance on or off on controlled camera.
 BLC x (On/Off) Turns backlight compensation on or off on controlled camera.

Bright x	(UP) Turns brightness up one increment.(Down) Turns brightness down one increment (Auto) restore auto brightness on controlled camera.
Camera x	(1-6) Switch control function to camera x.
CamFolPrv	(Yes) selecting preview camera source will automatically select camera control for that camera (No) camera control must be selected manually.
CBIdleDsp	(On) Displays Color bars on selected ports if no video is present, (Off) Displays dark screen.
ClearAll	Clears ALL presets.
Config	Displays the current configuration.
DefaultCam x	(1-6) When in Automatic mode, this camera will be activated at expiration of Time Delay. At startup, unit will switch to this camera.
Display x	(Main/Preview/Off) Selects what will be viewed on the internal LCD screen.
DspCams x	Lists connected cameras and presets.
ExtCombine x	(Yes) 12 external presets all for camera 1. (No) 6 external presets for camera 1, 6 for camera 2.
ExtDir x	(In) accepts triggers from external source as MicVIEW, StepVIEW, AutoVIEW IR, TouchVIEW, or third party gated microphone mixers.(Out) provides “logic out “ on out 1-4 pins to indicate camera in use.
Focus x	(Auto) restores auto-focus (Near) manual focus one increment near (Far) manual focus one increment far on controlled camera.
InvertPan x	(Yes) Changes pan direction on all cameras. (No) Normal direction.
InvertTilt x	(Yes) Changes tilt direction on all cameras. (No) Normal direction.
InvertZoom x	(Yes) Changes zoom direction (No) Normal direction.
MainIn x	(0-6) Selects the main out source 0=off.
Move x	Up/Down/Stop/Left/Right Moves or stops controlled camera.
PanSpeed x	(1-24) Changes pan speed on all cameras 24=fastest.
Pass(cr)	Passes next string to controlled camera.
Power x	(On)Starts ProductionView (Off) Places ProductionView and all controlled cameras into standby.
Preset x	(1-12) Go to preset x on controlled camera.
PreviewIn x	(1-6)Selects the preview out source.
Rescan	Rescans for attached cameras.
Reset	Reboots system.
SerialEcho x	(Yes) Serial commands sent to the ProductionView will be echoed back.(No) Not echoed.
SerialInfo x	(On) Shows console button pushes to RS232 host port. These commands the same as the input serial commands.(Off) Does not show these button pushes.
SetDefault x	(1-12) When in Automatic mode, this preset will be activated at expiration of Time Delay. At startup, unit will switch to this preset.
Store x	(1-12) Stores preset x on controlled camera.
SysMode x	(Manual) External triggers and default presets have no effect.(Automatic) External triggers will activate presets and cameras. Default camera, preset and timer applies after initial trigger.
TiltSpeed x	(1-20) Changes tilt speed on all cameras 20 = fastest.
TimeDelay x	(0-60 seconds)Default timer setting for default camera and preset when in automatic mode.0=off. Trigger must be activated and released for timer to take effect.
Version	Displays Firmware version installed
Zoom x	(In) Zooms in (Out) Zooms out (Stop) Stops Zoom - On controlled camera.



General Specifications:

Compatible Cameras:	Vaddio, Sony and Canon
Video Formats Supported:	NTSC and PAL
Video Switcher:	6x2, Audio-follow Video on Channel 5 and 6
Video Inputs	Six composite (BNC); Y/C (4-Pin Mini)
Video Outputs	Preview and Main, composite (BNC) & Y/C (4-Pin Mini)
Camera Control Ports	Six (6) RS-232 on RJ-45F
Control Interface	One (1) RS-232 on DB9
LCD Monitor	4" (10.16cm) Diagonal, Switchable between Main and Preview
Power Requirements	PowerRite 15 VDC Switching type (provided)
Control Inputs for Automatic Mode (Input 1 and 2)	1 and 2 have six presets each or Camera 1 can have 12 Control Inputs for Automatic Mode (Input 3-6) Cameras 3 through 6 have one Preset each, or Configurable (programmable) as Logic Outputs
Weight:	8.5lbs/3.85kg
Dimensions:	Height 4"/10.2cm, Width 16"/40.6cm, Depth 10"/25.4cm