

# PRELIMINARY



## V4400QS Real-Time Digital Color Quad Splitter

- **Individual camera titles**
- **Alarm inputs and outputs**
- **Sequential switching**
- **VCR interface**
- **On-screen programming menus**
- **Economical**

The V4400QS Digital Color Quad Splitter accepts four camera inputs, processes them digitally, and displays all four on a single monitor screen. The complete video from each camera is displayed. All operating and programming functions are performed with the front panel keys. The V4400QS may also be controlled remotely by a user-provided dry contact or a host computer using a simple RS-232 command set.

The V4400QS features real time image processing and 2x digital zoom in VCR playback. It has a high resolution of more than 700 TV lines in full screen mode. In VCR playback mode, the image can be put in a FREEZE mode. The splitter also features adjustable dwell time and on/off selectable on-screen title, time, date display and border display.

The V4400QS accepts both NTSC and PAL signals and 120 and 230 VAC.

### Sequential Switching

In addition to the quad screen display, the V4400QS offers a manually selected full-screen display of individual cameras and a sequencing program that displays each camera full screen. In this program, after camera 4 has been displayed, the quad image is displayed as part of the sequence. A dwell period is menu-selectable. Dwell can be set from 1 to 9 seconds and a camera can be programmed to be skipped in the sequence.

### Individual Camera Titles

Each camera can have a title of up to eight characters, from a character set including the upper and lower case alphabet, numbers 0 through 9, a series of special characters (including punctuation and common symbols) and a blank.

### Alarm Operation

The V4400QS includes alarm response capabilities. A separate hard-wired alarm input (which can be normally open or normally closed, menu-selectable) is provided for each camera channel, and an alarm relay output is provided for connection to an external device, such as a VCR. This output is normally open.

When an alarm is activated, the associated camera video displays full screen, the word ALARM displays on screen, a buzzer, if programmed ON, generates a continuous audible alarm and the alarm output relay activates. If multiple alarms are activated, the screen switches the full screen video for each channel in turn and displays the ALARM message for each screen. The buzzer generates an audible sound. If one of the alarm activated channel buttons is depressed while the video is switching, the switching stops temporarily while the button is depressed and continues when the button is released. Pressing the SEQ/ALM button resets the alarm condition.

### Video Loss

A built-in video loss detection system generates a visual alarm if video is lost from any of the four camera inputs. If video is lost from a camera, the screen goes blue and VD Loss appears on the screen. Unaffected cameras continue to display video.

### Time/Date

The unit has an onscreen menu to set the time and date. Time is in either the 12-hour or the 24-hour mode and is displayed at the top of the screen. The real time clock has a battery backup that can store data for two weeks without power.

### VCR Interface

The V4400QS has a VCR interface. The VCR input BNC accepts the video signal from the VCR and connects to the video output connector of the VCR. It allows the recorded tape to be played back. The VCR output BNC outputs the video signal to the VCR. This output is a quadrant display of video and any quad can be zoomed to full screen. It is connected to the video input connector of the VCR.

The V4400QS complies with FCC requirements for a Class A device and with European Community EMC Directive 89/336 EEC. The product was subjected to the testing outlined in European Normalization Standard EN 55022:1994 + A1:1995 (Class A) (Electromagnetic Compatibility - General Emissions Standard Part 1) and EN 50082-1 (Electromagnetic Compatibility - Generic Immunity Standard Part 1: Residential, Commercial and Light Industry).

## Contractors' Specification

### Real-Time Digital Color Quad Splitter

The color quad splitter shall display the video from four camera inputs on a single monitor screen and shall provide manually selectable full screen display of any input and shall also provide alarm operation. Each camera shall have a looping output. Video signal type shall be NTSC/PAL standard 2:1 interlace, composite video, 1.0 V p-p, terminated with 75 ohms. A sequential switching function shall be provided with a menu-selectable dwell time, and the quad screen shall be included in the sequence. Any camera or cameras or the quad display may be removed from the sequence. Dwell time shall range from 1 to 9 seconds.

Alarm operation shall include a separate hardwired alarm input for each camera input, normally open or normally

closed selectable, with an on-screen alarm announcement. A relay output shall activate while alarm inputs are active. A video loss alarm shall announce the loss of video by displaying a message on screen.

Additional functions shall include a separate eight-character title for each camera input. Power shall be supplied by a detachable external 5 VDC power supply. Dimensions shall not exceed: height, 1.75 in. (44 mm); width, 17.0 in. (432 mm); depth, 11.8 in. (300 mm). Weight shall not exceed 9.9 lb (4.5 kg), excluding power supply.

The digital color quad splitter shall be Vicon model V4400QS.

## Technical Information

### VIDEO SIGNAL

**Television System:** NTSC/PAL standard 2:1 interlace.

**Video Inputs:** 4 inputs from cameras.  
1 input from VCR.

**Video Input Signal:** 1 V p-p composite video, 75 ohms.

**Video Input Termination:** Auto switch.  
Nonlooping: 75 ohm.  
Looping: High-impedance.

**Video Outputs:** 4 looping outputs from camera inputs.  
1 output to monitor.  
1 output to VCR.

**Video Output Signal:** 1 V p-p, 75 ohm.

**Refresh Rate:** Full screen mode: 60/50 frames/second.  
Quadrant display and VCR playback modes: 60/50 frames/second.

**Resolution:** Full screen mode: 720 TV lines.  
Quadrant display mode: 220 TV lines.

### ELECTRICAL

**Input Voltage:** 100-250 VAC, -10%/+6%; detachable power supply included.

**Current Drain:** 0.4 A max @ 110 VAC.

**Power Consumption:** 2 W.

**Heat Equivalent:** 0.1 btu/min. (0.06 kg-cal/min).  
NOTE: These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.

**Power Supply:** Input: 120/230 VAC.  
Output: 5 VDC, 2.5 A. Standard DC jack.  
Plugs into a standard outlet; includes 6 ft (1.8 m) output cord with connector for V4400QS.

### ALARM

**Alarm Inputs:** 4 hardwired alarm inputs (normally open or normally closed) for each video channel.  
Video loss alarm.

**Alarm Output:** 1 normally open relay output; relay goes active in response to a hardwired input on any camera channel.

**Alarm Relay Rating:** Nominal contact capacity (resistive load) is 1A/30V DC or 0.5A/125V AC.

**Alarm Annunciation:** Hardwired alarm inputs: associated camera video displays full screen, the word ALARM displays on screen, a buzzer, if programmed ON, generates a continuous audible alarm for the set time and the alarm output relay activates.  
Video loss: screen goes blue and VD Loss appears on the screen.

### VIDEO FEATURES

**Display Modes:** Quad screen display: four quadrants separated by a black border (if ON) with individual titles.  
Full screen: video from single camera input with title.  
Sequential switching: video input from each camera and the quad display displays for specified dwell time.  
VCR playback: single screen display with 2x digital zoom.

**Sequencing Dwell:** Cameras and quad display can be programmed for a specified dwell time of 1 - 9 seconds.

**Camera Titles:** Each camera may have an individual title of up to 8 characters from a character set of upper and lower case alphabet, numbers 0-9, a series of special characters and a blank.

## Technical Information (cont'd)

**Output to VCR:** Video output to VCR is always quad screen display.

**Input from VCR:** VCR may be played back through V4400QS and is full screen 2x digital zoom.

**Looping Outputs:** Each camera has a looping video output that may be connected to other equipment. Video that is looped out must be terminated with 75 ohms at the last video device in line.

### CONTROLS AND CONNECTORS

**Front Panel Controls:** When active, LED illuminates and an audible beep is sounded.  
VCR: selects VCR input for display on monitor.  
PIP: displays picture-in-picture mode screen.  
SEQ/ALM: initiates sequential display or alarm reset when alarm is activated.  
QUAD/ENTER: enables quadrant display; in programming, returns to main setup menu.  
CH1/ ▲: displays camera 1 full screen; in programming, moves cursor up.  
CH2/ ▼: displays camera 2 full screen; in programming, moves cursor down.  
CH3/ ◀: displays camera 3 full screen; in programming, moves cursor left.  
CH4/ ▶: displays camera 4 full screen; in programming, moves cursor right.

**Rear Panel Connectors:** Video Inputs: 4 BNCs.  
Video Outputs: 4 BNCs, automatic impedance switch.  
Monitor Output: 1 BNC.  
VCR Input: 1 BNC.  
VCR Output: 1 BNC, may alternatively be used for second display monitor.  
Alarm In and Out: 10-pin terminal block for each video input and one output.  
Power Input: concentric pin-type jack.  
Remote: 15-pin connector.  
Ground: screw.

### MECHANICAL

**Dimensions:** Height (H): 1.75 in. (44 mm).  
Width (W): 17.0 in. (432 mm).  
Depth (D): 11.8 in. (300 mm).

**Weight:** V4400QS: 9.9 lb (4.5 kg).  
Power supply: 0.46 lb (0.21 kg).

**Shipping Dimensions:** Height: 4.1 in. (105 mm).  
Width: 18.7 in. (475 mm).  
Depth: 15.7 in. (400 mm).

**Shipping Weight:** 10.6 lb (4.8 kg).  
**Shipping Volume:** 0.7 ft<sup>3</sup> (0.02 m<sup>3</sup>).

### ENVIRONMENTAL

**Operating Temperature Range:** 32 to 122° F (0 to 50°C).  
**Operating Humidity:** Up to 90% relative, noncondensing.  
**Storage Temperature Range:** -31 to 185° F (-35 to 85°C).  
**Storage Humidity:** Up to 95% relative, noncondensing.

