Hall Research Technologies, Inc.

4 x 1 S-Video Switch
with Audio and Serial Control

VS4-YCA User's Manual

UMA1084 Rev. A

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Federal Communications Commission Statement

This equipment generates; uses and radiates radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device, pursuant to Part 15 of the FCC rules. Harmful interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

European Union Declaration of Conformity

This product has been tested and shown to comply with the requirements of the European EMC directive 89/336/EEC

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CUSTOMER SUPPORT INFORMATION

Order **toll-free** in the U.S. **800-959-6439**
FREE technical support, Call **714-641-6607** or fax **714-641-6698**
Mail order: **Hall Research Technologies** 1163 Warner Ave., Tustin, CA 92780
Web site: **www.hallresearch.com** • E-mail: **info@ hallresearch.com**

1. Introduction

1.1 General

The Model VS4-YCA is a versatile S-Video (Y/C or S-VHS) Switch with 4 inputs and one output. It also switches stereo audio from each of the inputs. It is compatible with all TV standards.

The selection of the channel to be displayed can be made from individual front panel switches or via RS-232 control port. Four LED lights are used to show the channel selection.

The unit features 250 MHz amplifiers for a clear and crisp image and also buffers the audio signals with low noise amplifiers for a distortion-free sound.

The output can be placed in scan mode (either from the front panel by pressing two buttons simultaneously, or via a serial command). In this mode the output displays each input channel for a few seconds and cycles through all inputs. The output can also be blanked (with audio muted) via a serial command.

1.2 Features

- Serial Port for Control via external device
- Buffered output; perfect for high quality video
- Scan mode to cycle through each input.
- LED Indicators
- Rugged Shielded Metal Enclosure
- Installs in minutes
- Universal Power Supply allows use world-wide

2. Installation

1. Plug in the desired number of S-Video/Audio sources to the S-Video/Audio inputs on the back of the VS4-YCA.
2. Connect an output device to the S-Video/Audio output on the back of the VS4-YCA.
3. Connect the included RS-232 cable to a PC or other Serial control device if so desired.
4. Connect the included power supply to the jack on the rear of the unit.
5. Apply AC to the power supply
6. Turn on your output video display and all audio/video sources

3. Operation

3.1 Modes of Operation

Scan Mode - Will cycle through and select each S-Video/Audio signal for a programmed number of seconds (1 to 60), and then switch to the next S-Video/Audio input.

Normal Mode - S-VIDEO/AUDIO inputs are selected based on user input. (This is the default mode).

The VS4-YCA can only be in one of these modes at a time.

3.2 Front-Panel Switches

The first function of the front panel buttons is to switch from one S-Video/Audio signal to another. Just press the button and the S-Video/Audio signal you selected will be routed to the output. If there is no S-Video/Audio signal to be displayed then you will see a black screen. The VS4-YCA will enter Normal Mode any time a single front panel button is pressed.

The second use of the front panel buttons is to put the VS4-YCA into Scan Mode. Press buttons 3 and 4 simultaneously and the VS4-YCA will enter Scan Mode. The time interval between switching will be the time interval last specified via Hyper Terminal. If no interval has been specified then the default is 5 seconds.

The third use of the front panel buttons is to reset the VS4-YCA to the factory default settings. Press button 1 and 4 simultaneously for 3 seconds. This will turn off scan mode and set the scanning interval to the default time of 5 seconds. This will also un-blank the outputs.

3.3 RS-232 control via Hyper Terminal

To use the RS-232 control interface, start HyperTerminal™ with the following settings:
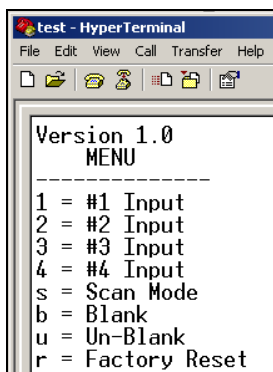
Baud rate: 4800
Data Bits: 8   Parity: None   Stop Bits: 1 or 2
Flow Control: None
This is what the menu will look like in HyperTerminal™.

```
test - HyperTerminal
File  Edit  View  Call  Transfer  Help

Version 1.0
      MENU
-------------
1 = #1 Input
2 = #2 Input
3 = #3 Input
4 = #4 Input
s = Scan Mode
b = Blank
u = Un-Blank
r = Factory Reset
```

By pressing the number keys, "1", "2", "3", "4", the VS4-YCA will switch to that S-Video/Audio input. This will also put the VS4-YCA into Normal Mode.

Pressing "s" will put the VS4-YCA into Scan Mode. Before the VS4-YCA enters Scan Mode, you will be asked how many seconds between switching:

"Seconds between switching? (1-60)".

To this question, you must input a number between 1 and 60 then press enter. Any other input will cause this question to be repeated.

Pressing "b" will blank the S-Video output and mute the line level Stereo Audio output from the VS4-YCA until the un-blank command is received.

Pressing "u" will un-blank the S-Video output and un-mute the line level Stereo Audio output from the VS4-YCA if it was previously blanked.

Pressing "f" will reset the VS4-YCA with the factory defaults. The factory defaults are Normal Mode, and the time interval between scanning is 5 seconds.

3.4 Non-Volatile Memory

The VS4-YCA saves the last channel selected and the Mode of operation (scan vs. normal) after power off. Blanking mode is not remembered.

4. Troubleshooting

Contacting Hall Research and Shipping/Packaging

Contact HRT Support at 714-641-6607 or via email or web. Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description. If you need to ship your unit for repair, make sure to get a RMA number first.

5. Specifications

Video Gain/Level Unity Gain. 1V p-p for Y, 0.3 V p-p for C
Audio Gain/Level Unity. Gain. 0 to +4dBu (0.78 to 1.23Vrms)
Video Bandwidth 250 MHz. (-3 dB)
Audio Bandwidth 10 Hz to 20 KHz
Input Impedance Video: 75 Ω on Y and C, Audio: 5 KΩ
Serial Control 4800 Baud, 8-bit, 1 stop bit, no parity
Temperature Operating: 32 to 122°F (0 to 50°C)
Storage: –40 to +158°F (–40 to +70°C)
Enclosure Steel
MTBF 85,000 hours (calculated estimate)
Power From utility-power (mains) outlet, through included external power supply.
Output Voltage: 6v DC Center-Positive. Average Power Consumption: 1 Watt
Size (h x w x d) 1.85"H X 10.88"W X 4.00"D
Weight 1.8 lbs (2.5 lbs shipping)

Products Designed and Made in the USA

1163 Warner Ave., Tustin, CA 92780
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