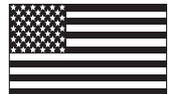| The VDS, VDS-3 and VSA | Video Detector Switch |

VDS Video Detector Switch
VDS-3 Video Detector Switch, 3 Channel
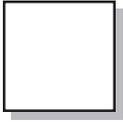**VSA Video Detector Switch with Audio**

Manual Version 3.0

⊓BURST™

BURST ELECTRONICS INC

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Video Detector Switch

Description:

The Burst Electronics Model VDS (and the VDS-3, a 3 channel version) detects the presence of composite video at its A input, and outputs this video. If loss of video on the A input is detected then the unit switches to the B input, lights a Red LED (VDS only) and energizes an internal "tally" relay (standard on VDS and VSA, optional on VDS-3). This relay may be used to control external devices. The tally relay has both normally closed and normally open contacts (Form C relay). The Model VSA includes stereo audio switching, audio follow video.

The video detection process utilizes a sophisticated sync separator circuit and a micro controller IC to analyze the A input. The composite sync tip amplitude, vertical sync, horizontal sync, and frame pulse are all analyzed by the micro controller to determine the quality of the incoming video on the A input.

Setting the DIP Switch:

The DIP switch sets the video accept/reject criteria. To set the switch, remove the cover. There is a four position DIP switch on the board that sets the loss of video software options and a pot that adjusts the sync tip reject point. The switch is factory preset to Up, Up, Up, Down. The sync amplitude is set to -20 IRE trip point.

For the DIP switch, this is the most strict setting. This setting will only pass video with near RS-170A quality. If you would like to accept less than perfect video, such as a VCR in the Pause mode or non-interlaced Blue Screen mode, then set the switch to Down, Down, Down, Down.

The composite sync tip trigger threshold may be adjusted from the factory preset of -20 IRE. To adjust this trigger point, a wave-form monitor, a source of stable video and an attenuator are required. Input the desired sync level and adjust the pot. DIP switch position 1 must be up.

When any of the first three switches are up, the microcontroller will test the associated input pins for valid signals. When a switch is down, the test for that signal will be skipped. All enabled tests must pass consecutively before input A is considered good.

Detection time will increase in relation with how many signal tests are enabled. Detect times will substantially increase if Sw 4 is up, loss of video detect will take approximately 4 seconds.

If the frame test is enabled, progressive scan video signals (blue screen) and VCR search and pause modes will be detected as bad video.

DIP Switch Function

Sw1 Up   Test the sync tip level
Sw2 Up   Test the vertical sync (good for end of tape)
Sw3 Up   Test the frame signal (Blue screen test)
Sw4 Up   Sample each enables input 10 times

Forcing the B Input

The presence of the B input can be confirmed with the "Force B" feature. With the VDS and the VSA, ground the appropriate pin of the MiniDIN connector. This will force the unit to select the B input. See the diagram at the end of the manual for the connector pinout.

The VSA also offers a front panel test switch to check for the presence of the B input.

The VDS-3 also has a front panel switch to force B. The remote Force B and Tally outputs are factory options for the VDS-3.

Specifications:

Video
NTSC and PAL (autodetects)

Tally Relay:
Form C (NO and NC contacts)
Connector: 4 pin miniDIN
Relay Rating: 1A 30 Vdc, 0.5A 125 Vac

General:
Video Connector: BNC
Audio Connector (Model VSA): RCA Phono Type
Power: 9 to 16 Vdc, polarity insensitive
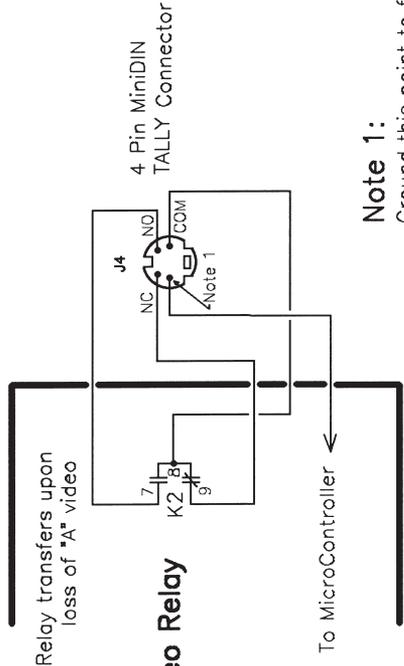Current: VDS   100mA
VDS-3   300mA
VSA   125mA

Wall Module Power Supply Included

Loss of Video Relay

Relay transfers upon loss of "A" video

K2

7
8
9

To MicroController

J4

NC
NO
COM

Note 1

4 Pin MiniDIN
TALLY Connector

Note 1:
Ground this point to force unit to switch to "B"

Title	VDS Tally Relay	
Size A	Burst Electronics, Inc.	Rev. E
Filename: TALLY_E.SCM	Date: 5.10.00	
Drawn by: WJK	Sheet 1 of 1	

Rev	Revision	
E	Rev MiniDIN	
D	1-4-99 Minor Clean-up	
C2		