

# VSA-10

VIDEO SCREEN ALERT  
ON SCREEN DISPLAY



INSTRUCTION BOOK

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## TABLE OF CONTENTS

	PAGE
1. <u>RECEIVING INSPECTION</u>	2
2. <u>INTRODUCTION</u>	2
3. <u>HOW AND WHERE TO MOUNT THE VIDEO SCREEN ALERT</u>	3
4. <u>HOW TO CABLE THE VIDEO SCREEN ALERT</u>	3
5. <u>POWER SUPPLY INSTALLATION</u>	3
6. <u>HOW TO PROGRAM CUSTOM TEXT</u>	3-4-5
7. <u>SWITCH POLARITY SELECTION</u>	5
8. <u>SWITCH OPERATION</u>	5
9. <u>PRIVACY MASKING</u>	5
10. <u>HOW TO CREATE CROSS-HAIRS</u>	5
11. <u>LIST OF FUNCTIONAL KEYS</u>	6

## 1. RECEIVING INSPECTION

Remove from shipping container and inspect for any shipping damage to the VSA-10. Included will be a VSA-10, 24VDC external power module, a computer keyboard, and this instruction book. Caution: Read this instruction manual before operating the equipment.

## 2. INTRODUCTION

This product allows you to superimpose as many as 10 user programmable alert messages onto any video image and have them appear and disappear on the monitor screen under the control of external alarm contacts. As an example, you could wire a door with contacts and then when the door is opened a message would appear overlaying the video image alerting the monitor personnel that the door was open, and when the door is closed the monitor would return to its normal view.

Having a custom message appear on the monitor screen will speed reaction time for personnel, and it can alert them to problems beyond the view of the camera. You can use it to display emergency instructions for visitors on public display monitors used for entertainment.

Install the unit ahead of any video recorder so the alert message will be overlaid on the video and will be recorded along with the video image. In this way the opening and closing of any alarm contact can be recorded in synchronism with the video image. Unauthorized entry can be identified and displayed on the video monitor.

Use the included MINI KEYBOARD to customize your on screen message.

This unit brings the alarm contact activity right onto the monitor screen so you can see any alarm event at a glance and the bright lettering will attract your attention even out of the corner of your eye. With 25 characters on each of ten independently controlled screen message lines this product will cover just about any application you can think of, and more.

A standard computer keyboard is used to input your custom message and then the unit saves the message into an EE-Prom non-volatile memory so if the power goes out your data is protected. If you wish to change the message at a later date you can re-program the unit anytime you wish. In fact you can reprogram the unit as many times as you like any time you like. This is a very versatile video product that will add an extra layer of security to any CCTV system.

This unit can also overlay privacy masking zones on any of the 10 lines combined with text on the video signal to create user defined areas covered in black rectangles the size of a standard character. The privacy zone area is blacked out completely preventing private areas from being observed or recorded. These areas can be uncovered at any time prior to recording by using the input contact control. Masking can be used to block out fixed bright (hot spots) in the image that can cause overloads in the DVR.

### 3. HOW AND WHERE TO MOUNT THE VIDEO SCREEN ALERT

Select a location to mount the unit along the video signal path near a power outlet for the power supply. If you want the text video overlay to appear on an individual camera view then the VSA-10 will be placed on the camera cable run between the camera and the video recorder.

If you want the video text overlay to appear on the multi-camera video display output of the video recorder then put the unit into the video cable between the recorder output and the main video monitor.

NOTE: For convenience you can program the custom text message on any table top before mounting the unit in the field, see the "HOW TO PROGRAM CUSTOM TEXT" section.

The placement is not critical because after set-up there are no routine adjustments necessary.

### 4. HOW TO CABLE THE VIDEO SCREEN ALERT

Connect a Male BNC cable from your source video to the "VIDEO INPUT" of the Video Screen Alert. The "VIDEO INPUT" is internally terminated by a precision 75 Ohm termination to match standard video cable.

Next connect a Male BNC cable from the "VIDEO OUTPUT" connector on the Video Screen Alert to the equipment you wish to have text insertion video supplied to. The "VIDEO OUTPUT" of the Video Screen Alert has a 75 Ohm source impedance to match standard video cable. Be sure the equipment being driven is properly terminated with a precision 75 Ohm termination to insure correct video level.

### 5. POWER SUPPLY INSTALLATION

Find a suitable 120 VAC power outlet and plug in the wall transformer, then plug the low voltage power plug into the VSA-10. At this time the green LED located at the front of the unit should be on. When power is supplied to the unit it will go into standard operating mode and will display video text on the video when the contact inputs are exercised. If the power is applied before programming the unit no text will be overlaid on the screen.

### 6. HOW TO PROGRAM CUSTOM TEXT

First attach the video connector marked "Video Output" to any video monitor so that you can view the text as you type it on the screen. The unit has an internal grey screen video generator so there is no need to connect a video source to the "Video Input" to program the custom text, however you can connect your source video to the "Video Input" connector on the unit to if you so desire.

Next attach the computer keyboard by plugging it into the socket on the side of the VSA-10. The keyboard should only be attached to the unit when programming new text and removed when not programming text.



To begin programming custom text into the non-volatile video memory you must recycle the power supply while depressing and holding down the reset button on the front cover near the power input plug. This reset button is recessed to prevent un-intentional clearing of custom text during power failure and accidental depression of the button.

Use any small object or the tip of your finger that will fit into the small hole to push and hold the button during power up. Custom text is saved into a non-volatile internal memory and will not be lost when the power is removed. The only way to clear the memory and re-enter new text is to push and hold the reset button while the power is being applied to the unit. If you accidentally push the button after the power is applied the button will not reset the display.

After you attach the keyboard, push and hold the reset button and cycle the power supply you can begin typing your custom text onto the screen. If the letter "V" appears on the screen just behind the arrow cursor back over and erase it using the "BACKSPACE" key and begin typing your custom message. Each line is independently controlled by the external switch contacts, so move to the line position you wish to place your text on using the space key on the keyboard and begin typing.



Use the "SPACE" key to move right and down the screen and use the "BACKSPACE" key to move left, erase and move up the screen. When you have finished your custom text, just push the "ESC" button on the keyboard and the unit will save your text and go into operation mode. If you continue to type beyond the tenth line at the bottom of the screen the unit will automatically save your text and go into operating mode.

All alpha-numeric keys and many symbol keys are available for use on the keyboard. Not all keys are available for use on the keyboard.

Note: After programming your custom text disconnect the keyboard and store away in a safe place. DO NOT LEAVE THE KEYBOARD CONNECTED TO THE UNIT WHEN NOT IN USE.

#### 7. SWITCH POLARITY SELECTION

The switch polarity can be selected by the use of an internal program jumper. To change the polarity of the external switch operation, remove the four screws in the outer most corners of the unit. This will allow you to remove the lid and the attached PC Board. Locate the J-2 Jumper and select the desired switch mode of operation. Put the jumper on both pins for Normally Closed and put the jumper off (one pin only) for Normally Open operation.

#### 8. SWITCH OPERATION

The 20 position screw terminal connector on the front of the unit is for switch contact connection. This connection is expecting to see a dry contact connected to it. It supplies a 5 volt signal at 0.5 Milliamps to read the switch connected to it. This loop current is returned to ground at one side of the two connectors. The connector marked "1" controls the first programmed line of video, the marked number "2" controls the second programmed line and so forth up to the tenth line marked "10". If you desire multiple lines to operate on the same switch closure, then parallel the switch connections on the line you wish to combine. Be sure to connect the grounds with the grounds and the +5 volt lines to the +5 volt lines or the switch will appear closed all the time. Any combination of the 10 input video line contacts can be paralleled in this way.

#### 9. PRIVACY MASKING

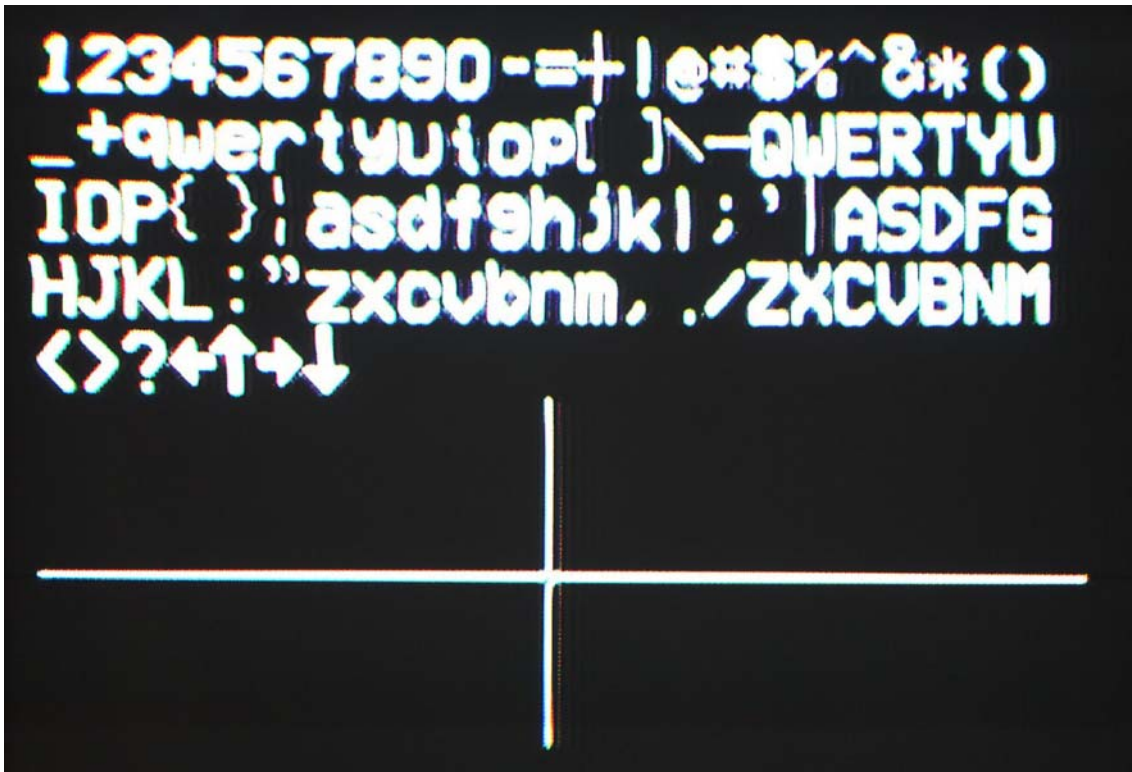
To overlay a black rectangle the size of a standard character to block the video image, use the "Pause Break" key. When the "Pause Break" key is depressed it will lay down two black rectangles at a time. If only one black rectangle is needed use the backspace key to remove the last block of the pair. This can be used to black out any fixed area that needs privacy or any area on the screen that has bright "Hot Spots" that can overload the DVR.

#### 10. HOW TO CREATE CROSS-HAIRS

In some industrial applications it is useful to overlay a Cross-hair onto the video screen so that operators can use it to place objects in precise locations relative to the video camera, or to mark areas of no entry for machine operator safety boundaries. Three keys are used to apply any number of cross-hairs onto the video screen. The "HOME" key is used to apply the Center of the Cross-hair, the "PAGE UP" key is used to apply a continuous Horizontal line, and the "PAGE DOWN" key is used to apply a continuous Vertical line. You may also apply any text on the screen along with the cross-hairs. Remember that the 10 lines of text and cross-hairs are still controlled by the external switches and can be made to come and go under switch control one line at a time or altogether by paralleling the switches.

11. LIST OF FUNCTIONAL KEYS

```
1234567890-+=|@#%&*()_+
!@#%&^&*()_+
qwertyuiop[]\
QWERTYUIOP{}|
asdfghjkl;'
ASDFGHJKL:"
zxcvbnm,./
ZXCVBNM<>?
"Pause Break" key = Masking Rectangle
"HOME" key = Cross-Hair Center
"PAGE UP" key = Cross-Hair Continuous Horizontal Line
"PAGE DOWN" key = Cross-Hair Continuous Vertical Line
"UP ARROW" key = UP ARROW Symbol
"DOWN ARROW" key = DOWN ARROW Symbol
"LEFT ARROW" key = LEFT ARROW Symbol
"RIGHT ARROW" key = RIGHT ARROW Symbol
```



Available keys

NOTE: Some keyboards may not give the same results. Be sure to retain the keyboard that is shipped with the unit.