



VSI+ Radar



Operation Manual

Caution

RISK OF ELECTRICAL SHOCK

DO NOT OPEN

CAUTION! TO PREVENT ELECTRIC SHOCK DO NOT REMOVE COVER. NO USER SERVICEABLE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with the arrow-head symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a class A computing device pursuant to subpart J of Part 15 FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

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VSI+FEATURES

- Easy Menu driven Set-up and Programming
- Auto Baud Rate Detection- Eliminates Internal Dip switch setting!
- 24 Field Programmable Exceptions with In or Out of Range Operators & Exception String to provide Greater than, Less than, and Equal to Exceptions
- On-screen Flagging of Exceptions
- Programmable Alarm and Flag Durations
- Serial Printer Output of all data or Exceptions
- Programmable Delay Screen Blanking
- Your Choice of 1 to 9 lines displayed on-screen
- On-screen Titler up to 20 Characters
- 10 Character Sizes
- Gray Scale and Border Selection from front panel
- Built-in Test Mode
- Built-in ATM & Cash Register Demo
- EX Options provides 2 fully programmable hard wire alarm output

CONNECTING YOUR VSI+

The VSI+ will overlay the characters from your Radar Gun on the input video source. The video source can be virtually any baseband or composite video source. The VSI+ will accept NTSC, RS-170, RS-330, CCIR, PAL, or SECAM video formats.

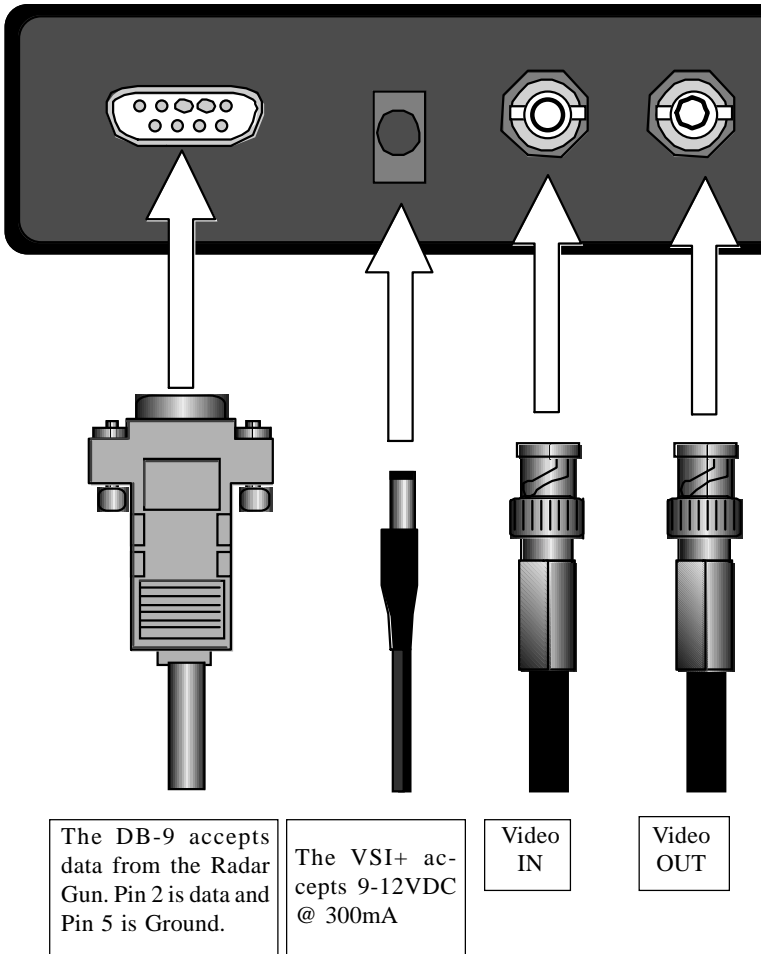
The Video input to the VSI+ is a standard BNC connector, terminated at 75 ohms.

IMPORTANT: *The input video level must be 1V P-P. If this level is not maintained, the VSI+ will have difficulty locking the character display over the input video source.*

After completing the interface installation as described in the separate Installation Guide for your specific Radar Gun, connect the video input source to the video input BNC on the rear of the VSI+.

The BNC video out put goes out to the video system (VCR, Quad, switcher, Multiplexer, or monitor.)

The video output from the VSI+ is 1V P-P into a 75 ohm load. Most monitors or televisions with direct video inputs are terminated with a 75 ohm load. If the monitor is not terminated, the VSI+ will output 2V P-P.

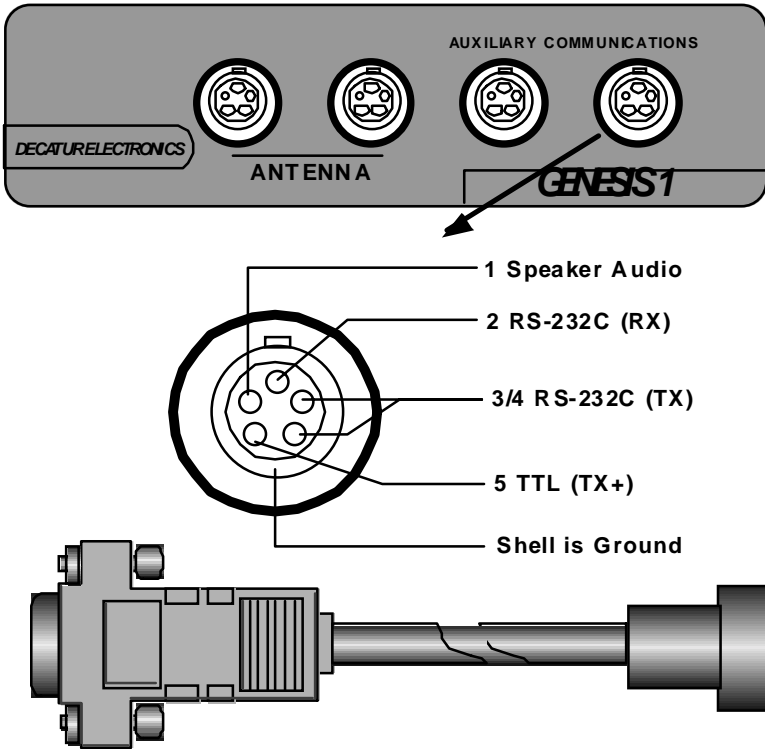


EX Option

With the optional EX daughter board installed, you will be able to tie your exceptions to 2 hard alarm outputs. Pin 1 on the DB-9 is Alarm 1, and Pin 9 is alarm 2, Pin 5 is ground for both alarm outputs. Be sure to observe polarity and do not exceed the 5V, 20mA rating of these alarm outputs.

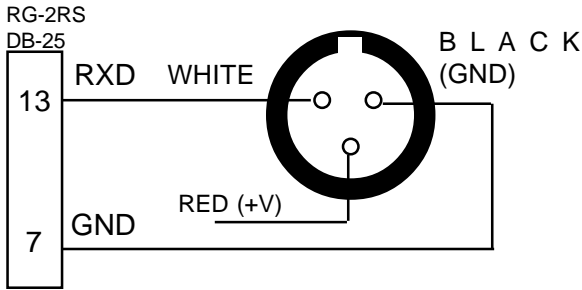
Connecting the VSI+ to Radar Guns

The VSI+ Text Inserter will work directly with the Decatur Genesis Radar Gun with out any additional interface. Some Radar Guns do require the RG2RS Interface Converter. Consult AVE for more information.



Interfacing with Stalker:

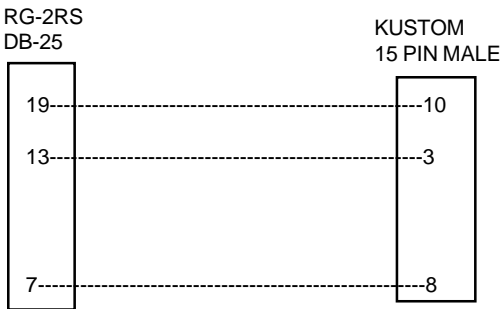
Make the following connection:



On the 8 position dipswitch, select Stalker and 9600 for the baudrate.

Interfacing with KUSTOM:

Make the following connection:



On the 8 position dipswitch, select KUSTOM and 9600 for the baudrate.

RS-232 SERIAL INPUT

The VSI+ accepts RS-232 serial data via the DB-9 female connector located on the rear of the VSI+. This connector is similar to the "AT" type computer RS-232 serial ports and the pin out is identical.

PIN#	Signal Name	VSI+
1	CD (Carrier Detect)	Optional EX alarm trigger
2	RXD (Receive Data)	RXD
3	TXD (Transmit Data)	TXD
4	DTR (Data Terminal Ready)	Always True
5	SG (Signal Ground)	GND
6	DSR (Data Set Ready)	Always True
7	RTS (Request to Send)	CTS (Optional)
8	CTS (Clear to Send)	RTS (Optional)
9	RI (Ring Indicator)	Optional EX alarm trigger

A FEW WORDS ABOUT PROGRAMMING

The VSI+ is programmed by pressing and releasing specific combinations of the the four front panel pushbuttons. Via these four simple buttons, all of the powerful programming features of the VSI+ Text Inserter are available to you. A video source and a monitor must be connected in order for you to see the programming menus.

The following sections provide detailed programming instructions.



PROGRAMMING - GETTING STARTED

After you have completed the installation of the VSI+ and any additional interfaces and cabling, follow the power-up sequence as described in the installation instructions for your specific device. Make sure that you have a video signal present from the camera that the VSI+ is using. If all of this was successful, you will be presented with the following message on the video monitor screen:

BAUDRATE DETECTION...

This feature will automatically detect the Baud Rate of your device when you turn on your Radar Gun. Upon receiving data from the device, the VSI+ will display the following message:

DETECTED: 2400

(or whatever the actual baud rate for your particular device is) and the rest of the transacted data.

If you received the message: “DETECTED” (Baud Rate)” and the rest of the transaction appears on-screen, you are ready to program your VSI+.

USER FRONT PANEL CONTROLS

Front panel user controls are provided to allow simple changing of the displays vertical and horizontal position and the gray scale or border. This eliminates the need of the user to enter the main menu and possibly change important programming set-ups.

To change the **HORIZONTAL POSITION** quickly without going through the VSI+ main menu, a front panel shortcut has been provided: simply hold down the “UP” button and press and release the “RESET” button, now use the “UP” & “DOWN” buttons to move the text to the desired horizontal position. Press “SET” to exit.

To change the **VERTICAL POSITION** quickly without going through the VSI+ main menu, a front panel shortcut has been provided: simply hold down the “SET” button and press and release the “RESET” button, now use the “UP” & “DOWN” buttons to move the text to the desired VERTICAL position. Press “SET” to exit.

To change the **BORDER/GRAY SCALE** quickly without going through the VSI+ main menu, a front panel shortcut has been provided: simply hold down the “DOWN” button and press and release the “RESET” button, now use the “UP” & “DOWN” buttons to cycle through and make your selection. Press “SET” to exit.

To access the main menu of the VSI+, simultaneously hold down the “DOWN” & “UP” buttons and press & release the “RESET” button and then release the “UP” & “DOWN” buttons. This will take you to the main programming menu of the VSI+. To navigate through this menu, simply use the “UP” & “DOWN” buttons to position the arrow in front of the desired function and then press “SET” to access that section.

The VSI+ main menu looks like this:

VSI+ MAIN PROGRAMMING MENU

REGISTER SELECT
SCREEN SETUP
TEXT DISPLAY
COMMUNICATION
EXCEPTION REPORT
ALARM OUTPUTS
TEST/DEMO MODE
DWN/UP LOAD SETUP
HELP

Following is a detailed description of the Menu selections and the programming capabilities of the VSI+.

REGISTER SELECT (Device Select)

Choosing this will bring up a sub-menu consisting of the following register selections:

REGISTER SELECT SUB-MENU

P-PIM
RADAR GUN
RG2RS
GENESIS
HUNTER
MICROS
EXIT

Position the arrow cursor in front of your Radar Gun selection and press & release “SET”. The “REGISTER SELECT” automatically formats the VSI+ to match the Radar Guns communications settings (i.e. Baud Rate, Parity, etc...). However, if you need to change these settings, you can do so through the “COMMUNICATIONS” menu described further down in this manual.

SCREEN SETUP

Place the arrow cursor in front of the SCREEN SETUP and press and release “SET”, you will be presented with the following sub-menu:

SCREEN SETUP SUB-MENU

CHARACTER SIZE
BORDER/GRAY SCALE
HORIZONTAL POS
VERTICAL POS
EXIT

CHARACTER SIZE

To change the size of the characters on the screen, position the arrow cursor in front of the “CHARACTER SIZE” and press and release “SET”. Use the “UP” or “DOWN

buttons to cycle through the selections. There are 10 character

sizes to choose from. The character block is 9 lines X 20 characters for a total of 180 characters displayed on screen, however choosing a larger display size may not display all characters on screen. If the screen skews during this set-up mode, this is normal. Large characters off screen will effect most monitors this way.

BORDER/ GRAY SCALE

To change the display border and/or the gray scale of the text on-screen, position the arrow cursor in front of “BORDER/GRAY SCALE” and press and release “SET”. Cycle through the selections by pressing the “UP” or “DOWN” buttons. There are 10 settings to choose from. Make your selection and press and release “SET” to return to the main menu.

HORIZONTAL POSITION

To change the horizontal position of the inserted text on-screen, position the arrow in front of “HORIZONTAL POS” and press “SET”. Press the “UP” or “DOWN” buttons to move the text to the desired horizontal position.

VERTICAL POSITION

To change the vertical position of the inserted text on-screen, position the arrow in front of “VERTICAL POS” and press “SET”. Press the “UP” or “DOWN” buttons to move the text to the desired vertical position.

EXIT

Place the arrow in front of the “EXIT” and press “SET” to return to the main menu.

TEXT DISPLAY

This menu will give you more control over the actual text block formatting and its appearance on the screen. Position the arrow in front of “TEXT DISPLAY” and press and release “SET”. You will be presented with the following sub-menu:

TEXT DISPLAY SUB-MENU

SCREEN BLANK
DISPLAY LINES
ON-SCREEN TITLER
TRUNCATE
LINE COMPRESS
LEFT JUSTIFIED
SCROLL DELAY
DISPLAY
EXIT

SCREEN BLANK

This is the amount of time that the VSI+ display will remain on-screen after the Radar Gun is turned on. The choices are (in seconds):

NONE, 6, 12, 20, 30, 60, 120, 180, 300

To change the “SCREEN BLANK” setting, place the arrow in front of SCREEN BLANK and press “SET”. The arrow will begin flashing. Now, by pressing the “UP” or “DOWN” buttons, you can cycle through the selections. Press and release “SET” when the desired time is displayed. The arrow stops flashing and you may continue programming. NOTE: Choosing “NONE” means the VSI+ display will remain on-screen for that amount of time, and then blank its display until the next transaction.

DISPLAY LINES

You have the choice of how many lines of text to display on-screen for the Radar Gun. The choices are:

1 THROUGH 9.

To change the “DISPLAY LINES” setting, place the arrow in front of DISPLAY LINES and press “SET”. The arrow will begin flashing. Now, by pressing the “UP” or “DOWN” buttons, you can cycle through the selections. Press “SET” when the desired number is displayed. The arrow stops flashing and you may continue programming.

NOTE: All Radar Gun data will scroll up regardless of the number of lines

you choose to display on-screen and the more lines you display on-screen, the greater the amount of time that the transaction data will be recorded. However, some applications may limit the number of lines and the size on the on-screen display. Note: If you are using an on-screen title, it will occupy Line 1, leaving 8 lines for the text insertion.

ON-SCREEN TITLER

Place the arrow in front on “ON-SCREEN TITLER” and press and release “SET”. You will be presented with the following sub-menu:

ON-SCREEN TITLER SUB-MENU

TITLER
TITLE
EXIT

TITLER

CHOICES - ON OR OFF

To change the status of the on-screen titler, position the arrow in front of “TITLER” and press “SET”. The arrow will start flashing, this means you can now change, whether the titler is displayed or not displayed, by pressing either the “UP” or “DOWN” button. This will toggle between the “ON” and “OFF” selection. Once you have made your selection and it is displayed, press “SET”. This will return the arrow to the non-flashing mode so you may continue.

TITLE

The VSI+ gives you the option of a 20 Character display for easy Radar Gun identification in addition to the actual Radar Gun data. To create a title, position the arrow in front of “TITLE” and press and release “SET”. You will see a row of 20 boxes and the first box will by flashing. To change the character in the first position, press the “UP” or “DOWN” buttons to cycle through the alphanumeric selections from the following list of available characters:

ABCDEFGHIJKLMNOPQRSTUVWXYZ

0123456789 .! = * & , : - + /

The solid white box is used for a blank space. Make your selection and press and release “SET”. This will advance to the next block, repeat until you have entered the desired title. When finished, simultaneously press and release the “DOWN” & “UP” buttons to enter your title. The white boxes will disappear and your title will be displayed as it will appear on screen. To return to the sub-menu and continue programming place the arrow in front of exit and press and release “SET”. Note: Remember, enabling the TITLE will limit text insertions to 8 lines maximum.

TRUNCATE

Truncate can be either “ON” or “OFF”. If TRUNCATE is ON, then all text over 20 characters will be chopped off. If TRUNCATE is “OFF” then text will be wrapped to the next line. Complete words will be wrapped to the next line and not separated or hyphenated. Position the arrow in front of TRUNCATE and press and release “SET”, the arrow will start flashing. Cycle between ON & OFF by pressing either the “UP” or “DOWN” buttons. After making your choice and it is displayed, press and release “SET”, the arrow will stop flashing and you can continue programming your VSSI+.

LINE COMPRESS

The VSI+ automatically compresses the spaces in a line first as it reaches 20 characters. With LINE COMPRESS “ON” the VSI+ will additionally remove multiple spaces and vowels from the text to further compress the display as necessary. To make this selection, position the arrow in front of “LINE COMPRESS” and press and release “SET”, the arrow will start flashing. Cycle through “ON” or “OFF” by pressing either the “UP” or “DOWN” buttons, and press and release “SET” when your choice is displayed, the arrow will stop flashing, and you can continue programming.

LEFT JUSTIFIED

When “LEFT JUSTIFIED” is on, the VSI+ will start each line of text with no leading spaces from the left margin of the character display block.

SCROLL DELAY

Scroll delay ensures that lines of text remain on screen a minimum of .5 seconds. When “SCROLL DELAY” is “ON”, the VSI+ slows down this data feed just enough to insure that each line of text is recorded.

The choices for “SCROLL DELAY” are either “ON” or “OFF”. To make this selection, position the arrow in front of “SCROLL DELAY” and press and release “SET”, the arrow will start flashing. Cycle through “ON” or “OFF” by pressing either the “UP” or “DOWN” buttons, and press and release “SET” when your choice is displayed, the arrow will stop flashing, and you can continue programming.

NOTE: At high Baud Rates and Scroll Delay on, the internal buffer of the VSI+ may overflow. This will cause lost text. The internal buffer can only hold up to 512 characters before overflowing.

DISPLAY

You have the choice to globally turn on or off the complete VSI+ text insertion function. This means no data will be visible on the monitor if you select “DISPLAY” off. However, if you select the “DISPLAY” off, you can still command each exception independently to either display on-screen or not, through its program setup menu under “EXCEPTION REPORTS”. You may also choose to enable an alarm output to occur during an exception while not displaying the exception data through its program setup menu under Alarm.

With the display “OFF” , the VSI+ will still perform all functions as programmed, for example; exception reporting, but the information will not appear on screen unless programmed to do so in the ALARM OUTPUTS menu. In order for you to be able to access exceptions with the VSI+ display off completely, you must have a VSI+ with the -EX option and a VCR with an alarm-input or a serial printer. This -EX option gives a hard wired alarm output. This hard wired alarm output is wired directly to a compatible VCR or Time-

lapse VCR with Alarm-in capabilities.

EXIT

Place the arrow here and press and release “SET” to return to the VSI+ Main Menu.

COMMUNICATION

This was discussed briefly in the section under “REGISTER SELECT” and will be fully explained here. When you choose your Radar Gun type under the “REGISTER SELECT”

menu, this automatically formats the VSI+ to the appropriate settings needed to communicate with your Radar Gun. There may be times when you will need to amend these settings for a specific Radar Gun.

To access the “COMMUNICATIONS” menu, place the arrow in front of “COMMUNICATION” and press “SET”. This will bring up the following sub-menu:

COMMUNICATIONS SUB-MENU

BAUD RATE
PARITY
DATA BITS
HANDSHAKE
AUTO LINEFEED
OUTPUT
EXIT

BAUD RATE

Choices: 150, 300, 600, 1200, 2400, 4800, 9600, 19200

The Baud Rate for your Radar Gun should be detected on start-up. Every time you RESET the VSI+, it will automatically detect for the Baud Rate until you program it in here. To set the Baud Rate for your particular Radar Gun, place the arrow in front of “Baud Rate” and press and release “SET”. The arrow will start flashing.

You can now use the “UP” & “DOWN” arrows to make your selection. When your selection appears, press “SET”, the arrow stops flashing and you can proceed to the next menu item for programming.

PARITY

Choices: NONE, ODD, EVEN

Place the arrow in front of “PARITY” and press and release “SET”. The arrow will start flashing. You can now use the “UP” and “DOWN” arrows to make your selection. When your selection appears, press “SET”, the arrow stops flashing and you can proceed to the next menu item for programming.

DATA BITS

Choices: 7 or 8

If you select 7 Data Bits, you must select “ODD” or “EVEN” Parity in the Parity menu. Place the arrow in front of “DATA BITS” and press and release “SET”. The arrow will start flashing. You can now use the “UP” & “DOWN” arrows to make your selection. When your selection appears, press “SET”, the arrow stops flashing and you can proceed to the next menu item for programming.

HANDSHAKE

Choices: ON, OFF

Handshaking is an electrical signal that tells the Radar Gun or Computer that the VSI+ is ready to receive data. Handshaking may not be necessary and/or may be connected to an outgoing signal from the Radar Gun or Computer since the VSI+ does not require Handshaking. The VSI+ Handshaking signal is always present.

Handshaking guarantees that the internal buffer is not over run or text is not lost. Most AVE interfaces do not support this function.

Place the arrow in front of “HANDSHAKING” and press and release “SET”. The arrow will start flashing. You can now use the “UP” & “DOWN” arrows to make your selection. When your selection appears, press “SET”, the arrow stops flashing and you can proceed to the next menu item for programming.

AUTO LINEFEED

Choices: ON, OFF

Some Radar Guns or computers, after sending a line of data, return to the first position of the same line. AUTO LINEFEED makes the VSI+ drop to the next line. This may not be necessary depending on the Cash Register or Computer being used.

Place the arrow in front of “AUTO LINEFEED” and press and release “SET”. The arrow will start flashing . You can now use the “UP” & “DOWN” arrows to make your selection. When your selection appears, press “SET”, the arrow stops flashing and you can proceed to the next menu item for programming.

OUTPUT

Choices: ON, OFF

The VSI+ can send RS-232 data out to a device. Some require a response from the VSI+ while others do not. On Radar Guns or computers that do not require a response, this OUTPUT feature may be used to send selected data to a serial printer or another computer modem. If used with a serial printer, the Baud Rate and Parity must match the register.

Place the arrow in front of “OUTPUT” and press and release “SET”. The arrow will start flashing . You can now use the “UP” & “DOWN” arrows to make your selection. When your selection appears, press “SET”, the arrow stops flashing and you can proceed to the next menu item for programming.

EXIT

— Returns to main menu.

ALARM OUTPUTS

NOTE: The VSI or VSI+ with the “EX” option installed will give you two hard alarm outputs to trigger other devices such as alarming VCR’s, enunciators, LED’s, etc. The VSI+ 16, available in late 1993, will give you 16 hard alarm outputs via a DB-25 connector.

Place the arrow in front of “ALARM OUTPUTS” and press and release “SET”. You will be presented with the following sub-menu:

ALARM OUTPUTS SUB-MENU

ALARM NO.
ALARM TRIG
NORMAL STATE
ALM DURATION
ON-SCREEN FLAG
FLASH FLAG
FLG DURATION
EXIT

The ALARM OUTPUTS menu controls not only the formatting of the external alarms, but also the formatting of the on-screen flags assigned to individual exceptions.

ALARM NO.

1-16 are the choices.

With the EX-option installed, you have the ability to tie Alarm 1 and 2 to any of the programmed exceptions to trigger an external device. If you purchased the VSI+16, you have up to 16 alarm outputs that may be used with any of the user programmed exceptions. NOTE: The hard alarm outputs on the VSI+16 can switch up to 12VDC @ 100mA.

To select the Alarm Number that you want to program, place the arrow in front of “ALARM NO.” and press and release “SET”. The arrow will start flashing . By using the “UP” & “DOWN” buttons, toggle through and make your selection. When you have made your selection, press and release “SET”, the arrow will become solid and you may continue programming your VSI+.

ALARM TRIGGER

An ALARM TRIGGER is the source of activity programmed to activate a certain alarming device.

The Alarm Trigger tells the VSI+ what exception is used to trigger the alarming device or the on-screen flag.

The choices are:

- Exceptions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, & 24: alarms when data is received that matches what you have set in these exceptions.
- Exceptions 1-12: alarms when data is received that matches any data set in Exception 1-12.
- Exceptions 13-24: alarms when data is received that matches any data set in Exception 13-24.
- Any Data: alarms whenever any data is received.
- None: Sends no alarming data.

NOTE:

In order for you to program an exception to trigger an external alarm number 1 or 2, you must have the VSI with the EX-option installed and you must add wires to the DB-9 connector on the VSI.

Pin 1 on the DB-9 is Alarm 1, and Pin 9 is Alarm 2. Pin 5 on the DB-9 is ground.

In order to program 16 alarms you need to have the new VSI+16.

To select the Alarm Trigger that you want to program, place the arrow in front of “ALM TRG” and press and release “SET”. The arrow will start flashing . By using the “UP” & “DOWN” buttons, toggle through and make your selection. When you have made your selection, press and release “SET”, the arrow will become solid and you may continue programming your VSI+.

NORMAL STATE

There are two choices: No (normally open) or NC (normal closed). These selection determine whether the optional EX alarm outputs will act as a normally open switch or a normally closed switch.

To select the Normal State that you want to program, place the arrow in front of “NORMAL STATE” and press and release “SET”. The arrow will start flashing . By using the “DOWN” & “UP” buttons, toggle through and make your selection. When you have made your selection, press and release “SET”, the arrow will become solid and you may continue programming your VSI+.

ALARM DURATION

This is the amount of time in seconds that the alarm will remain activated once it is triggered. The selections for alarm duration are:

PULSE, 6, 12, 20, 30, 60, 120, 180, and 300 seconds.

PULSE sends a 200mS alarm pulse to the alarm device.

To select the amount of time in seconds that you want to program the alarm duration, place the arrow in front of “ALM DURATION” and press and release “SET”. The arrow will start flashing . By using the “DOWN” & “UP” buttons, toggle through and make your selection. When you have made your selection, press and release “SET”, the arrow will become solid and you may continue programming your VSI+.

ON-SCREEN FLAG

This feature allows you to insert a visual alarm flag on each exception that you program to aid in the review of the video tape. This flag appears as an asterisk “*” in the upper right corner of the on-screen display. You have the choice to have this on-screen flag on or off.

To select whether to turn the on-screen flag on or off, place the arrow in front of “ON-SCREEN FLAG” and press and release “SET”. The arrow will start flashing . By using the “DOWN” & “UP” buttons, toggle between ON or OFF and make your selection. When you have made your selection, press and release “SET”, the arrow will become solid and you may continue programming your VSI+.

FLASH FLAG

This gives you the option of making the on-screen flag flash or not flash. To select whether to have the on-screen flag flash, place the arrow in front of “ON-SCREEN FLAG” and press and release “SET”. The arrow will start flashing . By using the “DOWN” & “UP” buttons, toggle between ON and OFF and make your selection. When you have made your selection, press and release “SET”, the arrow will become solid and you may continue programming your VSI+.

FLAG DURATION

This is the amount of time in seconds that the on-screen FLAG will remain activated once it is triggered.

NOTE: Flag duration is independent of the EX option Alarm Duration. Flag Duration is the amount of time the On-Screen flag will remain on after activation while Alarm Duration (available only with the EX option installed) is the amount of time that the HARD-WIRE Alarm outputs remains activated after it is triggered.

The selection for “FLG DURATION” are:

6, 12, 30, 60, 120, 180, and 300 seconds.

To select the amount of time in seconds that you want to program for the flag duration, place the arrow in front of “FLG DURATION” and press and release “SET”. The arrow will start flashing . By using the “DOWN” & “UP” buttons, toggle through and make your selection. After you have made your selection, press and release “SET”, the arrow will become solid and you may continue programming your VSI+.

EXIT

This will return you to the main menu of the VSI+.

EXCEPTION REPORTS OVERVIEW

The Exception Report gives you the option to assign an on-screen flag, trigger an alarming device, or send data to a printer. The VSI+ will allow programming of up to 24 separate exceptions.

ON-SCREEN FLAGS

You have several options for programming your Exception Report.

The first option typically has all programmed exceptions display a flashing asterisk in the upper right corner of the on-screen display. This ON-SCREEN FLAG is controlled through the “ALARM OUTPUTS” menu. You assign a corresponding Alarm to an Exception and set the parameters for the FLAG in this menu.

You do this by choosing “DISPLAY” for the corresponding Ex-

ception No. and selecting “ON”. With this option, all exceptions will be “flagged” with the flashing asterisk. You can then review these exceptions by putting your VCR in play and pressing the FF button. This will give you a fast scan of the tape and you can go into normal play when you see the flashing asterisk and view that event in real time or slow play or frame by frame, depending on the type of playback options of your particular VCR.

HARD ALARM OUTPUT

The VSI+ with the EX option allows you to program exceptions to trigger external alarming devices such as Time-Lapse VCR’s, Quads, Enunciators, LED’s etc. Using the EX option, you can have your time-lapse VCR record only exceptions, or have an alarming Quad go to full screen on an exception, or even trigger a buzzer to alert you that an exception has occurred.

PRINTER OUTPUT

The VSI+ provides a separate output that will send data to a remotely located serial printer. This feature is available on most registers that do not require a response from the VSI+. If you turn the on-screen display off and the output on and you have a remote serial printer hooked up to the VSI+, then, whenever an exception is reported, it is sent out to the serial printer only.

The printer will give you a hard copy printout of the questionable transaction with the time and date. The time and date is generated by the serial printer. With this hard copy printout of the exception report, you can then review the tape by going directly to that exceptions time.

EXCEPTION REPORT

Programming Your Exception Report:

From the main programming menu, place the arrow in front of “EXCEPTION REPORT” and press and release “SET”. This will take you to the following sub-menu:

EXCEPTION REPORT SUB-MENU

EXCEPTION NO.	1
DISPLAY	ON
OUTPUT	ON
OPERATOR	NONE
RANGE	
0000.00, 0000.00	
EXCEPTION STRING	
NO SALE	
EXIT	

EXCEPTION NO.

Choices: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, and 24. To select the Exception No. that you wish to program, place the arrow in front of "EXCEPTION NO." and press and release "SET". The arrow will start flashing. Use the "UP" & "DOWN" buttons to sequence through the choices. Make your selection and press and release "SET". The arrow will stop flashing and you may continue to the next menu item.

DISPLAY

Choices: ON or OFF

This "DISPLAY" item lets you control whether or not this particular exception is displayed on the video monitor or not. Please understand that unless you have the

-EX option installed (hard alarm outputs) or you are using a remote serial printer, if you do not turn on the Exceptions display here, you will not have a record of the exception when it occurs.

To make your selection, place the arrow in front of "DISPLAY" and press and release "SET". The arrow will start flashing. Use the "UP" or "DOWN" buttons to toggle between "YES" or "NO". Make your selection and press and release "SET", the arrow will stop flashing and you may continue to the next menu item.

OUTPUT

OUTPUT controls the RS-232 data from the VSI+. Typically

this is sent to a remote Serial Printer to provide a hard copy of the Exceptions with time and date generated by the remote printer. This data can also be sent out to a computer with the appropriate software and give you the ability to analyze the data. The Serial Printer must have the same Baud Rate and Parity as the Register in order for it to receive the data from the VSI+.

**The Pin out from the VSI+ DB-9 connector is:
PIN 3, Transmit Data, and PIN 5, Ground.**

To make your selection, place the arrow in front of “OUTPUT” and press and release “SET”. Use the “UP” and “DOWN” buttons to toggle between “ON” or “OFF”. Display your selection and press and release “SET”, the arrow will stop flashing and you may continue to the next menu item.

OPERATOR

The “OPERATOR” determines the behavior of the “RANGE”. Think of the OPERATOR in mathematical terms. Setting the correct range and specifying IN or OUT will make the OPERATOR perform Greater Than, Less Than, Equal To, IN the Range, or out of the RANGE. With this version of the VSI+, you can define ranges for your Exceptions and have the VSI+ alarm when an Exception falls within the ranges parameters or outside the range of the two numbers. The choices are: IN, OUT, and NONE.

DEFINING THE OPERATOR

To make your selection, place the arrow in front of “OPERATOR” and press and release the “SET” button. The arrow will start flashing. Use the “UP” and “DOWN” buttons to make your selection. When your selection is displayed, press and release the “SET” button. The arrow will stop flashing and you may continue to the next menu item.

RANGE

The range defines the limits of the operator. These are numeric only. The range has two separate fields that are separated by a comma.

This format must be followed, although your range does not have to contain all of the zero's as the default does, this is merely a guide for you to define your own ranges. The range can appear anywhere within the 20 character spaces provided.

Before you define your range, we need to explain how to navigate through the Range and Exception String using the front panel switches.

You will notice when you place the arrow in front of "RANGE" and press and release the "SET" button, the first "0" in the "Range" starts to flash. This means it is active and ready for programming. To change the value of this character, use the "UP" or "DOWN" buttons to move between 0-9. To move to the next block, press and release the "SET" button. This will advance the active block to the next block immediately to the left. This is how you move through the "RANGE" field.

While you are on an active block, pressing the "UP" and "SET" buttons simultaneously will return that block back to a blank, which is designated by a solid white box. You can follow this format to program your "RANGE". When you have finished and wish to set this range into the VSI+ memory, simultaneously press and release the "UP" and "DOWN" buttons. You can also use this if you make a mistake and want to start over, since there is not a backspace feature.

DEFINING THE RANGE

To define the range for the selected Exception, place the arrow in front of "RANGE" and press and release "SET". This will make the first position in the range field active. Follow the procedure outlined in the previous few paragraphs to enter your range. When you are ready to exit and continue on, simultaneously press and release the "UP" and "DOWN" buttons, this will set the range in the VSI+ memory and exit you back to the Exception Report Sub-Menu.

Reminder.

Use "UP" and "SET" together to erase entry. Use "UP" and "DOWN" together to set the Range or Exception String into the VSI+ memory and return to the menu.

EXCEPTION STRING

The Exception String is used typically in two very specific cases. The first case would be to further define the set range for more precise and specific exception reporting.

Remember, the VSI+ uses the same data that is printed on the video monitor.

The Exception String can also be used without a defined range.

WILDCARD

The WILDCARD has been added to the regular characters available for the exception String. This symbol “ . ”, a centered dot, accepts on any data in that position.

Note: Remember to follow your Radar Guns format exactly so the exception matches at least part of it.

To program the “EXCEPTION STRING”, place the arrow in front of “EXCEPTION STRING” and press and release “SET”. The first position of the 20 character exception will become active by flashing. Program in your exception string, remember “SET” advances to the next position. When you are finished, press “DOWN” and “UP” at the same time to enter the string into memory and to return to the sub-menu.

EXIT

Place the arrow here and press and release “SET” to return to the VSI+ main menu.

TEST/DEMO MODE

TEST/DEMO MODE SUB-MENU

RS232 TEST
REGISTER DEMO
ATM DEMO
LOGO
EXIT

RS232 TEST

Place the arrow in front of “RS232 TEST” and press and release “SET”. This will take you to the following RS232 TEST sub-menu:
RS232 TEST SUB-MENU

RECEIVE (RX) TEST
TRANSMIT (TX) TEST
RX/TX TEST
BAUD RATE SCAN
EXIT

RECEIVE (RX) TEST checks if the VSI+ is receiving data from the register. To proceed with this test, place the arrow in front of “RECEIVE (RX) TEST” and press and release “SET”. You will be presented with the following sub-menu

RECEIVE (RX) TEXT SUB-MENU

BAUD RATE: AUTO
PARITY: NONE
DATA BIT: 8
HANDSHAKING: ON
RECEIVING: BAUD RATE DETECTION.

NOTE: In any of these tests, you can pause the data scrolling by holding down either the “UP” or “DOWN” buttons.

The VSI+ is now waiting for data from the register. Enter a transaction. If the VSI+ is receiving data from the register, it will appear in three separate lines, scrolling from right to left across the bottom of the on-screen display. The first line is the transaction information. The second and third represent the HEX equivalent of the data in the first line.

0 Radar Gun Data
3
0

If you perform this test and do not receive any data, then check all connections to the VSI+, Radar Gun and any additional interfaces.

TRANSMIT (TX) TEST

In the TRANSMIT TEST, the VSI+ sends a predefined ASCII pattern to further test the hardwire connections of the system. To proceed with this test, place the arrow in front of “TRANSMIT (TX) TEST” and press and release “SET”. You will be presented with the following sub-menu:

TRANSMIT (TX) TEXT SUB-MENU

BAUD RATE:	AUTO
PARITY:	NONE
DATA BIT:	8
HANDSHAKING:	ON
TRANSMITTING:	BAUD RATE DETECTION.

RX/TX TEST

In the RX/TX TEST, the VSI+ echos whatever it receives to further test the hardwire connections of the system. To proceed with this test, place the arrow in front of “RX/TX TEST” and press and release “SET”. You will be presented with the following sub-menu:

RX/TX TEXT SUB-MENU

BAUD RATE:	AUTO
PARITY:	NONE
DATA BIT:	8
HANDSHAKING:	ON
TRANSMITTING:	BAUD RATE DETECTION

BAUD RATE SCAN

There may be times when the Baud Rate cannot be detected on start-up. In the BAUD RATE SCAN test, you can scan for your Radar Gun's Baud Rate. To proceed with this test, place the arrow in front of “BAUD RATE SCAN” and press and release “SET”. You will be presented with the following sub-menu:

BAUD RATE SCAN SUB-MENU

BAUD RATE:	AUTO
PARITY:	NONE
DATA BIT:	8
HANDSHAKING:	ON
TRANSMITTING:	BAUD RATE DETECTION

Turn the Radar Gun on, the VSI+ will scan for the Baud Rate and display it where “AUTO” is on the menu.

To return to the sub-menu, press and release “SET”.

EXIT

Place the arrow in front of “EXIT” to return to the “RS232 TEST” sub-menu.