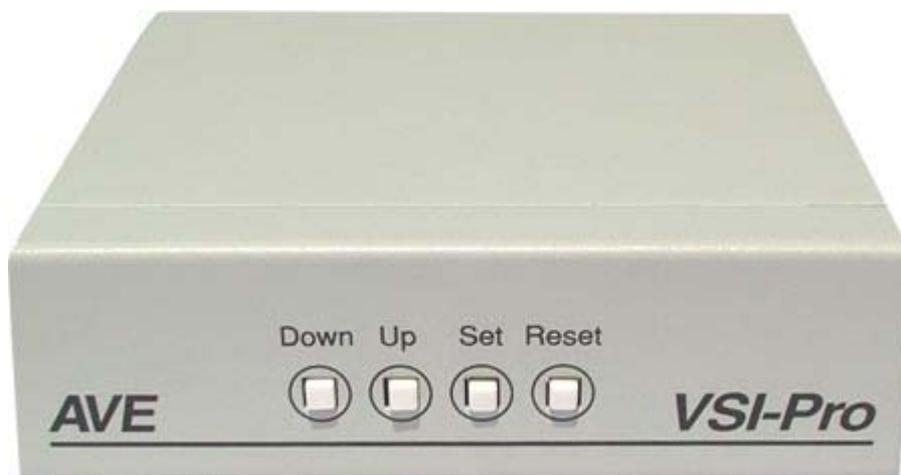


VSI-PRO-IBM



VIDEO SERIAL IBM CASH REGISTER INTERFACE

Operation Manual

July 2010



VSI-Pro



CAUTION!
RISK OF ELECTRICAL SHOCK!
DO NOT OPEN!



TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE COVER. DO NOT EXPOSE THE EQUIPMENT TO RAIN OR MOISTURE. NO USER SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

WARNING!

THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION 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 OF 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/HER OWN EXPENSE WILL BE REQUIRED TO TAKE WHATEVER MEASURES MAY BE REQUIRED TO CORRECT THE INTERFERENCE.

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1. INTRODUCTION

1. INTRODUCTION

The Video Serial Interface allows characters to be inserted into any video source via an RS-232 / RS-422 / RS-485 link. This allows cash registers, computers, scales, pole displays, printers or any RS-232 / RS-485 / RS-422 communicating device to display alpha-numeric in the video picture of any CCTV system. Simple front panel push-buttons allow the user to simply program all functions and features of the VSI-Pro-IBM. This includes characters position, gray scale and a wide variety text processing function including exceptions and alarming features.

This version has been specifically designed to connect to an **IBM CASH REGISTER** using the proprietary IBM printers or displays that connect via 4 or 16 Pin SDL connectors. The interface includes a 3' cable (an important aspect of the installation) that either plugs directly into or taps off an auxiliary or customer display port on the rear of the register. The VSI-Pro-IBM overlays data from the receipt or journal printer or customer display onto a video image, and contains all the powerful features of the standard VSI-Pro-IBM cash register interface including exporting the data to a compatible DVR via RS-232 for text insertion or text search functions.

The VSI-Pro-IBM can be used to trigger switchers, time lapse VCRs, DVRs, remote transmission devices or other alarming devices via the 2 hardwired open collector alarm outputs.

The VSI-Pro-IBM also has an additional RS-232 output that can send the formatted ASCII text to a DVR that can store the data as an electronic file in addition to inserted in the actual video image.

The Exception Processor of the VSI-Pro-IBM provides the intelligence to bring questionable or exceptional transactions to view for the user. This allows the user to quickly and easily review employee transactions to identify fraud and theft transactions at the cash register. When used with a compatible DVR, the VSI-Pro-IBM will command the DVR to automatically search to the transaction in question for instant review of the recorded video.

VSI / VSI+ / VSI-Pro-IBM Backward Compatibility

Since 1990 various versions of the VSI have been on the market solving cash register retail problems. Several special version are available to interface to other RS-232 devices like scales, coin counters, PLCC, gambling machines and ATMs along with countless other generic RS-232 devices. The first VSI, Version 9 had no exception processing until the release of Version 10. However these versions had the ability to output the data. As features increased we moved to the VSI+ Version 11, which had the first powerful set of exception processing and printing functions. This version also had hardware handshaking capability. The introduction of the VSI-Pro-IBM Version 12 added on-screen selection of various model IBM cash registers for ease of installation and supported many characters sizes for multiple units to display data on one camera view. The current VSI-Pro-IBM Version 13.XX has improved features and additional registers and the Version 13.00 supports North America cash registers and Version 13.24 supports UK and European models.

Contact the AVE factory for additional details on upgrading and networking with any DVR or learn about the advanced features when integrated with the AVE line of text insertion and search DVRs locally or remotely.

2. FEATURES & SPECIFICATIONS

2.1 FEATURES

-14 register selections
-User selectable hardware communications : RS485
-Serial output of all data or exceptions to printers, computers, modems and DVRs
-Programmable time-stamp on exception output
-Time/Date Searching with Compatible DVR
-Universal time/date format
-100 lines exception history buffer
-16 triggered text associated with 16 alarms
-Large data buffers for input/output to accommodate newer, faster registers
-2 built-in alarm outputs
-Powerful data filtering algorithms
-Easy on-screen menu-driven setup and programming
-Auto baud rate detection
-24 field programmable exceptions with numeric range
-On-screen flagging of exceptions with asterisk or reverse text
-Programmable alarm outputs.
-Alarm input for drawer open, safe open, etc.
-Programmable delayed screen blanking
-Choice of 1 to 11 lines displayed on-screen
-On-screen titler up to 40 characters
-Gray scale and border selection from front panel
-Built-in test mode
-Built-in cash register demo
-Upload/download programming to another VSI-Pro-IBM
-Data captured either to the memory or to the serial port



Figure 1: Front of VSI-Pro-IBM

2. FEATURES & SPECIFICATIONS

2.2 SPECIFICATIONS

Video In (BNC)	1V P-P Terminated 75 ohms +/- 20%
Video Out (BNC)	1V P-P Terminated or Unterminated
Video S / N	better than 50dB
Video B / W	better than 7MHz
Power (DC Coax 2.1mmx5.5mm)	9-12VDC 170mA
Battery Backup NiMH	1 year with 24 hour charge
Serial Port (DB-9 Female)	RS-485 A - Pin 4 B - Pin 6 GND - Pin 5
Baud Rate	AUTO, 135, 150, 300, 600, 1200, 2400, 4800
Word Length	7 or 8
Parity	ODD, EVEN, NONE
Stop Bits	1
RTS / CTS Handshaking	ON or OFF 3.3K Pull Up
DTR / DSR	3.3K Pull Up
Data Buffer	32K bytes
Alarm Outputs Pin 1 & 9	Open Collector 12VDC @ 20mA
Real Time Clock	12 or 24 Hr with Auto Daylight Savings Time Programmable
Date Format	MM/DD/YY, DD/MM/YY, YY/MM/DD Julian Calendar
Display Characters	40
Number of Lines	1-11
Character Gray Scale	8 levels of Gray
Matte Character Border	8 levels of Gray
Screen Update Delay .5s	ON or OFF
Auto Scrolling from last line	
Line Processing	Compress, Truncate, Left Justify
DVR Support	DMS-3001, DVR-3011
Watchdog Timer Hardware and Software	
Local / Remote Programming via PC Software	
Local Firmware Downloading	
History Buffer Downloadable / Searchable	
Temperature Rating	0 - 50 degrees Celsius 32 - 122 degrees Fahrenheit
Humidity	Non-Condensing 85% RH
Weight	0.68 Kg or 1.5 lbs
Metal Enclosure Beige	130L x 127W x 38H (mm) 5.12L x 5W x 1.5H (in)
Maximum Size with Connectors	145L x 127W x 43H (mm) 5.7L x 5W x 1.7H (in)
Packed in White Box with Manual	1.02 Kg or 2.26 lbs 340L x 190W x 85H (mm) 13.4L x 86.2W x 3.35H (in)



3. CONNECTIONS

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

The Video input to the VSI-Pro-IBM is a standard BNC connector, terminated at 75 [ohms].

NOTE 
The input video level must be 1[V] Peak to Peak. If this level is not maintained within +/- 20%, the VSI-Pro-IBM 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 cash register, computer, radar gun or other serial device, connect the video input source to the video input BNC on the rear of the VSI-Pro-IBM. The BNC video output goes out to the video system (VCR, DVR, quad, switcher, multiplexer, or monitor). This connection is shown in Figure 3. The video output from the VSI-Pro-IBM is 1[V] Peak to Peak 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-Pro-IBM will still output 1[V] Peak to Peak. The VSI-Pro-IBM will be able to drive two terminated loads without loss of video level.

NOTE 
The VSI-Pro-IBM will not enter the programming mode unless it is connected to a video source.

Included with the VSI-Pro-IBM is a 9 VDC @300 [mA] UL/CSA power supply which must be plugged into the Power input on the VSI-Pro-IBM's Real Panel.



Figure 2: VSI-Pro-IBM Rear Panel



Figure 3: VSI-Pro-IBM Cable Connections

3. CONNECTIONS

PIN #	FUNCTION	DIRECTION
1	Alarm Out 1	Open Collector Transistor
2	Receive Data	To VSI-Pro-IBM
3	Transmit Data	From VSI-Pro-IBM
4	DTR	From VSI-Pro-IBM(Remain High)
5	Ground	
6	DSR	From VSI-Pro-IBM(Stay High)
7	RTS (Alarm In)	To VSI-Pro-IBM
8	CTS	From VSI-Pro-IBM
9	Alarm Out 2	Open Collector Transistor

Table 1: Pin-Out of the DB-9 Female Connector on the VSI-Pro-IBM RS-232

3.1 RS-232 SERIAL INPUT

The VSI-Pro-IBM accepts serial data via the DB-9 female connector located on the rear of VSI-Pro-IBM. This connector is similar to “AT” type computer RS232 serial ports and the pin out is identical. Table 1 shows the standard pin out for VSI-Pro-IBM RS-232 female connector. On the other hand Table 2 compares the VSI-Pro-IBM RS-232 with standard “AT” computer’s RS-232 connector.

PIN #	SIGNAL NAME (RS232)	VSI-Pro-IBM
1	CD (Carrier Detect)	Alarm Out 1
2	RxD (Recieve Data)	RxD
3	TxD (Transmit Data)	TxD
4	DTR (Data Terminal Ready)	Always True
5	SG (Signal Control)	GND
6	DSR (Data Set Ready)	Always True
7	RTS (Request to Send)	CTS (Option)
8	CTS (Clear to Send)	RTS (Option)
9	RI (Ring Indicator)	Alarm Out 2

Table 2: RS-232 DB-9 Pin-Out vs VSI-Pro-IBM DB-9 Pin-Out

PIN #	FUNCTION	DIRECTION
1	Alarm Out 1	Open Collector Transistor
2	No Function	No Function
3	TXD RS-232	From VSI-Pro-IBM
4	RS-485 A Data	To VSI-Pro-IBM
5	Ground	
6	RS-485 B Data	To VSI-Pro-IBM
7	RTS (Alarm In)	To VSI-Pro-IBM
8	CTS	From VSI-Pro-IBM
9	Alarm Out 2	Open Collector Transistor

Table 3 : Pin-Out of the DB-9 Female Connector on the VSI-Pro-IBM RS-422 / RS-485

3.2 VSI-PRO-IBM CONNECTION

The register must be powered down and UNPLUGGED before connecting the VSI-Pro-IBM. The VSI-Pro-IBM plugs into auxiliary port 4A, 4B, or 9A on the rear of the IBM terminal with the 4 pin plug or port 7 with a 16 pin plug. The cable included with your purchase has been built for the specific port you specified when ordering. If you specified port 4A the cable may not be compatible with any other port, for port 4B, or 9A the cable is interchangeable and may be used in either of the 2 ports. The included cable has been built for other specifications as well, as listed below:

The included cable will have a Male SDL connector (either 4 or 16 pin) that plugs to the register, a female SDL connector (either 4 or 16 pin) that the occupying port cable is then plugged into for tapping, a DB9 Male that plugs to the VSI-Pro and a DB9 Female connector for attachment to your exception printer or DVR. For direct connect there is nothing to plug into the SDL Female connector and left open for future use of this port.

Due to the high speed register communication, the VSI-Pro-IBM cannot be more 3 feet from the register. The video input of the VSI-Pro accepts a standard 1Vp-p video signal and outputs the same into a 75 load. The baud rate to the DVR or printer is a maximum of 4800 baud.

3. CONNECTIONS

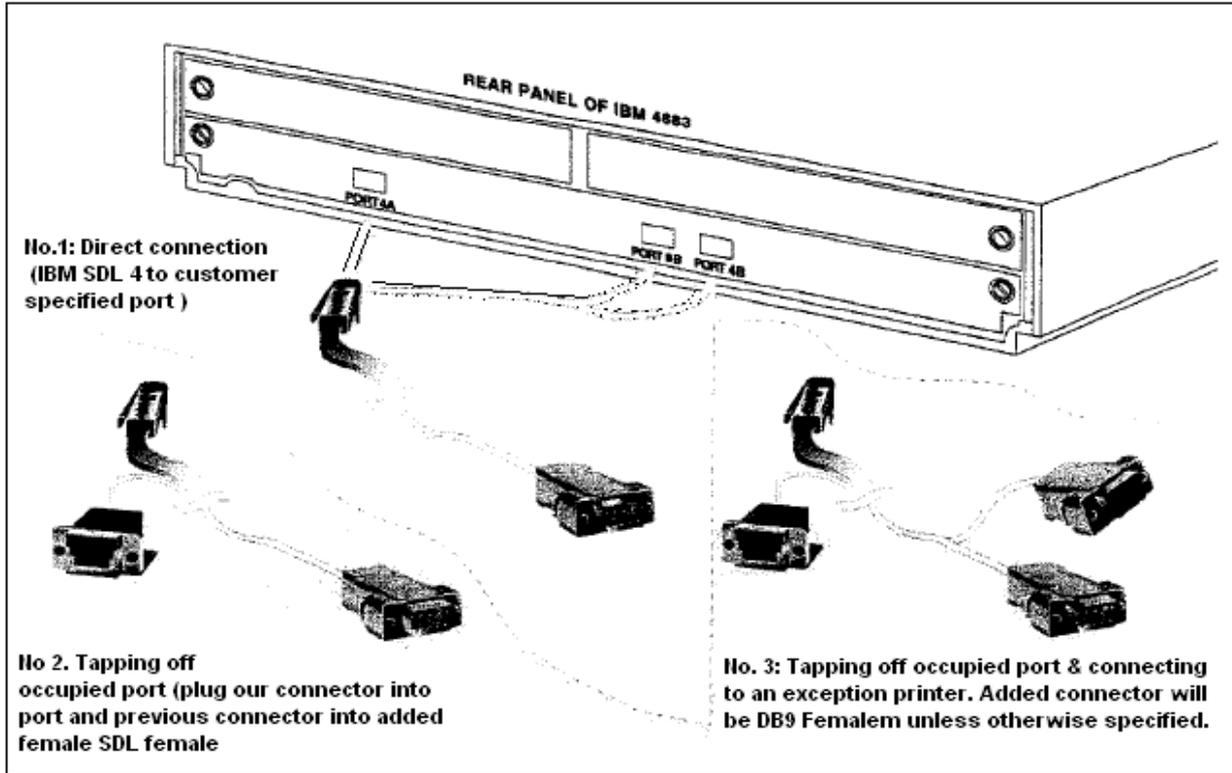


Figure 4: VSI-Pro-IBM CONNECTION DIAGRAM

PIN-OUT DIAGRAMS for VSI-Pro-IBM 4683/4684/4693/4694/4695 to Port 4A, 4B or 9A

**AVE P/N : 021-001-SF Standard VSI-Pro IBM Tapping
4684/4685 & IBM 4693/4694/4695 Cable**

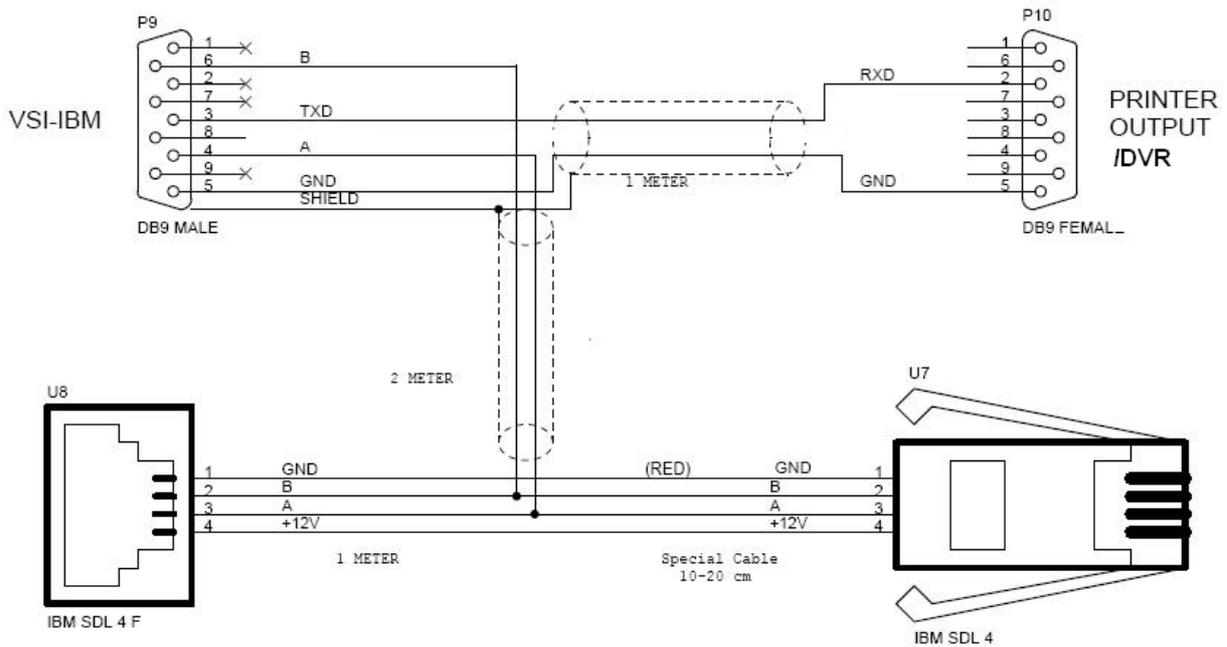


Figure 5: PIN-OUT for VSI-Pro-IBM 4683/4684/4693/4694/4695 to Port 4A, 4B or 9A

PIN-OUT DIAGRAMS for VSI-Pro-IBM 4683/4684/4693/4694/4695 to Port 7

AVE P/N : 021-053-SF Standard VSI-Pro IBM Tapping
 IBM 4693/4694/4695 Cable

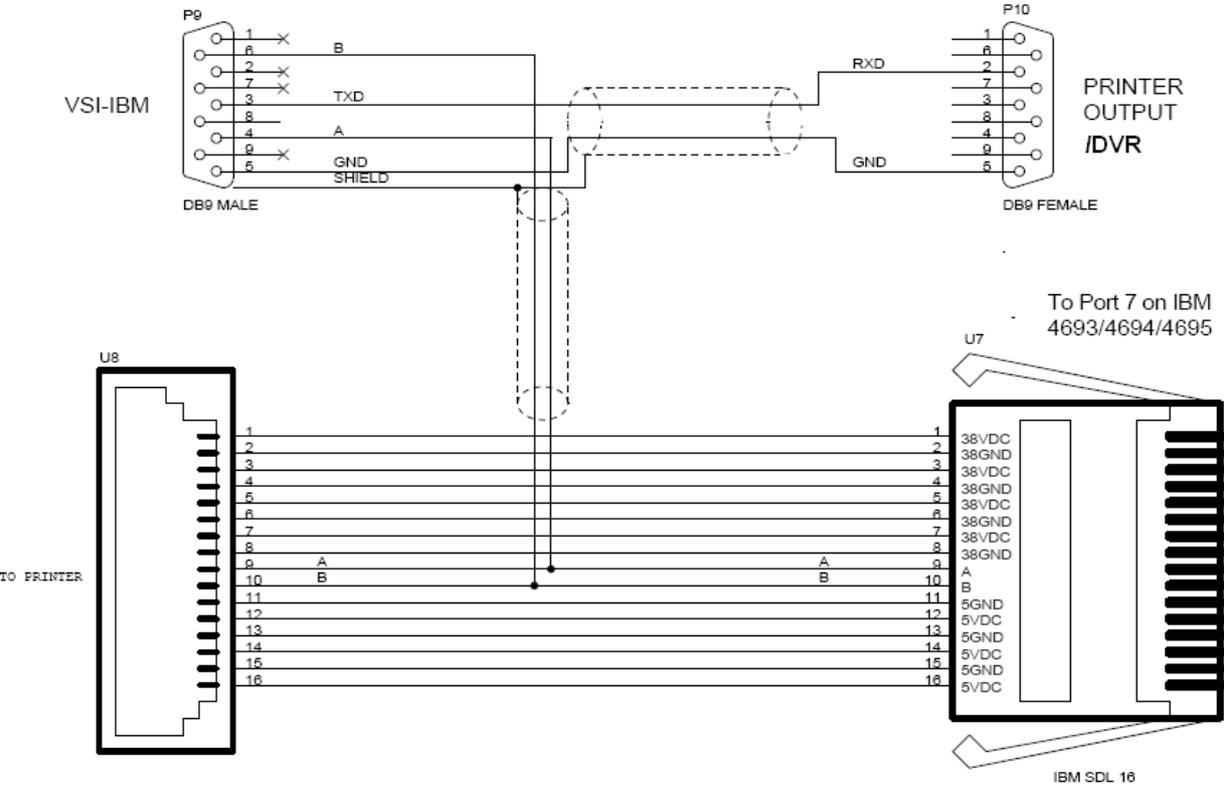


Figure 6: PIN-OUT for VSI-Pro-IBM 4683/4684/4693/4694/4695 to Port 7

4. USER FRONT PANEL CONTROLS

4. USER FRONT PANEL CONTROLS

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

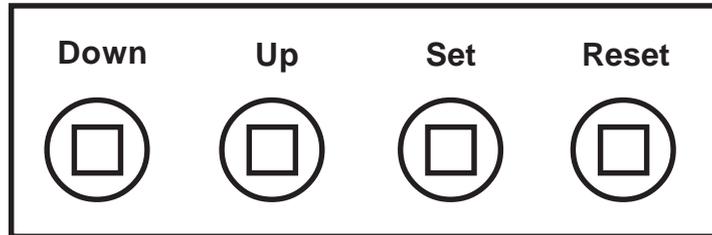


Figure 7: Four Front Panel Push Buttons of VSI-Pro-IBM

4.1 FRONT PANEL CONTROLS

The front panel controls are provided to allow simple changing of the display's vertical and horizontal position and the gray scale or border. This eliminates the need of the user to enter the main menu and inadvertently change important programming setups.

Changing the Gray Scale

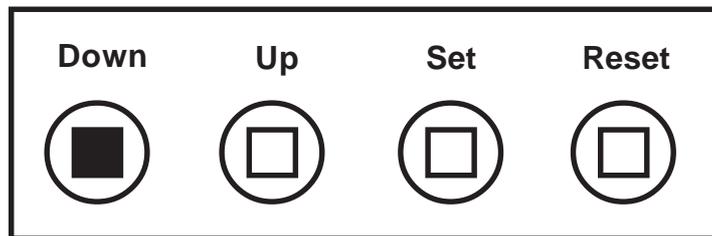


Figure 8: Four Front Panel Push Buttons of VSI-Pro-IBM (Down)

- 1) Press and hold the "Down" button.
- 2) Press and release the "Reset" button.
- 3) Release the "Down" button.
- 4) Press "Down" or "Up" to select the Gray Scale.
- 5) When choice is made, press and release the "Set" button.

Changing the Horizontal Position

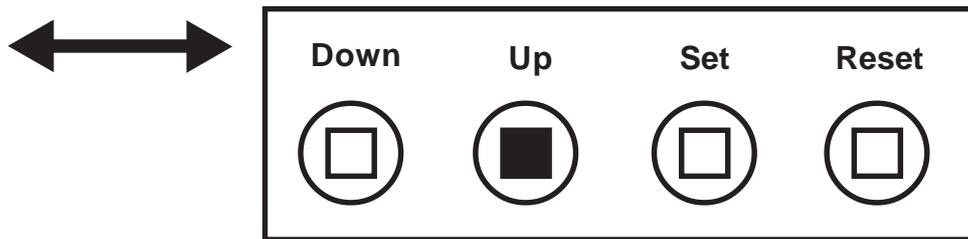


Figure 9: Four Front Panel Push Buttons of VSI-Pro-IBM (Up)

1. Press and hold the "Up" button.
2. Press and release the "Reset" button.
3. Release the "Up" button.
4. Press "Down" or "Up" to move the text block.
5. When the choice is made, press and release the "Set" button.

Changing the Vertical Position

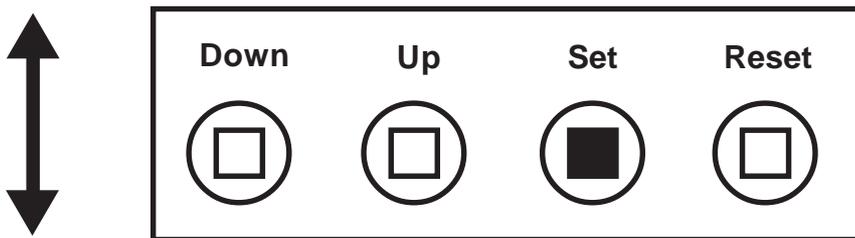


Figure 10: Four Front Panel Push Buttons of VSI-Pro-IBM (Set)

- 1) Press and hold the "Set" button.
- 2) Press and release the "Reset" button.
- 3) Release the "Set" button.
- 4) Press "Down" or "Up" to move the text block.
- 5) When the choice is made, press and release the "Set" button.

5. PROGRAMMING

5.1 GETTING STARTED

To access the main-menu of the VSI-Pro-IBM, simultaneously hold down the “Down” & “Up” buttons and press and release the “Reset” button and then release the “Down” & “Up” buttons. This will take you to the main programming menu. To navigate through this menu, simply use the “Down” and “Up” buttons to position the cursor in front of the desired function, then press “Set” to access that function.

If you have difficulty entering the main-menu, try the following procedure exactly. With your left thumb, lightly press and hold in the two buttons to the left (Up & Down). While holding down these buttons, press and release the “Reset” button with your right thumb. Then release the other buttons.

NOTE

If a sub-menu has an “EXIT” selection, always go there and press “Set”. Pressing “Reset” at the main-menu exits you from the programming mode.

5.2 MAIN PROGRAMMING MENU

Following is a detailed description of the menu selections and the programming capabilities of the VSI-Pro.

- DEVICE SELECT**
- SCREEN SETUP**
- TEXT DISPLAY**
- COMMUNICATION**
- EXCEPTION REPORT**
- ALARM OUTPUTS**
- TEST/DEMO MODE**
- DOWNLOAD/UPLOAD SETUP**
- HELP**

Figure 11: VSI-Pro-IBM Main Menu

5.3 DEVICE SELECT

To select a specific device, press the “Up” or “Down” button to move the cursor to “DEVICE SELECT” and press “Set”. The DEVICE SELECT menu will bring up a sub-menu consisting of PRINTER MODEL and PRINT TYPE shown in Figure 11.

- PRINTER MODEL**
- PRINT TYPE**
- EXIT**

Figure 12: DEVICE SELECT Sub Menu

To select the desired device, press the “Up” or “Down” button to move the cursor to that device and press “Set”. After selecting the Device, exit out of the DEVIDE SELECT sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” and then pressing “Set” button. In the main-menu, press “Reset” to activate the programing for that specific device. DEVICE SELECT automatically formats the VSI-Pro-IBM to match your device’s communication settings. However, if you need to change these settings, you can do so through the COMMUNICATION menu described later in this manual.

NOTE 

Whenever you select a device in this menu, certain programming features are reset to the default settings. Always set the device select first, get the data on-screen, then proceed with additional programming.

DEVICE SELECT PROGRAMMING

Press the “Up” or “Down” button to move the cursor to “PRINTER MODEL” and press “Set” button. The following menu will appear:

- LCD OP DISPLAY
- VFD II DISPLAY
- MODEL 2 PRINTER
- MODEL 3 PRINTER
- MODEL 4,4R PRINTER
- MODEL 4A PRINTER
- IBM 4610 PRINTER
- EXIT

Figure 13: PRINTER MODEL Sub Menu

LCD OP DISPLAY

Press the “Up” or “Down” button to move the cursor to “LCD OP DISPLAY” and press “Set” button. After selecting the device, exit out of the PRINTER MODEL sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button and then pressing the “Up” or “Down” button to move the cursor to “PRINT TYPE” and press “Set” button. The following menu will appear:

- 2-LINE DISPLAY
- SCROLL UP
- EXIT

Figure 14A: PRINT TYPE Sub Menu

To select the desired device, press the “Up” or “Down” button to move the cursor to that device and press “Set” button. After selecting the device, exit out of the PRINT TYPE sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button.

5. PROGRAMMING

VFD II DISPLAY

Press the “Up” or “Down” button to move the cursor to “VFD II DISPLAY” and press “Set” button. After selecting the device, exit out of the PRINTER MODEL sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button and then pressing the “Up” or “Down” button to move the cursor to “PRINT TYPE” and press “Set” button. The following menu will appear:

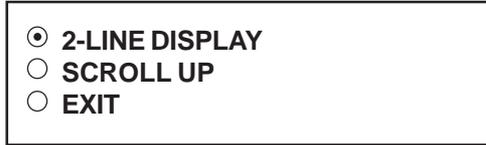


Figure 14B: PRINT TYPE Sub Menu

To select the desired device, press the “Up” or “Down” button to move the cursor to that device and press “Set” button. After selecting the device, exit out of the PRINT TYPE sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button.

MODEL 2 PRINTER

Press the “Up” or “Down” button to move the cursor to “MODEL 2 PRINTER” and press “Set” button. After selecting the device, exit out of the PRINTER MODEL sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button and then pressing the “Up” or “Down” button to move the cursor to “PRINT TYPE” and press “Set” button. The following menu will appear:



Figure 15A: PRINT TYPE Sub Menu

To select the desired device, press the “Up” or “Down” button to move the cursor to that device and press “Set” button. After selecting the device, exit out of the PRINT TYPE sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button.

MODEL 3 PRINTER

Press the “Up” or “Down” button to move the cursor to “MODEL 3 PRINTER” and press “Set” button. After selecting the device, exit out of the PRINTER MODEL sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button and then pressing the “Up” or “Down” button to move the cursor to “PRINT TYPE” and press “Set” button. The following menu will appear:



Figure 15B: PRINT TYPE Sub Menu

To select the desired device, press the “Up” or “Down” button to move the cursor to that device and press “Set” button. After selecting the device, exit out of the PRINT TYPE sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button.

MODEL 4,4R PRINTER

Press the “Up” or “Down” button to move the cursor to “MODEL 4,4R PRINTER” and press “Set” button. After selecting the device, exit out of the PRINTER MODEL Sub Menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button and then pressing the “Up” or “Down” button to move the cursor to “PRINT TYPE” and press “Set” button. The following menu will appear:



Figure 15C: PRINT TYPE Sub Menu

To select the desired device, press the “Up” or “Down” button to move the cursor to that device and press “Set” button. After selecting the device, exit out of the PRINT TYPE sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button.

MODEL 4A PRINTER

Press the “Up” or “Down” button to move the cursor to “MODEL 4A PRINTER” and press “Set” button. After selecting the device, exit out of the PRINTER MODEL Sub Menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button and then pressing the “Up” or “Down” button to move the cursor to “PRINT TYPE” and press “Set” button. The following menu will appear:



Figure 15D: PRINT TYPE Sub Menu

To select the desired device, press the “Up” or “Down” button to move the cursor to that device and press “Set” button. After selecting the device, exit out of the PRINT TYPE sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button.

IBM 4610 PRINTER

Press the “Up” or “Down” button to move the cursor to “IBM 4610 PRINTER” and press “Set” button. After selecting the device, exit out of the PRINTER MODEL Sub Menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button and then pressing the “Up” or “Down” button to move the cursor to “PRINT TYPE” and press “Set” button. The following menu will appear:



Figure 15E: PRINT TYPE Sub Menu

To select the desired device, press the “Up” or “Down” button to move the cursor to that device and press “Set” button. After selecting the device, exit out of the PRINT TYPE sub menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” then pressing “Set” button.

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5.4 SCREEN SETUP

Press the “Up” or “Down” button to move the cursor to “SCREEN SETUP” and press “Set”. The following menu will appear:

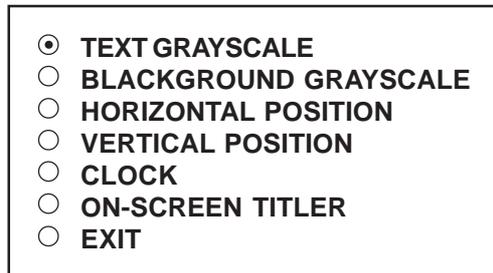


Figure 16: SCREEN SETUP Sub Menu

TEXT GRAYSCALE

To change the display border and/or the grayscale of the text on screen, press the “Up” or “Down” button to move the cursor to “TEXT GRAYSCALE” and press “Set”. Cycle through the selections by pressing the “Up” or “Down” buttons. There are 10 settings to choose from. Make your selection and press “Set” to return to the previous menu.

BACKGROUND GRAYSCALE

To change the display border and/or the grayscale of the text on screen, press the “Up” or “Down” button to move the cursor to “BACKGROUND GRAY SCALE” and press “Set”. Cycle through the selections by pressing the “Up” or “Down” buttons. There are 10 settings to choose from. Make your selection and press “Set” to return to the previous menu.

HORIZONTAL POSITION

To change the horizontal position of the inserted text on-screen, press the “Up” or “Down” button to move the cursor to “HORIZONTAL POSITON” 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, press the “Up” or “Down” button to move the cursor to “VERTICAL POSITION” and press “Set”. Press the “Up” or “Down” buttons to move the text to the desired vertical position.

NOTE

Upon powering up for the first time or when the battery becomes depleted, the on-screen Time / Date display may be incorrect or have unreadable characters. If this is the case, enter the clock menu and “Reset Time / Date”. The Time / Date will then show readable characters and be unaffected by a Master Reset.

CLOCK

To program the clock's functions, press the “Up” or “Down” button to move the cursor to “CLOCK” and press “Set”. The following menu will appear:

<input checked="" type="radio"/> T/D DISPLAY	ON
<input type="radio"/> TIME FORMAT	12 HOUR
<input type="radio"/> DATE FORMAT	MM/DD/YY
<input type="radio"/> DAYLIGHT SAVING	DISABLED
<input type="radio"/> SET TIME / DATE	
<input type="radio"/> RESET TIME / DATE	
<input type="radio"/> T/D LOCKING	ON
<input type="radio"/> EXIT	

Figure 17: CLOCK Sub Menu

T/D DISPLAY turns the time/date display on or off. Press the “Up” or “Down” button to move the cursor to “T/D DISPLAY” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to toggle between “ON” or “OFF” and press “Set” when the desired value is displayed.

TIME DISPLAY selects either 12-hour AM/PM or 24-hour Military Time format with AM/PM. Press the “Up” or “Down” button to move the cursor to “TIME DISPLAY” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to toggle between time formats and press “Set” when the desired format is displayed.

DATE FORMAT chooses one of the three available formats. Press the “Up” or “Down” button to move the cursor to “DATE FORMAT” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to toggle between date formats and press “Set” when the desired format is displayed.

DAYLIGHT SAVING selects, for example, USA, Canada, Australia or is disabled. Press the “Up” or “Down” button to move the cursor to “DAYLIGHT SAVING” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to toggle between values and press “Set” when the desired value is displayed.

SET TIME/DATE sets the clock manually. Press the “Up” or “Down” button to move the cursor to “SET TIME/DATE” and press “Set”. The time/date will appear and the cursor will start flashing. Press the “Up” and “Down” button to change the value and press “Set” when the desired value is displayed. The value is selected and the cursor will advance to the next position. When the desired time/date is displayed, press the “Up” and “Down” buttons simultaneously to enter the time/date into memory and return to the previous menu.

RESET TIME/DATE resets the clock to the default value. Press the “Up” or “Down” button to move the cursor to “RESET TIME/DATE” and press “Set” to reset the time/date.

T/D LOCKING turns the time/date locking on or off. If the time/date locking is turned on, make sure that the time and date format selected is the same as the ATM time and date format. Press the “Up” or “Down” button to move the cursor to “T/D LOCKING” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to toggle between “ON” or “OFF” and press “Set” when the desired value is displayed.

If the T/D LOCKING is turned on, make sure that the time format selected is the same as the register’s time/date format. If the T/D LOCKING is turned on, the VSI-Pro-IBM will monitor the incoming data string. If it finds a valid time and date in one or two consecutive lines, it will set the clock to whatever time/date it finds. A valid time has the following formats:

HH:MM, HH:MM:ss
 HH:MM AM, HH:mm:ss AM
 HH:MM PM, HH:MM:ss PM

where hh is a number between 0 and 12 (24 if either AM or PM not present)

A valid date has the same format as for date display and has either “/” or “-” as a separator.

ON-SCREEN TITLER

Press the “Up” or “Down” button to move the cursor to “ON-SCREEN TITLER” and press “Set”. The following menu will appear:



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<input checked="" type="radio"/> TITLER	OFF
<input type="radio"/> TITLE	
<input type="radio"/> EXIT	

Figure 18: ON-SCREEN TITLER Sub Menu

TITLER

To change the status of the on-screen titler, press the “Up” or “Down” button to move the cursor to “TITLER” and press “Set”. The cursor will start flashing. Select either “ON” or “OFF” by pressing the “Up” or “Down” button. After making a selection, press “Set”. This will return the cursor to the non-flashing mode. Now select “EXIT” to return to the previous menu.

TITLE

The VSI-Pro-IBM gives you the option of a 40-character display for easy register identification in addition to the actual register transaction data.

To create a title, press the “Up” or “Down” button to move the cursor to “TITLE” and press “Set”. You will see a row of 40 boxes and the first box will be flashing.

To change the character in the first position, press the “Up” or “Down” buttons to cycle through the alpha-numeric selections from the following list of available characters.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz =.:+*/9876543210

The solid white box is used for a blank space. Make your selection and press “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 into memory. The white boxes will disappear and your title will be displayed as it will appear on-screen. Press the “Up” or “Down” button to move the cursor to “EXIT” and press “Set” to return to the previous menu.

NOTE 

Remember, enabling the TITLE will limit text insertions to 10 lines maximum.

EXIT

Press the “Up” or “Down” button to move the cursor to “EXIT” and press “Set” to return to the previous menu.

5.5 TEXT DISPLAY

This menu will give you more control over the actual text block formatting and its appearance on the screen. To access the menu, press the “Up” or “Down” button to move the cursor to “TEXT DISPLAY” and press “Set”. The following sub-menu will appear:

<input checked="" type="radio"/> SCREEN BLANK	20
<input type="radio"/> DISPLAY LINES	10
<input type="radio"/> DISPLAY FORMAT	TOP
<input type="radio"/> LINE COMPRESS	OFF
<input type="radio"/> LEFT JUSTIFIED	OFF
<input type="radio"/> SCROLL DELAY	OFF
<input type="radio"/> DISPLAY	ON
<input type="radio"/> EXIT	

Figure 19: TEXT DISPLAY Sub Menu

SCREEN BLANK

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

This is the amount of time that the VSI-Pro-IBM text display will remain on-screen after a transaction before blanking itself off (not the video picture, just the register transaction data) until the next transaction.

To change the SCREEN BLANK setting, press the “Up” or “Down” button to move the cursor to “SCREEN BLANK” and press “SET”. The cursor will begin flashing. Press the “Up” or “Down” buttons to cycle through the selections.

Press “Set” when the desired time is displayed. The cursor will stop flashing and you may continue programming.

NOTE

Choosing “NONE” means No Blanking. The VSI-Pro-IBM will display the last transaction until a new transaction is performed.

DISPLAY LINES

You have the choice of how many lines of text to display on-screen for register transactions. The choices are up to 11 lines.

To change the DISPLAY LINES setting, press the “Up” or “Down” button to move the cursor to “DISPLAY LINES” and press “Set”. The cursor will begin flashing. Press the “Up” or “Down” buttons to cycle through the selections. Press “Set” when the desired number is displayed. The cursor will stop flashing and you may continue programming.

NOTE

All register transaction 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 of the on-screen display.

NOTE

If you are using an on-screen title, it will occupy Line 1, leaving 10 lines for the text insertion. If you enable the on-screen Time/Date then this takes one additional line also.

DISPLAY FORMAT

If “TOP” is selected which is the default, the data scrolls from the top most line down to the selected number of lines displayed. “T/D” and/or “TITLE” is displayed at the top of the screen. If “BOTTOM” is selected then the data scrolls up from the bottom most line to the top of the screen and “T/D” and/or “TITLE” is displayed at the bottom of the screen.

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LINE COMPRESS

NOTE  *Set your Exceptions first before enabling this feature.*

The VSI-Pro-IBM automatically compresses the spaces in a line first as it reaches 40 characters. With LINE COMPRESS "ON", the VSI-Pro will additionally remove multiple spaces and then 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" button, and press "Set" when your choice is displayed. The cursor will stop flashing and you can continue programming.

LEFT JUSTIFICATION

When LEFT JUSTIFIED is "ON", the VSI-Pro-IBM will start each line of text with no leading spaces from the left margin of the text display block.

SCROLL DELAY

Scroll delay ensures that lines of text remain on-screen a minimum of 0.5 seconds. This is especially useful with registers that run at a high baud rate, time-lapse VCRs in extended record modes, switchers, or multiplexers. Sometimes, the register can produce characters so quickly that they can scroll up too fast on the screen to be recorded. When SCROLL DELAY is "ON", the VSI-Pro-IBM 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" button, then press "Set" when your choice is displayed. The cursor will stop flashing and you can continue programming.

NOTE 

At high baud rates, the SCROLL DELAY on the internal buffer of the VSI-Pro-IBM may overflow. This will cause lost text. The internal buffer can hold up to 20K characters before overflowing so it is more than enough for almost all cash register applications.

DISPLAY

You have the choice to globally turn "ON" or "OFF" the complete VSI-Pro-IBM 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 the program set-up in the ALARM OUTPUTS menu. With the display "OFF", the VSI-Pro will still perform all functions as programmed, for example, exception reporting will still function, but the information will not appear on-screen unless programmed to do so in the EXCEPTIONS REPORT menu. Also the data will not show in the history buffer if not displayed.

EXIT

Press the "Up" or "Down" button to move the cursor to "EXIT" and press "Set" to return to the previous menu.

5.6 COMMUNICATION

This was discussed briefly in the section under “DEVICE SELECT” and will be fully explained here. When you choose your device type under the DEVICE SELECT menu, this automatically formats the VSI-Pro-IBM to the appropriate settings needed to communicate with your device. There may be times when you will need to amend these settings for a specific device.

To access the Communication menu, press the “Up” or “Down” button to move the cursor to “COMMUNICATION” and press “Set”. The following menu will appear:

<input checked="" type="radio"/> INTERFACE TYPE	RS-485
<input type="radio"/> RX BAUD RATE	4800
<input type="radio"/> TX BAUD RATE	4800
<input type="radio"/> PARITY	NONE
<input type="radio"/> DATA BITS	8
<input type="radio"/> HANDSHAKE	OFF
<input type="radio"/> AUTO LINEFEED	ON
<input type="radio"/> EXIT	

Figure 20: COMMUNICATION Sub Menu

INTERFACE TYPE

UNPROGRAMMABLE

Interface type for VSI-Pro-IBM is RS-485 ONLY.

RX BAUD RATE

UNPROGRAMMABLE

Rx Baud Rate for VSI-Pro-IBM is 4800bps ONLY.

TX BAUD RATE

Choices: AUTO, 150, 300, 600, 1200, 2400, 4800

To set the TX Baud Rate for your particular device, press the “Up” or “Down” button to move the cursor to “TX BAUD RATE” and press “Set”. The cursor will start flashing. You can now use the “Up” or “Down” buttons to make your selection. When your selection appears, press “Set”. The cursor will stop flashing and you can proceed to the next menu item for programming.

NOTE : *The VSI-Pro-IBM uses a special crystal and can output RS-232 at a maximum of 4800 baud*

PARITY

Choices: NONE, ODD, EVEN

Press the “Up” or “Down” button to move the cursor to “PARITY” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to cycle through the values and press “Set” when the desired value is displayed.

DATA BITS

Choices: 7 or 8

If you select 7 Data Bits, you must select “ODD” or “EVEN” Parity in the Parity menu. Press the “Up” or “Down” button to move the cursor to “DATA BITS” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to cycle through the values and press “Set” when the desired value is displayed.

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HANDSHAKE

Choices: ON, OFF

Handshaking is an electrical signal that tells the device that the VSI-Pro-IBM is ready to receive data. It may not be necessary and/or need not be connected to an outgoing signal from the device since the VSI-Pro-IBM does not require handshaking. The VSI-Pro-IBM handshaking signal is always true signally the device to send data.

Handshaking guarantees that the internal buffer is not over run or text is not lost. Most AVE interfaces do not support this function. Also since the VSI-Pro-IBM has a 20K buffer this feature is generally not required.

Press the "Up" or "Down" button to move the cursor to "HANDSHAKE" and press "Set". The cursor will start flashing. Press the "Up" or "Down" button to cycle through the values and press "Set" when the desired value is displayed.

AUTO LINEFEED

Choices: ON, OFF

Auto Linefeed makes the VSI-Pro-IBM append a CR/LF after each displayed line. The default of this function is "ON", but if you would like to disable it then press the "Up" or "Down" button to move the cursor to "AUTO LINEFEED" and press "Set". The cursor will start flashing. Press the "Up" or "Down" button to cycle through the values and press "Set" when the desired value is displayed.

EXIT

Press the "Up" or "Down" button to move the cursor to "EXIT" and press "Set" to return to the previous menu.

5.7 EXCEPTION REPORTS

EXCEPTION REPORT OVERVIEW

The Exception Report gives you the option to assign an on-screen flag, trigger an alarming device, or send data to another serial device on any questionable transaction that you have preprogrammed into the VSI-Pro-IBM. The VSI-Pro-IBM will allow programming of up to 24 separate exceptions. These exceptions can be VOIDS, REFUNDS, COUPONS, PAID OUT, RETURNS, individual departments, specific items, or any transaction that you determine (by programming) to be "exceptional" or questionable.

You may even set ranges for the exceptions. For example, all transactions over \$100, between \$8.00 and \$25.00, or lower than \$10 and greater than \$25.00, all transactions by a specific cashier, or whatever transactions you need to watch exceptionally close.

The following is a brief overview of how to set up Exception Reports.

1. On the main-menu, press the "Up" or "Down" button to move the cursor to "EXCEPTION REPORT" and press "Set".
2. On the sub-menu, press the "Up" or "Down" button to move the cursor to "EXCEPTION HISTORY" and press "Set".
3. On the sub-menu, press the "Up" or "Down" button to move the cursor to "DVR SELECTION" and press "Set". Then select the model of DVR you are using.
4. Exit and press the "Up" or "Down" button to move the cursor to "SET EXCEPTION" and press "Set".
5. To select the Exception No. that you wish to program, press the "Up" or "Down" button to move the cursor to the desired Exception No. then press "Set". Press the "Up" or "Down" button to toggle between the choices.
6. Make sure that DISPLAY is set to "ON" for any exception data to be saved in the Exception History.
7. Program the Exception String in the Exception Report to compare the data that shows on the screen for time search mode in the Exception History menu.
8. After you have set up the desired configurations, press the REC button on the DVR to record video into a hard drive or use alarm output for triggering the DVR at record input.
9. The monitor should display a flashing REC message and the REC button will light up indicating the DVR is in the recording mode.



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, or reversing the entire text 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 exception number and selecting "ON". With this option, all questionable transactions (exceptions) will be "flagged" with the flashing asterisk.

You can then review these exceptions by putting your DVR or 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 transaction in real time or slow play or frame by frame, depending on the type of playback options of your particular DVR or VCR.

HARD ALARM OUTPUT

The VSI-Pro-IBM allows you to program exceptions to trigger external alarming devices such as time-lapse VCR's, quads, enunciators, LED's etc. Using the ALARM OUTPUT 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 or DVR OUTPUT

There may be situations where you do not want cashiers or other employees to know what triggers an exception. In this case, the VSI-Pro-IBM provides a separate output that will send data to a remotely located serial printer. If you turn the on-screen display off and the output on and you have a remote serial printer hooked up to the VSI-Pro-IBM, 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. With this hard copy printout of the exception report, you can then review the tape by going directly to that exception's time.

The serial printer output of the VSI-Pro-IBM can be programmed to send out the entire transaction. The output can be connected to the other equipment such as DVRs, computers, phone line transmissions or digital storage devices for later retrieval.

The VSI-Pro-IBM also has a "triggered text" feature. This feature allows programmed text or control characters to be sent out when an exception occurs to trigger devices like DVR's to save the data file for future review. Other computer devices can wait for this specified text string and do other functions at this time via the serial communication process.

From the main programming VSI-Pro-IBM menu, press the "Up" or "Down" button to move the cursor to "EXCEPTION REPORT" and press and release "Set". The following menu will appear:

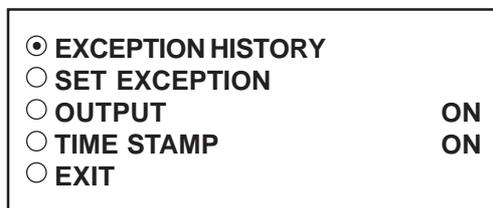


Figure 21: EXCEPTION REPORT Sub Menu

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EXCEPTION HISTORY

Press the “Up” or “Down” button to move the cursor to “ EXCEPTION HISTORY ” and press “Set”. The following menu will appear:

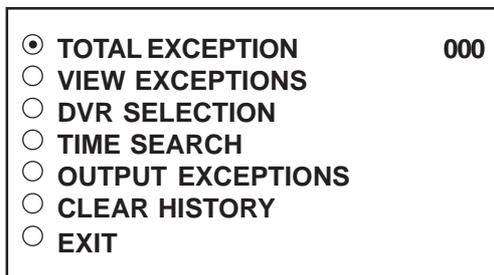


Figure 22: EXCEPTION HISTORY Sub Menu

TOTAL EXCEPTIONS

This is not a selection for just displays the total exception count kept in the Exception History Buffer.

VIEW EXCEPTIONS

This displays the buffered exceptions on-screen, starting with the oldest exception in the buffer. Press the “Up” or “Down” button to move the cursor to “VIEW EXCEPTIONS” and press “Set”. Once in the exception displaying screen, press the “Up” or “Down” button to scroll to the next screen. Press “Set” to exit and return to the previous menu. Remember, you must turn the DISPLAY “ON” for exceptions to be saved in history.

For example:

Define “NO SALE” as an exception string In Exception NO. 2 , DISPLAY to be “ON”, and define OPERATOR “IN”.

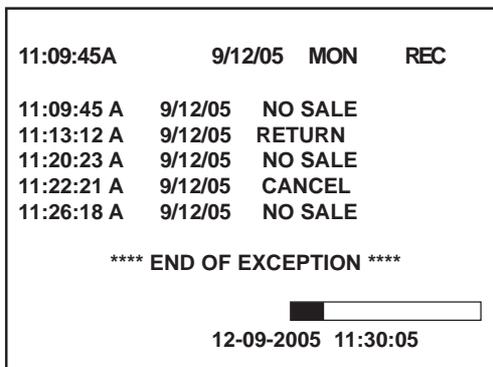


Figure 23: Display of VIEW EXCEPTIONS

NOTE

For any exception you must program Display “ON” for any exception data to be saved in the Exception History.

DVR SELECTION

Press the “Up” or “Down” button to move the cursor to “DVR SELECTION” and press “Set”. The following menu will appear:

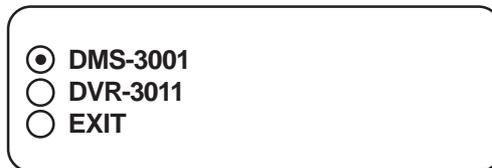


Figure 24: DVR Selection Sub Menu

DVR-3011

Press the “Up” or “Down” button to move the cursor to “DVR-3011” and press “Set”. An asterisk appears to indicate your selection.



Figure 25: DVR-3011,3021 Sub Menu

DEST ID and SRC ID

Choices: 1 through 32 **Note:** The DEST ID and SCR ID can not be the same value or can not send any command.

TIME SEARCH

Press the “Up” or “Down” button to move the cursor to “TIME SEARCH” and press “Set”. The following sub-menu will appear:

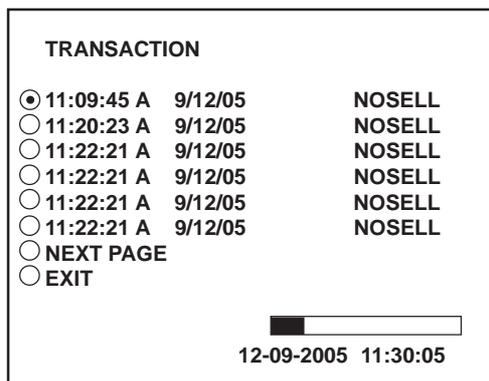


Figure 26: Display of TIME SEARCH

Use the “Up” or “Down” button to scroll to the desired exception in the transaction history. As you select the lline the exception string will display at the top of the page.

Then press “Set” and the DVR will be commanded by the VSI-Pro-IBM to go to the selected transaction via its Time/ Date Search function. Therefore you must make sure the Time and Date of the DVR is very close to the setting of the VSI-Pro-IBM or their will be an effor in the actual search time. Verify the proper connection to the DVR from the diagram on the following page.

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EXAMPLE

Define "NO SALE" as an exception string In Exception No. 2, DISPLAY to be "ON", and define OPERATOR "IN". If the screen is displayed "NO SALE", the VSI-Pro-IBM will keep this displayed line on Exception History.

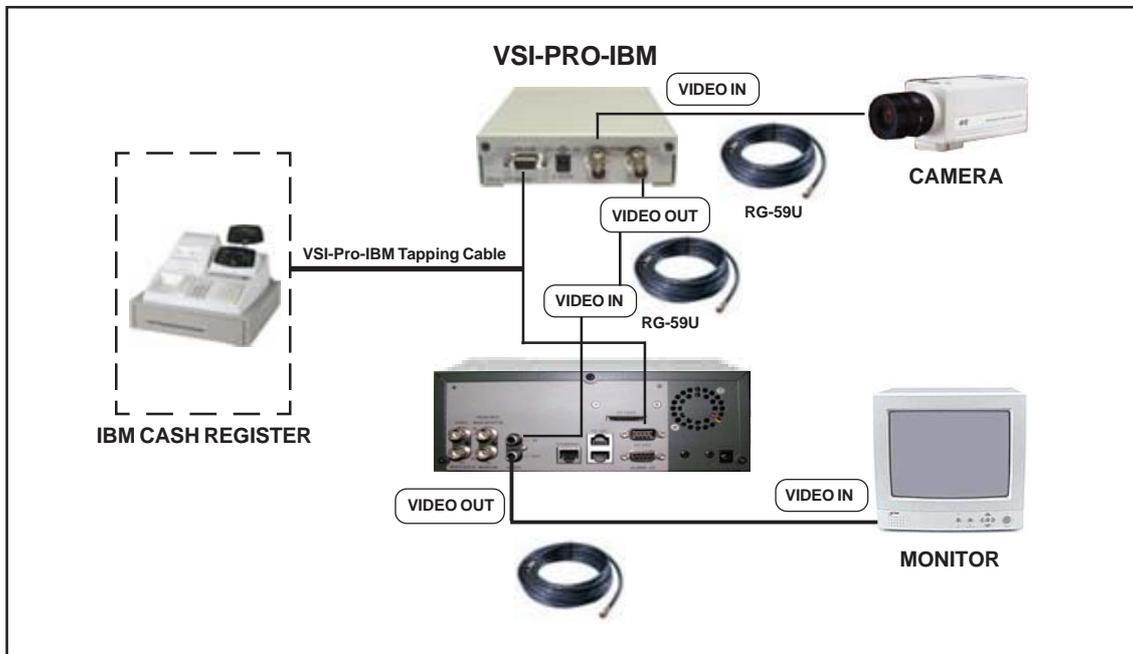


Figure 27: VSI-Pro-IBM with DVR Connections

NOTE:

The VSI-Pro-IBM can control the DVR RS-232 port from Pin 3. In the IBM Cash Register "Tapping Mode" the VSI-Pro-IBM uses Pin 3 to send out auxiliary ASCII data and DVR control signals.

OUTPUT EXCEPTIONS

This selection allows you to have the buffered exceptions sent out for printing. This is a global setting for all exceptions, but you also need to turn on the output for each independent exception.

CLEAR HISTORY

This selection clears all the buffered exceptions and resets the TOTAL EXCEPTIONS counter.

EXIT

Press the "Up" or "Down" button to move the cursor to "EXIT" and press "Set" to return to the previous menu.

SET EXCEPTION

Press the "Up" or "Down" button to move the cursor to "SET EXCEPTION" and press "Set". The following sub-menu will appear:

<input checked="" type="radio"/>	EXCEPTION NO.	1
<input type="radio"/>	DISPLAY	ON
<input type="radio"/>	OUTPUT	ON
<input type="radio"/>	EXCEPTION STRING	
	NO SALE	
<input type="radio"/>	RANGE	
	0000.00 - 0000.00	
<input type="radio"/>	OPERATOR	NONE
<input type="radio"/>	EXIT	

Figure 28: SET EXCEPTION Sub Menu

EXCEPTION NO.*Choices: 1 through 24*

To select the Exception No. that you wish to program, press the “Up” or “Down” button to move the cursor to “EXCEPTION NO.” and press “Set”. The cursor will start flashing. Use the “Up” & “Down” button to sequence through the choices. Make your selection and press “Set”. The cursor will stop flashing and you may continue to the next menu item.

DISPLAY*Choices: ON, OFF*

The DISPLAY item lets you control whether or not this particular exception is displayed on the video monitor. Please understand that if you are not using a remote serial printer and if you do not turn on the Exceptions display here, you will not have the on-screen flag and consequently no record of the exception when it occurs.

To make your selection, press the “Up” or “Down” button to move the cursor to “DISPLAY” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to toggle between “ON” or “OFF”. Make your selection and press “Set”. The cursor will stop flashing and you may continue to the next menu item.

 **APPLICATION NOTE**

If the display of the Exception is turned off here, the exception data will actually be erased from the screen. This feature can be used to generate what we refer to as “Negative Exceptions”, allowing the removal of unwanted text from the screen. See “Negative Exceptions” that follows.

OUTPUT*Choices: ON, OFF*

The OUTPUT controls the RS-232 data from the VSI-Pro-IBM. Typically this is sent to a remote Serial Printer to provide a hard copy of Exceptions with time and date on it. This data can also be sent out to a computer with appropriate software and give you the ability to analyze data. You could also use an auto answer modem and have the data sent to a central office or even to your home. The serial devices must have the same Baud Rate, Parity, and Data Bits as the VSI-Pro-IBM for optimum performance of data transfer.

To make your selection, press the “Up” or “Down” button to move the cursor to “OUTPUT” and press “Set”. Press the “Up” or “Down” button to toggle between “ON” or “OFF”. Make your selection and press “Set”. The cursor will stop flashing and you may continue to the next menu item.

5. PROGRAMMING



PROGRAMMING NOTE

The following sections defines the Exceptions Strings, the Operator and the Range. The Exception String is programmed first, then Range is defined and finally the Operator is selected. The VSI-Pro-IBM looks at the Exceptions String first, and if there is data that matches, it then checks to see if a Range has been defined.

EXCEPTION STRING

The VSI-Pro-IBM compares the data that is printed to video to the data entered in the Exception String. The Exception String can also be used without a defined range. Example of this would be to assign a word "VOID" as an exception. VSI-Pro-IBM will look for that string so range definition is not necessary. However, exception string "VOID" could be further defined by assigning a Range, i.e. all "VOID" over \$20.

You can also define a global exception to flag all negative transactions. An example of this using the Samsung ER-4715 would be the following exception to flag any transaction that contains a "-", or negative sign. For example, in the Samaung ER-4715 register an assigned Exception string ".-." will flag all Void, Refund, Merchandise Return and Paid out to the monitor.

You can also use wild card symbol ".", a centered dot on any data location. An example of this would be instead of assigning eight different exception strings for dept 00 to dept 07, you can assign only one exception string e.g. "dept .". That wild card exception string will handle exceptions for all eight departments.

To program the exception string, press the "Up" or "Down" button to move the cursor to "EXCEPTION STRING" and press "Set". The first 40 character exception will become active after flashing. Program in your exception string.

NOTE

Remember to enter your Exception String based on the way that data prints to video, including spaces. Also remember pressing "Set" advances to the next position. Pressing "Down" and "Up" at the same time enters the string into memory and returns to the menu for further programming.



TIP

If you make a mistake and need to erase a character, pressing "Up" and "Set" at the same time will change the character back to a blank space.

NEGATIVE EXCEPTION

You can remove unwanted text from the screen using the VSI-Pro-IBM. The VSI-Pro-IBM displays data in the text block 11 lines by 40 characters wide for total of 440 characters. To remove unwanted messages from the register data you first determine how the unwanted messages prints to the video. For example, a typical message which scrolls on the customer display or appears on the video monitor.

The removing of the above string is referred to as the Negative Exception. Follow the following steps to program the negative exception. Turn the display off for that exception. In the Exception String enter the words "WELCOME TO XYZ SUPER" exactly as they appear on the screen, including spaces.



NOTE 

Only 40 characters are allowed in each Exception String, including blank spaces.

OPERATOR

Choices: 0000.00-9999.99

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" calculations.

With this version of the VSI-Pro-IBM, you can define ranges for your exceptions and have the VSI-Pro-IBM alarm when an exception falls within the range's parameters or outside the range of the two numbers. The choices are "IN", "OUT", and "NONE". To program the operator, press the "Up" or "Down" button to move the cursor to "OPERATOR" and press "Set". The cursor will start flashing. Press the "Up" or "Down" button to cycle through the values and press "Set" when the desired value is displayed.

RANGE

Choices: 0000.00-9999.99

The Range defines the limits of the Operator. These are numeric only. As you can see from the previous examples, the range has two separate fields that are separated by a double-sided arrow. This format must be followed.

To program the range, press the "Up" or "Down" button to move the cursor to "RANGE" and press "Set". The first "0" in the range starts to flash. This means it is active and ready for programming. Press the "Up" or "Down" button to cycle through the values and press "Set" when the desired value is displayed. This will advance the active block to the next character. 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 want to set this range into the VSI-Pro-IBM memory, simultaneously press and release the "Up" and "Down" buttons.

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-Pro-IBM memory and exit you back to the previous menu.

EXMAPLES FOR SETTING EXCEPTION**EQUAL**

Suppose Exception #2 would be flag all \$10 sales on Register Department 1. This would be the settings for this Exception: (For these examples, we are using the Samsung ER-4715 Electronic Cash Register)

Exception	No. 2
Display	ON
Output	ON,OFF (depending on presence of serial printer)
Exception String	1 . . .
Range	0010.00-0010.00
Operator	IN

5. PROGRAMMING

OUT RANGE

Suppose Exception #3 would "FLAG" every transaction on Department 2 that is under 10 cents and over \$100 dollars. This would be the settings for this Exception:

Exception	No. 3
Display	ON
Output	ON, OFF (Depending on presence of serial printer).
Exception String	2 . . .
Range	0000.10 -0099.99
Operator	OUT

IN RANGE

Suppose Exception # 5 would flag all transactions between \$50.00 & \$100.00 on Department 3:

Exception No.	3
Display	ON
Output	ON or OFF (Depending on presence of serial printer).
Exception String	3 ...
Range	0049.99-0099.99
Operator	IN

With this exception all sales between \$50 and \$100 dollars will be flagged.

GREATER THAN

This example will show you how to program an exception to flag all sales in department 5 greater than \$100 dollars

Exception	No. 2
Display	ON
Output	ON or OFF
Exception String	5...
Range	0000.01- 0099.99
Operator	OUT

Now whenever anyone rings a sale of \$100 or more on Department 5, the transaction will be flagged.

LESS THAN

This example will show you how to program an exception to flag all sales in Department 6 of less than \$100. 00:

Exception	No. 4
Display	ON
Output	ON or OFF
Exception String	6
Range	0000.01-0099.00
Operator	IN

EXCEPTION REPORT MENU CONTINUED

OUTPUT

Choices: ON, OFF

This is global output to send data to the serial printer. When “ON” is selected all the data will be send to the serial printer regardless of what setting of out put has selected in the individual output in set exception menu. When “OFF” is selected only those exception will send to the serial printer whose out put is “ON” under set exceptions menu for individual exceptions. To turn output “ON” or “OFF”, press the “Up” or “Down” button to move the cursor to “OUTPUT” and press “Set”. Press the “Up” or “Down” button to cycle through the values and press “Set” when the desired value is displayed.

TIME STAMP

Choices: ON, OFF

If TIME STAMP is selected “ON” then printer will print the exception with time stamp flag, otherwise just print the Exception. To turn TIME STAMP “ON” or “OFF”, press the “Up” or “Down” button to move the cursor to “TIME STAMP” and press “Set”. Press the “Up” or “Down” button to cycle through the values and press “Set” when the desired value is displayed.

EXIT

Press the “Up” or “Down” button to move the cursor to “Set” to return to the previous menu.

5.8 ALARM OUTPUTS

To access alarm output, press the “Up” or “Down” button to move the cursor to “ALARM OUTPUTS” and press “Set”. The following sub-menu will appear:

<input checked="" type="radio"/> ALARM NO.	1
<input type="radio"/> ALARM TRIGGER	1
<input type="radio"/> NORMAL STATE	NO
<input type="radio"/> ALARM DURATION	20
<input type="radio"/> FLAG TYPE	FLASH *
<input type="radio"/> FLAG DURATION	000
<input type="radio"/> TRIGGERED TEXT	
<input type="radio"/> EXIT	

Figure 29: ALARM OUTPUTS Sub Menu

NOTE : 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.

Choices: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24

The VSI-Pro allows you up to 16 alarms that may be used with any of the user programmed exceptions. However there are only 2 hardwired alarm outputs and these correspond to Alarm 1 & 2 only. The other 14 alarms can be used to send trigger text, serial data out or flash the screen. To select the Alarm Number that you want to program, press the “Up” or “Down” button to move the cursor to “ALARM NO.” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to cycle through the values and press “Set” when the desired value is displayed.

5. PROGRAMMING

ALARM TRIGGER

Choices: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23,24 , 1-12, 13-24, 1-24

An Alarm Trigger is the source of activity programmed to activate a certain alarm. The alarm trigger tells the VSI-Pro what exception to use to trigger the alarming device or the on-screen flag.

Choices: Exceptions 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 (alarms when data is received that matches what you have set in these exception strings).

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.

Exceptions 1-24: alarms when data is received that matches any data set in Exception.

RTS

External alarm input. The VSI-Pro-IBM has 1 alarm input, if you are not using the handshaking function. A contact closure to ground on pin 7 (pin 5 is ground) will trigger this alarm. Coupled with the RTS Triggered text, you can now display a 40 character message from an external alarm input.

RTS APPLICATION NOTE

The RTS alarm input can be connected to a timer on the drawer of a cash register to alarm and send the message "DRAWER OPEN" to the screen if the drawer is open too long.

To select the alarm trigger that you want to program, press the "Up" or "Down" button to move the cursor to "ALARM TRIGGER" and press "Set". The cursor will start flashing. Press the "Up" or "Down" button to cycle through the values and press "Set" when the desired value is displayed.

NORMAL STATE

Choices: NO (Normally open), NC (Normal closed)

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

To select the Normal State that you want to program, press the "Up" or "Down" button to move the cursor to "NORMAL STATE" and press "Set". The cursor will start flashing . Press the "Up" or "Down" button to cycle through the values and press "Set" when the desired value is displayed.

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, press the "Up" or "Down" button to move the cursor to "ALARM DURATION" and press "Set". The cursor will start flashing. Press the "Up" or "Down" button to cycle through the values and press "Set" when the desired value is displayed.

FLAG TYPE

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 can appear as an asterisk “*”, a flashing asterisk, reverse text, or flashing reverse text.

To make your selection, press the “Up” or “Down” button to move the cursor to “FLAG TYPE” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to cycle through the values and press “Set” when the desired value is displayed.

FLAG DURATION

Choices: 6, 12, 30, 60, 120, 180,..., 300

This is the amount of time in seconds that the on-screen FLAG, either the Asterisk or the Reverse mode, will remain activated once it is triggered.

NOTE 

Flag Duration is independent of the Alarm Duration. Flag Duration is the amount of time the on-screen flag will remain on after activation, while, Alarm Duration is the amount of time that the hard-wired Alarm Output remains activated after it is triggered.

To select the amount of time in seconds that you want to program for the flag duration, press the “Up” or “Down” button to move the cursor to “FLAG DURATION” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to cycle through the values and press “Set” when the desired value is displayed.

TRIGGERED TEXT

A Triggered Text is a data string that associates with one of the 16 alarms or with external RTS alarm. When the alarm is triggered by a source, the associated string is sent out and/or displayed, if enabled respectively. Each Triggered Text can contain up to 40 printable ASCII data. If non-printable data (control code) is included, each control code occupies 3 printable spaces. Therefore, only 13 control codes maximum can be programmed in one Triggered Text. To program the TRIGGERED TEXT, go to the ALARM OUTPUTS sub-menu. Select desired ALARM NO or RTS for external alarm. Then go to the TRIGGERED TEXT sub-menu.

<input checked="" type="radio"/>	DISPLAY TEXT	OFF
<input type="radio"/>	OUTPUT TEXT	OFF
<input type="radio"/>	SET TRIGGERED	TEXT
<input type="radio"/>	EXIT	

Figure 30: TRIGGERED TEXT Sub Menu

DISPLAY TEXT

Choices: ON, OFF

Press the “Up” or “Down” button to move the cursor to “DISPLAY TEXT” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to cycle through the values and press “Set” when the desired value is displayed. Selecting “OFF” will not display any exception text on the video output.

5. PROGRAMMING

OUTPUT TEXT

Choices: ON, OFF

Press the “Up” or “Down” button to move the cursor to “OUTPUT TEXT” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to cycle through the values and press “Set” when the desired value is displayed. Selecting “OFF” will not send any exception text to the serial printer.

SET TRIGGERED TEXT

Press the “Up” or “Down” button to move the cursor to “SET TRIGGERED TEXT” and press “Set”. The following sub-menu will appear:



Figure 31: Triggered Text Main Menu

You can enter 1 line with 40 alpha numeric text on each line. You can also enter non-printable data (control code) instead of triggered text. Each control code occupies 3 characters, therefore you can enter 13 control codes in a line. To enter control code, first print up arrow ^ followed by 2 hex digit. For example, hex code 01 has to be entered like ^01.

Press “Up” and “Down” simultaneously to exit..

EXIT

Press the “Up” or “Down” button to move the cursor to “EXIT” and press “Set” to return to the previous menu.

5.9 TEST/DEMO MODE

The TEST/DEMO MODE provides you with several ways to test the VSI-Pro-IBM and demonstrate its capabilities as a cash register interface. Press the “Up” or “Down” button to move the cursor to “TEST/DEMO MODE” and press “Set”. The following sub-menu will appear:

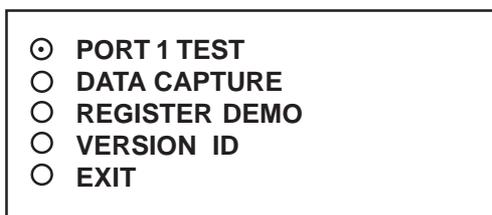


Figure 32: TEST/DEMO MODE Sub Menu

PORT 1 TEST

Sending and receiving data performance can be analyzed under the PORT 1 TEST sub-menu. Press the “Up” or “Down” button to move the cursor to “PORT 1 TEST” and press “Set”. The following sub-menu will appear:

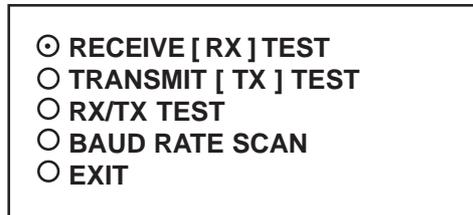


Figure 33: PORT 1 TEST Sub Menu

RECEIVE [RX] TEST

The purpose of this test is to determine that if VSI-Pro-IBM is receiving the data or not. Press the “Up” or “Down” button to move the cursor to “RECEIVE [RX] TEST”. The following display will appear (example only):

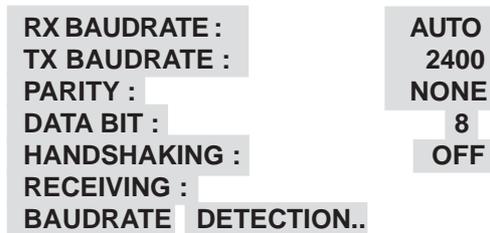


Figure 34: RECEIVE [RX] TEST Display

Receiving data will be appear in three sperate lines, scrolling from right to left. The first line is the actual ASCII data coming from the register while last two lines are HEX conversion of ASCII data. If you do not receive any data, check the connections between VSI-Pro-IBM and Register or any additional interfacing device.

Press “Set” to return to the previous menu.

TRANSMIT [TX] TEST

The purpose of this test is to determine that if the VSI-Pro-IBM is able to transmit data or not. Press the “Up” or “Down” button to move the cursor to “TRANSMIT [TX] TEST” and press “Set”. The following display will appear (example only):

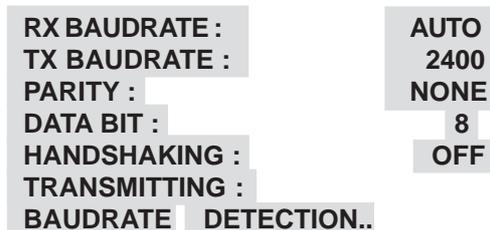


Figure 35: TRANSMIT [TX] TEST Display

If VSI-Pro-IBM transmitting data you will see some predefined ASCII character on the screen. If you don’t see any characters on the screen, check the connections and try again.

Press “Set” to return to the previous menu.

5. PROGRAMMING

NOTE

In any of the above tests, you can stop the scrolling data by holding down either “Up” or “Down” button.

RX / TX TEST

In the RX/TX test the VSI-Pro-IBM echos whatever it receives. Press the “Up” or “Down” button to move the cursor to “RX/TX TEST” and press “Set”. The following display will appear (example only):

```
RX BAUDRATE :      AUTO
TX BAUDRATE :      2400
PARITY :          NONE
DATA BIT :        8
HANDSHAKING :     OFF
ECHOING :
BAUDRATE  DETECTION..
```

Figure 36: RX /TX TEST Display

Press “Set” to return to the previous menu.

BAUD RATE SCAN

The Baud Rate Scan test can scan the baud rate of your register. Press the “Up” or “Down” button to move the cursor to “BAUD RATE SCAN” and press “Set”. The following display will appear (example only):

```
RX BAUDRATE :      AUTO
TX BAUDRATE :      2400
PARITY :          NONE
DATA BIT :        8
HANDSHAKING :     OFF
BAUDRATE SCAN :
BAUDRATE  DETECTION..
```

Figure 37: BAUDRATE SCAN Display

Enter a transaction from the register. The VSI-Pro-IBM will detect the baud rate and display it in front of RX Baud rate.

Press “Set” to return to the previous menu.

EXIT

Press the “Up” or “Down” button to move the cursor to “EXIT” and press “Set” to return to the previous menu.

DATA CAPTURE

This feature allow user to store the data either internal memory of VSI-Pro-IBM or some external data storing device. Press the “Up” or “Down” button to move the cursor to “DATA CAPTURE” and press “Set”. The following sub-menu will appear:



Figure 38: DATA CAPTURE Sub Menu

Press “Set” to return to the previous menu.

CAPTURE TO PORT 1

This feature redirect the incoming data to VSI-Pro-IBM to its output (Pin 3 of AT type RS-232 female connector) where that data can be stored to data storing devices (e.g. PC). This feature is useful to store non-RS 232 format data. Press the “Up” or “Down” button to move the cursor to “CAPTURE TO PORT 1 and press “Set”. The following display will appear (example only):

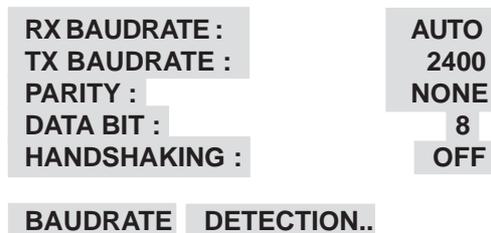


Figure 39: CAPTURE TO PORT 1 Display

Press “Set” to return to the previous menu.

CAPTURE TO MEMORY

This feature allow you to store the data in the internal memory of VSI-Pro-IBM. You can store up to 20 kilobytes of data in the internal memory of VSI-Pro-IBM. Power up the VSI-Pro-IBM for 24 hours prior to download of data. This will provide VSI-Pro-IBM’s internal battery a full charge to hold data in its memory. Press the “Up” or “Down” button to move the cursor to “CAPTURE TO MEMORY” and press “Set”. The following display will appear (example only):

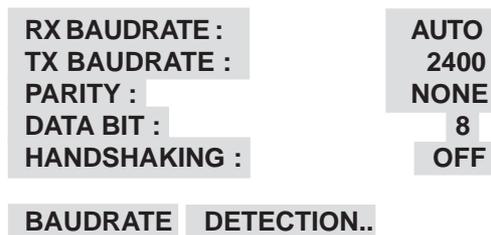


Figure 40: CAPTURE TO MEMORY Display

Press “Set” to return to the previous menu.

NOTE

VSI-Pro can only hold up to 20 kilobytes of data to make sure that you only transfer the data which is in correct format.

5. PROGRAMMING

NOTE  Any Programming or data transfer of any kind can overwrite the saved data in memory.

DUMP MEMORY

You can upload any saved information from the VSI-Pro-IBM memory to any PC or some specific communication devices using appropriate upload cable. To upload the information into a PC you must have any communication software which can transfer the binary data. Press the “Up” or “Down” button to move the cursor to “DUMP MEMORY” and press “Set”. The VSI-Pro-IBM will start uploading the data.

NOTE : The VSI-Pro-IBM can dump memory at a maximum of 4800 baud.

REGISTER DEMO

This demonstration simulates transaction data from a register. This is used to demonstrate the VSI-Pro-IBM's capabilities with just a monitor and camera without having a register hooked up. When the demo mode is active the VSI-Pro-IBM thinks the data is actually coming from a real register. You can use this demo data to configure exceptions and alarms to be fully functional for a complete customer demonstration.

Press the “Up” or “Down” button to move the cursor to “REGISTER DEMO” and press “Set”. The demo will start after a few seconds. To exit this demo, press and release “RESET”.

VERSION ID

When selected, this will display the version of software in use by the VSI-Pro-IBM shown detail (example below).



VSI-PRO IBM
V13.06R1
6/1/2005

EXIT

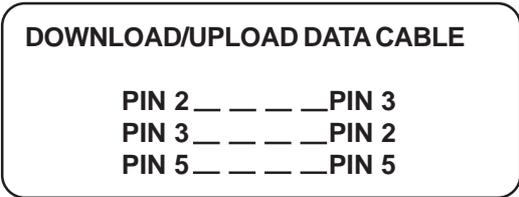
Press the “Up” or “Down” button to move the cursor to “EXIT” and press “Set” to return to the previous menu.

5.10 DOWNLOAD/UPLOAD SETUP

This feature lets you upload or download data between two VSI-Pro-IBM's. This feature is especially helpful on multi-interface installations. You can program one VSI-Pro-IBM and download the data to another VSI-Pro-IBM with the download/upload feature and a data transfer cable. The cable is made up of two male DB-9 connectors and the pin-out is below.

NOTE: This feature is only available to like versions and release. Therefore you can only program a Ver. 13.00 R5 with a same exact VSI-Pro-IBM or erroneous data will occur.

DOWNLOAD/UPLOAD DATA CABLE



PIN 2 _ _ _ _ PIN 3
PIN 3 _ _ _ _ PIN 2
PIN 5 _ _ _ _ PIN 5

Figure 41: Download/Upload Data Cable

DOWNLOAD/UPLOAD SETUP USING VSI-PRO-IBM TO VSI-PRO-IBM

To insure that the DOWNLOAD/UPLOAD process is accomplished, you need to access the programming menu for both VSI-Pro-IBMs, so each VSI-Pro-IBM needs a video input and a monitor. The optimum way to perform the DOWNLOAD/UPLOAD process would be to have a system set up with two separate cameras and monitors and the programmed VSI-Pro-IBM with the download data cable attached. The VSI-Pro-IBM programming data is stored internally in a battery backed 32K x SRAM. This would allow you to program one VSI-Pro-IBM on-site and bring the programmed VSI-Pro-IBM back to the shop or office and program additional VSI-Pro-IBMs quickly. We realize this may not always be possible to do and that there may be a need for field programming. The only difficulty with the field DOWNLOAD/UPLOAD process is accessing the programming menus of both VSI-Pro-IBMs simultaneously.

The use of the diagram in Figure 79 will let you perform the DOWNLOAD/UPLOAD process in the field. For this, you will need a short BNC to BNC cable approximately a foot long, the data cable, and a monitor that can be used next to the VSI-Pro-IBMs.

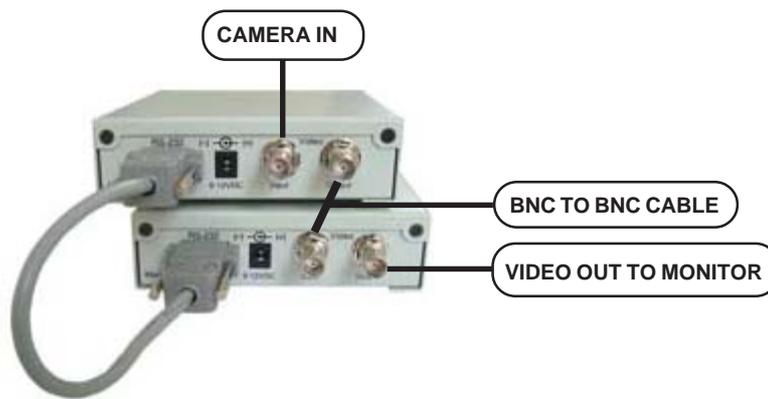


Figure 42: DOWNLOAD/UPLOAD SETUP Using VSI-Pro-IBM to VSI-Pro-IBM

The PROGRAMMED VSI-Pro-IBM will upload data to the UNPROGRAMMED VSI-Pro-IBM. In the configuration in the Figure 42, you can get the programming menus for both VSI-Pro-IBMs on the screen at the same time. Use the front panel shortcut to position the text block from the PROGRAMMED VSI-Pro-IBM on the left side of the screen. To do this, press and hold down “Up”, then press and release “Reset” and then release “Up”. Now, by using the “Up” and “Down” buttons you can move the display side to side on the screen. Move the text block as far to the left as you can and press “Set” to exit. To move the display to the top of the screen, press and hold down “Set” and press and release “Reset”, then release “Set”. Now by using the “Up” and “Down” buttons you can move the display up and down on the screen. Move the display to the top of the screen. When you have it in the correct position, press “Set” to exit.

Go to the UNPROGRAMMED VSI-Pro-IBM and follow the same instructions to move the display to the right side of the screen. After you have both displays positioned properly, the next step is to bring up both programming menus.

Let’s bring up the PROGRAMMED VSI-Pro-IBM first. To do this, simultaneously press and hold “Up” and “Down” and press and release “Reset”, then release “Up” and “Down”. This will bring up the main-menu and it should be on the top left of the screen. Now go to the UNPROGRAMMED VSI-Pro-IBM and do the same thing. You should now have both programming menus side by side.

NOTE

Depending on the size of the monitor you are using, these two menus may overlap, but should not be a problem.

5. PROGRAMMING

To proceed with the DOWNLOAD/UPLOAD SETUP, we will configure the UNPROGRAMMED VSI-Pro-IBM first. From the main-menu, press the “Up” or “Down” button to move the cursor to “DOWNLOAD/UPLOAD SETUP” and press “Set”. The following sub-menu will appear:



Figure 43: DOWNLOAD/UPLOAD SETUP Sub-Menu

Press the “Up” or “Down” button to move the cursor to “DOWNLOAD SETUP” and press “Set”. The following sub-menu will appear. Move to the cursor to “DOWNLOAD SETUP” and press “Set” and the display “DOWNLOAD SETUP...” will appear:



Figure 44: DOWNLOAD SETUP Sub-Menu & Display

The UNPROGRAMMED VSI-Pro-IBM is now waiting to receive data from the PROGRAMMED VSI-Pro-IBM.

Now go to the main-menu of the PROGRAMMED VSI-Pro-IBM and follow the previous instructions to get to “UPLOAD SETUP” and press “Set”. The following sub-menu will appear. Move to the cursor to “UPLOAD SETUP” and press “Set” and the display “UPLOAD SETUP...” will appear:

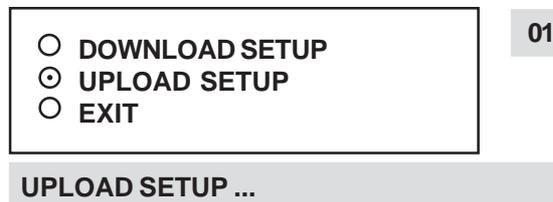
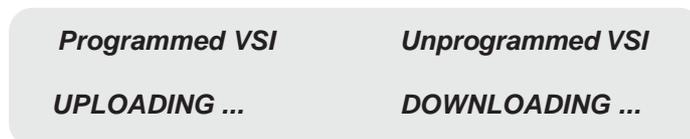


Figure 45: UPLOAD SETUP Sub-Menu & Display

The data transfer will begin and you will have a screen count down of the status that reads:



The count will end at 100. When this prompt clears the screen, the data transfer is complete. Press “Reset” to exit this menu on both VSI-Pro-IBM’s.

Now go to the main-menu of the previously UNPROGRAMMED VSI-Pro-IBM on the right side of the screen. Enter the EXCEPTIONS menu. You should see your exceptions and other programmed data just as they were on the original PROGRAMMED VSI-Pro-IBM.

5.11 HELP

“HELP” on the main-menu provides a quick reference guide of the functions of the “Up” and “Down” and “Set” buttons.

Key Definitions :	
UP/DOWN	-- Change value
SET	-- Enter change mode
	Save change
	Go to next position
UP AND DOWN	-- Save string input
UP AND SET	-- Erase character

Figure 46: HELP Sub-Menu

PROBLEM SOLVING GUIDE

APPENDIX A

NO DATA ON-SREEN

1. Press the “Reset” button on the VSI-Pro-IBM front panel.
2. Incorrect register selected in the REGISTER SELECT menu.
3. Data cable is miswired.
4. Data cable is too long or did not use shielded cable.
5. May be connected to the wrong port.

PROBLEMS WITH CR BOARDS

1. Check that the board is seated properly in the register.
2. Check jumper settings on the CR board if applicable.
3. On CR-700, 800 and 900 series boards, make sure the 2 pin data cable is plugged in correctly.
4. On CR-220 series board, make sure the 2 pin data cable is plugged in correctly.

PROBLEMS WITH N2RS, NCR2RS, DTS2RS, B2RS ETC.

1. Check the cable to the register.
2. If VSI-Pro-IBM was working and stopped, power cycle the system. Turn off the register, unplug the power to the N2RS, and unplug the power to the VSI-Pro-IBM. Now power up the system, plug in the VSI-Pro-IBM and the N2RS. Turn on the register and do a transaction. The data should re-appear.
3. Check the cable between the VSI-Pro-IBM and the N2RS.

NO VIDEO ON MONITOR

1. VSI-Pro-IBM transformer not plugged in, or is malfunctioning.
2. Video In/Out connectors reversed, or BNC connector is not correctly wired.
3. No video input signal.
4. Bad video cable or connector.
5. Camera Iris is closed.
6. Other video device in system is off or malfunctioning.

CHARACTERS JITTER, JUMP, OR SKEW

1. Darken the gray scale of the characters.
2. The VSI-Pro-IBM requires the input video signal to be 1V P-P +/-20%, terminated @ 75ohms. If the voltage is too high or low, then the VSI has trouble syncing the text to the video. Use an amplifier such as AVE's VDA-601 to get the proper level.
3. Poor input sync signals - too many AC coupled amplifiers in the video input signal.
4. Noisy or poor quality video source. Replace with better source.
5. Check for double termination.
6. Video level too high; VSI-Pro-IBM will clip video.
7. The text block is too close to the edge of the screen. Try repositioning the text block. Also, changing the size may help.
8. Too much light in the video picture may cause character distortion. Reposition the camera or reduce the amount of light to which the camera view is exposed. If the camera you're using has an auto iris lens, try adjusting the iris to average and then reduce or increase the level.

NOTE 

The VSI-Pro requires 1V P-P +/- 20 percent, terminated @ 75 ohms.

FUNNY CHARACTERS OR GARBAGE ON SCREEN

1. Power disconnected for too long and memory is lost.
2. Lightning strike, power line noise or power surge.
3. CR boards- make sure data cable is plugged in correctly.
4. Ground and Data wires are reversed. Verify correct DB-9 cable wiring.

HOW TO DO A MASTER RESET ON VSI-PRO-IBM

1. Press and hold in simultaneously the "Down", "Up" and "Set" buttons.
2. While holding those three buttons in, press and release the "Reset" button and then release the other three buttons.
3. This will display the copyright notice.
4. Restores the VSI-Pro-IBM to all the factory default settings.

MY CUSTOMER IS CHANGING REGISTERS. WILL THE VSI-PRO THEY HAVE WORK WITH THE NEW REGISTER?

This is a tricky one. The VSI-Pro-IBM interfaces to over 400 different registers, and as a result, there are several versions of software needed to work with all these different systems. The probability the VSI-Pro-IBM will work with a new system is relatively high, especially if it's Version 13 based. The chances any additional boards or boxes will work is lower, unless your customer is staying with the same manufacturer and within the same register series.

Contact AVE's Product Support Specialists for additional help with this issue.

IF I INSTALL YOUR INTERFACE BOARD INTO A NEW REGISTER, WILL IT VOID MY CUSTOMER'S WARRANTY?

If you are connecting to an external RS-232 port of the register, generally it does not void the warranty. But if you want to add the interface board inside your new cash register, we will highly recommend you to contact the manufacturer of the cash register.

The VSI-Pro-IBM provides two open collector transistor alarm outputs to trigger alarming devices. These are Alarm 1 & 2 in the Alarm menu. Upon an Exception, a VSI-Pro-IBM can be programmed to trigger a VCR to go to its fastest record time, have a Quad go full screen, home a switcher, trigger a preprogrammed PTZ, or provide visual or audible alarms. The VSI-Pro-IBM provides two alarm outputs that are rated at 12VDC @ 20mA maximum.

The following are some basic circuit designs to take advantage of the alarm output option of the VSI-Pro.

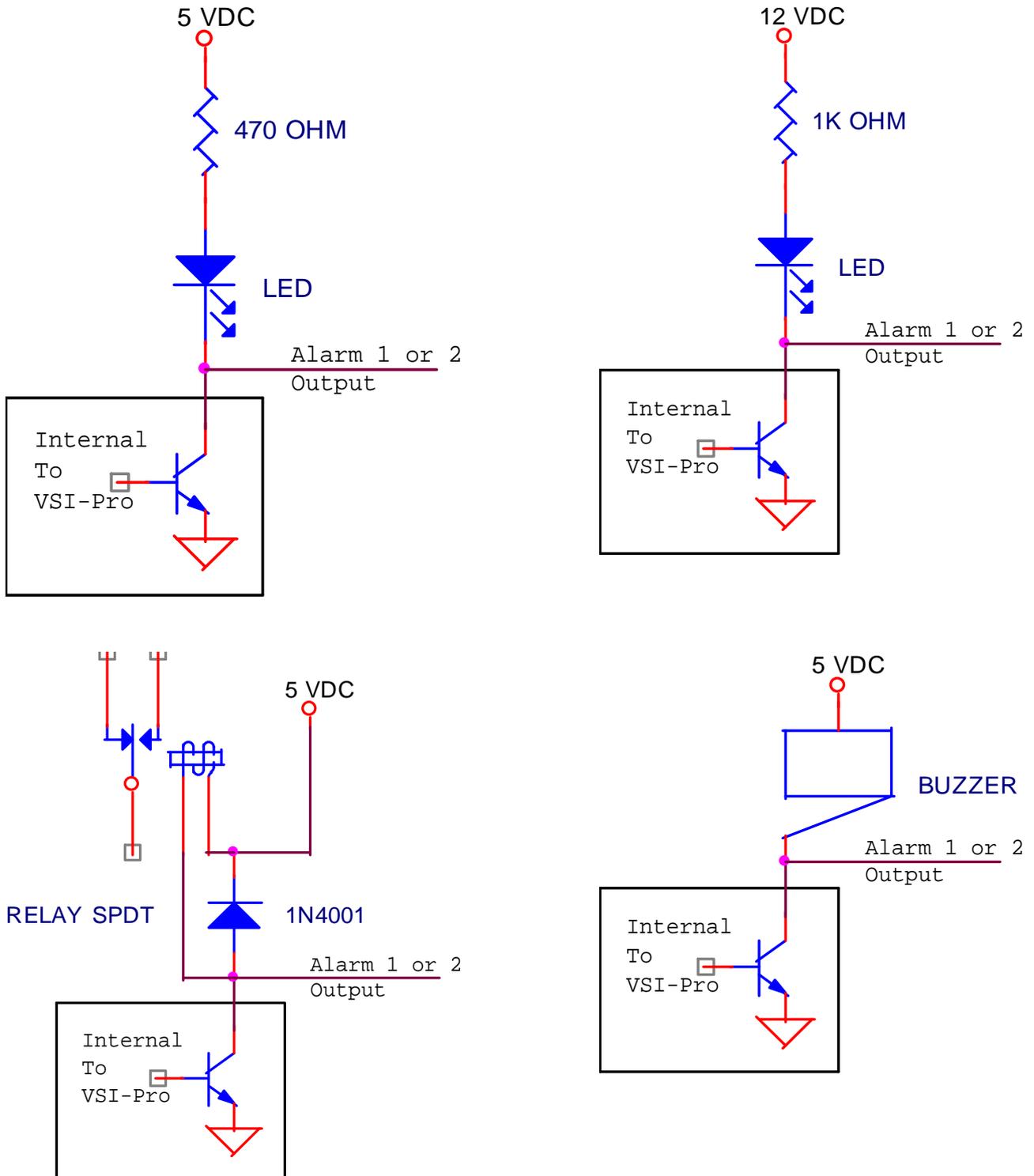


Figure 47: Hard Alarm Output

WARNING!

DOING A MASTER RESET CLEARS ALL PROGRAMMING AND THE VSI-PRO-IBM DEFAULTS TO THE FACTORY SETTINGS.

If you have difficulty entering the main-menu or you changed EPROMS in your VSI-Pro-IBM, do the following procedure exactly: Lightly press and hold in the 3 buttons to the left ("Up", "Down" & "Set"). While holding down these buttons, press and release the "Reset" button. Then release the other buttons. Wait a few seconds and the copyright notice will appear on-screen along with the version of software installed in your VSI-Pro-IBM.

Upon powering up the VSI-Pro-IBM for the first time, if the battery is depleted the master reset should be done. However in some cases the Time/Date display may not have the correct or legible characters. If this occurs, go to the Clock programming section of the menu and reset the clock and program the correct time. The Time/Date display will then function properly and any subsequent master resets will not affect the time.

LIMITED WARRANTY**APPENDIX D****LIMITED WARRANTY*****(Terms and Conditions)***

For **2 Years** from the date of shipment, Seller warrants to Buyer that the Product is free from defects in material or workmanship **under normal use and service**. Equipment manufactured by other than Seller but furnished by Seller carries the same warranty to Buyer as Seller receives from the other manufacturer, notwithstanding any provision to the contrary. If Buyer has specified a particular manufacturer's product which is not the brand standardly supplied by Seller, Buyer shall look only to the other manufacturer's warranty and Seller shall not warrant such item.

EXCLUSIONS. Seller's warranty does not cover the following :

1. In-transit damage claims, improper handling by carrier or post office.

(Only the consignee of the shipment can file a claim with the common carrier.)

2. Damages caused by incorrect use, modification, carelessness, improper storage, hostile operating conditions, or unauthorized service, installation or repairs without proper training from the Seller.
3. Damages caused by fire, flood, lightning, collision, acts of God or other events beyond the control of Seller.
4. Products or parts thereof that have had serial numbers removed, altered or defaced.
5. Products returned without an RMA number and sales or delivery receipt showing the date of original purchase.
6. Use of components that do not meet Seller's specifications.
7. External parts such as cabinets or keypads.
8. Periodic maintenance and adjustments resulting from normal use.



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NON-WARRANTY CLAIMS

In the event Buyer makes a warranty claim and Seller's warranty does not apply, Buyer shall reimburse Seller for all reasonable expenses incurred by Seller in diagnosing the installation/repair problem.

BUYER'S EXCLUSIVE REMEDIES

If the Product supplied shall fail to conform to the contract or any applicable warranty, Buyer shall immediately notify Seller of such condition and afford Seller a reasonable opportunity to inspect said Product. Seller shall, at its option, either repair or replace such nonconforming Product. Seller shall not be responsible for labor charges for removal or installation of such equipment or material or charges for transportation, handling and shipping except as provided in Seller's written service policy. No Product shall be returned without Seller's prior written consent.

SELLER SHALL NOT BE LIABLE FOR ANY SPECIAL, DIRECT INCIDENTAL OR CONSEQUENTIAL DAMAGES OF A COMMERCIAL NATURE ARISING OUT THE USE OF OR INABILITY TO USE SELLER'S PRODUCT BY REASON OF THE FACT THAT SUCH PRODUCT DOES NOT CONFORM TO THE CONTRACT OR TO ANY EXPRESS OR IMPLIED WARRANTY. SELLER'S MAXIMUM LIABILITY SHALL BE LIMITED TO THE COST OF REPAIR AND/OR REPLACEMENT OF THE PRODUCT CLAIMED TO BE DEFECTIVE OR NONCONFORMING, SUBJECT TO SELLER'S RIGHT OF REMOVAL AND RETURN OF PRODUCT.

All of the foregoing constitute Buyer's sole and exclusive remedy and Seller's sole and exclusive liability for supplying nonconforming or defective Product.

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AVE products are fully inspected and carefully packed to ensure you are delivered a quality product in good condition. If you are not fully satisfied with our product, returns of standard stocking items with no restocking fee can be made within thirty (30) days of invoice to Buyer. All such returns must have prior consent of Seller by obtaining an RMA number and must include the sales or delivery receipt showing the date of original purchase and be in an unused condition contained in its original packaging. Any other returns must have prior written consent of Seller and are subject to a restocking fee of fifteen percent (15%) and freight charges.

RMA NUMBER

The RMA (Return Material Authorization) number must be obtained by contacting Seller prior to the shipment of the product for return. The RMA number is valid only for 15 days from the date of issue. The RMA number must be clearly displayed on all shipping labels.



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