

VSI-PRO MAX



POS / CASH REGISTER INTERFACE

Operation Manual

January 2013

AVE 
AMERICAN VIDEO EQUIPMENT

VSI-Pro Max



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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

The VSI-Pro Max is the latest in the evolution of the popular VSI line of POS / Cash Register Interfaces from AVE. The VSI-Pro Max, now with larger memory space can hold ALL the AVE Interfaces in one unit with full remote PC or DVR programming for register selection, setups and onsite firmware updating. New video processing circuitry allows use with new WDR cameras and low video of commonly used UTP adapters. Built in RS-232, RS-485, RS422, Passive and the new Opto-Isolated selection, gives complete isolation from the POS/Cash Register from the video system. Internal 40 Mhz operation allows for combining the Networking functions of the Hydra, Regcom, Networker or Vnetworker within one convenient unit with looping RJ45s for a seem-less solution for multiple till configurations.

The VSI-Pro Max 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-numerics 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 Max. This includes characters position, gray scale and a wide variety text processing functions including exceptions and alarming features.

Whether used with a cash register providing real time data on an RS-232 port or tapping off a serial printer or pole display, the VSI-Pro Max is a valuable tool in loss prevention. When used in conjunction with AVE's extensive line of adapters this device can connect to any POS (Point of Sale) / ECR (Electronic Cash Register) or peripheral on the market today. Now available the TCPIP232 Adapter for interfacing to Ethernet LAN networks to capture common printer data or monitor any single register transactions.

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

The VSI-Pro Max also has an additional RS-232/RS-485 output that can send the formatted ASCII text to a DVR which can store the data as an electronic file in addition to inserted in the actual video image. This additional RS-485 port supports full networking of up to 16 VSI-Pro Max without any external devices using the AVE RS-485 Network.

The Exception Processor of the VSI-Pro Max 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 Max can command or be commanded by the DVR to automatically search to the transaction in question for instant review of the recorded video.

With the new "Scroll Matching" feature, users can easily set and erase scrolling advertising messages from the customer display or printer but always record the valid transactions.

The VSI-Pro Max is fully networkable with other VSI-Pro Max or our "Networker", "Vnetworker", "Hydra" and "Regcom" line of products. These devices when connected to the VSI-Pro or ECR Interfaces or Adapters directly, communicate back via an RS-485 network to the central location. PC Windows-based software can also be used as the controller of this network and store transaction files for up to 16 cash registers for remote viewing or downloading to produce reports for management.

The VSI-Pro Max is fully remotely downloadable, uploadable or programmable by our PC Programming Software. This utilizes a direct connection via RS-232 from a laptop to the VSI-Pro Max. Complete VSI-Pro Max settings can be saved on the laptop and uploaded to the VSI-Pro Max at will. Up to 16 VSI-Pro Max can be programmed from one RS-232 connection on the Master unit over the AVE Network. This is mainly used for dealer maintenance or for single station user programming or when cameras or monitors are not easily available.

Firmware is also downloadable in the field with any communications program so new updates and features can be easily passed to customers without changing EPROMs or opening the unit.

1.1 VSI / VSI+ / VSI-Pro / VSI-Pro Max 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 so are compatible with the Regcom line of networking adapters. 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 which allows it to be fully operational with the Networker and Regcom line. The introduction of the VSI-Pro Version 12 added on-screen selection of various model registers for ease of installation and supported many characters sizes for multiple units to display data on one camera view. This version also supports the Networker and Regcom products. The VSI-Pro 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. All Version 13.XX VSI-Pro support the Networker, Vnetworker and Regcom products. All Version 13.XX can be upgraded to the latest Ver. 13 release. This release adds PC Programming capability, Firmware update externally and Vnetworker support along with Networker and Regcom compatibility. The VSI-Pro Max is the latest in the development line and includes all register of Ver. 13.XX in one convenient unit along with built in Hydra, Regcom, Networker and Vnetworker hardware and software along with PC Programming and Firmware update over the AVE Network.

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



2.1 FEATURES

-400 Register Selections Selectable via OSD or remote PC Programming Software
-User Selectable Full Duplex Bi-Directional POS / Cash Register Communications
 - RS-232C
 - RS-232C Optically Isolated (See Appendix S Page 98 for Configuration)
 - RS-485 Full Duplex, RS-422 Half Duplex
 - Passive Tap (Hi-Z)
-RS-232C or RS-485 Output of all data or exceptions to DVRs, modems, printers or computers
-Dual RJ45 Connectors for easy RS-485 Networking with Standard CAT5 Cabling
(See Appendix N & O Page 90 for additional information)
-Built In Hydra, Regcom, Networker and Vnetworker Hardware and Protocol
-Diagnostic LEDs for Power, POS Communication & Network Communication
-Video Input AGC and Video Output can Drive two 75 ohm loads at 1VP-P
-Video and Power Input Surge and Lightning Suppression with External Grounding Lug
-Video Low or Lost LED indication and alarming function
-40 Mhz Processing with 128K Program and 128K SRAM Memory for High Performance Processing
-Multi Language Support, English, Spanish and German
-Programmable Time-Stamp and Trigger Text On-Screen and Exception Output
-Time/Date Searching with Compatible DVR
-Time/Date Syncing with Compatible DVR from POS T/D
-Universal Time/Date Format , Automatic Daylight Savings Adjustment and Register T/D Locking
-800 Lines of Exception History Buffer
-16 Triggered Text associated with 16 virtual alarms
-2 Built-in Programmable Hard Alarm Outputs (See Appendix B Page 77 for application information)
-Alarm Input for drawer open, safe open, etc. with programmable time delay
(See Appendix S Page 98 for proper jumper configurations)
-Alarm Syncing with Compatible DVR from Alarm Input
-Large Data Buffers for input/output to accommodate newer and faster registers
-Powerful Data Filtering Algorithms like Truncating, Space Filtering and Duplicate Line Filtering
-Removing Advertising Message on Printers or Customer Displays via the Scroll Matching Function
-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
-Alarm Trigger Text Output for Display of Events or Control of PTZ or other equipment
-Programmable Delayed Screen Blanking
-Scroll Delay for non real time recording
-Choice of 1 to 11 lines Displayed On-Screen up to 40 Characters per Line
-On-screen Titler up to 40 characters
-Gray scale and Border Selection from Front Panel
-Built-in Test and Diagnostic Modes
-Built-in Multiple Types of Cash Register Demos
-Upload/Download and Programming to a PC or another VSI-Pro Max
-Dual or Single Channel Data Captured either to the Memory or to the Serial Port
-Local Firmware Downloadable
-Local / Remote Programming via PC Software or Compatible DVR
-Full Programming and Firmware update over the AVE Network for up to 16 VSI-Pro Max
-Compatible with AVE AL-16 External Relay Interface adapter for additional Hard Alarm Outputs
-Supports AVE UART daughter board for full compatibility with standard 16550 UART and gives full emulation ability while using as a Master (See Appendix K Page 85 for installation and configuration)


2. FEATURES & SPECIFICATIONS

2.2 SPECIFICATIONS

Video In (BNC)	0.5VP-P to 2VP-P AGC Term. 75 ohms, 90V Gas Discharge Suppression			
Video Out (BNC)	1V P-P Terminated or Unterminated can drive two 75 ohm loads			
Video S / N	better than 50dB			
Video B / W	better than 7MHz			
Power (DC Coax 2.1mmx5.5mm)	9-12VDC 170mA 18V MOV Surge Suppression			
Battery Backup NiMH	1 year with 24 hour charge			
Register Serial Port Bi-Directional (DB9 Female)	RS-232C RXD - Pin 2 TXD - Pin 3 GND - Pin 5	RS-232 Opto RXD - Pin 2 GND - Pin 5 See Appendix S	RS-485 / RS-422 A - Pin 4 B - Pin 6 GND - Pin 5	PassiveHi-Z RXD - Pin 2 TXD - Pin 3 GND - Pin 5
Baud Rate	AUTO, 1200, 2400, 4800, 9600, 19.2K, 28.8K, 38.4K, 57.6K, 115.2K			
Word Length	7 or 8 (7 bit No Parity only supported with UART PCB installed)			
Parity	ODD, EVEN, NONE			
Stop Bits	1			
UART PCB Option Installed	Full 16550 Support Uses RXD 2 and TXD 8			
RTS / CTS Handshaking	ON or OFF (3.3K Pull Up Jumper Selectable)			
DTR / DSR	3.3K Pull Up (3.3K Pull Up Jumper Selectable)			
Data Buffer	128K bytes			
Data/Network Port (RJ45 X2 in Parallel)	RS-232 or RS-485 TXD Only or RS-485 Bi-Directional (Jumper 4 & 11)			
Baud Rate	1200-115.2K, 8 bits, No Parity, 1 stop Bit			
Alarm Outputs Pin 1 & 9	Open Collector 12VDC @ 20mA (Jumpers 18 & 6)			
Alarm Input Pin 7 (RTS)	Closure to Ground, 12 VDC Max			
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 and Border Gray Scale	8 levels of Gray each			
Screen Update Delay .5s	ON or OFF			
Auto Scrolling from last line				
Line Processing	Compress, Truncate, Space Compress, Left Justify, Scroll Matching			
DVR Support	MVDR2000, 3000, 4000, 5000, DMS-3001, DVR-3011, DVR-3021			
Watchdog Timer Hardware & Software				
Local / Remote Programming via PC Software				
Local / Remote Firmware Updating				
History Buffer Downloadable / Searchable				
40 Mhz Processor Operation				
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) or 5.12L x 5W x 1.5H (in)			
Maximum Size with Connectors	145L x 127W x 43H (mm) or 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) or 13.4L x 86.2W x 3.35H(in)			



The VSI-Pro Max will overlay the characters on any composite video source. The video input can be virtually any baseband or composite video source. The VSI-Pro Max will accept NTSC, RS-170, RS-330, CCIR, PAL or SECAM video formats. The Video input to the VSI-Pro Max is a standard BNC connector, terminated at 75 [ohms].

NOTE 

The input video level must be between 0.5V - 2.0V Peak to Peak. If the video is lower or not present the VL (Video Lost) LED will illuminate signifying low or no video and the VSI-Pro Max will have a poor or no output video signal.

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 Max. The BNC video output goes out to the video system (VCR, DVR, quad, switcher, multiplexer, or monitor). This connection is shown in Figure 4. The video output from the VSI-Pro Max 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 Max will still output 1[V] Peak to Peak. The VSI-Pro Max will be able to drive two terminated loads without loss of video level.

The VSI-Pro Max uses a 9-12VDC @300 [mA] UL/CSA power supply which must be plugged into the Power input on the VSI-Pro Max's rear Panel utilizing a DC Coax type connector.

3.1 LED Indicators

Power	Green	Signifies power is supplied to the unit
Network LED	Green	This LED flashes whenever data is sent or received on the Network Port
Register Data	Red	This LED flashes whenever data is received from the cash register
Video Error	Red	This LED illuminates with the video level is not present or too low

FIRMWARE UPDATE ERROR: If both the "Network LED" and the "Register LED" are **ON CONTINUOUSLY**, this means the VSI-Pro Max has no firmware installed. Please refer to Section 5.10 Page 68+ for firmware update instructions. Firmware can be updated via the PC Programming Software or any communications program like Hyper Terminal with the PC Programming/ Firmware Cable Part # 021-158.

Temporary PC Programming Mode

When you hold in the "Up" and "Set" buttons for longer than 3 seconds the "Network LED" and the "Register LED" will flash together. This signifies the unit has been enabled to RS-232 at a baud rate of 9600 so the PC Programming software can configure the unit. Upon exit the unit will revert to previous settings or any new settings programmed while in this mode.



Figure 2: VSI-Pro Max RJ45 RS-485 Network Connections



Figure 1: VSI-Pro Max Front Indicator LEDs and Programming Pushbuttons



Figure 3: VSI-Pro Max Rear Connections

3. CONNECTIONS

Pin #	Label	Direction	Function
1	Alarm Out 1	From VSI-Pro Max	Open Collector Transistor
2	Receive Data	To VSI-Pro Max	Data from Cash Register
3	Transmit Data	From VSI-Pro Max	Data to Cash Register
4	DTR	From VSI-Pro Max	Remain High or RS-485 Input (+)(A)
5	Ground	-----	Signal / Power Gnd or Isolated RS-232 Input Gnd
6	DSR	From VSI-Pro Max	Remain High or RS-485 Input (-)(B)
7	RTS	To VSI-Pro Max	Alarm Input or Hardware Handshaking
8	CTS	From VSI-Pro Max	DVR RS-232 Output or Hardware Handshaking
9	Alarm Out 2	From VSI-Pro Max	Open Collector Transistor or Signal / Power Gnd

Table 1: Pin-Out of the DB-9 Female Connector on the VSI-Pro Max

3.2 RS-232 SERIAL INPUT

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

PIN #	SIGNAL NAME (RS232)	VSI-Pro Max
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)	RTS (Option)
8	CTS (Clear to Send)	CTS (Option)
9	RI (Ring Indicator)	Alarm Out 2

Table 2: RS-232 DB-9 Pin-Out vs VSI-Pro Max 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 Max (Option)
4	RS-485 (+) A Data	From or To VSI-Pro Max
5	Ground	
6	RS-485 (-) B Data	From or To VSI-Pro Max
7	RTS (Alarm In)	To VSI-Pro Max
8	CTS or RS-232 Out	From VSI-Pro Max
9	Alarm Out 2	Open Collector Transistor

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

Note: When the RS-485 port is set for Bi-Directional RS-485 the TXD port has no function. When the RS-485 port is set for receive data only then the TXD port can be used for an RS-232 output.

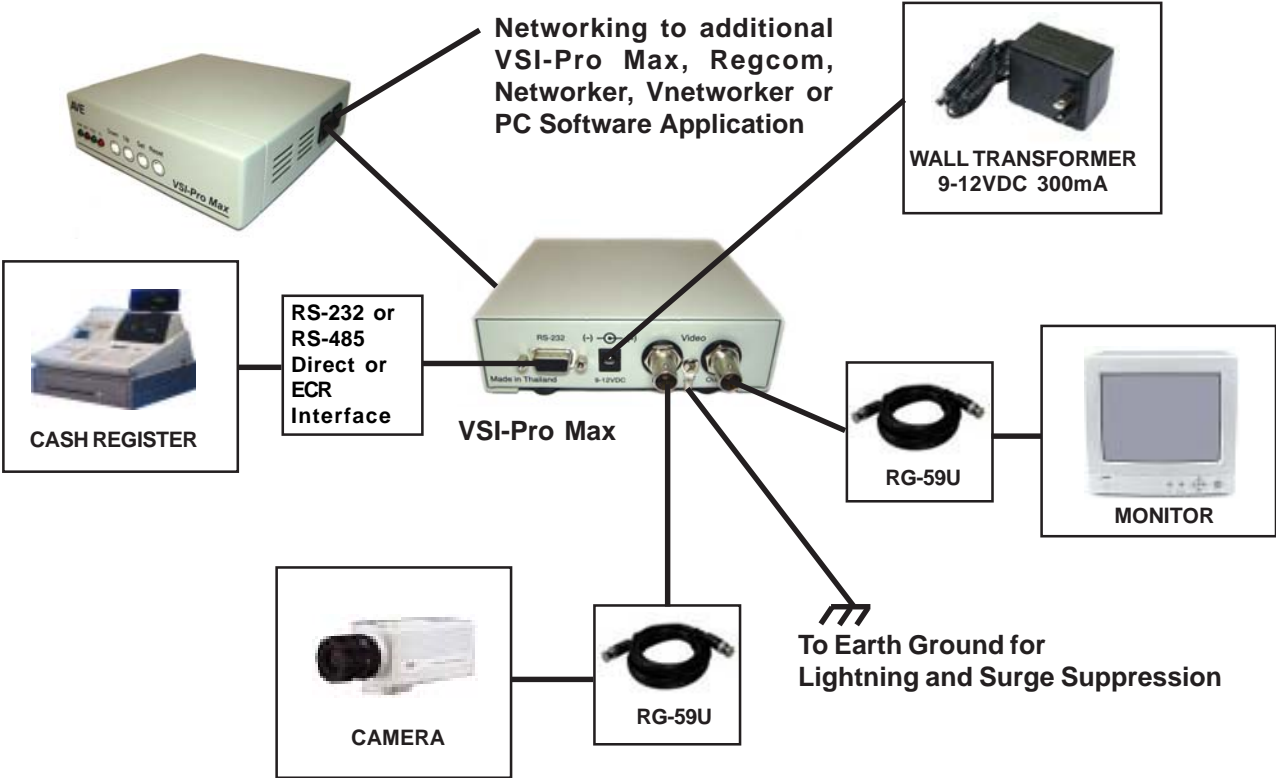


Figure 4: VSI-Pro Max Connections

3. CONNECTIONS

Grounding and Isolation

The VSI-Pro Max has an isolated internal signal/power ground from the case or chassis ground. Therefore maintaining this isolation will insure proper surge and lightning suppression when the chassis is grounded properly.

Video Surge / Lightning Protection

The VSI-Pro Max has an internal Gas Discharge Surge Suppressor on the video input. This enables high input surges to be suppressed so not to damage the internal circuitry of the VSI-Pro Max. Voltage spikes between video signal and video ground will be clamped and also between both of these signals and chassis ground. For this suppression to be fully effective the "Earth" grounding lug between the two BNC connectors must be connected to a solid and true earth ground. A good earth ground is a long metal rod into the ground 6' or connection to copper water pipes.

NOTE: If ground loops are in excess of 90 VAC to Earth or Signal ground the internal surge suppress make not be effective and cause undo noise in the video. If this is the case do not use the chassis grounding lug for undo voltage will be shorted through the suppression circuitry of the VSI-Pro Max.



Figure 5 : VSI-Pro Max Earth Grounding Connection

Power Surge / Lightning Suppression

The VSI-Pro Max has MOV (Metal Oxide Varistors) across the power input to signal ground and from both of these signal to chassis ground clamping at 18VDC. For this suppression to be fully effective the "Earth" grounding lug between the two BNC connectors must be connected to a solid and true earth ground. A good earth ground is a long metal rod into the ground 6' or connection to copper water pipes.

RS-232 DB9F Shielding

The shield of the DB9 RS-232 connector also connects to chassis ground. Therefore this shield should not be connected to any signal ground of any RS-232 signal or power signal. If for some reason the source or destination devices have internal connections from signal ground to the shield then the shield should not be connected on VSI-Pro Max end to maintain signal ground and earth ground isolation. The internal Opto Isolation circuitry for the RS-232 should also be used in these types of situations to completely isolate the VSI-Pro Max from the source or destination device ground.

Proper shielding of RS-232 signals will extend the length of wiring especially at high data rates and eliminate noise being coupled into the either a source or destination device by surrounding EMI or RFI generated by other equipment within the installation.

4. USER FRONT PANEL CONTROLS

The VSI-Pro Max 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. If no video source or monitor is available you can use the PC Programming Software to configure the VSI-Pro Max from the RS-232 port and any laptop.

4.1 FRONT PANEL CONTROLS

The front panel controls are provided to allow entry into the Programming Mode via the Main Menu, Access for PC Programming without video connected and simple changing of the display's vertical and horizontal position and the gray scale or border. The later eliminates the need of the user to enter the main menu and inadvertently change important programming setups.

Entering the Main Menu

Hold in the "Down" and "Up" buttons simultaneously for longer than 3 seconds and the Main Menu will appear on the video monitor. Release both buttons and continue to navigate the menus for programming.

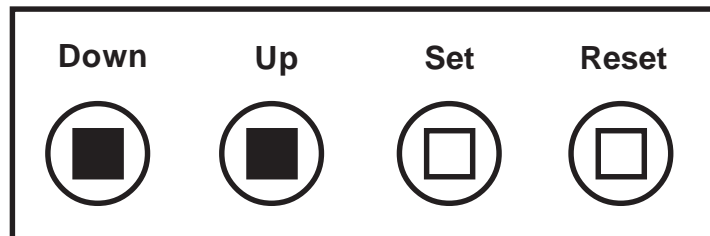


Figure 6 : Four Front Panel Push Buttons of VSI-Pro Max

Changing the Gray Scale

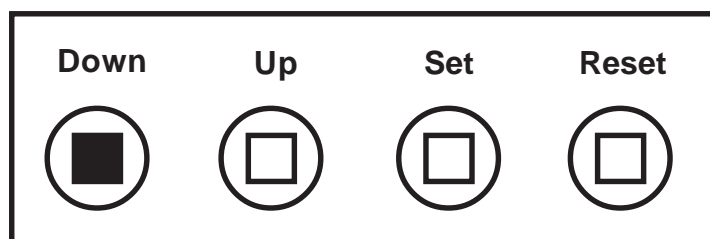


Figure 7: Four Front Panel Push Buttons of VSI-Pro Max (Down)

- 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.

4. USER FRONT PANEL CONTROLS

Changing the Horizontal Position

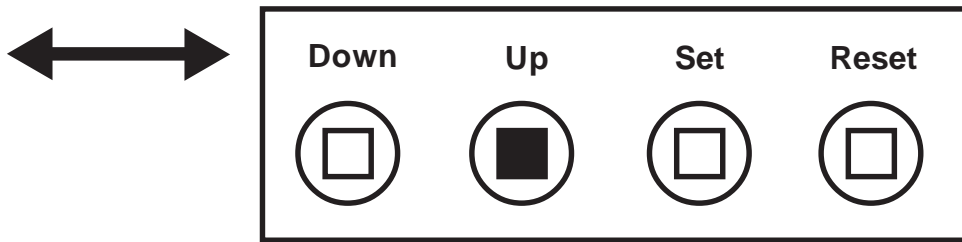


Figure 8: Four Front Panel Push Buttons of VSI-Pro Max (Up)

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

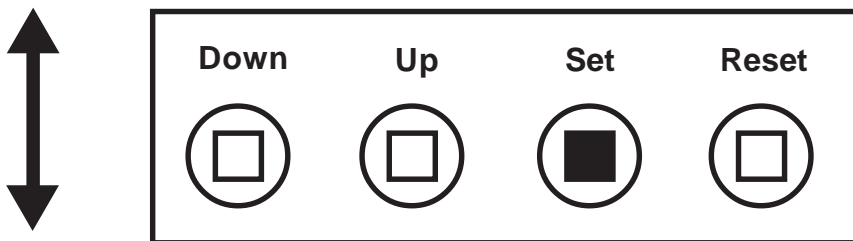


Figure 9: Four Front Panel Push Buttons of VSI-Pro Max (Set)

- 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.

Accessing the PC Programming RS-232 Connection

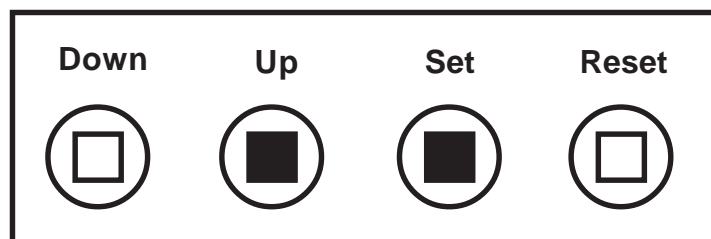


Figure 9A: Four Front Panel Push Buttons of VSI-Pro Max for PC Programming Temporary Access

Hold in the “Up” and “Set” buttons for longer than 3 seconds and the VSI-Pro Max will temporarily be configured for RS-232 Register Input at 9600 baud. If you have video connected you will see this message on-screen as well. This mode is also signified by the REGISTER LED and NETWORK LED flashing. This allows the user to connect the PC Programming cable and program the unit without worrying about what the internal setups are. This mode can be exited at any time by pressing the “Reset” button and the unit will return to the internal programmed settings. Do note that if you download new firmware the unit will be revert to factory default settings. If you download or change and settings via the PC Programming software these new settings will take effect upon exit.

5.1 GETTING STARTED

To access the main-menu of the VSI-Pro, simultaneously hold down the “Down” & “Up” buttons and wait 3 seconds and the main-menu will appear. An alternate method is to simultaneously hold down the “Down” & “Up” buttons and press and release the “Reset” button and then after the main menu appears 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 for sometimes difficult if the unit is not easily accessed. 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 “Set” button with your right thumb and continue holding the Up & Down buttons until the main menu appears. Then release the Up & Down 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 and may not save your selections.

5.2 MAIN PROGRAMMING MENU

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

- REGISTER SELECT
- SCREEN SETUP
- TEXT DISPLAY
- COMMUNICATION
- EXCEPTION REPORT
- ALARM OUTPUTS
- TEST/DEMO MODE
- DOWNLOAD/UPLOAD SETUP
- MASTER RESET
- HELP

Figure 10 : VSI-Pro Max Main-Menu

5.3 REGISTER SELECT

To select a specific register, press the “Up” or “Down” button to move the cursor to “REGISTER SELECT” and press “Set”. The REGISTER SELECT menu will bring up a sub-menu consisting of registers shown in Figure 11. You can go to the next or previous page by placing the cursor in front of “NEXT” or “PREVIOUS” and then pressing “Set”. To select the desired register, press the “Up” or “Down” button to move the cursor to that register and press “Set”. After selecting the register, exit out of the REGISTER SELECT menu by pressing the “Up” or “Down” button to move the cursor to “EXIT” and then pressing “Set”. In the main-menu, press “Reset” to activate the programming for that specific register. REGISTER SELECT automatically formats the VSI-Pro Max to match your register’s communication settings. However, if you need to change these settings, you can do so through the COMMUNICATION menu described later in this manual. Many Register Selections have no submenu and are simply special filters that when selected are enabled. For these registers no further explanation will be shown in this manual and the proper setups will be automatically loaded.

NOTE

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

5. PROGRAMMING

GENERIC

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

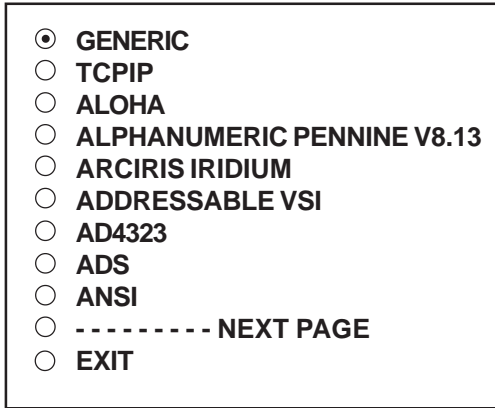


Figure 11: REGISTER SELECT Sub-Menu Page 1

Press the “Up” or “Down” button to move the cursor to “GENERIC” and press “Set”. In this mode is simply no filtering of the input data and will display any printable character in the video. If you are not sure of what you are connecting to this is the first selection so you will see everything and then later choose the options you want to better filter the display to your liking.

TCP/IP

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

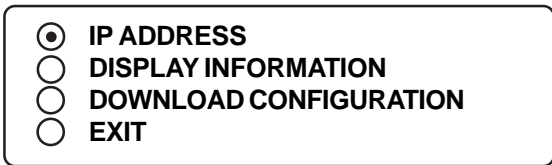


Figure 12: TCPIP Sub-Menu

Press the “Up” or “Down” button to move the cursor to “IP ADDRESS” and press “Set” to enter and change the IP Address to the same as the IP Address you wish to monitor.

EXAMPLE: If the IP address is 192.168.0.141, set the address on the TCPIP 232 Adapter using this menu.

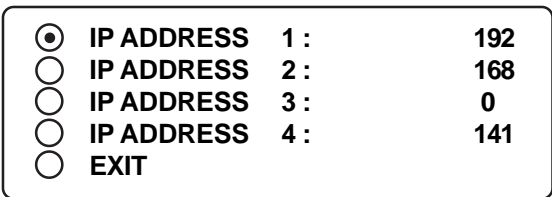


Figure 13: TCPIP IP Address Sub-Menu

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

3. Press the “Up” or “Down” button to move the cursor to “DISPLAY INFORMATION” and press “Set” to enter the DISPLAY INFORMATION sub-menu.

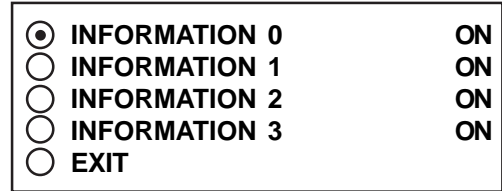


Figure 14: DISPLAY INFORMATION Sub-Menu

NOTE: The choices are On or OFF and selects the different packettes of information printed on the receipt to your selection.

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

5. Press the “Up” or “Down” button to move the cursor to “DOWNLOAD INFORMATION” and press “Set” to execute. Make sure a TCPIP232 Adapter is connected and the VSI-Pro Max will download the IP settings to this device.

Refer to: Appendix M Page 87 for additional information on the TCPIP232 Adapter or the manual included with the adapter.

NOTE: The TCPIP232 Adapter can be programmed by this method or by using a standard PC with a serial cable along with any communications software like Hyperterminal. Refer to the TCIP232 Adpater Manual for doing this.

Once you have set the IP address of the TCPIP232 Adapter you will be in the “Generic” display mode. You may select another register driver to format this display. When you do this the VSI-Pro Max loads the default register baudrate as if a direct connection to the register so make sure you set the proper baudrate as described below.

The TCPIP232 Adpater communicates with the VSI-Pro Max via RS-232 at a baudrate of 19.2K. Therefore when you select this menu option the baudrate of the VSI-Pro Max is changed to this rate so communication for downloading the configuration can occur. When using the TCPIP232 adpater with other register drivers or data dump mode make sure you change the RXD baudrate to 19.2K so the VSI-Pro Max will communicate with the TCPIP232 adapter.

TCP/IP Limitations

The TCP/IP232 Adapter can monitor any Ethernet LAN either 10MB/s or 100MB/s. However the actual burst throughput of the adapter is limited to 5MB/s. This is more than enough for network printers for cash receipts, bar code scanners or single cash registers that operate in a "Live Mode". Live Mode means the register transmits the data on the network line by line or at the end of each transaction.

Some cash registers have large local built in memories for thousands of items and then only batch multiple transactions on the network at any given time or controlled by the server. Cash Registers utilizing this kind of batch processing are not suitable for security monitoring because the data is not Live. Other devices that output large amounts of data will overrun the buffers of either the TCP/IP232 Adapter or VSI-Pro Max and data will be lost and would not be suitable for security monitoring anyway.

The VSI-Pro Max has a set of powerful data dump modes that are compatible with the TCP/IP232 Adapter. If large data packets need filtering or special formats are required contact the factory.

ADDRESSABLE VSI (VSI-ADD)

Press the "Up" or "Down" button to move the cursor to "ADDRESSABLE VSI" and press "Set". The ADDRESSABLE VSI menu will appear:



Figure 15: ADDRESSABLE VSI Sub-Menu

SET ADDRESS

Choices: ANY, 1, 2, 3,..., 253, 254, 255

NOTE: See Appendix Q Page 95 for more information on the VSI-ADD Protocol.

ADS

Press the "Up" or "Down" button to move the cursor to "ADS" and press "Set". The ADS menu will appear.

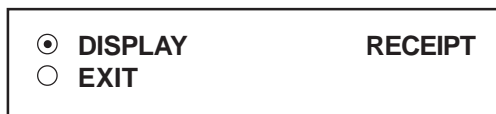


Figure 16: ADS Sub-Menu

DISPLAY

Choices: JOURNAL, RECEIPT

ANSI

Press the "Up" or "Down" button to move the cursor to "ANSI" and press "Set".

This selects an ANSI driver for the VSI-Pro Max. In this mode standard ANSI terminal commands sent to the VSI-Pro Max will control the display of the data on the screen.

NOTE: See Appendix I Page 83 for a detailed list of ANSI commands supported.

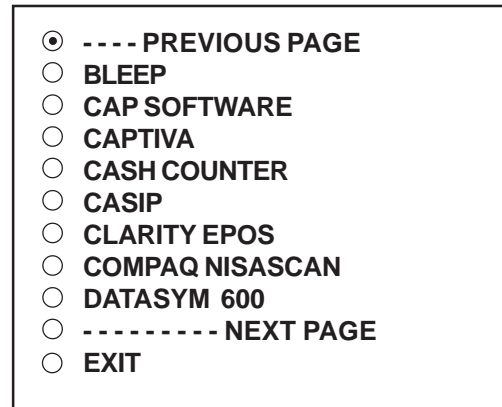


Figure 17: REGISTER SELECT Sub-Menu Page 2

BLEEP

Press the "Up" or "Down" button to move the cursor to "BLEEP" and press "Set".

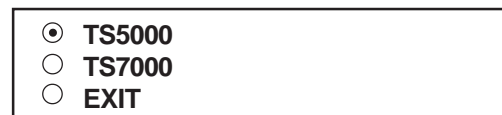


Figure 18: Bleep Sub-Menu

CASH COUNTER

Press the "Up" or "Down" button to move the cursor to "CASH COUNTER" and press "Set".



Figure 19: Cash Counter Sub-Menu

Select Glory GFR-220 and the following menu selections are available.



Figure 20: Glory GFR-220 Sub-Menu

5. PROGRAMMING

CASIO

Press the “Up” or “Down” button to move the cursor to “CASIO” and press “Set”. The CASIO sub menu will appear.

<ul style="list-style-type: none"><input checked="" type="radio"/> 230ER<input type="radio"/> 240CR<input type="radio"/> CE2300<input type="radio"/> CE3400/3405/3410/3415<input type="radio"/> CE3700/3710<input type="radio"/> CE4000/4200<input type="radio"/> CE4615<input type="radio"/> CE4700<input type="radio"/> CE6000/6100/7000<input type="radio"/> ---- NEXT PAGE<input type="radio"/> EXIT
--

Figure 21: Casio Sub-Menu Page 1

<ul style="list-style-type: none"><input checked="" type="radio"/> ---- PREVIOUS PAGE<input type="radio"/> IM800<input type="radio"/> QT2000<input type="radio"/> QT2100 REM DISPLAY<input type="radio"/> QT6000/6100<input type="radio"/> QT7000<input type="radio"/> SA1000<input type="radio"/> SA2000<input type="radio"/> SA5000<input type="radio"/> ---- NEXT PAGE<input type="radio"/> EXIT

Figure 22: Casio Sub-Menu Page 2

<ul style="list-style-type: none"><input checked="" type="radio"/> ---- PREVIOUS PAGE<input type="radio"/> TE2000<input type="radio"/> TE2200<input type="radio"/> TE3000<input type="radio"/> TE4000<input type="radio"/> TE4500<input type="radio"/> TE7000<input type="radio"/> TE8000F/8500F<input type="radio"/> TK1200<input type="radio"/> ---- NEXT PAGE<input type="radio"/> EXIT
--

Figure 23: Casio Sub-Menu Page 3

CASIO TE-2200

Press the “Up” or “Down” button to move the cursor to “CASIO TE-2200” and press “Set”. The CASIO TE-2200 menu will appear:

<ul style="list-style-type: none"><input checked="" type="radio"/> RS-232 PORT<input type="radio"/> TPIF PRINTER ADAPTER<input type="radio"/> EXIT
--

Figure 24: CASIO TE-2200 Sub-Menu

<ul style="list-style-type: none"><input checked="" type="radio"/> MODE: TAPPING<input type="radio"/> EXIT

Figure 25: CASIO TE-2200 RS-232 Port Sub-Menu

MODE

Choices: TAPPING, EMULATING

CASIO TE-2200 TPIF PRINTER ADAPTER

This driver requires the installation of the TPIF PCB inside the register to tap the thermal printer.

CASIO TE-3000

Press the “Up” or “Down” button to move the cursor to “CASIO TE-3000” and press “Set”. The CASIO TE-3000 menu will appear:

<ul style="list-style-type: none"><input checked="" type="radio"/> MODE: TAPPING<input type="radio"/> EXIT

Figure 26: Casio TE-3000 Sub-Menu

MODE

Choices: TAPPING, EMULATING

CASIO TE-4000

Press the “Up” or “Down” button to move the cursor to “CASIO TE-4000” and press “Set”. The CASIO TE-4000 menu will appear:

<ul style="list-style-type: none"><input checked="" type="radio"/> MODE: TAPPING<input type="radio"/> EXIT

Figure 27: Casio TE-4000 Sub-Menu

MODE

Choices: TAPPING, EMULATING

CASIO TE-4500

Press the “Up” or “Down” button to move the cursor to “CASIO TE-4500” and press “Set”. The CASIO TE-4500 menu will appear:

<input checked="" type="radio"/> MODE:	TAPPING
<input type="radio"/> EXIT	

Figure 28: Casio TE-4500Sub-Menu

MODE

Choices: *TAPPING, EMULATING*

<input checked="" type="radio"/> ---- PREVIOUS PAGE
<input type="radio"/> TK1300
<input type="radio"/> TK2100
<input type="radio"/> TK2200/2600
<input type="radio"/> TK2300/2700
<input type="radio"/> TK2300 LCD VERSION
<input type="radio"/> TK3200
<input type="radio"/> TK6000 / 6500
<input type="radio"/> TK7000 / 7500
<input type="radio"/> ---- NEXT PAGE
<input type="radio"/> EXIT

Figure 29: Casio Sub-Menu Page 4

<input checked="" type="radio"/> ---- PREVIOUS PAGE
<input type="radio"/> TK-T500
<input type="radio"/> VIDEO SYSTEM
<input type="radio"/> EXIT

Figure 30: Casio Sub-Menu Page 5

CASIO TK-T500

Press the “Up” or “Down” button to move the cursor to “CASIO TK-T500” and press “Set”. The CASIO TK-T500 menu will appear:

<input checked="" type="radio"/> MODE:	TAPPING
<input type="radio"/> EXIT	

Figure 31: Casio TK-T500 Sub-Menu

MODE

Choices: *TAPPING, EMULATING*

CLARITY EPOS

Press the “Up” or “Down” button to move the cursor to “CLARITY EPOS” and press “Set”. The sub menu will appear:

<input checked="" type="radio"/> SET TERM NO	ALL
<input type="radio"/> EXIT	

Figure 32: CLARITY EPOS Sub-Menu

<input checked="" type="radio"/> ---- PREVIOUS PAGE
<input type="radio"/> DECATOR 2000
<input type="radio"/> DELTA SONO 3.1
<input type="radio"/> DIGINET MINI POS
<input type="radio"/> DIGIPOS
<input type="radio"/> DRESSER WAYNE
<input type="radio"/> EDACOM
<input type="radio"/> ELCA
<input type="radio"/> E-NOVATIONS EMPERIUM
<input type="radio"/> ---- NEXT PAGE
<input type="radio"/> EXIT

Figure 33: Register Selection Menu Page 3

DELTA SONO 3.1

Press the “Up” or “Down” button to move the cursor to “DELTA SONO 3.1” and press “Set”. The DELTA SONO 3.1 menu will appear:

<input checked="" type="radio"/> DELTA JOURNAL
<input type="radio"/> DELTA RECEIPT
<input type="radio"/> EPSON JOURNAL
<input type="radio"/> EPSON RECEIPT
<input type="radio"/> EXIT

Figure 34: DELTA SONO 3.1 Sub-Menu

DIGIPOS

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

<input checked="" type="radio"/> PRINTER/CUSTOMER DISPLAY
<input type="radio"/> 2000
<input type="radio"/> MILLENIUM
<input type="radio"/> SNA SOFTWARE
<input type="radio"/> EXIT

Figure 35: DIGIPOS Sub-Menu

5. PROGRAMMING

DRESSER WAYNE

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

<input checked="" type="radio"/> POS / CDU
<input type="radio"/> NUCLEUS
<input type="radio"/> EXIT

Figure 36: DRESSER WAYNE Sub-Menu

Press the “Up” or “Down” button to move the cursor to “POS / CDU” and press “Set”. The POS / CDU menu will appear:

<input checked="" type="radio"/> JOURNAL PRINTER
<input type="radio"/> RECEIPT PRINTER
<input type="radio"/> EXIT

Figure 37: POS / CDU Sub-Menu

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

<input checked="" type="radio"/> TERMINAL
<input type="radio"/> PRINTER
<input type="radio"/> SECURITY PORT
<input type="radio"/> EXIT

Figure 38: NUCLEUS Sub-Menu

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

<input checked="" type="radio"/> TERMINAL 1
<input type="radio"/> TERMINAL 2
<input type="radio"/> TERMINAL 3
<input type="radio"/> TERMINAL 4
<input type="radio"/> TERMINAL 5
<input type="radio"/> TERMINAL 6
<input type="radio"/> TERMINAL 7
<input type="radio"/> TERMINAL 8
<input type="radio"/> EXIT

Figure 39: NUCLEUS TERMINAL Sub-Menu

<input checked="" type="radio"/> STANDARD [Both]
<input type="radio"/> PRINTER WITH POLE
<input type="radio"/> POLE VIA PRINTER
<input type="radio"/> EXIT

Figure 40: NUCLEUS PRINTER Sub-Menu

EDACOM

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

<input checked="" type="radio"/> MODEL	E90
<input type="radio"/> EXIT	

Figure 41: EDACOM Sub-Menu

Press the “Up” or “Down” button to move the cursor to “MODEL E90” and press “Set”. The MODEL E90 menu will appear:

<input checked="" type="radio"/> MODEL	E9010
<input type="radio"/> EXIT	

Figure 42: MODEL E90 Sub-Menu

MODEL

Choices: E90, E9010

<input checked="" type="radio"/> ---- PREVIOUS PAGE
<input type="radio"/> EPSON GENERIC
<input type="radio"/> EASY2TOUCH
<input type="radio"/> EUROPAD
<input type="radio"/> EZTOUCH
<input type="radio"/> FUJITZU
<input type="radio"/> GASBOY
<input type="radio"/> GELLER
<input type="radio"/> GLADUS TOUCH SCREEN
<input type="radio"/> ---- NEXT PAGE
<input type="radio"/> EXIT

Figure 43: Register Selection Menu Page 4

EPSON GENERIC

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

<input checked="" type="radio"/> STANDARD
<input type="radio"/> EPSON EMULATE
<input type="radio"/> ESSO POLE DISPLAY
<input type="radio"/> PRINTER WITH POLE
<input type="radio"/> DOUBLE CHAR PRINTER
<input type="radio"/> POLE DISPLAY
<input type="radio"/> POLE DISPLAY 20
<input type="radio"/> POLE VIA PRINTER
<input type="radio"/> RECEIPT PRINTER ONLY
<input type="radio"/> ---- NEXT PAGE
<input type="radio"/> EXIT

Figure 44: Epson Generic Menu Page 1

- PREVIOUS PAGE
- JOURNAL PRINTER ONLY
- SLIP PRINTER ONLY
- GRAPHIC FILTER
- EXIT

Figure 45: EPSON GENERIC Sub-Menu Page 2

EASY2TOUCH

Press the "Up" or "Down" button to move the cursor to "EASY2TOUCH" and press "Set". The EASY2TOUCH menu will appear:

- TS600/TS700
- EXIT

Figure 46: EASY2TOUCH Sub-Menu

EUROPAD

Press the "Up" or "Down" button to move the cursor to "EUROPAD" and press "Set". The EUROPAD menu will appear:

- EP300/EP3000
- EXIT

Figure 47: EUROPAD Sub-Menu

FUJITZU

Press the "Up" or "Down" button to move the cursor to "FUJITZU" and press "Set". The FUJITZU menu will appear:

- 9920
- G2220
- EXIT

Figure 48: FUJITZU Sub-Menu

Press the "Up" or "Down" button to move the cursor to "9920" and press "Set". The FUJITZU 9920 menu will appear:

- DISPLAY RECEIPT
- EXIT

Figure 49: FUJITZU 9920 Sub-Menu

Choices: Journal, Receipt

GASBOY

Press the "Up" or "Down" button to move the cursor to "GASBOY" and press "Set". The GASBOY menu will appear:

- DEVICE CONSOLE
- DEVICE ADDRESS 01
- EXIT

Figure 50: GASBOY Sub-Menu

DEVICE

Choices: PRINTER, CONSOLE, CSL OLD

DEVICE ADDRESS

Choices: ANY, 01, 02, 03,..., 17

GELLER

Press the "Up" or "Down" button to move the cursor to "GELLER" and press "Set". The GELLER menu will appear:

- 604
- CRS3000
- CX-200
- CX-300
- ET6600
- ET6800
- EX300
- FX400
- ML-780/790
- NEXT PAGE
- EXIT

Figure 51: GELLER Sub-Menu Page 1

- PREVIOUS PAGE
- MP2
- MP2-T
- MP3
- MZ1
- NT2324
- NT3412
- SX-590/780
- SX680
- EXIT

Figure 52: GELLER Sub-Menu Page 2



5. PROGRAMMING

- PREVIOUS PAGE
- GILBARCO
- HERO 9400
- HERTZ
- HTEC
- HUTH T400 / T500
- IBM
- ICL
- I-CNTRL INT JAVELIN VIPER
- NEXT PAGE
- EXIT

Figure 53: Register Selection Menu Page 5

GILBARCO

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

- PC G-SITE
- TCRG / 2
- TCR 15 G [OLD FMT]
- TCR 15 G [NEW FMT]
- PASSPORT
- PASSPORT [XML FMT]
- EXIT

Figure 54: GILBARCO Sub-Menu

NOTE: Selecting PASSPORT [XML FMT] requires the addition of the AVE UART Daughter board that emulates the 16550 UART for 7 bit communication. However the Gilbarco Passport can be set for any baud rate, bits and parity which will work directly with the VSI-Pro Max but the Gilbarco dealers normally only set for 7 bit , no parity so requires the AVE UART daughter board.

IBM

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

- IBM3151 TERMINAL
- 4614
- 46XX
- 4840-532
- RDS
- REDWOOD 538
- SURE POS / 500
- EXTERNAL CUSTOM DISPLAY
- 4610TF6
- EXIT

Figure 55: IBM Sub-Menu

IBM 3151 TERMINAL

Press the “Up” or “Down” button to move the cursor to “IBM 3151 TERMINAL” and press “Set”. The IBM 3151 TERMINAL menu will appear:

- DISPLAY MIXED
- EXIT

Figure 56: IBM 3151 TERMINAL Sub-Menu

DISPLAY

Choices: JOURNAL, RECEIPT, MIXED

RDS

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

- DISPLAY JOURNAL
- EXIT

Figure 57: IBM RDS Sub-Menu

DISPLAY

Choices: JOURNAL, RECEIPT, MIXED

4610TF6

Press the “Up” or “Down” button to move the cursor to “4610TF6” and press “Set”. The 4610TF6 menu will appear:

- TAP
- EMULATE
- EXIT

Figure 58: 4610TF6 Sub-Menu

ICL

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

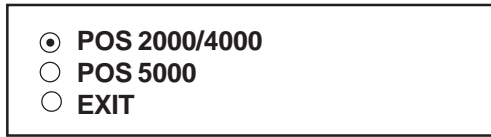


Figure 59: ICL Sub-Menu

ICL 5000

Press the “Up” or “Down” button to move the cursor to “POS 5000 ” and press “Set”. The sub menu will appear:



Figure 63: ICL 5000 Sub-Menu

ICL 2000/4000

Press the “Up” or “Down” button to move the cursor to “POS 2000/4000 ” and press “Set”. The sub menu will appear:

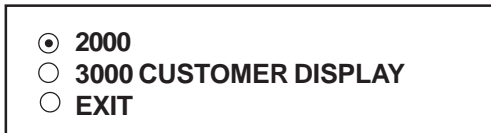


Figure 60: ICL 2000/4000 Sub-Menu

I-CNTRL INT JAVELIN VIPER

Press the “Up” or “Down” button to move the cursor to “I-CNTRL INT JAVELIN VIPER ” and press “Set”. The sub menu will appear.



Figure 64: JAVELIN VIPER Sub-Menu

ICL 2000

Press the “Up” or “Down” button to move the cursor to “2000 ” and press “Set”. The sub menu will appear:



Figure 61: ICL 2000 Sub-Menu

DISPLAY:

Device Address 1-999, press set to increment to the digits and press UP and Down simultaneously to save the address. Select “Any Address” On or Off.

ICL 3000 CUSTOMER DISPLAY

Press the “Up” or “Down” button to move the cursor to “3000 ” and press “Set”. The sub menu will appear:



Figure 62: ICL 3000 Sub-Menu

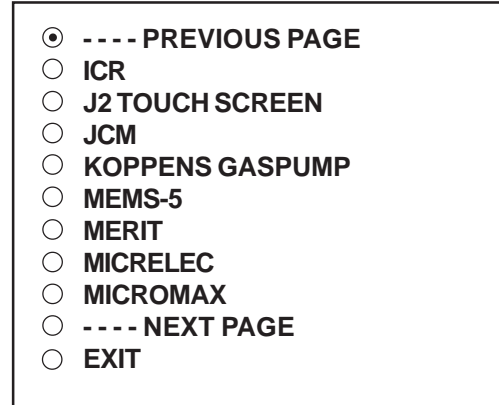


Figure 65: Register Selection Menu Page 6

JCM

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

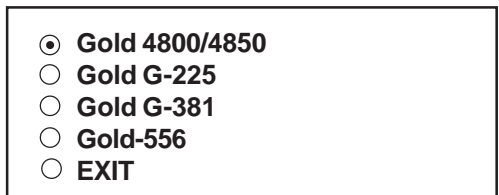


Figure 66: JCM Sub-Menu

NOTE: The two line setting simulates exactly the customer display since is only two lines and only shows the two lines at any given time. If you select Scroll then the display will scroll continuously like a normal receipt printer.

5. PROGRAMMING

MERIT

Press the “Up” or “Down” button to move the cursor to “MERIT ” and press “Set”. The Merit sub menu will appear.

<input checked="" type="radio"/>	DEVICE ADDRESS	000
<input type="radio"/>	ANY ADDRESS	ON
<input type="radio"/>	EXIT	

Figure 67: MERIT Sub-Menu

DISPLAY:

Device Address 1-999, press set to increment to the digits and press UP and Down simultaneously to save the address. Select “Any Address” On or Off.

MICRELEC

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

<input checked="" type="radio"/>	MICRELEC	MS	SERIES
<input type="radio"/>	MICRELEC	9500	
<input type="radio"/>	EXIT		

Figure 68: MICRELEC Sub-Menu

Press the “Up” or “Down” button to move the cursor to “MICRELEC MS SERIES” and press “Set”. The MICRELEC MS SERIES menu will appear:

<input checked="" type="radio"/>	OPERATOR
<input type="radio"/>	CUSTOMER
<input type="radio"/>	COMBINED
<input type="radio"/>	EXIT

Figure 69: MICRELEC MS SERIES Sub-Menu

Press the “Up” or “Down” button to move the cursor to “MICRELEC 9500” and press “Set”. The MICRELEC9500 menu will appear:

<input checked="" type="radio"/>	JOURNAL
<input type="radio"/>	RECEIPT
<input type="radio"/>	CHECK
<input type="radio"/>	CREDIT
<input type="radio"/>	EXIT

Figure 70: MICRELEC 9500 Sub-Menu

<input checked="" type="radio"/>	---- PREVIOUS PAGE
<input type="radio"/>	MICROPOS
<input type="radio"/>	MICROS
<input type="radio"/>	NCR
<input type="radio"/>	NIXDORF
<input type="radio"/>	NORAND 1200
<input type="radio"/>	OLYMPIA CM2220
<input type="radio"/>	OMEGA 2000
<input type="radio"/>	OMRON
<input type="radio"/>	---- NEXT PAGE
<input type="radio"/>	EXIT

Figure 71: Register Selection Menu Page 7

MICROS

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

<input checked="" type="radio"/>	LOCAL VSS
<input type="radio"/>	MICROS IDN NETWORK
<input type="radio"/>	MICROS ISN NETWORK
<input type="radio"/>	MICROS 3700 V4.X
<input type="radio"/>	EXIT

Figure 72: MICROS Sub-Menu

LOCAL VSS

This is selected when connecting to the PC Based Micros VSS software server from AVE Address 15.

MICROS IDN NETWORK

Press the “Up” or “Down” button to move the cursor to “MICROS IDN NETWORK” and press “Set”. The MICROS IDN NETWORK menu will appear:

<input checked="" type="radio"/>	DEVICE :	PRINTER
<input type="radio"/>	DEVICE ADDRESS:	ANY
<input type="radio"/>	MODE:	TAP
<input type="radio"/>	POS LED	ANY/VALID
<input type="radio"/>	LOGO	OFF/ON
<input type="radio"/>	EXIT	

Figure 73: MICROS IDN NETWORK Sub-Menu

DEVICE

Choices: PRINTER, VIDEO

DEVICE ADDRESS

Choices: ANY, 01, 02, 03,..., 13, 14, 15

MODE

Choices: EMULATE, TAP

POS LED

Choices: “Any” which is any data received or “Valid” which is only printable data similar to receipt or display.

LOGO OFF/ON, this eliminates or displays the store logo at the beginning of each receipt.

MICROS IDN HARDWARE CONNECTION

The Micros IDN connection use an RS-422 type 4 wire connection. Therefore the VSI-Pro Max F4 PCB requires the additional AVE RS-232 to RS-422/RS-485 converter. The internal jumper settings of the VSI-Pro Max also need to be changed from the default. JP9, JP10, JP11 must be Off or remove the jumper. See Appendix S, Page 98 for more information on VSI-Pro Max jumper settings. You will also need to configure the AVE RS-232 to RS-422/RS-485 converter to be RS-232 to RS-422. See Appendix J, Page 84 for more information.

AVE also has internal modules that eliminate this adapter but must be installed at the factory and specified upon ordering.

MICROS ISN NETWORK

Press the “Up” or “Down” button to move the cursor to “MICROS ISN NETWORK” and press “Set”. The MICROS ISN NETWORK menu will appear:

- SOURCE TYPE :** ANY
- SRC ISN GNA :** ANY
- SRC ISN LNA :** ANY
- SRC IDN ID :** ANY
- DESTIN TYPE :** ANY
- DST ISN GNA :** ANY
- DST ISN LNA :** ANY
- DST IDN ID :** ANY
- EXIT**

Figure 74: MICROS ISN NETWORK Sub-Menu

SOURCE TYPE

Choices: ANY, 00, 01, 02, 03, ..., 09

SRC ISN GNA

Choices: ANY, 00, 01, 02, 03, ..., 32

SRC ISN LNA

Choices: ANY, 00, 01, 02, 03, ..., 32

SRC IDN ID

Choices: ANY, 00, 01, 02, 03, ..., 15

DESTIN TYPE

Choices: ANY, 00, 01, 02, 03, ..., 09

DST ISN GNA

Choices: ANY, 00, 01, 02, 03, ..., 32

DST ISN LNA

Choices: ANY, 00, 01, 02, 03, ..., 32

DST IDN ID

Choices: ANY, 00, 01, 02, 03, ..., 15

MICROS 3700 V4.X

Press the “Up” or “Down” button to move the cursor to “MICROS 3700 V4.X” and press “Set”. The sub menu will appear:

- ECR NUMBER** 0000000
- HANSHAKING** ON
- EXIT**

Figure 75: MICROS 3700 V4.X Sub-Menu

DISPLAY:

ECR NUMBER 1-9999999, press set to increment to the next digit, UP or Down to select number and simultaneously to save the address. Select “HANSHAKING” On or Off.

NCR

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

- NCR 2113, 3110**
- NCR 7059**
- NCR 745X [POLE]**
- NCR JRNL PRINTER**
- NCR RCPT PRINTER**
- NCR SLIP PRINTER**
- NCR7454WS/7197**
- NCR7456**
- NCR 5972 [TAP]**
- NEXT PAGE**
- EXIT**

Figure 76: NCR Sub-Menu Page 1

- PREVIOUS PAGE**
- NCR 5972 [EMULATE]**
- CRSOSS 7474**
- REALPOS 30**
- EXIT**

Figure 77: NCR Sub-Menu Page 2

NCR 7059

Press the “Up” or “Down” button to move the cursor to “NCR 7059” and press “Set”. The sub menu will appear:

- NCR JRNL PRINTER**
- NCR RCPT PRINTER**
- NCR SLIP PRINTER**
- EXIT**

Figure 78: NCR 7059 Sub-Menu



5. PROGRAMMING

NIXDORF

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

- BEETLE/50 PRINTERS
- NIXDORF BEETLE
- EXIT

Figure 79: NIXDORF Sub-Menu

BEETLE/50 PRINTERS

Press the "Up" or "Down" button to move the cursor to "NIXDORF BEETLE" and press "Set". The BEETLE/50 Printers menu will appear:

- REMOTE SLIP
- OPERATOR DISPLAY

Figure 80: BEETLE/50 Printers Sub-Menu

NIXDORF BEETLE

Press the "Up" or "Down" button to move the cursor to "NIXDORF BEETLE" and press "Set". The NIXDORF BEETLE menu will appear:

- JOURNAL PRINTER
- RECEIPT PRINTER

Figure 81: NIXDORF BEETLE Sub-Menu

NORAND 1200

Press the "Up" or "Down" button to move the cursor to "NORAND 1200" and press "Set". The NORAND 1200 menu will appear:

- TITLE DISPLAY : ON
- CONSOLE ID : ANY
- WORKING MODE :
- EXIT

Figure 82: NORAND 1200 Sub-Menu

TITLE DISPLAY

Choices: ON, OFF

CONSOLE ID :

Choices: ANY, 1, 2, 3, 4, 5, 6, 7, 8

WORKING MODE

Choices: ACK, TAP

OMEGA 2000

Press the "Up" or "Down" button to move the cursor to "OMEGA 2000" and press "Set". The OMEGA 2000 menu will appear:

- JOURNAL PRINTER
- RECEIPT PRINTER

Figure 83: OMEGA 2000 Sub-Menu

OMRON

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

- PROLOGIC
- RS5550/5555
- EXIT

Figure 84: OMRON Sub-Menu

- PREVIOUS PAGE
- PANASONIC
- PAR
- PARAGON CLARITY SMARTPAD
- PC COM 1,2,3,4
- PEC
- PIXEL POINT
- POLE DISPLAY
- POINT4 DV10
- NEXT PAGE
- EXIT

Figure 85: Register Selection Menu Page 8

PANASONIC

Press the "Up" or "Down" button to move the cursor to "PANASONIC" and press "Set". The PANASONIC menu will appear:

- MODEL : 6000
- WORKING MODE : TAP
- EXIT

Figure 86: PANASONIC Sub-Menu

MODEL

Choices : 6000, 7000, 8000

WOKING MODE

Choices : ACK, TAP



PAR

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



Figure 87: PAR Sub-Menu

TOSHIBA

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



Figure 91: TOSHIBA Sub-Menu

PARAGON CLARITY SMARTPAD

Press the “Up” or “Down” button to move the cursor to “PARAGON CLARITY SMARTPAD” and press “Set”. The sub menu will appear:

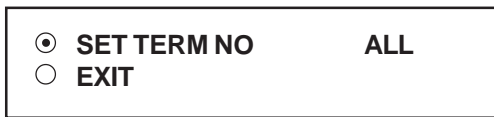


Figure 88: PARAGON CLARITY Sub-Menu

ULTIMATE PD2000

Press the “Up” or “Down” button to move the cursor to “ULTIMAT PD2000” and press “Set”. The sub menu will appear:



Figure 92: ULTIMATE PD2000 Sub-Menu

SET TERM NO

Choices: ALL, 1-255

PC COM 1, 2, 3, 4

Press the “Up” or “Down” button to move the cursor to “PC COM 1,2,3,4” and press “Set”. No menu will appear and merely sets the VSI-Pro Max to “Generic” mode.

POLE DISPLAY

Press the “Up” or “Down” button to move the cursor to “POLE DISPLAY” and press “Set”. The sub menu will appear:

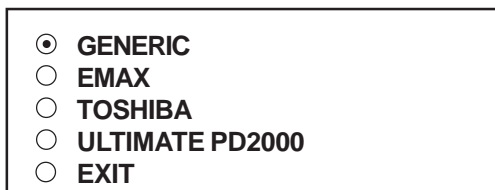


Figure 89: POLE DISPLAY Sub-Menu

NOTE: The two line setting simulates exactly the customer display since is only two lines and only shows the two lines at any given time. If you select Scroll then the display will scroll continuously like a normal receipt printer.

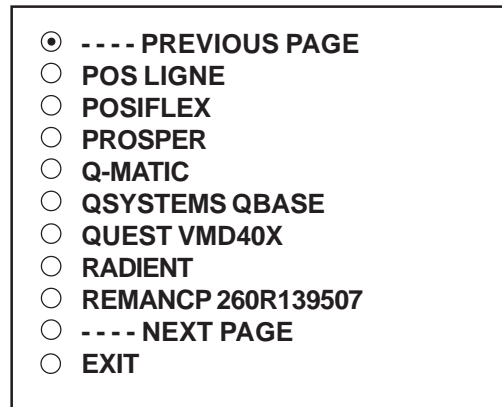


Figure 93: Register Selection Menu Page 9

EMAX

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



Figure 90: EMAX Sub-Menu

POSIFLEX

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



Figure 94: POSIFLEX Sub-Menu

5. PROGRAMMING

PROSPER

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

- ET7626
- ET7826
- EXIT

Figure 95: PROSPER Sub-Menu

- PREVIOUS PAGE
- RETAIL DATA PORT SHOPMATE
- RIVA
- RST EPOS ITOUCH
- RUBY SAPHIRE
- SAM EPOS
- SAMSUNG
- SCHEIDT U. BACH. DISPLAY
- SCHLUMBERGER
- NEXT PAGE
- EXIT

Figure 96: Register Selection Menu Page 10

RIVA

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

- JOURNAL TAPPING
- RECEIPT TAPPING
- JOURNAL EMULATING
- RECEIPT EMULATING
- EXIT

Figure 97: RIVA Sub-Menu

SAMSUNG

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

- 46XX
- 48XX
- 49XX
- 51XX
- 65XX
- SRP350
- ER-380
- ER-420M
- ER-1880
- NEXT PAGE
- EXIT

Figure 98: SAMSUNG Sub-Menu Page 1

- PREVIOUS PAGE
- ER5200
- ER650
- SER65XX
- SER7000
- SPS1000
- SPS2000
- EXIT

Figure 99: SAMSUNG Sub-Menu Page 2

ER-1880

Press the “Up” or “Down” button to move the cursor to “ER-1880” and press “Set”. The sub menu will appear:

- MODE: EMULATING
- EXIT

Figure 100: ER-1880 Sub-Menu

MODE
Choices: Tapping or Emulating

SCHLUMERGER

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

<input checked="" type="radio"/> DISPLAY	RECEIPT
<input type="radio"/> EXIT	

Figure 101: SCHLUMBERGER Sub-Menu

DISPLAY

Choices: RECEIPT, CDU[2L], C.D.U.

<input checked="" type="radio"/> ---- PREVIOUS PAGE
<input type="radio"/> SENSORS
<input type="radio"/> SHARP
<input type="radio"/> SHOPMATE
<input type="radio"/> SIEMENS BEETLE i815ES
<input type="radio"/> SICOM
<input type="radio"/> SQUIRREL
<input type="radio"/> SPEDI CCTV
<input type="radio"/> STAR PRINTER
<input type="radio"/> ---- NEXT PAGE
<input type="radio"/> EXIT

Figure 102: Register Selection Menu Page 11

SENSORS

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

<input checked="" type="radio"/> NE134 COUNTER
<input type="radio"/> ODOMETER
<input type="radio"/> SENSORSOFT THERMOMETER
<input type="radio"/> EXIT

Figure 103: Sensor Sub-Menu

NE134 COUNTER

Press the “Up” or “Down” button to move the cursor to “NE134 COUNTER” and press “Set”. The sub menu will appear:

<input checked="" type="radio"/> SET ADDRESS	0-99
<input type="radio"/> EXIT	

Figure 104: NE134 COUNTER Sub-Menu

SENSORSOFT THERMOMETER

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

<input checked="" type="radio"/> MODEL:	ST6105C
<input type="radio"/> DISPLAY:	FAHRENHEIT
<input type="radio"/> EXIT	

Figure 105: Sensorsoft Sub-Menu

DISPLAY

Choices: FAHRENHEIT, CELSIUS

SHARP

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

<input checked="" type="radio"/> ER-1772S
<input type="radio"/> ER-1875
<input type="radio"/> ER-1911/ 1920/1 /1970
<input type="radio"/> 2590
<input type="radio"/> ER-2905/2908
<input type="radio"/> ER-2910
<input type="radio"/> ER-3100/3110/3115
<input type="radio"/> ER-3100,3110
<input type="radio"/> ER-3220, 3221, 3250
<input type="radio"/> ---- NEXT PAGE
<input type="radio"/> EXIT

Figure 106: Sharp Sub-Menu Page 1

<input checked="" type="radio"/> ---- PREVIOUS PAGE
<input type="radio"/> ER-3110,331, 3550
<input type="radio"/> A310
<input type="radio"/> A330
<input type="radio"/> OLD A410,420
<input type="radio"/> NEW A410,420,450T,520,530
<input type="radio"/> A440, A460, A470
<input type="radio"/> A-460, A-470
<input type="radio"/> A-520, A-530
<input type="radio"/> ---- NEXT PAGE
<input type="radio"/> EXIT

Figure 107: Sharp Sub-Menu Page 2

<input checked="" type="radio"/> ---- PREVIOUS PAGE
<input type="radio"/> A-510, A550, A570, A610
<input type="radio"/> A-550, A-570
<input type="radio"/> A-610, A-650
<input type="radio"/> A-750
<input type="radio"/> A-750/AA-770 / ER-01PU
<input type="radio"/> A-770
<input type="radio"/> UP600 / 700
<input type="radio"/> UP3000 / 3300
<input type="radio"/> ---- NEXT PAGE
<input type="radio"/> EXIT

Figure 108: Sharp Sub-Menu Page 3

5. PROGRAMMING

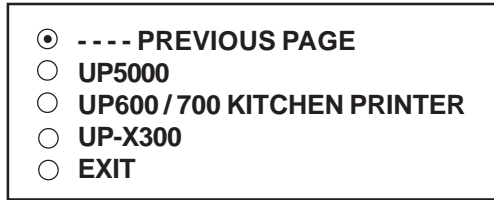


Figure 109: Sharp Sub-Menu Page 4

SHARP ER-A410/420

Press the “Up” or “Down” button to move the cursor to “SHARP ER-A410/420” and press “Set”. The SHARP ER-A410/420 menu will appear:

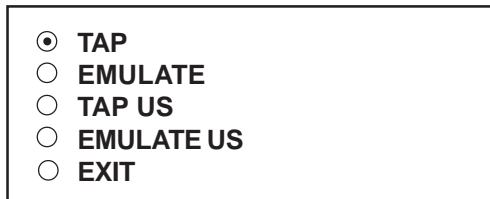


Figure 110: SHARP ER-A410/420 Sub-Menu

SHARP 750 ER-01PU

Press the “Up” or “Down” button to move the cursor to “SHARP 750 ER-01PU” and press “Set”. The SHARP 750 ER-01PU menu will appear:

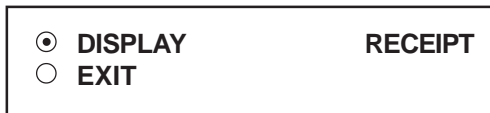


Figure 11: SHARP 750 ER-01PU Sub-Menu

DISPLAY

Choices: RECEIPT, JOURNAL

SHARP UP600/700

Press the “Up” or “Down” button to move the cursor to “SHARP UP600/700” and press “Set”. The SHARP UP600/700 menu will appear:



Figure 112: SHARP UP600/700 Sub-Menu

UP3000/3300

Press the “Up” or “Down” button to move the cursor to “UP3000/3300” and press “Set”. The UP3000/3300 menu will appear:



Figure 113: UP3000/3300 Sub-Menu

TERMINAL

Choices: 1, 2, 3,..., 16

SICOM

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



Figure 114: SICOM Sub-Menu

SECRET ADDRESS

Choices: ANY, 1, 2, 3,..., 255

SPEDI CCTV

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



Figure 115 : SPEDI CCTV Sub-Menu

SET ADDRESS

Choices: ANY, 1, 2, 3,..., 255

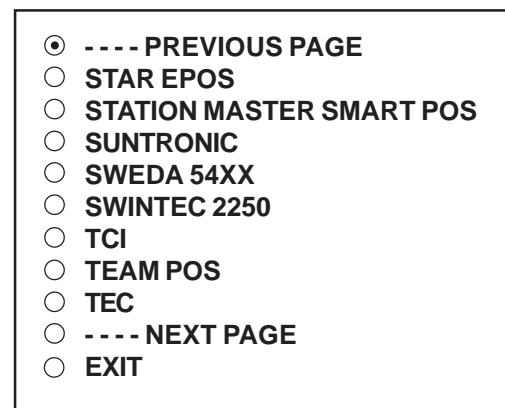


Figure 116: Register Selection Menu Page 12

SUNTRONIC

Press the “Up” or “Down” button to move the cursor to “SUNTRONIC” and press “Set”. The SUNTRONIC menu will appear.

- 890,891,960
- 2000

Figure 117: SUNTRONIC Sub-Menu

TCI

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

- DEVICE ADDRESS 000
- EXIT

Figure 118: TCI Sub-Menu

DEVICE ADDRESS
 Choices : 000, 001, 002, ..., 999

TEAM POS

Press the “Up” or “Down” button to move the cursor to “TEAM POS” and press “Set”. The submenu will appear:

- 2000
- 3000 CUSTOMER DISPLAY
- EXIT

Figure 119: TEAM POS Sub-Menu

Press the “Up” or “Down” button to move the cursor to “2000” and press “Set”. The sub menu will appear:

- 2000 - CBE
- 2000 - ISTORE
- EXIT

Figure 120: TEAM POS 2000 Sub-Menu

Press the “Up” or “Down” button to move the cursor to “3000” and press “Set”. The sub menu will appear:

- TWO LINES
- SCROLL
- EXIT

Figure 121: TEAM POS 3000 Sub-Menu

TEC

Press the “Up” or “Down” button to move the cursor to “TEC” and press “Set”. The TEC sub menu will appear.

- MA-516
- FS-1650
- MA-1350
- MA-1400
- MA-1450
- MA-1650
- MA-1700
- SL-9000-N
- ST-5600/ST-5601/ST-6500
- NEXT PAGE
- EXIT

Figure 122: TEC Sub-Menu Page 1

- PREVIOUS PAGE
- TEC SLIP PRINTER EMULATE
- VSI-DRS
- EXIT

Figure 123: TEC Sub-Menu Page 2

TEC SLIP PRINTER EMULATE

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

- MODEL: TEC SLIP PRINTER
- MODE: EMULATING /TAPPING
- EXIT

Figure 124: TEC SLIP PRINTER Sub-Menu

NOTE: The two line setting simulates exactly the customer display since is only two lines and only shows the two lines at any given time. If you select Scroll then the display will scroll continuously like a normal receipt printer.

5. PROGRAMMING

- PREVIOUS PAGE
- TEXAS DIGITAL
- TKMAXX
- TOKHEIM FUEL POS
- TOWA PROSPER ET-7626
- TOWA PROSPER ET-7826
- UNIPAR
- UNITOUCH DSP800
- UNIWELL
- NEXT PAGE
- EXIT

Figure 125: Register Selection Menu Page 13

TKMAXX

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

- JOURNAL PRINTER
- RECEIPT PRINTER

Figure 126: TKMAXX Sub-Menu

TOKHEIM FUEL POS

Press the “Up” or “Down” button to move the cursor to “TOKHEIM FUEL POS” and press “Set”. The sub menu will appear:

- DISPLAY RECEIPT
- EXIT

Figure 127: TOKHEIM FUEL POS Sub-Menu

DISPLAY

Choices; RECEIPT, CDU[2L], C.D.U.

UNIWELL

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

- UNIWELL
- UN4025
- DX890/915
- SX-330
- SX6600-03 OR 05
- SX6750
- SX700/7000/800/850
- SX875/8000/8500
- UX40/41/43
- NEXT PAGE
- EXIT

Figure 128: Uniwell Sub-Menu Page 1

- PREVIOUS PAGE
- UX-50
- UX60
- UX70/7000/7500
- UX-M750
- EXIT

Figure 129: Uniwell Sub-Menu Page 2

UN4025

Press the “Up” or “Down” button to move the cursor to “4025” and press “Set”. The sub menu will appear:

- DEVICE ADDRESS 000
- ANY ADDRESS ON
- EXIT

Figure 130: UNIWELL UN 4025 Sub-Menu

DEVICE ADDRESS

Choices: 000, 001, 002, ..., 999

ANY ADDRESS

Choices: ON, OFF

NOTE:

Device Address 1-999, press set to increment to the digits and press UP and Down simultaneously to save the address. Select “Any Address” On or Off.

DX890/915

Press the “Up” or “Down” button to move the cursor to “DX890/915” and press “Set”. The sub menu will appear:



Figure 131: UNIWELL DX890/915 Sub-Menu

DEVICE ADDRESS
 Choices: 000, 001, 002,..., 999

ANY ADDRESS
 Choices: ON, OFF

NOTE:
 Device Address 1-999, press set to increment to the digits and press UP and Down simultaneously to save the address. Select “Any Address” On or Off.

SX700/7000/800/850

Press the “Up” or “Down” button to move the cursor to “DX890/915” and press “Set”. The sub menu will appear:



Figure 132: UNIWELL SX700/7000/800/850 Sub-Menu

DEVICE ADDRESS
 Choices: 000, 001, 002,..., 999

ANY ADDRESS
 Choices: ON, OFF

NOTE:
 Device Address 1-999, press set to increment to the digits and press UP and Down simultaneously to save the address. Select “Any Address” On or Off.

SX875/8000/8500

Press the “Up” or “Down” button to move the cursor to “DX890/915” and press “Set”. The sub menu will appear:

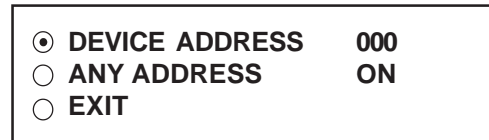


Figure 133: UNIWELL SX875/8000/8500 Sub-Menu

DEVICE ADDRESS
 Choices: 000, 001, 002,..., 999

ANY ADDRESS
 Choices: ON, OFF

NOTE:
 Device Address 1-999, press set to increment to the digits and press UP and Down simultaneously to save the address. Select “Any Address” On or Off.

UX60

Press the “Up” or “Down” button to move the cursor to “UX60” and press “Set”. The sub menu will appear:



Figure 134: UNIWELL UX60 Sub-Menu

DEVICE ADDRESS
 Choices: 000, 001, 002,..., 999

ANY ADDRESS
 Choices: ON, OFF

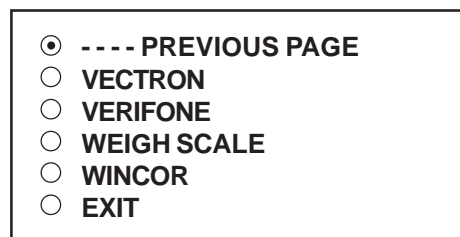


Figure 135: Register Selection Menu Page 14

5. PROGRAMMING

VECTRON

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

- COLOUR TOUCH
- POS MINI/32
- VARIO
- EXIT

Figure 136: VECTRON Sub-Menu

VERIFONE

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

- JOURNAL TAPPING
- RECEIPT TAPPING
- JOURNAL EMULATING
- RECEIPT EMULATING

Figure 137: VERIFONE Sub-Menu

WEIGHSCALE

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

- AVERY 2ND HEADER
- AVERY PC OUTPUT
- DE LA RUE 2800
- LEON LD5204
- LEON ENG. LD52XX
- MOLENS
- PINAL
- RITEWEIGH
- TOLEDO
- NEXT PAGE
- EXIT

Figure 138: WEIGH SCALE Sub-Menu Page 1

- PREVIOUS PAGE
- TOLEDO 8142 DIRECT OUTPUT
- VISHAY WEIGHBRIDGE
- EXIT

Figure 139: WEIGH SCALE Sub-Menu Page 2

VISHAY WEIGHBRIDGE

Press the “Up” or “Down” button to move the cursor to “VISHAY WEIGHBRIDGE” and press “Set”. The sub menu will appear:

- W.OUT
- W2.OUT
- EXIT

Figure 140: Vishay Weighbridge Sub-Menu

WINCOR

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

- BA63-1 CUSTOMER DISPLAY
- EXIT

Figure 141: Wincor Sub-Menu

BA63-1 CUSTOMER DISPLAY

Press the “Up” or “Down” button to move the cursor to “BA63-1 CUSTOMER DISPLAY” and press “Set”. The sub menu will appear:

- TAP
- EMULATE
- EXIT

Figure 142: BA63-1 Sub-Menu

NOTE

As we continually add new registers, these menus are subject to change.

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 143: SCREEN SETUP Sub-Menu

- TEXT GRAYSCALE
- BACKGROUND GRAYSCALE
- HORIZONTAL POSITION
- VERTICAL POSITION
- CLOCK
- ON-SCREEN TITLER
- LANGUAGE SETTINGS
- EXIT

TEXT GRAYSCALE

To change 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 8 settings to choose from peak white to black black. Make your selection and press “Set” to return to the previous menu.

BACKGROUND GRAYSCALE

To change the display background 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 8 settings to choose from white to black. 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:

Figure 144: CLOCK Sub-Menu

- T/D DISPLAY ON
- TIME FORMAT 12 HOUR
- DATE FORMAT MM/DD/YY
- DAYLIGHT SAVING DISABLED
- SET TIME / DATE
- RESET TIME / DATE
- T/D LOCKING
- EXIT

5. PROGRAMMING

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 without 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, MM/DD/YY, DD/MM/YY, YY/MM/DD. 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, UK, USA, Canada, Australia and Tasmania 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

To program the time synchronizing functions, press the “Up” or “Down” button to move the cursor to “T/D LOCKING” and press “Set”. The following menu will appear:

<input checked="" type="radio"/> DISPLAY	ON
<input type="radio"/> TIME SYNC	ON
<input type="radio"/> EXIT	

Figure 145: T/D LOCKING Sub-Menu

DISPLAY turns the T/D locking feature on or off. If ON then will lock the T/D of the VSI- Pro Max to the incoming POS data. If turned off then will not lock and use the free running clock of the VSI-Pro Max. 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” and press “Set” when the desired value is displayed.

If the DISPLAY is turned on, make sure that the time and date format selected is the same as the register’s time/date format. The VSI-Pro Max 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.

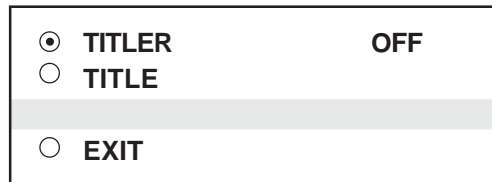
TIME SYNC turns the TIME SYNC ON or OFF. This is special protocol that will communicate to a compatible DVR to lock the DVR T/D to the VSI-Pro Max. This is currently supported by the AVE MVDR line of DVRs. Press the “Up” or “Down” button to move the cursor to “TIME SYNC” and press “Set”. The cursor will 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 TIME SYNC is turned ON, the “DEST ID” in MVDR3000/MVDR5000 sub-menu is identical with “COMM ID” or “UNIT ID” of the DVR and the value of “SRC ID” in MVDR3000/MVDR5000 sub-menu as 32. Make sure that the time and date format selected in the VSI-Pro Max is the same as the register’s time/date format. The VSI-Pro Max will monitor the incoming data string which is transmitted from the cash register. If it finds a valid time and date in one or two consecutive lines, it will set its internal clock to whatever time/date it finds. Then if Time Sync is ON will transmit this time/date to the DVR to lock the DVR to the VSI-Pro Max which is locked to the cash register. Refer to Appendix R Page 96-97.

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:

Figure 146: 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 Max 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.

LANGUAGE SETTINGS

Selecting Language Settings will give you the following menu:

Figure 147: Language Selection



The language selection options are *English, German or Spanish*.

EXIT

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

5. PROGRAMMING

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 CHARACTER/LINE	40
<input type="radio"/> DISPLAY FORMAT	TOP
<input type="radio"/> LINE COMPRESS	OFF
<input type="radio"/> SPACE COMPRESS	OFF
<input type="radio"/> LEFT JUSTIFIED	OFF
<input type="radio"/> SCROLL DELAY	OFF
<input type="radio"/> DISPLAY	ON
<input type="radio"/> EXIT	

SCREEN BLANK

Figure 48: Text Display Sub-Menu

Choices: NONE, RTS, 1, 3, 5, 10, 15, 20, 30, 60, 120, 180, 240 seconds

This is the amount of time that the VSI-Pro Max text display will remain on-screen after a transaction before erasing or blanking itself off (not the video picture, just the register transaction data) until the next transaction. If set for RTS, this means when RTS input Pin 7 is connected to ground or low then the screen will display normally. If RTS is no connection or high then the screen display will blank. This is done by sending the “Clear Screen” command one time so any new Trigger Text or POS data will continue display until the RTS input is returned to zero and then back to high again. You can not use the RTS for screen blank when using for Alarming or Trigger Text or might give conflicting results. See Page 58.

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 Max 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. 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 CHARACTER / LINE

This setting allows you to change the number of characters per line from 10 to 40.

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" are 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" are displayed at the bottom of the screen.

LINE COMPRESS

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

The VSI-Pro Max automatically compresses the spaces in a line first as it reaches 40 characters. With LINE COMPRESS "ON", the VSI-Pro Max 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.

SPACE COMPRESS

Space Compress allows you select the number of maximum spaces next to each other in a line. The selections are 1,2,3,4,5 and OFF. If you select "1" then if three spaces are shown on the receipt the VSI-Pro Max will delete 2 and only show 1 space between characters on the video and on the output data to the DVR.

LEFT JUSTIFICATION

When LEFT JUSTIFIED is "ON", the VSI-Pro Max 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 when used with DVRs or 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 Max 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.

DISPLAY

You have the choice to globally turn "ON" or "OFF" the complete VSI-Pro Max 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 Max 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. PROGRAMMING

5.6 COMMUNICATION

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

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:

Figure 149: COMMUNICATION Sub-Menu

- REGISTER SETTINGS
- NETWORK SETTINGS
- NETWORK PROGRAM
- NETWORK MASTER RESET
- EXIT

The “Register Settings” selects and allows you to program the communication and protocol parameters used to communicate with the POS or Cash Register using the DB9 connector. The “Network Settings” selects and allows you to program the communication and protocol parameters used to network the VSI-Pro Max to other units using the AVE RS-485 Network via the RJ45 connectors.

REGISTER SETTING

To access the Register Setting menu, press the “Up” or “Down” button to move the cursor to “REGISTER SETTING” and press “Set”. The following menu will appear:

- | | |
|---|--------|
| <input checked="" type="radio"/> INTERFACE TYPE | RS-232 |
| <input type="radio"/> RX BAUD RATE | AUTO |
| <input type="radio"/> TX BAUD RATE | AUTO |
| <input type="radio"/> TX PROTOCOL | ASCII |
| <input type="radio"/> PARITY | NONE |
| <input type="radio"/> DATA BITS | 8 |
| <input type="radio"/> HW HANDSHAKING | OFF |
| <input type="radio"/> SW HANDSHAKING | NONE |
| <input type="radio"/> AUTO LINEFEED | ON |
| <input type="radio"/> EXIT | |

Figure 150: Register Settings Sub-Menu

INTERFACE TYPE

Choices: RS-232, PASSIVE TAP, RS-485

To set the interface type for your particular device, press the “Up” or “Down” button to move the cursor to “INTERFACE TYPE” and press and release “Set”. The cursor will start flashing. You can now use the “Up” or “Down” button to make your selection. When your selection appears, press “Set” again. The cursor will stop flashing and you can proceed to the next menu item for programming. RS-232 and RS-485 are defined by IEEE standards, however, the Passive Tap is a high impedance (100K) input with full diode protection. Refer to Table 1&2 Pg. 12, for respective pin-outs of RS-232 or RS-485.

RX BAUD RATE

Choices: AUTO, 1200, 2400, 4800, 9600, 14.4K, 19.2K, 28.8K, 38.4K, 57.6K, 115.2K

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



TX BAUD RATE

Choices: *AUTO, 1200, 2400, 4800, 9600, 14.4K, 19.2K, 28.8K, 38.4K, 57.6K, 115.2K*

This feature allows you to set the transmit baud rate to a separate device if you are looping the data back out of the VSI-Pro Max or using an emulate mode to communicate back to the POS/Cash Register.

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.

TX PROTOCOL

This selection allows you program the protocol or format of the data that is transmitted out the TX port. This is only available for registers that do not use the TX line of the POS/Cash Register port for emulate modes. When using the register port for tapping then the data output in ASCII mode simulates the function of the VSI-Pro Max in previous versions and utilizes the same pinout connection. When using the VSI-Pro Max in the Master mode this TX line is used to output the data in the VSI-ADD or other protocol to be compatible with the Hydra output to DVRs.

Choices: *ASCII, VSI-ADD, VNet, Dallmeier, MVDR, Norbain Vista*

NOTE: The choices in the above selection will change depending on the programming selections in the Network Settings submenu. In the “Master” mode the data can be sent out the VSI-ADD format which is the standard AVE protocol for register data which is supported by all AVE DVRs and many 3rd party DVR manufactures. The VNET format is only support by the AVE Vnetworker PC Software. The MVDR format is a subset of the VNET format that is supported by the AVE MVDR line of DVRs. The Dallmeier setting supports communication to the Dallmeier DVR in Commanding mode. ASCII is not supported in the Master mode selection.

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. The VSI-Pro Max UART does not support 7 bit No Parity. However by adding the AVE UART Daughter board internally to the VSI-Pro Max this can be supported with full compliance to the standard 16550 UART.

HW HANDSHAKING

Choices: *ON, OFF*

Hardware handshaking is an electrical signal that tells the cash register or computer that the VSI-Pro Max is ready to receive data via CTS Pin 8. It may not be necessary to be connected to an outgoing signal from the cash register or computer since the VSI-Pro Max does not require handshaking. The VSI-Pro Max handshaking signal is true or high, signally the cash register or computer to send data until it goes false or low which means the VSI-Pro Max buffer is full and not to send additional data. Handshaking guarantees that the internal buffer is not over run or text is not lost. The RTS Pin 7 input controls the VSI-Pro Max to send data out. When true, high or no connection data is continuously output until RTS is pulled false or low by the external device and then no data is sent out.

NOTE: The default VSI-Pro Max setting for CTS Pin 8 output is RS-232 data from the Network Port. To use this function you must change the internal jumpers of the VSI-Pro Max to CTS Hardware Hanshaking along with enabling this programming selection. For this function JP3 & JP11 ON, JP4 & JP5 OFF. See Appendix S Page 98 for VSI-Pro Max jumper settings.



5. PROGRAMMING

SW HANDSHAKING

Choices: NONE, XON/XOFF, ACK/NAK

Software handshaking is a command that is embedded in the data stream that is read and/or sent by the VSI-Pro Max that controls the flow of data to or from an external device.

AUTO LINEFEED Choices: ON, OFF

Auto Linefeed makes the VSI-Pro Max 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.

NETWORK SETTINGS

Press the "Up" or "Down" button to move the cursor to "NETWORK SETTINGS" 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.

<input checked="" type="radio"/>	TYPE	GENERIC
<input type="radio"/>	ADDRESS	N/A
<input type="radio"/>	PROTOCOL	N/A
<input type="radio"/>	BAUD RATE	9600
<input type="radio"/>	EXIT	

Figure 151: Network Settings Sub-Menu

Press the "Up" or "Down" button to move the cursor to "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.

TYPE Choices: GENERIC, MASTER, SLAVE, OFF

GENERIC

This is the default setting of the VSI-Pro Max. Also the default Jumper setting of the VSI-Pro Max connects the Network Serial RS-232 to the DB9 Pin 8 and outputs the Exception Data from this port which can be connected to a DVR or Serial Printer. Also the Network RJ45 port outputs the same data via RS-485. The "Network LED" will also flash when data is transmitted out in Generic mode. For normal exception data output to be backward compatible with all VSIs set Protocol for ASCII.

MASTER

This setting configures the Network RJ45 port to be a Master which is formerly called Hydra. The Master uses RS-485 bi-directional communication to slave devices using either the RegCom or Vnet protocol.

When Interface Type is set for RS-232, the "OUTPUT" RS-232 data with the selected format in the Register Select/TX Protocol is sent out the DB9 TXD Pin 3. In the RS-232 mode you can still use the VSI-Pro Max to interface to a POS or Cash Register but only in the tap mode using the DB9 RXD Pin 2 only to receive the data. You must also select the Address to be 1-16. Emulation modes require the use of both the RXD and TXD so this mode is prohibited while using the VSI-Pro Max in the Master mode. If the Address is set to N/A then both the RXD/TXD are assigned for PC Programming or DVR connection and no register or POS can be connected to the Master VSI-Pro Max.

When Interface Type is set for RS-485, the "OUTPUT" RS-485 data with the selected format in the Register Select/TX Protocol is sent out the DB9 Pins 4&6 if Address is set for N/A. In this mode the VSI-Pro Max can not connect to any POS/Cash Register or PC Programming Software since will send the VSI-ADD or other protocol out RS-485 Only. You must set Address to 1-16 for the RS-485 to be used for POS data input on Pin 4&6. Pin 3 will still be available as TXD RS-232 Output of the selected Register Select/TX Protocol to send the Master Data to the DVR.



NOTE: The default RegCom/VNET address of the internal Cash Register port of the VSI-Pro Max as a Master is N/A. Therefore you must select what address you require to be assigned to the POS or Cash Register data so the DVR will assign the register data to the proper camera. This address must be unique to all the other addresses of slaves on the Network just like all the slaves must have a unique address.

Related Settings

“ADDRESS” selects the RegCom address of the internal Cash Register port N/A, 1-16

“PROTOCOL” which the choices are REGCOM 9.6K, REGCOM 57.6K or VNET

“TX PROTOCOL” which the choices will be MVDR, DALLMEIER, VSI-ADD, VNET, NORBAIN VISTA

“BAUD RATE” 1200- 115.2K

SLAVE

This setting configures the Network RJ45 port to be a Slave which is formerly called Regcom or Vnetworker. The Slave uses RS-485 bi-directional communication to the Master unit.

Related Settings

“ADDRESS” choices are N/A, 1-16

“PROTOCOL” which the choices are REGCOM 9.6K, REGCOM 57.6K or VNET

“BAUD RATE” 1200 - 115.2K

If the Type is set to OFF then no data is sent out the Network Port either via RS-232 or RS-485.

ADDRESS

Choices: N/A, 1-16

This selects the address or camera number when configured as a slave device. The selections are 1-16 so that the POS/Cash Register is assigned a unique number up to a maximum of 16 to send the data over the RS-485 network back to a Master unit or a Hydra device which then sends all the data to the DVR or PC via the VSI-ADD for recording.

PROTOCOL

Choices: REGCOM 9.6K, REGCOM 57.6K or VNET

This setting selects the protocol of the RS-485 Network. There are two protocols to be compatible with two different devices and functions. The REGCOM can be selected for compatibility with the RegCom networking device. The RegCom device can be set for either 9600 or 57600 baud rate to match the installed device settings. However when not using the RegCom device and using only VSI-Pro Max then any baud rate can be set. The RegCom Protocol only has the ability to receive register data only to be backward compatible with RegCom device connected with a VSI-Pro.

The VNET can be configured for compatibility with the Vnetworker or Networker devices. A baud rate of 19200 can be only used for these external devices. However when used with a VSI-Pro Max device and no external Vnetworker or Networker devices are used then any baud rate can be used. The Vnetworker protocol has the ability to receive register data, Program remote VSI-Pro Max devices, and Receive remote Alarming and Time/Date information.

BAUD RATE

Choices: 1200 - 115200 baud rate

This sets the communication speed for the Network port in all configurations. Care must be given to selecting the proper baud rate for the Type of operation you wish and configuration you set for the VSI-Pro Max.

EXIT

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



5. PROGRAMMING

NETWORK PROGRAM

The “Network Program” selects and allows you to program the settings of the slave devices. The Sub-Menu of Network Program can be accessed when the TYPE sub-menu in the NETWORK SETTINGS menu is set to **MASTER**.

NOTE: You can not change the Network Protocol or Address of any slave from this menu or the units will stop communicating. If you wish to change these settings you must do by independently by the OSD programming or connecting the PC Programming software to each device. The default Network Protocol is RegCom 9.6K so all must be the same if you do change any.

You will be able to change the Network Protocol and address of the VSI-Pro Max Master so if you do and it is not the same as all the slaves then will not be able to communicate to any slaves. If you add any additional device of an AVE product via the RS-485 network they also must be the same protocol and address unique.

While accessing the programming menu of any slave, all the other slaves will stop transferring transaction data to the Master and will be buffering any incoming data in the slave memory. Upon exit from the programming mode the slaves will then send all the buffered data to the Master. Therefore you should avoid doing remote programming during high transaction traffic times for will delay the display of the data over the video so will not correspond to live transactions.

If you set the first channel to have Hydra or Master Output to the DVR using the VSI-ADD protocol you must reset this via the on-screen menu back to default via the on-screen menu to use the PC Programming software for all devices

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

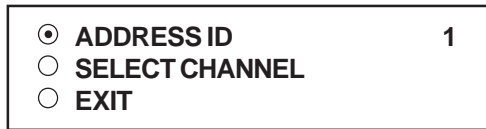


Figure 152: Network Program Sub-Menu

ADDRESS ID

Choices: N/A, 1,2,3,4,5,..., 16

This selects the channel that you want to program. To select the Address ID, press the “Up” or “Down” button to move the cursor to “ADDRESS ID” and press “Set”. The cursor will start flashing. Then press the “Up” or “Down” button to cycle through the values and press “Set” when the desired address is displayed.

SELECT CHANNEL

This selects when you want to access the “Main Programming Menu of a slave device” which selected from “ADDRESS ID” sub-menu. The SELECT CHANNEL can operate when the RS-485 network protocol of master is identical with RS-485 network protocol of slave device that selected from ADDRESS ID sub-menu.

To access the “Main Programming Menu of a slave device”, press the “Up” or “Down” button to move the cursor to “SELECT CHANNEL” and press “Set”. The following menu will appear which is the Main Menu of the slave device.

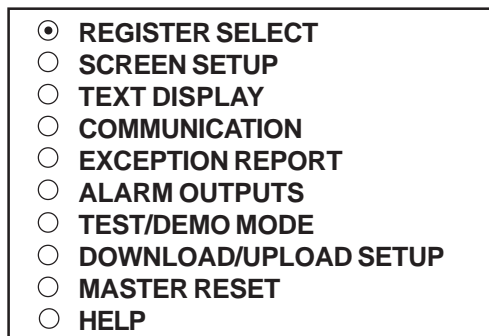


Figure 153: Main Programming Menu of Slave VSI-Pro Max via a VSI-Pro Max as Master

Using the front panel buttons of the VSI-Pro Max Master you will navigate the menu of the Slave VSI-Pro Maxt identically as if you were navigating the Master unit.

When you want to exit from the Programming Menu of a slave device, press the “Up” and “Down” and “Set” button at the same time and will exit the menu of the slave. The “NETWORK PROGRAM” sub-menu will also appear on the Master unit. Pressing “Reset” on the Master while remote programming slaves will result in resetting both the Master and the Slave being addressed. If the Master unit losses power and stops communicating with the slave, the slave menu will display until the communication handshaking time out expires and then will reset itself.

EXIT

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

NETWORK MASTER RESET

The “Network Master Reset” selects and allows you to master reset the slave device. The Sub-Menu of Network Master Reset can be accessed when the TYPE sub-menu in the NETWORK SETTING menu is set to **MASTER**.

To access the NETWORK MASTER RESET sub-menu, press the “Up” or “Down” button to move the cursor to “NETWORK MASTER RESET” and press “Set”. The following menu will appear:

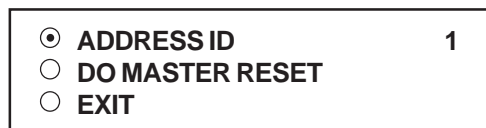


Figure 154: Network Master Reset Sub-Menu

ADDRESS ID

Choices: N/A, 1,2,3,4,5,..., 16, ALL

This selects the channel that want to master reset. To select the Address ID, press the “Up” or “Down” button to move the cursor to “ADDRESS ID” and press “Set”. The cursor will start flashing. Then press the “Up” or “Down” button to cycle through the values and press “Set” when the desired address is displayed.

DO MASTER RESET

This selects to master reset the device that was selected from ADDRESS ID. To select the DO MASTER RESET, press the “Up” or “Down” button to move the cursor to “DO MASTER RESET” and press “Set”.

If the ADDRESS ID sub-menu of Network Master Reset is set to address 1, 2, ..., 16. The DO MASTER RESET can operate when the RS-485 network protocol of master identical with RS-485 network protocol of slave device that selected from ADDRESS ID sub-menu.

DO MASTER RESET cannot change the TYPE, ADDRESS ID and RS-485 network protocol of any slave device. When you want to change TYPE, ADDRESS ID and RS-485 network protocol of a slave device, you must use the OSD buttons of the VSI-Pro Max or the PC Programming Software by connecting to the RS-232 Register port of each slave device independently. This eliminates the user from accidentally changing the network communication parameters causing the slaves to stop communicating with the Master.

EXIT

Press the “Up” or “Down” button to move the cursor to “EXIT” and press “Set” to return to the “COMMUNICATION” Sub Menu.

5. PROGRAMMING

5.7 EXCEPTION REPORTS

EXCEPTION REPORT OVERVIEW

The Exception Report gives you the option to assign an on-screen flag, trigger an alarming device, display user programmable on-screen data or send data to another serial device like a DVR on any questionable transaction that you have preprogrammed into the VSI-Pro Max.

The VSI-Pro Max 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. Press the "Up" or "Down" button to move the cursor to "SET EXCEPTION" and press "Set".
3. To select the Exception No. that you wish to program, press the "Up" or "Down" button to move the cursor to the Exception No. then press "Set". Press the "Up" or "Down" button to toggle between the choices.
4. Make sure that HISTORY BUFFER is set to "ON" for any exception data to be saved in the Exception History.
5. Program the Exception String in the Exception Report to the desired type of exception you wish to detect.
6. If you want to detect a numeric range of the transaction sale then enter in the proper values in the "Range" and select the "Operator" to achieve your desired result.
7. To do DVR alarm triggering go to the Alarm Menu and set up the Hard alarm outputs and connect to the DVR so that whenever an exception occurs you alarm the DVR so you can later search to this via the DVR menu.

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 allows you to program exceptions to trigger external alarming devices such as DVRs, Time-lapse VCR's, quads, enunciators, LED's etc. Using the ALARM OUTPUT you can have your DVR 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. The VSI-Pro Max has two alarm outputs which can be configured independently. These outputs are open collector transistor outputs 12VDC @ 20mA maximum.

TRIGGER TEXT

If you wish you can print programmable text into the video to search to or notify specific events. If POS cryptic character signify voids or cancels then you can assign another text string to signify this like "CANCEL" or "VOID". This will provide a common search term to be viewed by managers.

This same function can be programmed to output ESC sequences or Hexidecimal values that can connect to PTZ cameras to home to specific locations when exception occur. On dome could be monitoring several POS lanes and when exceptions occur home to the preset for each lane.



DVR or PRINTER OUTPUT

There may be situations where you want to send all the data to store on a DVR or do not want cashiers or other employees to know what triggers an exception. In this case, the VSI-Pro Max provides a separate serial output that will send data to a remotely located DVR or 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 Max, 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 output of the VSI-Pro Max 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 Max 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 Max menu, press the "Up" or "Down" button to move the cursor to "EXCEPTION REPORT" and press and release "Set". The following menu will appear:

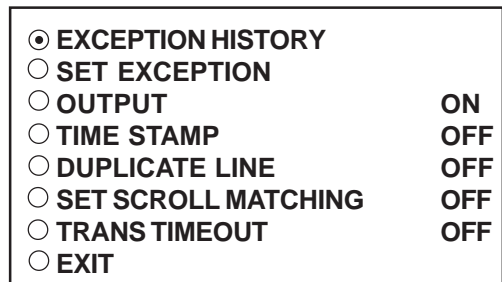


Figure 155: EXCEPTION REPORT Sub-Menu

EXCEPTION HISTORY

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

TOTAL EXCEPTIONS

This is not a selection for just displays the total exception count kept in the Exception History Buffer maximum 800.

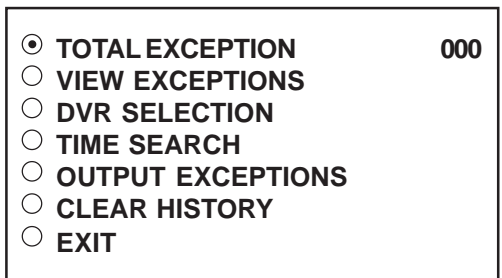


Figure 156: EXCEPTION HISTORY Sub-Menu

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.

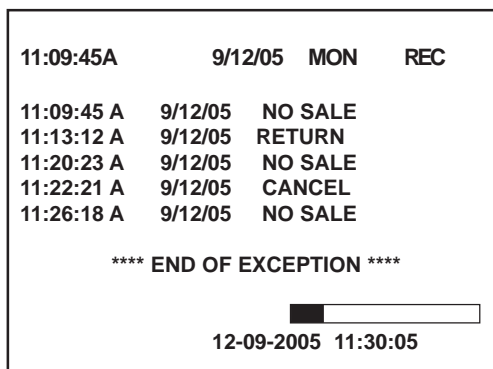


Figure 157: Display of View Exceptions

NOTE

For any exception you must program History Buffer "ON" for any exception data to be saved in the Exception History.

5. PROGRAMMING

DVR SELECTION

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

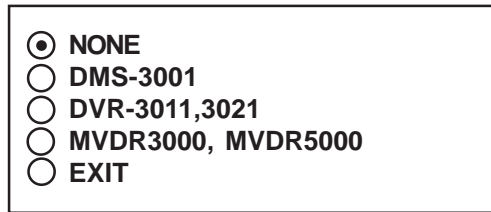


Figure 158: DVR Selection Sub-Menu

DVR-3011 / DVR-3021 / MVDR3000 / MVDR5000

Press the “Up” or “Down” button to move the cursor to “DVR-3011,3021” and press “Set”. An asterisk appears to indicate your selection.

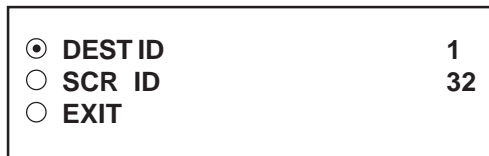


Figure 159: DVR-3011,3021, MVDR3000, MVDR5000 Sub-Menu

DEST ID and SRC ID

Choices: 1 through 32

Note: The DEST ID and SRC 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:

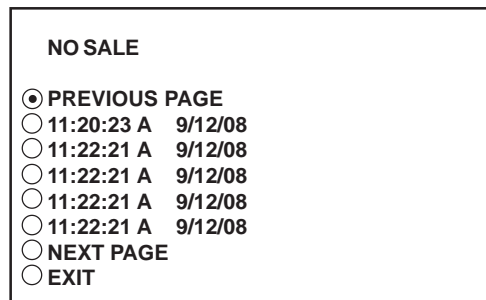


Figure 160: Display of TIME SEARCH

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

Then press “Set” and the DVR will be commanded by the VSI-Pro Max to go to the selected transaction via its Time/Date Search function. Therefore you must make sure the T/D of the DVR is very close to the setting of the VSI-Pro Max or their will be an error in the actual search time. For the MVDR you should turn on T/D Locking and Time Sync so the clocks are identical. Verify the proper connection to the DVR from the diagram on the following page.

EXAMPLE

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

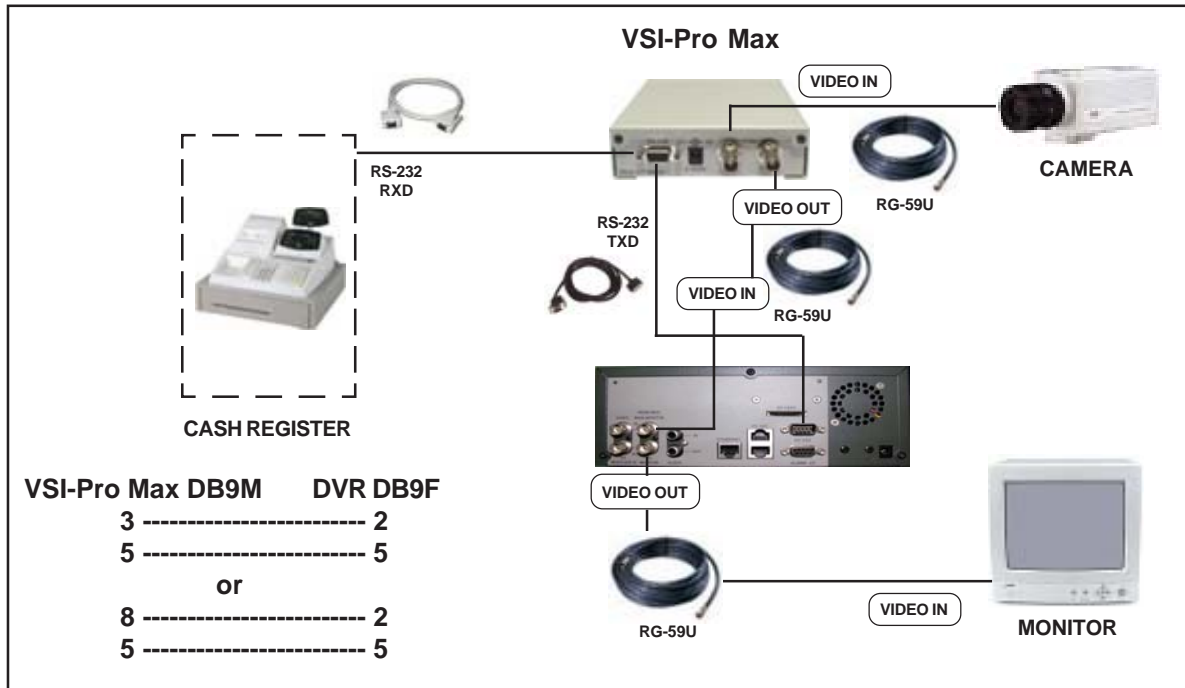


Figure 161: VSI-Pro Max with MVDVR3000/5000 Control Connections

NOTE:

The VSI-Pro Max can control the DVR RS-232 port from either Pin 3 or Pin 8 depending on the configuration. Default setting is both. In the Cash Register “Tapping Mode” the VSI-Pro Max uses Pin 3 to send out auxillary ASCII data and DVR control signals. Therefore in this mode you can operate the VSI-Pro Max in the “Slave Mode” and connect to control the DVR via Pin 3. You can not use the VSI-Pro Max in the “Master Mode”. If you select “Master Mode” this will have priority and when you select DVR Time/Data Search you will generate an error message.

In the Cash Register “Emulate Mode” the VSI-Pro Max uses Pin 3 to connect to the cash register supplying the proper emulate handshaking signals. Therefore Pin 8 must be connected to the DVR to command the Exception Search mode. Therefore you can not use the VSI-Pro Max in “Slave Mode” and utilize the DVR control feature while connecting in “Emulate Mode”. If you choose the “Slave Mode” this will have priority over the DVR control mode and will generate an Error Message when DVR Time/Date is selected. The same will be true if “Master Mode” is selected.

The VSI-Pro Max can also control the MVDR series DVR or others via RS-485 connections using the RJ45 connector. Please Refer to Appendix C Page 78 for additional information on this connection.

OUTPUT EXCEPTIONS

This selection allows you to have the buffered exceptions sent out the serial port to a DVR or 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.

5. PROGRAMMING

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"/>	HISTORY BUFFER	ON
<input type="radio"/>	EXCEPTION STRING	
	NO SALE	
<input type="radio"/>	RANGE	
	00,000,000.00 - 00,000,000.00	
<input type="radio"/>	OPERATOR	NONE
<input type="radio"/>	EXIT	

EXCEPTION NO.

Choices: 1 through 24

Figure 162: SET EXCEPTION Sub-Menu

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 or DVR 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 on Page 54.

OUTPUT

Choices: ON, OFF

The OUTPUT controls the RS-232 data from the VSI-Pro Max to the external device like DVR. Typically this is sent to a remote Serial Printer to provide a hard copy of Exceptions with time and date on it or a DVR for database logging. 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 Max as explained in the Communications section.

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.



HISTORY BUFFER ON/OFF

The history buffer stores all the exceptions that occur in the VSI-Pro Max. Sometimes this can be very large and consume a large portion of the memory of the VSI-Pro Max. This can be used to automatically search a compatible DVR, upload to a PC to save or print out and view on screen on the VSI-Pro Max. This setting allows the user to enable or disable this feature as to conserve memory allocation for other features.



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 Max 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 Max 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. The VSI-Pro Max 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" "wildcard ⊙". 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 programing.



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.

5. PROGRAMMING

NEGATIVE EXCEPTION

You can remove unwanted text from the screen using the VSI-Pro Max. The VSI-Pro Max 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.

The Negative Exception feature is only useful when the message is printed at the top of the printer for advertising on the receipt given to the customer. For scrolling advertising messages on the Customer Display is handled by the "Scroll Matching" Feature, Page 57. The Scroll Matching Feature is an automatic filter for one or two line scrolling advertising messages.

RANGE

Choices: 00,000,000.00-99,999,999.99

The Range defines the limits of the Operator. These are numeric only. As you can see from the following 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. You can follow this format to program your range. When you have finished and want to set this range into the VSI-Pro Max 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 Max memory and exit you back to the previous menu.

OPERATOR

Choices: NONE, IN, OUT

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 the VSI-Pro Max, you can define ranges for your exceptions and have the VSI-Pro Max 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. The range value can be from 0 to 99,999,999.00 to accommodate low value currency or high value transactions in any currency.

EXAMPLES 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

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 String2 . . .	
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 String3 ...	
Range	0049.99-0099.99
Operator	IN

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

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 String3 ...	
Range	0049.99-0099.99
Operator	IN

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

5. PROGRAMMING

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 Sub Menu Continued

OUTPUT

Choices: ON, OFF

This is global output to send data to the serial port connected to a printer or DVR. When "ON" is selected all the data will be sent to the serial port regardless of what setting of output has selected in the individual output in the set exception menu. When "OFF" is selected only those exception will send to the serial port whose output 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 the serial port will send data with a 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.

DUPLICATE LINE

Choices: ON, OFF

If this selection is turned ON then any transaction line that is the exact duplicate of the previous one is not displayed or processed by the exception processor and is basically ignored. Be careful in selecting this function because many POS/ Cash Register have a "Repeat" key to ring up multiple items. In this case true transactions will be deleted and not shown. This function is useful when used with Customer Displays that continuously refresh the display with identical data and not related to new transactions and causes unnecessary data to be sent to the interface.



SCROLL MATCHING

Scroll Matching is a feature to better remove those advertising scrolling messages on the customer display of cash registers so they do not clutter up the video display and recording.



Figure 163: Scroll Matching Sub Menu

SCROLL MATCHING

Choices; *Off, Scroll, Two Lines*

TIMEOUT

Choices; *Off, 3s, 5s, 10s, 15s*

The Scroll Matching feature handles two types of advertising messages, single or two line scrolling messages. A single line scrolling message is where the advertisement is on only the top line or a single line of the customer display. It basically scrolls from left to right to alert the customers of promotions or the store name. Sometimes a single line message has the Time/Date on the second which is accomodated by this feature. A two line customer display can also be scrolling but scrolls together both lines together from left to right and can have Time & Date intermixed as well. In either case the Time & Date is displayed along with any normal transactions occuring at any time in the scrolling advertising message. Therefore when messages are scrolling on one line set "Scroll Matching" for "Scroll". For messages scrolling on two lines set "Scroll Matching" for "Two lines".

Advertising messages also scroll at different speeds depending on the POS or Cash register and size of customer display. Therefore a "TimeOut" setting is required to make sure that the software gives the display enough time to scroll three lines so the filtering can properly detect the full message and delete it correctly. First set for "3s" but if the scrolling display is slower than this and the message is not fully and reliably deleted increase the time until satisfactory results occur.

TRANS TIMEOUT OFF, 3s, 6s, 10s, 30s, 60s, 180s, 300s

The Transaction Timeout allows you to trigger an alarm condition if a transaction does not occur for a programmable period of time. When used in combination with the trigger text can implement a watchdog timer for external applications.

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:

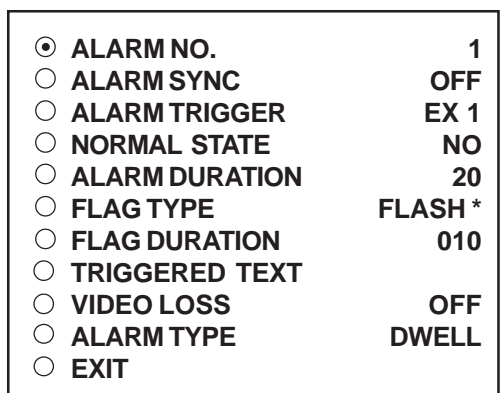


Figure 164: ALARM OUTPUTS Sub-Menu

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.

5. PROGRAMMING

ALARM NO.

Choices: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

The VSI-Pro Max allows 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.

ALARM SYNC ON/OFF

The alarm sync sends a command via the RS-232 port to a compatible DVR to command the DVR to the alarm mode. This eliminates the need for external hard alarm connections to the DVR. The AVE MVDR3000/5000 support this function.

ALARM TRIGGER

Choices: NONE, 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, RTS, TTO

An Alarm Trigger is the source of activity programmed to activate a certain alarm. The alarm trigger tells the VSI-Pro Max 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 Note: The RTS input has debounce time so the duration of this input must be longer than 200ms.

External alarm input. The VSI-Pro Max has 1 alarm input, if you are not using the handshaking function of the RTS which controls the flow of the RS-232 ASCII data output. A contact closure to ground on pin 7 will trigger this alarm. Coupled with the RTS Triggered text, you can now display a 40 character message from an external alarm input. **NOTE:** You can not use RTS for alarming when using RTS for Screen Blank see Page 40 or will give conflicting results.

 **RTS APPLICATION NOTE:** The RTS alarm input can be connected to the drawer of a cash register or safe to alarm and send the message "DRAWER OPEN" to the screen if the drawer is open too long.

TTO This stands for **Transaction Timeout** and when selected will trigger the respective alarm per the setting in the Exception Menu on Page 49.

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: MANUAL, PULSE, 1, 3, 5, 10, 15, 20, 30, 60, 120, 180, 240 seconds. (PULSE sends a 200mS alarm pulse to the alarm device.) If set for Manual then the alarm duration will follow the RTS input and is not applicable to Exception Triggers for those must be set for a time and not manual.

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, flashing reverse text or none.

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: MANUAL, 1 - 240 seconds

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. If you select Manual then the Flag display will remain on the screen for as long as the RTS alarm is active. This feature is not applicable to Exception triggers for this must be set for a time not manual.

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"/>	RTS TRIGGERED DELAY	OFF
<input type="radio"/>	CLEAR SCREEN	OFF
<input type="radio"/>	SET TRIGGERED TEXT	
<input type="radio"/>	EXIT	

Figure 165: TRIGGERED TEXT Sub-Menu

5. PROGRAMMING

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 trigger text on the video output.

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 trigger text to the serial port to DVR or Printer.

RTS TRIGGERED DELAY

Choices: OFF, 1S, 5S, 10S, 20S, 30S, 1M, 5M, 10M

Press the “Up” or “Down” button to move the cursor to “RTS TRIGGERED DELAY” 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 give no delay and will trigger the alarm immediately upon RTS closure..

This function introduces a time delay for the RTS Trigger Input before initiating an alarm condition. The alarm must be continuous for the entire time of the delay setting or the time out will be reset. This is useful to connect to cash drawers or safe doors and wait a programmable amount of time before sounding the alarm. Leaving cash drawers or safe doors open are indicative of theft or simple forgetfulness and an alarm condition will deter this behavior.

CLEAR SCREEN ON/OFF

Press the “Up” or “Down” button to move the cursor to “CLEAR SCREEN” and press “Set”. Use “Up” or “Down” to toggle between On or Off. When Clear Screen is “On” the Trigger Text is erased when the alarm time out is finished. If “Off” then the Trigger Text remains on the screen and is scrolled with the normal transactions.

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:

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

Figure 166: Set Triggered Text Sub-Menu

You can enter 2 lines 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. Trigger Text is added to the end of any text onscreen including normal transactions. Therefore if you want the Trigger Text to be on its own line you will have to enter “^0D” which is HEX for LF (linefeed) at the beginning of the Trigger Text string so you move to the next line to display the Trigger Text.

EXIT

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




VIDEO LOSS

Choices: Manual, 1s, 2s, 3s, 4s, 5s, 10s, 20s, 30s, 1M

Video Loss allows the VSI-Pro Max to generate an alarm condition when low or lost video occurs. When set for manual the alarm follows the state of the video loss, when set for 1s-1M this means the video must be lost continuously for that period of time before an alarm is triggered. The alarm mode is a timed mode so once the video loss alarm is triggered the alarm time out must expire and get another video loss to retrigger the alarm. Video Loss is "OR" with the Alarm Trigger so if either one occurs will trigger the appropriate alarm for all the setups for that Alarm number.

ALARM TYPE DWELL or TIMED

When set for DWELL Mode the alarm timeout is retriggered every time a new alarm comes in within the dwell period. If set for TIMED mode the alarm is triggered once and when the time out expires the alarm must reset and retrigger to start the alarm time out again.

NOTE  *In the below tests, you can stop the scrolling data by holding down either "Up" or "Down" button.*

5.9 TEST/DEMO MODE

The TEST/DEMO MODE provides you with several ways to test the VSI-Pro Max 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:

- PORT 1 TEST
- PORT 2 TEST
- DATA CAPTURE
- REGISTER DEMO
- VERSION ID
- EXIT

Figure 167: TEST/DEMO MODE Sub-Menu

PORT 1 or PORT 2 TEST

Sending and receiving data performance can be analyzed under the PORT 1 TEST or PORT 2 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:

- RECEIVE [RX] TEST
- TRANSMIT [TX] TEST
- RX/TX TEST
- BAUD RATE SCAN
- EXIT

Figure 168: PORT 1 TEST Sub-Menu

RECEIVE [RX] TEST

The purpose of this test is to determine that if VSI-Pro Max 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):

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

Figure 169: 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 Max and Register or any additional interfacing device.

Press "Set" to return to the previous menu.

5. PROGRAMMING

TRANSMIT [TX] TEST

The purpose of this test is to determine that if the VSI-Pro Max 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):

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

Figure 170: TRANSMIT [TX] TEST Display

If VSI-Pro Max 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.

RX / TX TEST

In the RX/ TX test the VSI-Pro Max 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 171: 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 172: Baudrate Scan Display

Enter a transaction from the register. The VSI-Pro Max 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 allows the user to store the data either in the internal memory of VSI-Pro Max 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:

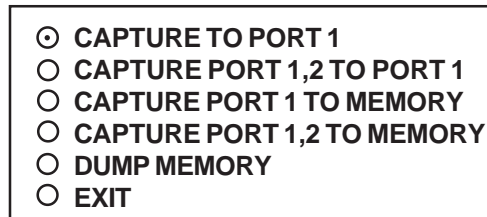


Figure 173: DATA CAPTURE Sub-Menu

Press “Set” to return to the previous menu.

Data Capture Methods

The VSI-Pro Max has two built in UARTs. Port 1 can be RS-232 RXD / TXD or RS-485/RS-422 RXD Only using the DB9F RS-232 port on the rear of the unit. Port 2 is RS-485 RXD/TXD 2 Wire or RS-422 RXD Only or RS-485/RS422 TXD Only using the RJ45 Network Connectors on the side of the unit and/or RS-232 TXD Only using Pin 8 of the DB9F RS-232 connector.

RS-232 or RS485/RS422 Capture RXD Only

If you wish to capture the tapped data from an peripheral device like printer or customer display then you need only use Port 1 which is on the DB9F RS-232 Connector. Use Port 1 selections in the Data Capture Sub-Menu above. This means the data is sent to the printer and the appropriate cable is placed between the printer and the POS terminal to “Tap” the data and be read by both the VSI-Pro Max and the printer. Therefore whatever is sent to the printer will be sent to the VSI-Pro Max.

Most all AVE RS-232 POS cables will work for this mode and the data is received on Pin 2 at the target device communication settings which is set in the “Communications” Main Menu and “Register Settings” submenu. You can then send out the received data at another baud rate via the same submenu using Pin 3 of the DB9F connector.

If you wish to capture RS485/RS422 data then you will need to select “Interface Type” RS485 in the “Communications Menu”. Data will be received using the RS485/S422 RXD on Port 1, Pin 4 (A+) and Pin 6 (B+) on the DB9F RS-232 connector. Data can then be sent out via RS-232 via Pin 8 which the baud rate settings can be selected in the “Communications Menu” under “Network Settings” Submenu. “Type” must also be selected for “Generic”.

RS-232 or RS-485/RS422 BiDirectional Data Capture

If you wish to capture the data being received and sent by the peripheral device then you will need to capture both the TXD and RXD signals simultaneously using Port 1,2 Selections in the Data Dump Menu above.

For RS485/RS232 this can be done by using the RS485/S422 RXD on Port 1, Pin 4 (A+) and Pin 6 (B+) on the DB9F RS-232 connector for the RXD signal of the peripheral. For the TXD signal of the peripheral use Port 2 which is the RJ45 Network Connector on the side of the unit Pin 4 (A+) Pin 5 (B+). See Page 79 for RJ45 diagram. You will need to set the Port 1 Communications settings in “Register Settings” Submenu and Port 2 settings in “Network Settings” Submenu. Also the captured data of both Port 1 and Port 2 will come out RS-232 from Pin 8 of the DB9F RS-232 connector with the same settings as the “Network Settings”. Therefore you can only output data at the same baud rate as the data dump of the peripheral device.

For RS-232 Data Capture of both RXD and TXD channels of your peripheral device is similar to above but will need the AVE RS-232 to RS485 converter to connect from the peripheral device to Port 2 which can only be RS-485 input but the Port 1 input can be RS-232 so a direct connection can be made.

Contact the factory for a complete Data Dump cable and converter set for plug and play connectivity for both RS-232 and RS485/RS422 Data Dump capability.

5. PROGRAMMING

Multiprocessor Data Dump Mode

The VSI-Pro Max has the ability to read high speed Interprocessor or Multiprocessor serial communications. This uses a fixed 9 bit protocol and can have speeds up to 384K baud used in many IRC or printers of POS systems. Since the VSI-Pro Max ignores the parity in the data dump mode this multiprocessor data can be read as RS-232 input from Port 1 Pin 2 or RS485/RS422 input from Pin 4/6 and output Port 1 Pin 3 as RS-232. Select the appropriate "Type" either RS-232 or RS-485 in "Register Settings" under the "Communications" Menu and the appropriate baud rate. However you must select Parity as ODD, and Data Bits as 8. You can save to Memory or output Port 1 Pin 3 with the same baud, parity and bits as selected for the receiving data. The VSI-Pro Max only supports baud rates up to 115Kbs so if higher speeds are desired we have special versions that support up to 384K so contact the factory if this is required.

CAPTURE PORT 1 TO PORT 1

This feature redirects the incoming data of the VSI-Pro Max Register Port or Port 1 to its output (Pin 3 of AT type RS-232 female connector) where that data can be stored to a data storing device (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):

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

Figure 174: CAPTURE PORT 1 TO PORT 1 Display

Press "Set" to return to the previous menu.

CAPTURE PORT 1, 2 TO PORT 1

This feature redirects the incoming data of the VSI-Pro Max Register Port or Port 1 and the Network Port or Port 2 to the Register Port output (Pin 3 of AT type RS-232 female connector) where that data can be stored to a data storing device (e.g. PC). The baud rate, parity, data bits and handshaking is set the same for both ports. The Output baud rate can be different depending on the requirements of your data receiving device. The two input data streams are combined to one file in the OM1 format. This format can be read by the ComScope software but mainly is used internally by AVE to develop drivers for bi-directional data communications for handshaking from various POS devices.

Press the "Up" or "Down" button to move the cursor to "CAPTURE TO PORT 1,2 to PORT 1 and press "Set". The following display will appear (example only):

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

Figure 175: CAPTURE PORT 1,2 TO PORT 1 Display

Press "Set" to return to the previous menu.

CAPTURE PORT 1 TO MEMORY

This feature allows you to store the data in the internal memory of VSI-Pro Max from the Register Port 1. You can store up to 120 kilobytes of data in the internal memory of VSI-Pro Max. Power up the VSI-Pro Max for 24 hours prior to download of data. This will provide VSI-Pro Max's internal battery a full charge to hold data in its memory. Press the "Up" or "Down" button to move the cursor to "CAPTURE PORT 1 TO MEMORY" and press "Set". The following display will appear (example only):

```

RX BAUDRATE :          AUTO
TX BAUDRATE :          2400
PARITY :              NONE
DATA BIT :             8
HANDSHAKING :         OFF

BAUDRATE  DETECTION..
    
```

Figure 176: CAPTURE PORT 1 TO MEMORY Display

Press "Set" to return to the previous menu.

CAPTURE PORT 1, 2 TO MEMORY

This feature redirects the incoming data of the VSI-Pro Max Register Port or Port 1 and the Network Port or Port 2 to store in the VSI-Pro Max's internal memory. The baud rate, parity, data bits and handshaking is set the same for both ports. The Output baud rate can be different depending on the requirements of your data receiving device. Power up the VSI-Pro Max for 24 hours prior to download of data. This will provide VSI-Pro Max's internal battery a full charge to hold data in its memory. The two input data streams are combined to one file in the OM1 format. This format can be read by the ComScope software but mainly is used internally by AVE to develop drivers for bi-directional data communications for handshaking from various POS devices.

Press the "Up" or "Down" button to move the cursor to "CAPTURE TO PORT 1,2 TO MEMORY" and press "Set". The following display will appear (example only):


```


RX BAUDRATE :          AUTO
TX BAUDRATE :          2400
PARITY :              NONE
DATA BIT :             8
HANDSHAKING :         OFF

BAUDRATE  DETECTION..
    
```

Figure 177: CAPTURE PORT 1,2 TO MEMORY Display

Press "Set" to return to the previous menu.

NOTE  *VSI-Pro Max can hold up to 120 kilobytes of data so make sure that you only transfer the data which is in correct format.*

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

5. PROGRAMMING

DUMP MEMORY

You can upload any saved information from the VSI-Pro Max 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 Max will start uploading the data. The dumping memory process does not erase the internal saved memory it merely sends out a copy. Therefore you can dump the data out as many times as you wish. However the memory will be cleared if you save another data dump or connect to a register or run the demo mode, all of which overwrite the memory buffer space.

REGISTER DEMO

This demonstration simulates transaction data from a register. This is used to demonstrate the VSI-Pro Max’s capabilities with just a monitor and camera without having a register hooked up. When the demo mode is active the VSI-Pro Max 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”. You will see the following;

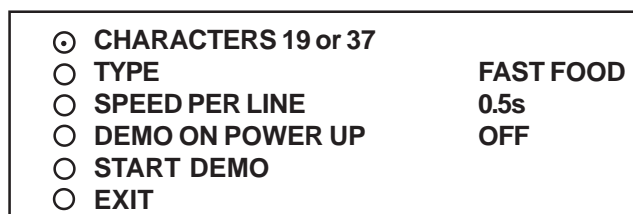


Figure 178: Register Demo Sub-Menu

Selecting “Characters 19 or 37” will give you two options of 19 or 37 characters per line.

Selecting “Type” will give you the choices of a demo from a Fast Food Resturant, Convenience Store, Grocery, Pizza Shop, Coffee Shop or a Retail Store.

Selecting Speed per line will output each line at the programmed speed. The selections are 0.5s, 1s, 2s, 3s.

If you select “DEMO ON POWER UP” as “ON” then pressing the “Reset” or powering up or down will have no effect on the demo mode and will continuously work until disabled by this menu selection. If you connect the VSI-Pro Max to a cash register and it sends data to the VSI-Pro Max during this demo mode then the demo mode will also be disabled until you press “Reset” or power down and up again.

Selecting “Start Demo” will exit the proramming mode immediately and start to display the data of the selected demo.

VERSION ID

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

VSI-Pro Max Version 14.00 R16
08/25/2011

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 Max's or a VSI-Pro Max and a PC. This feature is especially helpful on multi-interface installations. You can program one VSI-Pro Max and download the data to another VSI-Pro Max 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 VSI-Pro Max Ver. 14 R2 with a same exact VSI-Pro Max or erroneous data will occur.

DOWNLOAD/UPLOAD SETUP USING VSI-Pro Max TO VSI-Pro Max

To insure that the DOWNLOAD/UPLOAD process is accomplished, you need to access the programming menu for both VSI-Pro Max, so each VSI-Pro Max 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 Max with the download data cable attached. The VSI-Pro Max programming data is stored internally in a battery backed 128K SRAM. This would allow you to program one VSI-Pro Max on-site and bring the programmed VSI-Pro Max back to the shop or office and program additional VSI-Pro Maxs 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 Max simultaneously.

The use of the diagram in Figure 180 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.

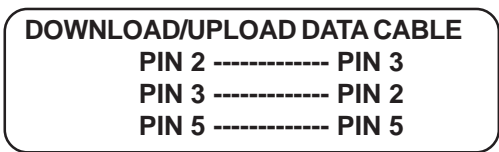


Figure 179: Download/Upload Data Cable

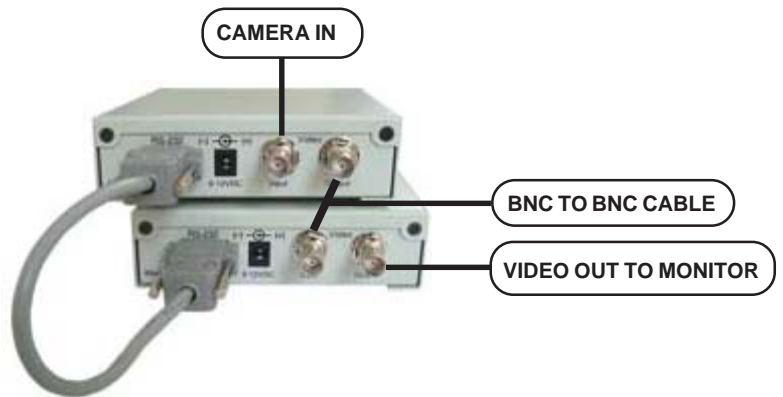



Figure 180: DOWNLOAD/UPLOAD SETUP Using VSI-Pro Max to VSI-Pro Max

The PROGRAMMED VSI-Pro Max will upload data to the UNPROGRAMMED VSI-Pro Max. In the configuration in the Figure 180, you can get the programming menus for both VSI-Pro Max on the screen at the same time. Use the front panel shortcut to position the text block from the PROGRAMMED VSI-Pro Max 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 Max 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 Max 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 Max and do the same thing. You should now have both programming menus side by side.

NOTE 
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 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 181: 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:

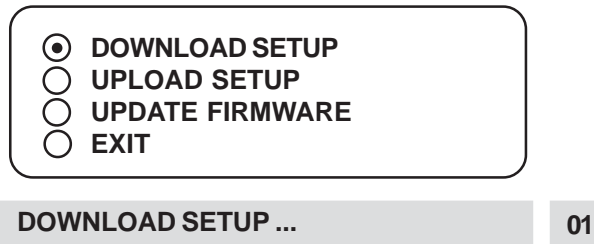


Figure 182: DOWNLOAD SETUP Sub-Menu & Display

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

Now go to the main-menu of the PROGRAMMED VSI-Pro Max 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:

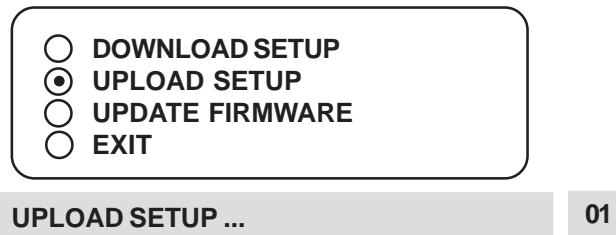
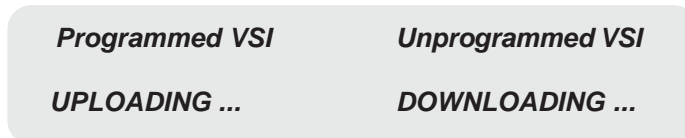


Figure 183: UPLOAD SETUP Sub-Menu & Display

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 Max’s.

Now go to the main-menu of the previously UNPROGRAMMED VSI-Pro Max 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 Max.

DOWNLOAD/UPLOAD SETUP USING A PC

You can use a Laptop PC and AVE’s IC, HyperTerminal or equivalent communications program to store data from a VSI-Pro Max to a file. This file can then be uploaded to other VSI-Pro Max units with the same software revision level. Use 38400,n,8,1 baud for the PC’s baud rate. **NOTE:** This feature is only available to like versions and release. Therefore you can only program a Ver. 14.00 R5 with a same exact VSI-Pro Max or erroneous data will occur.

VSI-Pro Max Remote PC Program Downloading

The VSI-Pro Max has the ability to upload or download all the programming settings and history files along with update firmware via a PC Windows based application. Custom or specific register configurations can now be saved in a laptop for ease of service and programming. You can set the VSI-Pro Max clock in sync with a laptop or manually enter. Simple keyboard strokes can enter titles, exceptions and trigger strings quickly and easily. This is accomplished by using a Com port of the laptop or a USB to RS-232 adapter. Auto connection time out and error recovery guarantees the VSI-Pro Max will function under any condition including cable breakage, power down of laptop or VSI-Pro Max and accidentally hitting reset on the VSI-Pro Max during connection.

Accessing the PC Programming RS-232 Connection

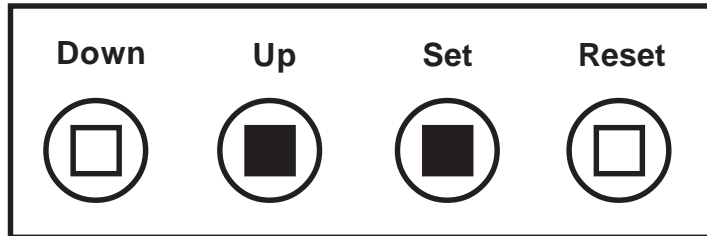


Figure 183A: Four Front Panel Push Buttons of VSI-Pro Max for PC Programming Temporary Access

Hold in the “Up” and “Set” buttons for longer than 3 seconds and the VSI-Pro Max will temporarily be configured for RS-232 Register Input at 9600 baud. If you have video connected you will see this message on-screen as well. This mode is also signified by the POS and NETWORK LEDS flashing. This allows the user to connect the PC Programming cable and program the unit without worrying about what the internal setups are. This mode can be exited at any time by pressing the “Reset” button and the unit will return to the internal programmed settings. Do note that if you download new firmware the unit will be revert to factory default settings. If you download or change and settings via the PC Programming software these new settings will take effect upon exit.

Software Installation

Click Setup.exe for installation the VSI-Pro Max PC Program Download V14.00R17
After installation is complete, run the program. The following window will be loaded.

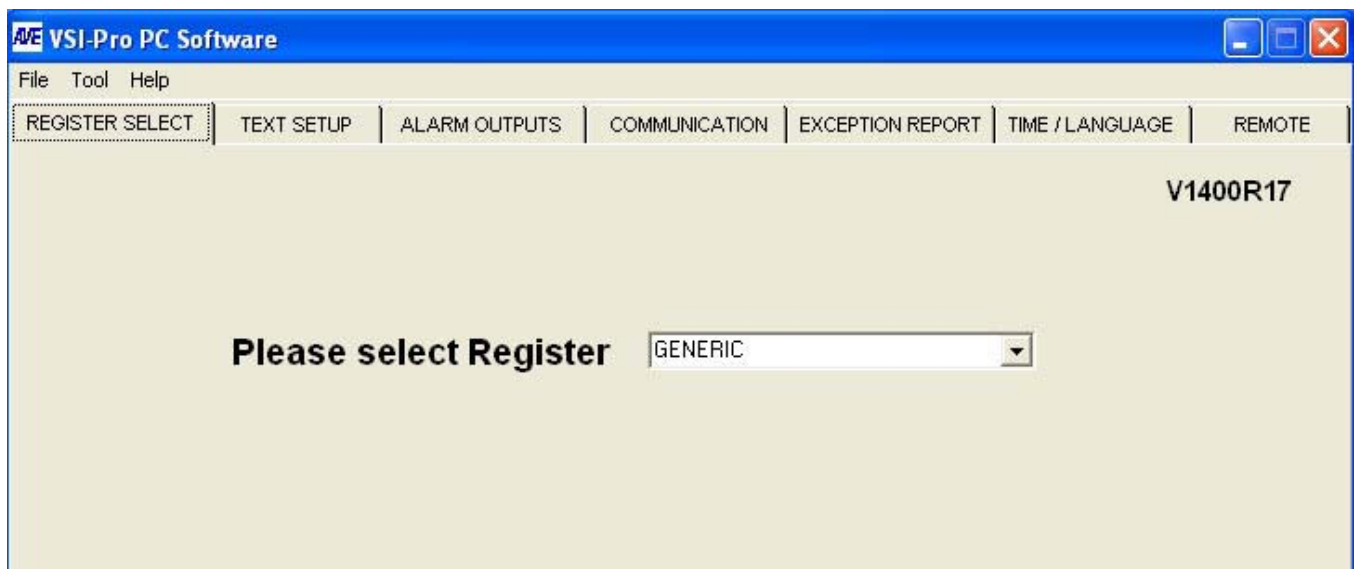


Figure 184: PC Programming Main Menu

5. PROGRAMMING

Click the Tab “Remote” and you will see the following Menu.

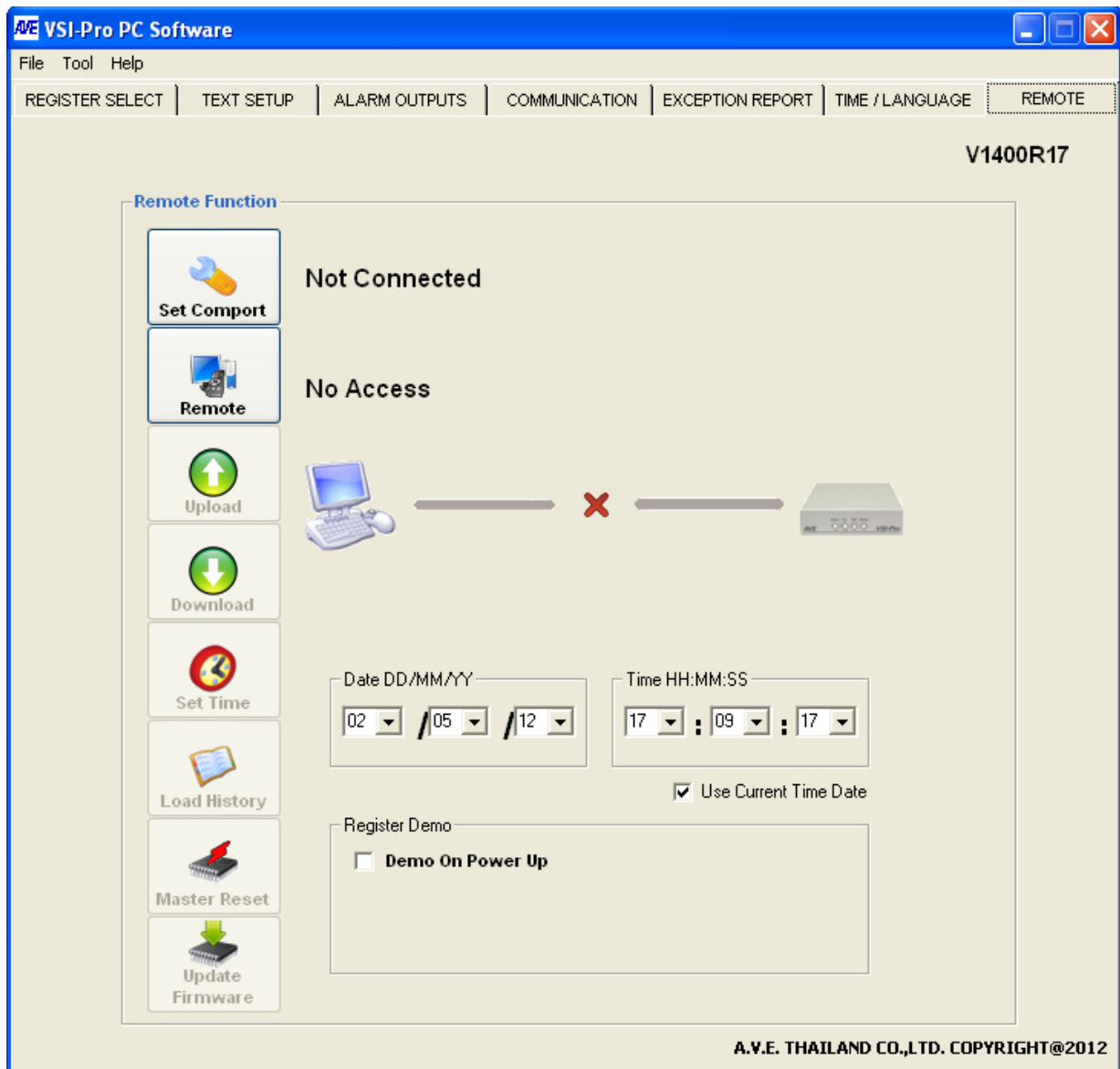


Figure 185: Remote Menu

Click on “Set Comport”. If the VSI-Pro Max is in the “Baudrate Detection” Mode then you can set any baud rate and the VSI-Pro Max will self configure. However if the VSI-Pro Max is already set to a baud rate you must select the exact baud rate and communication configuration in the VSI-Pro Max for connection to occur. If the unit does not display “Connected” then you have either entered the wrong baud rate or communication settings or a cable problem or the VSI-Pro Max not powered.

Once connected then click “Remote” and will display “Accessed” or will go back to “No Access” if the baud rate or cable connection is not proper and will also go back to “Not Connected” so you can reset the communication settings. It might take 2 or 3 tries to determine the proper auto baud rate.

Once you have “Access” then you can do any function on this menu screen. “Upload” data which reads the current settings of the VSI-Pro into the PC. “Download” which sends the PC settings to the VSI-Pro. “Set Time” can set a new time or PC sync time to the VSI-Pro. “Load History” reads the History File of Exceptions from the VSI-Pro and saves as a text file on the PC.

Note: If the cable is disconnected, VSI-Pro Max reset or powered down, PC program closed, the PC and/or the VSI-Pro Max has a 30 second timeout and will reset itself for normal operation so wait this time and start again.

File Menu



Figure 186: File Menu

“Open” allows you to select a file which contains a previously saved version of all the VSI-Pro Max setups.

“Open History” allows you to view a previously saved History File downloaded from the VSI-Pro Max.

“Save” allows you to save a current set of VSI-Pro Max settings that are configured in the program or previously uploaded from the VSI-Pro Max.

About Menu



Figure 187: Help Menu

“Help” gives you all the help topics of the VSI-Pro Max Program Download Ver.14.00R17

“VSI-Pro Max Manual” is an online .pdf of the current VSI-Pro Max manual for easy reference to all the setups and programming features and applications of the VSI-Pro Max.

“About” shows you the version and release of this software.

Communication Cable Pin Out

The Com cable is RS-232 from the PC or laptop to the VSI-Pro Max as follows. This cable can be no more than 100' but if additional length is required you will need a set of the AVE RS-232 to RS-422 adapter which will extend the range to 3000'.

	PC / Laptop DB9F	VSI-Pro Max DB9M
Figure 188: PC Programming Cable Pin Out	2-----	3
Part # 021-158	3-----	2
	5-----	5



5. PROGRAMMING

Update Firmware

To update the firmware via the PC Programming software select the “Tool” pulldown menu and select “Load Firmware”. The dialog box to the right will prompt you to select the path and file name of the firmware you wish to update. Note that the PC Programming Software is specific to the version of software you are updating for actual programming the VSI-Pro Max for selections, upload, download, T/D etc. However you can use it to update any version of firmware to any VSI-Pro Max but then can only use the OSD of the VSI-Pro Max for programming.

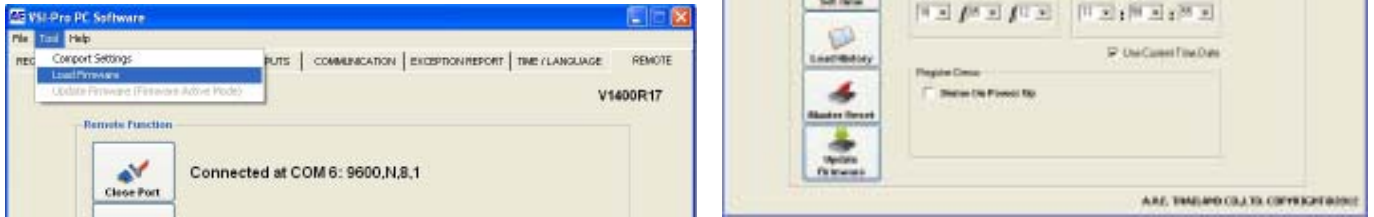


Figure 188A Update Firmware Submenu

Upon selecting a valid path and firmware file name another dialog warning box will appear to make sure you want to update the firmware. Proceeding past this point will permanently erase the firmware in the VSI-Pro Max and connect with the firmware update utility in the VSI-Pro Max and update the firmware. You will see the following progress boxes for connecting and updating below.

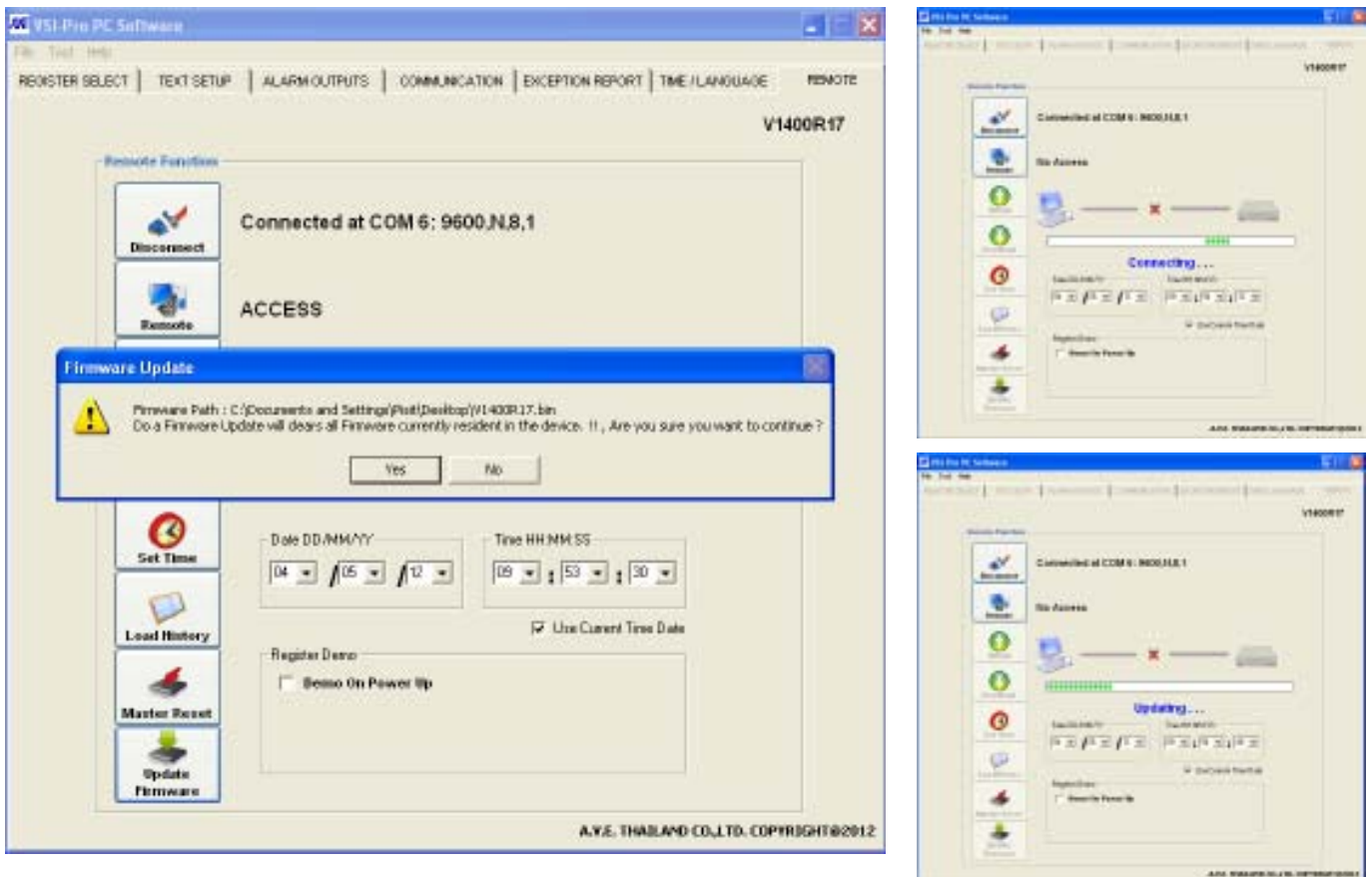


Figure 188B Update Firmware Connecting

After a couple minutes of updating you will either see the firmware update “Success” box or the “Fail” box. If you see the



Figure 188c Update Firmware Status

If the firmware update utility fails you will have to go the Tool menu and select Active Mode to recover from a update error. Make sure you check all cabling and power supplies for any interruption of the communication will cause the update of firmware to fail. Confirm the firmware path and Communication parameters and when verified continue by following the instructions in the dialog boxes below. You must power down the VSI-Pro Max and then power back up and press Reset before starting the update utility again.

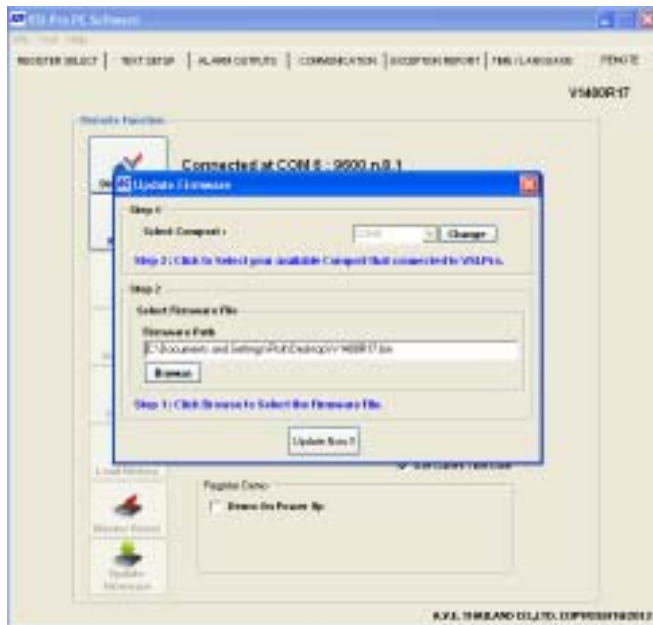
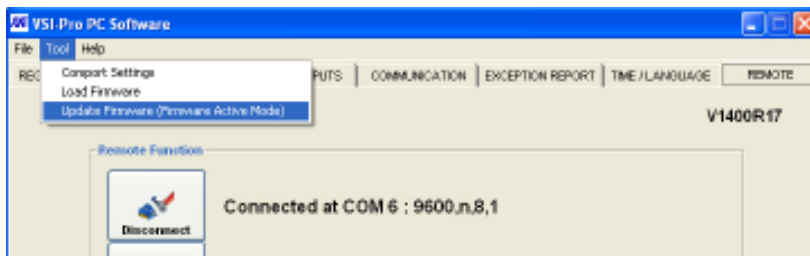


Figure 188D Update Firmware Active Mode

5. PROGRAMMING

VSI-Pro Max Firmware Download Menu

This document describes the VSI-Pro Max firmware update feature. This feature allows a user to download firmware update via the RS-232 port. The executable “bin” program is then loaded via any terminal program such as Hyper Terminal via a PC or compatible device.

To update the VSI-Pro Max, select “Download/Upload Setup” from the main menu and the following submenu will appear on screen. Select “UPDATE FIRMWARE” from the menu selection and follow the instructions below.



Figure 189: Update Firmware Sub-Menu

WARNING: Make sure you have the proper firmware bin file and follow the on screen instructions carefully for selection of the Update Firmware Utility will permanently erase the firmware in the unit and can not recover unless you download the firmware.

Update Firmware of VSI-Pro Max

You have to connect the VSI-Pro Max with a Serial Program Terminal such as HyperTerminal, IC etc. But advise to use HyperTerminal. First, you have to set the baud rate HyperTerminal to 115,200. **Note:** Make sure you do not have the “Scroll Lock” turned on in Hyperterminal or errors will occur.

See PC Windows below to verify proper HyperTerminal setup.

Click File ==> Properties

You will see the configuration frame and select the proper Comport.

Click “Configure” to set the Communications settings.

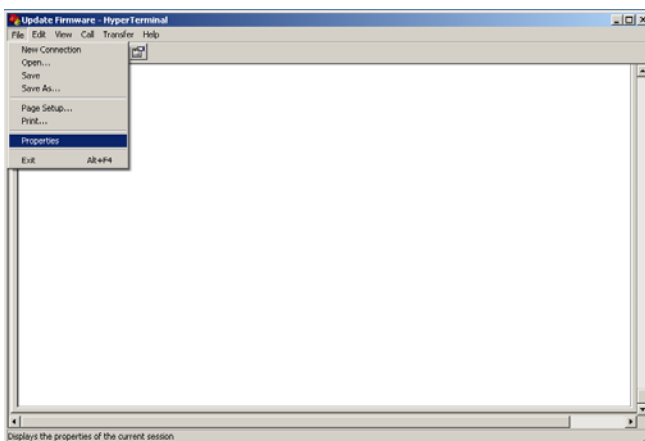


Figure 190: HyperTerminal Main Menu

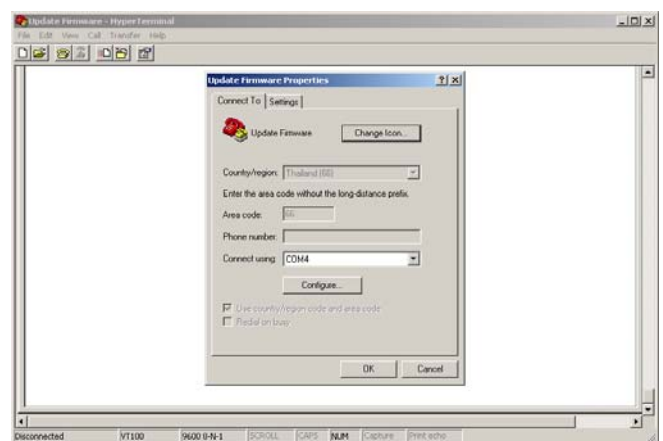


Figure 191: Connect To Menu

Verify that the correct ComPort is selected in the Connect Menu dialog box. If you are using a USB to RS-232 converter and not sure which Comport has been assigned you can go to Control Panel, System, Hardware, Device Manager, Ports and the USB adapter along with all other Comports available are you PC are listed so you can select the proper one.

Set Flow Control Handshaking to “NONE”

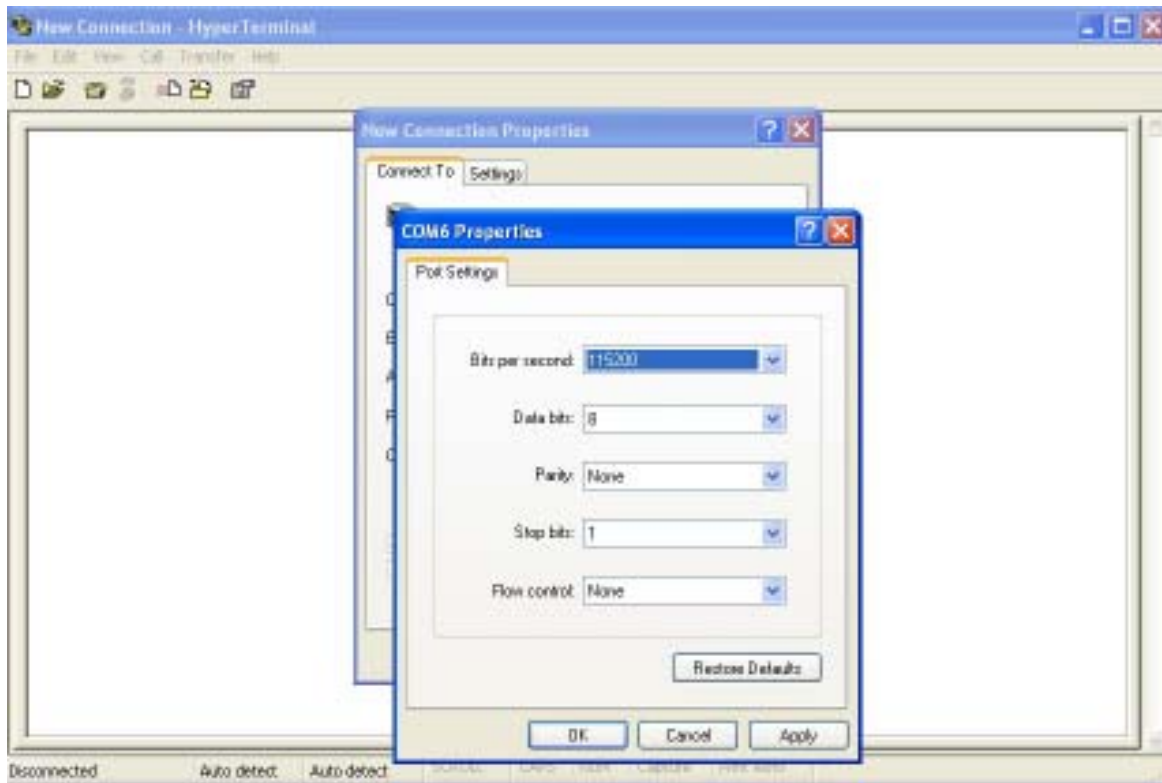


Figure 191A: Communications Settings Menu

Choose Bits per second to 115200 and press OK and then Connect and verify the telephone icon handset is up.

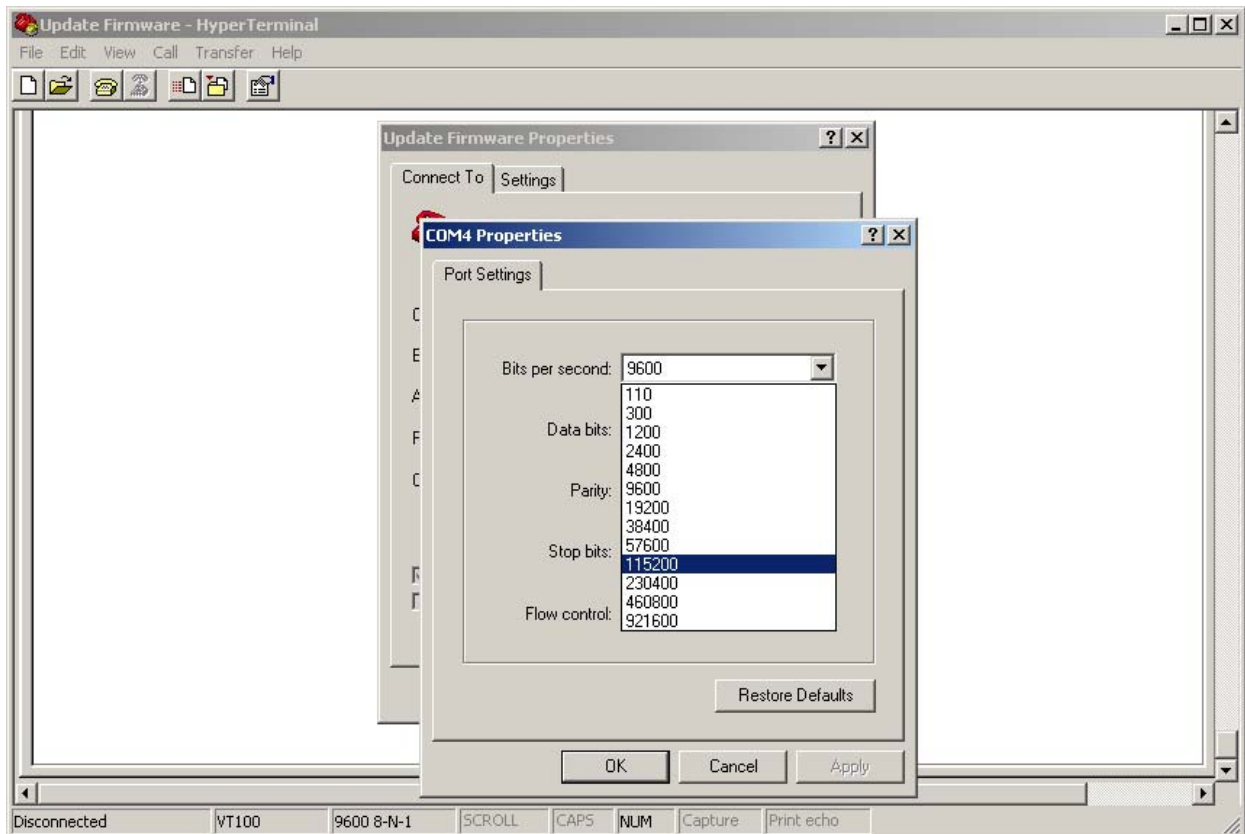


Figure 192: Baud Rate Settings Menu

5. PROGRAMMING

Second, you go to the menu of the VSI-Pro Max “Download/Upload Setup” then select ==> “Update Firmware” and then press Set. Now you will see message in Hyper Terminal.

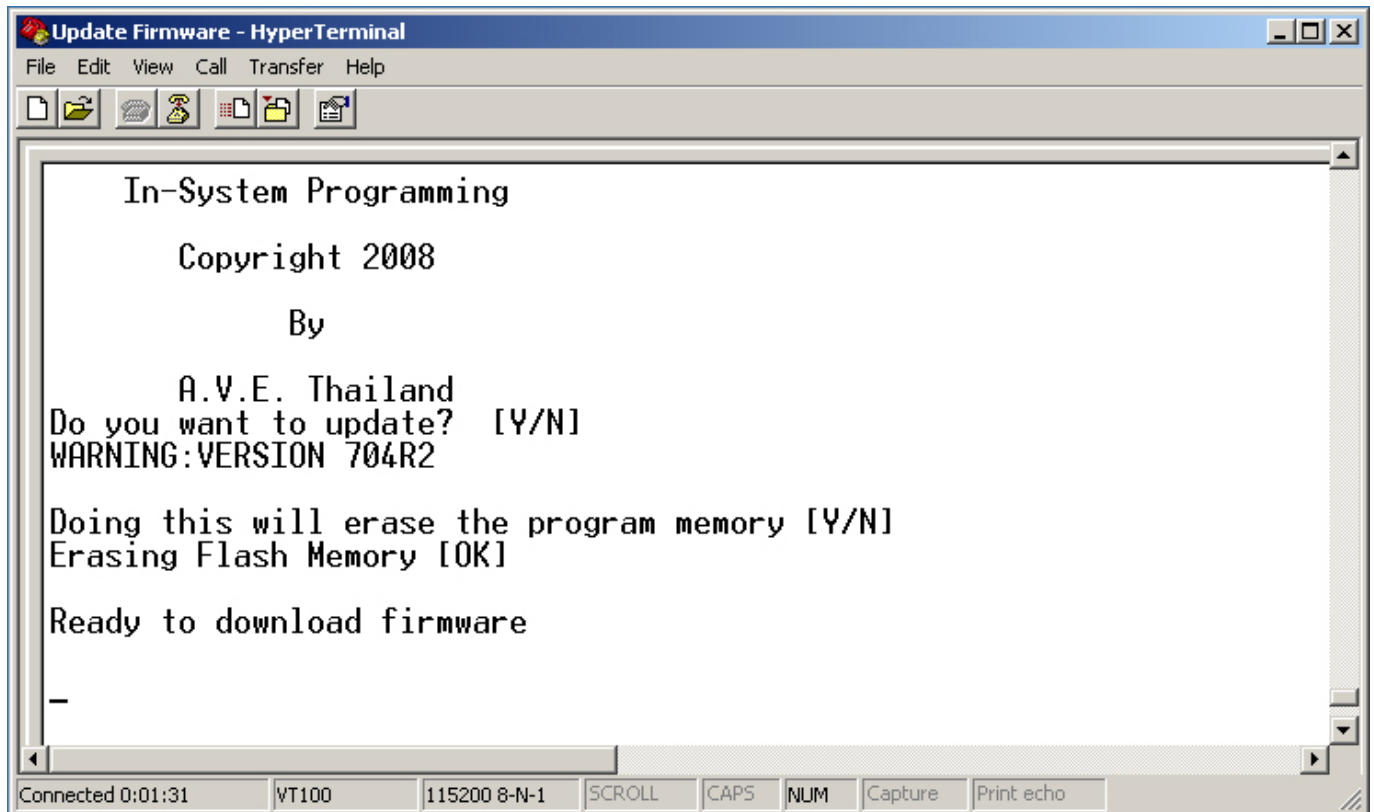


Figure 193: In-System Programming Display

“Do you want to update? [Y/N]”
Press “Y” to accept update.
You will see message warning again.
“Doing this will erase the program memory [Y/N]”
Press “Y” again to accept update.

NOTE: Pressing “Yes” again will permanently erase the entire program memory and the VSI-Pro Max will not function until firmware is loaded. Make sure you have the proper firmware file ready or the VSI-Pro Max will be rendered useless.

Finish erasing the program memory step.

Next, you have to send file to update firmware by click on “Transfer Menu” and select “Send Text File” and wait until finished programming. Progress dots will be displayed on the terminal program until finished and takes approximately 2.5 minutes.

NOTE: If for some reason you are disconnected from the VSI-Pro during downloading, power is lost to the VSI-Pro Max or PC or the firmware update does not finish for any reason you can repeat the procedure above again. The bootstrap loader never is erased and will always request for a valid firmware update until achieved.

To do this just power up the VSI-Pro Max or press reset while the terminal program is connected and you will see the prompt messages as above window.

NOTE: If you have errors or can not update firmware make sure the “Scroll Lock” is not on when you use Hyperterminal or if using Vista OS with Hyperterminal there is a Microsoft compatibility with this program and will be very slow about x20 times slower so you must wait until the firmware is finished no matter how long it takes and can not cancel or disconnect for will cause errors or even cause the firmware function to not update at all and disable the VSI-Pro Max.

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 position
UP AND DOWN	-- Save string input
UP AND SET	-- Erase character

Figure 194: HELP Sub-Menu

PROBLEM SOLVING GUIDE

APPENDIX A

REGISTER LED and NETWORK LED Continuously ON and VSI-Pro Max no function

No internal firmware. This is caused by improper firmware updating, lost connection, power down unit, pressing Reset during firmware update or accidentally enabling firmware update via the on screen menu. See Update Firmware via PC Programming or Communications program to upload the proper firmware.

NO DATA ON-SCREEN and/or REGISTER LED NOT FLASHING

1. Press the “Reset” button on the VSI-Pro Max 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.
6. Need RS-232 Optical Isolation so enable this feature in the VSI-Pro Max

REGISTER LED FLASHING but NO or Wrong DATA ON-SCREEN

1. Incorrect register selected in the REGISTER SELECT menu.
2. Baud Rate wrong, change to Auto Baud rate and do transaction
3. Interface Type set wrong
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 ECR / TPIF BOARDS

1. Upon register power up verify on-screen ECR power up test.
2. Check that the board is seated properly in the register.
3. Check jumper settings on the board if applicable.
4. For ECR boards 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 Max 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. Now power up the system, plug in the VSI-Pro and the N2RS. Turn on the register and do a transaction. The data should re-appear.
3. Check the cable between the VSI-Pro Max and the N2RS.

NO NETWORK COMMUNICATION OR LED FLASHING

1. Verify the RJ11, RJ12 or RJ45 is locked into the connector firmly and the locking tab no broken
2. Verify the RJ connector is crimped and wired properly, Pins 4 &5 the two in the very center.
3. Verify the unit is set to either the Master or Slave Mode
4. Verify all network modules are connected and the last in the loop terminated.

NO DATA TO THE DVR FROM MASTER

1. Verify the TX Protocol is set correctly and matches the DVR type and setting
2. Verify the DVR ComPort is enabled
3. Verify the cable from the VSI-Pro Max to the DVR is correct.

NOTE 

The VSI-Pro Max requires 0.5VP-P to 2V P-P to properly overlay data on the video image

NO VIDEO ON MONITOR

1. VSI-Pro Max 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 Max requires the input video signal to be 0.5VP-P to 2V P-P. 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-401 or VECA 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 Max 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.

NO COLOR IN THE PICTURE

1. Cable run too long and color signal too low, use AVE ARXD Active Receiver to recovery signal.
2. Cable run too long and color signal too low, use AVE VECA on the camera end to amplify the signal.

HUM BARS or NOISE IN THE VIDEO

1. Check video coax connectors for proper grounding
2. Check power ground for proper connection
3. Use the Opto-Isolation input of the Register Port and isolate the ground.(See Appendix S Page 98)
4. Possible large ground loop fault and must use Video Isolation Transformers

VL VIDEO ERROR LED NOT ON BUT VIDEO LOOKS BAD

VL Video Error measures the level of the sync signal not the overall video peak to peak level. Therefore if sync signal is correct and the video level is noisy or low or high the display might be too light or too dark. In this case the addition of a video amplifier or adjustment of the camera settings might help.

VL VIDEO ERROR LED ON BUT VIDEO LOOKS GOOD

The VL Video Error measures the level of the sync signal not the overall video peak to peak level. Therefore it is detecting the sync signal is low and amplifying the video signal to its maximum of 2 times. In this case the sync is sufficient for the monitor or DVR to lock to and show a good image. If the inserted text from the VSI-Pro Max is stable then the VSI-Pro Max is able to lock to this low signal. If the text jitters or is skewed then a video amplifier must be placed in line with the VSI-Pro Max to bring the signal up to at least .5V P-P so the AGC circuitry can adjust to the proper output level.

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. ECR / TPIF 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 Max

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 Max to all the factory default settings and erases all user programming.

MY CUSTOMER IS CHANGING REGISTERS. WILL THE VSI-Pro Max WORK WITH THE NEW REGISTER?

This is a tricky one. The VSI-Pro Max interfaces to over 400 different registers. The probability the VSI-Pro Max will work with a new system is relatively high. 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.

There are a myriad of PC-based systems out there which do not appear on the AVE Cash Register Compatibility List. Most of the PC-based cash registers that were not included in the AVE Cash Register Compatibility List are able to interface to the VSI-Pro. To find the compatibility of a cash register we need to determine following:

Does the cash register use a stand-alone receipt printer? If it does it can either be a serial or parallel printer. Serial printers use DB9 or DB25 type connectors. However parallel printers generally use Centronics type connectors, but on the cash register side use DB25. If it is a serial printer then you can use an AVE Triport DB9 or Triport DB25.

If upgrading to USB connections then the USB232 adapter might be required or if tapping a LAN then the TCPIP232 adapter might be required.

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 for sometimes opening the register does void the warranty.

The VSI-Pro Max 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 Max can be programmed to trigger a DVR or 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 Max 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 Max.

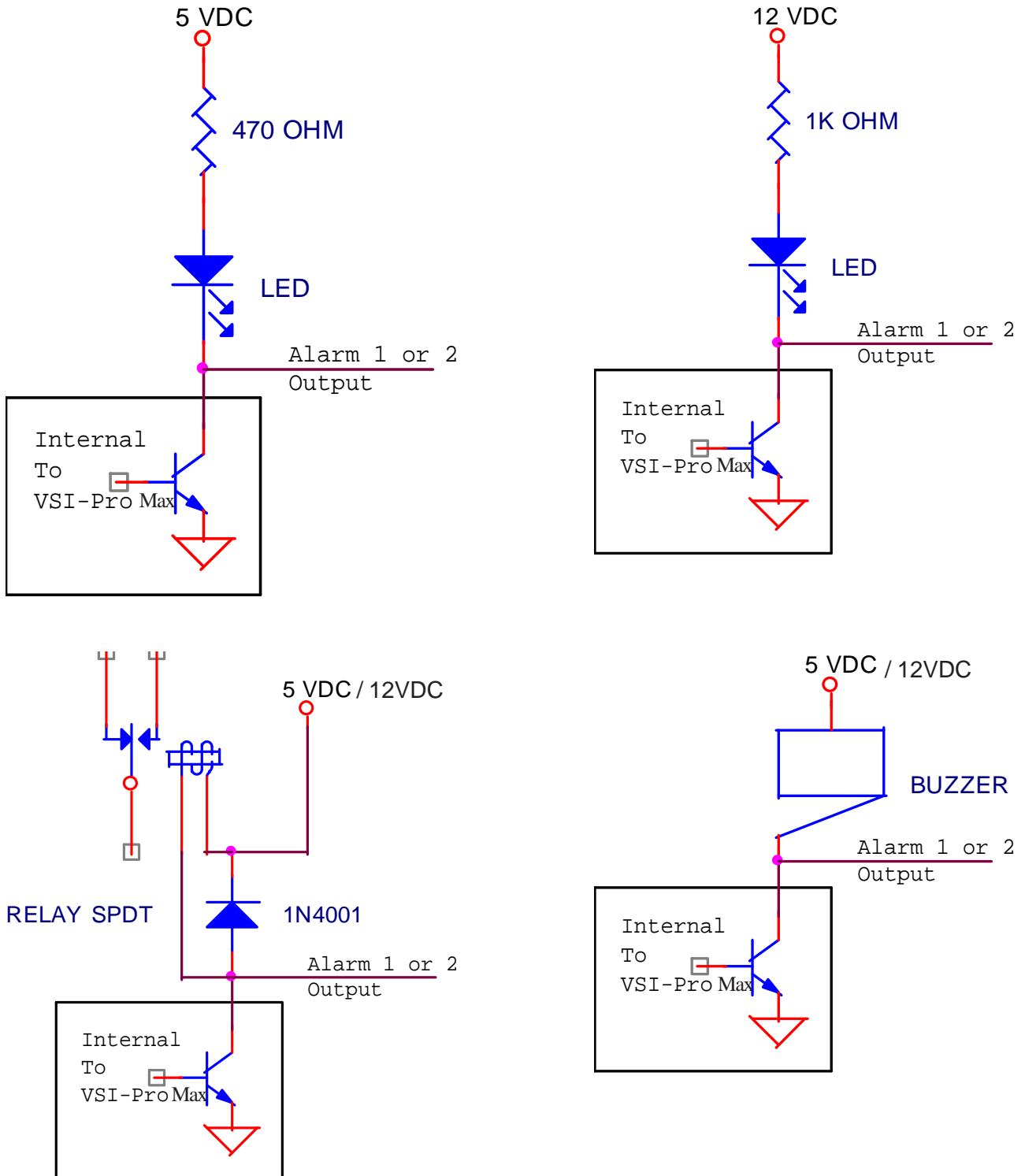


Figure 195: Hard Alarm Output

The AVE MVDR5000 DVR has the ability to input two VSI-Pro Max ASCII Text directly without any networking. The RS-232 DB9M connector on the rear of the DVR can accept the data from one VSI-Pro Max. The RS-485 RJ12 connector can also accept data from the VSI-Pro Max. The RS-232 port inserts the data on Camera 1 and the RS-485 port inserts on Camera 2.

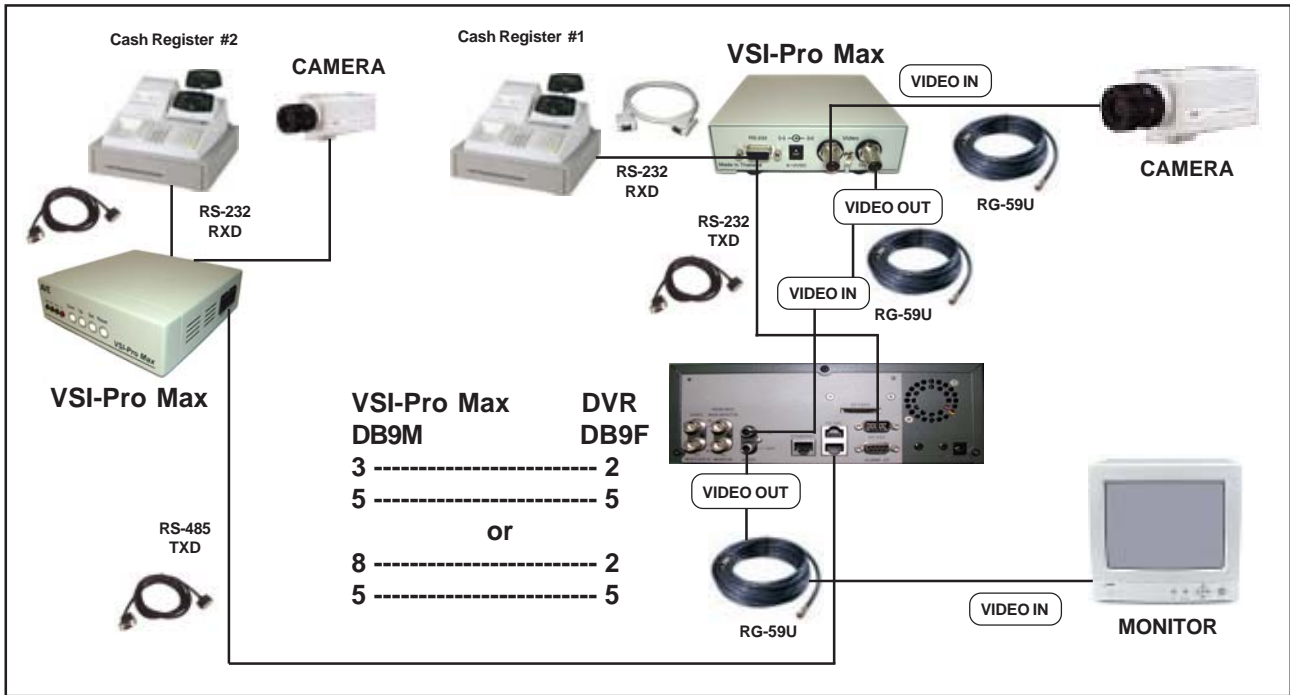


Figure 196 : VSI-Pro Max with DVR Text Input Connections

When using the VSI-Pro Max in the register “Tapping Mode” the RS-232 Pin 3 or Pin 8 can be used to output the text to the DVR. If you are using the VSI-Pro Max for “Slave Mode” networking then you can not use the RJ45 RS-485 or RS-232 Pin 8 as an output to the DVR and only RS-232 is available from Pin 3. If you are not using the VSI-Pro Max in the “Slave Mode” then you can use RS-232 Pin 8 or RJ45 RS-485 output to the DVR. If using the VSI-Pro Max in the “Master Mode” then only RS-232 Pin 3 can be used to connect to the DVR or use the AVE RS-232 to RS-485 converter to connect to the DVR RS-485 input.

When using the VSI-Pro Max in the register “Emulate Mode” only Pin 8 can be used for RS-232 output or the RJ45 Network connector can be used for RS-485 output to the DVR. The VSI-Pro Max can not be used in either the “Slave or Master Mode” while providing any ASCII text output to the DVR in either RS-232 or RS-485 format. Therefore the VSI-Pro Max when used in the “Emulate Mode” can only be used in conjunction with the “Slave Mode” OR Text output mode using RS-232 Pin 8 or RJ45 RS-485.

MVDR3000 / 5000 RJ12 - 6 Pin Modular	VSI-Pro Max RJ45 - 8 Pin Modular	VSI-Pro Max DB9F	RS-232 to RS-422/485 Adapter Screw Terminals
---	-------------------------------------	---------------------	---

1 --- N/C			
2 --- GND	----- N/C	----- N/C	----- GND ----- Terminal 5
3 --- B-	----- 5	----- 6	----- B- ----- Terminal 1
4 --- A+	----- 4	----- 4	----- A+ ----- Terminal 2
5 --- GND	----- N/C		
6 --- N/C			

Figure 197: VSI-Pro Max and DVR RS-485 Pin Outs

AGC

The VSI-Pro Max has an AGC (Automatic Gain Control) circuit on the video input. This means that even if the video signal is as low as 0.5 V P-P the VSI-Pro Max will automatically amplify to the proper level of 1 V P-P and insert the cash register data into the video flawlessly. Also if for some reason the video signal is as high as 2 V P-P the VSI-Pro Max will reduce the video signal to 1 V P-P.

With the increasing cost of RG-59U coaxial cable many installers are using the lower cost UTP (Unshielded Twisted Pair) cable and video adapters similar to the AVE TwistPlex line of passive and active adapters. When passive transmitters like the AVE UTP-1500 are used at the camera end and long runs of UTP or CAT5 wire is used, the video signal is reduced significantly by the time it reaches the VSI-Pro Max. Therefore the built in AGC circuitry of the VSI-Pro Max allows the use of low cost passive receivers like the AVE UTP-1500 and recovers the video signal.

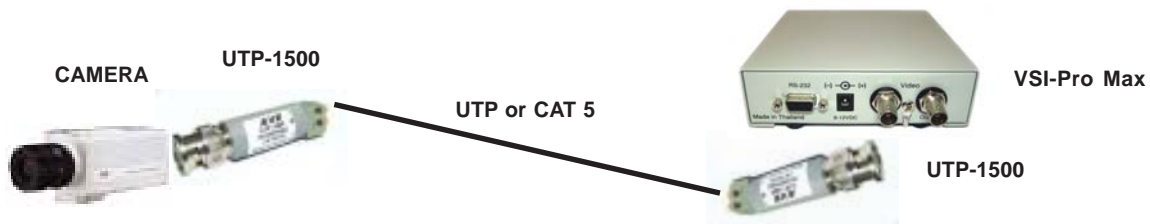


Figure 198: VSI-Pro Max UTP Connections

Network RJ45 Connector

The VSI-Pro Max has two RJ45 connectors on the side of the unit mainly for Network communications. However only two pins of this connector is used for the networking RS-485 signals Pins 4&5. All other pins are wired in parallel so can pass other LAN signals utilizing the same cable. When using CAT5 or CAT6 cable for 10Mbps or 100Mbps only Pins 1&2 and 3&6 are used for the Ethernet LAN connections so the VSI-Pro Max networking signals can use Pins 4&5 without any conflict with the LAN connections. Therefore IP cameras or Internet can ride on the same cable. Furthermore Pins 7&8 can be used to for power or the video signal utilizing the UTP-1500.

VSI-Pro Max RJ45 Pin Outs

RJ45 In	RJ45 Out	VSI-Pro Max
1 -----	1 -----	N/C
2 -----	2 -----	N/C
3 -----	3 -----	N/C
4 -----	4 -----	A+ VSI-Pro Max Network
5 -----	5 -----	B - VSI-Pro Max Network
6 -----	6 -----	N/C
7 -----	7 -----	N/C
8 -----	8 -----	N/C

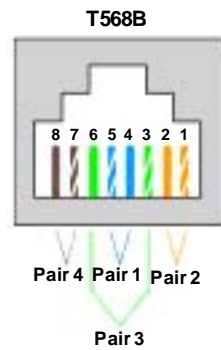


Table 4: VSI-Pro Max RJ45 Pin Outs

Figure 199: RJ45 Connector

CAT 5 Breakout

The AVE CAT5 Breakout makes all these connections simply plug and play. This device has an RJ45 connector for the CAT5/6 wire connection of all 4 pairs. It also has an additional RJ45 for the addition of Ethernet LAN, another RJ45 for the VSI-Pro Max Networking or Telco signals and a built in UTP-1500 for passive video transmission on the same cable.



Figure 200: VSI-Pro Max & CAT5 Breakout



The VSI-Pro Max can also interface with a parallel printer, or commonly called Centronics printer that connects to the PC or POS LPT ports. Using the AVE P2RS high speed parallel-to-serial converter with either the cash register or with the printer will convert this parallel data to RS-232 that can be read by the VSI-Pro Max.

The P2RS-Pro is a multi-functional POS / Cash Register Interface peripheral. Similar to the P2RS the unit can tap or emulate Centronics Parallel printer data from a normal or enhanced LPT port of any POS or PC. This data also is exported via the Data RS-232 port in ASCII format to the VSI-Pro or VSI-Pro Max line of text inserters or directly to a DVR for display or database storage.

The P2RS-Pro has the additional features that allow up to 16 units to be daisy chained on the AVE RS-485 two conductor RegCom/Vnet network to deliver all the POS data to one serial port of a DVR or multiple VSI-Pro devices.

An additional high speed UART has been added to the P2RS-Pro to allow connection to any POS or Cash Register port accomodating any baud rate, parity, and bit selections and higher speeds to accomodate the latest IRC and communications protocol. This UART also is fully compatible with the standard 16550 PC Comport.

The P2RS-Pro is fully programmable by any PC or laptop running any communications program like Hyperterminal for full configuration.

Advanced new software features for compatible devices, allow genlocking the DVR or Text inserter Time and Date to the POS or Cash Register to insure a seamless record of POS journal to CCTV recording. Alarming the recording device when POS data is recieved is also available.

NOTE: When connecting the P2RS or P2RS-Pro you must make sure that the CTS function is enable which by default is disabled so that RS-232 data can be exported from Pin 8. Therefore JP3 must be ON and JP4 must be OFF. See Appendix S Page 98, VSI-Pro Max Jumper Settings for additional information.



Figure 201: P2RS-Pro Parallel-to-Serial Converter Front Panel



Figure 202: P2RS or P2RS-Pro Parallel-to-Serial Converter Rear Panel

Centronics Parallel Printer Cables

Advise of your register printer output connector to meet AVE Printer Cables before ordering.

1. 021-076-SF DB-25 Emulating Cable. This cable will connect directly from the POS to the P2RS-Pro. This mode will not require any printer connected on register.
2. 021-073-SF DB-25 Printer Tap Cable. This cable taps the DB25 connector on the rear of the POS which connects to the printer.
3. 021-077-SF Centronics Printer Tap Cable. This cable taps the Centronics DB37 connector on the rear of the printer.

Figure 203: P2RS or P2RS-Pro Parallel-to-Serial Converter Connection Cables

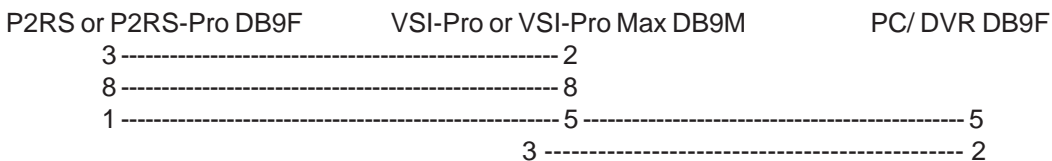


Figure 204: P2RS or P2RS-PRO Com Cable with Handshake (Baudrate 9600, 8, none, 1) 021-072-SF

USB Ports are also commonly connected to printers. The AVE USB232 adapter will emulate a printer and output RS-232 data to the VSI-Pro Max. A software driver is supplied with the unit which needs to be installed on the PC based POS prior to running the POS Software. The USB232 adapter is also used for the Networker/Vnetworker Software for fully supports Bidirectional RS-485 Two Wire protocol used to communicate with these devices. The USB232 can also be used for PC Programming and Firmware update of the VSI-Pro Max which is described below.

Using USB232 Adapter with VSI-Pro Max for Programming and Update Firmware

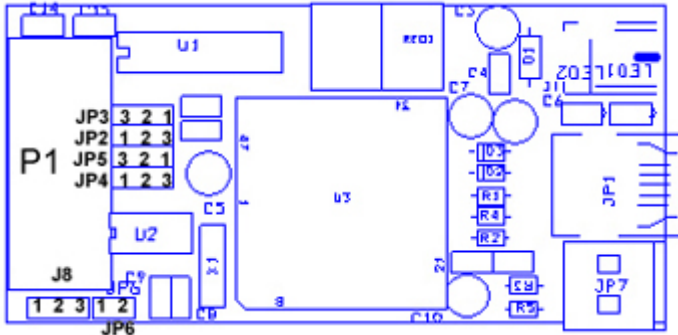


Figure 205: USB232 Adapter Silkscreen



Figure 206: USB232 Adapter

- P1 - RS232 Connector (DB9 Male)
- JP1 - USB type B Connector.
- JP6 - RS485 load resistor jumper (120 Ohm)
- JP7 - RS485 Connector.

Communication Settings

Jumper	RS232	RS485 A(+) B(-)
JP8	2-3	1-2

RS232 Configuration Setting

Jumper	Close 1-2 for Connect to DB9	Close 2-3 for Connect to DB9
JP2 (TXD)	Pin 3	Pin 2
JP3 (RXD)	Pin 2	Pin 3
JP4 (RTS)	Pin 7	Pin 8
JP5 (CTS)	Pin 8	Pin 7

Jumper Setting for RS232 Communication

Jumper	Close	Note
JP2 (TXD)	1-2	Connect to DB9 PIN 3
JP3 (RXD)	1-2	Connect to DB9 PIN 2
JP4 (RTS)	1-2	Connect to DB9 PIN 7
JP5 (CTS)	None	Not connected
JP8	2-3	Select RS232

Baud Rate : This device can scan terminal baudrate and set device Baud rate as same as terminal.

Compatible Baud rate (Bit per second) : 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200

Power : This device can use power from USB bus or power from DC adaptor 9-12 VDC

See users guide of USB232 Adapter for Software Installation and compatibility.

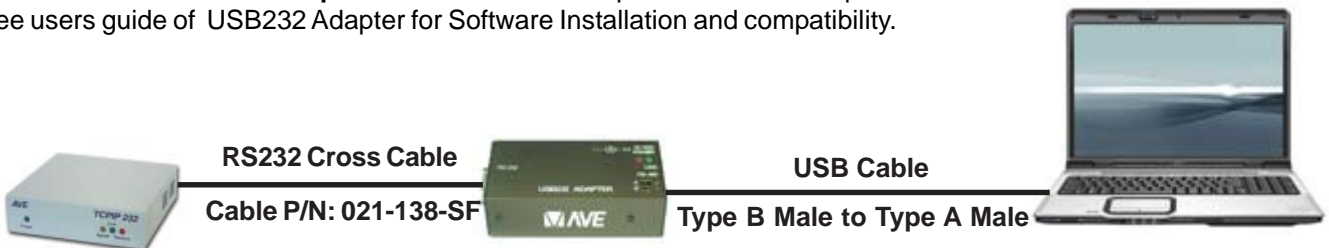


Figure 207: Connection Diagram between VSI-Pro and USB Port of Laptop via USB232 Adapter

VSIB for Thai, Korean or Chinese Languages

The VSIB is a bit-mapped display device that can display Thai, Korean, or Chinese characters. This device works in conjunction with the VSI-Pro. A special cable is connected between the VSI-Pro and the VSIB so all on-screen programming is done via the VSIB but the controls and menus are the same as the VSI-Pro. Therefore after connection, the programming will be identical to this manual. The VSIB must be ordered independently for any of the above supported languages and the language must be specified.



Figure 208: VSI-Pro Front Panel



Figure 210: VSIB Front Panel



Figure 209: VSIB Rear Panel



Figure 211: VSIB Connection Cables

Disconnect the standard VSI-Pro and plug its cable into the female connector of the Triport.



Use the BNC connectors of the VSIB for your Video Input & Output

Figure 212: Cable Connection to VSIB

The pin-out for the VSIB between the VSI-Pro and the VSIB is as follows:

VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)
TXD 3	—————	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)
RTS 7	—————	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)
GND 5	—————	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)	VSIB (DB-9M)

Figure 213: Pin-Out for VSIB to VSI-Pro

The ECR Interfaces are small PCBs that mount internally to the cash registers. These PCBs convert internal data from matrix and drum printers or thermal printers to RS-232 data. This RS-232 data is then connected directly to the VSI-Pro for display. It also can be connected directly to the Regcom to send up to 16 cash register's data on a central collection PC or DVR.

The ECR Interfaces have many different connection types depending on the make and model of cash register. Typically the RS-232 cable comes from the rear of the register to further connect to the VSI- Pro or DVR. The manufacturer and model number of the cash register must be supplied when ordering this ECR Interface.

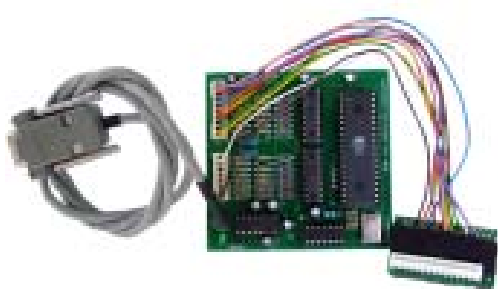


Figure 214: TK6000/7000 PCB and Cable



Figure 215: TK2300 and Adapter



Figure 216: TE2200 Thermal Printer

When using the AVE IF ECR Interface PCBs that are generally installed inside the cash register and an RS-232 connector mounted on the register or the RS-232 cable fitted through the rear of the till. These interfaces output direct converted and formatted RS-232 of the printer. This data can be connected directly to the AVE line of DVRs without additional conversion up to 100'. If additional lengths are needed then the AVE RS-232 to RS-422/485 converter can be used to extend this range to 3000'.

The Regcom interface can directly connect to these devices and report up to 16 tills on the Regcom network back to the PC Program or to the AVE line of DVRs converted using the Hydra.

ANSI DRIVER COMMANDS

APPENDIX I

SET CURSOR

<ESC>[Y;XH -> Y is vertical, X is horizontal, X and Y set by numeric character (0-9)
 Ex. Vertical line = 5, Parameter Y will be set to "35H"
 Horizontal line = 19, Parameter X will be set to "31H39H"
 Result Hex format = 1BH 5BH 35H 3BH 31H 39H 48H

CLEAR DISPLAY

<ESC>[2J

CLEAR CURRENT CURSOR TO END OF LINE

<ESC>[K

REVERSE TEXT

<ESC>[7M

CURSOR DOWN

<ESC>[PnB

FLASH TEXT

<ESC>[5M

CURSOR UP

<ESC>[PnA

NORMAL TEXT

<ESC>[0M

CURSOR LEFT

<ESC>[PnC

CURSOR RIGHT

<ESC>[PnD

** <ESC> = 1BH

** Pn = The distance moved is determined by this parameter. If the parameter value is not set then default value will be 1

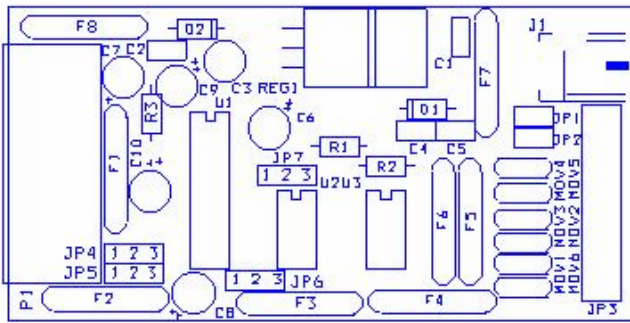
Table 5: ANSI Driver Commands



For some installations exceptional long runs are required, then RS-232 can not support for is normally limited to about 100 ft. In this case one would convert the RS-232 to RS-485 which can be extended up to about 3000 ft. Then on the other end another converter would convert back to RS-232. When using the VSI-Pro Max this additional converter is not required for already has built in RS-485 compatibility. However termination for the POS / Cash Register port is via JP2 internally to the VSI-Pro Max is required.

Jumper Setting

JP1	OPEN/CLOSE	RS485 / RS-422 Transmit Termination On/Off 120 Ohm
JP2	OPEN/CLOSE	RS-422 Receive Termination On/Off 120 Ohm
JP4	CLOSE 1-2	RS-232 TXD to DB9M Pin 3
JP4	CLOSE 2-3	RS-232 TXD to DB9M Pin 2
JP5	CLOSE 1-2	RS-232 RXD to DB9M Pin 2
JP5	CLOSE 2-3	RS-232 RXD to DB9M Pin 3
JP6	CLOSE 1-2	Enable RS-485
JP6	CLOSE 2-3	Enable RS-422
JP7	CLOSE 1-2	Enable RS-485
JP7	CLOSE 2-3	Enable RS-422



- 5 GND
- 4 RS422 Rx + A
- 3 RS422 Rx - B
- 2 RS422 Tx + A / RS485 + A
- 1 RS422 Tx - B / RS485 - B

Figure 217: RS-232 to RS-485/422 Converter PCB

Jumper Setting for RS422

JP1	CLOSE	RS-422 Transmit Termination On 120 Ohm
JP2	CLOSE	RS-422 Receive Termination On 120 Ohm
JP4	CLOSE 1-2	RS-232 TXD to DB9M Pin 3
JP5	CLOSE 1-2	RS-232 RXD to DB9M Pin 2
JP6	CLOSE 2-3	Enable RS485
JP7	CLOSE 2-3	Enable RS485

Jumper Setting for RS485 (Default)

JP1	CLOSE	RS-485 Termination On 120 Ohm
JP2	OPEN	RS-422 Receive Termination Off 120 Ohm
JP4	CLOSE 1-2	RS-232 TXD to DB9M Pin 3
JP5	CLOSE 1-2	RS-232 RXD to DB9M Pin 2
JP6	CLOSE 1-2	Enable RS-485
JP7	CLOSE 1-2	Enable RS-485

DB9M Pin Out

- 1 _____ N/C
- 2 _____ RXD/TXD
- 3 _____ RXD/TXD
- 4 _____ DTR True
- 5 _____ GND
- 6 _____ N/C
- 7 _____ RTS
- 8 _____ N/C
- 9 _____ 12VDC Input



Figure 218: RS-422/485 Connector of the RS-232 to RS-422/485 Converter.



Figure 219: RS-232 Connector of the RS-232 to RS-422/485 Converter.

Using UART Module (UART daughter board) with VSI-Pro Max (R17 or Higher)

UART module is daughter board for special communication of the VSI-Pro Max. When the UART Module has been installed into the J4 connector on the VSI-Pro Max Printed Circuit Board, the VSI-Pro Max can receive the special data format ; that is 7 data bits and no parity and fully emulate the 16550 UART commonly used in PCs.

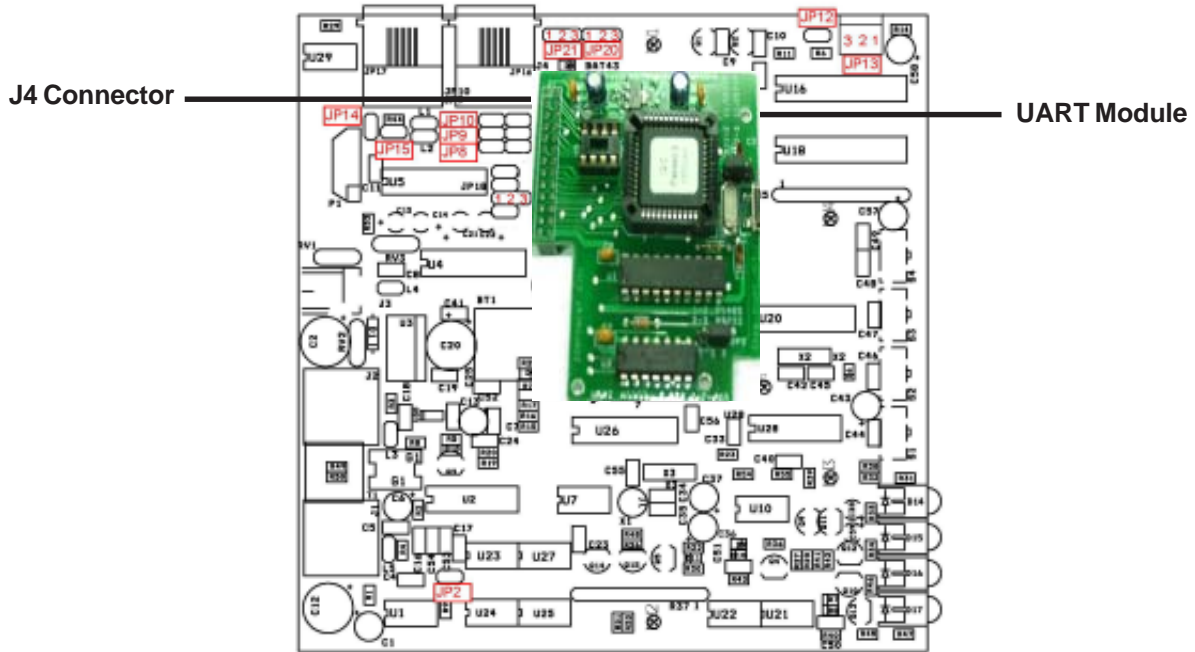


Figure 220: VSI-Pro Max Silkscreen

The VSI-Pro Max automatically recognizes the UART daughter board is installed and then uses this 16550 Compatible UART for the Register Port and all Selections. If VSI-Pro Max cannot communicate with the UART daughter board then this message will appear on the screen " UART DAUGHTER BOARD NOT INSTALLED".

The VSI-Pro Max combined with the UART daughter board can interface to a device which can transmit the specific format data; that is data bits is 7 bits and no parity. Access the Main Menu, select GENERIC or specific driver in the "REGISTER SELECT" menu then exit to the Main Menu. Press the "Up" or "Down" buttons to move the cursor to "Communication" menu then set a PARITY sub menu is NONE and set DATA BITS sub menu is 7. If VSI-Pro Max cannot communicate with the daughter board, This message will appear on the screen." UART DAUGHTER BOARD NOT INSTALLED".

NOTE: This PCB must be installed at the factory for VSI-Pro Max PCB F4L6 or earlier due to internal modification required. On this version the "Register Data LED" will be disabled. For VSI-Pro Max PCB F5 or higher the user can install this PCB by just plugging in the connector and the "Register Data LED" will not be disabled. Jumper Settings; JP1 OFF, JP3 OFF, JP4 OFF, JP5 ON, JP11 ON. RTS Alarm Input or Handshaking is not available when using the UART PCB. See Appendix S Page 98 for additional jumper information.

Register Connections and Pin Out

When this UART PCB is installed and Interface Type is set for RS-232 and Network Settings, Type “Generic”, the Register Port is reconfigured to RXD Pin 2 and TXD Pin 8 for both Tapping and Emulate Modes. Therefore in the Emulate mode make sure you purchase the proper cable when installing the UART PCB. TXD Pin 3 can then be configured for formatted ASCII data output. With the UART PCB the VSI-Pro Max can be configured as a Master and will output the VSI-ADD or other protocol out Pin 3 as RS-232 in addition to be able to fully support Emulation modes using RXD 2 and TXD 8 for Register Connections but will have to set Address to either 1-16 to enable the Register Port. If you set Address for N/A when in the Master mode then the Register Port can only be used for PC Programming Software or Firmware Updating using RXD 2 and TXD 3 which is the same as without the UART PCB installed and uses the same cable. It is always recommended to hold the “Up” and “Set” buttons in for 3 seconds to enter the PC Software Programming temporary mode before connecting to the VSI-Pro Max with the PC Programming Software.

NOTE: TXD 3 will never be allowed to have 7 bit no parity since not supported by the output. If you select 7 bit no parity for the UART PCB or Register Selection then TXD 3 will be 8 bit no parity at the same baud rate.

When Interface Type is set for RS-485 and UART PCB installed and Network Settings, Type “Generic”, the Register Port is reconfigured for RS-485 input using DB9 Pin 4(A+) and Pin6(B-). The DB9 Pin 3 will still output the formatted data with the respective TX Protocol via RS-232. In this mode the UART PCB has no function.

When Interface Type is set for RS-485 and UART PCB installed and Network Settings, Type “Master”, the Register Port is reconfigured for RS-485 input using DB9 Pin 4(A+) and Pin6(B-) only if Address is set for 1-16 enabling the Register Port. The DB9 Pin 3 will still output the formatted data with the respective TX Protocol via RS-232. In this mode the UART PCB has no function.

If the Address is set for N/A then the RS-485 port Pins 4/6 Outputs the selected TX Protocol. In this mode the VSI-Pro Max can not connect to any POS/Cash Register or PC Programming Software since will send the VSI-ADD or other TX Protocol out RS-485 Only.

If the UART board is not installed or you attempt to program baud rates that are not supported you will see the onscreen error messages.

RegCom IBM

The RegCom IBM is special version of the RegCom exclusively for IBM 46XX terminal with the SDL RS-485 type connections. Regcom IBM provided the 8 positions DIP switch on the back for various display interface types. See table as below to switch the DIP switch meet your display interface type. The RegCom IBM is not a slave device and can not work with the Hydra or VSI-Pro Max as a Master device. It is merely a device that uses the same hardware as the RegCom and converts the IBM High Speed RS-485 network to ASCII RS-232 for connection directly to a VSI-Pro Max or DVR.

AVE offers a full line of cables that use the IBM SDL connectors to plug directly to the IBM POS either 4 Pin Display ports or the 16 Pin Printer port. The RegCom IBM will read the POS data, format it and send out formatted ASCII at 4800 baud, 8 bits, No Parity and one Stop bit which is fixed.

1	2	3	4	5	6	7	8	Display Interface Type
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	LCD OP DISPLAY
ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	VFD II DISPLAY
OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	VFD II (DBCS)
ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	MODEL 2 PRINTER
OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	MODEL 3 PRINTER
ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	MODEL 4, 4R PRINTER
OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	MODEL 4A PRINTER
ON	ON	ON	OFF	OFF	OFF	OFF	OFF	IBM 4610 PRINTER

Table 6: RegCom IBM Interface Type Selections



TCPIP 232 ADAPTER

Interfacing the VSI-Pro Max to the POS / Cash Register TCP/IP network requires the TCPIP 232 Adapter along with the VSI-Pro Max. The IP address of the cash register is programmed into the TCPIP 232 Adapter via on-screen programming. The Cash Register LAN cable is plugged into the adapter and the supplied additional LAN cable is then plugged into the Cash Register. Therefore this DOES NOT require an additional network port for the cash register interface or any host programming of the router or switch. The TCPIP232 Adapter is AutoSense so will automatically configure to the router or POS / Cash Register LAN port.



Figure 221: Front of TCPIP 232 Adapter



Figure 222: Rear of TCPIP 232 Adapter

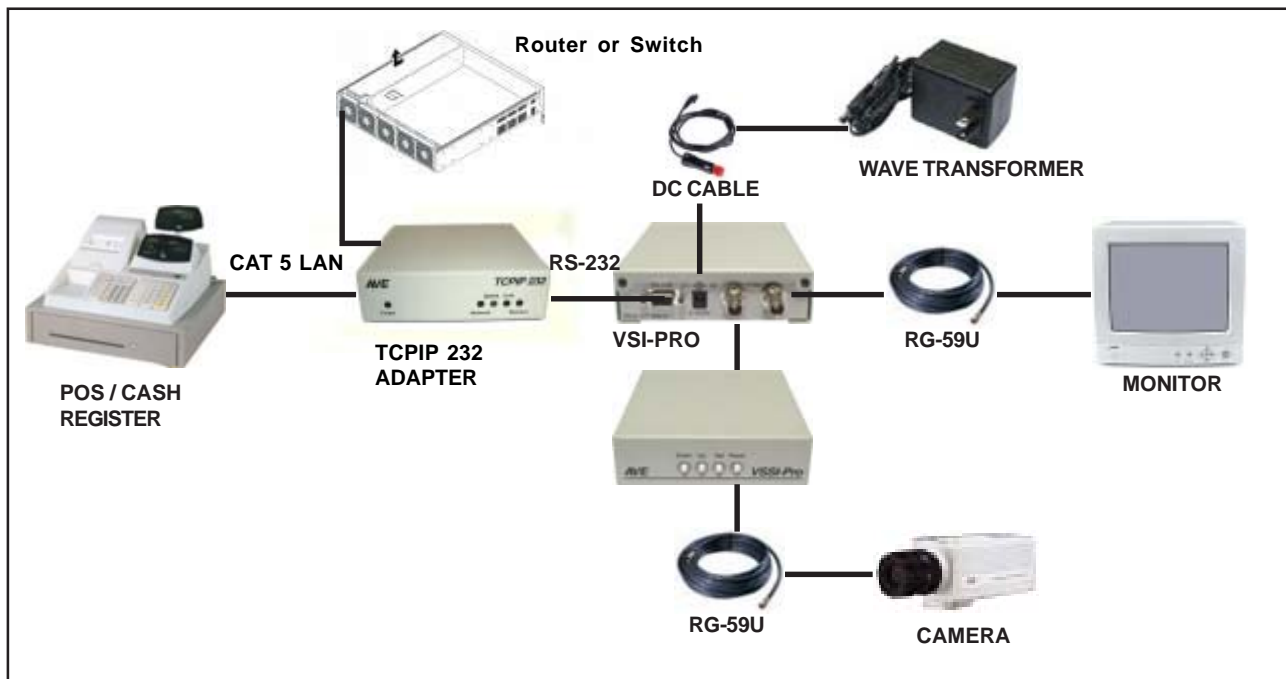


Figure 223: VSI-Pro Max Connections with TCPIP 232 Adapter

The pin-out between the TCPIP 232 Adapter and the VSI-Pro Max is as follows:

TCPIP (DB-9M)	VSI-Pro Max (DB-9M)	TCPIP232 RJ45	VSI-Pro Max RJ45	DB9(M)
RXD 2	RS-232	4 - A+ RS-485	4 - A+ RS-485	4 - A+ RS-485
TXD 3	RS-232	5 - B- RS-485	5 - B- RS-485	6 - B- RS-485
GND 5	3 TXD			
	2 RXD			
	5 GND			

Figure 224: Pin-Out for TCPIP 232 Adapter to VSI-Pro Max

POS Client Server

A special version of the TCPIP232 Adapter is called the POS Client Server. The POS Client version can read RS-232/RS485 data from a POS or VSI-Pro Max and send this data over the LAN network directly to compatible DVRs or to the POS Server. The POS Server can also output the data in RS-232/RS485 or in the AVE VSI-ADD protocol to be delivered to compatible DVRs.

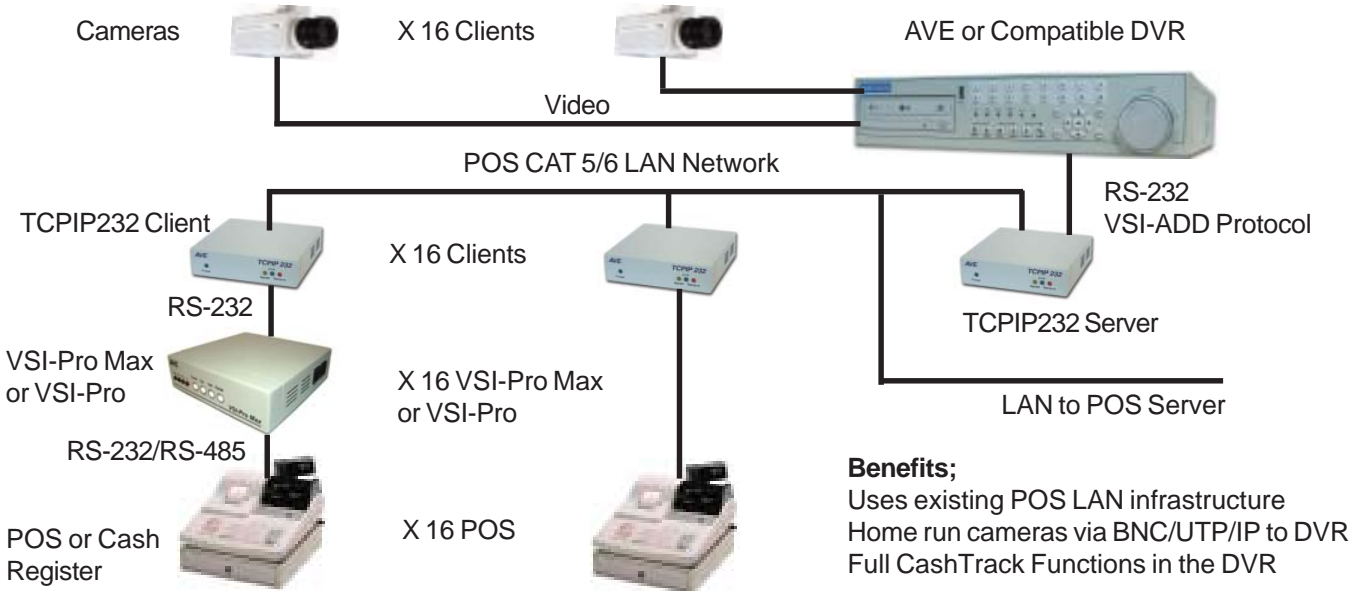


Figure 225: TCPIP232 POS Client Server Connection with AVE VSI-Pro Max and AVE or Compatible DVR

The diagrams on this page shows how you can use the LAN infrastructure from existing POS installations to send the POS data back to the DVR security system. Connect the TCPIP232 Client to the router or switch at the POS location and then use the TCPIP232 Server to convert the LAN data to the AVE VSI-ADD protocol that can be connected to the AVE DVR or compatible DVR or to a VSI-Pro Max at the DVR location or in the convenient Rack of 16.

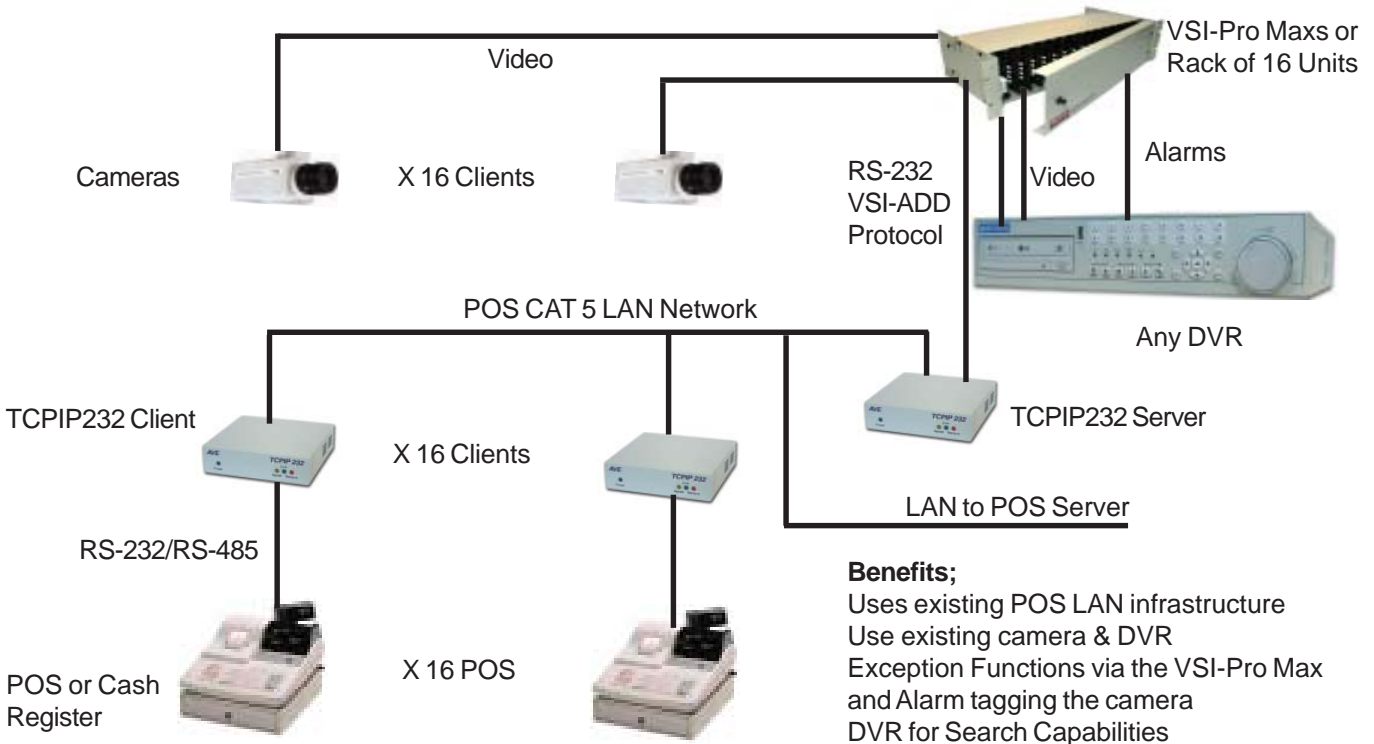


Figure 226:TCPIP232 POS Client Server Connection with AVE VSI-Pro Max and Any DVR

This diagram shows how you can use AVE RS-485 Network for up to 16 POS and use the TCPIP232 Client as a Master of the AVE RS-485 Network and read data from up to 16 VSI-Pro Max configured as Slaves. The TCPIP232 Client will then send all the POS data on the LAN network and be decoded by the TCPIP232 Server which then outputs all the POS data in the AVE VSI-ADD protocol to one RS-232 port on the AVE or Compatible DVR.

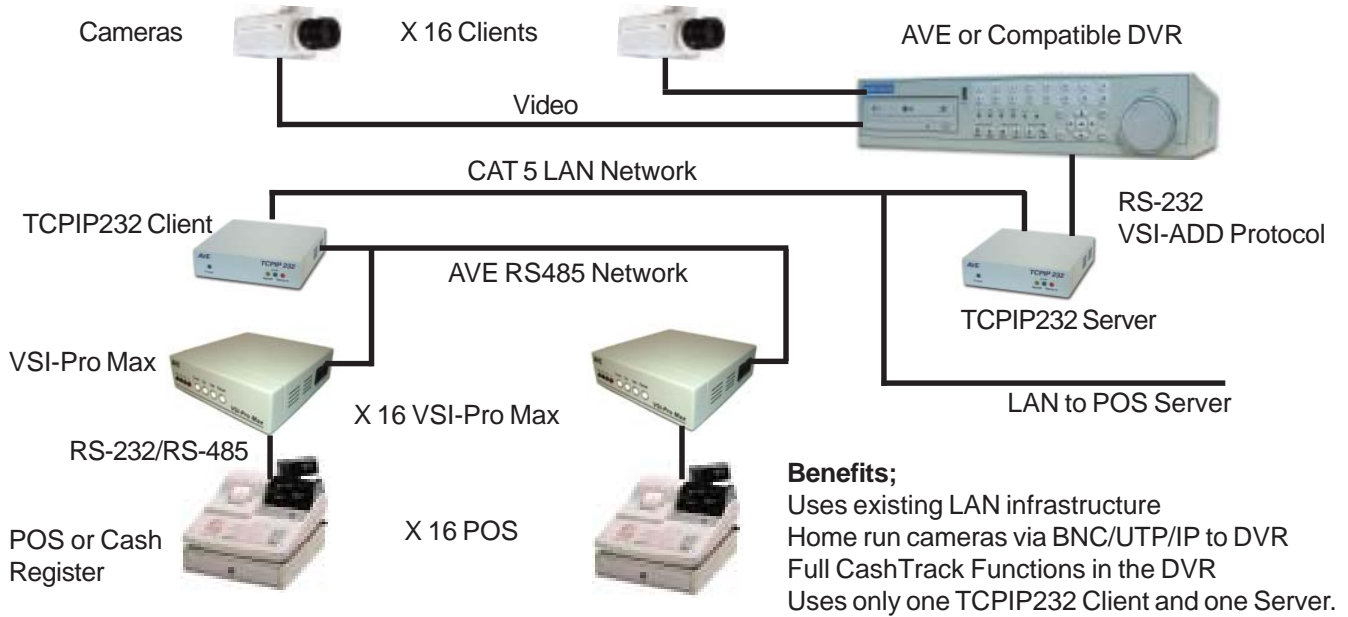


Figure 227: TCPIP232 POS Client Server Connection with VSI-Pro Max RS-485 Networking and AVE or Compatible DVR

This diagram shows how you can use AVE RS-485 Network for up to 16 POS and use the TCPIP232 Client as a Master of the AVE RS-485 Network and read data from up to 16 VSI-Pro Max configured as Slaves. The TCPIP232 Client will then send all the POS data on the LAN network directly to compatible DVRs by assigning each POS data with a unique LAN Port Number. Up to 16 TCPIP232 Clients can be connected on the LAN network either reading single VSI-Pro Max data or using the AVE RS-485 Network for multiple VSI-Pro Max.

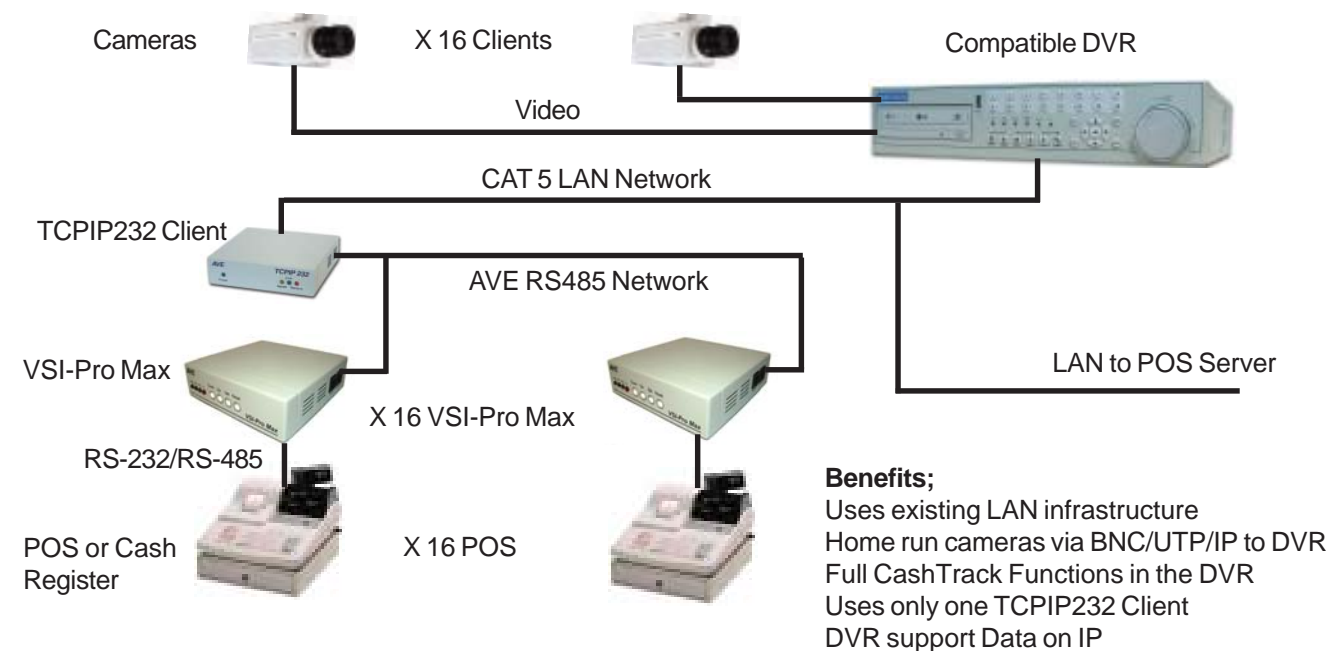


Figure 228: TCPIP232 Client Server Connection with AVE VSI-Pro Max and AVE or Compatible DVR

The VSI-Pro Max is an evolution in the philosophy of AVE to be fully backward compatible with older products along with advancing the features and performance of our new products. Not only can the VSI-Pro Max be fully compatible with all AVE Networking devices like the original Hydra / Regcom, the lower cost Networker and Vnetworker but it can translate between these protocols to integrate older installations and configurations seamlessly with the latest products. Both communication ports of the VSI-Pro Max are either RS-232 or RS-485 so the need of external converters is now eliminated.

Network Types

Traditionally the Hydra / Regcom system connected to VSIs, ECR Cards or adapter directly with a buffered product and allows the register data to be collected on one RS-485 network and delivered to a DVR or PC offering a moderately priced solution

The Hydra / Networker system connected only to VSIs using the VSI internal buffer and allows the register data to be collected on one RS-485 network and delivered to a DVR or PC offering a low cost solution.

The Hydra / Vnetworker system connected only to VSI-Pro using the VSI-Pro internal buffer and remote programming ability to program and control the VSI-Pro remotely by the DVR or PC along with register data collection and delivery via the RS-485 network.

VSI-Pro Max Network Capability

The VSI-Pro Max can interface to all of the above network types and then output this network data in the Master or Hydra mode in any format selectable by the user. Therefore existing systems can simply add a VSI-Pro Max to them and configure for whatever they choose. The following is some examples;

- 1) Systems using VSIs with Regcoms and a Hydra Master can simply add the VSI-Pro Max as a slave register interface expanding the existing system.
- 2) Systems using the VSIs with Regcoms can replace the Hydra Master with a VSI-Pro Max which will do the Hydra function and add another register to the system. Then with the VSI-Pro Max as the Master the protocol can be translated from Regcom to Vnet allowing connection to the AVE MVDR5000 and have remote programming capability from the DVR front panel for the VSI-Pro Max. The older VSIs and Regcoms on the network will remain to collect data but will not be able to be remotely programmed by the DVR.
- 3) If a user is using an older version of PC software for data collection for Regcoms or Vnetworkers, the same software can be used to collect data from another network type by the translation capability of the VSI-Pro Max. However the latest release of PC Programming software for the VSI-Pro Max includes all versions in one and supersedes all previous multiple versions.
- 4) Systems using Networkers can add Vnetworkers seamlessly to these networks or VSI-Pro Max. The programming capability of Vnetworkers and VSI-Pro Max are macro sets of the Networker so would seamlessly together. However you could use a VSI-Pro Max as the Hydra Master and translate the Vnetworker protocol to the Regcom protocol and deliver the data to a DVR that only supports the VSI-ADD protocol. Then if the DVR software is updated to support the Vnetworker protocol, simply select the output protocol of the VSI-Pro Max accordingly and take advantage of remote programming capability of the DVR.

Summary

The VSI-Pro Max is now the solution to almost every new application or configuration of any AVE POS/Cash Register Interface solution. Compatibility with existing cables for both the register and the network make the VSI-Pro Max Plug and Play as a standalone or an addition to any existing AVE interface installation.

MASTER COMMUNICATION PROTOCOL

OPERATION

The VSI-Pro Max or Hydra/Regcom/Vnetworker/Networker use a bi-directional, 2-wire RS-485 databus to communicate. A VSI-Pro Max can be a Slave or a Master. A Regcom, Vnetworker or Networker are used to convert the VSI-Pro, ECR Cards or Adapters to be slaves. The Hydra is a “Master” device and only one unit required for up to 16 Slaves. Only one master device can exist on a single network. When the VSI-Pro Max is used to connect to a register that uses the emulate mode then it can not be a Master. However the VSI-Pro Max can connect to a normal register in tap mode and still be configurable as a master or slave.

The master device controls the flow of data by polling each of the slaves in turn. When polled, a slave device will either respond with a “No Data” code to say it has no data to send, or it will begin sending data from its buffer.

The Hydra or VSI-Pro Max can support many manufactures of DVR for direct storage of the transaction data on the DVR as a file rather than just inserting in the video image for recording. It also supports the VSI-ADD (VSI Addressable) format which allows multiple VSI-Pros or VSI-Pro Max to be mounted in a convenient rack and connected to a Master for display of cash register data remotely. See Figure below.

HYDRA COMPATABILITY LIST

DVR

- | | | | |
|---------------------|---------------------|---------------------|-------------|
| ■ AVE MVDR3000 | ■ Norbain Columbus | ■ Dallmeier | ■ Samsung |
| ■ AVE MVDR5000 | ■ GE StoreSafe | ■ Redi Watch | ■ Hitron |
| ■ AVE DRX Excalibur | ■ Kalatel StoreSafe | ■ Kalatel StoreSafe | ■ Revo |
| ■ Pelco DX8100 | ■ NOVAR VP | ■ UDP Technology | ■ IDIS |
| ■ Sanyo DSR-HB8000 | ■ Heitel | ■ Dynacolor | ■ Geovision |
| ■ Appro | ■ Artnix | ■ Toshiba | ■ Telexper |
| ■ Pinetron | ■ Heitel | ■ Nuvico | |

The Network Port of a VSI-Pro Max, Regcom or Hydra use an RJ45 connector. Each unit has two RJ45s and the Networking signals Pins 4&5 are in parallel. However in the VSI-Pro Max all pins are wired in parallel but the Regcom or Hydra are not. The usage of an RJ45 connector allows the installer to use either RJ11, RJ12 or RJ45 connectors since all support the center two pins of the connector which are the only pins used.



Figure 229: DS-20-OF VSI-Pro Max PCB Rack using VSI-ADD protocol

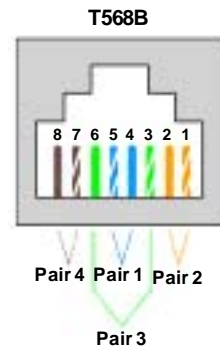


Figure 230: RJ45 Network Connector Pin Out

VSI-Pro Max Networking

The VSI-Pro Max as a slave allows the connection of multiple cash register terminals to a master unit for the purpose of transaction logging.

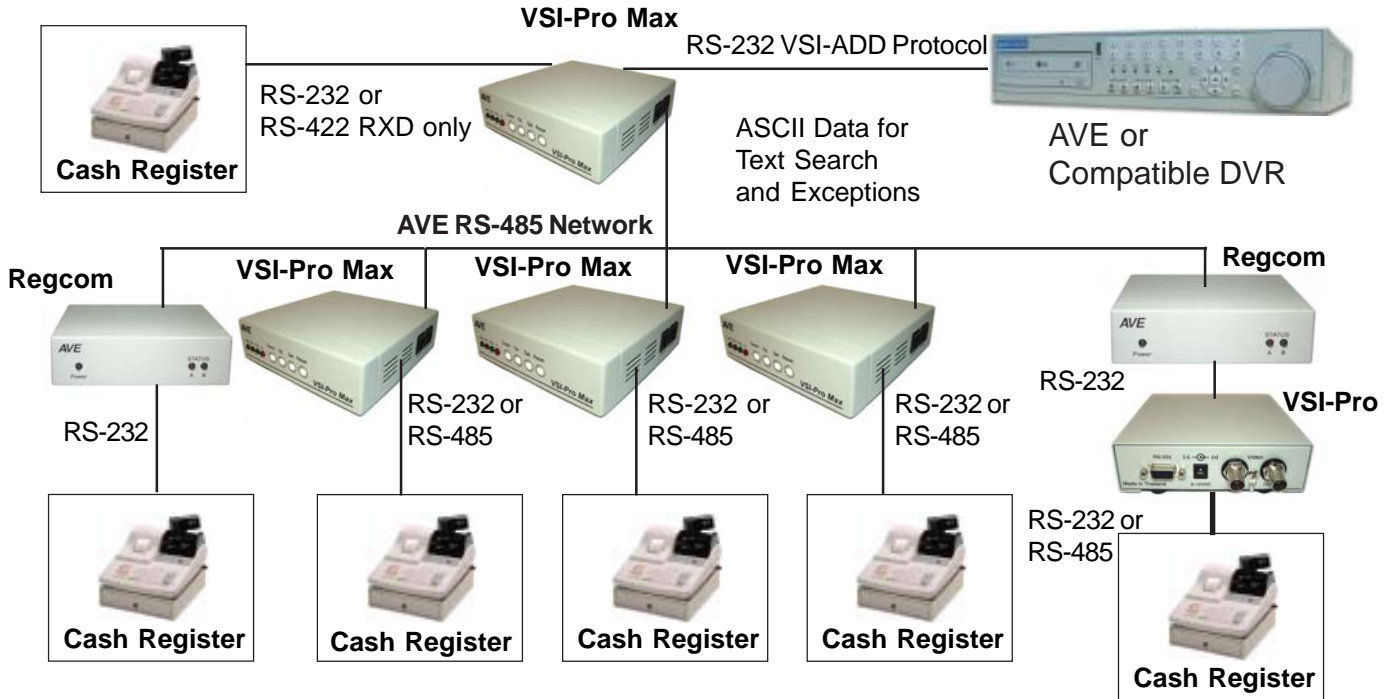


Figure 231: VSI-Pro Max Networking Connection Diagram

NETWORK TERMINATION

The device at end of the network must be “TERMINATED”. For the Hydra an 8 DIP Switch on the rear of the unit is used to set the termination. When the switch is set to “ON”, the device is terminated. When the switch is set to “OFF”, it will be un-terminated. For the VSI-Pro Max an internal jumper JP15 must be set to terminate.

DB-9 Pin-Out

Pin 1	Alarm 1
Pin 2	To Register
Pin 3	TXD (Master)
Pin 4	DTR
Pin 5	Ground
Pin 6	DSR
Pin 7	RTS
Pin 8	CTS
Pin 9	Alarm 2

DB-9 Pin-Out

Pin 1	
Pin 2	RX (RS-232)
Pin 3	TX (RS-232)
Pin 4	
Pin 5	Ground
Pin 6	
Pin 7	
Pin 8	
Pin 9	

RJ-45 Pin-Out

Pin 1	
Pin 2	
Pin 3	
Pin 4	RS-485 (+)
Pin 5	RS-485 (-)
Pin 6	
Pin 7	
Pin 8	

Table 8: RJ-45 Pin-Out

Table 7 : VSI-Pro Max Master Output Table 7: Hydra DB-9 Pin-Out



RS-485 NETWORK DATA CABLE WIRING

(120 Ohm impedance, twisted pair)

RJ-45	RJ-45
Pin 4	Pin 4
Pin 5	Pin 5

Table 10: RS-485 Network Data Cable Wiring

RS-232 Parameters

Baud rate	9600 or 57.6K
Data bits	8
Parity	None
Stop bits	1

Table 11: Hydra RS-232 Parameters

LED STATUS INDICATION

Status light A illuminates whenever data is sent from the Regcom to the master unit. This is the same as Network LED on the VSI-Pro Max.

Status light B illuminates to indicate the Regcom is correctly connectly connected via the RS-485 network to the master unit. This is the same as the Register LED on the VSI-Pro Max

Network Parameters

Standard	RS-485
Max line length	4000 ft
Cable type	120 Ohm twisted pair

Table 12: Network Parameters



Figure 232: VSI-Pro Max Front Panel



Figure 233: Hydra / Regcom Front Panel



Figure 234: Hydra / Regcom Rear Panel

Dipswitch Settings

The following are the rear dipswitch settings for both the Regcom and Hydra. SW1-4 select the address for the Regcom and the communication parameters for the Hydra. SW6 has no function. SW7 has no function for the Hydra but selects Baud rate for the Regcom On- 57.6K, Off 9600 baud. SW8 terminates either device with 120 ohms and should be on for the Hydra and on for the last Regcom in the network.

Regcom Address	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	(Note) Term On/Off	Input	Hydra Functions Output
---	Off	Off	Off	Off	Off	Off	----	----		Regcom	VSI-ADD 9600 baud
1	On	Off	Off	Off	Off	Off	----	----		Vnetworker	Vnetworker
2	Off	On	Off	Off	Off	Off	----	----		Vnetworker	MVDR3000/5000
3	On	On	Off	Off	Off	Off	----	----		Regcom	Dallmeier Addr 1-8
4	Off	Off	On	Off	Off	Off	----	----		Vnetworker	Dallmeier Addr 1-8
5	On	Off	On	Off	Off	Off	----	----		Regcom	VSI-ADD 57.6K baud
6	Off	On	On	Off	Off	Off	----	----		TBD	
7	On	On	On	Off	Off	Off	----	----		TBD	
8	Off	Off	Off	On	Off	Off	----	----		TBD	
9	On	Off	Off	On	Off	Off	----	----		TBD	
10	Off	On	Off	On	Off	Off	----	----		TBD	
11	On	On	Off	On	Off	Off	----	----		TBD	
12	Off	Off	On	On	Off	Off	----	----		TBD	
13	On	Off	On	On	Off	Off	----	----		TBD	
14	Off	On	On	On	Off	Off	----	----		TBD	
15	On	On	On	On	Off	Off	----	----		TBD	
16	Off	Off	Off	Off	On	Off	----	----		TBD	

Table 13: Hydra / Regcom Dipswitch Settings



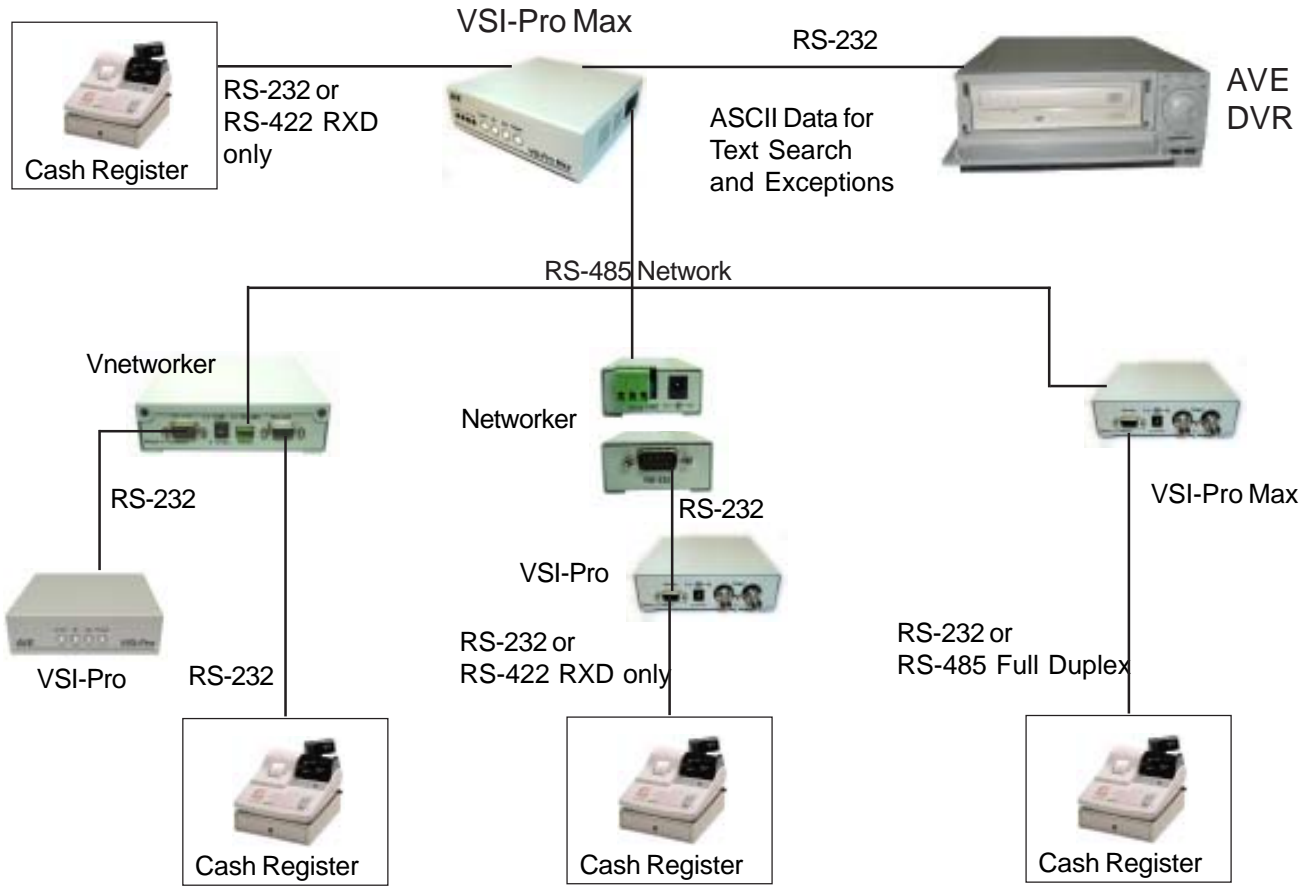


Figure 1235: VSI-Pro Max Vnetworker Connection

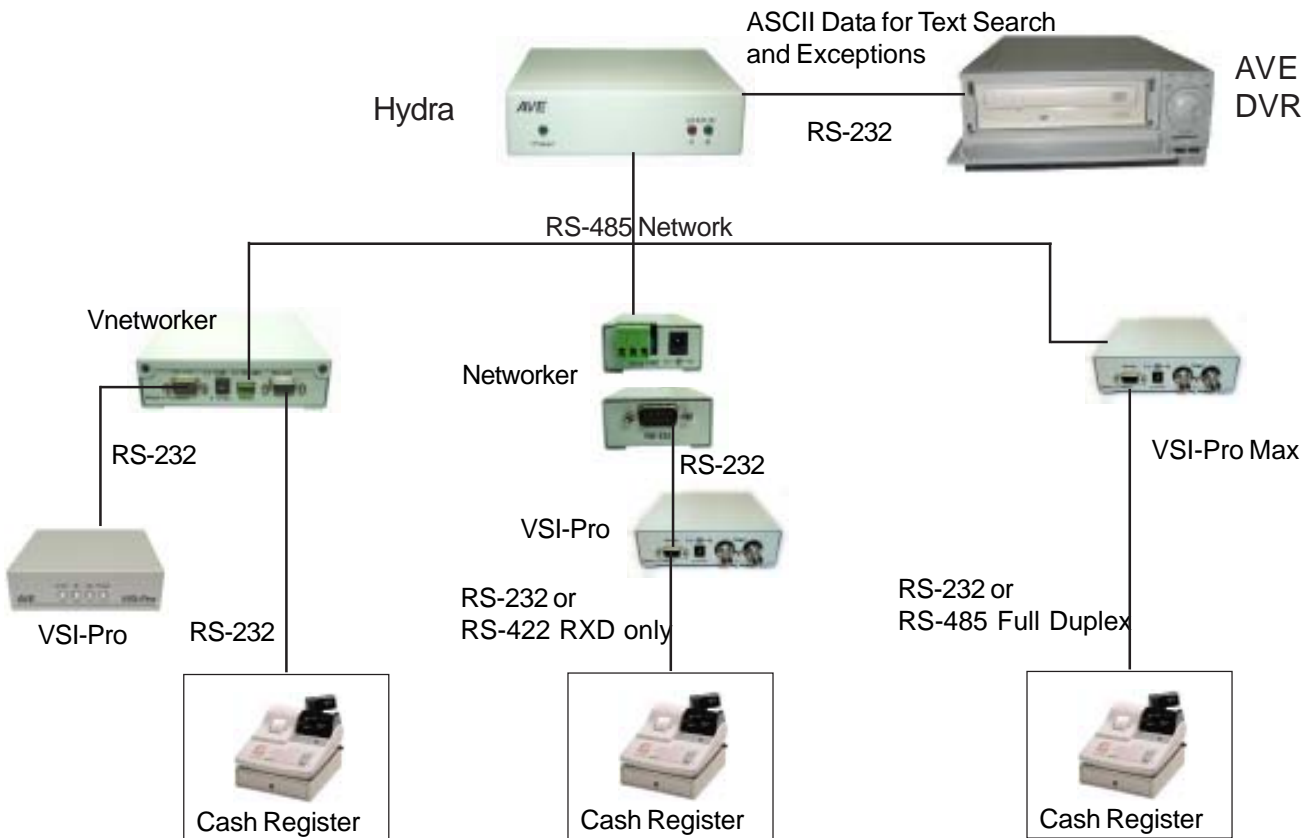


Figure 236 : Hydra Vnetworker Connection

AVE POS Networking Protocol (VSI-ADD Protocol)

The AVE VSI-Pro Max, IF ECR Interface Cards and other POS Adapters export the POS data in formatted ASCII text via RS-232 directly. This data can be read by any DVR Com Port for recording as a separate data file appended to the Audio/Video file.

For multiple POS on one DVR you could use multiple RS-232 ports but this is cumbersome and the length of runs is limited.

The VSI-Pro Max in the Slave mode or the "Regcom" device connects directly to any of the AVE POS interfaces listed above or any RS-232 source. This buffered device takes the POS data and converts it to an RS-485 network.

The "Networker" connects only to the older VSI-Pro and supports the same RS-485 network. This network is terminated by a "Hydra" or a VSI-Pro Max in the Master mode which decodes the RS-485 network and sends all the data to one RS-232 Com Port on the DVR.

The data from the Master device to the DVR Com Port has the following data format:

<ESC> ADDR {TEXT TO BE DISPLAYED}

Where ESC is 1BH; ADDR is one byte binary code. The valid address is 1 through 16.

The DVR will then read this protocol and decode the proper POS interface data to be associated with the respective camera.

Network Protocol

For advanced interfacing a DVR may directly control the RS-485 Regcom Network by implementing the full poll/select protocol. For more information on this contact the AVE factory.

The latest in the development of RS-485 networking is called the Vnetworker Protocol. This is an enhanced poll/select protocol that allows the remote master to program and control the remote VSI-Pro Max or VSI-Pro with Vnetworker device. Not only will this allow transaction logging but allow reading Alarm inputs, setting/reading/locking to T/D, Full programming and register configuration remotely along with remote firmware updating. Implementation of this protocol brings seamless POS /Cash Register /ATM interfacing to the AVE or 3rd party DVR suppliers. For more information on this contact the AVE factory.

PC Protocol Simulator

The PC Protocol Simulator is a PC software simulation program that simulates the VSI-ADD or Vnet Protocol to a VSI-Pro Max configured as a master with up to 16 slaves. This software can receive Transaction Data, Time Sync, Alarm Sync, Alarm Notification and Program all the units connected to the VSI-Pro Max Master. This is a valuable tool to verify communications if you are implementing the VSI-ADD or Vnet protocol in a third party DVR or NVR. Contact the AVE factory for additional information



Time Sync and Alarm Sync function within VSI-Pro Max and AVE RS-485 Network and MVDR3000/5000

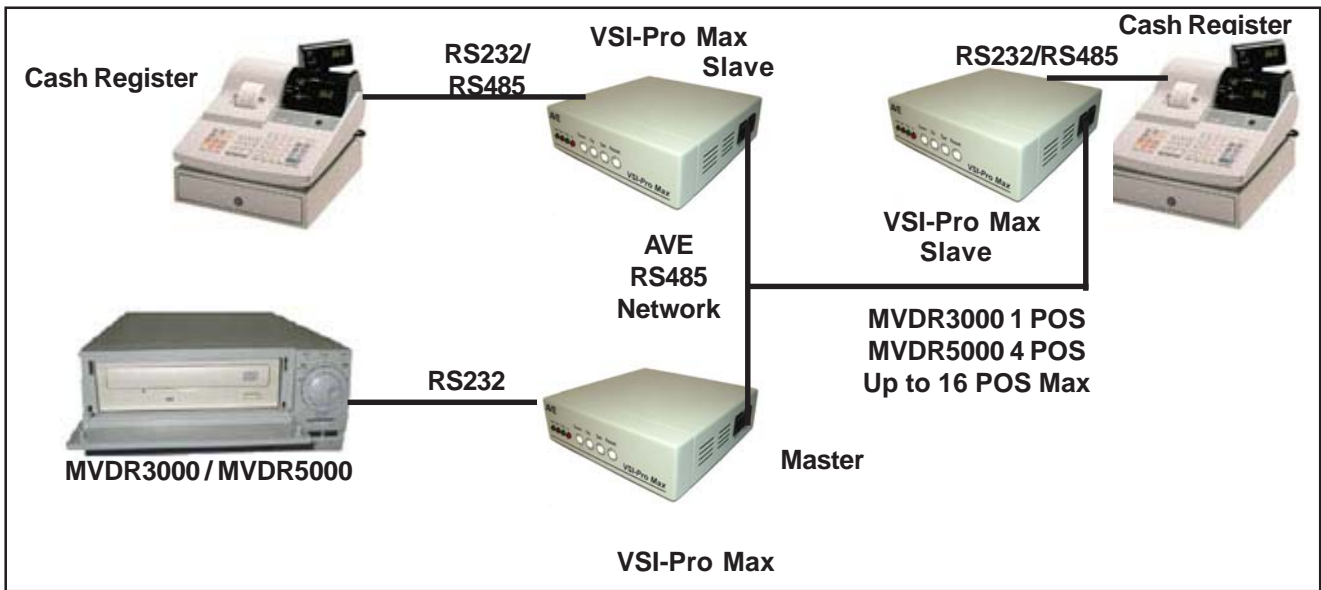


Figure 237: Connection Diagram of VSI-Pro Max AVE RS-485 Network with MVDR3000/5000

RS-485 Network of VSI-Pro Max with Time Sync Function for MVDR3000/5000

If the transaction which include time and date is sent out from the Cash Register and received by the VSI-Pro Max via the Vnet protocol has occurred and The Time Sync function is enabled. The time and date of a DVR will synchronize with the time and date of a VSI-Pro Max via the RS485 network.

To enable the Time Sync function. Access the Main Menu, press the “Up” or “Down” button to move the cursor to “SCREEN SETUP” and press “Set” then move the cursor to “CLOCK” and press “Set” then move the cursor to “T/D LOCKING” and press “Set”. and then move the cursor to “TIME SYNC” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to change the value is “ON” and press “Set” then back to the Main Menu. Press the “Up” or “Down” button to move the cursor to “EXCEPTION REPORT” and press “Set” then move the cursor to “EXCEPTION HISTORY” and press “Set” and then move the cursor to “DVR SELECTION” and press “Set”. Press the “Up” or “Down” button to move the cursor to “MVDR3000/5000” and press “Set”. The MVDR3000/5000 sub-menu will appear:

Figure 238: MVDR3000/MVDR5000 Sub-Menu

<input checked="" type="radio"/>	DEST ID	1
<input type="radio"/>	SRC ID	32
<input type="radio"/>	EXIT	

Press the “Up” or “Down” button to move the cursor to “DEST ID” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to change the value and press “Set” when the value of the “DEST ID” as identical with the “COMM ID” or “UNIT ID” of the DVR, then move the cursor to “SRC ID” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to change the value of “SRC ID” as 32 and press “Set” then back to the Main Menu.

RS-485 Network of VSI-Pro Max with Alarm Sync Function for MVDR3000/5000

If the alarm of VSI-Pro Max within the VSI-Pro Max AVE RS485 network is triggered and the Alarm Sync function is enabled. The VSI-Pro Max will send command to DVR to trigger an alarm or start recording immediately.

To enable the Alarm Sync function. Access the Main Menu, press the “Up” or “Down” button to move the cursor to “ALARM OUTPUTS” and press “Set” then move the cursor to “ALARM SYNC” and press “Set”. the cursor will start flashing. Press the “Up” or “Down” button to change the value is “ON” and press “Set” then back to Main Menu. Press the “Up” or “Down” button to move the cursor to “EXCEPTION REPORT” and press “Set” then move the cursor to “EXCEPTION HISTORY” and press “Set” and then move the cursor to “DVR SELECTION” and press “Set”. Press the “Up” or “Down” button to move the cursor to “MVDR3000/5000” and press “Set”. The MVDR3000/5000 sub-menu will appear:



Figure 239: MVDR3000/MVDR5000 Sub-Menu

⊙ DEST ID	1
○ SRC ID	32
○ EXIT	

Press the “Up” or “Down” button to move the cursor to “DEST ID” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to change the value and press “Set” when the value of the “DEST ID” as identical with the “COMM ID” or “UNIT ID” of the DVR, then move the cursor to “SRC ID” and press “Set”. The cursor will start flashing. Press the “Up” or “Down” button to change the value of “SRC ID” as 32 and press “Set” then back to the Main Menu.

Time Sync and Alarm Sync Feature within the VSI-Pro Max and MVDR3000/MVDR5000 or compatible DVRs

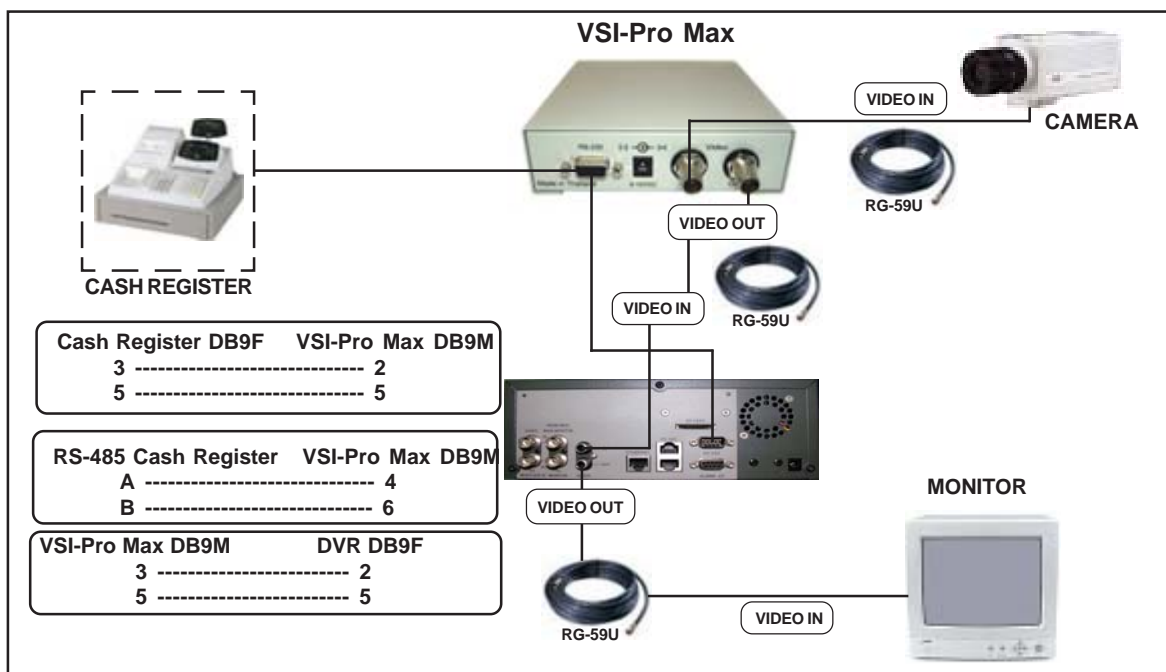


Figure 240: Connection Diagram of VSI-Pro Max and Cash Register with MVDR3000/5000

VSI-Pro Max with Time Sync Function for MVDR3000/5000

If the transaction which include time and date is sent out from the Cash Register and received by the VSI-Pro Max has occurred and The Time Sync function is enabled. The time and date of a DVR will synchronize with the time and date of a VSI-Pro Max.

To enable the Time Sync function. Access to the “SCREEN SETUP” menu, select the “CLOCK” sub-menu then select the “T/D LOCKING” sub-menu and then turns the Time Sync as “ON” then back to the Main Menu. Access to the “EXCEPTION REPORT” menu ,select the “EXCEPTION HISTORY” sub-menu then select the “DVR SELECTION” sub-menu and then select the “MVDR3000/5000” sub-menu. To enable MVDR3000/5000 support the TIME SYNC function, set the “DEST ID” as identical with the “COMM ID” or “UNIT ID” of the DVR and set the “SRC ID” as 32.

VSI-Pro Max with Alarm Sync Function for MVDR3000/5000

If an any alarm of the VSI-Pro Max is triggered and the Alarm Sync function is enabled. The VSI-Pro Max will send command to DVR to trigger an alarm condition on the DVR.

To enable the Alarm Sync function. Access the Main Menu, press the “Up” or “Down” button to move the cursor to “ALARM OUTPUTS” and press “Set” then move the cursor to “ALARM SYNC” and press “Set”. the cursor will start flashing. Press the “Up” or “Down” button to change the value is “ON” and press “Set” then back to Main Menu. Access to the “EXCEPTION REPORT” menu ,select the “EXCEPTION HISTORY” sub-menu then select the “DVR SELECTION” sub-menu and then select the “MVDR3000/5000” sub-menu. To enable MVDR3000/5000 support the ALARM SYNC function, set the “DEST ID” as identical with the “COMM ID” or “UNIT ID” of the DVR and set the “SRC ID” as 32.

The VSI-Pro Max has several internal jumpers to allow the user to configure the device for many special configurations for operation and interfacing. Some examples to use CTS for Hardware handshaking rather than output formatted ASCII text. You may also use the internal RS-232 Opto Isolator if there is noise in the video or problem communicating with devices which have poor or incorrect grounding or isolation. External DSR or DTR can be configured for pullups or not via removing jumpers. If you have any questions on these jumpers call the factory for detailed explanations.

See the adjacent pages for detailed steps to remove the cover of the VSI-Pro Max to access the internal jumpers. Make a note in this manual if you do change any so you can refer to them later.

See independent sections for complete description of jumper settings relating to its particular function. All Factory Control Jumpers should not be changed for are only used for factory testing and configuration.

Jumper	Default	Jumper	Default
Register RS-422/485 Termination		Network RS-422/485 Termination	
JP2 ON - Term 120 ohm		JP15 ON - Term 120 ohm	
OFF - No Term	OFF	OFF - No Term	OFF
DB9 Pin 9 Selection		DB9 Pin 8 Output (Only one ON)	
JP6 ON 1-2 Alarm 2	ON	JP3 ON - CTS Output	OFF
OFF -Enable Signal Gnd Ref		OFF - No CTS Output	
JP18 ON - Signal Gnd Reference		JP4 ON - Network RS-232	ON
		OFF - No Network RS-232	
DB9 Pull-Up 3.3K to 12VDC			
JP8 ON RTS (Pin 7)	ON		
JP9 ON DSR (Pin 6)	ON		
JP10 ON DTR (Pin 4)	ON		
DB9 Pin 5 Selection			
JP14 ON - RS-232 Signal Gnd	ON		
OFF - RS-232 Isolate Gnd			
Register RS-232 Type			
JP20 & JP21 ON 1-2 RS-232C	ON		
ON 2-3 Opto Isolated RS-232			

NOTE: Must remove JP14 and use Pin 5 for isolated ground when using Opto Isolated RS-232 input. If using TXD or other input/output signals simulatenously, must remove JP6 and put JP18 ON and use Pin 9 for signal ground reference.

Factory Control

JP1 ON, JP5 OFF, JP11 ON, JP12 ON, JP13 OFF

Opto Isolated RXD Pin 2 Register Input

The default setting of the VSI-Pro Max has no Opto Isolation on RXD configured and referenced to power/signal ground. To configure RXD for Opto Isolation with isolated ground set the following; JP21 2-3, JP20 2-3, JP14 OFF, JP18 ON and JP6 OFF both. Now RXD Pin 2 and Ground Pin 5 are Opto Isolated. Therefore no ground connection from the POS/Cash Register to the VSI-Pro Max is made and isolated. TXD Pin 3 or Pin 8 and all other handshaking signals remain the same and the signal ground is now available on Pin 9. Alarm 2 Hard Output is no longer available.

UART PCB Installation & Configuration

This PCB must be installed at the factory for VSI-Pro Max PCB F6 or lower due to internal modification required. On this version the "Register Data LED" will be disabled. For VSI-Pro Max PCB F7 or higher the user can install this PCB by just plugging into the J4 connector and the "Register Data LED" will not be disabled. Jumper Settings; JP1 OFF, JP3 OFF, JP4 OFF, JP5 ON, JP11 ON. RTS Alarm Input or Handshaking is not available when using the UART PCB.

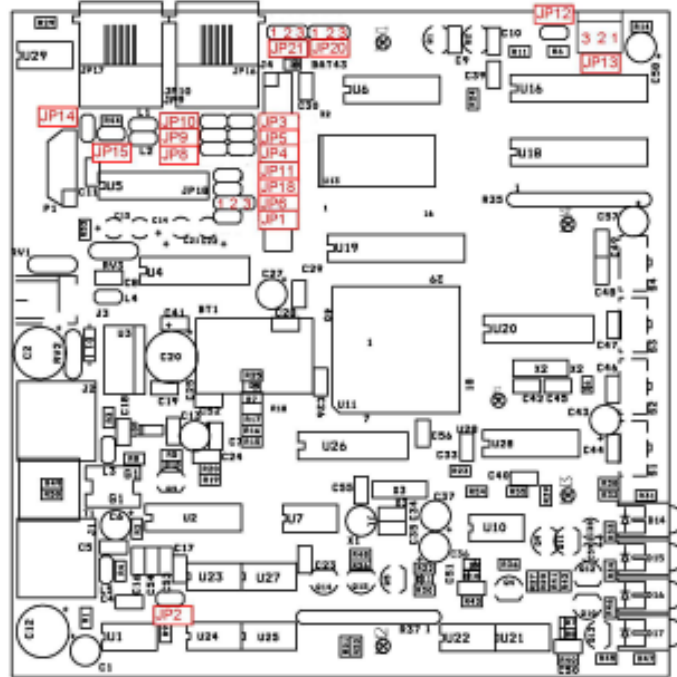


Figure 241: VSI-Pro Max PCB Jumper Settings



1. Place the VSI-Pro Max on the table with the base cover facing upwards.



2. Remove the 2X M3 x L5mm P0.5 Countersunk Philips screws using a proper screw driver.

3. Hold onto the top cover assembly and slide out the front cover.



4. Remove the front cover panel completely.



5. With the base cover remaining facing upward, remove the remaining 4X M3 x L5mm screws.



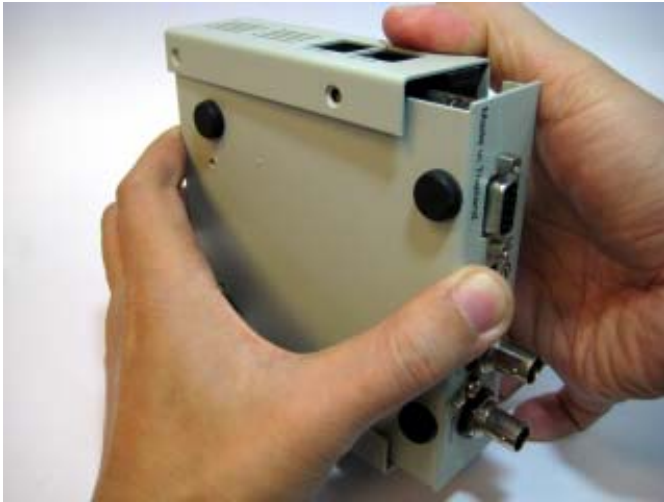
6. With the right hand thumb holding the top cover at the rotation edge and the left hand holding the base cover, rotate the cover in the direction shown to expose the end catch.



7. With the left hand holding the base cover slide down the cover and at the same time press to dislocate the RJ45 connectors away from the top cover.



8. With the end catch now out away from the top cover, slide out the base cover and the top cover in the direction as shown.



9. See jumper settings in Appendix N and adjust according to your require and proceed with assembly.

Assembly

10. Slide the base cover onto the top cover with the slide reference sitting on the lower side of the top cover.



11. Make sure you clear the RJ45 connectors with the top cover.



12. Press onto the base rear cover to align the RJ45 connectors to the the square opening on the side of the top cover.



13. Place the base cover assembly with the base facing upwards onto the table. Reinstall the 4X M3 x L5mm screws and tighten.



14. Reinstall the front cover and screw in the 2X M3 x 15mm screws which secure the front panel cover.



Trigger Text not only sends out printable data for the user to be notified visually or markers for the DVR Text Search function but also can send out special Control Characters or Escape Sequences. The AVE AL-16 accepts commands to trigger independent Form C Relay contacts via RS-232 communication. Therefore the proper command sequences can be programmed into the Trigger Text and sent to this device upon alarm or exception. This will expand the number of hard alarm outputs of the VSI-Pro or VSI-Pro Max to the maximum of 16. This allows simple wire connection to presets of PTZ, gate openers, lights, IR illuminators and any other external device that needs to be controlled by the powerful exception and alarm processor of the VSI-Pro Max.



Figure 242: AL-16 RS-232 & Power Connector



Figure 243: AL-16 Relay Output Connectors

POS & CCTV APPLICATIONS

APPENDIX V

PTZ Control

Trigger Text not only sends out printable data for the user to be notified visually or markers for the DVR Text Search function but also can send out special Control Characters or Escape Sequences. PTZ commands for homing to preset positions are very common. When using a PTZ dome to monitor more than one POS / Cash Register the VSI-Pro Max can be programmed to send out a homing preset string via RS-485 to the PTZ controller upon an exception. Therefore the dome will then home to that particular register and view the exception in progress. Multiple VSI-Pro Max can be paralleled on the RS-485 since in the receive mode until the exception occurs.

In gasoline or petrol stations the same function is very useful. One PTZ can cover several pumps. When a customer slides his credit card or activates the pump the VSI-Pro Max can send out the homing preset string for the PTZ and capture images of the user and vehicle for every transaction. This will allow close up images of each transaction from one camera rather than many fixed cameras.

Cash Drawers, Safes and Security Doors

The RTS Alarm Input can be programmed to be a generic Hard Alarm input. This can be connected to a Cash Drawer and alarmed when the drawer is open. With the RTS Alarm Delay feature a time can be programmed to wait for this alarm to be true longer than that time and then trigger the alarm. This is very powerful to detect when cash drawers or safes are open for an excessive amount of time which is indicative of theft practices.

The RTS Alarm input can also be connected to entry and exit doors and generate alarm conditions when the door open too long. This in conjunction with the Trigger Text can send specific text data to the DVR upon this condition so later the DVR database can be searched for such events. Therefore hard alarms in conjunction with user programmed data strings provide powerful search criteria for exceptional events.

Access Control Panels

The VSI-Pro Max can be connected to read the data coming directly from an access control panel or to the server. The VSI-Pro Max has RS-485 or RS-422 compatibility along with RS-232 in passive mode which can be connected in parallel with most access panels with no effect on transmission to the server. The VSI-Pro Max can then be programmed for a specific user ID and generate alarm or exception conditions and alerts when they enter. It also can deliver an e-journal of all entries directly to the database of the AVE DVRs and then later search directly to a user name or specific Time & Date.

VMD and Cash Registers

In a normal check out lane if motion is detected in the customer area but no motion in the clerk area this is a potential problem. If this exists and the cash drawer is opened or a transaction is detected by the VSI-Pro Max then this is indicative of a theft. Many VMDs like the DigiSpec DS1-PL has logic on the alarm input to the VMD so it can be connected in series with the VSI-Pro Max alarm output functions detecting cash drawer open or transactions being entered. Therefore a single camera with this type of VMD can detect motion in several areas independently with one camera view and combined with the VSI-Pro Max to detect these types of situations.



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.

WARRANTIES EXCLUDED, SELLER EXPRESSLY DISCLAIMS AND EXCLUDES ANY EXPRESS OR IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEEDS OR IS INCONSISTENT WITH THE WARRANTY HEREIN EXPRESSLY SET FORTH.

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.



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

RETURNS

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.

MASTER RESET

APPENDIX S

WARNING!

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

If you have difficulty entering the main-menu or you changed uP or updated the Firmware in your VSI-Pro Max, 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 Max.

Upon powering up the VSI-Pro Max 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.

The internal rechargeable NiMH battery needs a full 24 Hr charge if fully discharged to be fully charged.





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