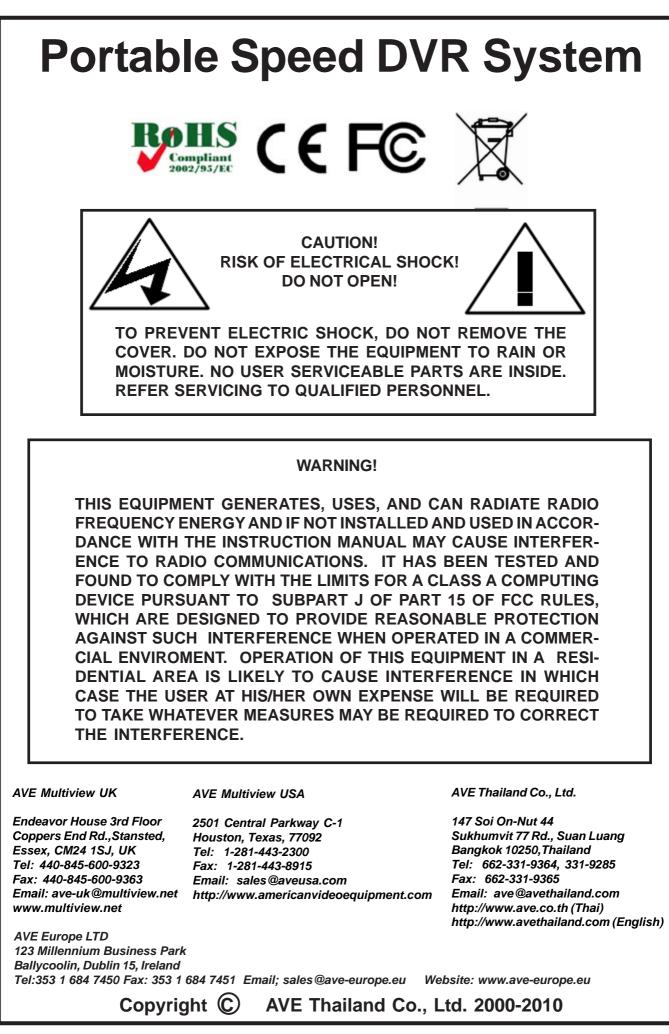
# Portable Speed DVR System





December 2010





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# **1. INTRODUCTION**

The Portable Speed DVR System allows characters to be inserted into the camera video via an RS-232 source. This allows Radar or Laser Speed Guns, GPS or Alcohol Meters or any RS-232 communicating device to display alphanumerics in the video picture. Simple side panel push-buttons allow the user to simply program all functions and features of the Integrated Portable Speed Gun System. This includes character position, gray scale, aiming cross hair and a wide variety text processing function including exceptions and alarming features.

The Exception Processor of the Portable Speed DVR System provides the intelligence to monitor the data stream and alarm or notify is the speed higher than the legal limit or if any data has changed along with triggering the DVR to record images.

Simple programming pushbuttons for DVR setup, recording or playback are also side mounted. You can record JPEG snapshots or live MPEG4 video.

Complete Portable Speed DVR System settings can be saved on the laptop and uploaded to the Portable Speed DVR System at will. This is mainly used for dealer maintanence or for single station user programming.

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

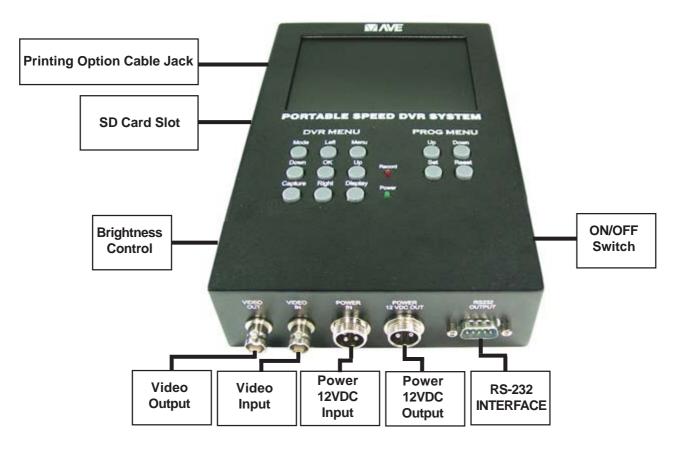


Figure 1: Portable Speed DVR System

**NOTE** : Refer to Appendix C Typical Portable Speed DVR System Operation page 56 for Quick Operation Guide.



#### SERIAL INPUT AND OUTPUT

The Portable Speed DVR System accepts serial data via the DB-9 male connector located on the bottom of Portable Speed DVR System. This connector is similar to "AT" type computer RS232 serial port. Table 1 shows the standard pin out for Portable Speed DVR System male connector.

PIN #	Label	Direction	Function
1	6 VDC	From Portable Speed System	Power Supply
2	Recive Data (RS-232)	To Portable Speed System	Data From Radar Gun, Laser Gun, etc
3	Transmit Data (RS-232)	From Portable Speed System	Data To Radar Gun, Laser Gun, etc
4	DATA 0	To Portable Speed System	Data From Stalker ATR (TTL-Level)
5	Ground		Signal / Power Ground
6	-	-	-
7	NO	From Portable Speed System	Relay, Normally Open
8	NC	From Portable Speed System	Relay, Normally Closed
9	СОМ	To Portable Speed System	Relay, Common

Table 1: Pin-Out of the DB-9 male Connector on the Portable Speed DVR System.

## 2.1 FEATURES

## **VSI-Pro INTERFACE**

- .....All popular Speed Radar Units, Decatur, MPH, Kustom, Stalker, Targetron, Tribar, Municipal
- .....All popular Speed Laser Units, LTI, Laser Atlanta, Stalker, Kustom
- .....Intoxilyzer and Alcolmeter Alcohol Meters
- .....All popular GPS Data Formats NEMA0183, AIR, NORTHM2
- .....RS232C AND TTL Interface
- .....Serial output of all data or exceptions to printers, computers, modems and DVRs
- .....Cross Hair Programmable for vehicle targeting
- .....Universal time/date format
- .....100 lines exception history buffer
- .....2 alarms Relays 1 for the DVR Record Internal and the 2nd for DB-9 male connector.
- .....16 triggered text associated with 16 alarms
- .....Large data buffers for input/output to accommodate newer, faster registers
- .....Powerful data filtering algorithms
- .....Easy on-screen menu-driven setup and programming
- .....Auto baud rate detection
- ......24 field programmable exceptions with numeric range
- .....On-screen flagging of exceptions with asterisk or reverse text
- .....Programmable alarm outputs.
- .....Programmable delayed screen blanking
- .....Choice of 1 to 11 lines displayed on-screen
- .....On-screen titler up to 40 characters
- .....Gray scale and border selection from front panel
- .....Built-in test mode
- .....Upload/download programming to another Portable Speed DVR System or PC.
- .....Data captured either to the memory or to the serial port
- .....Local Firmware Downloadable



## 2.2 SPECIFICATIONS

#### RECORDING

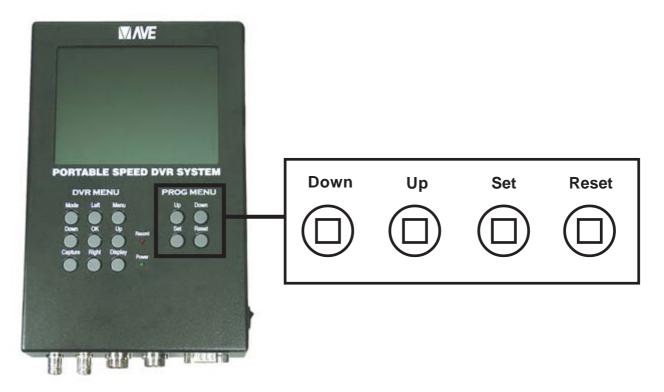
## DISPLAY

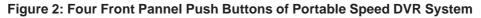
TFT LCD Screen Size	5.6 Inches (Diagonal)
Display Mode	Normal White
Input signal	1.0Vpp Composit Video (meet EIA's RS-170A standard and PAL standard)
White Chromaticity	X = 0.30, Y = 0.35 at view angle 0
Active Display Area	113.31mm (W) x 84.7mm (H)
Display Resolution	960 (W) x 234 (H)
Dot Pitch	0.118mm (W) x 0.362mm (H)
Gray Scale	Analog
Backlight	CCFL x 1
Front Surface	Anti-Glare hard coating
Brightness	300 cd/m2 typical (250 cd/m2 min.)
Contras Ratio	150 typical (100 min.) (At optimized viewing angle.)
Viewing Angle	Left/Right +/- 45 Deg. (H) (at CR >10)
	Top/Bot +/- 10/30 Deg. (V) (at CR>10)
Humidity	10% RH-90%RH
Virbration (with Carton)	5-200 Hz Sweep Frequency
Drop (with Carton)	60cm at 1 corner, 3 edges, 6 surface
POWER INPUT	12VDC +/- 10% @ 1.25A on 4P DIN Connector to DC Car Cord Cigarette Lighter Type
ALARM OUTPUT RELAY	Realy Via DB-9 male connector, Contact Rating : 0.3A @ 125VAC 0.3A @ 110VDC ,1A @ 30VDC
VIDEO OUTPUT	1Vpp 75 Ohm BNC Connector
DIMENSIONS	240mm(L) x 158mm(W) x 100mm (H)
WEIGHT	1.85 kg or 4.0 lbs



# 3. USER FRONT PANEL CONTROLS

The Portable Speed DVR System is programmed by pressing and releasing specific combinations of the four front panel push button. Via these four simple buttons, all of the powerful programming features of the Text Inserter are available.





## 3.1 FRONT PANEL CONTROLS

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

#### Changing the Gray Scale

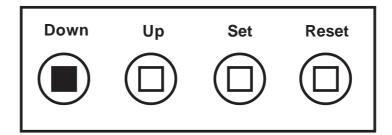


Figure 3: Four Front Pannel Push Buttons of Portable Speed DVR System (Down)

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



## Changing the Horizontal Position

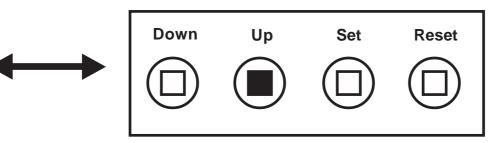


Figure 4: Four Front Pannel Push Buttons of Portable Speed DVR System (Up)

- 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

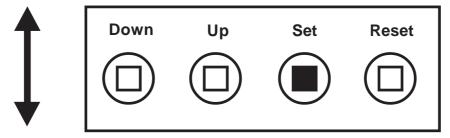


Figure 5: Four Front Pannel Push Buttons of Portable Speed DVR System (Set)

- 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.



## 4.1 GETTING STARTED

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

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

# NOTE 🔊

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

## 4.2 MAIN PROGRAMMING MENU

Following is a detailed description of the menu selections and the programming capabilities of the Integrated System.

• DEVICE SELECT
○ SCREEN SETUP
O TEXT DISPLAY
○ EXCEPTION REPORT
O ALARM OUTPUTS
O TEST/DEMO MODE
O DOWNLOAD/UPLOAD SETUP
○ HELP

Figure 6: Portable Speed DVR System Main-Menu

## 4.3 DEVICE SELECT

To select a specific device, press the "Up" or "Down" button to move the cursor to "DEVICE SELECT" and press "Set". The DEVICE SELECT menu will bring up a sub-menu consisting of devices shown in Figure 10. 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 device, press the "Up" or "Down" button to move the cursor to that device and press "Set". After selecting the device, exit out of the DEVICE 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 programing for that specific device. DEVICE SELECT automatically formats the Integrated System to match your device's communication settings. However, if you need to change these settings, you can do so through the COMMUNICATION menu described later in this manual.

# NOTE 🛋

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



## DEVICE SELECT

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

ullet	GENERIC
$\bigcirc$	GPS INTERFACE
$\bigcirc$	RADAR GUN
$\bigcirc$	LASER GUN
Ο	ALCOHOL METER
$\bigcirc$	CARD READER
$\bigcirc$	EXIT
	00000

Figure 7: DEVICE SELECT Sub-Menu

Press the "Up" or "Down" button to move the cursor to "GENERIC" and press "Set" to select, The Generic mode has no filter or driver but simply displays all the printable ASCII characters sent to the Portable Speed DVR System. If you are testing a new device use this setting first to verify data and then select the appropriate driver.

## **GPS INTERFACE**

Press the "Up" or "Down" button to move the cursor to "GPS INTERFACE" and press "Set". The GPS INTER-FACE sub-menu will appear:

• FORMAT	NEMA0183
	ON
O DATE	ON
O SPEED	KNOT
	ON
O EXIT	

Figure 8: GPS INTERFACE Sub-Menu

## FORMAT

Choices: NEM0183, AIR, NORTHM2

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

## TIME / DATE / DIRECTION

#### Choices: ON, OFF

Turns the Time/Date/Direction on or off. Press the "Up" or "Down" button to move the cursor to "TIME" or "DATE" or "DIRECTION" 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.



## SPEED

Choices: KNOT, KPH, MPH

Chooses one of the three available unit of speed. Press the "Up" or "Down" button to move the cursor to "SPEED" and press "Set". The cursor will start flashing. Press the "Up" or "Down" button to toggle between unit of speed and press "Set" when the desired unit of speed is displayed.

## **RADAR GUN**

Press the "Up" or "Down" button to move the cursor to "RADAR GUN" and press "Set". The following menu options will apprear.

	DECATUR
0	KUSTOM
0	MPH PYTHON
	MPH Z35
	MUNICIPAL TS-4
0	RG2RS
0	NEXT PAGE
0	EXIT
Ŭ	

Figure 9: Radar Gun Sub-Menu Page 1

•	PREVIOUS PAGE
0	STALKER DUAL SL
0	STALKER SPORT
0	STALKER ATR
0	STALKER II SDR
0	TARGETRON RAPID FIRE
0	TRIBAR MUNI QUIP
0	EXIT

#### Figure 10: Radar Gun Sub-Menu Page 2

#### DECATUR

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

• GENESYS I/II

 $\bigcirc$  HUNTER

#### Figure 11: DECATUR Sub-Menu

Note that when selecting the Hunter model this requires a special TTL Mod adapter for inside the Portable Speed DVR System. Please contact the factory for further information.

Press the "Up" or "Down" button to move the cursor to "GENESYS I/II" or "HUNTER" and press "Set" to select and back to previous menu.

#### KUSTOM

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

۲	<b>GOLDEN EAGLE</b>	
0	KUSTOM ICFT	

#### Figure 12: KUSTOM Sub-Menu

Note that Kustom Signals has many versions of software for RS-232 output of their radar guns. Particularly they encode the data so the customer can not use with 3rd party video systems. Contact Kustom to obtain the proper generic software version for your radar gun.

Press the "Up" or "Down" button to move the cursor to "GOLDEN EAGLE" or "KUSTOM ICFT" and press "Set" to select and back to previous menu.

#### **MPH PYTHON**

Press the "Up" or "Down" button to move the cursor to "MPH PYTHON" and press "Set". No menu will apprear and merely sets the Integrated System to support this unit.

#### MPH Z35

Press the "Up" or "Down" button to move the cursor to "MPH Z35" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit.

#### **MUNICIPAL TS-4**

Press the "Up" or "Down" button to move the cursor to "MUNICIPALTS-4" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit.

#### RG2RS

Press the "Up" or "Down" button to move the cursor to "RG2RS" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this device.

The RG2RS is an AVE additional adapter that allows interfacing to older radar guns via remote display and other special protocols prior to the common RS-232.

#### **STALKER II SDR**

Press the "Up" or "Down" button to move the cursor to "STALKER II SDR" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit.



#### STALKER DUAL SL

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

MODE A
MODE B
EXIT

#### Figure 13: STALKER DUAL SL Sub-Menu

Press the "Up" or "Down" button to move the cursor to "MODE A" or "MODE B" and press "Set" to select and then press the "Up" or "Down" button to move the cursor to "EXIT" and press "Set" then back to previous menu.

#### STALKER SPORT

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

MODE A
MODE B
EXIT

#### Figure 14: STALKER SPORT Sub-Menu

Press the "Up" or "Down" button to move the cursor to "MODE A" or "MODE B" and press "Set" to select and then press the "Up" or "Down" button to move the cursor to "EXIT" and press "Set" then back to previous menu.

#### STALKER ATR

Press the "Up" or "Down" button to move the cursor to "STALKER ATR" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit.

The STALKER ATR either requires the RG2RS adpater or is supported by the VSI-Pro Mini RG which only available in PCB form or is an integral part of the Portable Radar Set.

#### **TARGETRON RAPID FIRE**

Press the "Up" or "Down" button to move the cursor to "TARGETRON RAPID FIRE" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit.

## TRIBAR MUNI QUIP

Press the "Up" or "Down" button to move the cursor to "TRIBAR MUNI QUIP" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit.

## LASER GUN

Press the "Up" or "Down" button to move the cursor to "LASER GUN" and press "Set". The LASER GUN submenu will appear:

- LTI20-20
- O LASER ATLANTA
- STALKER LIDAR FORMAT6

Figure 15: LASER GUN Sub-Menu

#### LTI20-20

Press the "Up" or "Down" button to move the cursor to "LTI20-20" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit and back to previous menu.

## LASER ATLANTA

Press the "Up" or "Down" button to move the cursor to "LASER ATLANTA" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit and back to previous menu.

#### **STALKER LIDAR FORMAT6**

Press the "Up" or "Down" button to move the cursor to "STALKER LIDAR FORMAT6" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit and back to previous menu.

#### ALCOHOL METER

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

- ALCOLMETER SD-400P
- ALCOLMETER LION SD-400
- INTOXILYZER 400

Figure 16: ALCOHOL METER Sub-Menu



Press the "Up" or "Down" button to move the cursor to "ALCOLMETER SD-400P" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit and back to previous menu.

#### **ALCOLMETER LION SD-400**

Press the "Up" or "Down" button to move the cursor to "ALCOLMETER LION SD-400" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit and back to previous menu.

#### **INTOXILYZER 400**

Press the "Up" or "Down" button to move the cursor to "INTOXILYZER" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit and back to previous menu.

## **CARD READER**

Press the "Up" or "Down" button to move the cursor to "CARD READER" and press "Set". No menu will apprear and merely sets the Portable Speed DVR System to support this unit.



#### 4.4 SCREEN SETUP

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

- TEXT GRAYSCALE
   BLACKGROUND GRAYSCALE
   HORIZONTAL POSITION
- O CLOCK
- $\circ$  exit

Figure 17: SCREEN SETUP Sub-Menu

#### TEXT GRAYSCALE

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

#### BACKGROUND GRAYSCALE

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

#### HORIZONTAL POSITION

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

#### VERTICAL POSITION

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

# NOTE 💉

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



● T/D DISPLAY	ON
○ TIME FORMAT	12 HOUR
○ DATE FORMAT	MM/DD/YY
○ DAYLIGHT SAVING	DISABLED
○ SET TIME / DATE	
○ RESET TIME / DATE	
	ON
OEXIT	

Figure 18: CLOCK Sub-Menu

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

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

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

**DAYLIGHT SAVING** selects, for example, USA, Canada, UK, Australia, 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 turns the time/date locking on or off. If the time/date locking is turned on, make sure that the time and date format selected is the same as the ATM time and date format. Press the "Up" or "Down" button to move the cursor to "T/D LOCKING" and press "Set". The cursor will start flashing. Press the "Up" or "Down" button to toggle between "ON" or "OFF" and press "Set" when the desired value is displayed.

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

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

where hh is a number between 0 and 12 ( 24 if either AM or PM not present ) A valid date has the same format as for date display and has either "/" or "-" as a separator.

## ON-SCREEN TITLER

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



#### Figure 19: ON-SCREEN TITLER Sub-Menu

<ul><li>TITLER</li><li>TITLE</li></ul>	OFF	
O EXIT		

#### 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 Portable Speed DVR System gives you the option of a 40-character display for easy unit identification in addition to the actual unit 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.



#### EXIT

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

#### 4.5 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 submenu will appear:

	• SCREEN BLANK	20	
		10	
	○ DISPLAY FORMAT	TOP	
		OFF	
Figure 20: Text Display Sub-Menu		OFF	
	○ LEFT JUSTIFIED	OFF	
		OFF	
		ON	
	○ CROSS HAIR		

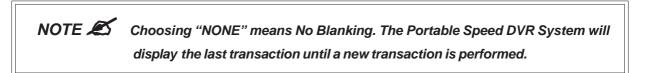


## SCREEN BLANK

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

This is the amount of time that the Portable Speed DVR System text display will remain on-screen after data sent before blanking itself off (not the video picture, just the radar data) until the next transaction.

To change the SCREEN BLANK setting, press the "Up" or "Down" button to move the cursor to "SCREEN BLANK" and press "SET". The cursor will begin flashing. Press the "Up" or "Down" buttons to cycle through the selections. Press "Set" when the desired time is displayed. The cursor will stop flashing and you may continue programming.



#### DISPLAY LINES

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

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

# NOTE 🛋

All register transaction data will scroll up regardless of the number of lines you choose to display on-screen and the more lines you display on-screen, the greater the amount of time that the transaction data will be recorded. However, some applications may limit the number of lines and the size of the on-screen display.

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

## DISPLAY FORMAT

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

#### LINE COMPRESS

The Portable Speed DVR System automatically compresses the spaces in a line first as it reaches 40 characters. With LINE COMPRESS "ON", the Integrated System 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.





## 4. 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 Portable Speed DVR System 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 Integrated System will start each line of text with no leading spaces from the left margin of the text display block.

#### SCROLL DELAY

Scroll delay ensures that lines of text remain on-screen a minimum of 0.5 seconds. This is especially useful with registers that run at a high baud rate, time-lapse VCRs in extended record modes, switchers, or multiplexers. Sometimes, the register can produce characters so quickly that they can scroll up too fast on the screen to be recorded. When SCROLL DELAY is "ON", the Portable Speed DVR System slows down this data feed just enough to insure that each line of text is recorded.

The choices for SCROLL DELAY are either "ON" or "OFF". To make this selection, position the arrow in front of "SCROLL DELAY" and press and release "Set". The arrow will start flashing. Cycle through "ON" or "OFF" by pressing either the "Up" or "Down" button, then press "Set" when your choice is displayed. The cursor will stop flashing and you can continue programming.

# NOTE 🙇

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

#### DISPLAY

You have the choice to globally turn "ON" or "0FF" the complete Portable Speed DVR System 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 Portable Speed DVR System 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.

#### **CROSS HAIR**

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

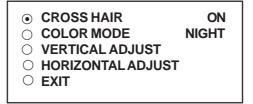


Figure 21: CROSS HAIR Sub-Menu

The Cross Hair puts a targeting crosshair into the video image so the user can better target the car or license plate of the vehicle they are detecting. This cross hair is recorded in the video so can be used as legal evidence the office targeted the proper vehicle with the radar. The Color mode selects a white cross hair for Night and a black cross hair for Day.



## **CROSS HAIR**

#### Choices : ON, OFF

Turns the crosshair on or off. Press the "Up" or "Down" button to move the cursor to "CROSS HAIR" 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.

## COLOR MODE

Choices : DAY, NIGHT

selects either black crosshair for Day or white crosshair for Night. Press the "Up" or "Down" button to move the cursor to "COLOR MODE" and press "Set". The cursor will start flashing. Press the "Up" or "Down" button to toggle between time "NIGHT" or "DAY" and press "Set" when the desired color mode is displayed.

## VERTICAL ADJUST

To change the vertical position of Cross Hair, press the "Up" or "Down" button to move the cursor to "VERTICAL ADJUST" and press "Set" button. Press the "Up" or "Down" buttons to move the Cross Hair to the desired vertical position, then press "Set" button to return to the Cross Hair Sub Menu.

#### HORIZONTAL ADJUST

To change the horizontal position of Cross Hair, press the "Up" or "Down" button to move the cursor to "HORIZONTAL ADJUST" and press "Set" button. Press the "Up" or "Down" buttons to move the Cross Hair to the desired horizontal position, then press "Set" button to return to the Cross Hair Sub Menu.

#### EXIT

Press the "Up" or "Down" button to move the cursor to "EXIT" and press "Set" to return to the Text Display Sub-Menu.



## 4.6 COMMUNICATION

This was discussed briefly in the section under "DEVICE SELECT" and will be fully explained here. When you choose your unit type under the DEVICE SELECT menu, this automatically formats the Portable Speed DVR System to the appropriate settings needed to communicate with your unit. There may be times when you will need to amend these settings for a specific unit.

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:

• RX BAUD RATE	AUTO
○ TX BAUD RATE	AUTO
	NONE
$\bigcirc$ DATA BITS	8
	ON
	ON
O EXIT	

Figure 22: COMMUNICATION Sub-Menu

#### **RX BAUD RATE**

Choices: AUTO, 150, 300, 600, 1200, 2400, 4800, 9600, 14.4K, 19.2K, 28.8K, 38.4K

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, 150, 300, 600, 1200, 2400, 4800, 9600, 14.4K, 19.2K, 28.8K, 38.4K

This is a new feature that allows you to set the transmit baud rate to a separate device if you are looping the data back out of the Portable Speed DVR System.

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

# NOTE 🛋

When selecting 38.4K, the TX and RX Baud rate must both be 38.4K. However, with any lower baud rate the TX and RX can be any different baud rate.



## 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.

## HANDSHAKE

## Choices: ON, OFF

Handshaking is an electrical signal that tells the unit or computer that the Portable Speed DVR System is ready to receive data. It may not be necessary and/or need not be connected to an outgoing signal from the unit or computer since the Portable Speed DVR System does not require handshaking. The Portable Speed DVR System handshaking signal is always true signally the unit or computer to send data.

Handshaking guarantees that the internal buffer is not over run or text is not lost. Most AVE interfaces do not support this function. Also since the Portable Speed DVR System has a 20K buffer this feature is generally not required.

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

#### AUTO LINEFEED

#### Choices: ON, OFF

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

#### EXIT

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

## 4.7 EXCEPTION REPORTS

#### **EXCEPTION REPORT OVERVIEW**

The Exception Report gives you the option to assign an on-screen flag, trigger an alarming device, or send data to another serial device on any questionable data that you have preprogrammed into the Portable Speed DVR System. The Portable Speed DVR System will allow programming of up to 24 separate exceptions. These exceptions can be any data new, speed over 120KPH, arriving at a designated GPS location, blood alcohol over the legal limit or any data that you determine (by programming) to be "exceptional" or questionable.

You may even set ranges for the exceptions. For example, speed over 90 MPH, between 55 and 75, or lower than 10 and greater than 100, all data by a specific car, or whatever data you need to watch exceptionally close.



## 4. PROGRAMMING

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

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

#### **ON-SCREEN FLAGS**

You have several options for programming your Exception Report. The first option typically has all programmed exceptions display a flashing asterisk in the upper right corner of the on-screen display, or reversing the entire text display. This on-screen flag is controlled through the ALARM OUTPUTS menu. You assign a corresponding alarm to an exception and set the parameters for the flag in this menu. You do this by choosing "DISPLAY" for the corresponding exception number and selecting "ON". With this option, all questionable transactions (exceptions) will be "flagged" with the flashing asterisk.

You can then review these exceptions by putting your DVR or VCR in play and pressing the FF button. This will give you a fast scan of the tape and you can go into normal play when you see the flashing asterisk and view that transaction in real time or slow play or frame by frame, depending on the type of playback options of your particular DVR or VCR.

#### HARD ALARM OUTPUT

The Portable Speed DVR System allows you to program exceptions to trigger external alarming devices such as timelapse VCR's, quads, enunciators, LED's etc. Using the ALARM OUTPUT you can have your time-lapse VCR record only exceptions, or have an alarming quad go to full screen on an exception, or even trigger a buzzer to alert you that an exception has occurred.

## PRINTER or DVR OUTPUT

There may be situations where you do not want cashiers or other employees to know what triggers an exception. In this case, the Portable Speed DVR System provides a separate output that will send data to a remotely located serial printer. If you turn the on-screen display off and the output on and you have a remote serial printer hooked up to the Portable Speed DVR System, then, whenever an exception is reported, it is sent out to the serial printer only. The printer will give you a hard copy printout of the questionable transaction with the time and date. With this hard copy printout of the exception report, you can then review the tape by going directly to that exception's time.

The serial printer output of the Portable Speed DVR System can be programmed to send out the entire transction. The output can be connected to the other equipment such as DVRs, computers, phone line transmissions or digital storage devices for later retrieval.

The Portable Speed DVR System 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 Portable Speed DVR System 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 23: EXCEPTION REPORT Sub-Menu

• EXCEPTION HISTORY	
$\odot$ SET EXCEPTION	
$\bigcirc$ OUTPUT	ON
○ TIME STAMP	ON
$\odot$ EXIT	

#### **EXCEPTION HISTORY**

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

#### Figure 24: EXEPTION HISTORY Sub-Menu

۲	TOTAL EXCEPTION	000
Ο	VIEW EXCEPTIONS	
Ο	DVR SELECTION	
Ο	TIME SEARCH	
Ο	OUTPUT EXCEPTIONS	
Ο	CLEAR HISTORY	
$\bigcirc$	EXIT	

#### TOTAL EXCEPTIONS

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

#### **VIEW EXCEPTIONS**

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

#### For example:

Define " • " as an exception string In Exception No. 2, HISTORY BUFFER to be "ON", and define OPERATOR "NONE".

11:09:45 A	9/12/05	TARGE	123.00	
11:13:12 A	9/12/05	PATROL	254.00	
11:20:23 A	9/12/05	LOCKED	126.00	
11:22:21 A	9/12/05	TARGET	56.00	
11:26:18 A	9/12/05	PATROL	190.00	
**** END OF EXCEPTION ****				

#### Figure 25: 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.



## **DVR SELECTION**

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

$\odot$	DMS-3001
Õ	DVR-3011.3021
Õ	EXIT

#### DVR-3011 / DVR-3021

#### Figure 26: DVR Selection Sub-Menu

Press the "Up" or "Down" button to move the cursor to "DVR-3011.3021" and press "Set". An asterisk appears to indicate your selection.

DEST ID     SCR ID     FXIT	1 1

Figure 27: DVR-3011.3021 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:

<ul> <li>○ PREVIOUS PAGE</li> <li>○ 11:20:23 A</li> <li>9/12/05</li> <li>○ 11:22:21 A</li> <li>9/12/05</li> <li>○ 11:22:21 A</li> <li>9/12/05</li> <li>○ 11:22:21 A</li> <li>9/12/05</li> <li>○ 11:22:21 A</li> <li>9/12/05</li> <li>○ NEXT PAGE</li> <li>○ EXIT</li> </ul>	

Figure 28: Display of TIME SEARCH

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

Then press "Set" and the DVR will be commanded by the Portable Speed DVR System 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 Radar or their will be an effor in the actual search time. Verify the proper connection to the DVR from the diagram on the following page.

#### EXAMPLE

Define "<sup>()</sup>" as an exception string In Exception No. 2, HISTORY BUFFER to be "ON", and define OPERATOR "NONE". If the screen is displayed any data, the Portable Speed DVR System will keep this displayed on Exception History.



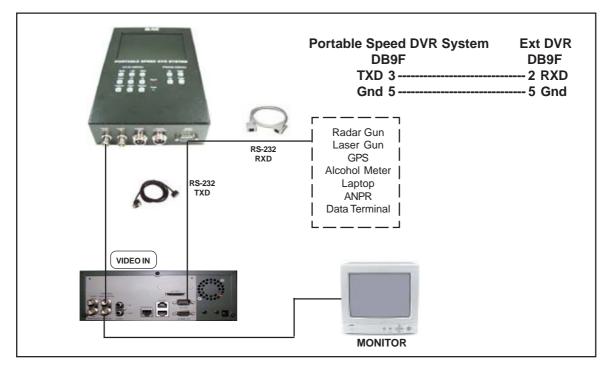


Figure 29: Portable Speed DVR System with External DVR Connections

## **OUTPUT EXCEPTIONS**

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

## **CLEAR HISTORY**

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

#### EXIT

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

#### SET EXCEPTION

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

<ul> <li>EXCEPTION NO.</li> <li>DISPLAY</li> <li>OUTPUT</li> <li>HISTORY BUFFER</li> <li>SCROLL MATCHING</li> <li>EXCEPTION STRING</li> </ul>	1 ON ON OFF	
<ul> <li>●</li> <li>● RANGE</li> <li>0000.00 - 0000.00</li> <li>○ OPERATOR</li> <li>○ EXIT</li> </ul>	NONE	

Figure 30: SET EXCEPTION Sub-Menu



## **EXCEPTION NO.**

Choices: 1 through 24

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

#### DISPLAY

Choices: ON, OFF

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

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

# APPLICATION NOTE

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

#### OUTPUT

Choices: ON, OFF

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

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

#### HISTORY BUFFER

Choices : ON , OFF

The history buffer stores all the exceptions that are occur in the Portable Speed DVR System. Sometimes this can be very large and consume a large portion of the memory of the Portable Speed DVR System. 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 Portable Speed DVR System. This setting allows the user to enable or disable this feature as to conserve memory allocation for other features.

To make your selection, press the "Up" or "Down" button to move the cursor to "HISTORY BUFFER" 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.



## SCROLL MATCHING EXCEPTION STRINGS ON/OFF

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 recording. To better understand how to use this, first we must discuss how the Exception String is processed.

Exception Strings (with Scroll Matching OFF) are compared to any text in a line or any text after a CR LF up to 20 characters. If the line is longer than 20 characters we insert a virtual LF CR. Therefore exception string can not be longer than 20 characters. If you use a wild card in front of or behind of a normal exception string then no matter what letter is recieved in that position of the wild card it will be accepted as part of exception string.

Typically to erase these scrolling messages we would use the Negative Exception feature and turn "Off" the display after we entered in the words with or without wildcards. However this left many unwanted bits and pieces of the scrolling message visible because the transactions interrupt the scrolling message and then when the transaction is completed the scrolling message goes back to the exact place in the message where it was interrupted. This is different than normal transactions for they always start with a the description, quantity and price usually in one line.

In scrolling messages we may not have LF and sometimes no CR. This has the first character of every line different of the scrolling message possibly different and even partial words starting at any place within any one of the words of the scrolling message. Therefore conventional Exceptions even with the wild card does not remove all.

Scroll Matching "On" allows you to enter an exception string with or without wildcards and no matter when this string is detected the entire line is erased. This feature "On" does not process the exception string any differently than normal exceptions with Display "Off" but gives a higher priority than any normal exception set with Scroll Matching "Off" and Display "On".

This means that if you set an Exception for "Shipping" with or without a dollar figure associated and a normal transaction that you wanted to generate an exception and set Display "On". Everytime you hit the "Shipping" key your would get an exception. However if you had a scrolling message "You can rely on us for all your Shipping needs" Then you might want to erase this entire line and by doing so the word shipping would be included in the exception with scroll matching "On". In this case you would never see the normal transactions with Shipping \$4.50 either as an exception or displayed for the Scroll Matching would override.

A rule of thumb is to never use a scroll matching word the same word as any word in an item description or any partial word that is a partial of any item description.

To make your selection, press the "Up" or "Down" button to move the cursor to "SCROLL MATCHING" 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.



## 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 Portable Speed DVR System 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 Portable Speed DVR System 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 "Target" as an exception. Portable Speed DVR System will look for that string so range definition is not necessary. However, exception string "Target" could be further defined by assigning a Range, i.e. all "Target" over 80MPH.

You can also define a global exception to flag all negative transactions. An example of this using the a radar gun would be the following exception to flag any speed that contains a "-", or negative sign. For example, in the an assigned Exception string "..-" will flag all speeds in the reverse direction say on a one way street and send out to the monitor.

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

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

The default setting for the "Radar Gun" is LOCK and the default setting for the "Laser Gun" is SPEED.

# 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.

## **NEGATIVE EXCEPTION**

Ô

You can remove unwanted text from the screen using the Portable Speed DVR System. The Portable Speed DVR System 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 "Patrol" exactly as they appear on the screen, including spaces.

NOTE 🙇

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



## RANGE

## Choices: 0000.00-9999.99

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

To program the range, press the "Up" or "Down" button to move the cursor to "RANGE" and press "Set". The first "0" in the range starts to flash. This means it is active and ready for programming. Press the "Up" or "Down" button to cycle through the values and press "Set" when the desired value is displayed. This will advance the active block to the next character. While you are on an active block, pressing the "Up" and "Set" buttons simultaneously will return that block back to a blank, which is designated by a solid white box. You can follow this format to program your range. When you have finished and want to set this range into the Portable Speed DVR System 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 Portable Speed DVR System memory and exit you back to the previous menu.

The default setting for the "Radar Gun" and the "Laser Gun" is "0000.00 - 0080.00"

## 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 this version of the Portable Speed DVR System, you can define ranges for your exceptions and have the Portable Speed DVR System 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 default setting for the "Radar Gun" and the "Laser Gun" is "OUT"

## The following is a brief overview of how to set for triggering when over a programmed speed.

- 1. On the Main-Menu, press the "Up" or "Down" button to move the cursor to "EXCEPTION REPORT" and press "Set".
- 2. On the Sub-Menu, press the "Up" or "Down" button to move the cursor to "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 desired Exception No. then press "Set". Press the "Up" or "Down" button to toggle between the choices.
- 4. Program the Exception String in the Exception Report to compare the data that shows on the screen, Depending on the type of Radar Gun. Example, LASER ATLANTA is "SPEED"
- 5. On the "SET EXCEPTION" sub-menu. Press the "Up" or "Down" button to move the cursor to "RANGE" and press "Set". The first "0" in the range starts to flash, then set the value of range to the maximum speed.
- 6. On the "SET EXCEPTION" sub-menu. 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 "OUT" is displayed. Press the "Up" or "Down" button to move the cursor to "EXIT" and press "Set" to return to The "EXCEPTION REPORT" sub-menu. Press the "Up" or "Down" button to move the cursor to "EXIT" and press "Set" to return to The Main-Menu.
- 7. On the Main-Menu, press the "Up" or "Down" button to move the cursor to "ALARM OUTPUTS" and press "Set". The ALARM OUTPUTS menu will appear. Then, set the ALARM NO. to be "1" and set the ALARM TRIGGER, The alarm trigger tells the Integrated System what exception to use to trigger the alarming device, is identical with that configured in the item# 3.

If the speed exceeds the "RANGE", maximum speed. The Internal DVR of Integrated System will start recording.



## 4. PROGRAMMING

## **EXMAPLES FOR SETTING EXCEPTION**

#### EQUAL

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

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

## **OUT RANGE**

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

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

#### **IN RANGE**

Suppose Exception # 5	would flag all transactions between \$50.00 & \$100.00 on Department 3:
Exception No.	5
Display	ON
Output	ON or OFF (Depending on presence of serial printer).
Exception String	3
Range	0049.99-0099.99
Operator	IN
With this exception all	sales between \$50 and \$100 dollars will be flagged.

#### **GREATER THAN**

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

Exception	No. 2
Display	ON
Output	ON or OFF
Exception String	5
Range	0000.01-0099.99
Operator	OUT
	1 (\$100

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

## LESS THAN

This example will show you how to program an exception to flag all sales in Department 6 of less than \$100.00:

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



## **EXCEPTION REPORT MENU CONTINUED**

## OUTPUT

## Choices: ON, OFF

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

## TIME STAMP

## Choices: ON, OFF

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

## EXIT

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

## 4.8 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:

● ALARM NO.	1
	EX 1
○ NORMAL STATE	NO
	20
○ FLAG TYPE	FLASH *
○ FLAG DURATION	000
○ TRIGGERED TEXT	
	DWELL

Figure 31: ALARM OUTPUTS Sub-Menu

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

## ALARM NO.

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

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

**NOTE** : Alarm No. 1 be reserved for the internal DVR of Integrated Portable System.



## 4. PROGRAMMING

## ALARM TRIGGER

Choices: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 1-12, 13-24, 1-24, NONE

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

*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.

#### NORMAL STATE

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

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

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

#### ALARM DURATION

This is the amount of time in seconds that the alarm will remain activated once it is triggered. The selections for alarm duration are: PULSE, 6, 12, 20, 30, 60, 120, 180, and 300 seconds. (PULSE sends a 200mS alarm pulse to the alarm device.)

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

#### **FLAG TYPE**

This feature allows you to insert a visual alarm flag on each exception that you program to aid in the review of the video tape. This flag can appear as an asterisk "\*", a flashing asterisk, reverse text, or flashing reverse text.

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

#### FLAG DURATION

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

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



# NOTE

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

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

## TRIGGERED TEXT

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

0	DISPLAY TEXT OUTPUT TEXT SET TRIGGERED T EXIT	OFF OFF EXT
· ·	SET TRIGGERED T	

#### Figure 32: TRIGGERED TEXT Sub-Menu

#### DISPLAY TEXT

Choices: ON, OFF

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

#### OUTPUT TEXT

#### Choices: ON, OFF

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



#### SET TRIGGERED TEXT

Press the "Up" or "Down" button to move the cursor to "SET TRIGGERED TEXT" and press "Set". The following submenu will appear:

#### Figure 33: 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 charactors, therefore you can enter 13 control codes in a line. To enter control code, first print up arrow ^ follwed by 2 hex digit. For example, hex code 01 has to be entered like ^ 01.

Press "Up" and "Down" simultaneously to exit..

#### ALARM TYPE

#### Choices : DWELL, TIMED

There are two choices : DWELL or TIMED. If select DWELL, the Portable Speed DVR System will generate many alarm. If select TIMED, Portable Speed DVR System will generate alarm only one time until lock data is changed or cleared.

To select the Alarm Type that you want to program, Press the "Up" or "Down" button to move the cursor to "ALARM 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.

#### EXIT

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

#### 4.9 TEST/DEMO MODE

The TEST/DEMO MODE provides you with several ways to test the Portable Speed DVR System and demonstrate its capabilities as a Radar Gun or unit interface. Press the "Up" or "Down" button to move the cursor to "TEST/DEMO MODE" and press "Set". The following sub-menu will appear:

0	PORT 1 TEST
0	DATA CAPTURE
0	RADAR GUN DEMO
0	VERSION ID
0	EXIT

Figure 34: TEST/DEMO MODE Sub-Menu



#### PORT 1 TEST

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

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

#### Figure 35: PORT 1 TEST Sub-Menu

#### RECEIVE [ RX ] TEST

The purpose of this test is to determine that if Portable Speed DVR System 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 36: 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 Portable Speed DVR System and device or any additional interfacing device.

Press "Set" to return to the previous menu.

#### TRANSMIT [ TX ] TEST

The purpose of this test is to determine that if the Portable Speed DVR System 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 37: TRANSMIT [TX ] TEST Display

If Portable Speed DVR System 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.



# NOTE 🔊

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

#### **RX / TX TEST**

In the RX/TX test the Portable Speed DVR System 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 38: 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 39: Baudrate Scan Display

Enter a transaction from the register. The Portable Speed DVR System will detect the baud rate and display it in front of RX Baud rate.

Press "Set" to return to the previous menu.

EXIT

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



#### DATA CAPTURE

This feature allow user to store the data either internal memory of Portable Speed DVR System 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:

CAPTURE TO PORT 1
CAPTURE TO MEMORY
DUMP MEMORY
EXIT

#### Figure 40: DATA CAPTURE Sub-Menu

Press "Set" to return to the previous menu.

#### **CAPTURE TO PORT 1**

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

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

BAUDRATE DETECTION..

#### Figure 41: CAPTURE TO PORT 1 Display

Press "Set" to return to the previous menu.

#### **CAPTURE TO MEMORY**

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

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

#### BAUDRATE DETECTION..

#### Figure 42: CAPTURE TO MEMORY Display

Press "Set" to return to the previous menu.

# NOTE 🛋

Portable Speed DVR System can only hold up to 20 kilobytes of data to 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.

#### **DUMP MEMORY**

You can upload any saved information from the Portable Speed DVR System 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 Portable Speed DVR System will start uploading the data.

#### RADAR GUN DEMO

This demonstration simulates the data from an actual radar gun. This is used to demonstrate the Portable Speed DVR System's capabilities with just a monitor and camera without having a device hooked up. When the demo mode is active the Portable Speed DVR System thinks the data is actually coming from a real radar gun. 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 "RADAR GUN DEMO" and press "Set". You will see the following;



Figure 43: RADAR GUN DEMO Sub-Menu

Selecting "DEMO" will start the demo after a few seconds. To exit this demo, press and release "Reset". If data is sent to the Portable Speed DVR System during this demo mode with "DEMO ON POWER UP" set to OFF then the demo mode will be disabled and you must go back into the programming mode and select again as described above.

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 Portable Speed DVR System to a device and it sends data to the Portable Speed DVR System during this demo mode then the demo mode will also be disabled until you press "Reset" or power down and up again.

#### VERSION ID

When selected, this will display the version of software in use by the Portable Speed DVR System shown detail (example below).

VSI-PRO Version 13.03R6 09/03/2010

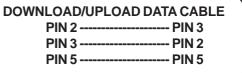
#### EXIT

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

#### 4.10 DOWNLOAD/UPLOAD SETUP

This feature lets you upload or download data between two Portable Speed DVR System's. This feature is especially helpful on multi-interface installations. You can program one Portable Speed DVR System and download the data to another Portable Speed DVR System with the download/upload feature and a data transfer cable. The cable is made up of two male DB-9 connectors and the pin-out is below. **NOTE:** This feature is only available to like versions and release. Therefore you can only program a Ver. 13.03R6 with a same exact Portable Speed DVR System Version and Release or errorenous data will occur.

#### Figure 44: Download/Upload Data Cable

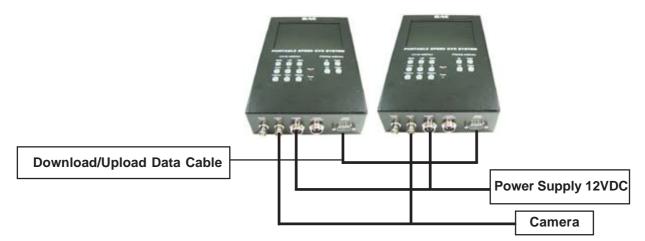




#### DOWNLOAD/UPLOAD SETUP USING PORTABLE SPEED DVR SYSTEM TO PORTABLE SPEED DVR SYSTEM

To insure that the DOWNLOAD/UPLOAD process is accomplished, you need to access the programming menu for both Portable Speed DVR System, so each Portable Speed DVR System 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 Portable Speed DVR System with the download data cable attached. The Portable Speed DVR System programming data is stored internally in a battery backed 32K x SRAM. This would allow you to program one Portable Speed DVR System on-site and bring the programmed Portable Speed DVR System back to the office and program additional Portable Speed DVR System 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 Portable Speed DVR Systems simultaneously.

The use of the diagram in Figure 45 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 Portable Speed DVR Systems.



#### Figure 45: DOWNLOAD/UPLOAD SETUP Using Portable Speed DVR System to Portable Speed DVR System

The PROGRAMMED Portable Speed DVR System will upload data to the UNPROGRAMMED Portable Speed DVR System. In the configuration in the Figure 45, you can get the programming menus for both Portable Speed DVR Systems on the screen at the same time.

Let's bring up the PROGRAMMED Portable Speed DVR System 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 Portable Speed DVR System and do the same thing. You should now have both programming on each unit respectively.



### 4. PROGRAMMING

To proceed with the DOWNLOAD/UPLOAD SETUP, we will configure the UNPROGRAMMED Portable Speed DVR System 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 46: DOWNLOAD/UPLOAD SETUP Sub-Menu

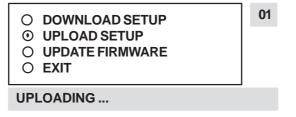
Press the "Up" or "Down" button to move the cursor to "DOWNLOAD SETUP" and press "Set". The following submenu will appear. Move to the cursor to "DOWNLOAD SETUP" and press "Set" and the display "DOWNLOAD SETUP..." will appear:

⊙ DOWNLOAD SETUP	01		
O UPLOAD SETUP			
O UPDATE FIRMWARE			
O EXIT			
DOWNLOADING			

#### Figure 47: DOWNLOAD SETUP Sub-Menu & Display

The UNPROGRAMMED Portable Speed DVR System is now waiting to receive data from the PROGRAMMED Portable Speed DVR System.

Now go to the main-menu of the PROGRAMMED Portable Speed DVR System 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 48: UPLOAD SETUP Sub-Menu & Display

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

Programmed VSI	Unprogrammed VSI
UPLOADING	DOWNLOADING

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 Portable Speed DVR System's.

Now go to the main-menu of the previously UNPROGRAMMED Portable Speed DVR System. Enter the EXCEPTIONS menu. You should see your exceptions and other programmed data just as they were on the original PROGRAMMED Portable Speed DVR System.

For locations or companies with a large number of units, we strongly advise that you keep one programmed Portable Speed DVR System as a master and a backup to insure your system integrity. This will also aid in reprogramming any changes and protect against any catastrophic events.



#### Integrated System Firmware Download Menu

To update the Portable Speed DVR System, Select the Integrated System Firmware Download Function and follow the instructions below. Then select "UPDATE FIRMWARE" from the menu selection.

#### Figure 49: UPDATE FIRMWARE Sub-Menu

DOWNLOAD SETUP
 UPLOAD SETUP
 UPDATE FIRMWARE
 EXIT

#### Integrated System Firmware Download Function

This document describes the Portable Speed DVR System V13.14 R10 The new features of this version are able to download firmware update via the RS-232 port. The LDROM 4K boot strap loader must be burner to the uP via a conventional programmer. Then the executable program is then loaded via any terminal program such as Hyper Terminal via a PC or compatible device. All firmware files are encoded to the AVE proprietary format and decoded by the bootstrap loader for standard program execution.

Update Firmware of Portable Speed DVR System

You have to connect the Portable Speed DVR System 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 19200

See PC Windows below to verify proper HyperTerminal setup.

*	TEST - HyperTerminal 🦳 🦳 🔗
File Edit View Call Transfer Help	
New Connection Open Save Save As	·
Page Setup Print	
Properties	
Exit Alt+F4	
<	<b>S</b>
Displays the properties of the current sessio	ان الله الله الله الله الله الله الله ال

#### Figure 50: HyperTerminal Main Menu



# 4. PROGRAMMING

Click File ==> Properties You will see the configuration frame and then click.

<b>*</b>	TEST Properties	
File Edit View Call Tra	Connect To Settings	
	TEST Change Icon	~
	Country/region: United States (1)	
	Enter the area code without the long-distance prefix.	
	Area code:	
	Phone number:	
	Connect using: COM1	
	Configure	
	Use country/region code and area code	
	Redial on busy	
		¥
V Disconnected	OK Cancel	ure Printiecho

Choose Bits per second to 19200 and press connect.

Figure 51 : Connect To Menu

File Edit View Call Tra	Connec				-
	P	COMD	Properties		
	E	Bits per second:	9600	•	
	P	Data bits:	110 300 1200 2400		
	d	Parity:	4800 9600 19200 38400		
		Stop bits:	57600 115200 230400		
		Flow control:	460800 921600		
Disconnected		0	Restore D		Print echo
re 52 : Port Settings Me	nu	0	K Cancel	Apply	



Second, you go to the menu of the Portable Speed DVR System "Download/Upload Setup" then select ==> "Update Firmware" and then press Set. Now you will see message in Hyper Terminal.

🏀 TEST - HyperTerminal 🕘 💽	
File Edit View Call Transfer Help	
In-System Programming Copyright 2006 By A.V.E. Thailand VERSION 700R2 10/27/2006 Do you want to update? [Y/N] WARNING: Doing this will erase the program memory [Y/N] Erasing Flash Memory [OK] Ready to download firmware	• • • • • • • • • • • • • • • • • • •
Connected 0:09:19 VT100 19200 8-N-1 SCROLL CAPS NUM Capture Print echo	×
Connected 0:09:19 VT100 19200 8-N-1 SCROLL CAPS NUM Capture Print acho	33

Figure 53: 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 Portable Speed DVR System will not function until firmware is loaded. Make sure you have the proper firmware file ready or the Portable Speed DVR System 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 Portable Speed DVR System during downloading, power is lost to the Portable Speed DVR System 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 Portable Speed DVR System or press reset while the terminal program is connected and you will see the prompt messages as above window.



# 4.11 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
<b>UP AND DOWN</b>	_ Save string input
UP AND SET	Erase character

Figure 54: HELP Sub-Menu



#### 5.1 DVR FRONT PANEL PROGRAMMING KEY



#### Figure 55: Front Pannel Push Buttons of DVR Programming Menu

#### VIDEO / PHOTO CAPTURES

- 1. Portable Speed DVR System will generate an alarm to close the contact of the CAPTURE switch to start capure video or photo.
- 2. For Manual recording Press "CAPTURE" button direct on DVR Front Panel Programming Key.
- 3. Motion Detection will also generate an alarm for DVR to start capture video or photo.
- 4. Press "DISPLAY" button to select video source between Video 1 and Video 2

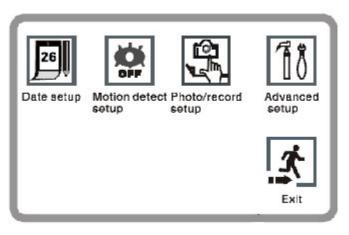
Note: Video 2 No Connection and blue screen will come out.

Figure 56: DVR SETUP Mode

#### 5.2 DVR PROGRAMMING

Press the "Menu" button while DVR is powered on, ensure DVR was not on recording or photo taking. The DVR Setup Mode will pop up as below:

#### **DVR SETUP MODE**

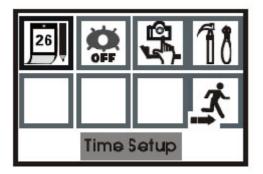


**Notes:** Video Capture mode will take about 20 second continuously and is not programmable or stoppable.



#### TIME/ DATE SETUP

1. Press "Menu" button to Setup Mode.

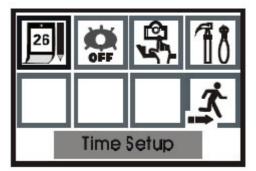


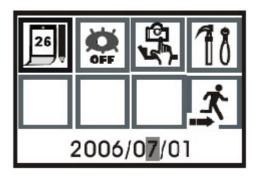
- 3. Press "RIGHT" button to move the cursor forward and "LEFT" button to backward the cursor.
- 4. Press "UP" or "DOWN" button to increase or decrease that cursor is on.

5. Press "RIGHT" button to move the cursor util Time

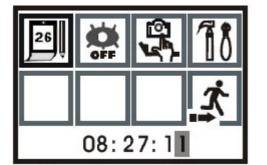
menu come up. and do as items 3 and 4.

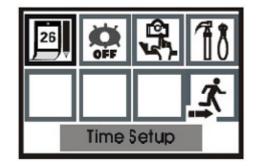
2. Press "LEFT" or "RIGHT" button to move the cursor to Time Setup and then press "OK" button.





6. When setup complete, Press "OK" button to return to the Setup Mode.





7. Exit Setup Mode, Press "LEFT" or "RIGH" button to move the cursor to Exit and press "OK" button or press "MENU" button to Exit off directly.

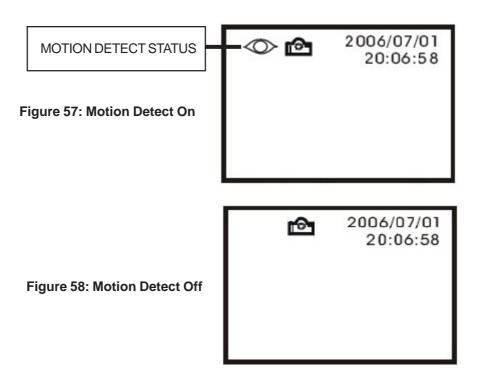


#### MOTION DETECTION SETUP

When power up, if the SD card is not inserted to DVR. The motion detect feature will be enabled automatically. To disable the motion detection in this case for avoid DVR to start record when motion detected in the video. DVR provided shortcut key to enable or disable directly while DVR on view mode.

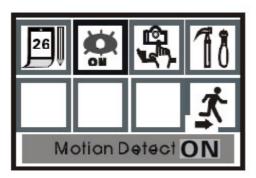
#### QUICK SETUP

Press "UP" button to toggle Motion Detection to be ON/OFF, EYE is symbol for motion detection mode is operated.

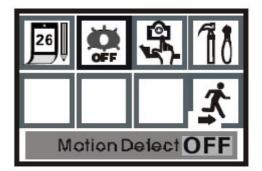


#### **MENU SETUP**

- 1. While DVR was on View Mode, Press "Menu" button to access Setup Mode.
- 2. Use "LEFT" or "RIGHT" button to control the cursor to Motion detection menu.
- 3. Press "OK" button to toggle ON/OFF motion detection.



**Motion Detect ON** 



**Motion Detect OFF** 



# 5. DVR PROGRAMMING

#### **RECORD VIDEO/PHOTO SETUP**

Recording format available for AVI 320x240 pixels @10 fps and compressed in Motion JPEG (MJPEG) and JPEG Resolution 640 x 480 pixels for photo.

#### **QUICK SETUP**

While on View Mode onscreen, Press "DOWN" button to toggle between Video or Photo Camera.

Figure 59: AV Setup status with Motion On

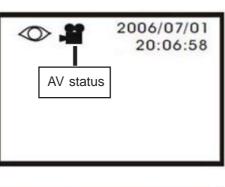
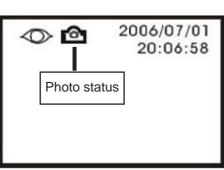
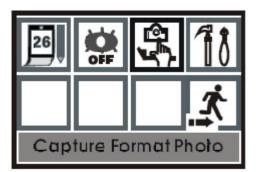


Figure 60: Photo Setup status with Motion On



#### **MENU SETUP**

- 1. Press "Menu" button to access Setup Mode.
- 2. Use "LEFT" or "RIGHT" button to control the cursor to Capture Format menu.
- 3. Press "OK" button to toggle Video / Photo camera



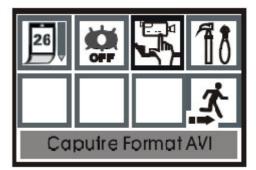
**PHOTO CAPTURE** 

#### ADVANCE SETUP MENU

This is system setup menu including:

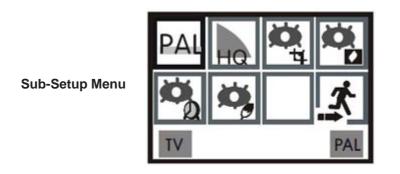
1. Standard Video formatNTSC/PAL2. Video Quality SetupHIGH/LOW3. Motion Area DetectionLARGE/MEDIUM/SMALL4. Motion Detect Count1/3/55. Motion Detection Interval1S/3S/5S5. Motion Senstivity01-99





**VIDEO CAPTURE** 

Press "Menu" button to access Setup Mode. Use "LEFT" or "RIGHT" button to move the cursor to Setup Menu, then press "OK" button to enter to Sub-Setup Menu.



Use "LEFT" or "RIGHT" button to move the cursor to the desired menu.

Standard Video Format menu : Press "OK" button to toggle PAL and NTSC format.

Video Quality Setup menu : Press "OK" button to toggle High and Low video quality.

Motion Area Detection menu : Press "OK" button to Motion Detect Area Setup, then press "LEFT" or "RIGHT" button to choose detect area , **Large/Medium/Small**, and then press "OK" button. Press "Up", "Down", "Left", "Right" button to move detect area and then press "OK" button to exit Detect Area Setup.

Motion Detect Count menu : Motion Detect Count setup means the count number setup which take in one motion detect. (can set 1/3/5 pics)

Press "OK" button to choose count number.

Motion Detection Interval menu : Motion Detect Interval means that you can set 1/3/5 seconds interval between two motion detect.

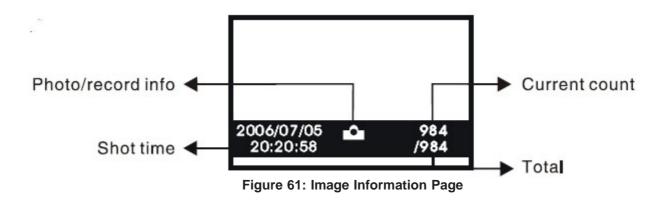
Press "OK" button to switch time.

Motion Sensitivity menu : The Motion Detect sensitivity range is 01-99. The smaller the value, the more sensitive ;the bigger the value, the less sensitive.

To exit Setup Mode, Press "LEFT" or "RIGH" button to move the cursor to Exit and press "OK" button or press "MENU" button to Exit off directly.

#### PLAYBACK MODE

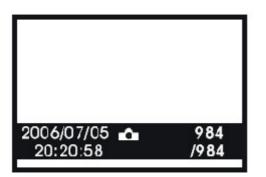
Press "MODE" button to toggle to Playback Mode, DVR will start to preview all recorded videos and taken photo. Video and Photo can be browsed by one or sixth thumbnailor. It can be deleted one by one, delete all, The SD Card can be formated in the playback mode.



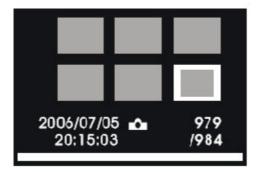


#### **BROWSE SIXTH THUMBNAIL PHOTO**

1. Press "MODE" button to toggle to playback mode



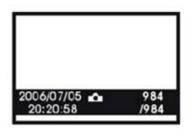
3. Press "LEFT" or "RIGHT" button to move the highligh to choose the photo or video is recorded.



5. Press "MODE" button to return View Mode.

#### **DELETE FILES**

1. Press "Mode" button to enter Playback Mode, then press "LEFT" or "RIGHT" button to move the cursor for select file.



**Playback Mode** 

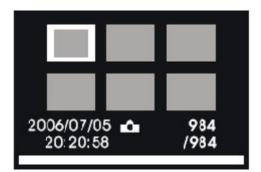
3. Press "LEFT" or "RIGHT" button to enable or disable delete, then press "OK" button to confirm.



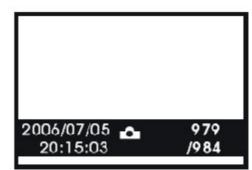




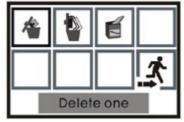
2. Press "OK" button to File Browsing Menu.



4. Press "OK" button to view Photo or Video with full screen and press "DOWN" button to play video file.



2. Press "Menu" button to enter to Delete menu, then press "LEFT" or "RIGHT" button to select deleting ONE/ ALL/ FORMATE menu, and then press "OK" button to desired menu.



**Delete Menu** 

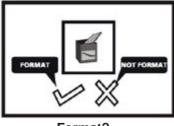
### FORMAT SD CARD

1. Press "Mode" button to toggle to Playback Mode, then press "Menu" button to enter to Delete Mode.



**Playback Mode** 

 Press "LEFT" or "RIGHT" button to enable or disable format the SD Card, then press "OK" button to confirm.



Format?

Notes : Doing this you may lose all files.

#### **CHOOSE FOLDER**

1. Press "Mode" button to toggle to Playback Mode.



**Playback Mode** 

3. Press "OK" button to enter the folder.

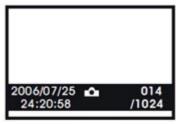
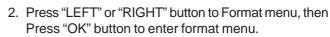
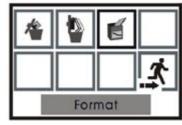


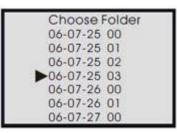
Photo in Folder





**Format Menu** 

2. Press "CAPTURE" button to choose the folder, then press "UP" or "DOWN" button to select the folder.



Select Folder Menu



#### NO DATA ON-SREEN

- 1. Press the "Reset" button on the Portable Speed DVR System front panel.
- 2. Incorrect unit selected in the DEVICE SELECT menu.
- 3. Data cable is miswired.
- 4. Data cable is too long or did not use shielded cable.

#### PROBLEMS WITH RG2RS

- 1. Check the cable to the unit.
- 2. If Portable Speed DVR System was working and stopped, power cycle the system. Turn off the device, unplug the power to the RG2RS, and unplug the power to the Portable Speed DVR System. Now power up the system, plug in the Portable Speed DVR System and the RG2RS. The data should re-appear.
- 3. Check the cable between the Portable Speed DVR System and the RG2RS.

#### NO VIDEO ON MONITOR

- 1. Portable Speed DVR System not plugged into power.
- 2. Camera lens covered.
- 3. LCD brightness too low.

#### 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. RG2RS 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 INTEGRATED SYSTEM

- 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 Portable Speed DVR System to all the factory default settings.

#### DVR PROBLEM SOLVING

#### NO VIDEO OUTPUT WHEN POWER UP THE SYSTEMS

SD card may corrupted and cause DVR cannot start up. Please remove the SD Card and insert brand new into and power up again.

#### VIDEO NOISY AND JITTERING

Requirement for re-charger battery

#### SD CARD CORRUPTED

While the DVR is recording do not power down the DVR or remove the SD card to avoid SD Card Corruption.



The Portable Speed DVR System provides Alarm 1 output port to trigger the internal DVR. There is also Alarm 2 in the Alarm menu. The Portable Speed DVR System can be programmed to trigger an external DVR to record or an IR Illuminator to turn on. See the Alarm section for proper programming of this 2nd user alarm output.

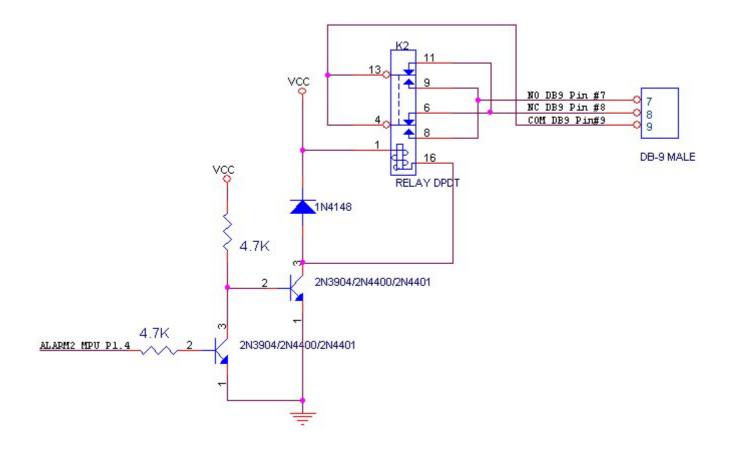


Figure 62: Hard Alarm Output Relay

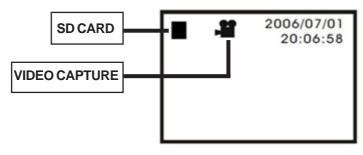


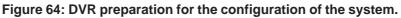
#### **STALKER II SDR**



Figure 63: Portable Speed DVR System Interface with Radar Gun (Stalker II SDR)

- 1. Turn on Portable Speed DVR System, Verify LCD Display for DVR motion detection, if it was enabled then press "Up" button on DVR Programming Key to disable.
- 2. Verify the SD Card is presented on LCD Display, So ready for recording.
- 3. Verify the DVR Recroding Mode was Photo or Video. Press "DOWN" button for Video Mode
- 4. Setup Time / Date for Portable Speed DVR System and internal DVR



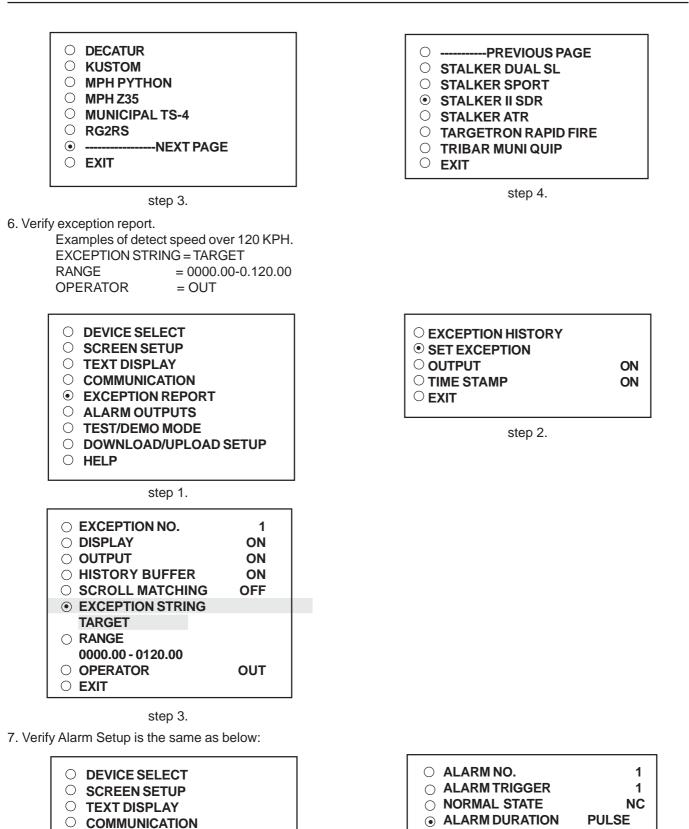


5. To main programming menu and select the Radar Gun Interface.





step 2.



STREMUTH IN THE BUSINESS Portable Speed DVR System

 $\bigcirc$  EXCEPTION REPORT

O DOWNLOAD/UPLOAD SETUP

step 1.

• ALARM OUTPUTS

○ TEST/DEMO MODE

○ HELP

step 2.

FLASH \*

**DWELL** 

002

○ FLAG TYPE

⊖ EXIT

○ FLAG DURATION

**○** TRIGGERED TEXT

# APPENDIX C

8. Self test with radar gun demo. Run this demo mode, The Radar information included TARGET, PATROL, LOCK virious range of data. Press "RESET" button to clear demo.

0	DEVICE SELECT
$\bigcirc$	SCREEN SETUP
$\bigcirc$	TEXT DISPLAY
$\bigcirc$	COMMUNICATION
Ο	EXCEPTION REPORT
$\bigcirc$	ALARM OUTPUTS
ullet	TEST/DEMO MODE
$\bigcirc$	DOWNLOAD/UPLOAD SETUP
$\sim$	

O HELP

step 1.

$\sim$	DEMO	
$\odot$	DEMO	
Ο	DEMO ON POWER UP	OFF
Ō	EXIT	-

step 3.

- 9 Cross Hair Setup
  - DEVICE SELECT
    SCREEN SETUP
    TEXT DISPLAY
    COMMUNICATION
    EXCEPTION REPORT
    ALARM OUTPUTS
    TEST/DEMO MODE
    DOWNLOAD/UPLOAD SETUP
  - $\bigcirc$  Help

step 1.

• CROSS HAIR	ON
	DAY
○ VERTICAL DAJUST	
○ HORIZONTAL ADJUST	
<sup>⊖</sup> EXIT	
L	

step 3.

- O PORT 1 TEST
- O DATA CAPTURE
- RADAR GUN DEMO
- O VERSION ID
- O EXIT

step 2.

0 sc	REEN BLANK	20
	SPLAY LINES	10
	SPLAY FORMAT	ТОР
	NE COMPRESS	OFF
O SP	ACE COMPRESS	OFF
O LE	FT JUSTIFIED	OFF
0 SC	ROLL DELAY	OFF
	SPLAY	ON
• CR	ROSS HAIR	
0 EX	IT	

step 2.

# TYPICAL PORTABLE SPEED DVR OPERATION

- 10. Power up your radar gun interface and connect the cable to DB9M of Portable Speed DVR System.
- 11. Change DVR recording to Photo Mode.
- 12. Point the radar to the target and hold the trigger to read the speed of the target. if the range of speed exceed the the range is more than in the setup then Portable Speed DVR System will generate alarm for DVR to capture the image and record to SD CARD.
- **Notes:** 1. This Stalker II SDR is Radar Gun can be tested in house by using "Sound Fork". Press "TEST" button on Radar Gun. There will be no any RS232 Data Output.

2. Exception String Default is "LOCK" to maintain radar gun works as normal mode. Operator will pull the trigger to enable radar gun to read the target speed, and press "LOCK" on the front panel of radar gun to get the lock data. This lock data will be sent consequentially if user is not clear the lock data. To voild Portable Speed DVR System generate many alarms as DWELL, please verify alarm output for alarm type is TIMED. Portable Speed DVR System will generate alarm only 1 times untill Lock data is changed or cleared.

#### MPH-Z35 RADAR GUN



#### Figure 65: MPH-Z35 RADAR Gun with RS232 Connection

- 1. Ensure yours MPH Z-35 included RS232 Connector. This is MPH Option, So advise MPH Industry to enable RS232 Connection, and then Connect the RS232 Data Cable which accomudated Portable Speed DVR System Coonect Power cable for 12VDC 1%, Verify Motion Dection or press "UP" button on DVR Programming Key to disable.
- 2. Verify the SD Card is presented on LCD Display, So ready for recording.
- 3. Verify the DVR Recroding Mode was Photo or Video. Press "DOWN" button for Video Mode
- 4. Setup Time / Date for Portable Speed DVR System and internal DVR



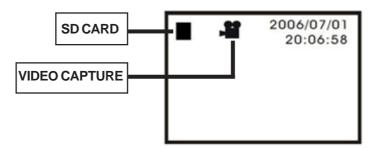
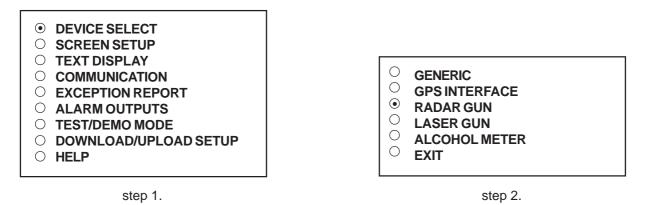


Figure 66: DVR preparation for the configuration of the system.

5. To main programming menu and select the Radar Gun Interface.



- 6. Verify setups, (See Stalker II SDR items 6-9)
- 7. Power up your radar gun interface and connect the cable to DB9 of Portable Speed DVR Systesm.
- 8. Change DVR recording to Photo Mode.Video Mode is easier but it will recording for 20s unstopable, then can change to Photo Mode later.
- 9. Point the radar to the target and hold the trigger to read the speed of the target. if the range of speed exceed the the range is more than in the setup then Portable Speed DVR System will generate alarm for DVR to capture the image and record into SD CARD.
- **Notes:** 1. This MPH-Z35 is Radar Gun can be tested in house by using "Sound Fork". Press "TEST" button on Radar Gun. There will be no any RS232 Data Output.

2. Exception String Default is "LOCK" to maintain radar gun works as normal mode. There are 2 steps of trigger for MPHZ-35, First is enable and read target, and the next is lock target. Operator will pull the trigger into the firs trige and hold to enable radar gun to read the target speed, and pull into insidest to lock the target speed. if lock data is not clear by user. MPHZ-35 will keep to send out RS232 data. To avoid Portable Speed DVR System generate many alarms as DWELL, please verify alarm output for alarm type is TIMED. Portable Speed DVR System will generate alarm only 1 time until lock data is changed or cleared. This will prevent user to forget to clear LOCK data.



#### DOWNLOAD/UPLOAD SETUP USING PC

You can use a Laptop or PC and HyperTerminal program to store configuration from a Portable Speed DVR System to a file. This file can then be uploaded to other Portable Speed DVR System units with the HyperTerminal Program. Use 38400,n,8,1 baud for the PC's baud rate. The Portable Speed DVR System has the ability to upload or download all the programming settings and history files via a PC Windows based application, HyperTerminal Program. Customer can now be saved in a laptop for ease of service and programming. This is accomplished by using a Communication port of the laptop or a USB to RS-232 adapter.

#### Preparation the HyperTerminal and Portable Speed DVR System for Download/Upload Setup

#### Portable Speed DVR System Section

From the Main Programming Menu of Portable Speed DVR System, press the "Up" or "Down" button to move the cursor to "DOWNLOAD/UPLOAD SETUP" and press "Set". The DOWNLOAD/UPLOAD SETUP sub-menu will appear:

^		
	$\odot$	DOWNLOAD SETUP
	Õ	UPLOAD SETUP
	Õ	UPDATE FIRMWARE
		EXIT
	-	

#### Figure 67: DOWNLOAD/UPLOAD SETUP Sub-Menu

#### HyperTerminal Program Section

First, you have to set the baud rate HyperTerminal to 38400bps. See PC Windows below to verify proper HyperTerminal setup. Run the HyperTerminal program then Click File menu and select Properties on drop-down menu.

🏀 RS-232 - HyperTerminal	
File Edit View Call Transfer Help	
New Connection	
Open	
Save	
Save As	
Page Setup	
Print	
Properties	
Exit Alt+F4	
	<u> </u>
Displays the properties of the current session	





You will see the Properties window then select communication port. Click the configure... button.

🇞 R5-232 - Hyper1	RS-232 Properties	? ×	
File Edit View Ca	Connect To Settings		
	RS-232 Change Icon		
	Country/region: Thailand (66)		
	Enter the area code without the long-distance prefix.		
	Area code: 66		
	Phone number:		
	Connect using: COM4		
	Configure ✓ Use country/region code and area code ← Redial on busy		<b>_</b> _
<b>I</b> isconnected	OKCa	ncel	Capture Print

Figure 69: Connect to Menu

Choose Bits per second to 38400bps and Flow control is None.

File Edit View Ca   Connect To Settir   Settir Port Settings   Bits per second:   38400   Bits per second:   Stability:   Port Settings   Data bits:   Bits per second:   Stability:   Port Settings   Data bits:   Parity: None   None   Port Settings Data bits:   1   Data bits:   8   Phone number:   Connect using:   Vuse country/re   Prediat on busy   Restore Defaults	And shares the second se	RS-232 Properties	COM4 Properties	? >
RS-232   Country/region:   Enter the area coc   Area code:   Phone number:   Phone number:   Connect using:   Use country/re   Redial on busy     Restore Defaults		Connect To Settir	Port Settings	
Country/region:   Enter the area coo:   Area code:   F   Phone number:   Phone number:   Connect using:   Connect using:   Use country/re   Redial on buss		🦓 RS-232		
Enter the area coc   Area code:   Phone number:   Phone number:   Connect using:   Image: Connect			Bits per second: 38400	
Enter the area coc Area code: Phone number: Connect using: Use country/re Redial on bus;		Country/region:		
Phone number: Connect using: Use country/rr Redial on busy Restore Defaults		Enter the area coc		
Connect using:     [       Image: Stop bits:     1       Image: Stop bits: Stop bits:     1       Image: Stop bits: St		Area code: 🛛 🖡	Parity: None	
Connect using: ( Use country/re Redial on bus; Restore Defaults		Phone number:	Stop bits: 1	6
Use country/re Redial on bus;		Connect using: [(		
Restore Defaults		[	Flow control: None	
		Redial on busy	Restore Defa	ults
			OK Cancel /	Apply
	A Disease shad			чрруу труппс





#### UPLOAD SETUP

From the Preparation HyperTerminal for Download/Upload Setup section. Click Transfer menu and select "Capture Text.." on drop-down menu then Capture text window will appear. Set the file name and choose a location to store the configuration of Portable Speed DVR System, then click Start button and then click Call menu and select Call on drop-down menu.

🍓 RS-232 - HyperTerminal			
File Edit View Call Transfer Help			
🗅 😅 🍘 🌋 📰 Send File			
Receive File	Capture Text	?	×
Capture Text			
Send Text File	Folder: C:		
Capture to Printer	File: C:\Configuration1.TXT	Browse	
	_		
•		Start Cancel	
Creates a file of all incoming text			1

Figure 71: Capture Text Menu

From the Preparation Portable Speed DVR System for Download/Upload Setup section. Press the "Up" or "Down" button to move the cursor to "UPLOAD SETUP" and press "Set". The data transfer will begin and show count number on the screen.

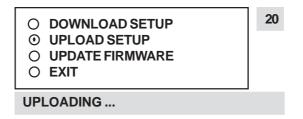


Figure 72: Upload Setup Processing

🍓 RS-232 - HyperTerr	ninal			
File Edit View Call	Transfer Help			
D 🖻 🍘 🔏 💷	Send File			
	Receive File	L	000000000000000000000000000000000000000	0000(.]
\$7F2000000	Capture Text 💦 🕨 🕨	Stop	000000000000000	
\$7F4000000	Send Text File	Pause	000000000000000	
\$7F6000000 -		Resume	00000000000000000	0000(
\$7F800000L	Capture to Printer	0000000	000000000000000000	0000(
\$7FA000000	000000000000000000000000000000000000000	00000000	000000000000000000000000000000000000000	0000
11				
Stop capturing				

#### Figure 73: Capture Text Stop Menu

Now, The configuration of Portable Speed DVR System is stored in that file, Configuration1.TXT. Click on Transfer menu and select Capture Text on drop-down menu then select stop menu.



#### DOWNLOAD SETUP

From the Preparation Portable Speed DVR System for Download/Upload Setup section. Press the "Up" or "Down" button to move the cursor to "DOWNLOAD SETUP" and press "Set".

<ul> <li>DOWNLOAD SETUP</li> <li>UPLOAD SETUP</li> <li>UPDATE FIRMWARE</li> <li>EXIT</li> </ul>	01		
DOWNLOADING			

Figure 74: Download Setup Waiting

From the Preparation HyperTerminal for Download/Upload Setup section. Click Transfer menu and select "Send Text File.." on drop-down menu.

🏀 R5-232 - HyperTerminal				
File Edit View Call	Transfer Help			
02 3 1	Send File			
	Receive File			
	Capture Text			
	Send Text File			
	Capture to Printer			
		· · · · · · · · · · · · · · · · · · ·		
	•			
Sends a text file to the re	emote system	1.		

Figure 75: Send Text File Menu

Select the configuration of Portable Speed DVR System that desired, then click on the Open button

🏀 R5-232 - HyperTerminal						
File Edit	Send Text File					? ×
0 🖻 👔	Look in:	🥌 Local Disk (C:)	•	G 💋	⊳ 🖽	
	My Recent Documents	ConfigRadar Documents and S Firmware	Settings			
Sends a text	My Network Places	File name:	Text file (*.TXT)		•	Open Cancel

Figure 76: Select Configuration Menu

When the process of Download Setup was success. The screen of the Portable Speed DVR System is show this information and reset to operation mode.

Figure 77: Successful Download Configuration





#### PRINTING OPTION MODULE

Usually, The Portable Speed DVR System can record data into the SD Card and use of these infomation must be printed out in the office only. To solve this problem, We can use the Printing Option Module instead of the SD Card allows the Portable Speed DVR System to print out immediately. Printing Option Module can support the Sony Digital Photo Printer, Model DPP-FP67, or compatible printer.

Insert the Printing Option Module into the SD Card slot on the Portable Speed DVR System then connect the Printing Option Module to the PictBridge port of the Sony Digital Photo Printer via USB Cable (Type A Male to Type A Female). Insert the SD Card into SD Card slot of the Printing Option Module then install the Printing Option Cable for connect between Printing Option Module and Portable Speed DVR System.

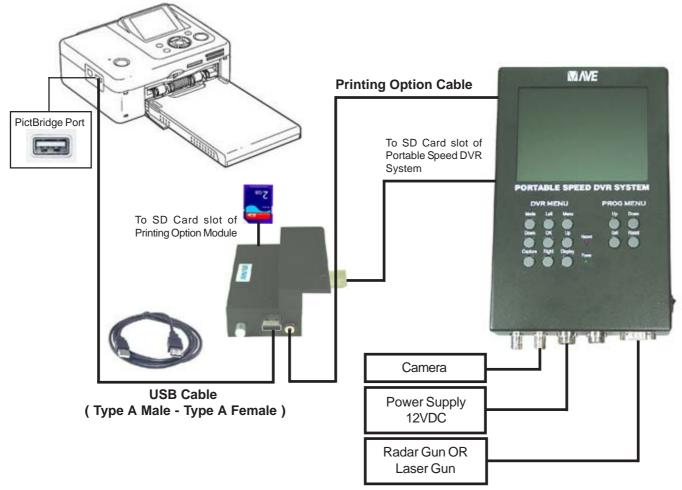


Figure 78: Connection Diagram between Printing Option Module and Portable Speed DVR System

Typically, The Portable Speed DVR System is connected to the SD Card via the Printing Option Module for store the data into SD Card. Pressing a button on the Printing Option Module allows the establish connection between SD Card and Sony Digital Photo Printer to print out the information desired.

This figure is a Printer Option Module which is installed into the Portable Speed DVR System correctly.





# WARNING!

### DOING A MASTER RESET CLEARS ALL PROGRAMMING AND THE Portable Speed DVR System DEFAULTS TO THE FACTORY SETTINGS.

If you have difficulty entering the main-menu or you changed EPROMS in your Portable Speed DVR System 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 Portable Speed DVR System.

Upon powering up the Portable Speed DVR System 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.

## APPENDIX G

#### LIMITED WARRANTY

# LIMITED WARRANTY

#### (Terms and Conditions)

For **1 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.

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

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

#### 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.





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