MDVR

USER GUIDE

INTERFACE V6.0

Mobile Digital Video Recorder

(16 Channels HDD MDVR -720P)

Dual Hard Drives

Please Note: Due to our constant efforts of product improvement, the original vendor and or manufacture reserves the sole right to change product specifications, functions, operations and perform other modifications at our sole discretion without notification to our clients. We strongly advise our clients to monitor our web site for notifications and implementing changes as made necessary regarding the above.

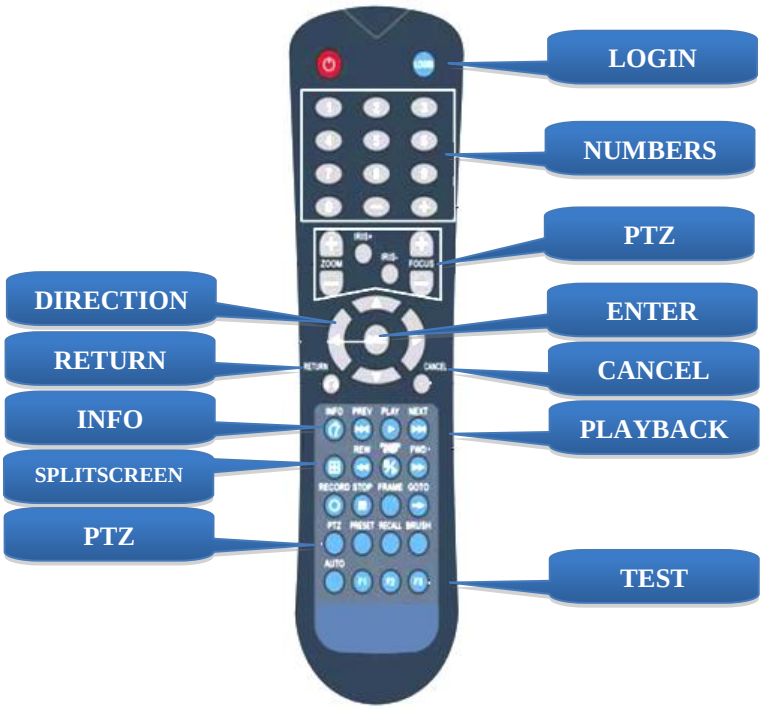
We also strongly encourage constructive User feedback regarding errors, omissions and especially, useful feature and accessory upgrades as well as innovative User implementation of our products to creatively solve problems.

USING THE USER INTERFACE (UI)

The MDVR User Interface is designed to be clear, concise, consistent and easy to use for system setup, use and change. All selections and data entries are thru the use of the IR Remote Control (IRC) and the Virtual Keyboard. Read the dedicated pages regarding their use and the operational cues within the Screen Features.

User Index

IR REMOTE CONTROL (IRC) FUNCTION KEYS



NOTE: Insert two new AAA alkaline batteries (User supplied) prior to the first use of the IRC.

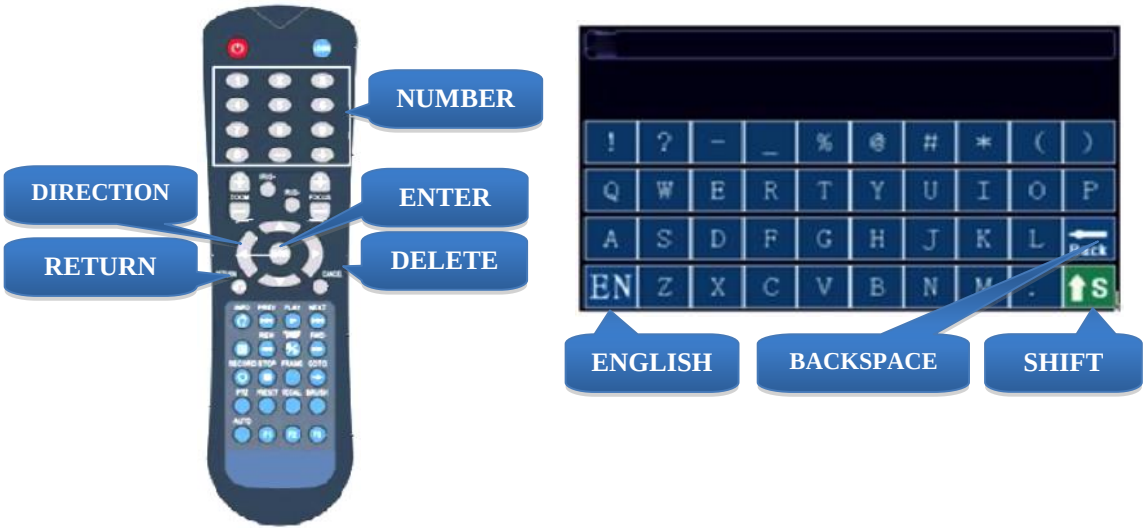
Function Key Color Code used in the User Guide:

ENTRY	IRC (Above) function key: Black background with white lettering
SAVE	MDVR Onscreen function key: Blue background with white lettering. A dark blue background appears it is selected by the IRC. Press **ENTER** to complete the function.

Operation and setup of the User Interface involve onscreen selection and key entry using the IRC:

LOGIN	Press the **LOGIN** button to enter the 1.0 USER LOGIN Screen.
INFO	Press to display selected Info Screens overlaid on the Video
SPLITSCREEN	Allows switching between four-screen and single screen views onthe LCD Monitor.Press Screen–Split key to display 5 screens.Press **1**, **2**, **3**, **4**, **5**or **8**to display a full screen view of the desired camera view
NUMBERS	Press number (**0**-**9**) to enter (10=010,11=011…….)
CANCEL	Press to delete last character entered
RETURN	Press to Return to the previous screen
PAUSE/STEP	Press during the Play Back mode to Pause and Single Step thru the Video. Press Direction (arrow) keys to resume normal playback speed
PLAY	Press during Play Back mode to start video playback after you have searched and selected the video file to review
FORWARD	Press successively to Fast Forward (**2X**,**4X**,**8X**,**16X**) the video during the Play Back mode
REW	Press successively to Reverse (**2X**,**4X**,**8X**,**16X)** the video during Play Back mode
PTZ FUNCTION KEYS	Press to control various PTZ functions. Including Pan, Tilt, Zoom, Focus, Presets, etc. Note: PTZ Video Channel view must be selected prior to use
F1, **F2**, **F3**	Used for special test functions

IR REMOTE CONTROL USE FOR DATA ENTRY (IRC)



The IR Remote Control (IRC) is used in conjunction with the MDVR Virtual Keyboard to enter **alpha-numeric** data into the MDVR OS selection and data fields. The Virtual Keyboard will automatically appear as needed. Use the IRC Number Keys for Fields requiring numbers only.

Types of Data Fields used in the GUI:

(DATA FIELD)	The MDVR system will post the data. (No User entry)
USER ENTRY FIELD	The User will enter data using the IRC and/or the Virtual Keyboard will automatically be displayed when needed.
DROP DOWN MENU	The User will select one of the choices offered in the drop down Menu.

To enter/delete characters using the Virtual Keyboard and the IRC:

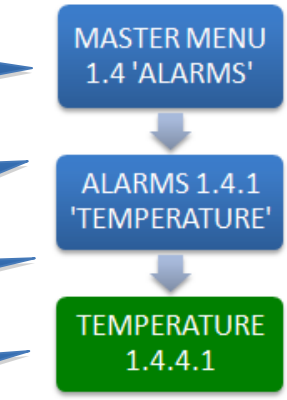
Lower Case Letters and Numbers	Move to the character and press **ENTER**
Upper Case Letters	Select ⇧S on the Virtual Keyboard and press. **ENTER** Select the character and press **ENTER**
Delete Character	Press **CANCEL**
Switch Languages	Select **EN** on the Virtual Keyboard. Press **ENTER** to toggle the keyboard from English to Chinese and back
Return to Previous Screen	Press **RETURN**

TYPICAL UI PAGE LAYOUT

SCREEN ID And NAME

1.4.4.1 TEMPERATURE SETTINGS

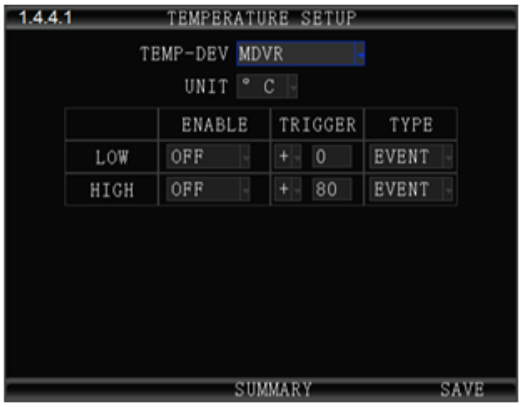
FLOWCHART (SYSTEM MAP)



PRIOR SCREEN

YOU ARE HERE

NEXT SCREEN



USAGE SUMMARY

The **1.4.4.1TEMPERATURE SENSOR SETUP** screen allows the User to trigger the MDVRs Recording Mode based on low and high temperature thresholds determined by temperature settings entered. Either or both High and Low settings may be entered independently.

HOW TO

ITEM NAME AND USAGE

DATA ENTRY FIELDS

ACTION BAR KEYS

TEMP-DEV	Select the Sensor used as the temperature reporting source: **MDVR** MDVR internal temperature (Standard) **DISK** DISK temperature (Standard) **TEMP EXT (1 – 4)** External temperature sensors, up to 4 (Optional)
UNIT	Select the unit of temperature measurement: **F** Fahrenheit **C** Celsius
RANGE	There are two settings (each optional) to create the upper and lower temperature range: **LOW** Low temperature setting row **HIGH** High temperature setting row
ENABLE	Select the operational status of this function: **ON** The selected functions are 'On' **OFF** The selected functions are 'Off'
TRIGGER	Enter the Temperature limits and select + or – indicators as needed: **LOW** The Low temperature to trigger a response **HIGH** The high temperature to trigger a response
TYPE	Select one of two options: **ALARM** Event will be, recorded, logged and searchable as an ALARM **SYSTEM** Event will be, recorded, logged and searchable as SYSTEM

Action Bar Keys (Select, then press **ENTER**):

SUMMARY	To move to the 1.4.4.1.1 TEMPERATURE SUMMARY PAGE
SAVE	To save and activate the new settings

MENU SCREEN LAYOUT

The 1.1 MASTER MENU screen shown above is an example of a typical UI Menu or sub Menu. The Menu acts as a general gateway to more specific Sub Menus and Data Screens for entering data and the settings of various MDVR functions, features and actions. In addition, if the User Guide isn't readily available, the User may simply move from icon to icon and read the Highlighted Icons Content list to search for access to a content specific screen.

Use the IR Remote Control (IRC) to move to and highlight the desired icon.

A content description of the highlighted Icon will appear near the bottom of the Menu screen listing the main topic screens associated with this Icon

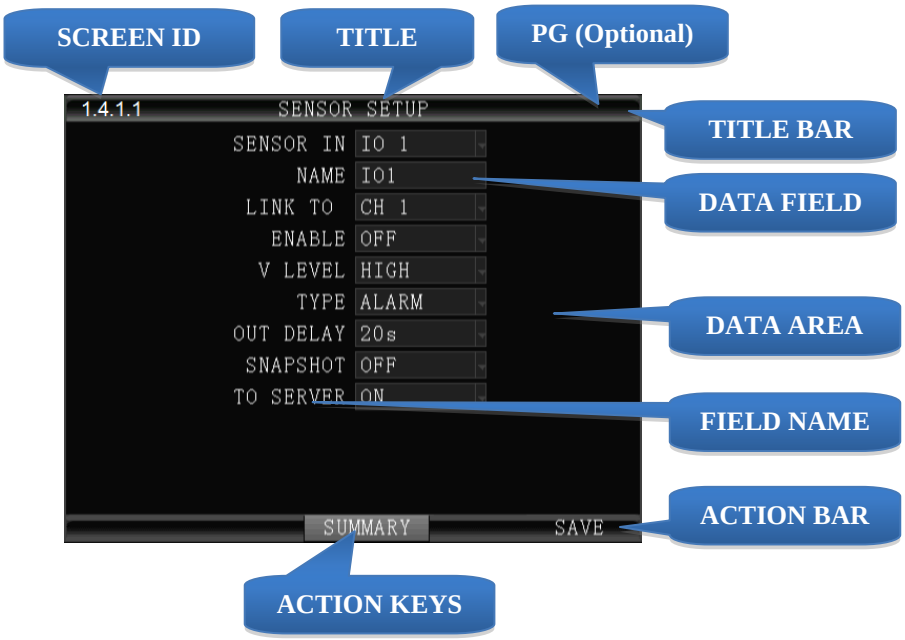
There are three major sections:

TITLE BAR	The top blue bar consists of: **ID** Unique number to refer to a particular Screen/Menu for support purposes **TITLE** Name of the screen for functional reference
ICON AREA	Each ICON relates to specific Sub Menus and Data Screens for entering data and the settings of various MDVR functions, features and actions
HIGHLIGHTED ICON CONTENT	A list of the specific Sub Menus and Data Screens available through the highlighted Icon for entering data and the settings of various MDVR functions, features and actions

Use the IRC Direction Keys to highlight the desired ICON, then:

ENTER	Press to move to the associated Sub Menu or Data Screens
RETURN	Press to return to previous screen

DATA SCREEN LAYOUT



The Data Screen enables a User with appropriate authorization to view, setup and change the MDVR UI fields, features and functions.

There are three major sections:

TITLE BAR	The top blue bar consists of: **ID** Unique number to refer to a particular Screen/Menu for support purposes **TITLE** Name of the screen for functional reference **PG** Page number used only for the INFO Screens overlaid on the video
DATA AREA	The data area consists of the fields necessary to setup MDVR options, features and functions, generate and report monitored activities, etc. For detailed definitions see the DATA AND ACTION FIELDS page in this User Guide
ACTION BAR	The bottom blue bar has the Action Keys (CAPITAL White Letters) necessary to complete the data setup and entry functions associated with that screen. SAVE, NEXT, UP, DOWN, etc. Select the desired key and press **ENTER**

DATA ENTRY AND REPORT FIELDS

There are several different types of Data Fields used within the MDVR GUI:

SYSTEM FILL	( )	Data is automatically entered by the MDVR OS (GPS, Month, Measurement Unit, Device Reading, etc.)
DATA ENTRY	DOOR	Data is to be entered by User using the IRC (Numeric only) or Virtual Keyboard appearing when alphanumeric data entry is needed
DATA ALERT	DOOR	A data field background may change color to indicate a device status change (Green for Set, Red for Alarm, etc.). The User Guide will define this feature for each affected field
DROP DOWN	CH 1	Indicated by a 'Down Arrow' symbol on the right side of the field. The User may use the IRC to select the from a preset list appearing onscreen
DROP DOWN MENU	ALARM ALARM SYSTEM	Appears when the User selects a Drop Down field using the IRC. Move the blue highlight (as shown) to the appropriate entry and press ENTER
DATA ENTRY	DOOR OPEN	Data is to be entered by User using the IRC (Numeric only) or Virtual Keyboard appearing when alphanumeric data entry is needed
CHECK BOX		Move the blue highlight to the data next to the Check Box. Press ENTER to select. Different results may occur depending on the GUI screen settings. The User Guide will define this feature as necessary. See examples below:

CHECK AND GO

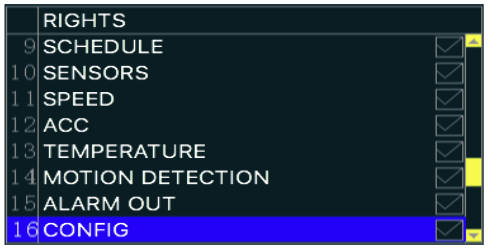
Single Selection and Go To:

Select one item (Highlight)

Press **ENTER**

Relevant screen appears

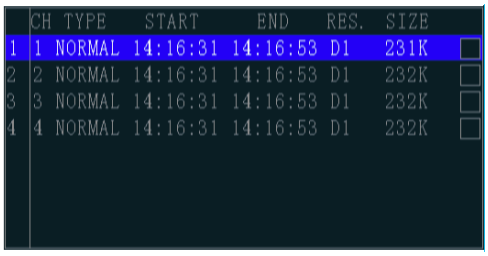
CHECK LIST



Multiple Selection and Save:

Select one or more items for list
Press **ENTER** each time
Select **SAVE** and save list
Press **ENTER**
Proceeds to relevant screen

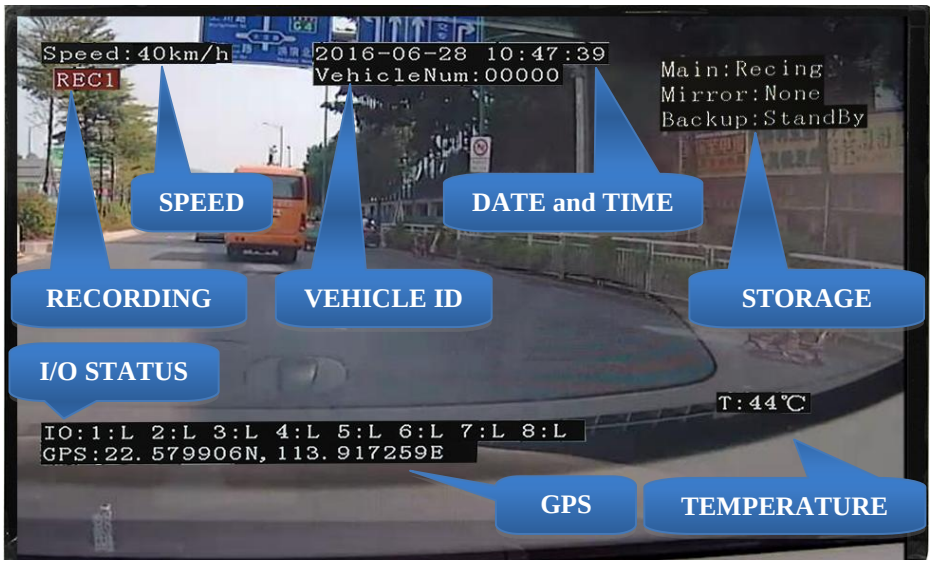
CHECK AND PLAY



Playback List:

Select one or more items
Press **ENTER** each time
Select video to view
Press **PLAY** , List will be displayed at end of video

VIDEO SCREEN LAYOUT



Screen View with Data Overlay

Displays current or recorded camera view(s) and/or information (Previously set in the UI) overlaid on video, including System Messages, Alerts and Status. Requires a properly connected and setup Display Monitor (Optional)

View up to sixteen MDVR video screens are for real time or playback on a single channel A/V Monitor:

TWO VIEWS

THREE VIEWS

FOUR VIEWS

SIXTEEN VIEWS

To Change Views:

SPLITSCREEN	Press to enter SPLIT SCREEN Mode
1, **2**, **3**,**4**,**5**or **16**	Press to display a full screen view of the desired camera view

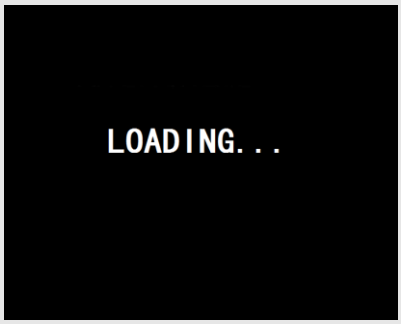
DEVICE START-UP

The following assumes the User has confirmed the MDVR is correctly installed according to the manufacturers installation instructions and is correctly configured for use:

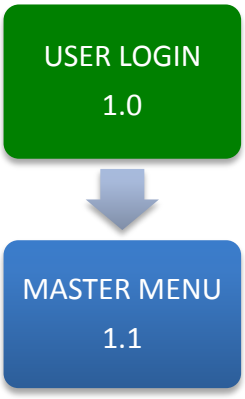
Pre-check before Startup:

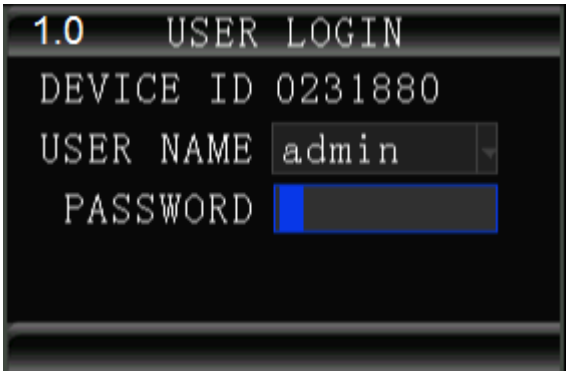
LCD MONITOR	Connected to either the rear I/O Cable Monitor Connector or the A/V Jack on the Front Panel
SECURITY PANEL	Closed
POWER SOURCE	Connected and MDVR STATUS PANEL PWR indicator (blue) is lit

Startup Sequence:

CHECK POWER	The PWR indicator (blue) will be lit on the front Status Panel to show the MDVR is receiving power. If the Monitor is powered by the MDVR is may not display anything until the 0.0 LOADING PAGE appears
INSERT KEY	Insert key into Security Lock located on the front panel
POWER ON	Turn the key counterclockwise 90^0 from the UNLOCK position
P.O.S.T.	Pre-Operation System Test. It is an automatic and required comprehensive test of the operational status during startup of the MDVR requiring about 48 seconds to complete.
LOADING SCREEN	The Loading Screen will be displayed during the P.O.S.T. If not, then check if Monitor is power On and the correct viewing channel set 
SAFETY MESSAGE	The LOADING SCREEN will also display a Driver Safety Message
START UP VIEW	The Startup Screen will be displayed. The camera view(s) will be as set in the last setup of the MDVR 
CHECK STATUS	Use the IRC to verify the operational status of the MDVR: **INFO** Press to view 1.8.1 SYSTEM INFO PG 1 OF 3 **NEXT** Select, then: **NEXT** Press to view PG 2. Repeat to view PG 3

1.0 USER LOGIN





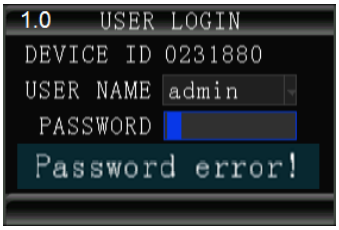
The **1.0 USER LOGIN** screen is used to provide secure access to the MDVR settings by requiring User Name and Password entry for access to the MDVR features, functions and settings.

For security purposes change original USER NAME and PASSWORD as soon as possible.

To Login:

LOGIN	Press
USER NAME	Enter **ADMIN**
PASSWORD	Enter **888888**

Note: If the USER NAME and PASSWORD do not match, a warning prompt will appear in red below the Password field to re-enter the correct data. If so, press **RETURN** to return to the LOGIN screen and enter the correct data.

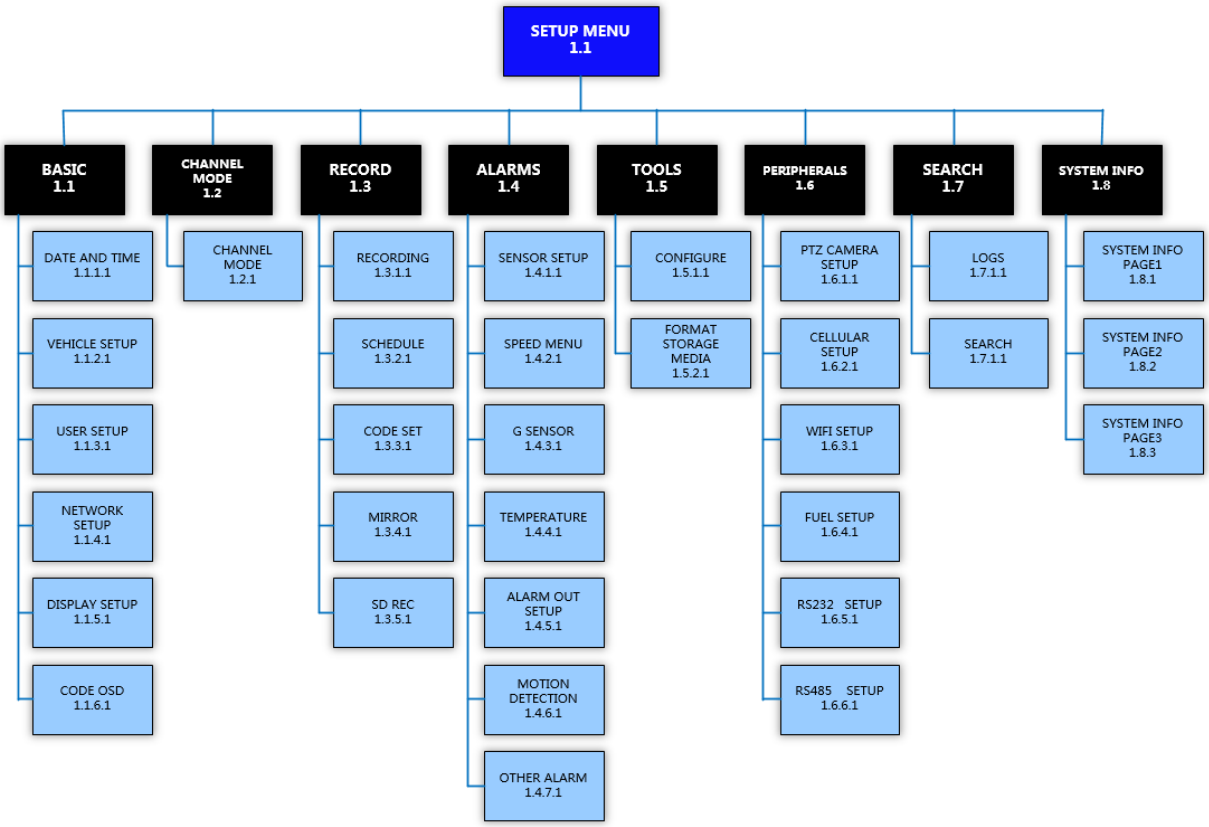


Once the correct User Name and Password have been entered and accepted the 1.1 MASTER MENU will appear:

To setup the initial User Name and Password go to the **1.1.3.1 PASSWORD SETUP** screen:

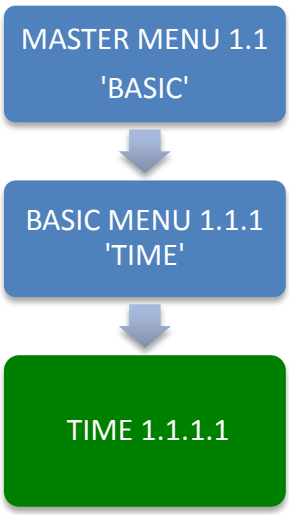
1.1 MASTER MENU

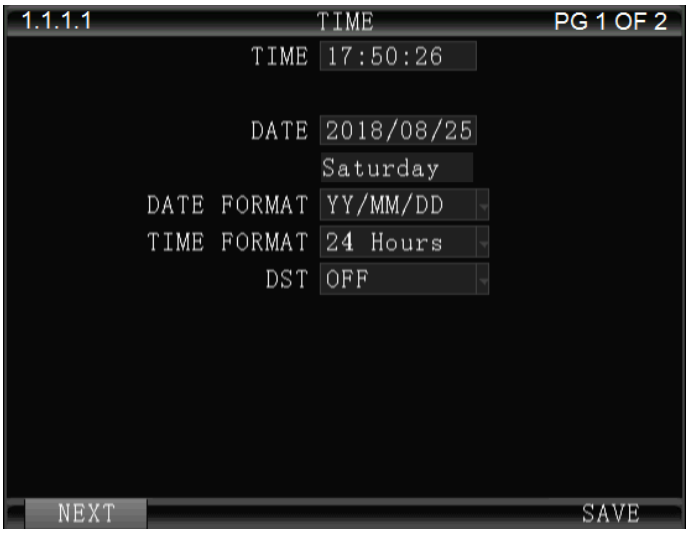
The **1.1 MASTER MENU** allows access to eight sub menus allowing the User, depending on their System Access Credentials, to access, search, view and change features or functions:



MASTER MENUFLOWCHART

1.1.1.1 TIME (PG 1 OF 2)

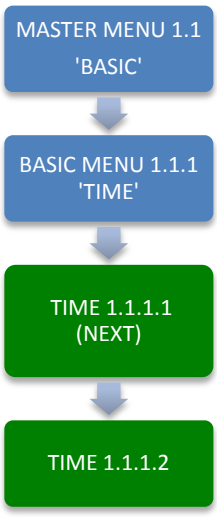




The **1.1.1.1 TIME** screen allows the User to select or enter data to set the System Time and other basic time related properties of the MDVR.

DATE	Enter the current date in the format requested
TIME	Enter the correct local time in the format shown
(DAY)	Auto filled by SYSTEM (No User entry)
DATE FORMAT	Select to one of three possible date formats (**Year-Month-Day, Day-Month-Year, Month-Day-Year)**.
TIME FORMAT	Select one of two Time Formats: **12 HOUR** 0 to 12 hours **24 HOUR** 0 to 2400 hours
DST	**D**aylight **S**avings **T**ime. Select from two options: **OFF** The default system setting. The User will have to manually change the System Time to compensate for the DST time changes if applicable. **ON** Enables the MDVR to automatically change the System Time based on Daylight Savings Time (DST)
ADJ	Select the amount of time, if necessary, to be added to the GMT set time for local accuracy
START	Select the Day DST is to start
MONTH	Select the Month DST is to start
END	Select the Day DST is to end
MONTH	Select the Month DST is to end

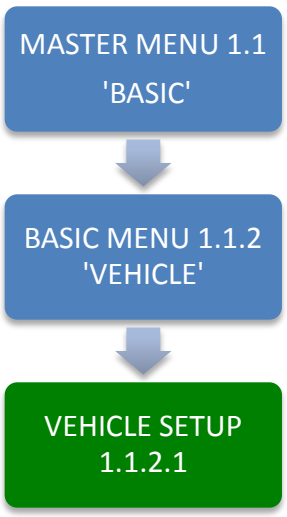
1.1.1.2 TIME (PG 2 OF 2)

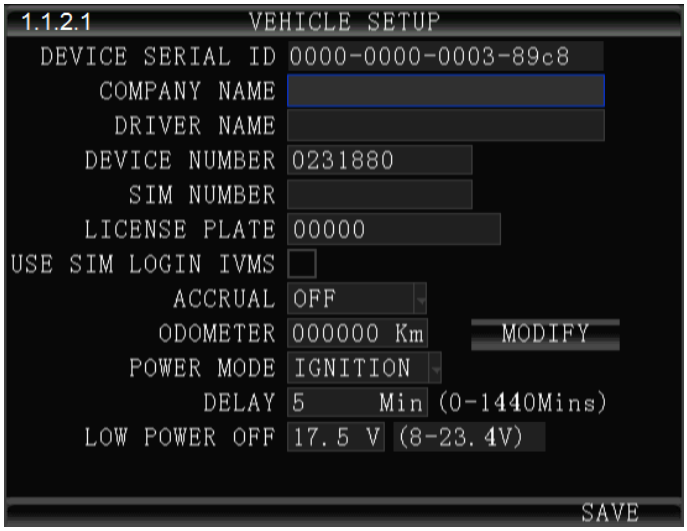


The **1.1.1.2 TIME** screen allows the User to select or enter data to set the System Time and other basic time related properties of the MDVR.

TIME ZONE	Enter the GMT Time Zone setting for your location
PLUS	Select the additional time to add to the GMT time to be accurate locally
TIME SOURCE	There are two methods of updating the System Time: **MANUAL** The User will have to update the System Time. **GPS** The GPS system will automatically update the System Time each time it accesses the International GPS System.
TIME CHECK	Enter time for the MDVR to use GPS to reset onboard time if necessary
MAINT	Select the operational status of this function: **ON** The selected functions are 'On' **OFF** The selected functions are 'Off'
M. TIME	Enter the time the MDVR is to be turned 'Off', then 'On'
SCREEN OFF	The device has no operation and automatically goes to the monitoring interface.

1.1.2.1 VEHICLE SETUP





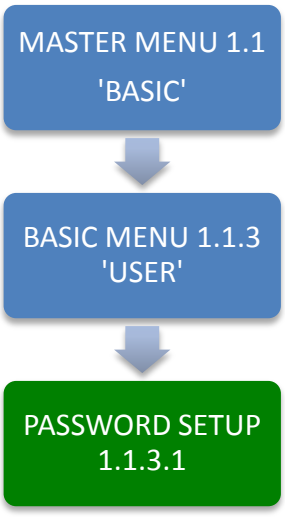
The **1.1.2.1VEHICLE SETUP** screen is used to enter data and enable functions related to the company, vehicle, driver, mobile phone number and power related operation. The DEVICE NUMBER is the only field **required** to have data entered.

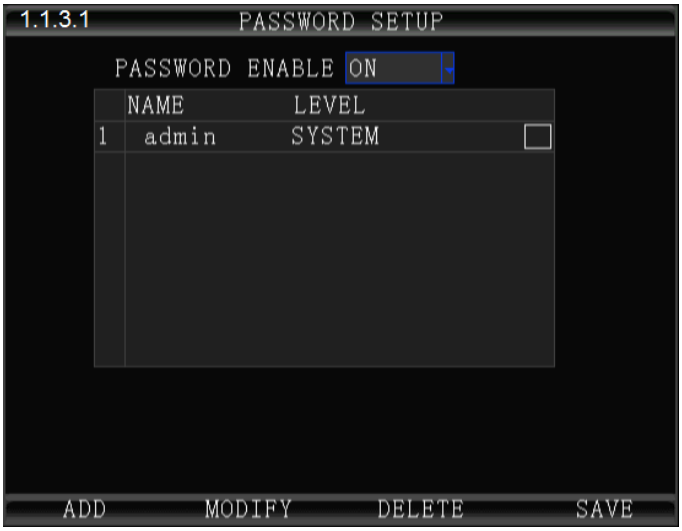
DEVICE SERIAL ID	Unique number assigned by factory.
DEVICE NUMBER	Unique number (Up to 7digits) to display on Video Display, be recorded with the Video files and ID the Vehicle to CMS
COMPANY NAME	Enter company name (Up to 19 characters)
DRIVER NAME	Drivers name or ID (Up to 19 characters)
SIM NUMBER	Phone number for the MDVR contained SIM Card if installed
ACCRUAL	Select from two ODOMETER options: **ON** Odometer will add (accrue) distance traveled based on GPS **OFF** Function disabled
ODOMETER	Enter starting mileage or kilometers if ACCRUAL function is 'ON'
LICENSE PLATE	Enter License Plate characters (Up to 8 characters)
POWER MODE	Select from two options: **TIMER** MDVR power will turn 'Off ' and 'On' at preselected times. **IGNITION** MDVR power will be controlled by the Ignition Switch (Select the ignition, there is a **delay** shutdown function)
POWER ON	Enter time to start MDVR. Note: TIMER Mode must be selected.
POWER OFF	Enter time to end MDVR. Note: TIMER Mode must be selected.
LOW POWER OFF	Enter the voltage level to turn Off the MDVR to prevent further drain on the vehicle battery when it is low

Action Bar Keys (Select, then press **ENTER**):

CHANGE ODOMETER	To enter new distance related numbers into the ODOMETER field
SAVE	To save the new settings 1.1.2.1 VEHICLE SETUP screen will remain showing

1.1.3.1 PASSWORD SETUP (Users)





The **1.1.3.1 PASSWORD SETUP** screen allows setup of two levels of Password protected access to the MDVR UI. The ADMIN User account must have at least its Password changed first. Use the Action Bar keys to add, modify or delete User Accounts.

After the initial STSTEM (ADMIN) User Account has at least its Password changed and saved it will be necessary to login again using the new Password. ***WARNING: Store the ADMIN Password in a secure location. If it is lost or forgotten you will have to contact the manufacturer to regain access to the MDVR OS.***

NOTE: For security purposes it is strongly recommended the Administrator setup and enable the Password function. The default Login: ADMIN Password: 888888

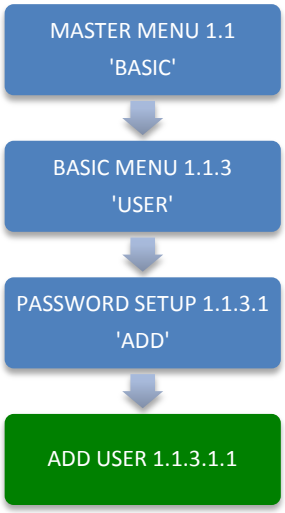
The MDVR Operating System is protected and accessed by two levels of password authority:

SYSTEM	Select from two options: Grants unlimited access and change privileges, including creating User Accounts, Passwords and restricted access Rights
GENERAL	Provides Password, limited access and change Rights
PASSWORD	Select from two options: **ON** Password protection is enabled **OFF** Password protection is off
NAME	User Name list
LEVEL	Indicates the System Access Level granted by the ADMIN (No User Entry)

Action Bar Keys (Select, then press **ENTER**):

ADD	To Add new User account 1.1.3.1.1 ADD USER screen
MODIFY	To Modify a User settings 1.1.3.1.2 MODIFY USER screen
DELETE	To Delete a User access 1.1.3.1.3 DELETE USER screen
SAVE	To Save the new settings 1.1.3.1 PASSWORD SETUP screen will remain

1.1.3.1.1 ADD USER



The **1.1.3.1.1 ADD USER** screen allows SYSTEM level Users to add SYSTEM (total access) or GENERAL (limited access) level Users for setup and operation of the MDVR User Interface. A total of eight User accounts are allowed.

After a User Account is entered and saved it will be necessary to login again using the new Password.

To add a User Account:

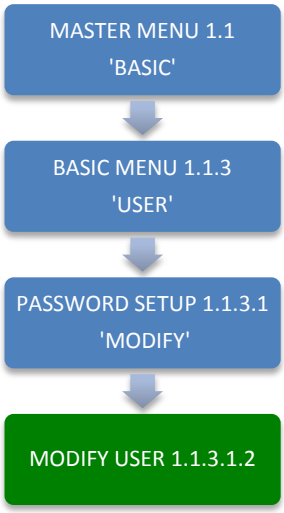
NAME	Enter Users Name
LEVEL	Select from two options: SYSTEM Grants unlimited access and change privileges, including creating User Accounts, Passwords and restricted access Rights GENERAL Provides Password, limited access and change Rights
PASSWORD	Enter Users 6 digit Password (Numbers only)
CONFIRM	Re-enter the same User Password
RIGHTS	A title for the list of the User screens allowing setup and change of the MDVR features. Select as necessary
CHECKBOX ☐	Select the User Access (setup and change) Rights by moving the blue highlight to the desired Rights Check box and pressing **ENTER**. Repeat process until list is complete

Confirm the new settings are correct and save the file.

Action Bar Keys (Select, then press **ENTER**):

SAVE	To save and the 1.1.3.1 PASSWORD SETUP screen will appear

1.1.3.1.2 MODIFY USER



The **1.1.3.1.2 MODIFY USER** screen allows SYSTEM level Users to change the parameters of an existing User account.

Once the selected User account is added the 1.1.3.1 PASSWORD SETUP screen will appear. To modify another User account repeat the Modify User account process.

To modify a User Account:

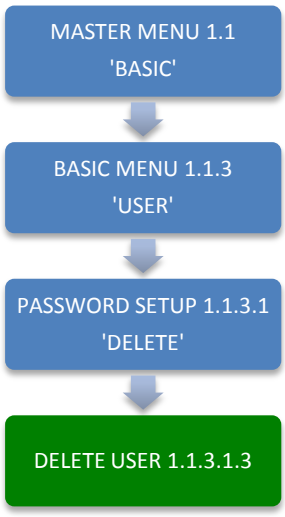
NAME	Enter Users Name
LEVEL	Select from two options: **SYSTEM** Total system access **GENERAL** Limited to specific rights set by the SYSTEM level User
PASSWORD	Enter Users 6 digit Password (Numbers only)
CONFIRM	Re-enter the same User Password
RIGHTS	A title for the list of the User screens allowing setup and change of the MDVR features
CHECK BOX ☐	Select the User Access (setup and change) Rights by moving the blue highlight to the desired Rights Check box and pressing **ENTER** to check or uncheck. Repeat process until list is correct

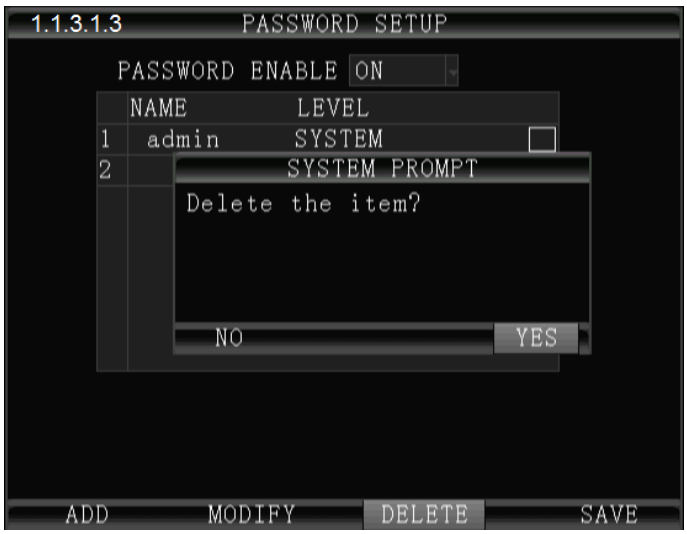
Confirm the new settings are correct and save the file.

Action Bar Keys (Select, then press **ENTER**):

SAVE	To save and the 1.1.3.1 PASSWORD SETUP screen will appear

1.1.3.1.3 DELETE USER





The **1.1.3.1.3 DELETE USER** screen allows a SYSTEM level User to delete an existing User account.

If a User account is deleted by mistake, it will have to be re-entered using the 1.1.3.1.1 ADD USER screen.

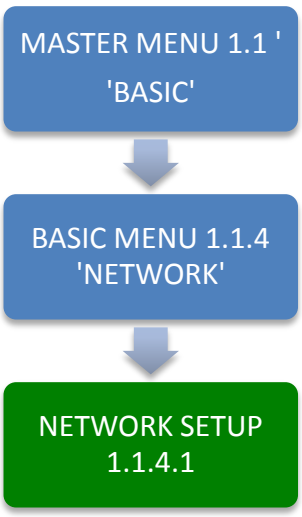
Once the selected User account is deleted the 1.1.3.1 PASSWORD SETUP screen will appear. To delete another account repeat the Delete User account process.

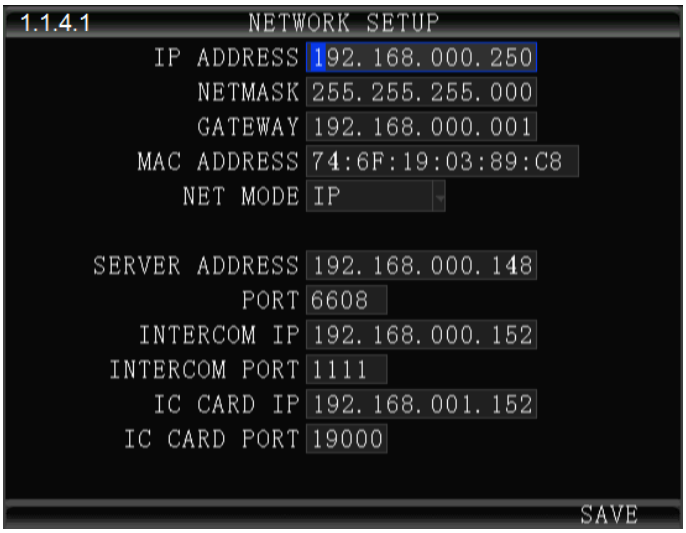
NAME	Users Name (No User entry)
LEVEL	Users Access Level: **SYSTEM** Total system access **GENERAL** Limited to specific rights set by the SYSTEM level User
CHECK BOX ■	Select the User Account to be deleted by moving the blue highlight to the desired Rights Check box and pressing **ENTER**

Action Bar Keys (Select, then press **ENTER**):

DELETE	To delete User account and the 1.1.3.1 PASSWORD SETUP screen will appear

1.1.4.1 NETWORK SETUP





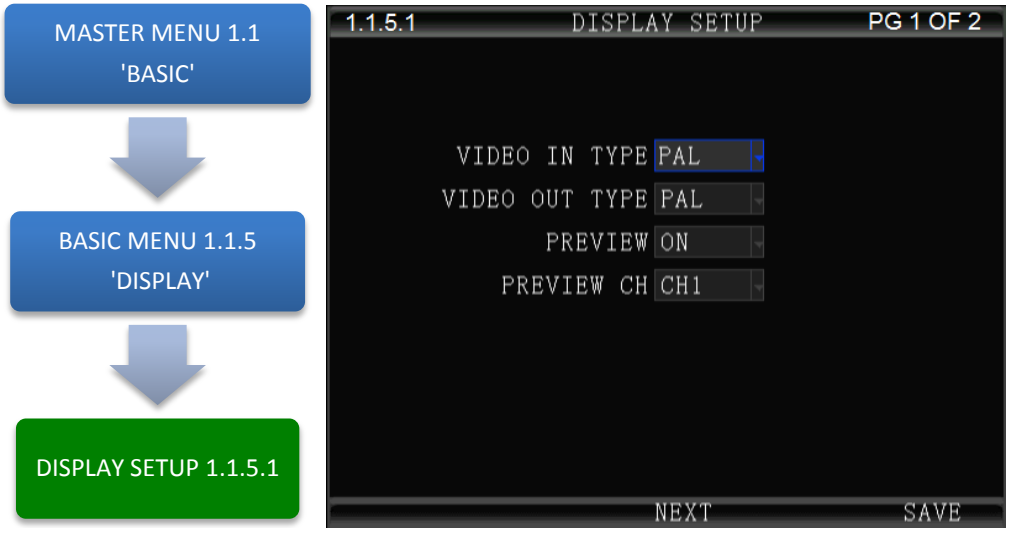
The **1.1.4.1NETWORK SETUP** function enables the User to setup a WIFI based, full duplex (bi-directional), communication between the MDVR and the Central Monitoring Service (IVMS) (optional) for real time, remote monitoring, setup, speed, etc. To utilize these functions, a compatible Internal or External WIFI Modem must be connected and enabled. The Internal Modem must be ordered and installed by the factory. The External Modem is available as an option. Contact your IVMS SysOp(IT) for the data to enter below.

IP ADDRESS	Enter in standard format (000.000.000.000)
NETMASK	Enter in standard format (000.000.000.000)
GATEWAY	Enter in standard format (000.000.000.000)
MAC ADDRESS	The Modem will display the MDVRs MAC Address. It can be User edited
NET MODE	Select one of two options: **DOMAIN** When selected, the **DOMAIN and DNS** Fields will appear **IP** When selected, the **SERVER IP** Field will appear
DOMAIN NAME	(30 Characters)Appears only when **DOMAIN** is selected in the above field
DNS	Appears only when **DOMAIN** is selected in the **NET MODE** field
SERVER ADDRESS	Appears only when **IP** is selected in the **NET MODE** field
CONTROL PORT	(6 digits) Contact CMS SysOp for this field entry
INTERCOM IP	Contact CMS SysOp for this field entry. This feature requires the INTERCOM Kit (Optional)
INTERCOM PORT	(6 digits)Contact CMS SysOp for this field entry**.** This feature requires the INTERCOM Kit (Optional)

Action Bar Keys (Select, then press **ENTER**):

SAVE	To save and activate the new settings

1.1.5.1 DISPLAY SETUP (PG 1 OF 2)



The **1.1.5.1 DISPLAY SETUP** screen allows the selection of video input (Cameras) and video output (Monitor). If the wrong type is selected for the Camera or Monitor, a horizontal 'rolling effect' may be seen.

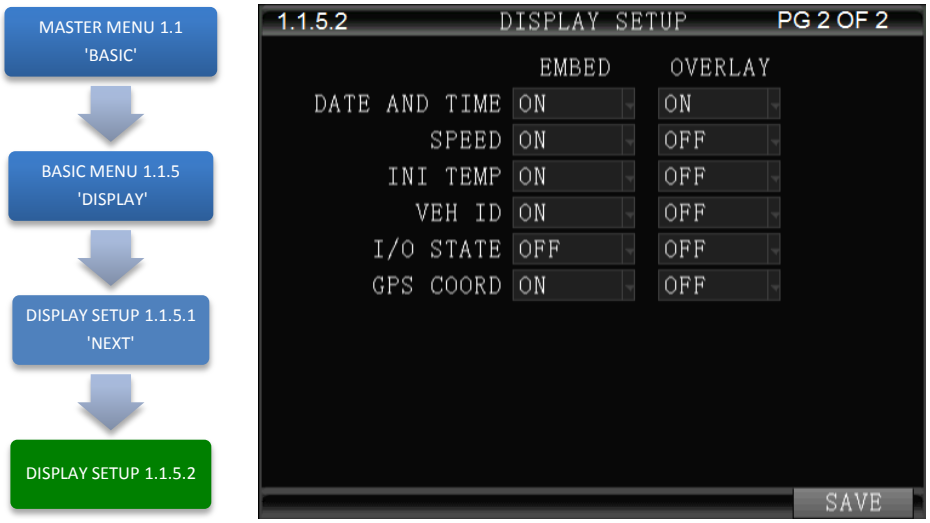
The VIEW function allows the use of a 'hidden camera' whereby its output may be recorded on the MDVR and viewed remotely via the CMS but not displayed on the local Monitor.

VIDEO IN TYPE	Select one of two options to match the Camera Type connected to the MDVR: **NTSC** USA Video standard **PAL** Europe, China, etc**.**
VIDEO OUT TYPE	Select one of two options to match the Monitor Type connected to the MDVR: **NTSC** USA Video standard **PAL** Europe, China, etc.
PRVIEW	Allows use of camera without it being displayed in real time on the monitor. Select one of two options: **ON** The camera view will be displayed **OFF** The camera view will NOT be displayed
PRVIEW CH	Select the channel which will NOT be displayed on the local Monitor

Action Bar Keys (Select, then press **ENTER**):

NEXT	To move to the 1.1.5.2 DISPLAY SETUP screen
SAVE	To save and activate the new settings

1.1.5.2 DISPLAY SETUP (PG 2 OF 2)



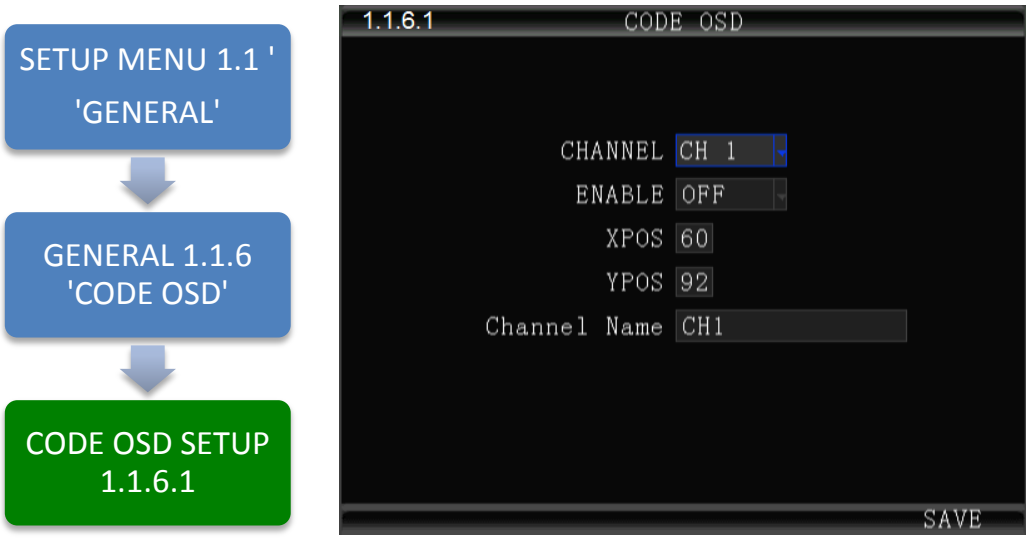
The **1.1.5.2 DISPLAY SETUP** screen allows to the User to select Embed and/or Overlay options for the fields listed on the screen.

EMBED	Data is overlaid and becomes a permanent part of the video
OVERLAY	Data is displayed overlaid on the video but not saved as integral part of the video
DAY/TIME	Select from two options each for EMBED and OVERLAY: ON OFF
SPEED	Select from two options each for EMBED and OVERLAY: ON OFF
INT TEMP	Select from two options each for EMBED and OVERLAY: ON OFF
VEH ID	Select from two options each for EMBED and OVERLAY: ON OFF
I/O STATUS	Select from two options each for EMBED and OVERLAY: ON OFF
GPS COORD	Select from two options each for EMBED and OVERLAY: ON OFF
SD STATUS	Select from two options for OVERLAY: ON OFF
HD STATUS	Select from two options for OVERLAY: ON OFF

Action Bar Keys (Select, then press **ENTER**):

SAVE	To save and activate the new settings

1.1.6.1 CODE OSD



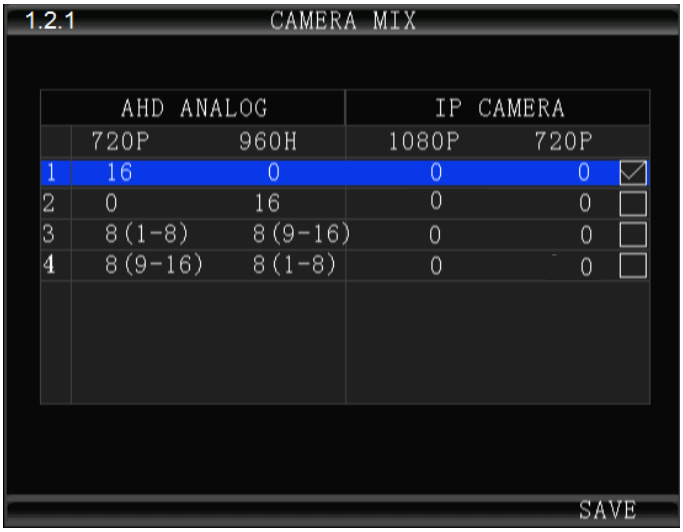
The **1.1.6.1 CODE OSD** screen provides the function of character overlay for each video channel, which determines the display position of the characters according to the abscissa and ordinate values.

ENABLE	Select from two options: **ON** Enable Video channel OSD **OFF** Disable video channel OSD
CHANNEL	**CH 1 – 16**
XPOS	**(0 to 99)**Abscissa position parameters.
YPOS	**(0 to 99)**Ordinate position parameters
CHANNEL NAME	Character overlay channel name : Can be described according to the installation location, the default CH1-CH16,

Action Bar Keys (Select, then press **ENTER**):

SAVE	To save and activate the new settings

1.2.1 CAMERA MIX



The **1.2.1 CAMERA MIX** screen allows the selection of one of four camera groups to match the variety of AHD, Analog and IP Cameras which may be connected to the MDVR Camera inputs.

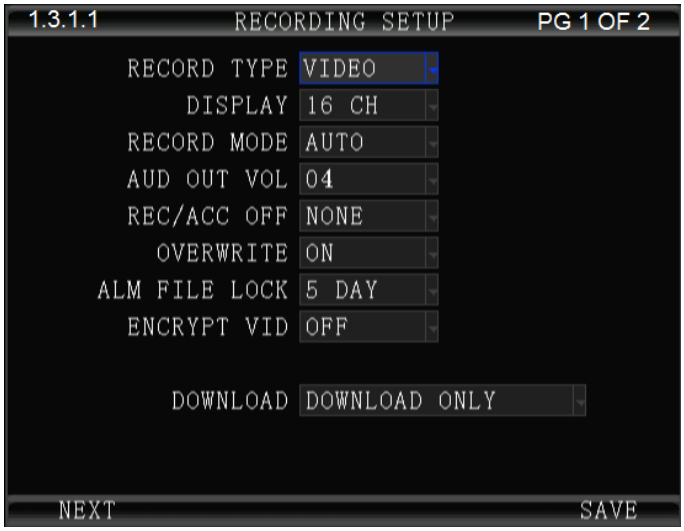
The MDVR must be restarted each time a new combination of cameras is connected using these five steps:

CAMERA MIX	Determine the types of cameras connected to the MDVR
SELECT	Select (Blue highlight) the group of cameras matching the cameras connected to the MDVR
CHECK BOX ☐	Press **ENTER** to select the checked group
RESTART	Select **SAVE**, then press **ENTER** and THE SYSTEM WILL RESTART in order to recognize the new camera mix
GO TO	AFTER THE MDVR RESTARTS go to the 1.3.5.1 IP CAMERA SETUP screen

Select one of five options:

MIX OPTION 1	Only **AHD** Cameras may be connected to Camera Input Channels 1~16
MIX OPTION 2	Only **ANALOG** Cameras may be connected to Camera Input Channels 1~16
MIX OPTION 3	**AHD** Cameras may be connected to Camera Input Channels 1~8 **ANALOG** Cameras may be connected to Camera Input Channels 9~16
MIX OPTION 4	**AHD** Cameras may be connected to Camera Input Channels 9~16 **ANALOG** Cameras may be connected to Camera Input Channels 9~16

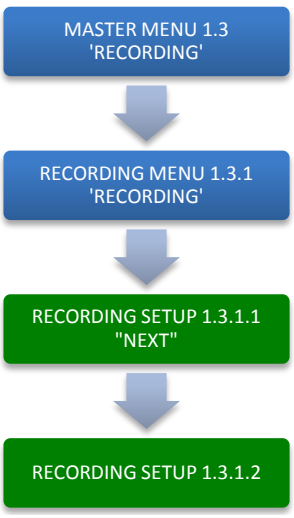
1.3.1.1 RECORDING SETUP (PG 1 OF 2)



The **1.3.1.1 RECORDING SETUP** screen is one of the most used setup screens concerning file storage criteria.

RECORD TYPE	**VIDEO** Records video per settings in 1.3.3.1 CODE SETUP **I FRAME** Saves storage space but results in choppy video playback
RECORD MODE	**AUTO** MDVR automatically starts up in Recording Mode **TIMER** Recording is controlled by settings in 1.3.2.1 RECORDING SCHEDULE **ALARM** MDVR starts Recording Mode when triggered
OVERWRITE	Select whether to overwrite earlier recorded data on the storage media other than the files protected by the ALM FILE LOCK setting: **ON** Continuously record files as new files replace older ones after the storage media is full **OFF** MDVR will continue to write to the storage media until full and then stop recording
ALM FILE LOCK	Enter the number of days to prevent an alarm designated file from being overwritten
ENCRYPT VID	Select from two options: **ON** Provides encryption to maintain file privacy. **OFF** No protection
DISPLAY	Select the number of video channels (CH 1 – 16) to be displayed on the Monitor
AUD OUT VOL	Select the Audio Output volume level to the Monitor
ACC/REC OFF	Allows selection of the camera view(s) which **WILL NOT** be recorded when the vehicle is in the ACC mode: **NONE** Every camera view will be recorded per preset parameters **ALL** Every cameras view will not be recorded **CH (Select)** Choose a single specific camera view to not be recorded
DOWNLOAD	Select the download status in the wifi download.

1.3.1.2 RECORDING SETUP (PG 2 OF 2)



The **1.3.1.2 RECORDING SETUP** screen is one of the most used setup screens concerning file storage criteria.

POST RECORD	Enter the time in Seconds to continue recording after being triggered
ALM OUT	Enter the time in seconds (5 – 255) for the ALM indicator on the MDVR front panel and the device connected to the SENSOR OUTPUT to be activated

1.3.2.1 RECORDING SCHEDULE

The **1.3.2.1 RECORDING SCHEDULE** screen allows the MDVR to be programmed to record for two periods per day. The default setting is to record whenever the MDVR is operating. It can also be set to use the same recording periods every day or each day can be set to record using a schedule specific to that day.

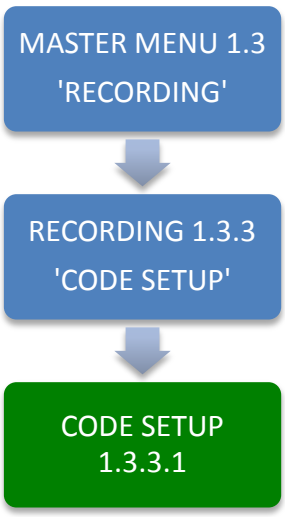
PERIOD	Select and enter the recording time setting periods per day: 1 First recording time period for the day 2 Second recording period for the day
EVERY DAY	Sets the same schedule for every day of the week. Do not enter time in any other days
MONDAY **TUESDAY** **WEDNESDAY** **THURSDAY** **FRIDAY** **SATURDAY** **SUNDAY**	Set each individual days schedule independently
START	Enter Start recording time in 24 Hour format
END	Enter End recording time in 24 Hour format

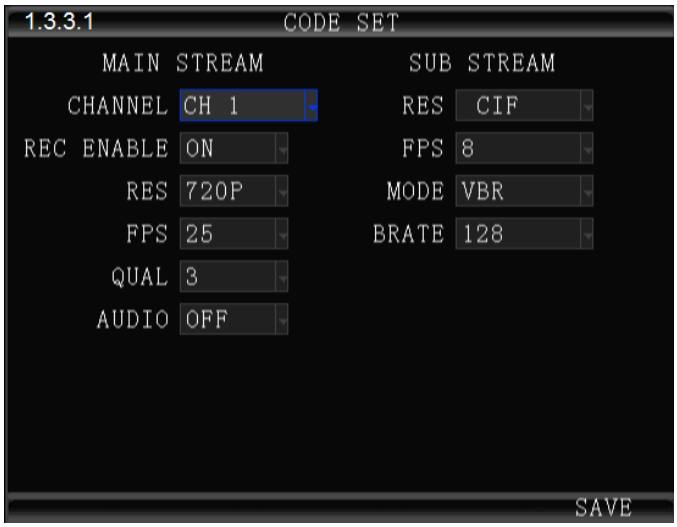
NOTE: A recording schedule problem may occur if the schedule set above differs from the 1.1.2.1 VEHICLE SETUP screen when POWER MODE is set to TIMER and the POWER ON, OFF settings conflict or overlap.

Action Bar Keys (Select, then press **ENTER**):

SAVE	To save and activate the new settings

1.3.3.1 CODE SETUP

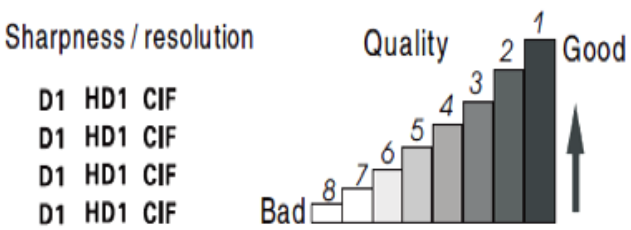




The **1.3.3.1 CODE SETUP** screen provides the ability to configure each of the MDVRs five video channels to provide the optimum balance of Video Type, Frames per Second (FPS), Resolution and Quality while ensuring the maximum file storage is achieved on the installed storage media.

MAIN STREAM:

REC ENABLE	Select from two options: **ON** Enable Video channel recording **OFF** Disable video channel recording
RES.	**CH 1 – 16 D1, HD1, CIF, 960H, 720P** The higher the chosen resolution, the more storage space will be required and the video will be more detailed.
FPS	**(1 to 30)** Select the **F**rames **P**er **S**econd to be recorded. The higher the number, the closer to real time fluidity (30 FPS for NTSC and 25 FPS for PAL settings) action will be recorded. The higher the setting the more storage space will be required for the file.
QUALITY	**(1 to 8)** Enter the record resolution setting desired with 1 being the highest quality. A higher quality setting will require more file storage space, but yield a more detailed video.
AUDIO	Select from two options: **ON** Enable audio recording (If selected camera channel has a microphone connected) **OFF** Disable audio recording of an audio Pickup equipped video source



	PAL	NTSC
D1	704*576	704*480
HD1	704*288	704*240
CIF	352*288	352*240

SUB – STREAM SETUP:

The **SUB-STREAM SETUP** Menu allows the User to achieve a balance between speed of data transmission and the video resolution (clarity). The uploading (transmission) of the video files from the MDVR to another location by WIFI or 3G/4G cellular communication networks is limited by Bandwidth. **Sub-stream** settings refer to the choices being made when uploading the MDVR recorded files to another location such as to the IVMS Server over 3G/4G. The User must choose a balance of speed and resolution. Higher resolution files require a longer transmission time yet yield clearer video. Whereas faster transfer rates are a result of sending lower resolution video files quickly, but yield less detailed videos for replay. In some cases the larger file size will overwhelm the systems available bandwidth and result in intermittent, slow or error laden file transfers. As shown in the chart below the sub-stream settings are related to whether the video displayed on the **IVMS** platform is clear and smooth. Of course, the most important factor for network transmission is the up and down rate of the local network broadband. Video resolution can be set as **CIF** and **QCIF**.

The corresponding relationship between bit rate setting and the frame rate changing is shown as below, the bit rate set here is the transmission rate of a channel.

The frame rate setting is changed according to the corresponding bit rate change; it can be set as bit rate **128**,frame rate **8** in default. This setting is the current one that can guarantee fluency as well as a certain resolution when the cellular network transmits audio and video,but you can set this based on your own network situation, if under good enough network bandwidth, it can be set higher frame rate and bit rate and it can also be set automatically.

Bit rate	16	24	32	40	48	56	64	72	80	96	128	160	200	256	384	自动	---	---
Frame rate	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	---	25

Sub-stream set is a basic set of network transmission

Action Bar Keys (Select, then press **ENTER**):

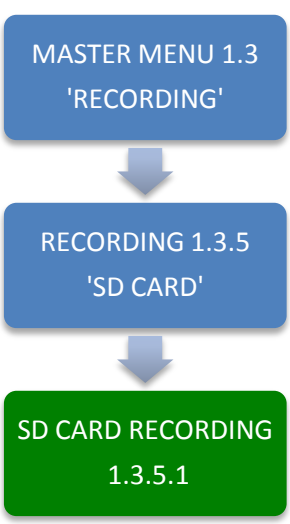
SAVE	To save and activate the new settings

1.3.4.1 MIRROR

The **1.3.4.1 MIRROR SETUP** screen provides the ability to save selected video channels and any data EMBEDDED in their video frames (See 1.1.5.1 DISPLAY SETUP) using the parameters set in the configure each of the six video channels to provide the optimum balance of Video Type, Frames per Second (FPS), Resolution and Quality while ensuring the maximum file storage is achieved on the USB Drive inserted in the Rear USB 2.0 Port.

ENABLE	Select from two options: **ON** Enable Video channel recording **OFF** Disable video channel recording
RES.	**CH 1 – 16 D1, HD1, CIF** The higher the chosen resolution, the more storage space will be required and the video will be more detailed.
FPS	**(1 to 30)** Select the **F**rames **P**er **S**econd to be recorded. The higher the number, the closer to real time fluidity (30 FPS for NTSC and 25 FPS for PAL settings) action will be recorded. The higher the setting the more storage space will be required for the file.
QUALITY	**(1 to 8)** Enter the record resolution setting desired with 1 being the highest quality. A higher quality setting will require more file storage space, but yield a more detailed video.
AUDIO	Select from two options: **ON** Enable audio recording (If selected camera channel has a microphone connected) **OFF** Disable audio recording of an audio Pickup equipped video source

1.3.5.1 SD CARD RECORDING SETUP



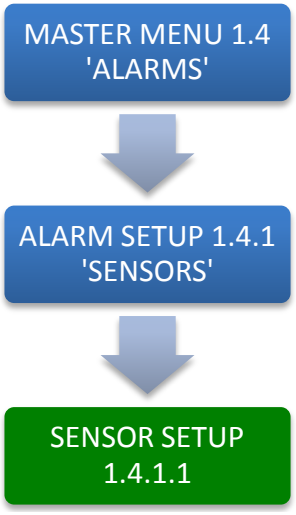
The **1.3.5.1 SD CARD RECORDING** screen allows the User to enable the MDVR to save recorded files to the SD Card. Enabling SD Card Recording does not effect the settings for the HDD.

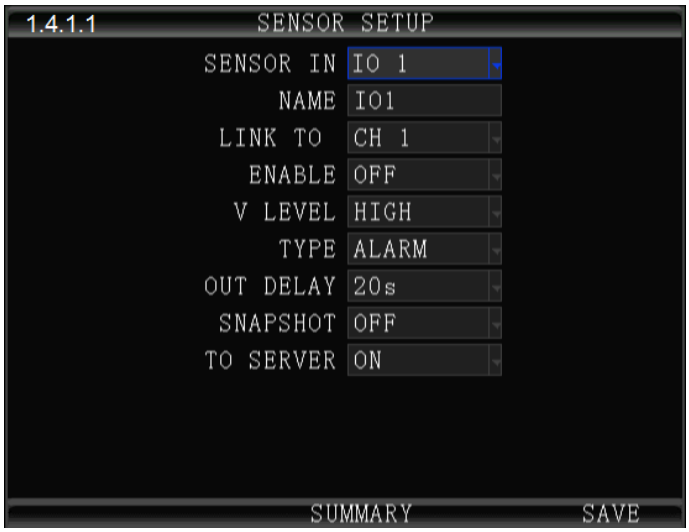
ENABLE	Select from two options: **ON** SD Card is ready to record **OFF** SD Card is NOT ready to record

Action Bar Keys (Select, then press **ENTER**):

SAVE	To save and activate the new setting

1.4.1.1 SENSOR INPUT AND OUTPUT





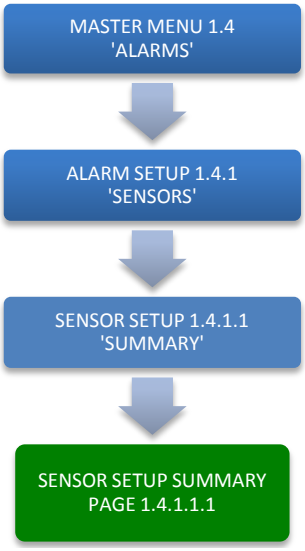
The **1.4.1.1 SENSOR SETUP** screen defines the trigger response relationship between each of the 8 Sensor In (Inputs) and actions available

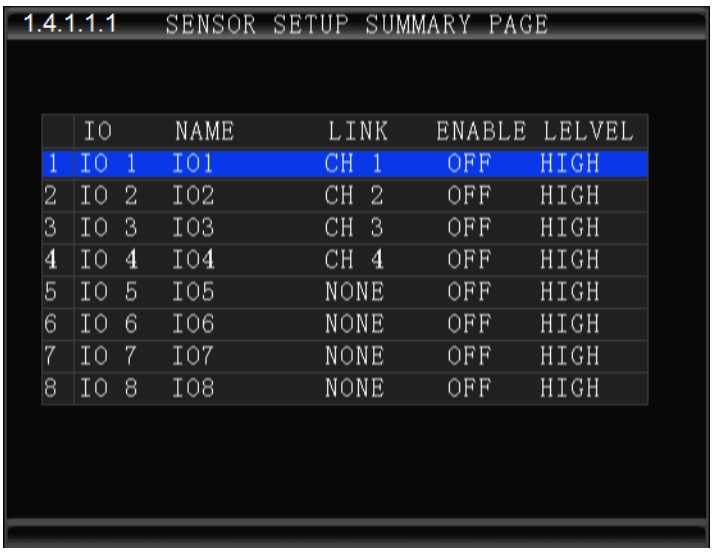
SENSOR IN	Define the trigger response relationship for each of the 8 SENSOR IN (Input)
NAME	Name of SENSOR IN device (8 Characters)
LINK TO	Enter Camera channel (CH) to switch to full screen and display video when assigned SENSOR IN is triggered
ENABLE	Select from two options: **ON** The selected functions are 'On' **OFF** The selected functions are 'Off'
V LEVEL	**HIGH** Detect when Voltage is 'On' **LOW** Detect when Voltage is 'Off'
TYPE	Select type of response is to be sent when the V LEVEL SETTING is matched: **ALARM** Triggers a response sent to one of the two SENSOR OUT ports **SYSTEM** Triggers an entry into the SYSTEM and/or ALARM/EVENT LOG
OUT DELAY	Select the time delay in seconds for alarm out
SNAPSHOT	Takes a single picture
TO SERVER	Select from two options: **ON** Automatically upload the Snapshot to the IVMS **OFF** **DO NOT** Automatically upload the Snapshot to the IVMS

Action Bar Keys (Select, then press **ENTER**):

SUMMARY	To move to 1.4.1.1.1 SENSOR SETUP SUMMARY PAGE to provide a list of the current Sensor In (SENS IN) and Output relationships
SAVE	To save and activate the new settings

1.4.1.1.1 SENSOR SETUP SUMMARY PAGE





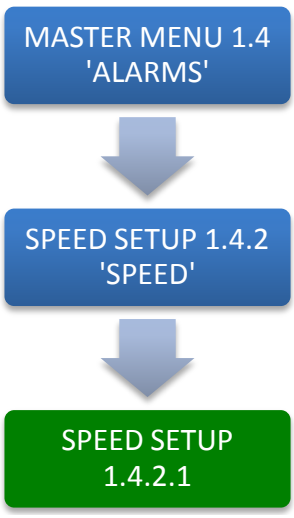
The **1.4.1.1.1 SENSOR SETUP SUMMARY PAGE** displays each of the currently programmed 8 SENS IN (SENSOR IN) relationships.

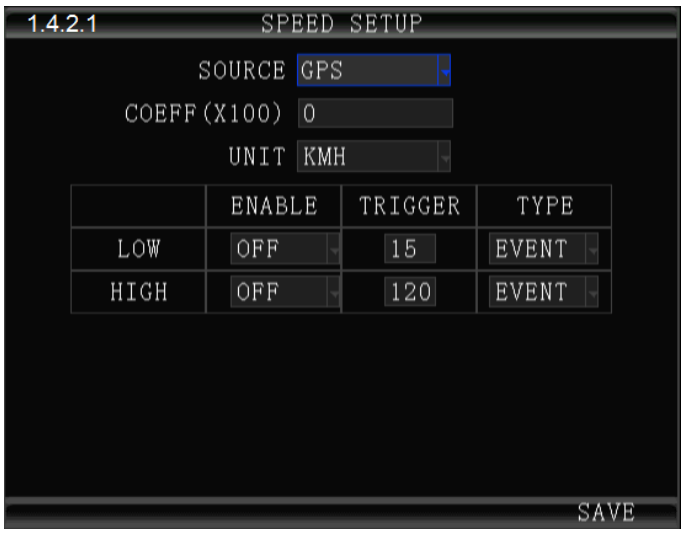
The Check Box is only User selectable option. When selected, using the IRC, it returns to the 1.4.1.1 SENSOR SETUP PAGE and displays the data entry fields associated with the checked SENS channel.

Go to 1.4.5.1 ALARM OUT SETUP screen to setup a Sense/Trigger relationship between the SENS IN Channel and a SENS OUT Channel to trigger an ALARM and/or LOG EVENT

IO	SENSOR IN Channel
NAME	Name of SENSOR IN device
LINK	Camera channel to switch to full screen and display video when assigned SENSOR IN is triggered
ENABLE	Select from two options: **ON** The selected functions are 'On' **OFF** The selected functions are 'Off'
LEVEL	Displays the current voltage level setting: **HIGH** Voltage on **LOW** No voltage

1.4.2.1 SPEED SETUP





The **1.4.2.1 SPEED SETUP** screen allows the User to trigger the MDVRs Recording Mode based on low and high speed thresholds determined by the settings entered. Either or both High and Low settings may be entered independently.

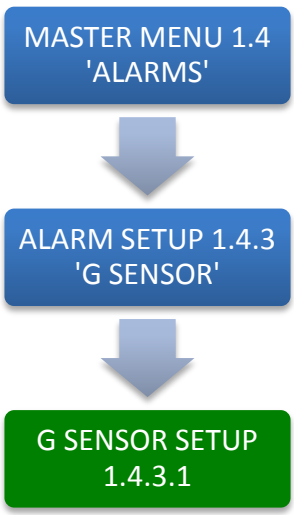
Vehicle speed can be monitored and recorded using the speed data (KPH or MPH) from either the onboard GPS (optional) or a more accurate speedometer sensor (optional). The Speed Alert can be set to monitor Upper and Lower Speed Limits to trigger an alarm, log, and record the event.

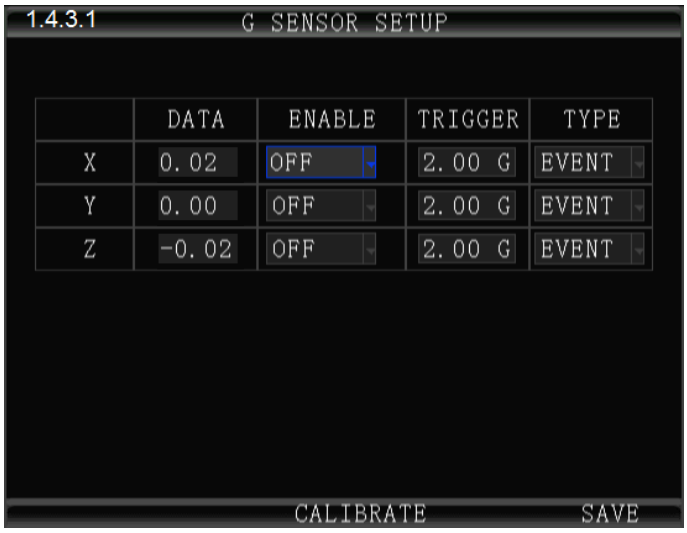
SOURCE	Select the source for the speed related data: **GPS** Select to use to **GPS** data to obtain vehicle speed information. **VEHICLE** Select to use speed related data from the optional VEHICLE SPEED MODULE
COEFF(X100)	Only used when the VEHICLE SPEED OPTION is installed: Set according to User Manual provided with the VEHICLE SPEED MODULE
UNIT	Unit of speed measurement **KMH** Kilometers per Hour **MPH** Miles per Hour
ENABLE	Select from two options: **ON** The selected functions are 'On' **OFF** The selected functions are 'Off'
TRIGGER	Enter the speed (up to 3 digits) at which to trigger the response required: **LOW** Sends a trigger when the vehicle speed falls below the entered speed **HIGH** Sends a trigger when the vehicle speed exceeds the entered speed
TYPE	Select the Type of Trigger response required: **ALARM** Sends a trigger to generate an alarm (See 1.4.5.1 ALARM OUT SETUP) **SYSTEM** Sends a trigger to enter a message in the ALARM/EVENT Log

Action Bar Keys (Select, then press **ENTER**):

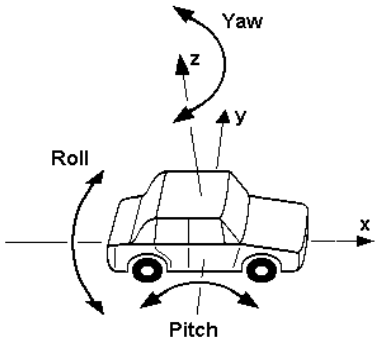
SAVE To save and activate the new settings

1.4.3.1 G SENSOR SETUP





The **1.4.3.1 G SENSOR SETUP** screen (accelerometer) enables the MDVR to monitor the movement of the vehicle in 3 Axes (X, Y, Z) and can be used to trigger a response based on the Trigger values set in the G Sensor Menu. Readings from the sensor may indicate hard braking, acceleration, impact, sharp turns, etc. This data may be used to evaluate driver and vehicle performance, maintenance cycles and load dynamics.

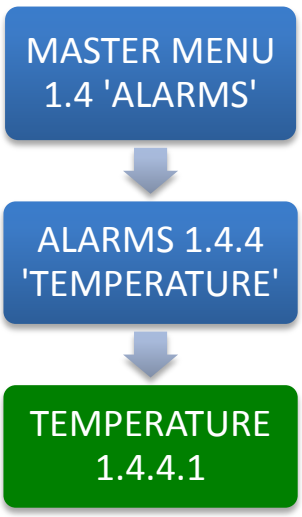


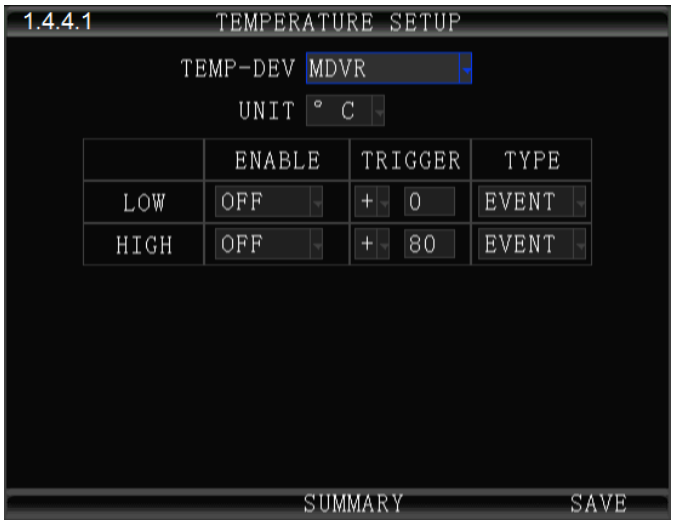
AXIS	(No user entry) The three AXIS of movement of the monitored vehicle are: X = ROLL Possible high speed into turns relative to load Y = PITCH Possible Hard braking or acceleration, speed bumps, etc. Z = YAW Possible bad shocks, uneven road or unsecured load, etc.
DATA	(No user entry) Displays the current G Force reading for each Axis
ENABLE	Select from two options: **ON** The selected functions are 'On' **OFF** The selected functions are 'Off'
TRIGGER	Enter the G Force setting (up to 3 digits) at which to trigger the response required: Sends a Trigger when the vehicle G Force is less than or greater than the trigger setting
TYPE	Select the Type of Trigger response required: **ALARM** Sends a trigger to generate an alarm (See 1.4.5.1 ALARM OUT SETUP) **SYSTEM** Sends a trigger to enter a message in the ALARM/EVENT Log

Action Bar Keys (Select, then press **ENTER**):

CALIBRATE Select after installing the MDVR to reorient the G Sensor

1.4.4.1 TEMPERATURE SETTINGS





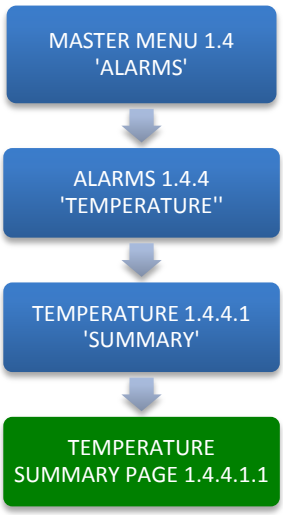
The **1.4.4.1TEMPERATURE SENSOR SETUP** screen allows the User to trigger the MDVRs Recording Mode based on low and high temperature thresholds determined by temperature settings entered. Either or both High and Low settings may be entered independently.

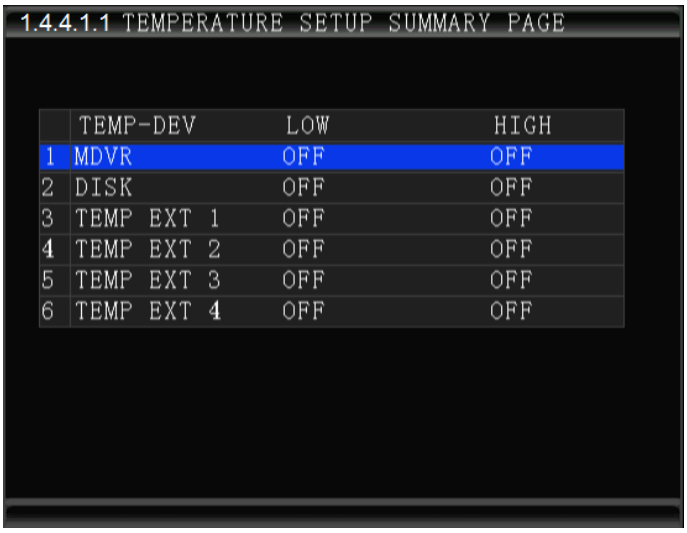
TEMP-DEV	Select the Sensor used as the temperature reporting source: **MDVR** MDVR internal temperature (Standard) **DISK** DISK temperature (Standard) **TEMP EXT (1 – 4)** External temperature sensors, up to 4 (Optional)
UNIT	Select the unit of temperature measurement: **F** Fahrenheit **C** Celsius
RANGE	There are two settings (each optional) to create the upper and lower temperature range: **LOW** Low temperature setting row **HIGH** High temperature setting row
ENABLE	Select the operational status of this function: **ON** The selected functions are 'On' **OFF** The selected functions are 'Off'
TRIGGER	Enter the Temperature limits and select + or – indicators as needed: **LOW** The Low temperature to trigger a response **HIGH** The high temperature to trigger a response
TYPE	Select one of two options: **ALARM** Event will be, recorded, logged and searchable as an ALARM **SYSTEM** Event will be, recorded, logged and searchable as SYSTEM

Action Bar Keys (Select, then press **ENTER**):

SUMMARY	To move to the 1.4.4.1.1 TEMPERATURE SUMMARY PAGE
SAVE	To save and activate the new settings

1.4.4.1.1 TEMPERATURE SETUP SUMMARY PAGE

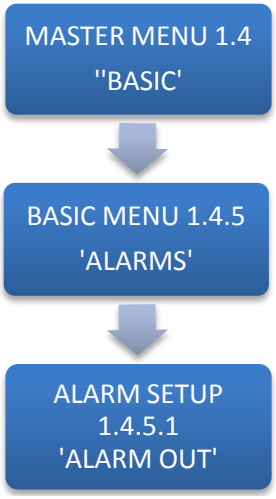


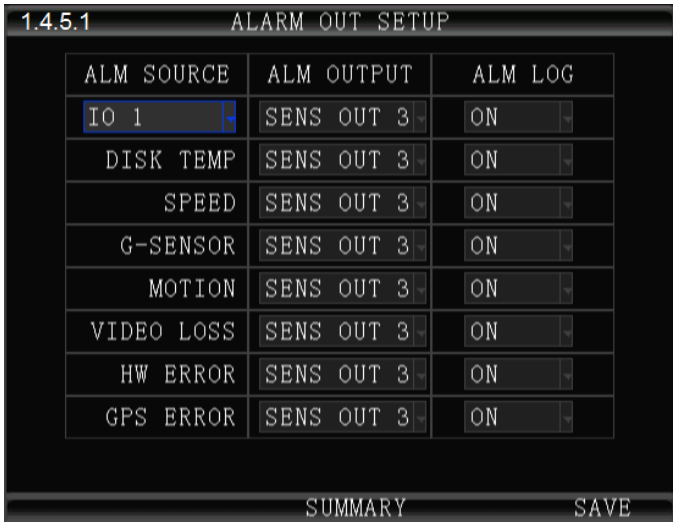


The **1.4.4.1.1 TEMPERATURE SETUP SUMMARY PAGE** screen displays the current status of all Devices setup in the 1.4.4.1 TEMPERATURE SETUP screen. Select a file check box to return to the 1.4.4.1 TEMPERATURE SETUP screen and review or change its settings.

TEMP- DEV	Sensor used as the reporting source
LOW/HIGH	Current status of the device

1.4.5.1 ALARM OUT SETUP





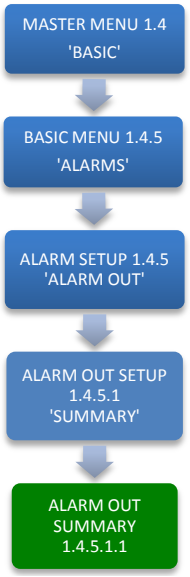
The **1.4.5.1 ALARM OUT SETUP** screen defines the Input – Trigger – Response relationships with the various sensors and reporting devices connected to the MDVR. The ALARM OUT SETUP screen adds the ability to add ALARM and ALARM logging responses to the other criteria set within the individual Sensor and Device screens.

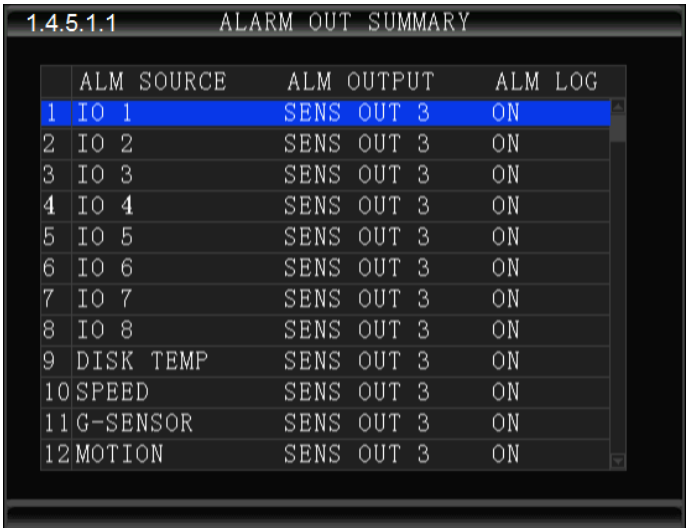
ALM SOURCE	The input to trigger the ALM (Alarm) Output
ALM OUTPUT	The output path to a Sensor Output
LOG	Select whether the detected Alarm is also logged as an ALARM
IO	Select one of 8 Sensor Inputs (IO1-8)
DISK TEMP	Hard disk temperature alarm.
SPEED	Monitors High and Low speed settings in 1.4.2.1 SPEED SETTINGS
G -SENSOR	Monitors X, Y, Z settings in 1.4.3.1 G SENSOR SETUP
VIDEO LOSS	Monitors Video Loss (Camera malfunction)
MOTION	Monitors movement or light changes sensed by the 1.4.6.1 MOTION DETECTION SETUP
HW ERROR	Monitors factory set criteria for the detection of hardware level errors
GPS ERROR	Monitors factory set criteria for the detection of GPS Module signal reception errors

Action Bar Keys (Select, then press **ENTER**):

SUMMARY	To move to the 1.4.5.1.1 ALARM OUT SUMMARY PAGE to view a list of the Input – Trigger – Response relationships currently setup
SAVE	To save and activate the new settings

1.4.5.1.1 ALARM OUT SUMMARY

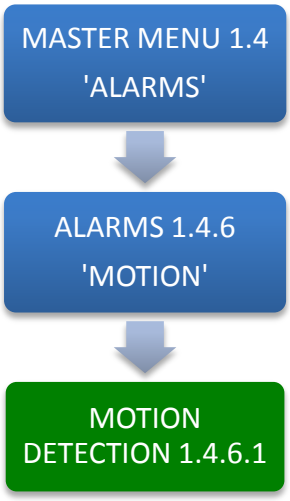




The **1.4.5.1.1 ALARM OUT SUMMARY** screen displays the current relationships created between the Sensor In (SENS IN), Alarm Out (ALM OUT) and LOG functions using the 1.4.5.1 ALARM OUT SETUP screen.

ALM SOURCE	SENS IN CH (1 – 8) selected to trigger ALM OUTPUT (1, 2) response. (No User entry)
ALM OUTPUT	ALM (ALARM) OUTPUT selected to trigger a response to a SENS IN (No User entry)
ALM LOG	Displays Log status

1.4.6.1 MOTION DETECTION



The **1.4.6.1 MOTION DETECTION** screen is the first of three screens necessary for the setup, activation and testing of the motion detection features for each camera channel. Motion Detection based triggering may only be used when the vehicle is parked or when the camera is in an enclosed area of the vehicle, as changing lighting conditions may trigger the Motion Detection Zone.

Setup must be complete for all three screens to properly enable and test the motion detection function:

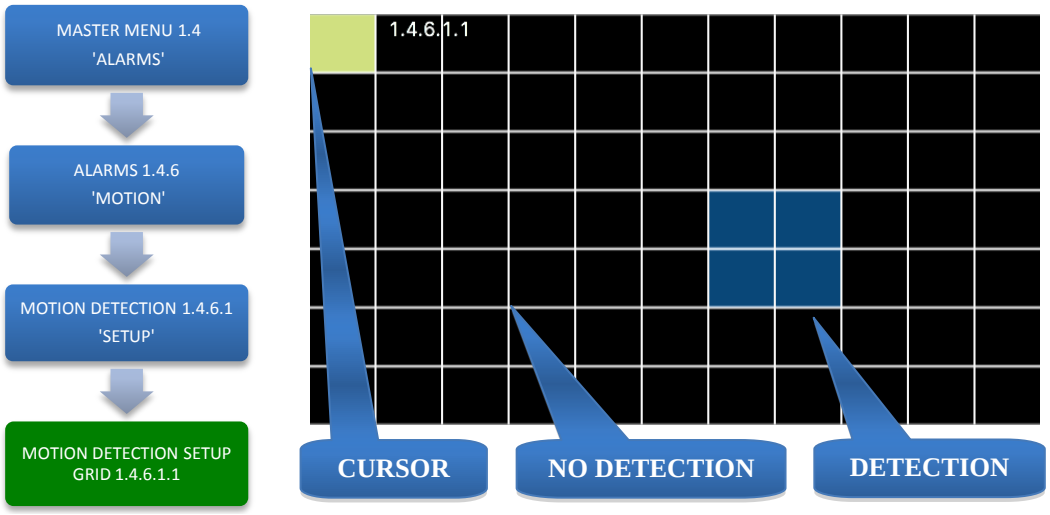
1.4.6.1 MOTION DETECTION SETUP	Setup and subsequently test each camera using the motion detection function
1.4.6.1.1 MOTION DETECTION GRID	Setup the motion detection activation zone
1.4.5.1 ALARM OUT SETUP	Setup the motion detection response to trigger an ALARM OUT and/or LOG the event.

ENABLE	Select from two options: **ON** The selected functions are 'On' **OFF** The selected functions are 'Off'
SENSITIVITY	Select from three levels: **LOW** **MED** **HIGH**
AREA	Select the **SETUP** field. The 1.4.6.1.1 MOTION DETECTION screen will appear as an overlay on the camera view. The SETUP button backgrounds are color coded to display their status: **BLACK** Motion Detection area has not been setup **GREEN** Motion Detection Zone is ready to detect **YELLOW** Motion Detection has been triggered
SETUP	When you select the Area '**SETUP**' button the 1.4.6.1.1 MOTION DETECTION GRID screen is displayed. Instruction and setup of the motion detection zone are on the following page

Action Bar Keys (Select, then press **ENTER**):

SAVE	To save the Motion Detection Zone settings
ALARM OUT SETUP	To move to the 1.4.5.1 ALARM OUT SETUP screen and add a response

1.4.6.1.1 MOTION DETECTION SETUP GRID



The **1.4.6.1.1 MOTION DETECTION GRID** is the second of three screens required to setup and test the Motion Detection function. It allows the user to define a detection zone to automatically trigger the functions set in the 1.4.6.1 MOTION DETECTION SETUP and the 1.4.5.1 ALARM OUT SETUP screen.

Motion Detection Zone (MDZ) definition:
A User defined grid of transparent squares overlaid on a Camera view creating a response to light or movement. The User can define the active motion detection zone with Blue squares.

CLEAR	No detection set
YELLOW	Cursor position
BLUE	Detection area set

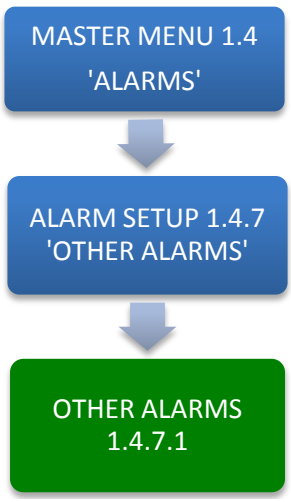
Once all three related screens are properly setup, a detected movement meeting the parameters set will trigger a response governed by the **1.4.5.1 ALARM OUT** screen.

Create the Active Motion Detection Zone:

SELECT	Move Yellow Cursor to the square to be enabled as part of the Detection Zone
ENTER	Press to enable (Becomes Blue) or disable the square (Becomes Clear)
REPEAT	Continue until the Detection Zone is defined
RETURN	Press to return to the 1.4.6.1 MOTION DETECTION screen. The affected camera button will display a Green background if it is setup to be tested. **For a motion detected response to trigger an ALARM and/or LOG the event it is necessary to go to the 1.4.5.1 ALARM OUT SETUP screen and complete the related setup process**

To setup additional cameras repeat the above and continue setting up the parameters for each camera as necessary.

1.4.7.1 OTHER ALARMS



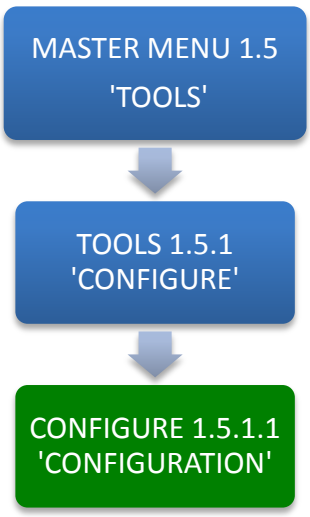
The **1.4.7.1 OTHER ALARMS** screen allows the IVMS to monitor Driver (Vehicle) activity by monitoring the time elapsed alarms for each field.

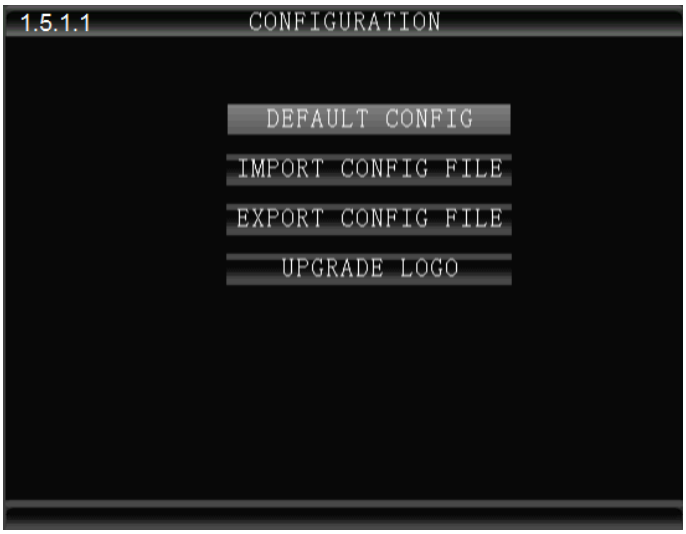
TIMEOUT PARK	Select the length of time before and alarm is sent and logged. Monitors the time the Vehicle Ignition Switch is in the ACC position and reports it to the IVMS
PATIGUE DRIVE	Select the length of time before and alarm is sent and logged. Monitors the time the Vehicle Ignition Switch is in the ON position and reports it to the IVMS

Action Bar Keys (Select, then press **ENTER**):

SAVE	To save and activate the new settings

1.5.1.1 CONFIGURATION

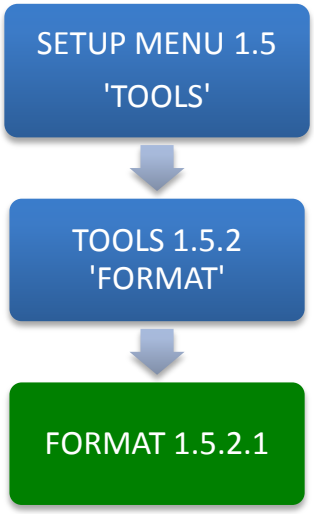


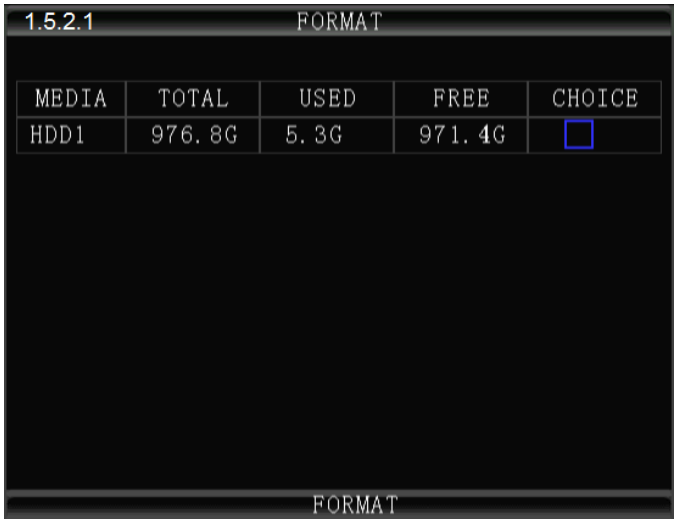


The **1.5.1.1 CONFIGURATION** screen allows the user to copy the basic system settings from one MDVR and transfer (Export) them to another MDVR using an SD card.

EXPORT CONFIG FILE	Select to copy this MDVRs system settings to an SD Card for use as backup or to easily setup another MDVR: 1. Place blank, formatted SD Card in SD Slot 1 2. Select EXPORT CONFIG FILE button 3. Remove SD Card from Slot 1
IMPORT CONFIG FILE	Use to copy the above MDVRs system settings to the one to be programmed. 1. Ensure MDVR is powered Off and in UNLOCK position 2. Insert SD Card containing the EXPORT CONFIG FILE in SD Slot 1 3. Close the Security Door and turn Key to the 'LOCK' position 4. MDVR will start up and automatically copy the settings on the SD Card and complete the startup process 5. When the Camera Screen appears Turn Key to 'UNLOCK' position 6. Open Security Door; remove the SIM Remove SD Card from Slot 1
RESET TO DEFAULT	Resets MDVR to the original factory settings and permanently deletes any other settings. The SYSTEM will prompt you to reconfirm prior to completing the reset to original settings
CHANGE LOGO	Add or upgrade a logo to be displayed on the MDVRs LCD Monitor during the start up process

1.5.2.1 FORMAT STORAGE MEDIA





The **1.5.2.1 FORMAT** screen allows the User to format Storage Media a (HDD, SSD or SD Card) prior to its initial use or to reformat (erase) a previously used (recorded on) for reuse. Use only name brand SD Cards rated Class 10 or better. Use only an SV rated, EXT3 formatted HDD/SSD in the Drive Tray.

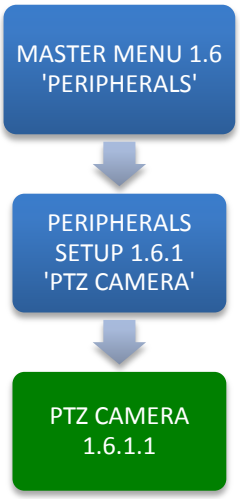
To Format :

SELECT	Select from two options to be formatted and press **ENTER**: **HDD** Hard Disk Drive (Regular HDD will be formatted as EXT3) **SD** SD Card
FORMAT	Select and press **ENTER** to begin Format process
READ **SYSTEM WARNING**	A 1.5.2.1 SYSTEM WARNING screen will appear: 
YES	To **FORMAT:** Select and press **ENTER**. No other warnings will appear
NO	To **CANCEL**: Select and press **ENTER** to return to the beginning of the Format process

Action Bar Keys (Select, then press **ENTER**):

FORMAT	To begin Format process
YES	To **FORMAT**. No other warnings will appear
NO	To **CANCEL**

1.6.1.1 PTZ CAMERA SETUP



The **1.6.1.1 PTZ CAMERA** screen allows up to four PTZ (Pan, Tilt, Zoom) Cameras to be programmed, viewed and controlled by the MDVR using its IR Remote Control (IRC) or a compatible PTZ Joystick Control Console.

Read the manual supplied by the PTZ Cameras manufacturer.
Set the operational codes on the camera as required. Then enter the same codes in the MDVR using the PTZ Camera screen. Ex.: Pelco D (Protocol), 2400 (Baud), 1 (Data Bit), 1 (Stop Bit), NONE (Check).
The ADDR can be from 1 – 255 and must be unique for each device.

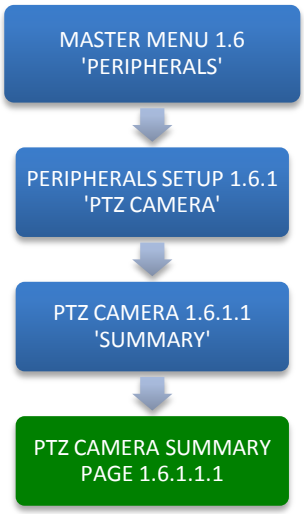
Enter the first PTZ Camera settings. Save the settings, then select **SUMMARY** to view 1.6.1.1.1 PTZ CAMERA SUMMARY page for a display of the current settings of PTZ Cameras installed on the MDVR. Add other PTZ Cameras in the same manner by selecting another device using the DEVICE field.

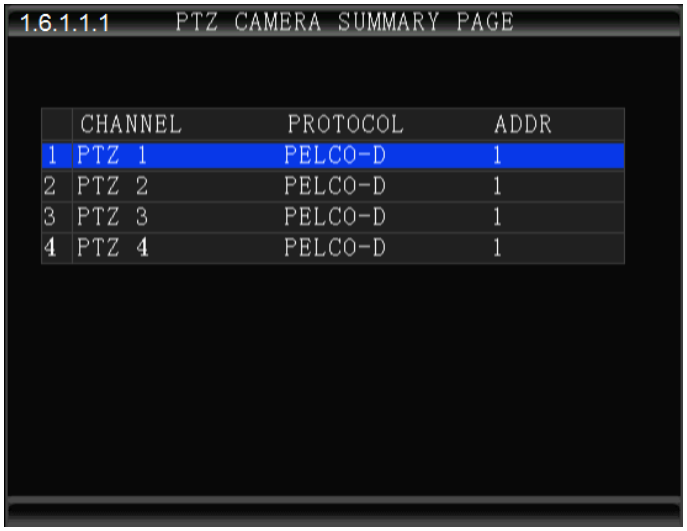
CHANNEL	Select one of four channels for the PTZ Camera to use: **CH 1-4**
PROTOCOL	Select from two industry standard PTZ operating codes: **PELCO D** **PELCO P**
BAUD	Select to match the settings on the PTZ Camera
DATA BIT	Select to match the settings on the PTZ Camera
STOP BIT	Select to match the settings on the PTZ Camera
CHECK	Select to match the settings on the PTZ Camera
ADDR	Enter to match the settings on the PTZ Camera. Each PTZ Camera must have a different address

Action Bar Keys (Select, then press **ENTER**):

SUMMARY	To move to the 1.6.1.1.1 PTZ CAMERA SUMMARY PAGE

1.6.1.1.1 PTZ CAMERA SUMMARY PAGE

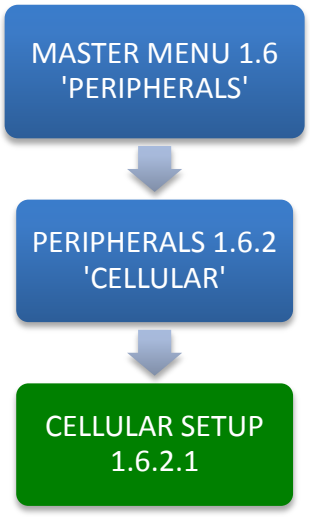


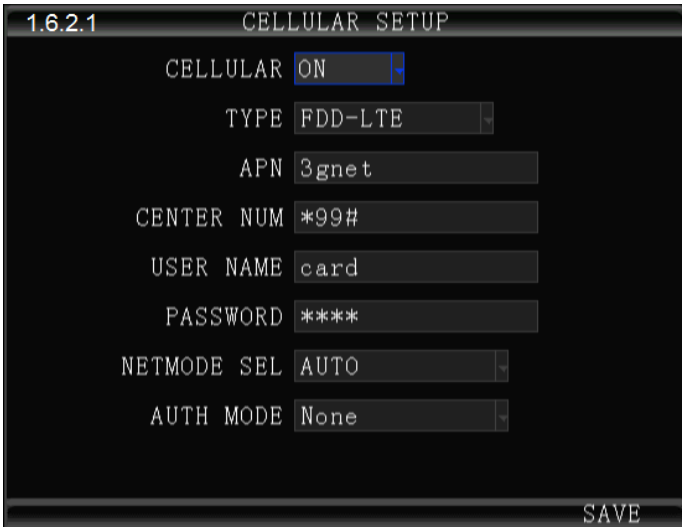


The **1.6.1.1.1 SUMMARY PAGE** displays each of the currently programmed PTZ CAMERA relationships.

CHANNEL	The Sensor used as the reporting source (No User entry)
PROTOCOL	PTZ operating codes (**1.6.1.1 PTZ CAMERA**)(No User entry)
ADDR	Enter to match the settings on the PTZ Camera. Each PTZ Camera must have a different address (**1.6.1.1 PTZ CAMERA**) (No User entry)

1.6.2.1 CELLULAR SETUP





The **1.6.2.1CELLULAR SETUP** screen allows the setup of the (optional) Cellular communications capability of the MDVR allowing real time cellular communication between the MDVR and the IVMS using a carrier compatible SIM Card (Second Card option available) and the Cellular Communication Option installed.

SIM Card Setup
A SIM Card compatible with the MDVRs internal cellular modem (Optional) must be inserted in the SIM slot located on the front of the MDVR. See SIM CARD INSTALLATION in the HARDWARE SETUP SECTION OF THE user Guide for the correct procedure.

Antenna
A compatible Cellular Antenna must be connected properly to the MDVR and correctly installed on the vehicle. See CELLULAR ANTENNA INSTALLATION in the HARDWARE SETUP SECTION OF THE user Guide for the correct procedure.

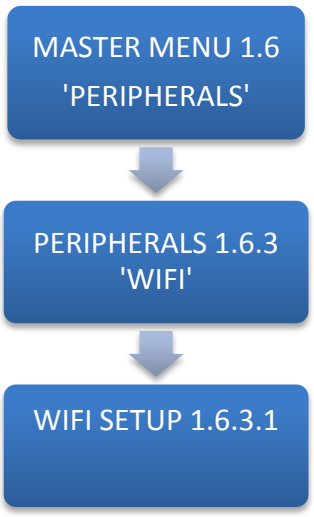
CELLULAR	Select from two options: **ON** Cellular features and functions are On **OFF** Cellular features and functions are Off
APN	Enter APN Provided by Cellular Service Provider
CENTER NUM	(*99#) Default entry
USER NAME	(Up to 16 characters) Optional User entry
PASSWORD	(Up to 16 characters) Optional User entry

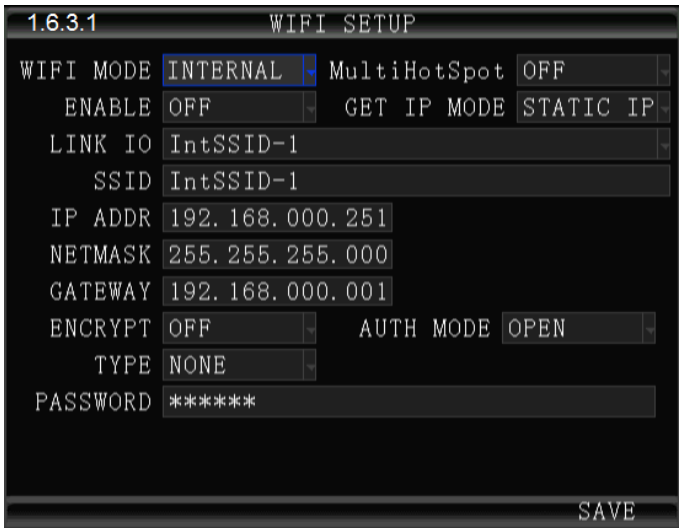
Confirm the new settings are correct and save the file.

Action Bar Keys (Select, then press **ENTER**):

SAVE	To save and activate the new settings

1.6.3.1MDVR WIFI SETUP (Optional module required)

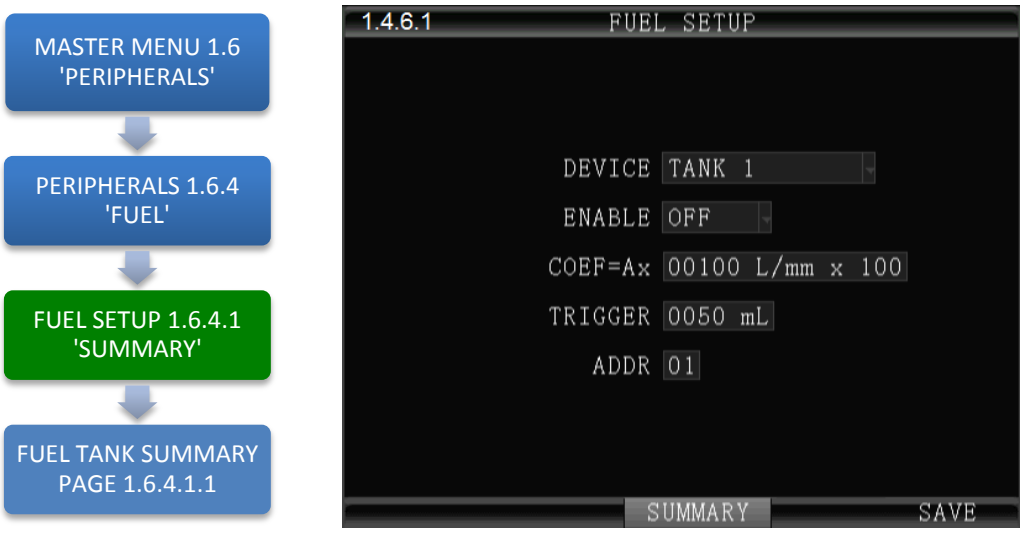




The 1.6.3.1**WIFI SETUP** Menu allows the setup of the optional WIFI communications capability of the MDVR allowing real time WIFI communication between the MDVR and the IVMS using either an (optional) internal or external WIFI (802.11n or AC) Modem. Note: Use IRC number keys to enter (Standard Format) address data used in your current wireless LAN network settings. CONTACT YOUR IT PERSON FOR SUPPORT.

WIFI MODE	Select from two options: **INTERNAL** WIFI MODEM Option is installed inside the MDVR **EXTERNAL** WIFI MODEM Option is installed outside the MDVR
MULTIHOTSPOT	**ON** Turn on multiple hotspot modes **OFF** Turn off multiple hotspot modes
ENABLE	Select from two choices: **ON** Activate the installed WIFI function **OFF** No WIFI option is installed or the installed option is off
LINK TO	To establish connection between the MDVR and the CMS Server, please input CMS central IP and port number
SSID	(Standard Format)
IP ADDR.	(Standard Format)
NETMASK	(Standard Format)
GATEWAY	(Standard Format)
ENCRYPT	Select from two options: **ON** Encryption mode is active **OFF** Encryption function is off
GET IP MODE	Select from two options: **STATIC** **DHCP**
AUTH MODE	Select from five options: 1. **OPEN** 2. **SHARED** 3. **WPA** 4. **WPA-PSK** 5. **WPA2-PSK** Select OPEN as initial setting.
TYPE	Select from two options: **NONE** **WEP**
PASSWORD	(Up to16 Characters) Enter a password (optional)

1.6.4.1 FUEL SETUP



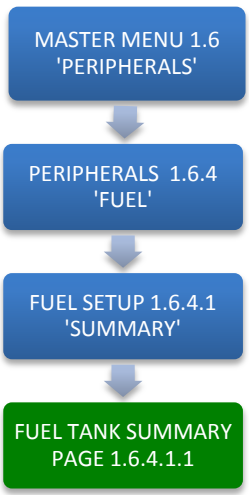
The **1.6.4.1 FUEL SETUP** Menu allows the user to track and record fuel (or other transported fluids) usage or delivery. The use of this feature requires an optional Fuel Sensor connecting via RS 232 or RS 485.

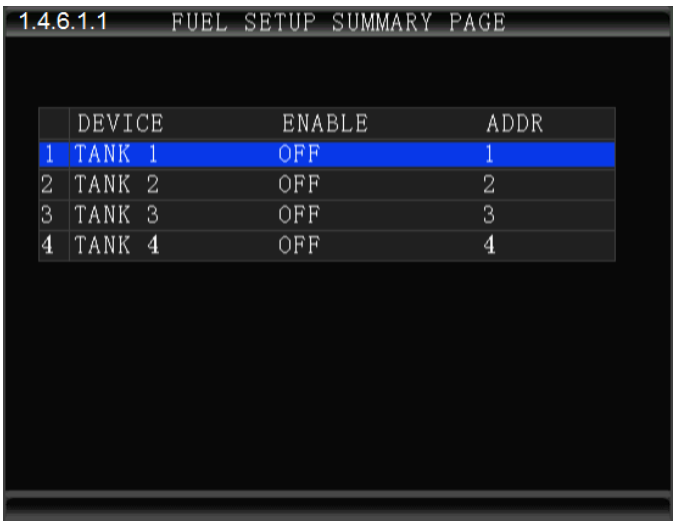
DEVICE	Select the Sensor used as the reporting source: **TANK (1 – 4)**
ENABLE	Select the operational status of this function: **ON** The selected functions are 'On' **OFF** The selected function are 'Off'
COEFF	(Optional) The Coefficient is an element of calculation adjustment varying with different brands and types of fuel or liquid storage measurement devices. Consult the Device manufacturer for details
TRIGGER	Enter the minimum amount of fuel (or other fluid) level measurement units to trigger a response
ADDR	Enter to match the settings on the FUEL. Each FUEL must have a different address

Action Bar Keys (Select, then press **ENTER**):

SUMMARY	To move to the 1.6.4.1.1 FUEL TANK SUMMARY PAGE
SAVE	To save and activate the new settings

1.6.4.1.1 FUEL SUMMARY PAGE

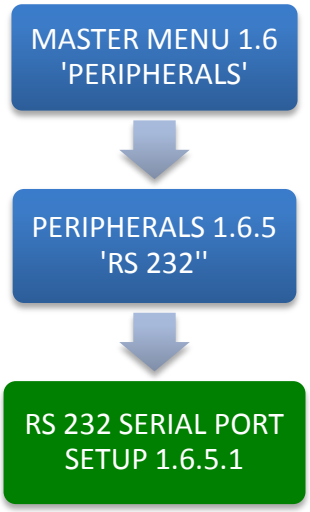


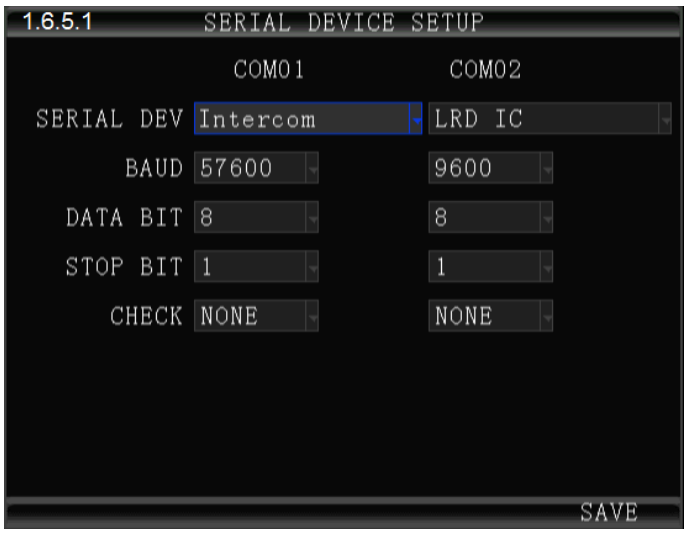


The **1.6.4.1.1 FUEL TANK SUMMARY PAGE** screen displays the current status of all devices setup in the 1.6.4.1 FUEL SETUP screen.

DEVICE	Sensor used as the reporting source (No User entry)
ADDR	(Optional) Unique address of this device by the device installation manual(No User entry)
ENABLE	Current status of the device(No User entry)

1.6.5.1 RS 232 SERIAL DEVICE SETUP





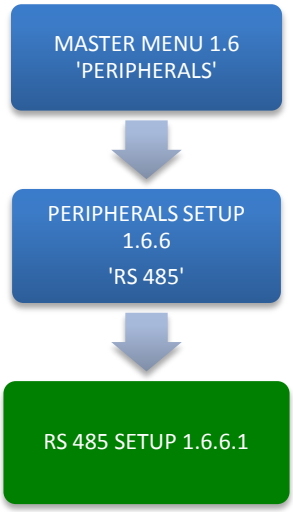
The **1.6.5.1 RS 232 SERIAL DEVICE SETUP** screen allows up to two RS 232 data or control devices to be setup using industry standard RS 232 code settings.

COM1/2	Select each of two control channels to setup connected devices: **COM 1** **COM 2**
SERIAL DEV	Select a unique name for the RS 232 device
BAUD	Select to match the settings on the RS 232 device
DATA BIT	Select to match the settings on the RS 232 device
STOP BIT	Select to match the settings on the RS 232 device
CHECK	Select to match the settings on the RS 232 device

Action Bar Keys (Select, then press **ENTER**):

SAVE	To save and activate the new settings

1.6.6.1 RS 485 DEVICE SETUP



The 1.6.6.1 RS 485 DEVICE SETUP screen allows up to eight compatible RS 485 data or control devices to be setup using industry standard RS 485 code settings.

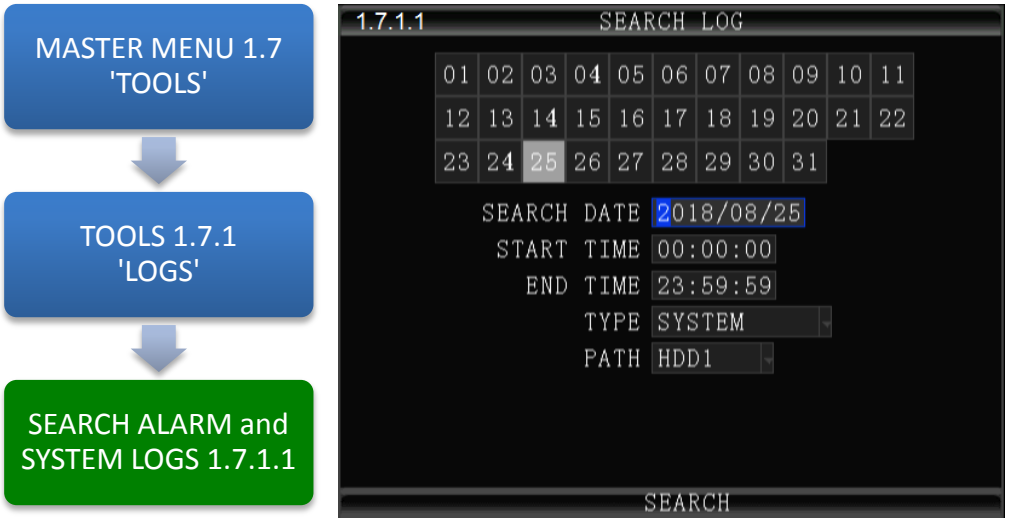
NOTE**:** This does not include the PTZ Cameras setup in the 1.6.1.1 PTZ CAMERA SETUP.

SERIAL DEV	Select a unique name for the RS 485 device
BAUD	Select to match the settings on the RS 485 device
DATA BIT	Select to match the settings on the RS 485 device
STOP BIT	Select to match the settings on the RS 485 device
CHECK	Select to match the settings on the RS 485 device
ADDR	(Optional) Enter a number (5 – 255) to match the settings on the RS 485 device. Numbers 1 – 4 are reserved for the PTZ Cameras

Action Bar Keys (Select, then press **ENTER**):

SAVE To save and activate the new settings

1.7.1.1 SEARCH SYSTEM and ALARM LOGS



The 1.7.1.1 **SEARCH SYSTEM and ALARM LOGS** Menu allows the user to search all logged events or to search for specific predetermined events the MDVR previously recorded on the installed HDD or SD Card.

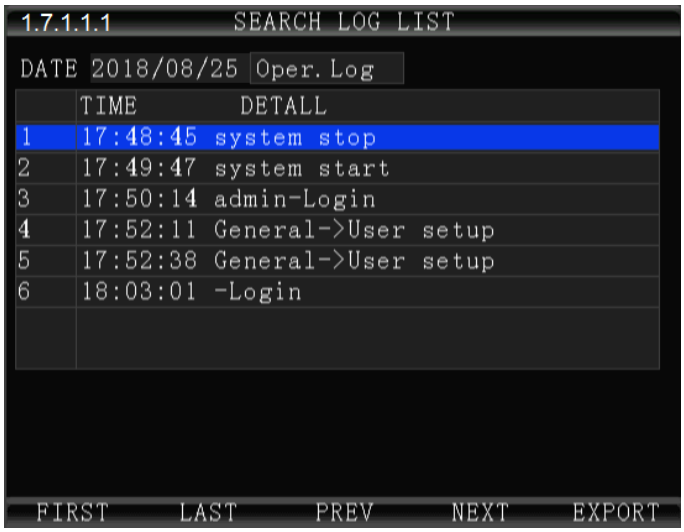
The colored grid shown lists the days of the search month. To expedite file searches Days with recordings available have a green background.

SEARCH DATE	Enter the date to be searched in the format shown in this field
START TIME	Enter the Start Time in 24 hour format for the files to be searched
END TIME	Enter the End Time in 24 hour format for the files to be searched
TYPE	Select from three options: **SYSTEM** Search recorded operating system events, i.e., On, Off, Changes, etc. **ALARM** Search recorded ALARMS, i.e., Sens Out, etc.
PATH	Select the file storage source on the MDVR: **HDD** Search recorded files on the Hard Disk Drive **SD** Search recorded files on the SD Card

Action Bar Keys (Select, then press **ENTER**):

SEARCH	To the 1.7.1.1.1 SEARCH LOG LIST

1.7.1.1.1 SEARCH LOG LIST



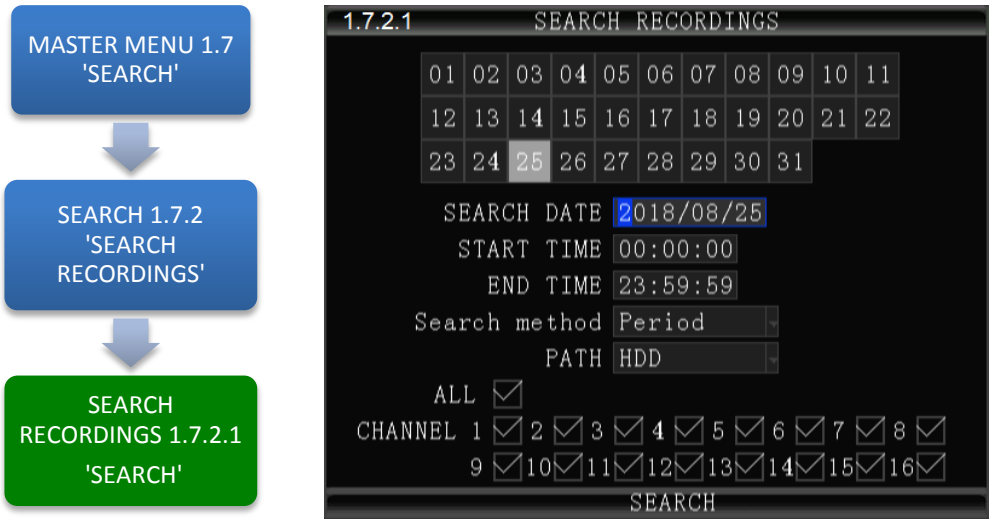
The **1.7.1.1.1 SEARCH LOG LIST** allows the user to view the results of the search criteria entered on the 1.7.1.1 SEARCH SYSTEM and ALARM LOGS screen. Use the Action Bar keys to navigate the list.

DATE	(YY/MM/DD) Specific Date the listed event occurred
TIME	(24 Hour Format) Specific start time of the recorded file found
TYPE	Shows Type of Log file recorded to: **SYSTEM** **ALARM**
DETAIL	Provides description of logged event

Action Bar Keys (Select, then press **ENTER**):

FIRST	Move cursor to first page in search results
LAST	Move cursor to last page in search results
NEXT	Move cursor to next (lower) page in search results
PREV	Move cursor to previous page in search results
EXPORT	Export logs to the front USB
RETURN	Press to return to the 1.7.1.1 SEARCH SYSTEM and ALARM LOGS screen

1.7.2.1 SEARCH RECORDINGS



The **1.7.2.1 SEARCH RECORDINGS** screen allows the user to search by Date, Path (Storage Media) and Type (ALL, GENERAL or ALARM) list all recorded events or to search for specific predetermined events the MDVR previously recorded on the installed storage media Path.

The colored grid shown lists the days of the search month. To expedite file searches Days with recordings available have a green background.

SEARCH DATE	Enter the Date to be searched in the format shown in this field
START TIME	Enter the Start Time in 24 hour format for the files to be searched
END TIME	Enter the End Time in 24 hour format for the files to be searched
PATH	Select the file storage source: **HDD** Hard Disk Drive **SD** SD Card
SEARCH METHOD	Select the Type of recordings to search for the time period entered: **TIME** Search ALL recordings **PERIOD** Search PERIOD labeled recordings **EVENT** Search EVENT labeled recording
CHANNEL	Select the Video Channel (CH 1 – 8) to be displayed for the time period entered: **ALL** Search ALL camera channels for recordings **CH 1 – 16** Search a specific Camera channel (CH) for recordings.

Action Bar Keys (Select, then press **ENTER**):

SEARCH	To search and move to the 1.7.2.1.1 SEARCH PLAYBACK LIST

1.7.2.1.1 SEARCH PLAYBACK LIST

The **1.7.2.1.1 SEARCH PLAYBACK LIST** displays the results of the last 1.7.2.1 SEARCH RECORDINGS screen. Select the file or files. To Playback the recorded file(s) selected above use the instructions on the following page.

DATE	Search date for recorded files listed (No User entry)
CH	Camera channel recorded from (No User entry)
TYPE	Search Type producing listing: **ALL, GENERAL or ALARM/EVENT**
START	Start time for the recording (No User entry)
END	End time for the recording (No User entry)
CHECK BOX ☐	Select file and press **ENTER** to mark the file for viewing

Action Bar Keys (Select, then press **ENTER**):

FIRST	Move cursor to first PAGE
LAST	Move cursor to last PAGE
PREV	Move cursor to previous PAGE
NEXT	Move cursor to next PAGE
ALL	Select all files. Fills in all check boxes
INVERSE	Reverse file listing order
EXPORT	To save the selected files to a USB Drive inserted into the front panel USB report. A 1.7.2.1.1.A SYSTEM MESSAGE will appear and display the File Transfer status until the download is completed
RETURN	Press to return to the 1.7.2.1.1 SEARCH PLAYBACK LIST screen

To playback the selected file(s) follow the instructions on the next page.

1.7.2.1.1 VIEWING FILES

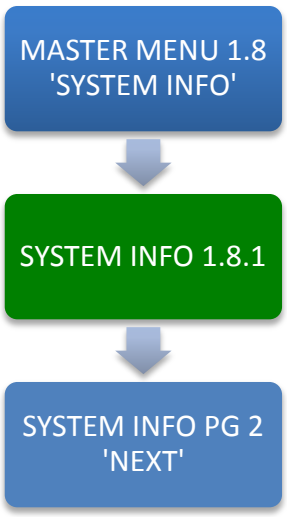
Two options to return to the 1.7.2.1.1 SEARCH PLAYBACK LIST screen

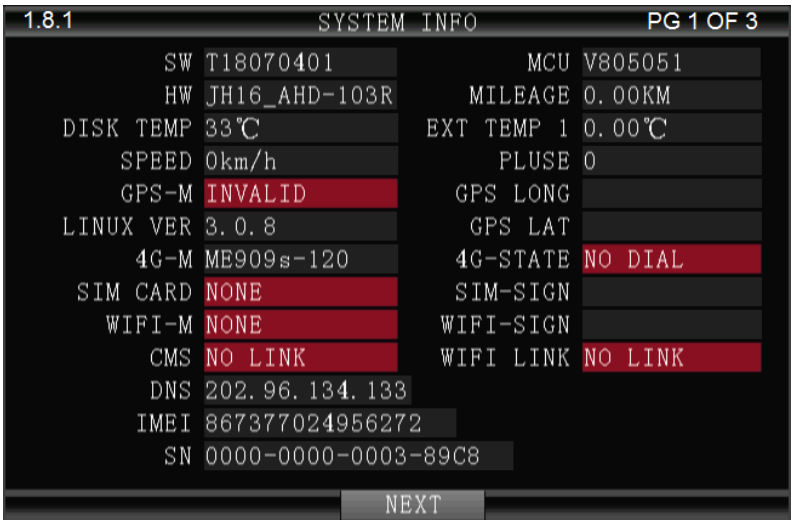
VIEW FILE	Once the file is completely played the 1.7.2.1.1 SEARCH PLAYBACK LIST screen will be displayed and the last viewed selection highlighted.
RETURN	Press to end viewing and return to the 1.7.2.1.1 SEARCH PLAYBACK LIST screen

IRC Playback Related Keys:

PLAY		Starts Playback of the selected recorded file. Press repeatedly to increase Playback speed by X2, X4, X8, X16
REW		REWIND Reverses the Playback of the selected recorded file. Press repeatedly to increase Reverse speed by X2, X4, X8, X16
FWD		FAST FORWARD
PAUSE/STEP		Press to pause recording. Press to advance one frame per press

1.8.1 SYSTEM INFO, PG 1 OF 3





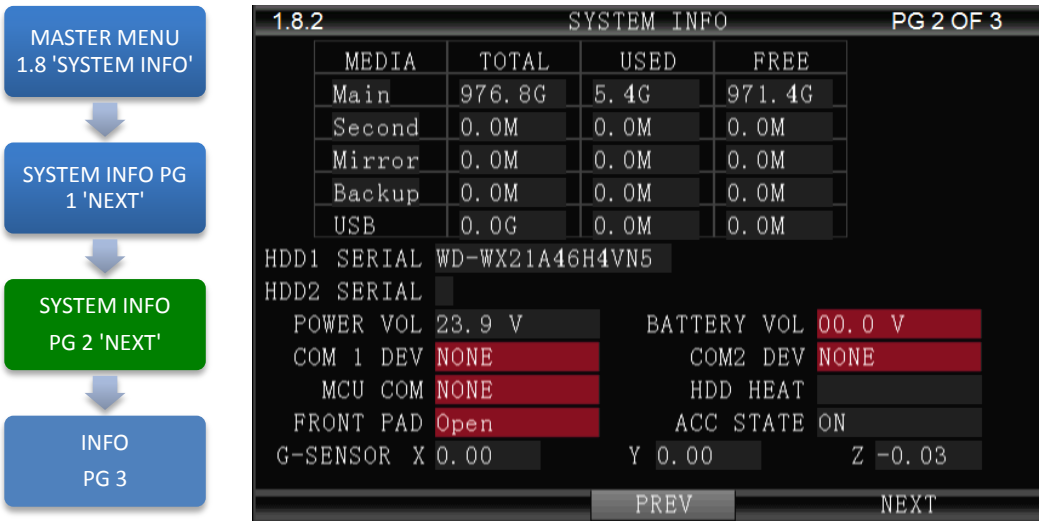
The **1.8.1 SYSTEM INFO** screen is one of three sequential screens to display the current MDVR system settings, real time operational status and optional business contact information. A compatible monitor must be properly connected and configured to either of the MDVR Rear or Front Monitor ports.

INFO	Press to view PG 1 of the System Info screens.
NEXT	Select and press **ENTER** to view 1.8.2 SYSTEM INFO PG 2
RETURN	Press to return to the previous page

Note: For Status Report purposes only. No User entry

SW	Software Version
HW	Hardware Version
SN	Serial Number
MCU	**M**icro **C**ontrol **U**nit
IMEI	The ID of the MDVR Cellular Modem Option when installed and enabled within the MDVR for communication with the CMS Server. It is automatically displayed if an active SIM Card is installed.
DISK TEMP	Internal Temperature reading of DISK
SPEED	Vehicle Speed (should read '0' if the vehicle is properly parked)
GPS-M	GPS optioninstalled?
MILEAGE	Approximate distance Vehicle has traveled since last odometer setting
4G-M	Cellular Option installed?
SIM CARD	SIM Card installed?
WIFI-M	WIFI Option installed?
CMS	Central Monitoring Station Linked?
EXT-TEMP	External Temperature reading (Option)
PULSE	Optional. Requires SPEEDOMETER MODULE
GPS LONG	Current GPS Longitude reading
GPS LAT	Current GPS Latitude reading
4G-STATUS	Cellular Status
4G-SIGNAL	SIM Signal reading
WIFI-SIGNAL	WIFI Signal reading
DNS	Domain IP of 3G/4G
WIFI LINK	WIFI Station Linked?

1.8.2 SYSTEM INFO, PG 2 OF 3



The**1.8.2 SYSTEM INFO** screen shown above is Page 2 of 3 sequential screens displaying the current MDVR system settings, operational status and business contact information.

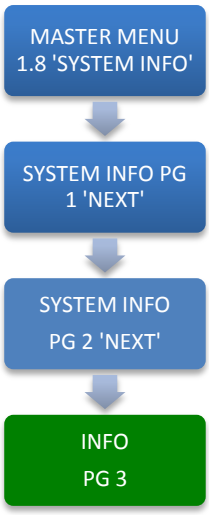
To view the INFO screen:

INFO	Press to view PG 1 of the System Info screens.
NEXT	Select and press **ENTER** to view 1.8.3 SYSTEM INFO PG 3
RETURN	Press to return to the previous page

Note: For Status Report purposes only. No User entries.

MEDIA	Storage status for each of the installed recording media
HDD1 SERIAL	Serial number of the hard disk 1
HDD2 SERIAL	Serial number of the hard disk 2
COM 1 DEV	Serial Port 1 (Device Connected)
COM 2 DEV	Serial Port 1 (Device Connected)
POWER VOL	Voltage supplied by vehicle to MDVR
BATTERY VOL	Backup battery input voltage
MCU COM	Serial Port MCU (Device Connected)
G SENSOR X	Accelerometer X Axis reading
Y	Accelerometer Y Axis reading
Z	Accelerometer Z Axis reading
ACC STATE	ACC State(ON OR OFF)

1.8.3 SUPPORT INFO, PG 3 OF 3



The**1.8.3 SYSTEM INFO** screen shown above is Page 3 of 3 sequential screens displaying the current MDVR system settings, operational status and business contact information.

To view the INFO screen:

INFO	Press to view PG 1 of the System Info screens.
PREV	Press to return to the previous page

Note: For Status Report purposes only. No User entries.

SENSOR IN STATUS	Status of 8 SENS IN channels. ALARM status is indicated by white letters on red background
SENSOR OUT STATUS	Status of 2 SENS OUT channels. ALARM status is indicated by white letters on red background

USER NOTES AND FEEDBACK