







User Manual
for
X3 MDVR GUI

Mobile Digital Video Recorder

CE FC

NOTICE

The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without any notice.

The purpose of this manual is to kindly aid the user for the operation for our MDVR (especially for GUI setting). The user should have a basic understanding of computer operation and basic knowledge of how to connect peripherals and make some settings.

1 PRODUCT CHARACTERISTICS AND OVERVIEW

1.1 PRODUCT OVERVIEW

SVT-MDVR-X3 is a cost-effective and functional Mobile Digital Video Recorder specially designed for vehicle surveillance and remote monitoring, combined with high-speed processor and embedded operating system. The advanced H.264 video compression and decompression, GPS location make it to be a very powerful and perfect solution for vehicles.

1.1.1 VIDEO/AUDIO FERATURES AND CAPABILITIES

- 4 channels for video and audio inputs, 2 channel real-time D1, 4CH D1 at 12fps/15fps continuous or priority video recording and live view display.
- Semi-transparent GUI makes setting for GUI and live display synchronously.
- Special file system NVRFSTM is very good for improving the security level of data, providing self-recovery function, self-check, self-backup for certain critical data and avoiding data fragment that affect system efficiency.
- Watermark prevents any modification in recorded file, which is part of the law enforcement.
- Better Compression rate at H.264 (50% less than MPEG4).Enhance recording storage rate in most efficiency way.
- 4 channels for high-fidelity, digitally recorded, synchronized audio matched to 4 video channels
- User friendly criteria to playback the events associated video only.
- Dual-Stream for wireless transmission depends on wide or narrow bandwidth.
- User-selectable settings for quality and audio record enable/disable for each video channel.
- 12v power supply for multiple devices such as cameras, sensors, relays and any other accessories.
- Selectable frame rate with event-triggered burst recording speeds up to 30FPS/camera.
- Multiple alarm inputs with selectable pre-alarm and post-alarm record timings.

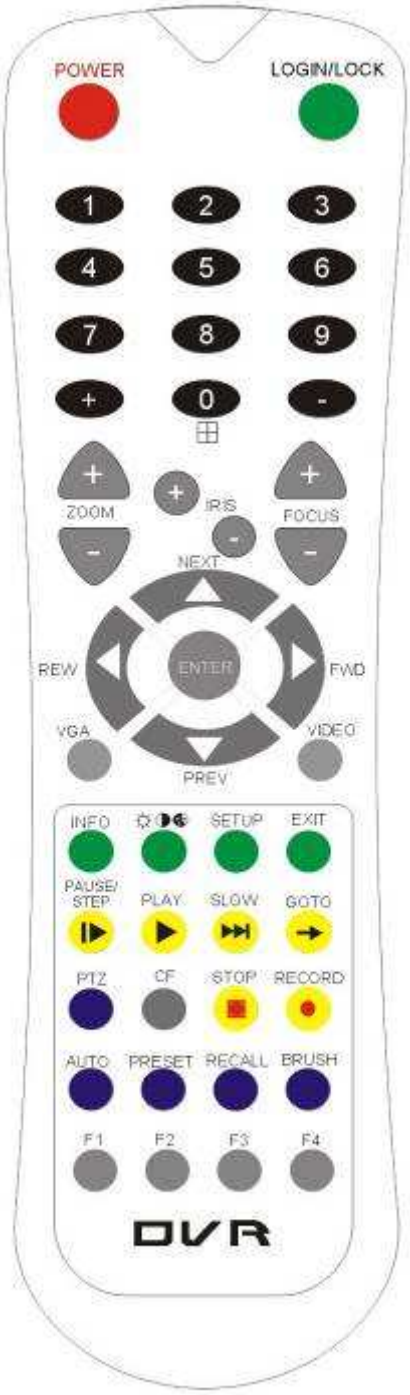
1.1.2 REMOTE CONNECTION CAPABILITIES

- Handheld Infra-Red controller with OSD for quick access to recorded video and settings menu.
- PC-Based Client software for live viewing, playback video, playback events video and download capabilities
- Support CMS (Central Management System) for remote monitoring by 3G (HSDPA or EVDO) and WIFI, PAS (Playback Analysis Software) for video playback, meta-data analysis.

1.1.3 ACCESSORY MODULES FOR MDVR

- Video Interface Module including GPS location and speed.
- Control panel for driver’s simply operation.
- Vehicle Motion Manager includes 3-axis Inertia Sensor to determine video-matched motion events.
- Wireless module GPRS /3G, WIFI for transferring data to CMS server for remote monitoring.

2 HANDHELD IR REMOTE CONTROL



Numeric Input Keys

Use the numbers to input
Values in the system setup
Screen or switch through the channels
in live view.

Navigation Arrows

Use the ARROW keys to move between selections, input fields and icons.
Press ENTER to select
And EXIT to return. Next and previous is also used to increase or decrease volume when at live or search screens.

Each MDVR includes a handheld Infra-Red (IR) controller that allows the user to transmit commands to recording module and display on screen control menu

2.1 NUMERIC KEYPAD

[0-9] keys: During setup, number keys are used to input number values.

In live view window, you can press 1, 2, 3 and 4 to switch to full screen, and press 0 to switch to quad view.

During full screen view of each camera, you can press ☼◑◕ key to adjust contrast, luminance, color and saturation, and then press + and - to make the adjustments. Pressing ☼◑◕ will navigate through the color adjustment options.

2.2 SETUP MENU NAVIGATION

▲, ▼: Up, down directional keys: Move selection up and down in setup menu.

►, ◄: Left, Right directional keys: Move cursor left or right in setup menu.

[ENTER] key: During setup, select and save the settings

2.3 OTHER KEYS FUNCITONS

LOGIN/ LOCK	You can press LOGIN / LOCK or SETUP key to enter the GUI to setup. If password enabled, you have to input default Admin password: 88888888.
POWER	To reset the MDVR in to sleep mode (You can press power button again to let MDVR start up when it in sleep mode).
⊞	Switch full screen of one channel to quad view.
☼◑◕	Brightness, contrast, color adjustment for per channel. Use [+] [-] button to change the values. You have to adjust the values for each channel individually.
SETUP	Login GUI to setup the parameters.
EXIT	Return to the previous menu.
Stop	Used to stop the recording manually. Only valid when you setup the record mode as manual.
Record	Used to start the recording manually. Only valid when you setup the record mode as manual.
PAUSE/STEP ▌►	Freezes playback to a single frame and can advance one frame at a time. To advance the frame press Pause / Step to move frame by frame. Press EXIT to return to normal playback speed.
PLAY ►	Starts/Resumes playback from any other mode (FF, RR, Frame by Frame etc).

SLOW ⏭	Reduces playback speed to 1/2, 1/4, 1/8 modes. Press PLAY to return to normal playback speed.
GOTO ➔	Quick search mode when you playback the record file in MDVR. Press GOTO button and input the desired time, and the select SURE to jump to the specific time you want to playback.
NEXT ▲	Increase volume while playback (if audio is recorded).
PREV ▼	Decrease volume while playback (if audio is recorded).
REW ◀	Rewinds the video while playback. X2 and X 4 modes available.
FWD ▶	Fast forward the video while playback. X2 and X4 modes available.
CF	No use at present.
[F1]	Export all the event record files of the day to USB by press F1 key.
[F2],[F3],[F4]	Reserved for future use.

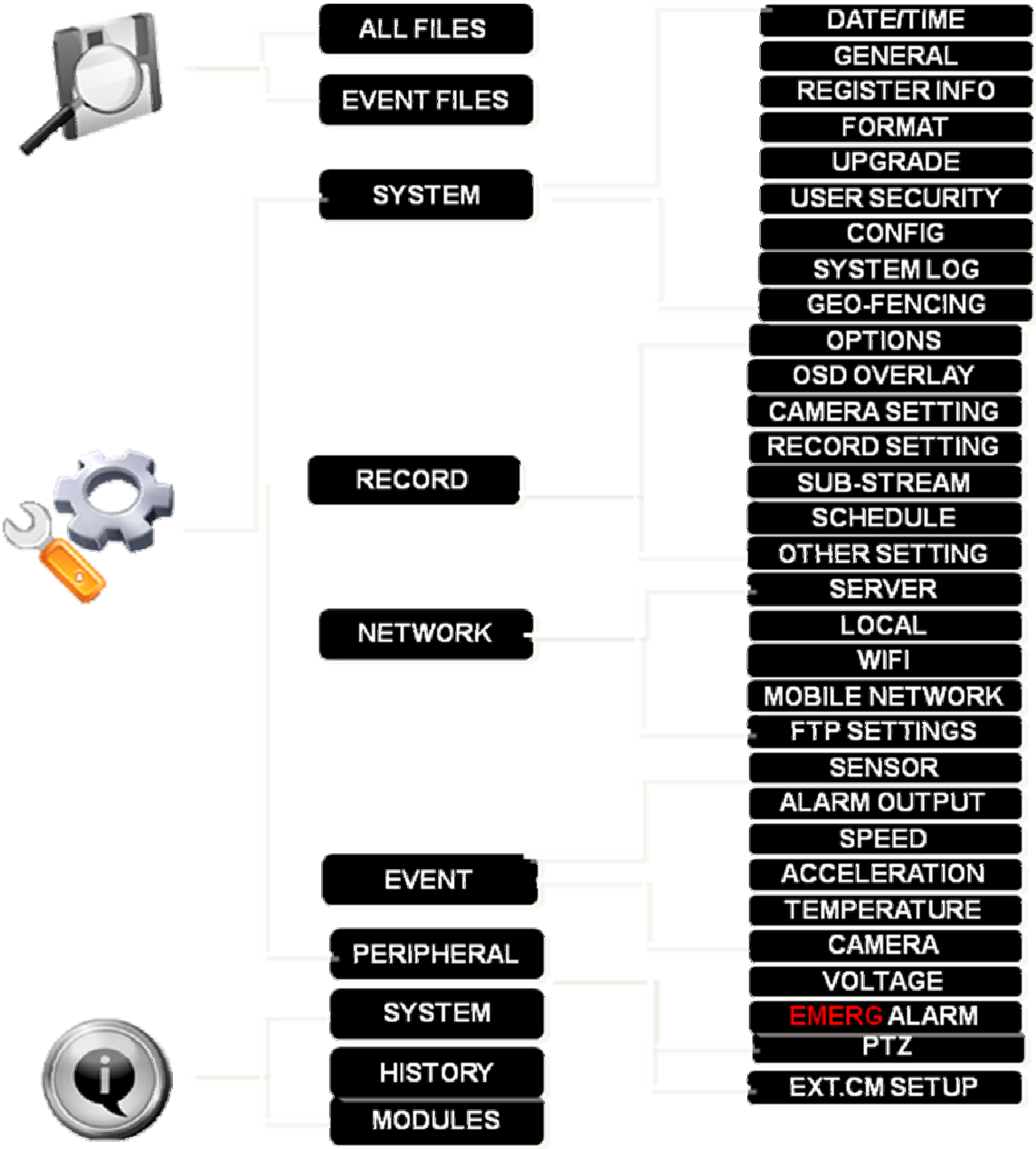
2.4 PTZ FUNCTION KEYS

While connect with PTZ camera and using the RS485 in DB26, following commands can control with PTZ camera with following function:

[ZOOM IN +], [ZOOM OUT -]	ZOOM IN/OUT
[IRIS +], [IRIS-]	Brightness control
[FOCUS +], [FOCUS -]	Focus control
PTZ	Enable the PTZ function
AUTO	Auto run with the PTZ pattern
PRESET	Preset default position
RECALL	Recall the position that you have setup.
BRUSH	Brush the glass screen

Check battery in place of remote controller since no battery in the standard package

3 MENU TREE



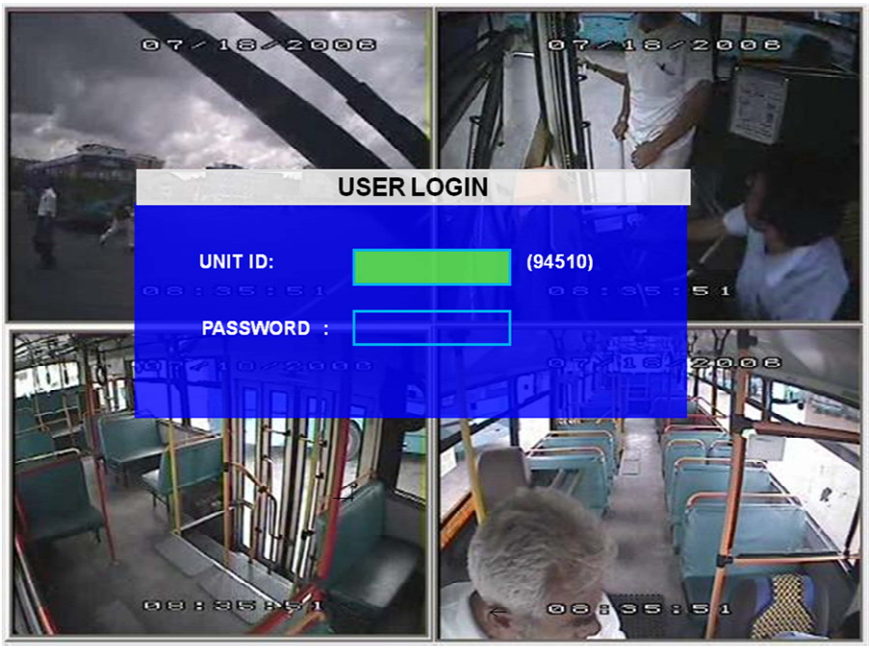
Menu structure tree

4 SYSTEM START UP

Install the HDD/SD card first and then lock it in front panel.

For testing, just connect the red wire and yellow wire together to Power + (8~36V DC), connect the black wire to GND. If on vehicle, please connect red wire to power +, yellow wire to Ignition, black GND wire to power -.

SYSTEM LOGIN FOR SETUP



MDVR GUI is semi-transparent; you can see the live view when you make GUI configurations

- When Password is set disable, press SETUP key on the handheld controller into the setup menu directly;
- When Password is set enable, press LOGIN/LOCK OR ENTER key on the handheld controller, the setup menu will appear:

UNIT ID: The unit ID of MDVR. You make the ID setting in the GUI and then the NO. will display on screen automatically.

PASSWORD: Enter the admin password or user password.

User default password is 22222222, and Admin password is 88888888.
OPERATOR PASSWORD CORRECT indicates permission is limited to video, sensor menu.
ADMIN PASSWORD CORRECT indicates full access to MDVR.
SUPER PASSWORD CORRECT indicates full access to MDVR under the circumstance of losing the password and modifies the MAC address.

Keyboard: Press 【Enter】to use keyboard to type device ID and password.

1）0~9, number key, press【Enter】to select the number.

2）123: Input type shift key. (Number, capital, small letter)

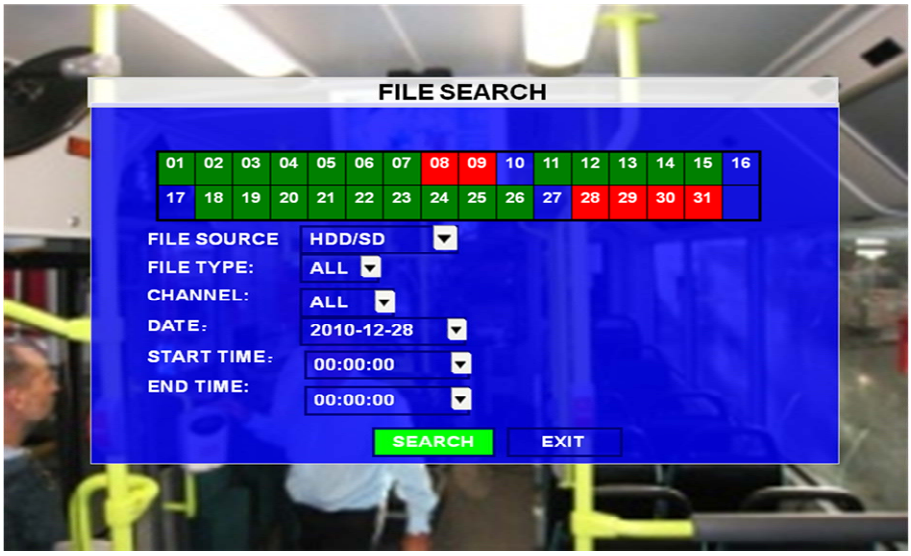
3）【←】delete, 【⇧】Exit.

5 SEARCH and PLAYBACK VIDEO FILE

This part is for search and playback the video file on the MDVR directly.

5.1 ALL FILES

You can search all the video files including normal files, alarm files by record time and file type. Please highlight the option **ALL FILES** and then enter into following screen.



FILE SOURCE: User can choose to playback from the HDD or from the SD for mirror recording.

FILE TYPE: The type of the file including all file, alarm file and normal file.

CHANNEL: Select the channel you want to search.

DATE: MDVR system will display the current day automatically. The day with record files will be indicated by

green. If the day with ALARM FILES, it will indicated by red.

START TIME: The default setting is 00:00:00; this time is for the start time for recording.

END TIME: The default setting is 23:59:59; this time is for the end time for recording.

For example: If the date is 2011_04_14 , the start time is 00:00:00 and end time is 23:59:59. it indicates you want to search the entire video file from 00:00:00 to 23:59:59 on 14th, Apr, 2011. If the date is 2011_05_16, the start time is 12:56:00 and end time is 13:10:20, then it indicates you want to search all the files from 12:56:00 to 13:10:20 on 16th, May, 2011.

Remark: the Green color means the record file of this day is normal record file, Red color means there is alarm files during this day.

Please press【**SEARCH**】to enter into the next menu for listing out all the certain video files depends on the setting for the file type, date and time.

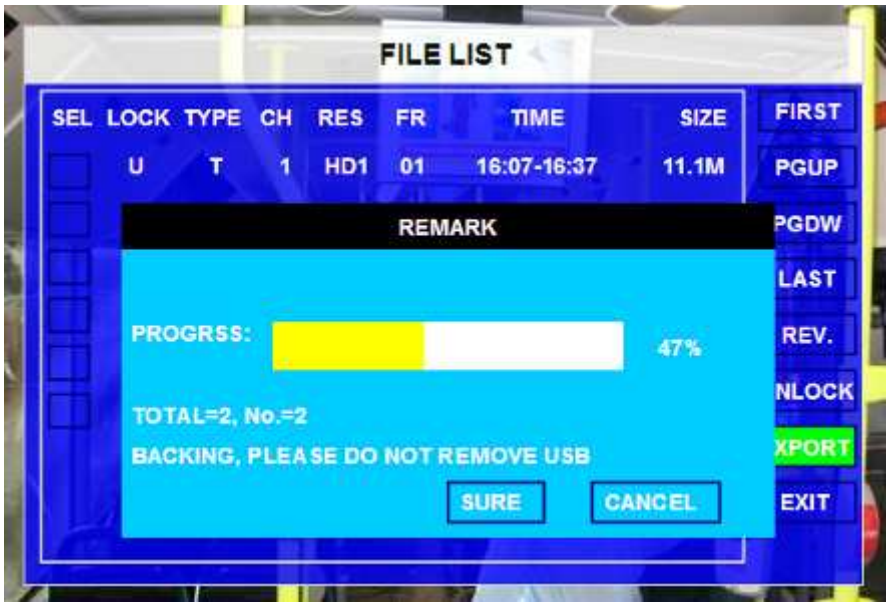
SEL: For selecting the files for backup. Please press arrow key on remote control to select the file that need to back up and then **×** will display.

REV.: Press for selecting all the other files. For example, if you do not select any file for backup, then press 【**REV.**】, all the files are selected. If you select one file and then press 【REV.】, all other files are selected. (But the selected one will not be selected)

Lock: L means this file is locked. **U** Means this file is unlocked. Lock means the alarm file is protected for the configured days to avoid being overwritten. Go to SETUP--EVENT, for each kinds of alarm, you can enable or disable the lock function in the setting interface.

EXPORT: Export the selected file to external device by USB port in the front of MDVR.

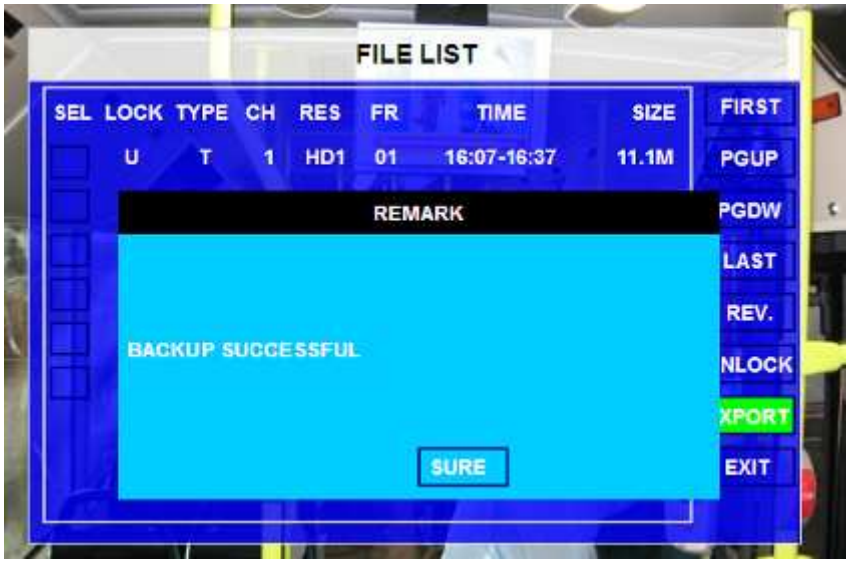
Please connect the external storage device with MDVR by USB port and then press 【 **EXPORT**】 to backup. Then the following screen will pop up.



TOTAL: total quantity for the files that you selected for back up.

No.: The file No. that is backing now.

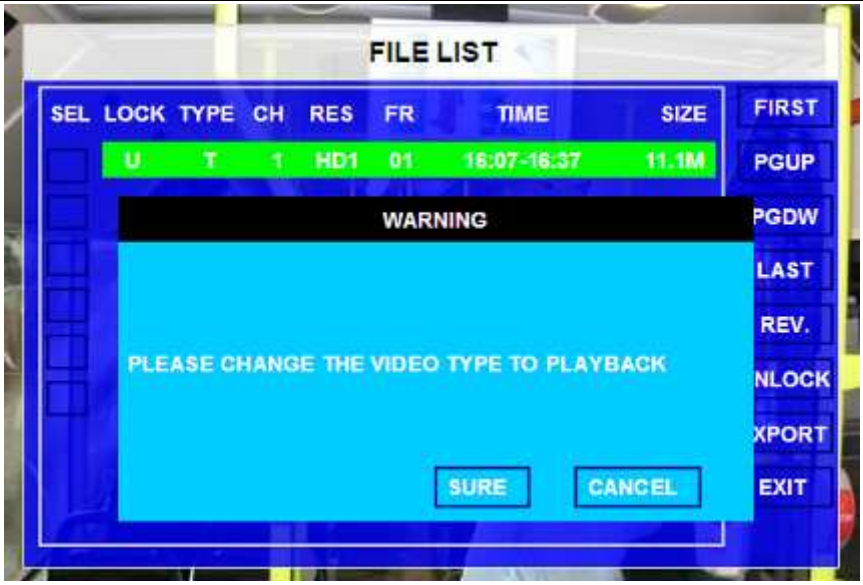
After successful backup, the following screen will pop up.



If you do not connect external storage device or the storage device is defective, then the system will display NO THUMB DRIVE.

If the MDVR current video type is different with the setting that the MDVR record last time, then the video file can not playback, for example, the video type of record files is NSTC, now the setting of video type is PAL, you can't playback the video file until you change the video type to NSTC.

Another example: if you change the video type to NTSC, then after the MDVT reboot, you can't playback the previous video files recorded in PAL, as the following picture:

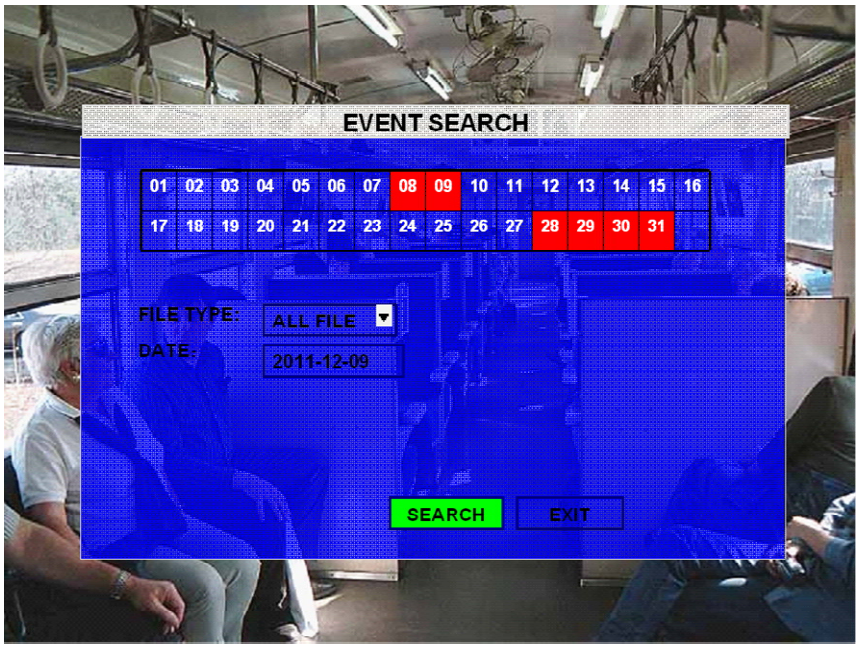


Please enter into the **OPTION GUI** and change the video type to be PAL manually and then the video file can be playback, otherwise, can not.

Also, if the HDD is used on 8-CH MDVR before, then you can't playback the video files(recorded on 8CH MDVR) on 4 channel MDVR.

5.2 EVENT FILES

Search for all the event files LOG, not video file.



FILE TYPE: The type of the alarm file including I&O / ACCELERATION/ SPPED/TEMP/ VL ALARM/MOTION DETECTION/BLIND and so on

DATE: MDVR system will display the current date automatically. The date with alarm record files will be indicated by yellow.

Please press【**SEARCH**】to enter into the next menu to list out all the certain video files depends on File's type and date.

SEL: For selecting the LOG for backup. Please arrow key on remote control to select the LOG file that need to back up and then √ will display. Please press 【**REV.**】to select all the files for backup or not.

EVENT NAME: The name for the alarm such as alarm for video loss, alarm for over speed, low speed or high temperature, sensors and so on.

DATE: Display the date when the alarm occurred.

TIME: The start time when the alarm occurred.

REV.: Press for selecting all or not. For example, if you do not select any file for backup, then press 【REV.】, all the files are selected.

EX LOG: Export the selected LOG to external device by USB port on the front of MDVR.

EXPORT: Export the related video if the event has the record file. If no related video file, you will got a remark that no video file.

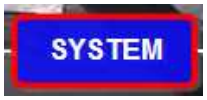
It is just LOG file for event name, start time, not video file. If you want to see the alarm video, please search them in ALL FILES menu.

6 SETUP

This part will show you how to setup the MDVR and how to check the working status.

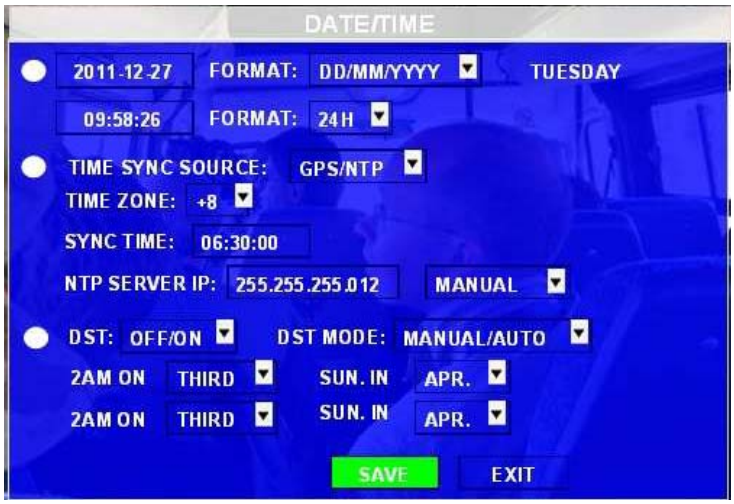
Please press SAVE to make all the setting valid and it will give you a remark when you save successful, and when you modify the settings for the network, it will restart automatically after you exit to live view.
The MDVR will stop recording when enter into the MDVR configuration GUI.
You can input the letters and characters by software keyboard.

6.1 SYSTEM

Use ARROWS to select 

and press ENTER. The screen will show the menu as below:

6.1.1 DATA/TIME



DATE FORMAT: Press 【**ENTER**】to select different format MM/DD/YYYY, DD/MM/YYYY, YYYY-MM-DD

TIME FORMAT: 12H or 24H, Press【**ENTER**】to select different format.

TIME SYNC SOURCE: The system allow have the time synchronizing via by either “GPS” or “NTP”.

A: While selecting the “GPS”, the device must have GPS connection and GPS signal must be have well reception signal. To set the sync time in this menu, and unit will record the time difference-GMT offset, when the system time arrive the sync time, unit will synchronize with GPS time once.

B: While selecting the “NTP” (Network Time Protocol), the device must have network access connection and assign the NTP IP location; This process run at 6:30am local time while the system have network connection;

TIME ZONE: Please choose the correct time zone where vehicle in.

SYNC TIME: This is the time when the unit will sync the system time every day. The method depends on the setting on the TIME SYNC SOURCE option:

NTP SERVER IP: Input the IP server which supports NTP protocol, in order to allow the system have time synchronization through the network. [Example: "192.43.244.18", "129.6.15.28", "211.22.55.116", "194.88.2.60"]

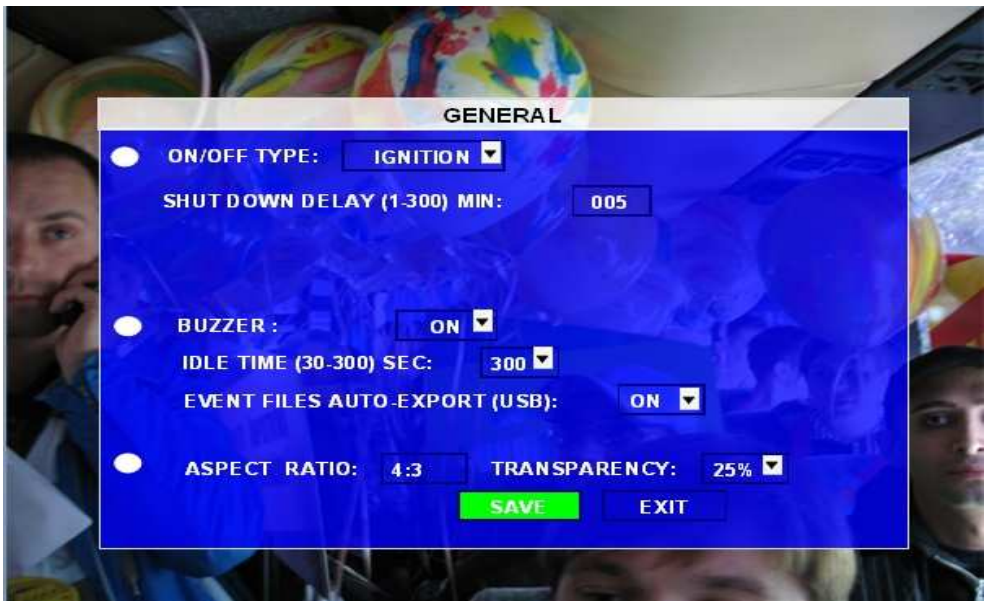
DST: Daylight Saving Time. Only when it set on, the following option will available.

DST MODE: There are two modes: Auto / Manual. Auto: According to the international DST, i.e.: valid only between 2AM on Second Sun in March and 2AM on First Sun in NOV.

While setting the DST, the former date must be earlier than the latter; if the two setting Date is the same, the DST will invalid.

Scroll to【**SAVE**】to make the setting valid.

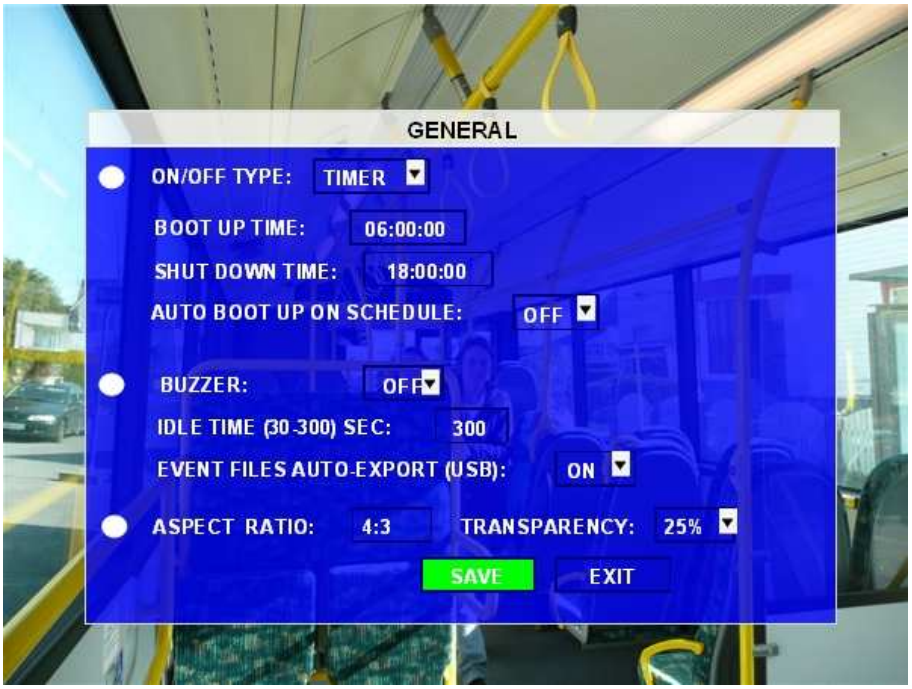
6.1.2 GENERAL



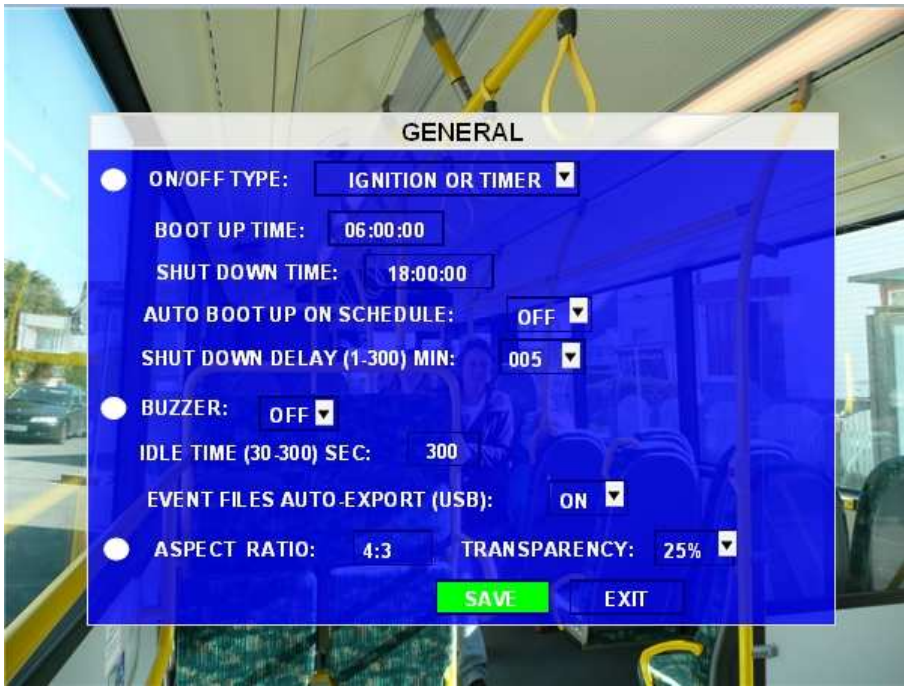
ON/OFF TYPE: There are IGNITION, TIMER and IGNITION OR TIMER three options.

A) **IGNITION:** for shut down delay function. For example: If you setup the SHUT DOWN DELAY as 5 min, then MDVR will shut down after 5 min after the ignition off.

B) **TIMER:** It will start up automatically at the time you setup. If you select TIMER, then the following screen will pop up.



C) **IGNITION OR TIMER:** means include both conditions.



BOOT UP TIME: The exact time for MDVR starts to work every day.

SHUT DOWN TIME: The exact time for MDVR shut down every day.

BOOT UP IN RECORDING TIME: ON means record function linkage to timer start-up. For example, if the setting for BOOT UP TIME is 6:00:00, then when it is 6:00:00, MDVR will start to record even ignition is OFF.

BUZZER SWITCH: ON means the built-in buzzer will beep when alarm happens, OFF means no audio when alarm happens. Beeping time depends on the ALARM TIME in SETUP-RECORD-OPTION

IDLE TIME (SEC): The time for the operation interface switch to the live view. if the user does not make any operation for some time, the system will switch to the live view automatically.

EVENT FILES AUTO-EXPORT (USB): When is switch is ON, you can back up all the alarm record files of today by press F1 on IR control in live view mode.

For TIMER type, if the setting for boot up time is 6:00:00 and shut show time is 11:00:00. After the MDVR is OFF, reboot up the MDVR and MDVR will check the system for 5 min and then shut down again, you must enter into this menu to change the TYPE to be ignition. Anyway, if the time for reboot up the MDVR is not during 6:00:00 to 11:00:00, then MDVR will shutdown in 5 min.

OUTPUT MODE: There are 4:3 and 9:6 two options, you can select the mode you want.

TRANSPARENCY: Setup the brightness for the screen display as you want.

Scroll to【**SAVE**】to make the setting valid

6.1.3 REGISTER INFO

UNIT S/N: The series Number for MDVR. One MDVR has only one S/N. This number is read from special encrypted chip.

UNIT ID: Device ID. Use the **NUMERIC** keypad to enter the system ID from 00000 to 99999. This ID is used when logging in to the unit (if security is enabled).

COMPANY NAME: The name of company, Press the arrow key on the remote control and highlight this Option and then input the name of the company.

VEHICLE NO.: The number of the vehicles.

DRIVER/ROUTE NAME: The driver's name and the route name

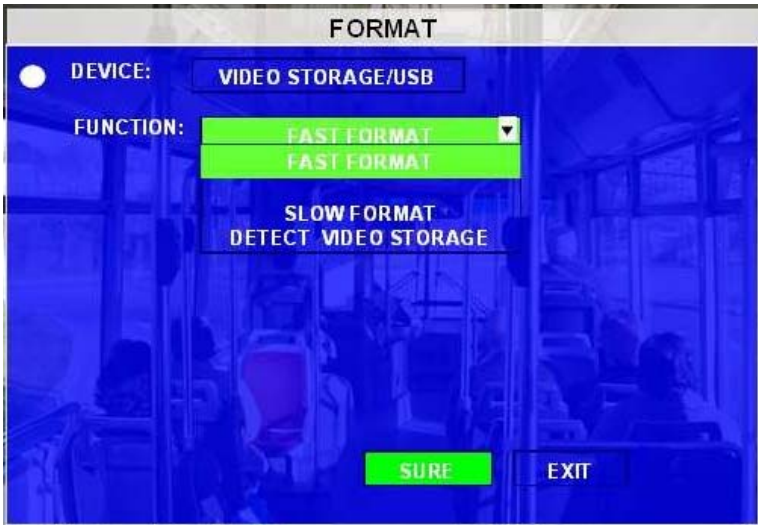
DEVICE ID: This ID should be unique and it is very important for the message server of CMS, WCMS, and ADS. Only this number can be recognized by message server.

Remark: when you connect MDVR to PC software, make sure vehicle NO and DEVICE ID is not blank, otherwise, it can't connect to message server.

Scroll to【**SAVE**】to make the setting valid

6.1.4 FORMAT

Select the device you want to format, Video Storage, SD card or USB.



DEVICE: Please press 【**ENTER**】 to select the target device for format. There are 2 options: Video Storage/ SD/USB. Then choose format method, there are three methods optional:

FAST FORMAT: MDVR would clear all the video data directly.

SLOW FORMAT: MDVR would detect before format, if there are bad blocks, it would mark them out and would not record here next time.

Detect Video Storage: MDVR just detect the video storage media, no format at all.

After format success, it will restart.

6.1.5 UPGRADE

Upgrade to new firmware or MCU.

FIRMWARE: Upgrade the firmware.

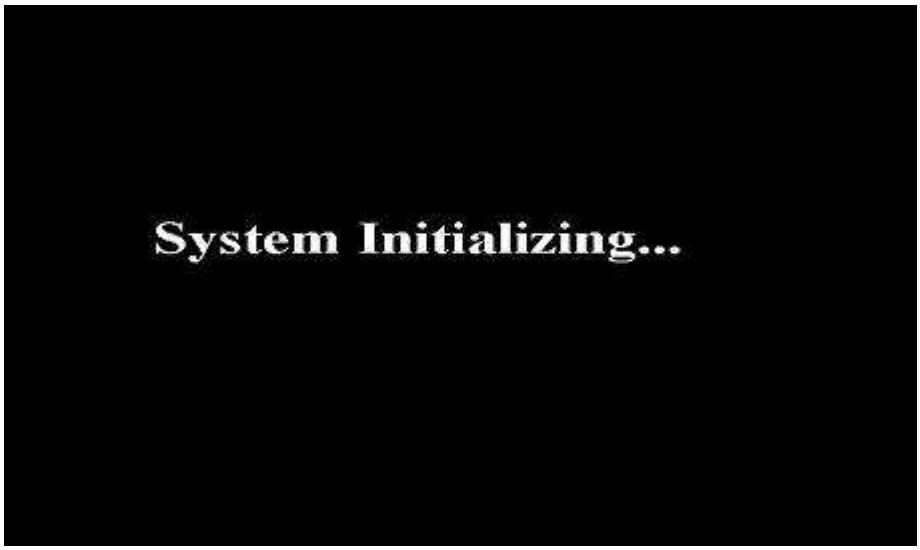
MCU: Upgrade MCU.

HOW TO UPGRADE THE FIRMWARE:

1. Please create one folder named **dvrupgrade** in thumb drive and then copy the firmware upgrade file into this folder.
2. Insert the thumb drive into the USB port in the front panel of MDVR.

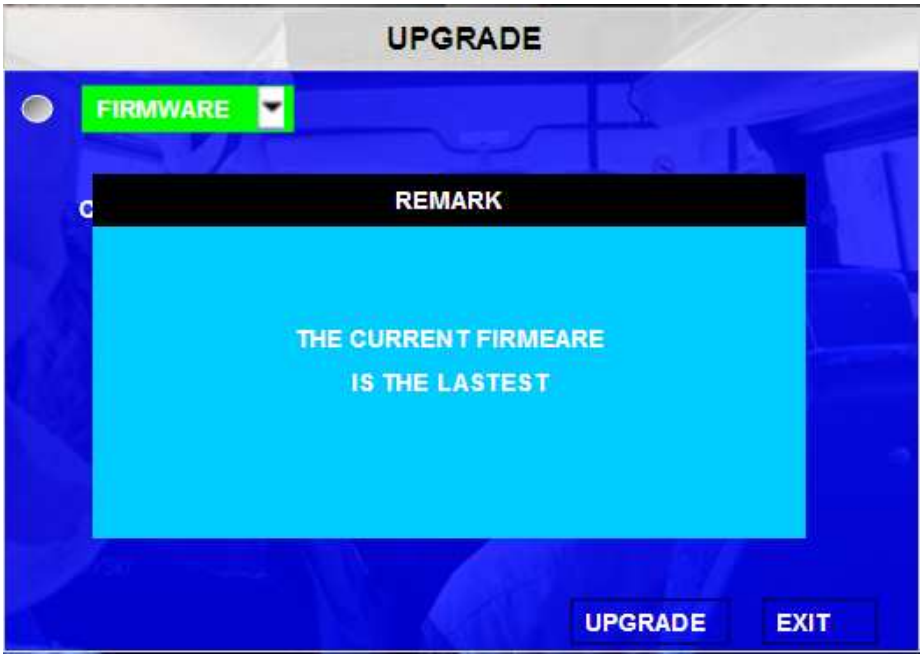
3. Please enter into this interface and press 【UPGRADE】, MDVR will upgrade the firmware automatically.
4. During the firmware upgrade, then following screen will pop up.

5. After upgrade success, it will restart automatically, as follow:



Please do not cut off the power for MDVR or remove the thumb drive during firmware upgrade. Please check the firmware version after the MDVR reboot up and make sure that the firmware upgrade is completely successful.

If the firmware of the MDVR is the latest, then you can not upgrade the firmware again. And MDVR system will pop up one screen as following:



MCU UPGRADE: The step is the same as upgrade firmware.

LOGO: update the starting interface. For our standard firmware, when the system starting up, you can see SYSTEM INITIALIZENG interface. With this function, you can change this interface to your own logo. The requirements are as following:

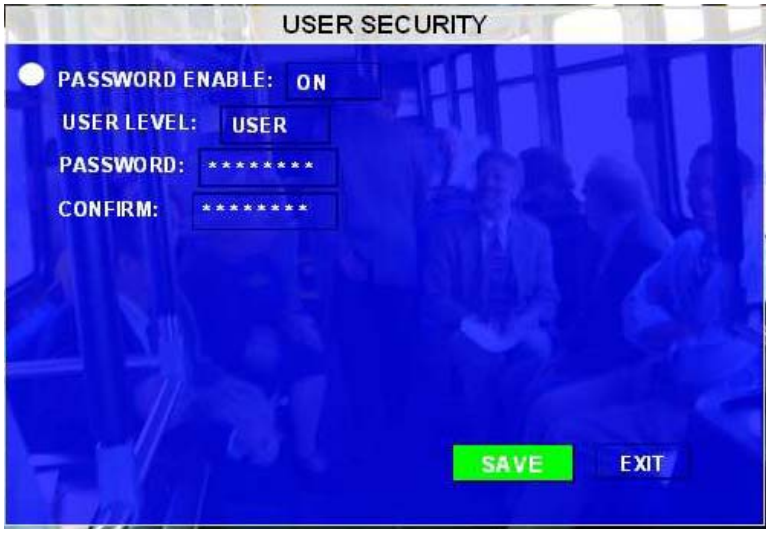
1) The picture must be JPEG format and generated by paint in windows OS,
2) Resolution: 720*576
3) File name: logome.jpg
4) File size: <100KB
5) Upgrade method: the same to upgrade firmware, put this file to dvrupgrade folder in root of USB drive.

UPDATE: when you update the firmware, there is screen to show you UPDATING..., with this function, you can change this interface to your own logo.

The method and requirements of this picture are the same as upgrade logo, but the file name should be update.jpg

6.1.6 USER SECURITY

Setup the password for user and admin.



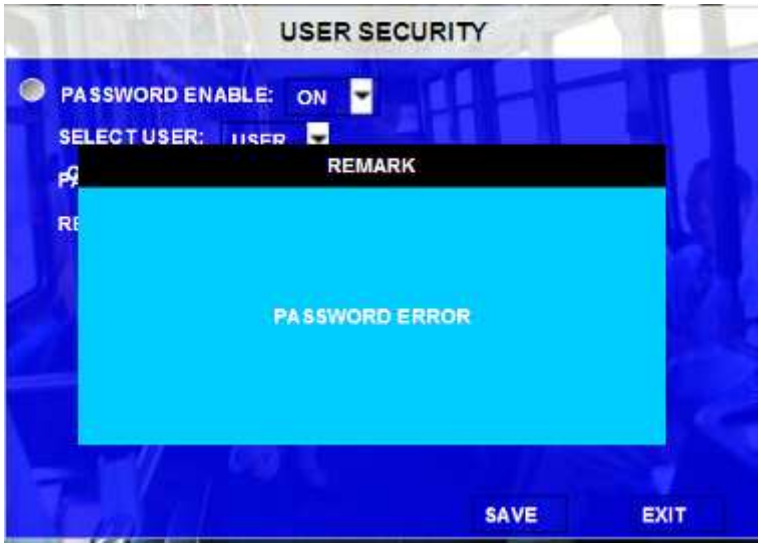
PASSWORD ENABLE: To active this function or not. Selecting “ON” will require a password in order to access the setup menu. Selecting “OFF” will not require a password in order to access the setup menu.

USER PASSWORD: User can only search, can’t modify any parameters.

ADMIN PASSWORD: An Administrator with full rights

The default password for Admin is 8888 8888.

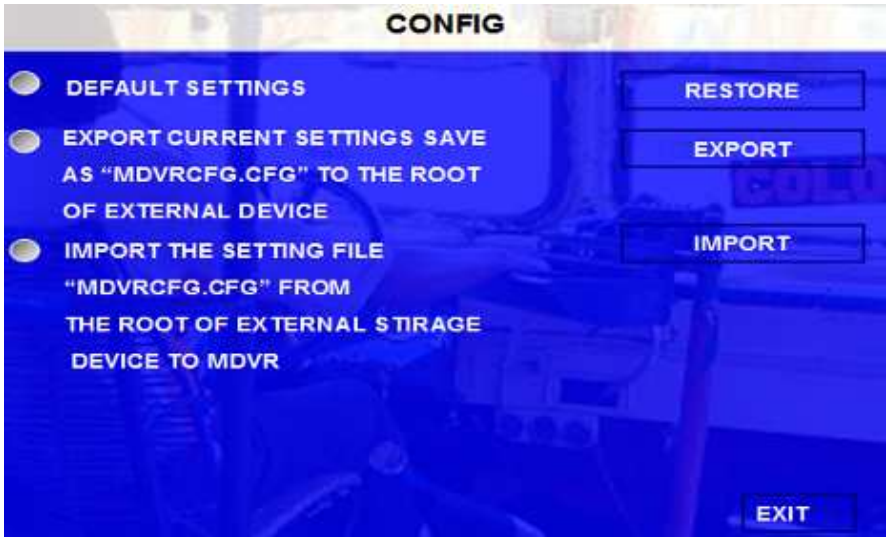
Re-enter must be same input as first password, otherwise the system would not accept the password setting when password does not match between the first and re-enter line. Then the following screen will pop up:



Scroll to【**SAVE**】to make the setting valid.

6.1.7 CONFIG

Restore the default setting and export and import the MDVR configuration.



EXPORT: Export all the configuration for the MDVR to another MDVR to make sure that two MDVR have the same setting. Please insert the external storage device to the USB port and then press 【EXPORT】, Then the configuration file will backup to the external device.

IMPORT: Import the MDVR configuration file to the current device, except MAC address, LOCAL IP, WIFI IP and register information. Please insert the external storage device to the USB port (Must have configuration file in the storage device) and then press 【IMPORT】. The configuration will be imported to this MDVR automatically.

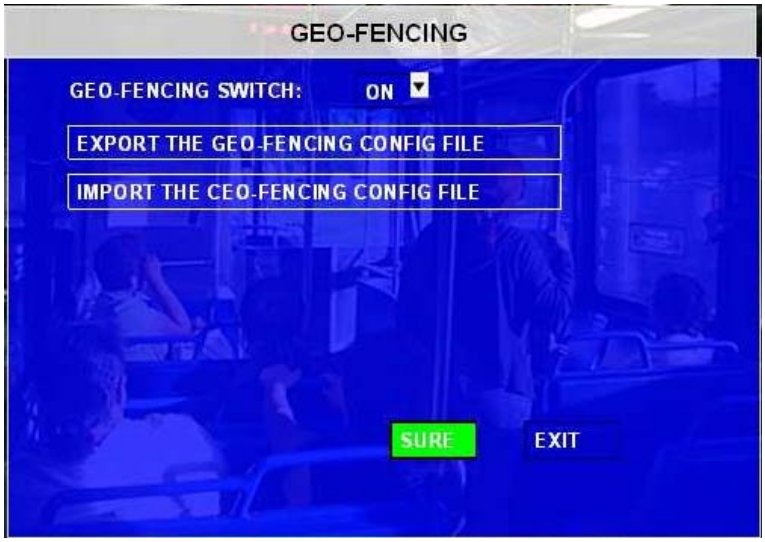
RESTORE: Restore default settings.

6.1.8 SYSTEM LOG

You can export or delete the system log in this interface, as following picture:

Remark: The user log mainly include: start record time, event time, stop recording time, power on and power off time and so on

6.1.9 GEO-FENCING



EXPORT THE GEO-FENCING CONFIG FILE: Export all the GEO-Fencing configuration for the MDVR to another MDVR to make sure that two MDVRs have the same settings. Please insert the external storage device to the USB port and then press 【EXPORT】, Then the configuration file will backup to the external device.

IMPORT THE GEO-FENCING CONFIG FILE: Import the MDVR GEO-Fencing configuration file to the current device. Please insert the external storage device to the USB port (Must have configuration file in the storage device) and then press 【IMPORT】. The configuration will be imported to this MDVR automatically.

6.2 RECORD

Setup the related configuration for Record

6.2.1 OPTIONS

Setup the basic parameters.

VIDEO TYPE: PAL and NTSC optional. The default setting is NTSC

RECORD MODE: Record mode, three modes as following:

GENERAL: When MDVR is power on and start up, the MDVR will start to record automatically.

TIMER: record according to schedule in SETUP--RECORD-SCHEDULE.

EVENT: When event trigged, MDVR will start to record.

NORMAL REC RATE: normal record rate, two option:

NORMAL: MDVR will start to record according to the setup of RECORD SETTING.

I FRAME: MDVR only record at one frame per second in order to take less space of hard drive. BUT when event is trigged, MDVR will record according to setup of RECORD SETTING.

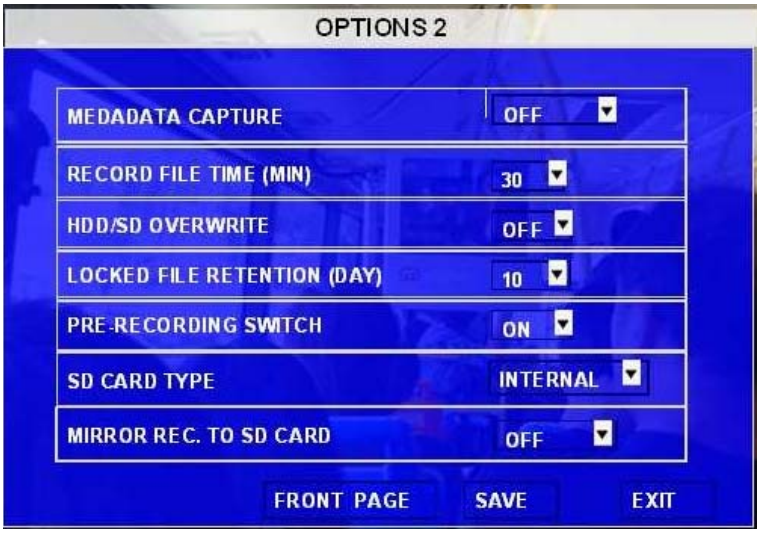
ALARM PRE-REC TIME（1-60）MIN: Pre-record time setting is from 1 to 60 minutes. For example: If the setting for pre-record is 30min, when alarm trigger at 10:30, then the record file start from 10:00 to 10:30 will pack as alarm record.

(Make sure the Pre-recording switch is ON in next page when you want to use this function)

ALARM DURATION（3-30）SEC: The alarm duration time, all the alarm for same type considered to be one alarm during the setting for alarm duration and MDVR reset the duration time automatically. For example, if the setting for alarm duration is 10 sec and during this 10 sec, anther same type alarm triggered and then MDVR system will consider them to be one alarm event. And the alarm start time will be reset based on the second time for alarm.

ALARM POST REC（30-1800）SEC: Alarm post recording time.

ALARM TIME: buzzer alarm duration time setup, when alarm triggered, the buzzer duration time.



MEDADATA CAPTURE: metadata information, it will create a black box file in HDD when you enable this switch.

RECORD FILE TIME（MIN）: Recording file packing size, 15, 30, 45, 60 minutes optional.

HDD/ SD OVERWRITE: To make the HDD or SD overwrite when there is only 2GB space in HDD.

LOCKED FILE RETENTION (DAY): Locked recording file save time: 7, 10, 15, 20, 30, 45 days optional, during the save time, the locked recording file won't be deleted. Once pass lock time, the recording file LOCK identifier will be from L to U, and then can be deleted.

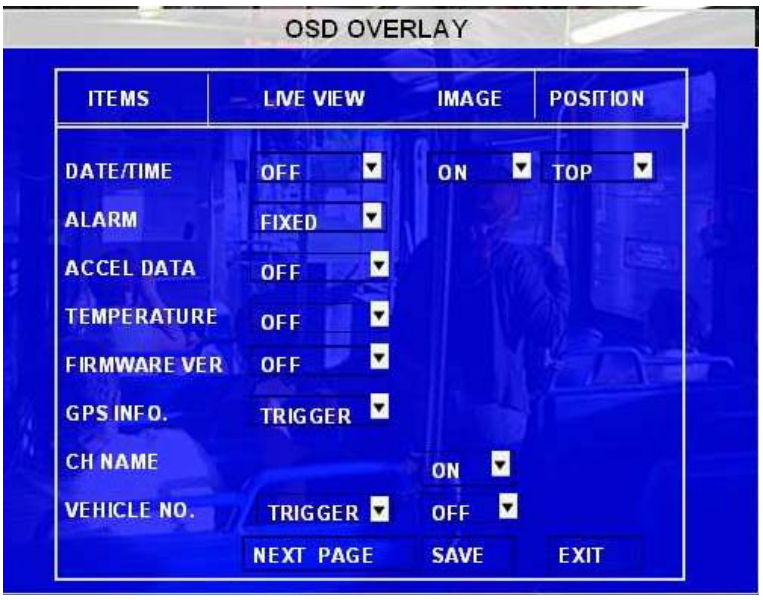
PRE-RECORDING SWITCH: Only when this is sent as "ON" the pre-recording time is valid.

SD CARD TYPE: Internal means the one in the SD card slot below the HDD case; External means the one in file-proof box.

Mirror Rec. To SD CARD: For MDVR to backup recording files to SD card when backing up to hard disk.

6.2.2 OSD OVERLAY

During Live view, press 【Enter】 on remote control to show MDVR working status on live view.



DATE/TIME: Display date and time on OSD.

ALARM: Display Alarm information on OSD. **FIXED** means show the alarm information all the time on image.

ACCEL DATA: Display the information for inertial sensor

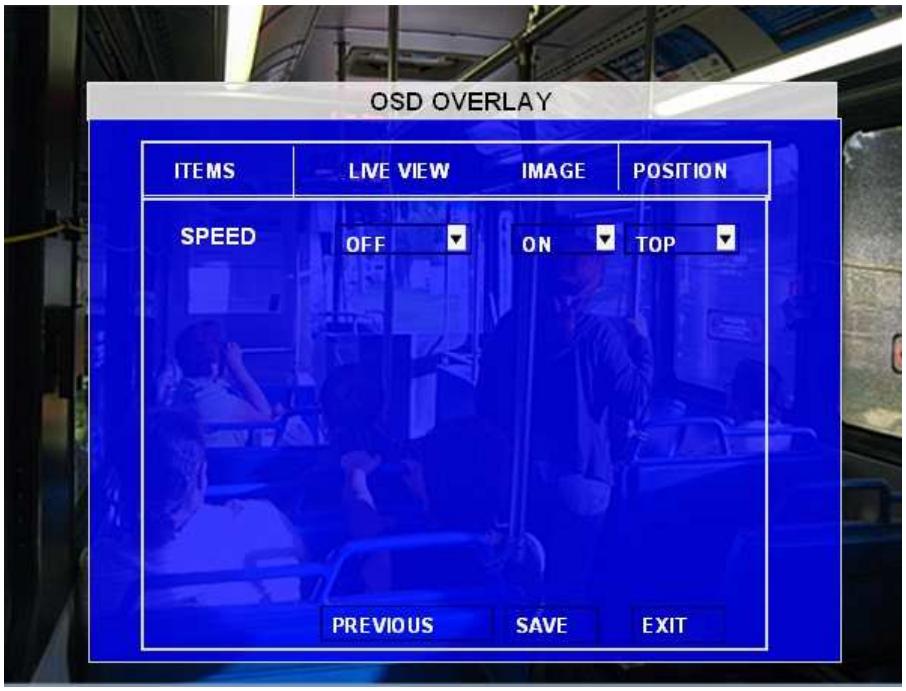
TEMPERATURE: Display the temperature on OSD

FIRMWARE VER: Display the current firmware version

GPS INFO: Display the GPS working status. **TRIGGER** means only when GPS is available, it will be shown.

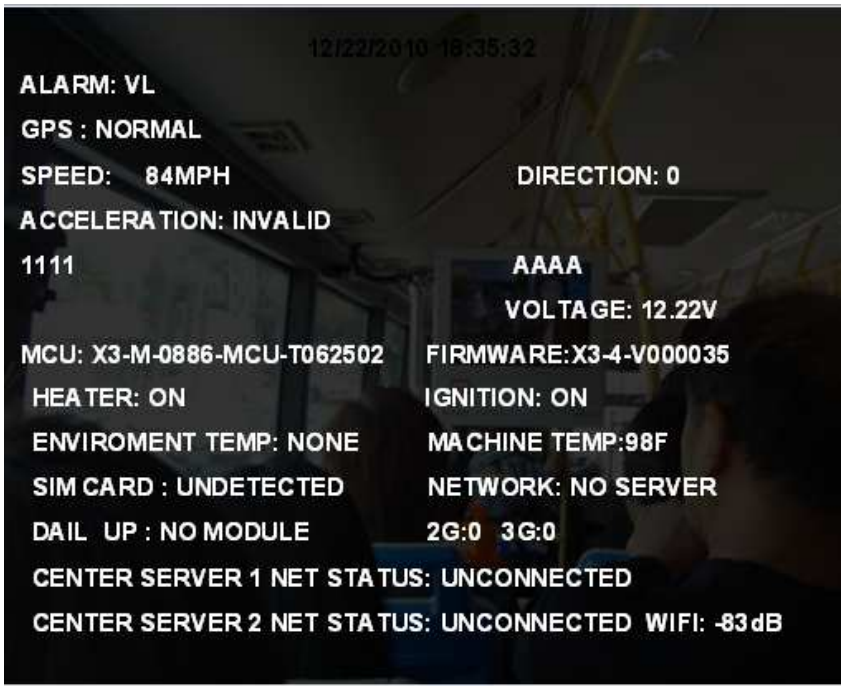
CHANNEL NAME: Display the channel name.

VEHICLE NO.: Display the vehicle NO.,



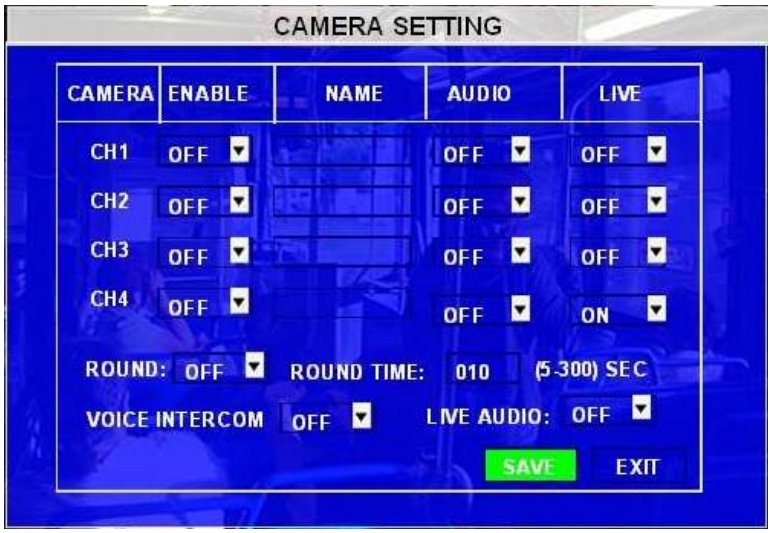
SPEED: Display vehicle speed info.

If all the options are ON, Then the following screen will pop up after you press 【Enter】during live view.



6.2.3 CAMERA SETTING

Setup enables record function and live view for each channel.



ENABLE: Enable the record function.

NAME: The name of the channel. For example, if you setup the name of CH1 is ABC, and you can see ABC three letters display on the live view (for channel 1)

AUDIO: Active the audio record function

LIVE: to display the live view

ROUND: Means channel loop function, if you setup time as 5 second, which means the channel will change to full screen from channel 1 to 4.

VOICE INTERCOM: it's a switch for talk function. It can only be initiated from the server side. The audio of 4th channel is used for this function. So when there is voice intercom, the video file of this channel has no audio.

6.2.4 RECORD SETTINGS

Make configuration for Resolution, frame rate, image quality parameter setting for each channel.

RES: Resolution, D1, HD1, CIF optional. For example: D1 resolution is 704×576, HD1 resolution is 704×288, and CIF resolution is 354×288.

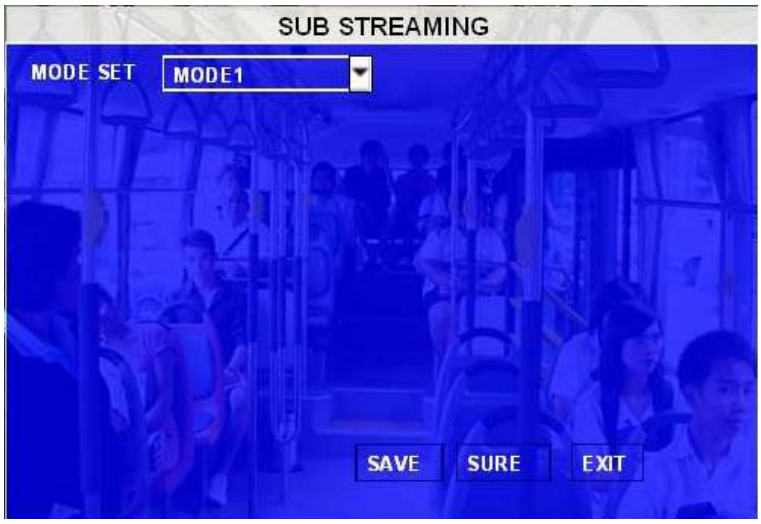
FPS: Frame rate, frames per second, 1~25 can adjust.

QUANLITY: Image quality, 8 levels optional, Level 1 is the best.

Normal quality is the quality for normal record, and alarm quality is for alarm record.

6.2.5 SUB-STREAMING

This is used for video transmission to WCMS software which won't affect the recording on MDVR. There are two modes SUB-STREAM, mode 1 is for broad bandwidth, such as connect in LAN or WIFI, mode 2 is for wireless transmission like GPRS or 3G.



When you selected MODE1, and then press SURE, you will enter into the interface as follow:

EN: Enable this channel or not. If it is OFF, then you can't get video from this channel. It shows black window in CMS client.

RES: Resolution, CIF.

FPS: Frame rate, frames per second, 1~25 adjustable.

QUALITY: the quality of video transmission.

Kbps: Means the decode rate of the video transmission.

When you selected **MODE2**, and then press SURE, you will enter into the interface as follow:

BAND WIDTH: Setup the band width for video transmission, for 3G, it can be 500~800.

EN: Enable the channel or not.

RES: Resolution, CIF.

FPS: Frame rate, frames per second.

SUB-STREAM MODE: adapt and fix two options, adapt means it will adjust the bit rate and frame according to the bandwidth of network, fix means it will transmit as the bit you setup, when the bandwidth is not enough, the video may not smoothly.

6.2.6 SCHEDULE

Date: Press ENTER to change the period of time to control the recording schedule

- Single Day: Choose the name of a day to create a recording schedule
- Every Day: Choose “Every” to apply a schedule to every day of the week
- Weekday: Schedule will only apply Weekdays (weekday is from Monday to Friday)
- **********: Choosing the asterisks will suspend the highlighted schedule

Type: Press ENTER to change the type of the recording mode:

- Normal: Continuous recording
- Alarm: Alarm recording
- B.D.: Blind detection recording
- M.D.: Motion detection recording

Schedule 1 / 2:

- Press the RIGHT ARROW key to enter values using the NUMERIC keypad into any time field;
- Schedule 1 is the first of two possible ON/OFF cycles that apply to any day in the period chosen under Date.
- Schedule 2 is the second cycle for any day in the period. There is no need to overlap times of Schedule 1 and Schedule 2.
- Ending at 23:59 of one day and beginning with 00:00 of the next day will provide continuous recording without interruption (factory default setting)

When same date/time, on the condition that the schedule set as “NORMAL” type, priority record also can be available. Then Sensor can trigger full frames recording.

6.2.7 OTHER SETTING

A) INITIALIZE INTERFACE: LIVING is to show the live view image in LCD monitor; CP3 MENU is to show the CPS setting menu.

B) WATERMARK: This is a technical to protect original data from illegal modification, as long as you setup water mark, we will find the difference when we analysis the record files.

INTERCOM SENSOR: This is to set the intercom function of CP3. If you choose Sensor1, you must also set as follow: >>EVENT>>SENSOR

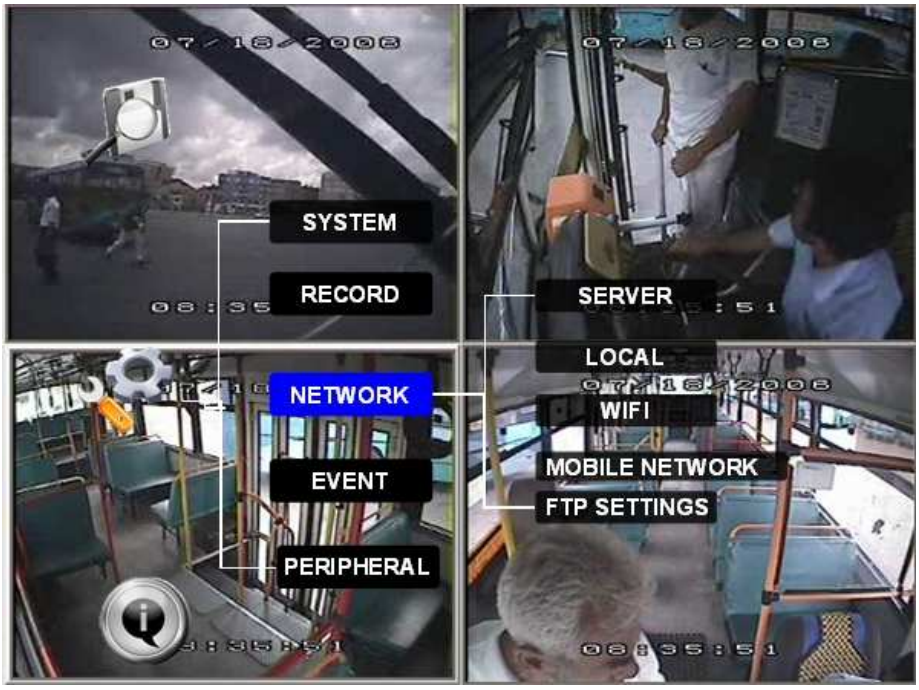
ENABLE SENSOR 1>>ON

NAME: INTERCOM or any other short name

SET: choose HIGH

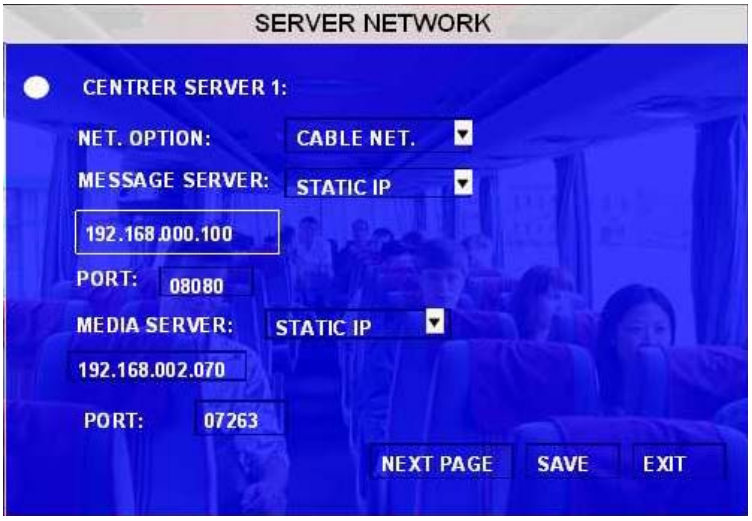
C) **EXPORT MINIPLAYER:** Press ENTER to export MINIPLAYER to USB thumb drive. So when insert the USB to other computers, you can just run it to playback video file.

6.3 NETWORK



6.3.1 SERVER

The sever IP and port setting for CMS software.



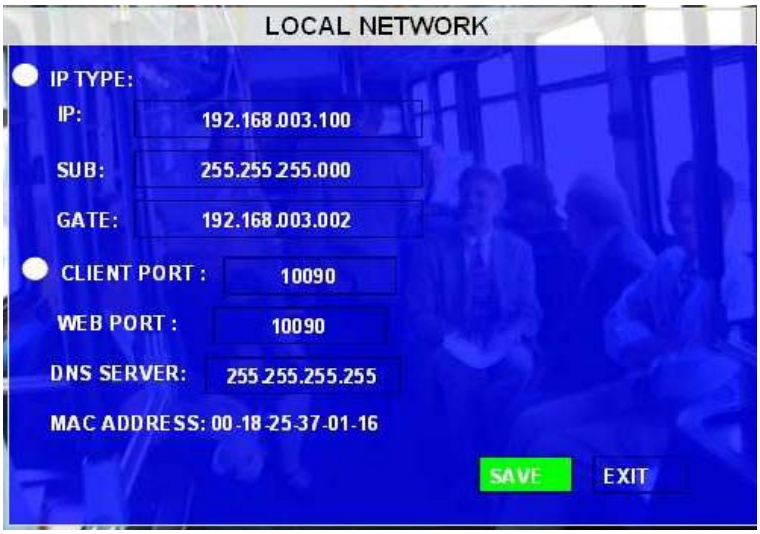
MESSAGE SERVER: While using the CMS (Center Management System) software, require assigned the IP address to allow MDVR can sending the video and data to this destination. This server IP must be the same with the server IP of CMS (the IP of the PC that installed message server). CMS is used in LAN by WIFI or local network, or via 3G wireless module.

PORT: please use the default port 5556 here.

MEDIA SERVER IP AND PORT: NO use at present.

Please refer to the detailed manual for CMS settings in this part.

6.3.2 LOCAL NETWORK



Local IP is the IP setting for the MDVR to make sure that MDVR can go online

Must enter a fixed IP address to use Network capabilities, please consult with local Internet Service Provider for the information. Use NUMERIC keypad to enter the TCP/IP address information:

IP: Enter the static IP address

SUB: Enter the subnet mask

GATE: Enter the gateway that the MDVR through to network

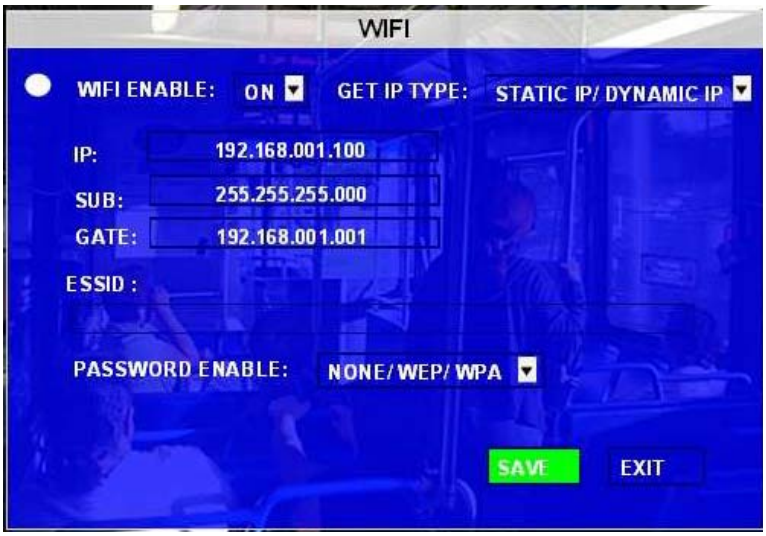
CLIENT PORT: can't be 0 for IE login

WEB PORT: the port for IE login. That is input the MDVR's WIFI or Local IP on IE address bar to access the MDVR for live view/playback/setup or upgrade. For example: type http://192.168.2.100:990 990 is the web port. If you don't change this port, just enter the IP to access.

MAC Address: MAC address is uniquely and cannot change it.

6.3.3 WIFI SETUP

When choose ON, the following screen will pop up.



GET IP TYPE: There are two options; STATIC IP means you have to arrange a static IP for WIFI sever, and AUTO IP means it will get a dynamic IP, and make sure the DHCP function is OK.

IP: Enter the static IP address of built-in WIFI.

SUB: Enter the subnet mask

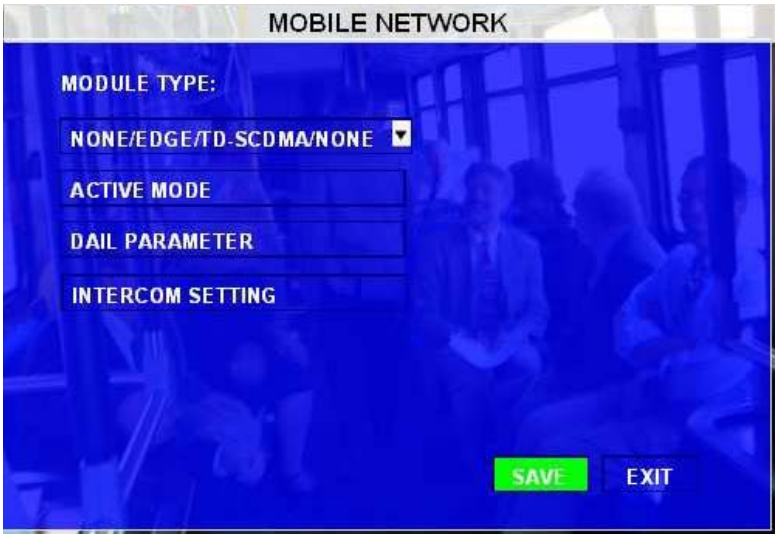
GATE; Enter the gateway that the MDVR through to network

ESSID: The AP name of this WIFI server.

PSSWORD ENABLE: if the WIFI server need password, you can input it here, and please make sure it less that 5 digitals.

6.3.4 MOBILE NETWORK

This interface is the network setup for wireless modules, and SIM card, please select the corresponding mode for your SIM card, when you connect in LAN, please select NONE.



1) MODULE TYPE

Choose the module type here: GPRS/ CDMA/ EVDO/ WCDMA/ EDGE/ TD-WCDMA/ NONE.

Note: this must be the same with your 3G module. For example, if you use WCDMA module, but you want to use GPRS network(our WCDMA module support GPRS network), here you must setup the type as WCDMA.

2) ACTIVE MODE

You may choose the active mode to trigger 3G live view transmission:

Always: 3G transmission keep connected after the MDVR power ON.

Call/SMS: 3G transmission will be triggered when anyone of the 3 preset mobile phones calls or sends messages to the SIM card number in MDVR.

Sensor: 3G transmission will be activated when related sensor is triggered..

3) DIAL PARAMETER

Please check the setup as follow form, but the parameters should be different in different countries, so please check with your network carrier for the 4 parameters.

Network Type	User name	Password	APN	Access number
CDMA	card	card		#777
EVDO	card	card		#777
WCDMA			Please check the APN with SIM card manufacture	*99#
GPRS	card	card	Please check the APN with SIM card manufacture	*99***1#
EDGE	card	card	Please check the APN with SIM card manufacture	*99***1#
TD-SCDMA	card	card	Please check the APN with SIM card manufacture	*98*1#

4) INTERCOM FUNCTION

This is to open or close the intercom function in CP3.

5) FTP SETTING

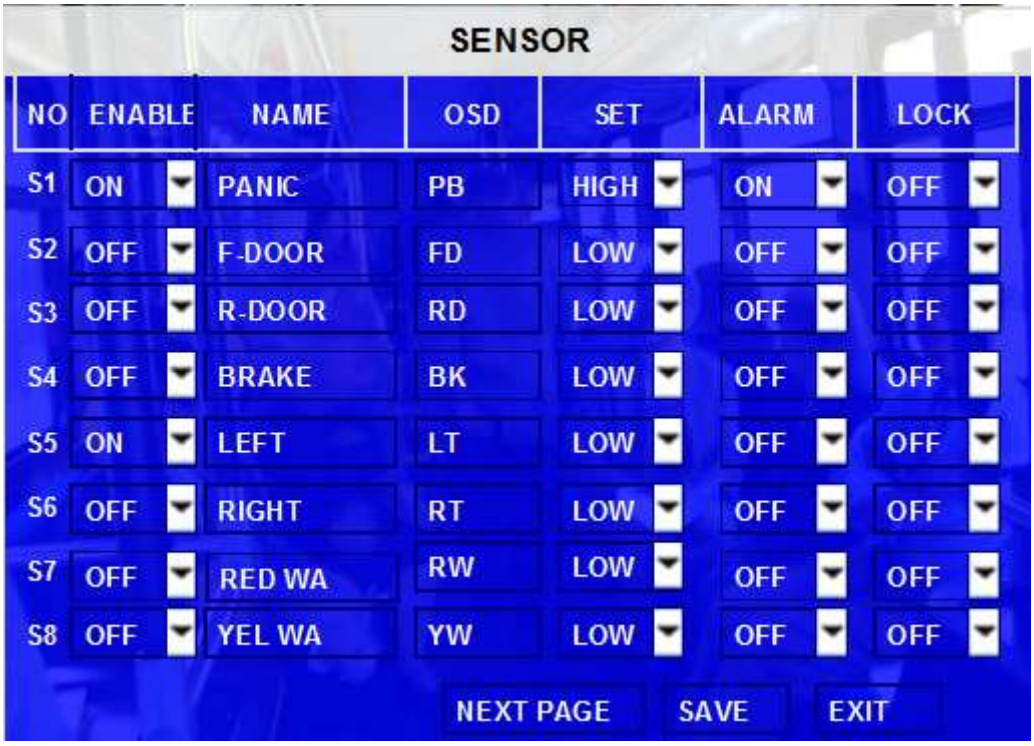
The MDVR can work as a FTP server, so user can type the MDVR's IP address in IE address bar to login the MDVR and copy the video files out.


FTP SETTING
PASSWORD ENABLE
ON/OFF
USER NAME:
PASSWORD:
SAVE
EXIT

6.4 EVENT


07/18/2008
SYSTEM
RECORD
08:35
07/18/2008
SENSOR
08:35:51
ALARM OUTPUT
NETWORK
EVENT
PERIPHERAL
SPEED
ACCELERATION
TEMPERATURE
CAMERA
VOLTAGE
EMERG ALARM
08:35:51

6.4.1 SENSOR



SVT 3 series MDVR can support 8 sensor inputs.

EN: Enable, to active this sensor

NAME: Press ENTER on the Name field to display the soft keyboard. Enter the text name to identify the source of each Sensor connected to the unit.

OSD: Input the numbers and Characters, they will be shown on screen when alarms happen, and the alarm information will be embedded into the video file. Please press【Enter】 into the soft keyboard. The label also identifies the type of event when doing a quick search using **EVENT SEARCH** option.

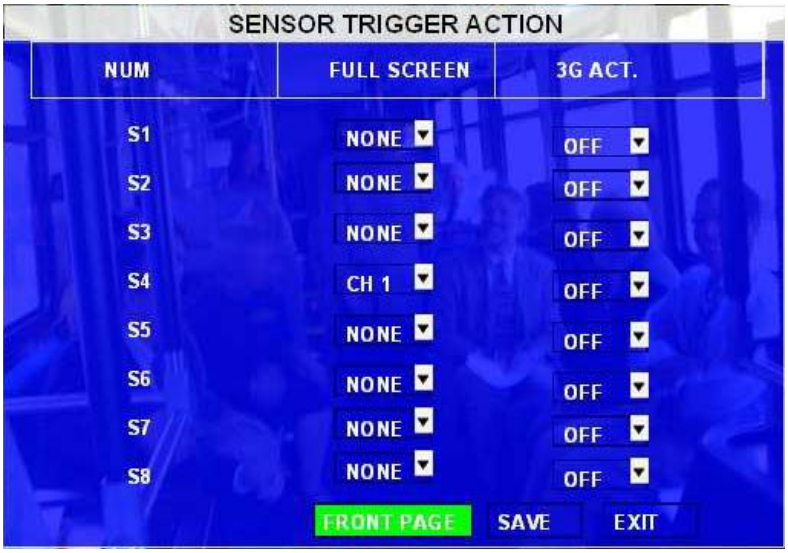
SET: LOW (normal close) means low voltage can trigger alarm.
HIGH (normal open) means high voltage can trigger alarm.

ALARM: Press ENTER to select between OFF or ON:
ON means when sensor triggered, alarm LED will flashing, until re-login the system with account, the flashing will disappear.

LOCK: When LOCK is set ON, the video file will not be covered during the over-write process of hard disk;

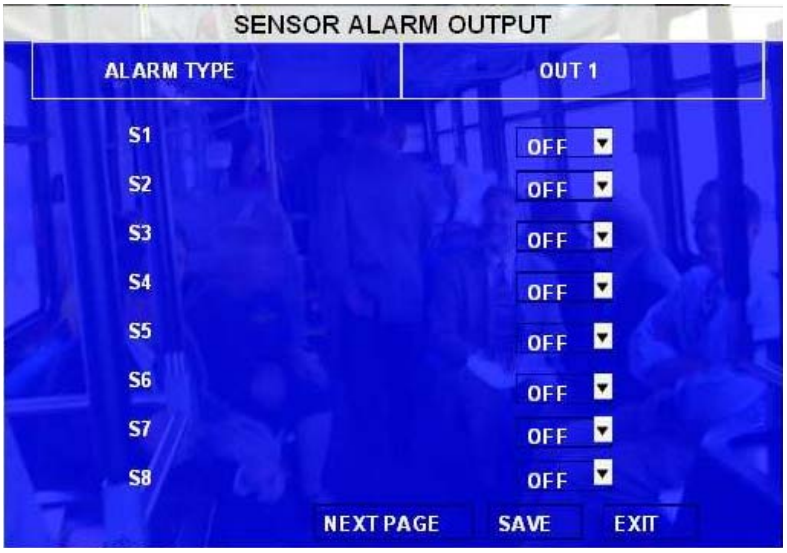
If switch/alarm/lock all set as ON, When sensor triggered, it will trigger alarm signal and event log, it will also trigger alarm recording and event recording.

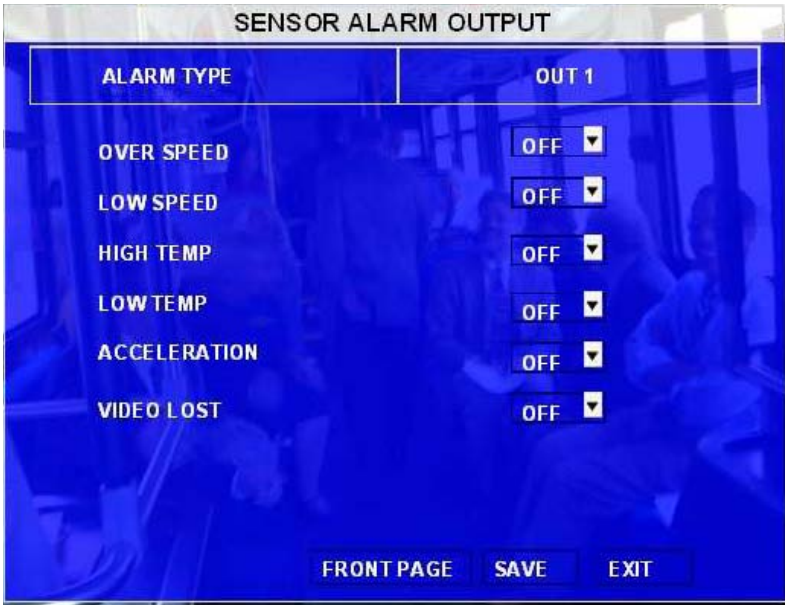
NEXT PAGE: Sensor trigger action means setup the alarm linkage for each sensor, for example, you setup the ch1 as the alarm linkage for sensor1, when sensor1 triggered, ch1 will change to full screen. And the device will response the trigger by PRI, sensor1 has the highest priority, sensor8 has the lowest priority.



6.4.2 SENSOR OUTPUT

Our MDVR support 2 sensor outputs, two sensor outputs are on the I/O HUB. All the alarm inputs can trigger the three sensor output, such as sensor1~8, over speed, temperature, video loss and so on, please enter into GUI>>>>SETUP>>>EVENT>>>SENSOR OUTPUT, as follow:





ON means this input can trigger this out put, OFF means can't.

6.4.3 SPEED

Setup the alarm for over speed and some other parameters.

SOURCE: MDVR is capable of capturing vehicle speed via GPS antenna or Vehicle--speedometer.

- Browse between the settings of GPS or speedometer from the list.
- Please note that the GPS antenna should be connected to MDVR to receive satellite signals for speed.
- For more information on capturing speed from speedometer please contact local distributor for more technical support;

CALIBRATE: Speed check is used to calibrate the offset speed when connected to the speedometer. That's to say, the check only available when speed source is vehicle.

- Input the first area with the vehicle speed, for example at 80 (in KM/H)

- Start the vehicle and the second area will show the data from speedometer (in HZ)
- When the vehicle reach to 80 KM/H (shown in vehicle meter or dash board), and keep this speed at 30 seconds, then press the “Check” to make the system calibrate the second area (HZ) set as first area data (80);

OVER SPEED: If the vehicle exceeds the SPD, MDVR will trigger the alarm signal (when the following option ALARM set as YES) until the driver slows down the speed

LOW SPEED: If the vehicle exceeds the high speed limit, MDVR will trigger the alarm signal (when the following option ALARM set as YES) until the Admin password is entered to acknowledge the alarm.

OSD: To name the event, for example we can name the over speed event as SPDH, and low speed as SPDL. Whenever the event triggers, SPDH or SPDL will show in OSD.

EN: To enable the alarm when this kind of event triggers.

Threshold: The threshold we define for the speed. For example, if we define 80MPH as low speed, once the speed equals or lower than this amount, it would be reckon as an alarm file.

ALARM: To enable the flashing LED when the speed alarm is triggered.

LOCK: To lock the speed alarm files so that it could be covered during the process of over-writing.

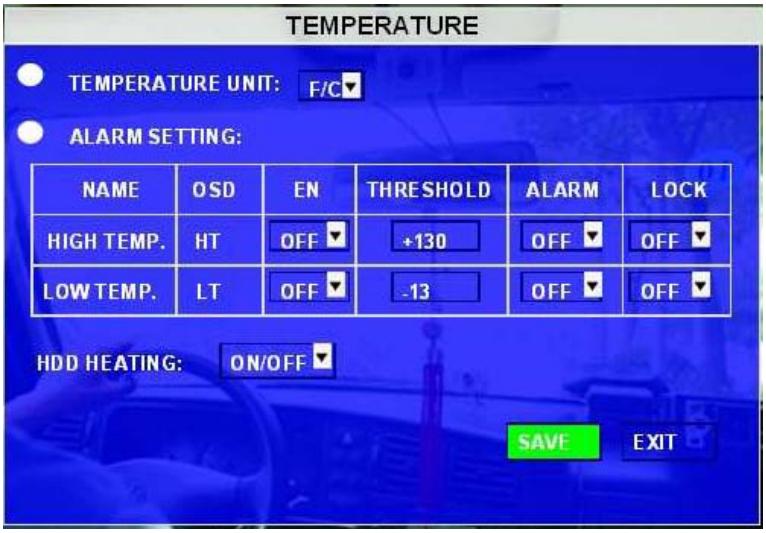
6.4.4 ACCELERATION

There are 3 values for G force inertial sensor: X, Y, and Z. X indicate forward and backward. X, Y indicates left and right and Z indicated up and down. Threshold is the limitation for the value, if the value large than the setting in the menu, then MDVR will alarm.

This function only can be active when the MDVR connected with inertial sensor.

6.4.5 TEMPERATURE

Inspection for temperature, there are high and low two kinds temperature inspection.



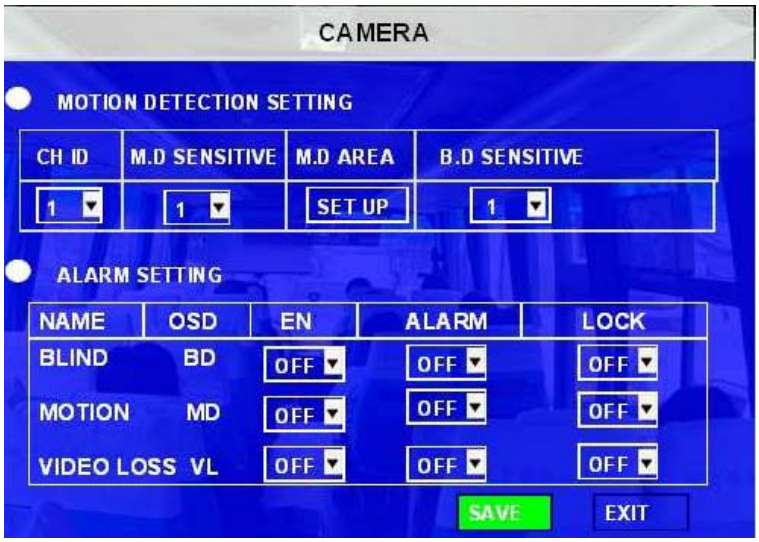
If the MDVR working temperature is higher than the threshold for **HIGH TEMP**, MDVR will alarm.

If the MDVR working temperature is lower than the threshold for **LOW TEMP**, MDVR will alarm.

HDD heating is to enable the heating function so that MDVR could work normally under the temperature below 0℃.

6.4.6 CAMERA

Display the alarm information from camera.



MOTION DETECTION SETTING: This is to set the Channel which will be used for motion detection and the channel for blind detection, sensitivity, and sensitive area.

OSD: This to name the alarms caused by different kinds of camera triggers. For example, MD for motion detection, BD for blind detection and VL for video loss.

EN: To enable the switch for MD, BD and VL alarms.

ALARM: This is to open the alarm trigger.

Lock: To lock the alarm files caused by MD/ BD/ VL or not.

6.4.7 VOLTAGE

LOW VOLTAGE PROTECTION: means when the voltage is in a low status, MDVR will disconnect to CMS or shut down automatically.

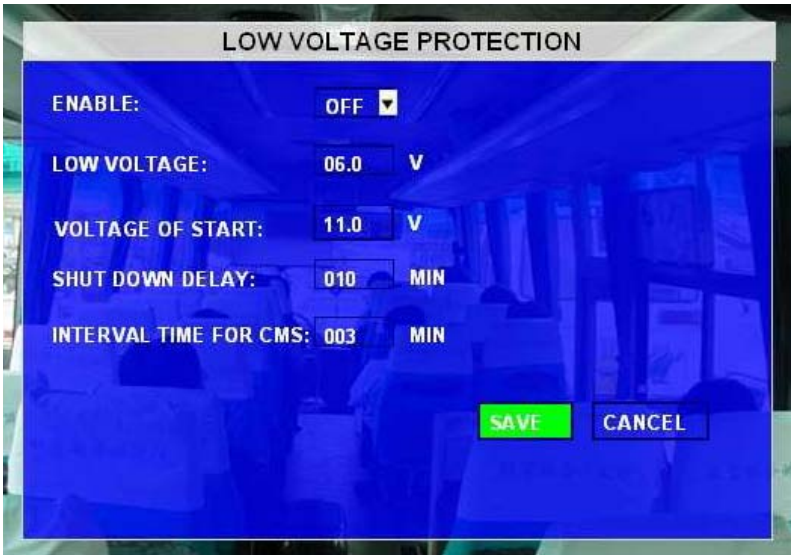
ENABLE: setup the voltage protection switch, ON means enable, OFF means disable.

LOW VOLTAGE: setup the low Voltage limited value for MDVR to shut down.

VOLTAGE OF START: setup the voltage parameter for MDVR to reboot up.

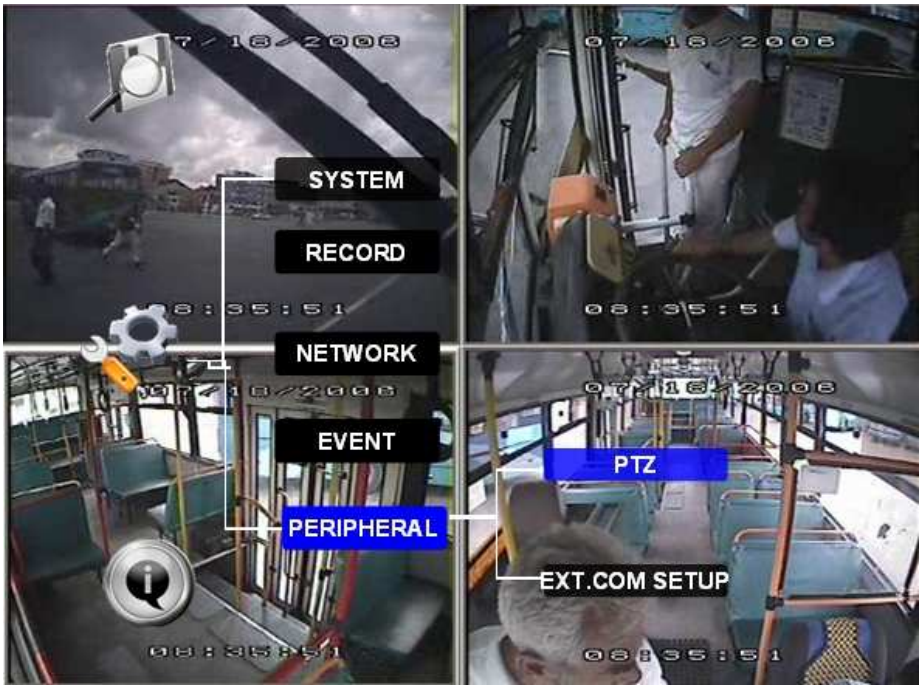
TIME FOR SHUTDOWN: means when MDVR in low voltage for so long time, device will shutdown automatically.

INTERVAL TIME FOR CMS: means when MDVR in low voltage for such a period, device will disconnect to CMS server



ALARM FOR PANIC BUTTON: This is to set the panic button alarm files.

6.5 PERIPHERAL



6.5.1 PTZ

CHANNEL: The channel of PTZ connected.

PROTOCOL: select the protocol of different PTZ, there are two protocols to switch, and the default is Pelco-D

BAUD RATE: select the different baud rate for your PTZ, there are 1200, 2400, 4800, and 9600

DATA BIT: there are 5,6,7,8 options to select, default setting is 8.

STOP BIT: there are 1and 2 to select, the default setting is 1.

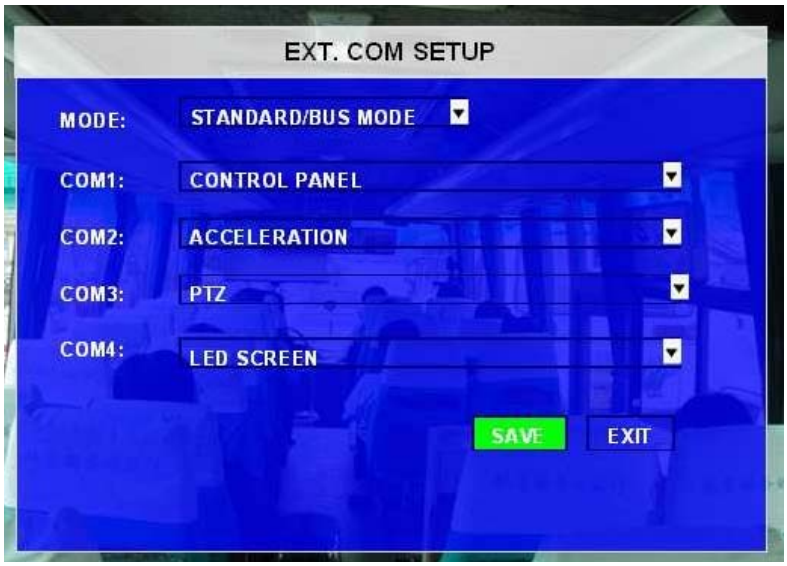
VERIFY: there are None/Odd/Even/Mark/Space to select, the default setting is none.

ADDRESS: Fill the code of respective PTZ

6.5.2 EXT.COM SETUP

This interface is for external accessory connection, such as control pane, PTZ, Inertia sensor, LED screen, station announcement and so on.

MODE: There are STANDARD and BUS MODE two options, when select standard mode, you can select each external port for each COM, when select Bus mode, COM1 is station announcement, COM2 is amplifier board, unchangeable, COM3 and COM4 is changeable.



7 INFORMATION

7.1.1 SYSTEM

Display the MCU version, firmware version, hard disk information.

1, NONE HDD means No HDD installed or the HDD is defective and can not work.

2, NO FORMAT means HDD installed but not formatted.

3, showing the detailed information for HDD means HDD works fine.

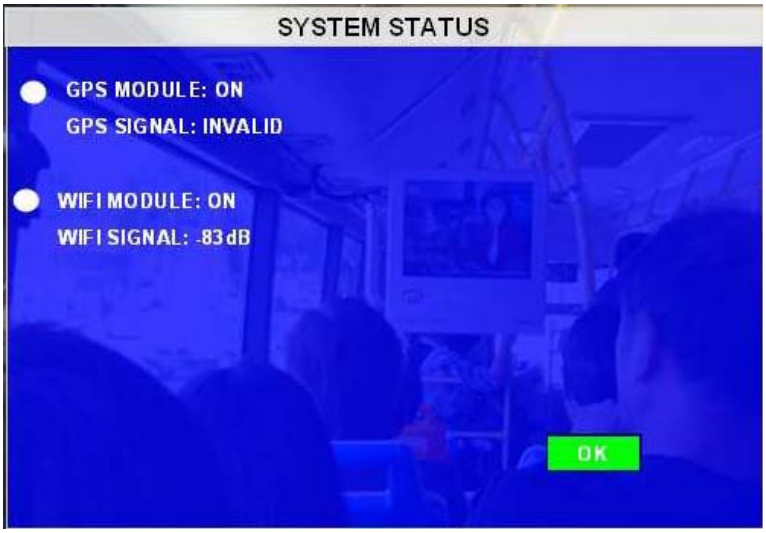
7.1.2 HISTORY

The data for history information

Press 【CLEAR】to delete all the current data.

7.1.3 MODULES

Display the module information (GPS and WIFI)


SYSTEM STATUS
GPS MODULE: ON
GPS SIGNAL: INVALID
WIFI MODULE: ON
WIFI SIGNAL: -83dB
OK