



***User's Manual
MOB 8444***

User Manual

For more information please visit our website sieraelectronics.com

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1. Overview

This manual is the instruction manual for MOB 8444 series MDVR as below:

Please read the manual before you using the product.

The manual will be updated from time to time without prior notice.

2. Cautions

2.1. Installation Environment

1. To extend equipment life, please install the equipment in locations with little vibration.
2. To ensure normal heat dissipation, do not install the device in a poorly-ventilated area (such as trunk), and also keep about 15 cm away from other objects on the same level.
3. The device shall be horizontally installed and protected against water, humidity and lightning; in addition, keep the vehicle still during installation to prevent damage to the device due to falling off.
4. To ensure safe operation, keep the device, camera, cables and other accessories out of reach of passengers and driver.

2.2. Avoid electric shock and fire

1. The machine uses 9V-36V DC power supply, notice the polarity when wiring to avoid short circuits.
2. Please power off the device when connecting accessories with device.
3. Do not touch the power and the device with wet hands.
4. Do not spray liquid on the device to prevent internal short circuit or fire.
5. Do not put any other equipment on top of camera.
6. Do not disassemble the housing without authorization to avoid damage or electric shock.

2.3. Transport and operation

1. Please use the original package in transport to avoid damage in transport.
2. Please keep power off in moving the device or replacing components.

3. Product introduction

The MDVR supports 8 channels analog audio and video recording and playback with network function. The product adopts ARM DSP fast dual-core processor running on the Linux embedded OS, and also integrates the most advanced H.264/H.265 video encoding/decoding in IT industry, 4G network, GPS and Wi-Fi, as well as power-failure protection, HDD shock absorption, HDD heating, wide voltage features.

It is extensively applied in public buses, logistics vehicles, school buses, police cars, financial convoy cars and fuel tankers.

Main Features:

- Supports 8 ch AHD 720P/ 1080P cameras
- Industry leading CPU with powerful processing ability
- Supports HDD/SSD/SD card for recording. Max. 2TB HDD.
- "Plug and Recording" Hard disk: innovative hard disk mounting design, no need to mount screws
- Robust design: Cast aluminum enclosure. Patented design
- Selected industrial power chip-sets, support 8-36V wide range power input, adapt to harsh environment
- Support UPS
- Support low/high temperature environment
- Support external Fireproof box, to backup data in extreme scenarios
- Support backup recording
- Dual streams for local recording and network transmission
- Support 3G/4G, Wi-Fi, GPS modules.
- Built-in G-sensor for harsh acceleration/deceleration detection
- Data self-protection, save data when shut down abnormally

4. Product Specification






Power input	DC: +9V ~ +36V	9V~36V, Check the supply voltage of the vehicle battery before use; If it is supplied with more than 36V for a prolonged period, the device may be damaged.
Power output	+12V@2.5A, +5V@2A	
ACC detection	≤4V	Power off
	≥5V	Power on
Video input impedance	75Ω	Each video input impedance: 75Ω
Video output voltage	2Vp-p	2VP-P CVBS output analog signal which should be adapted by 75Ω of input impedance from the display unit.
I/O interface	<1V	Low level alarm
	>5V	High level alarm
Operating temperature	-20°C~70°C	In a well-ventilated place

5. Mainframe

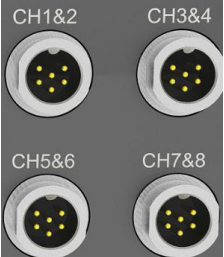





5.1. Interface






5.2. Front panel

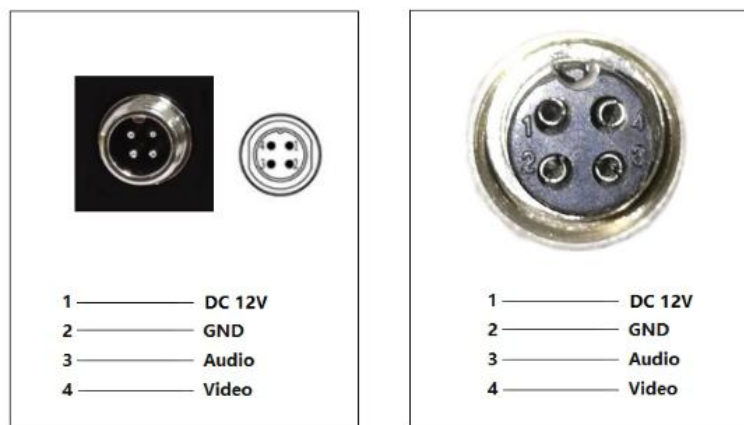
Interface	Name	Description
	IR	Infrared Receiver
	HDD Slot	2.5 inch SATA HDD slot. Please unlock the lock with the key. You can also see SD card slot and SIM card slot with HDD slot together.
	Lock&Open	Open and lock the door for HDD/SD card/SIM card slot; On/off switch for device power;
	USB	For USB mouse,USB flash drive,etc.
	LED	LED Indicators. Green is on status. SD/HDD LED blinking means it's recording.Alarm blinking means there is an alarm.

5.3. Rear panel

Interface	Name	Description
	CH1/CH2/CH3/CH4/ CH5/CH6/CH7/CH8	Connect with cameras. The port can provide DC12V power to cameras directly.
	AV Out	4pin aviation connector; Connect with monitor; The port will output audio and video to screen.
	3G/4G LTE	Connect with 3G/4G LTE antenna.
	GPS	Connect with GPS antenna.
	WIFI	Connect with WIFI antenna.
	Power	Connect with power adapter/battery

 LAN	LAN	Connect with network cable for network
 I/O&Serial	I/O&Serial	For IO cables; Including sensor input,sensor output,DC power output, RS232, RS485, sensor
 USB	USB Storage	Fireproof box

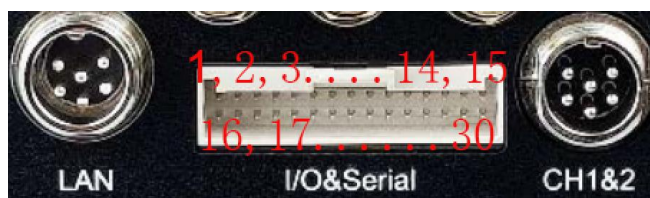
5.4. Pin definition of Audio/Video input/output port



5.5. Pin definition of IO&Serial port for other models

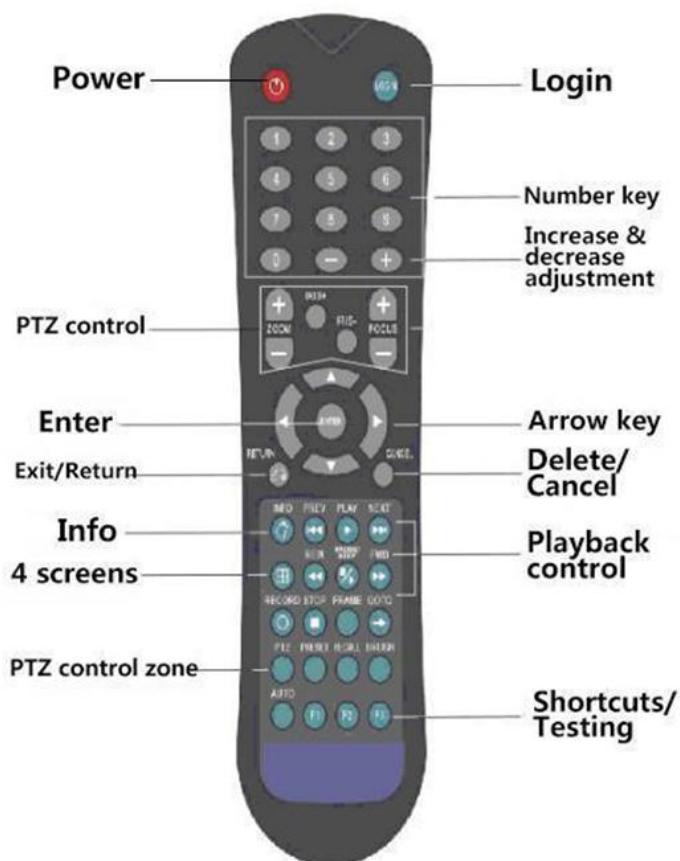
The port contains below interfaces:

- DC12V OUT;
- DC5V OUT;
- RS232;
- RS485;
- Sensor Input;
- Sensor Output;
- Audio Out;
- MIC;



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VCC12V-OUT	GND	RS232-RX1-Debug	RS232-TX1-Debug	Analog1	SENSO R-IN-6	RS485-B3	RS232-RX2	SENSO R-IN-9	SNESO R-OUT-1	SENSO R-IN-3	GND	N/A	MIC-	RS232-TX1
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
VCC5V-OUT	GND	GND	Analog2	SENSO R-IN-7	SENSO R-OUT-2	RS485-A3	RS232-TX2	SENSO R-IN-5	SNESO R-IN-4	SNESO R-IN-2	SENSO R-IN-1	AUDIO-OUT	MIC+	RS232-RX1

5.6. Remote controller



Login	When the recorder is set with a password, press the Login key to input your password. As the system is not provided with recover and reset features, always keep your password in mind.
INFO key	Short-cut for check the device's information.
Enter key	Confirm , enter into the input mode.
Number key 1, 2, 3, 4	You can press number 1/2/3/4 to display channel 1, channel 2, and channel 3 and channel respectively.
Return key	Return to the previous menu, and finally exit from the setup menu to the monitoring interface.
DEL key	Delete when input the numbers by remote.
Play key	Press this key to start playing (search the video file to be played and select, then press the key to play it).
Forward key	Forward key in four grades: 2X,4X,8X,16X
Rewind key	Rewind key in four grades: 2X,4X,8X,16X
Next key	Page down or roll to the next file.
Previous key	Page up or roll to the previous file.
PTZ key	PTZ, Focus+ ,Focus-
F1	F1 is a key to start functional test

6. Device and installation

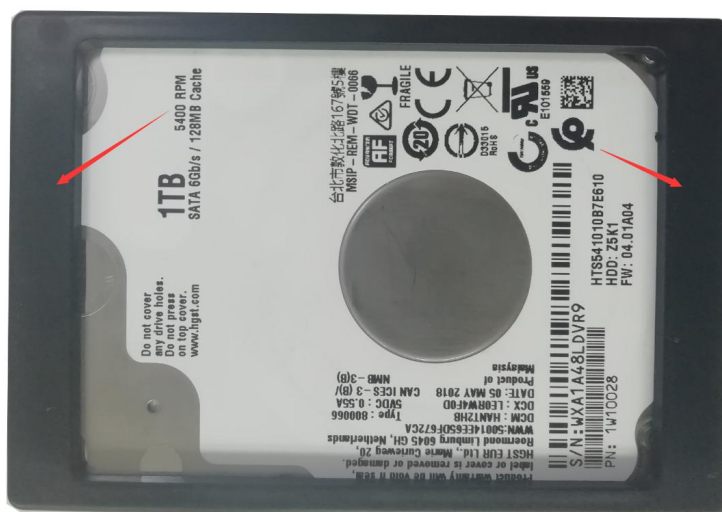
1. Unlock the electric lock on front panel



MOB 8444HDD

2. Install disk

- A. Take the pad from the package, get rid of the sticker label, then stick to the HDD.



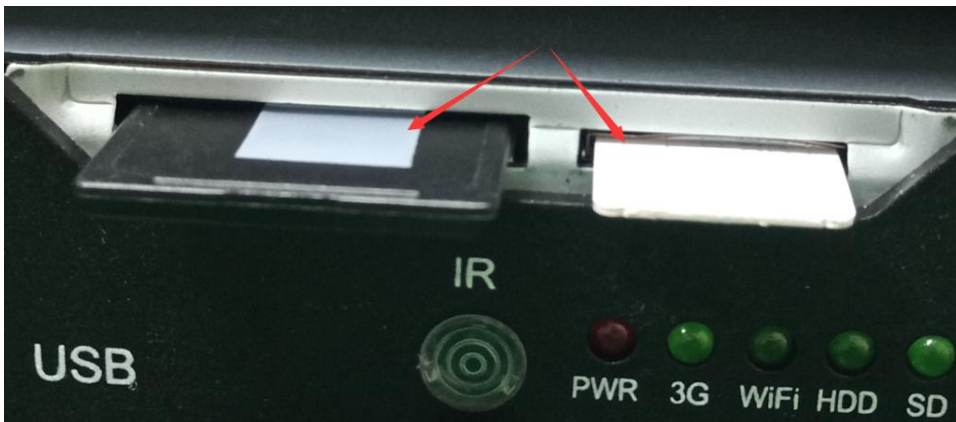
- B. Unscrew the screw in the front panel by hand, take the HDD case out.

- C. Unscrew the screw of HDD case. Take the sticker label off, the install the rubber holder. Then install the Hard disk, please mind the direction.





3. Install SIM card and SD card.
Install SIM card and SD CARD.



4. Put the HDD disk case back, fix it . Lock the electric lock.



5. Connect 3G/WIFI/GPS antennas
Connect 3G/WIFI/GPS antennas according to labels on antennas and connectors.



GPS



3G/4G



WIFI

6. Connect Speaker, Serial cable.

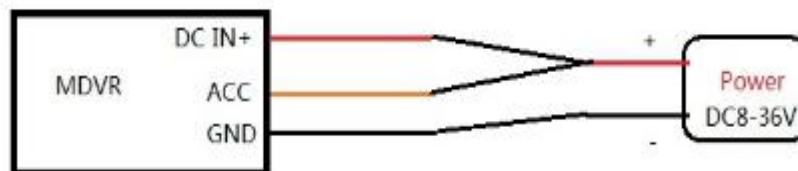


7. Connect power with MDVR

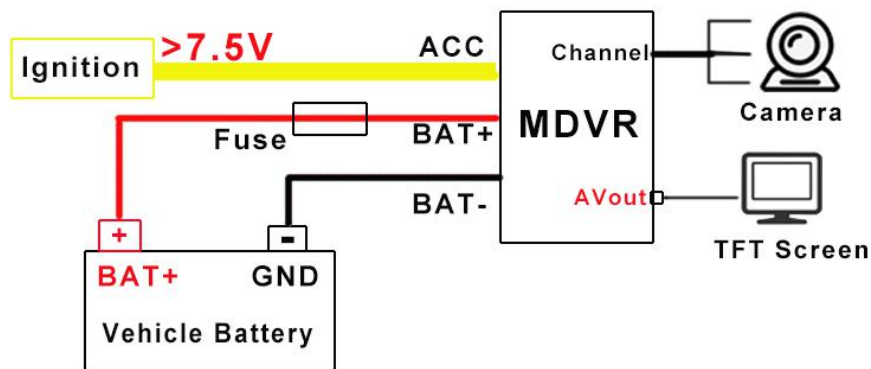
Use DC12V, 3A(at least) or **higher(5A is better)** power adapter in office test.



MDVR Power connection for test



For the vehicle, must install like this.



8. Connect AHD TFT monitor

Connect our dedicated TFT monitor with AVOUT port on the rear panel of MDVR.

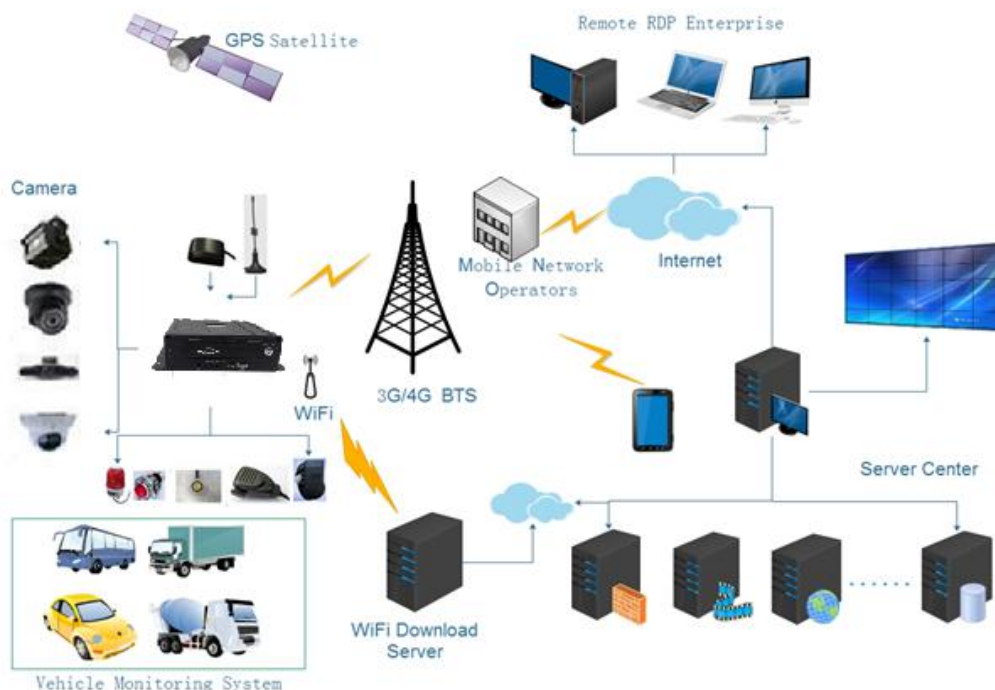
Attention:

1. **The MDVR will provide power to TFT screen by Avout port.** so don't connect any external power for the TFT screen, or else, it will destroy the MDVR.
2. AVout resolution is 1280*720P, so need High definition monitor.

7. System diagram

This product is suitable for video monitoring or remote monitoring and applicable for general or special vehicles. It mainly uses the special designed vehicle camera to acquire the front video signal, then transmits the signal via a special video cable to the MDVR mainframe for video compression and image processing and finally stored in the HDD.

It can also locate where the vehicle is in real time via GPS module, and then upload the location information to the remote server via 3G/4G module. You can download video files from the remote client to realize real-time remote monitoring of the vehicle. The following shows the actual application model of this product that may be different depending on vehicle type and peripherals.



8. System operations

8.1. User login

The default password for admin is **111111**; user is **666666**



With remote:

Press **【LOGIN】** button to login MDVR.

Press **【Enter】** button to call the keyboard page to input password.

If any error while inputting ,press **【Delete】** button to delete.

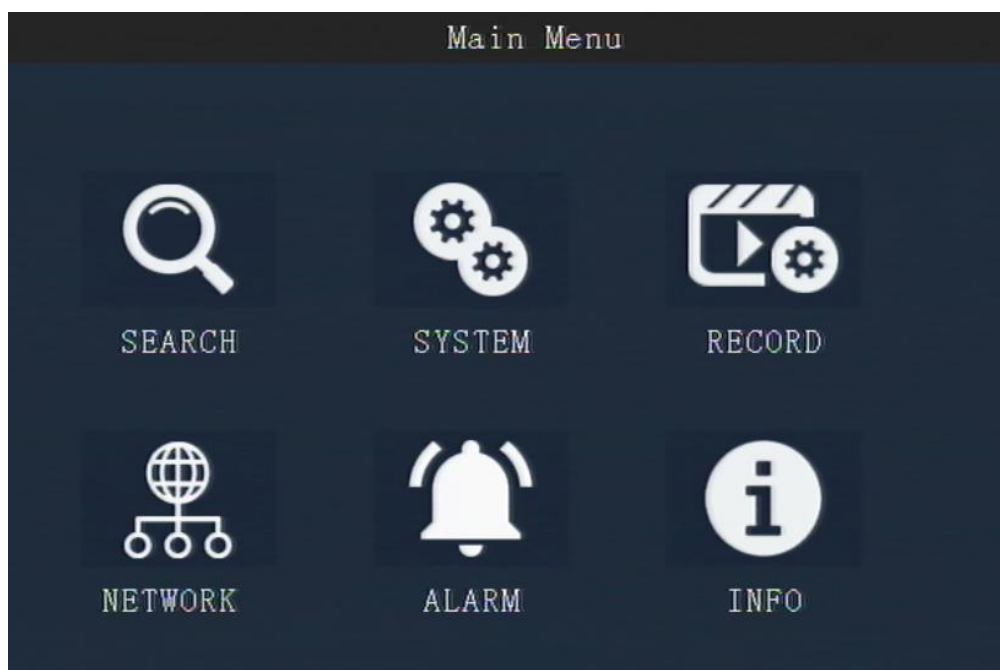
With USB mouse:

Please connect a USB mouse with MDVR to setup the menu.

Right click on the live video interface and you can see the login page.

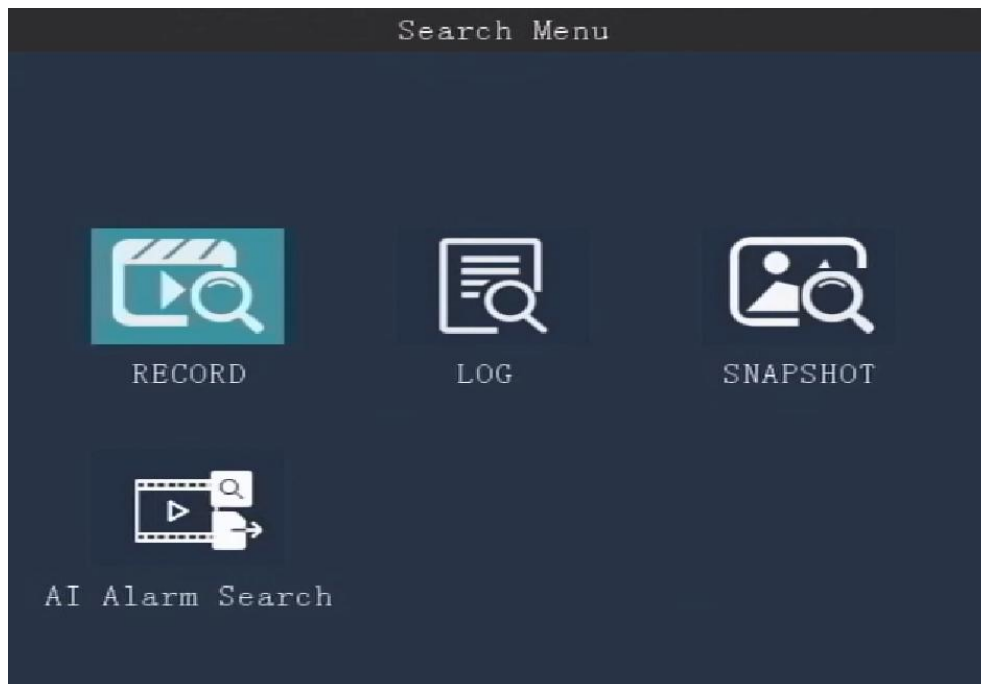
Click on the password column to call the keyboard page to input password.

8.2. Main menu

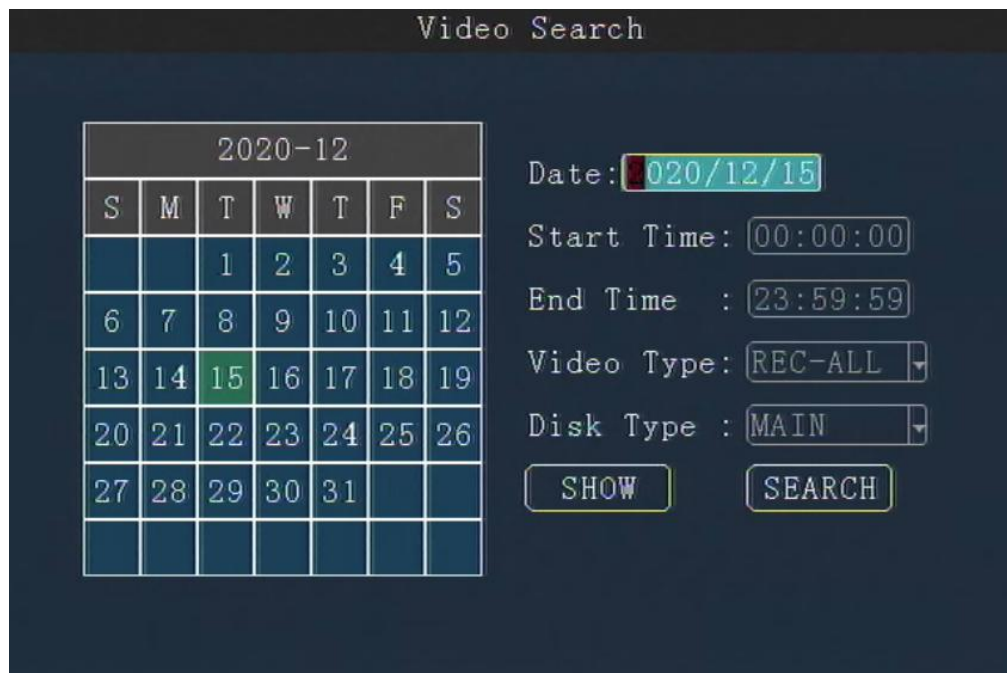


8.2.1. Search

Searching menu includes: video search, log search and image search.



8.2.1.1. Video Searching

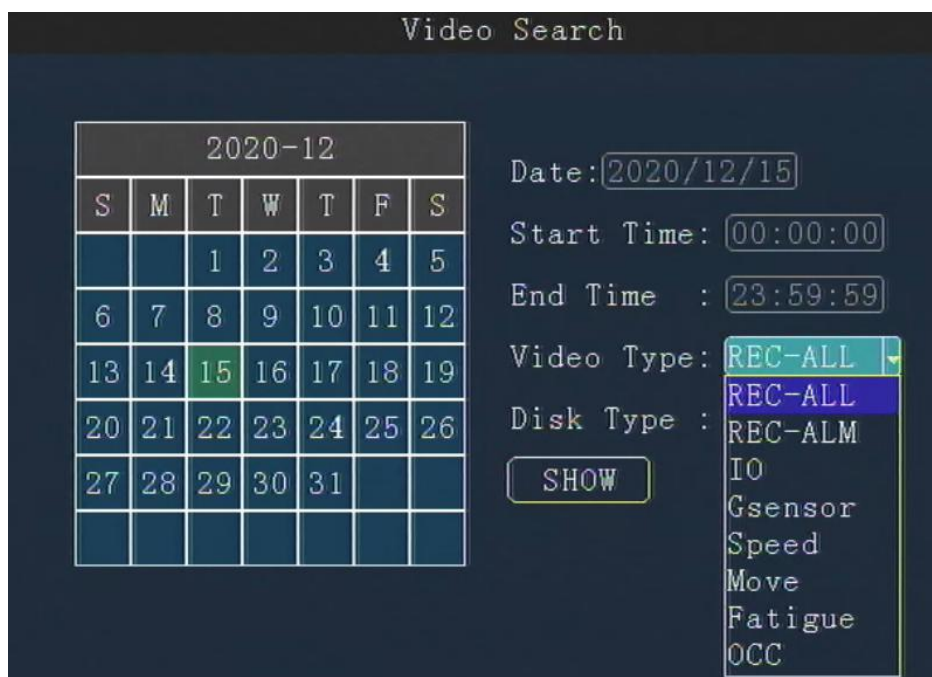


Date: Press number keys on remote to select the date, it defaults for the current day.

Start time: Press number keys to input the time, it defaults for 00:00.

End time: press number keys to input the time, it defaults for 23: 59.

Video Type: press **【Enter】** to select:



REC-ALL (all type of videos)

REC- ALM(alarm videos) contains

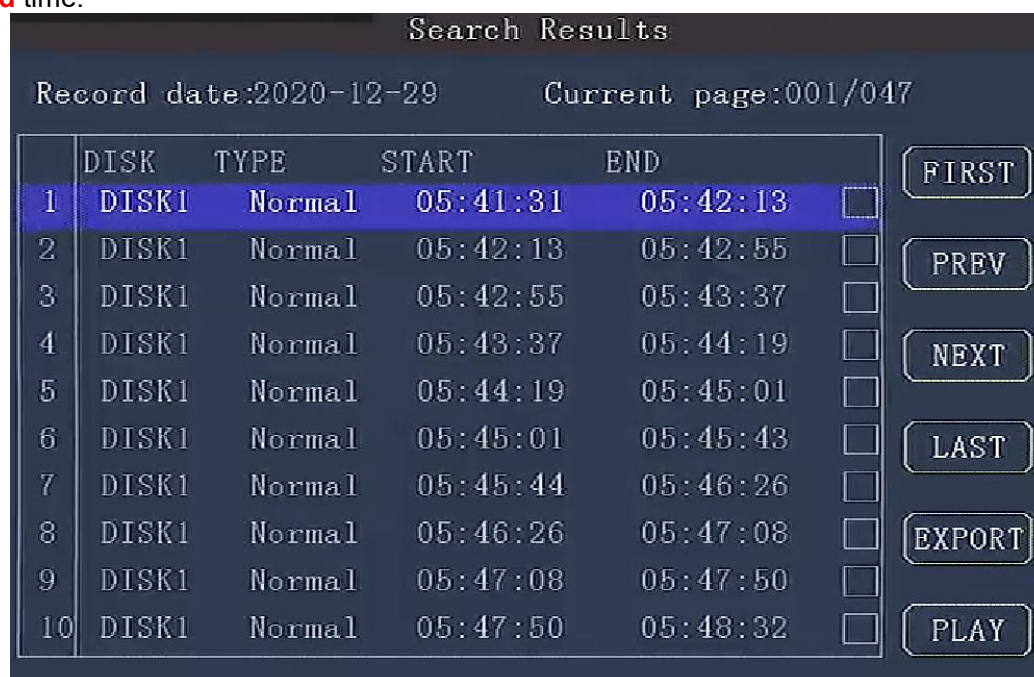
IO(I/O recording), G sensor, Speed ,Move, Fatigue,OCC type. Need set in the Alarm menu first.

Disk Type: press **【Enter】** to select: **main disk / mirror disk / disk backup**. it defaults for main disk. Regarding the difference , please check **[9.2.3.5 Storage setting]**.

Search: Move to the **"Search"** button, press **【Enter】** , then enter the search results interface.

The interface contains **record date**, **the current page** number , **menu for browsing**, search contents.

In the search contents, it contains : **DISK**(the file's location), **Type** (which you have selected) ,**start** and **end** time.



Press the **Arrow** keys to select the information you want to view, press **【Play】** on the remote or click **PLAY** to start playing the video, press the **【Return】** key to return the previous level.

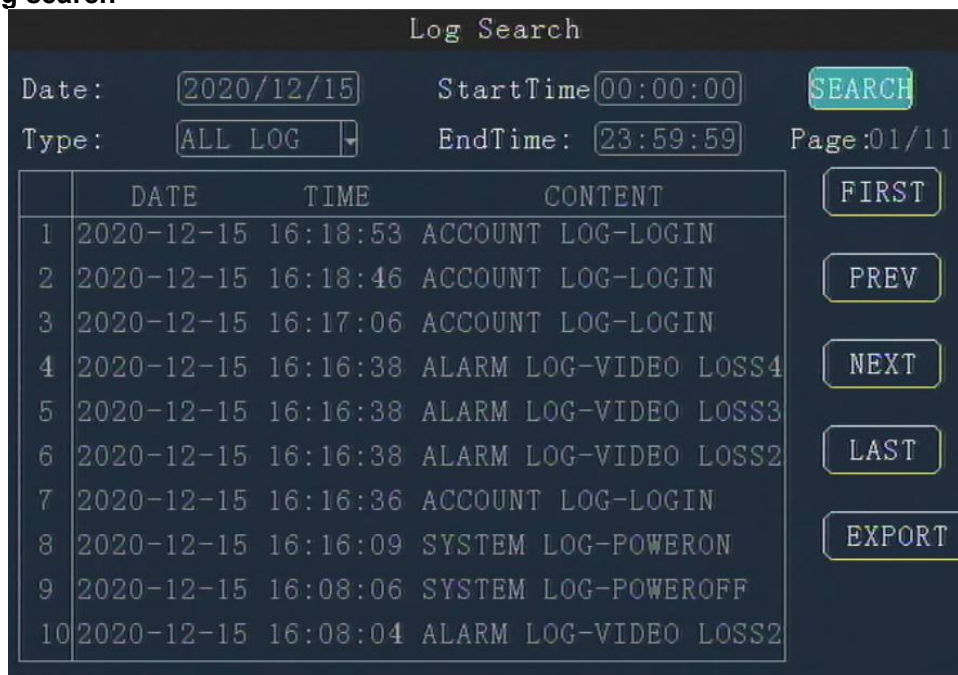
Select the video file you want to view and press **【Enter】** key to check the video to be backed up.

Press the **Arrow** keys to select "**First**", "**Previous**", "**Next**", "**Last**", "**Play**", press **【Enter】** key to display the information page.

Export: Press **【Enter】** , the selected videos will be exported to an external USB storage device .

Note: If the selected period there is no video file and interface prompt: "**! This day has no video file**"

8.2.1.2. Log search



Log management record : power on/off, GPS timing, alarm event information, including event date, event time, and event name.

Date Search: Press number keys on remote to enter the date, default setting is today.

Log Type: Press **【Enter】** to select: **All log/ System log /Configuration log/ Alarm log / Record log/Clear log/Operation log/Manage log.** Default is all log.

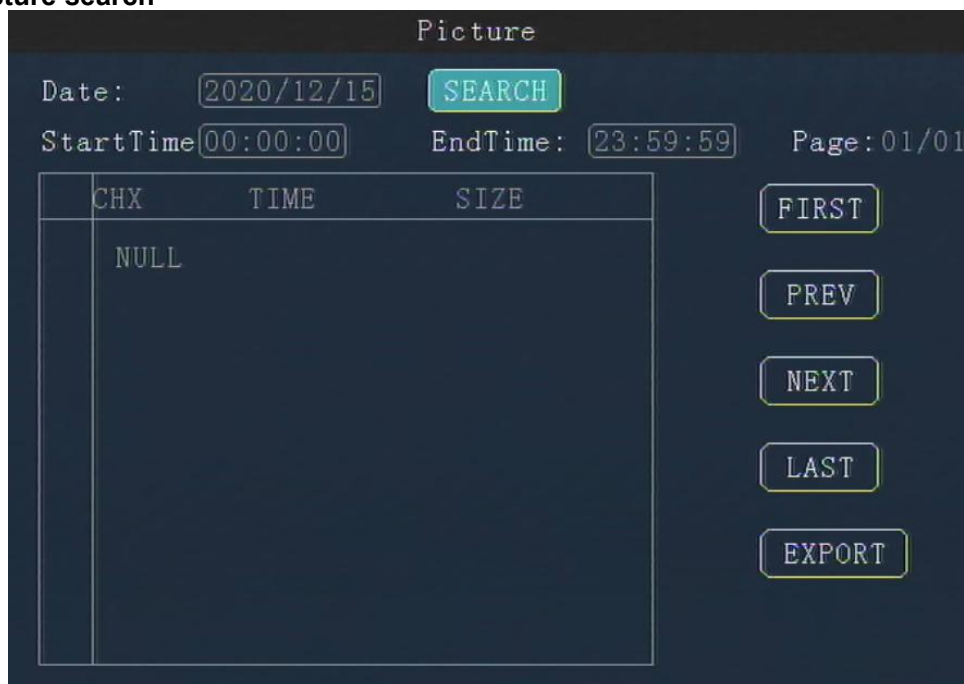
Start Time: Press the number keys to enter the time, default is 00:00.

End Time: Press the number keys to enter the time, default is 23:59.

Search: Press **【Enter】** to select, search the log information from the start time to the end time.

Press the arrow keys to select "**First**", "**Previous**", "**Next**", "**Last**", press **【Enter】** to display the information page.

8.2.1.3. Picture search



Pic search is used for checking the snapshot when alarm is triggering(I/O alarm and Video detect) , should set in the alarm menu first.

Search Date: Press number keys to enter the date, default is today.

Start Time: Press the number keys to enter the time, default is 00:00.

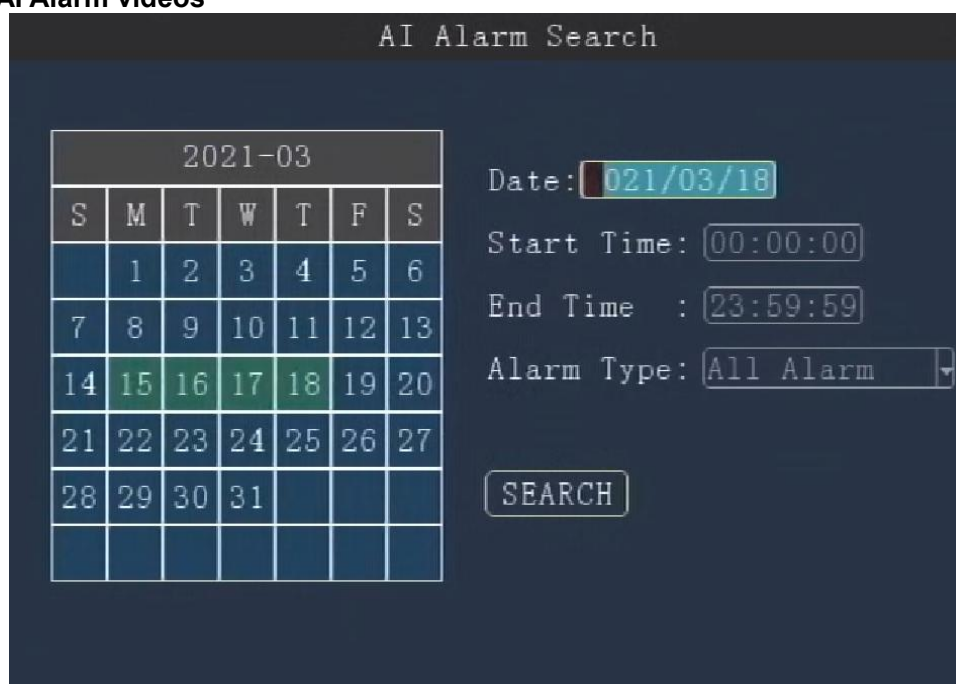
End time: Press the number keys to enter the time, default is 23:59.

Search: Press **【Enter】** to select, search the log information from the start time to the end time.

Press the arrow keys to select "**First**", "**Previous**", "**Next**", "**Last**", press **【Enter】** key to display the information page.

Export: Press **【Enter】** , the selected pictures will be exported to an external USB storage device .

8.2.1.4. AI Alarm videos



The AI alarm videos saved in the built-in EMMC of MDVR, which you can search and export the files in folder(Video and pictures) to a external USB drive, click search, then you will get this page

AI Alarm Results

BLOCK: 001/020

	DISK	ALARMTYPE	TIME	
1	EMMC	DRI_ABNOR	00:00:22	<input type="checkbox"/>
2	EMMC	DRI_ABNOR	00:05:22	<input type="checkbox"/>
3	EMMC	DRI_ABNOR	00:10:22	<input type="checkbox"/>
4	EMMC	DRI_ABNOR	00:15:22	<input type="checkbox"/>
5	EMMC	DRI_ABNOR	00:20:22	<input type="checkbox"/>
6	EMMC	DRI_ABNOR	00:25:22	<input type="checkbox"/>
7	EMMC	DRI_ABNOR	00:30:22	<input type="checkbox"/>
8	EMMC	DRI_ABNOR	00:35:22	<input type="checkbox"/>
9	EMMC	DRI_ABNOR	00:40:22	<input type="checkbox"/>
10	EMMC	DRI_ABNOR	00:45:22	<input type="checkbox"/>

FIRST
PREV
NEXT
LAST
EXPORT

8.2.2. System setting

System setup menu includes: **Register info**, **User**, **Time**, **Startup**, **Config** and **Format**.

8.2.2.1. Register info



The MOB VSS server will monitor and manage the vehicle by **Device ID**.

Device ID、Plate No., Province ID, Terminal Model, Factor ID, Terminal ID, City ID: Press number keys to input.

Device ID

Set a number(12 digital at most) ,but must be unique, It's very important , since we will add this device to the server by these numbers.

Language: press **【Enter】** to select and system will reboot automatically.

Position Mode:GPS **【Default mode】**, BD, GLONASS, GPS+BD, GPS+GL.

License1 &2: Custom function of RFID function for driver, should input the license number. It's support for the platform with H-protocol.

8.2.2.2. User

Password: press **【Enter】** :On/Off

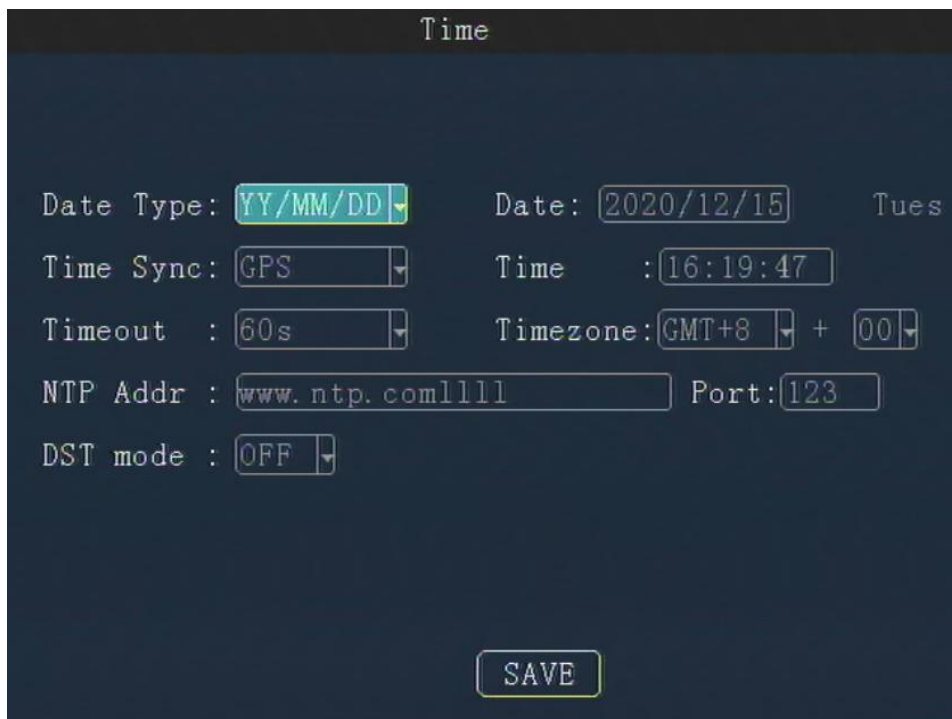
ON: Login with Admin password can setting the User &Admin password; login by user password can only set a user password, password must be the same with **confirm** below .

The administrator **can set or change the parameters**, so if you need to set some parameters, login with this account.

The user can search and view the files only.

OFF: Without password. When entering the menu, get into the main menu directly .

8.2.2.3. Time setup



Date Type: Use for selecting the data type, year - month - day, day - month - year ,month - day - years. Press **【Enter】** to select.

Time Sync: Press **【Enter】** to select: Off / GPS / NTP, default is GPS.

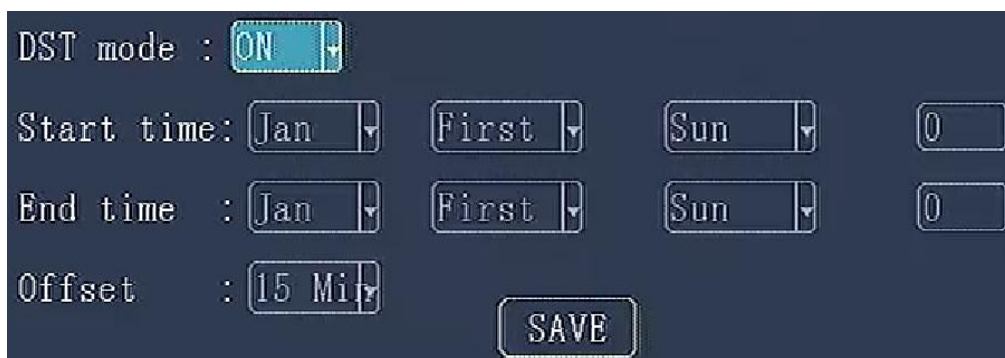
Time out: Setup Menu Waiting Time, once overtime, it will automatically log off the current user,back to the monitoring mode. Press **【Enter】** to select: 1 minute / 2 minutes / 5 minutes / 10 minutes,Default is 1 minute.

Date: To modify current system date, press number keys to enter.

Time: To modify current system time, press number keys to enter.

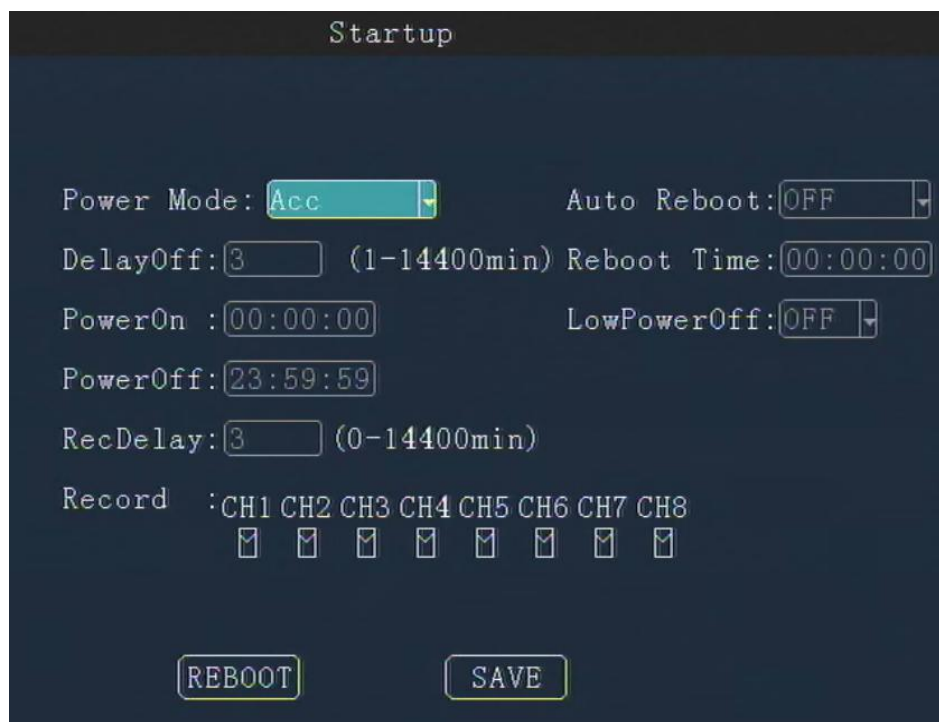
Timezone: Press **【Enter】** to select a time zone, default is GMT + 08.

DST mode: Daylight Saving Time , set it according to your local area requirement.



Select the start and end time, by week and the specific hour , then set the offset time (according to your local regulation, normally it's 60 minutes).

8.2.2.4. Start-up



Power Mode: To set Power ON/Off mode, press **【Enter】** to select. Acc mode / timing mode.

Timing mode: on/off according to the user's setting period.

Acc mode: On/off by the vehicle's ACC ignition.

Auto Reboot: ON/OFF. The default is OFF. If it's **ON**, it will reboot at the **Reboot Time**.
If the device is running all the 24 hours, please set it **ON**.

Delay off: Set the device delay off time. MDVR will still work after the vehicle is power off, then turn off after **Delay-off** time, press **【DEL】** to clear the current number, press the number keys to change.

1440 minutes means the device will work all the time if the battery can support that long time. So please set a available parameter for it.

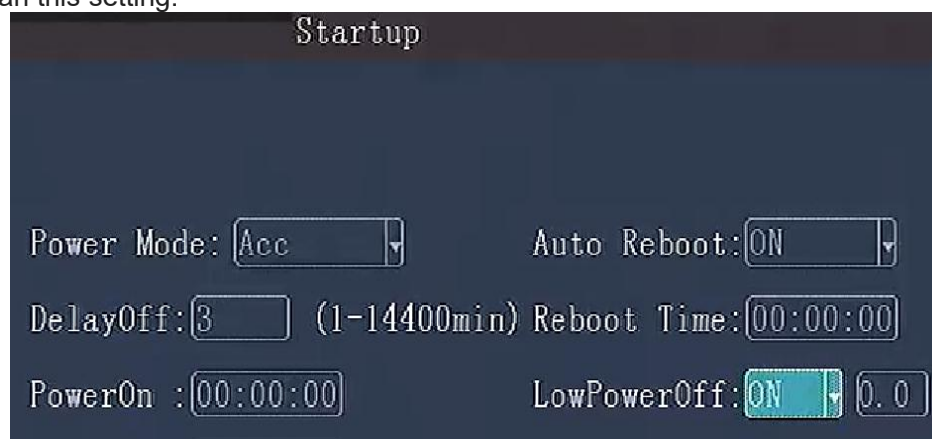
RecDelay: When the vehicle is power off, set the record delay time, it will continue recording during this time. This time can't exceed the **Delay off** time.

Record : Check the channels for delay recording.

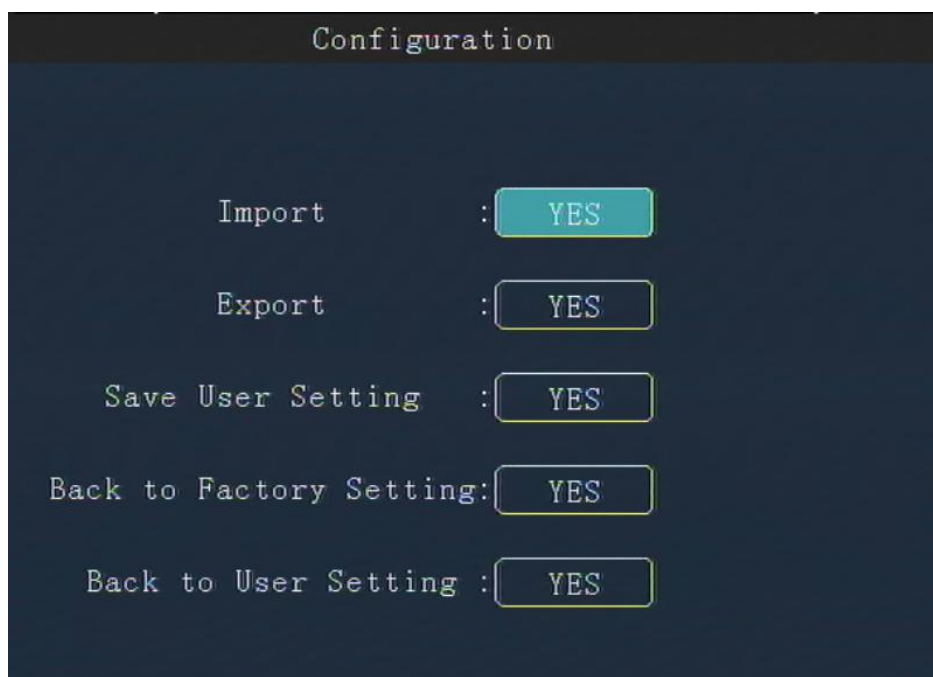
Power on: Setup power on time under timing mode.

Power off: Setup power off time under timing mode.

Low Poweroff: You can set a voltage for prevent draining battery, MDVR will power off automatically when less than this setting.



8.2.2.5. Config



Parameters import: Import configuration information in the USB driver to the current device.

Parameters Export: Export all the configuration information of the current device to the USB flash driver. If there is no USB flash driver, it will be saved in the existing HDD/SD card.

Tips:

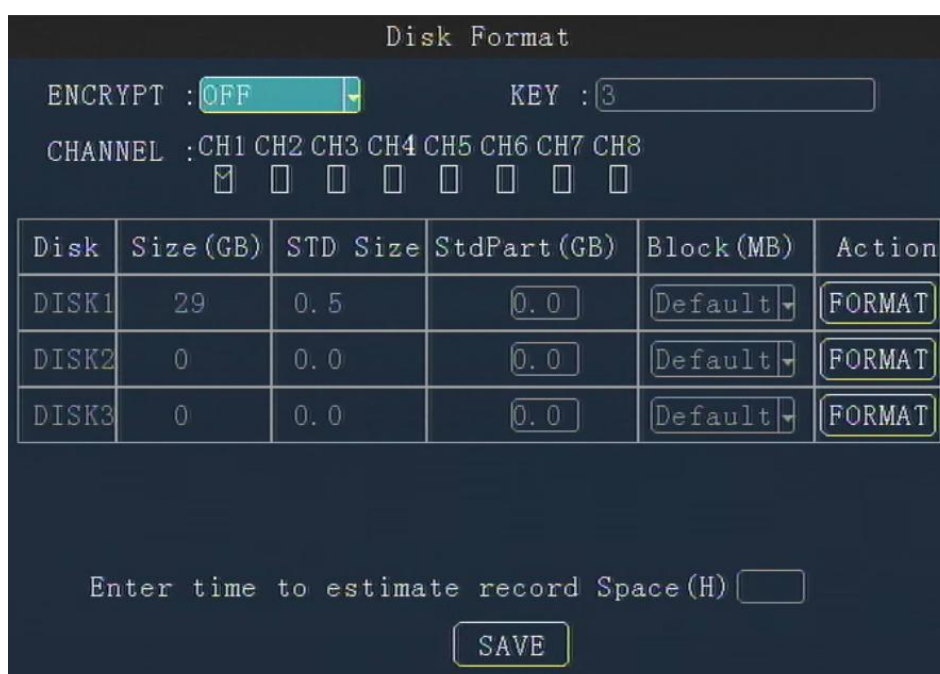
If you had set the whole parameters in one device already, you can export it first, and then import to other devices by this function. After the import, it will reboot automatically.

Save User Setting: Save all configuration information for the current user, it will store this information in the SD/HDD.

Factory settings: Restore some device parameters to factory default, such as Alarm, Record. It will not change the Register and Network setting.

Back to User settings: Restore all device parameter setting to saved user's setting

8.2.2.6. Format



Press the arrow keys to select **DISK1 / DISK2 / DISK3/USB**(if you had plugged the USB drive).

It will display the whole available disks. Size/Std size/Block setting.

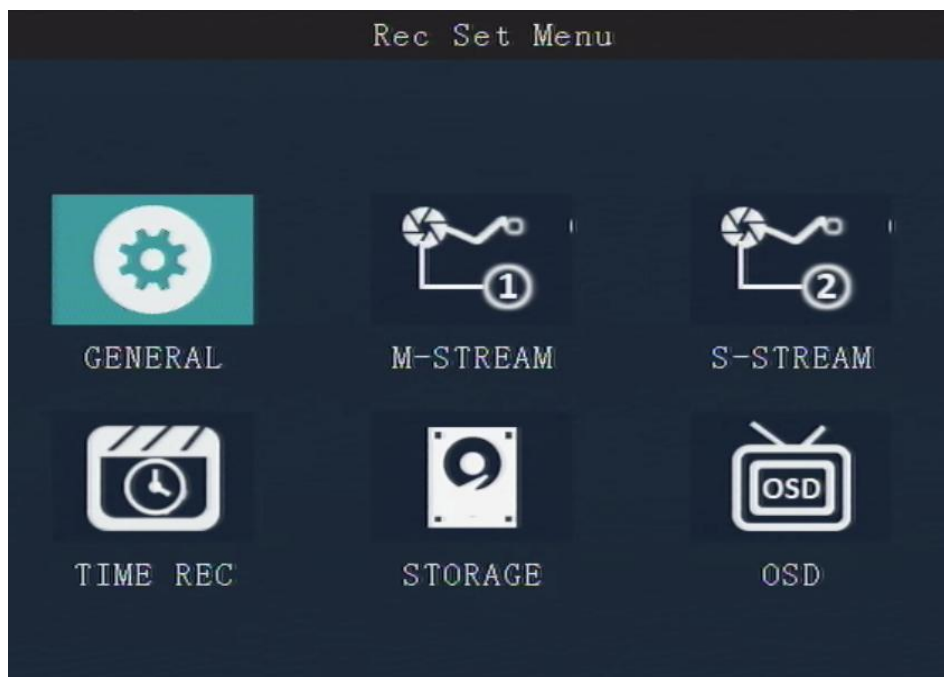
Encryption: For safe concern of videos, we can set a password(KEY) for the dedicated channels. When play by our player, it will ask the user to input the password.

STD size: The area for saving Alarm pictures, debug Logs, system file, Alarm videos. This area is which you can check on the PC. For example, if you need more space for saving alarm videos and upload to FTP server, should change it. Just input a new value in **StdPart(GB)** and **SAVE** it.

Block(MB): All videos are saving by block read&write technology. It's not recording by time length. So if you need save a long time period video, change a bigger value for it.

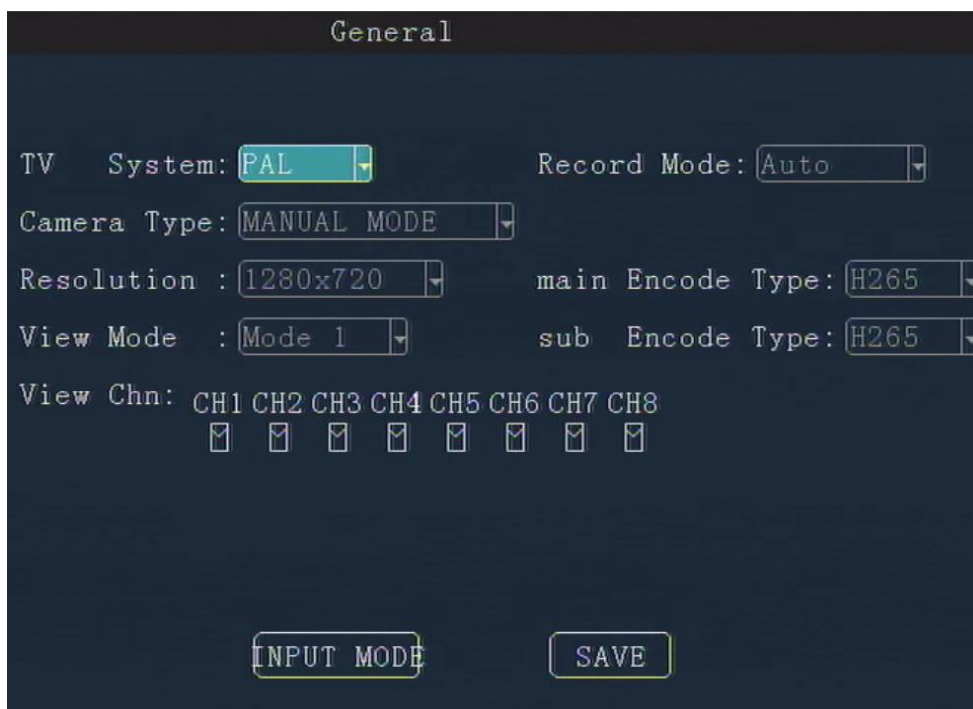
Format: If there is some err with the disk, format it. It will take about some minutes.

8.2.3. Record



Recording setup including: **General, M-stream, S-stream, Time recording, Storage, OSD set.**

8.2.3.1. General



The General info contains the basic setting for camera. When you install the MDVR, please

double-check these sub-menu .

TV System: Press **【Enter】** to select: PAL / NTSC, default is PAL. If it's wrong ,the image will become black-white color only. **Select PAL/NTSC according to the camera's video type. Device will automatically restart after changing it.**

Camera Type: Manual Mode as default. The device will detect camera type automatically.

Attention: Not support D1 camera.

Record Mode: Press **【Enter】** to select: Auto / time recording / alarm recording, default is Auto.

Auto: it will record all the time.

Time recording: Need set the time in **[9.2.3.4 Timed Record]**.

Alarm: Only record when alarm is triggering, should set in the Alarm menu first.

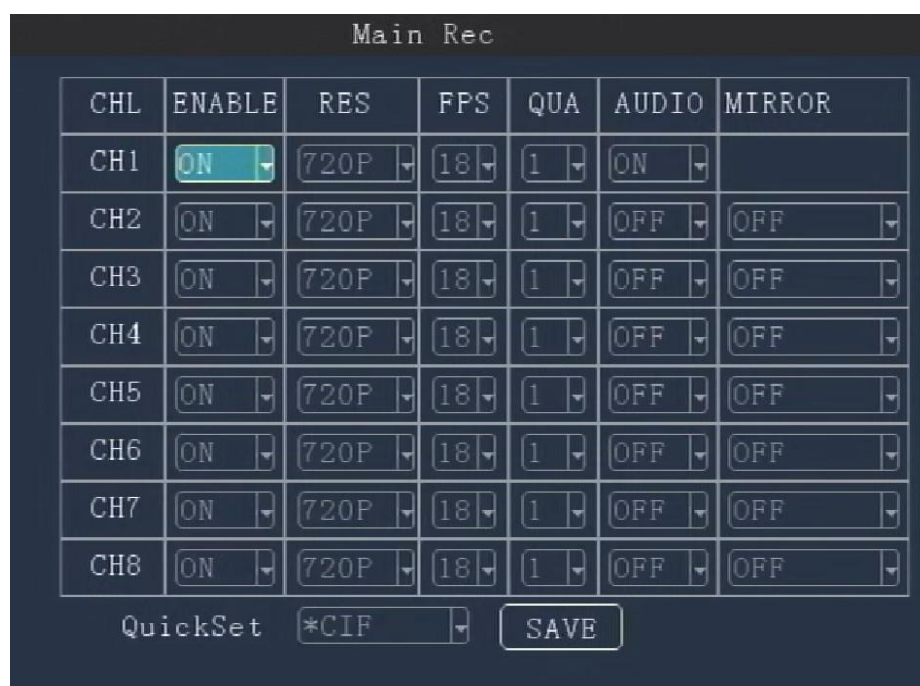
Display Resolution: Set as 1280*720P.

Main/Sub Encode Type: Support H265 and H264 both.

View mode: Press **【Enter】** to select: Two / Four / Six / nine

View Chn: Select the channels you need ,default setting is all channels.

8.2.3.2. Main stream



Enable: Press **【Enter】** to select: On / Off.

Res: Resolution ,press **【Enter】** to select: D1 / HD1 / CIF / 720P.

CIF:352*288,**HD1:**352*576, **D1:**704*576, **720P:**1280*720 .

FPS: Frames per second , More frames, every picture will be more clear. press **【Enter】** to select: 1-25 .
NTSC : 30FPS , PAL: 25FPS.

QUA: Quality of the video, press **【Enter】** to select: 1-8. **1** is best , but it will cost more storage space.

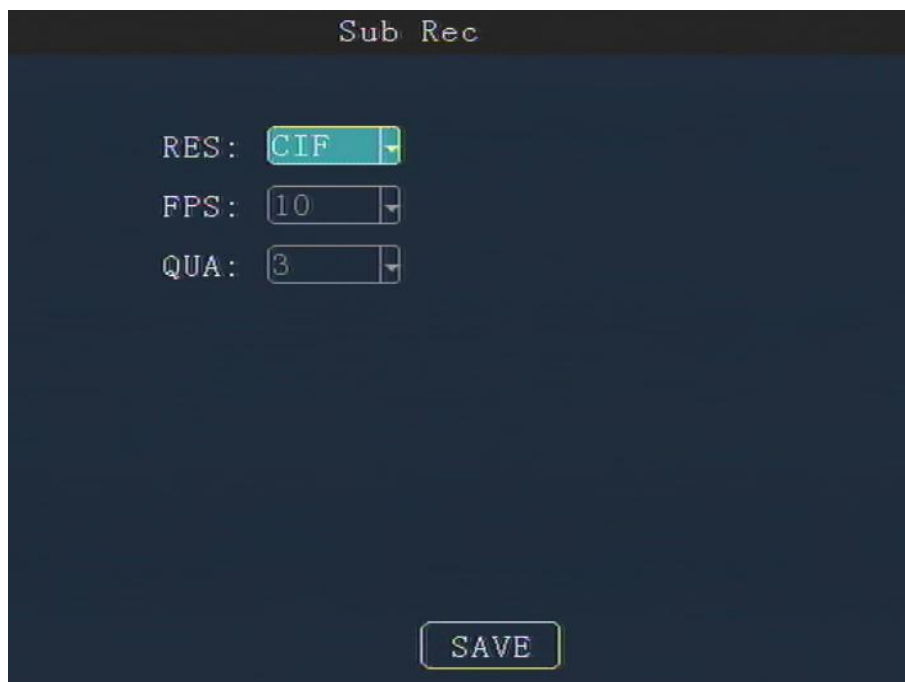
AUDIO: Press **【Enter】** to select: On / Off. **ON** means the audio will be saved with video together.

Attention: Only 1 channel could support audio function. You need select 1 channel from 8 channels.

Mirror/Flip: Set the image to mirror or flip .Press **【Enter】** to select the types.

QuickSet: Setup all channels resolution simultaneously, press **【Enter】** to select: 720P/D1 / HD1 / CIF / 720P.

8.2.3.3. Sub stream

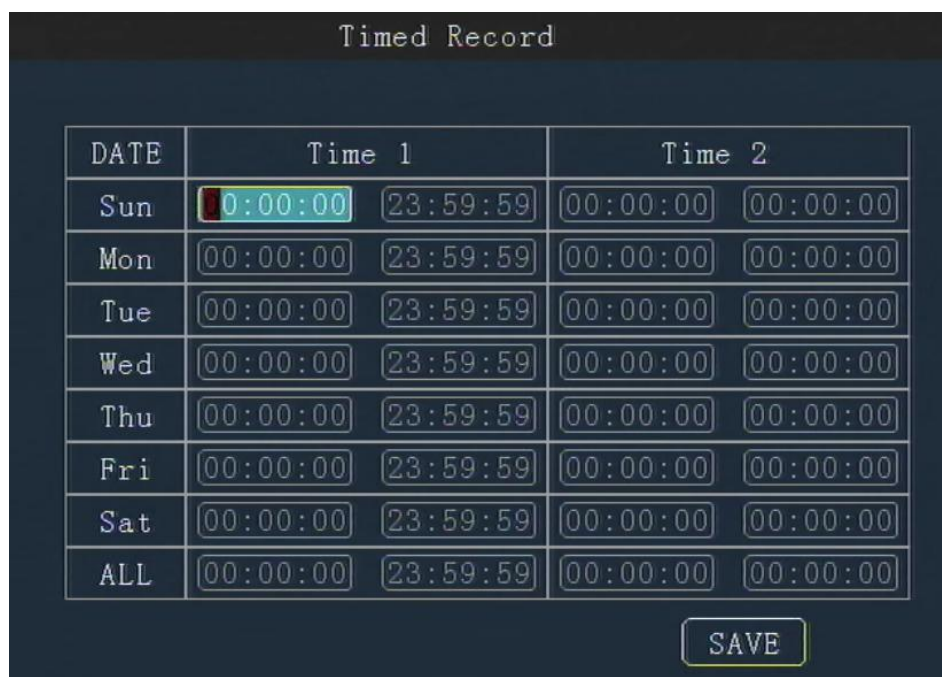


The sub-stream is used for live streaming. The higher Resolution, bit rate and frame rate, video will be more clearer, but need more 3G/4G data.

Notice:

1. Currently **3G** networks support **CIF** real-time network transmission, the default setting is **CIF**.
2. **QUA, 1 is best**, for saving the 3G/4G data. Please choose 7 or 8.

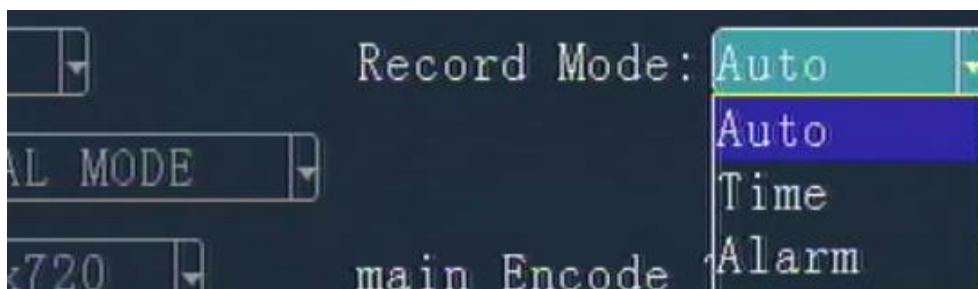
8.2.3.4. Timed recording



Setting the **start time** and **end time** of timing record, press number keys to enter. During the setting time, it will start recording automatically.

Attention:

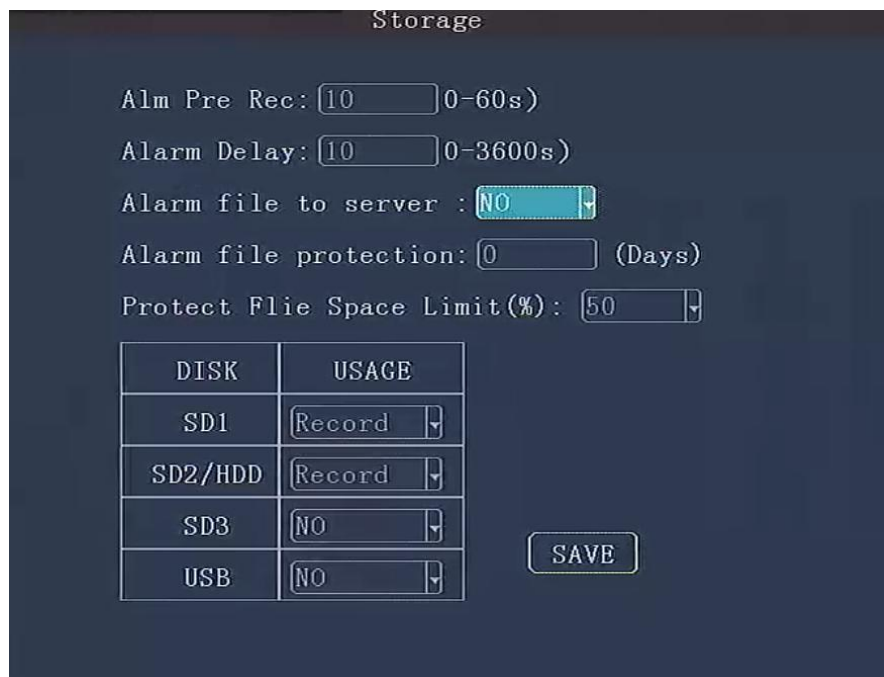
1. Need turn on the **Time** mode first, in the **MENU--General--Record Mode**



2. Set the **ALL** as **00:00:00-00:00:00**, or else, the timed recording will not work!

3. Set the recording plan for every day.

8.2.3.5. Storage setting



SD1 is for SD card, SD2/HDD is Hard disk, SD3 is for fireproof box, USB means USB storage drive.

Alarm Previous Rec: Set the previous recording time before the alarm happens. Press number keys to enter, 0 to 60 seconds for selection.

Alarm delay: Set the delay recording time after the alarm happened. Press number keys to enter, 0 to 3600 seconds for selection.

Alarm file to server: Alarm file save to FTP. All alarms file will be uploaded at real-time. So pay attention if it's linked by 3G/4G, since it will cost data of SIM card.

Alarm file protection: Set the alarm file protection time, this files will be not deleted during the setting days. Press number keys to enter, 0 to 45 days.

Attention: *In order to upload files to FTP storage server.*

1. Must turn on the **Protect Switch OPEN**. And set the **Alarm file protection days**.
2. Set a Big space for **StdPart** (such as 2G/4G size) in **9.2.2.6 Format**.

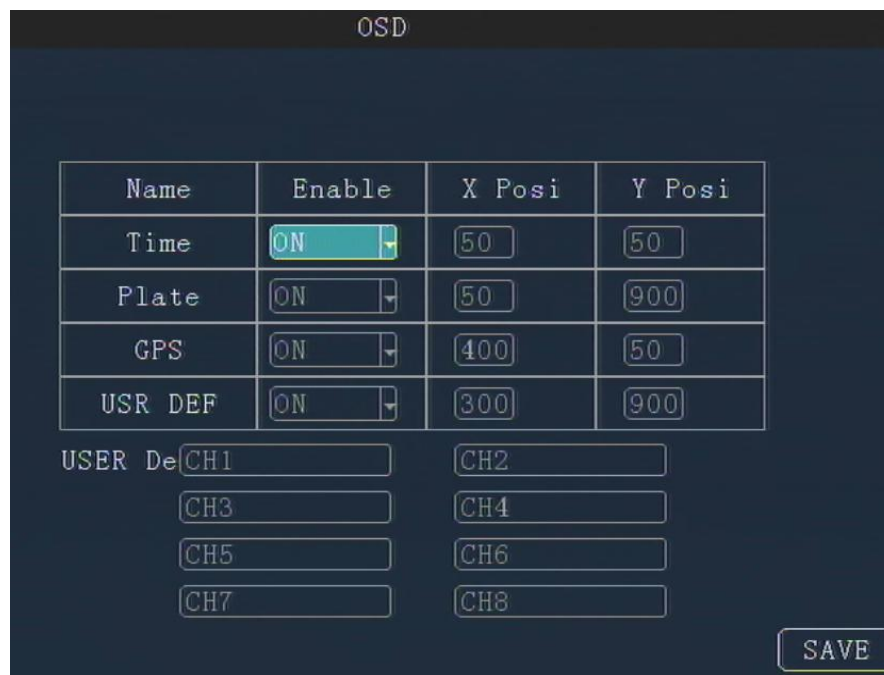
Disk and Usage: Press **【Enter】** to select: No / Record / mirror / Backup.

No: No recording; **Record:** Recording the file in this disk.

Mirror: Save the recording video in this disk at same time.

Backup: When the current recording disk is failed, the system will save the video in this disk.

8.2.3.6. OSD Set



Set the stamp information on the image , and location to be displayed on the image.

Time: Press **【Enter】** to select Enable: on / off, press number keys to enter the X and Y coordinates.

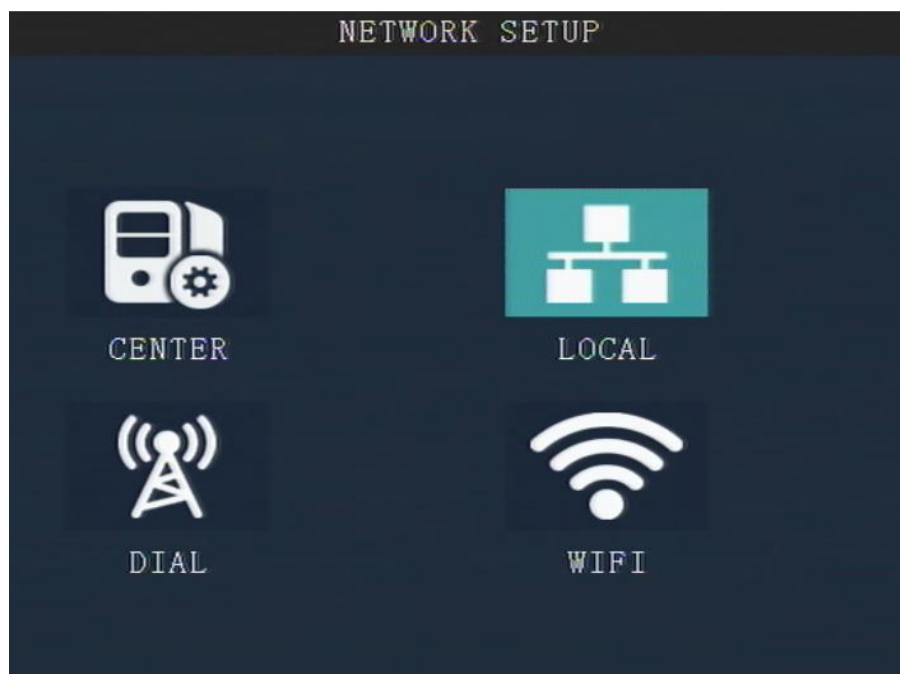
Plate: Press **【Enter】** to select Enable: on / off, press number keys to enter the X and Y coordinates.

GPS: Press **【Enter】** to select Enable: on / off, press number keys to enter the X and Y coordinates.

USR DEF: Press **【Enter】** to select Enable: on / off, press number keys to enter the X and Y coordinates.

USER Define: You can define every channel a name by yourself, press **【Enter】** to call out the keyboard, and input the characters , **12 characters at most**.

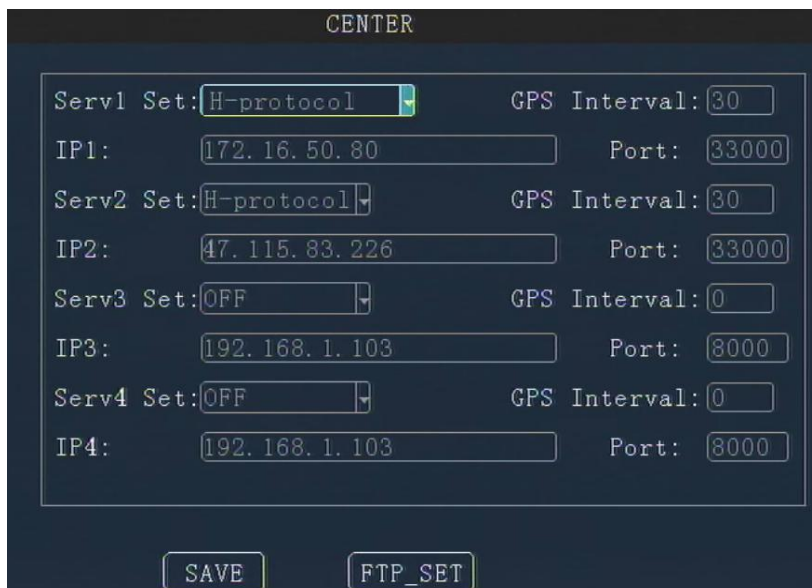
8.2.4. Network Setting



Network Setup menu includes: **Center** settings, **Local** settings, **Dial** settings and **WiFi** settings. The device access the CMS server or third party platform by these method .

Network priority is **WIFI>3G/4G>LAN**, it will switch automatically according to the network status.

8.2.4.1. Center settings



Our MDVR supports 2 system platform at the same time. You can choose one of them to test.

Server1/2: MOB VSS platform. Input your MOB VSS server PC's WAN or LAN IP address for test.

Port: The default port is 33000

Server3/4 : Transport server. For uploading the raw data of external devices via RS232 or RS485.

Server Protocol: H protocol is the protocol if you need to bind the third party MOB VSS or FMS platform.

GPS Interval: The time interval for sending the GPS data package(contains GPS, speed, alarm ,time&date and so on. The device will send the data package to platform.

If you need save the data of SIM card, set a long time.

FTP server



Input the FTP server IP address, port .User and password. You can build your own FTP server. **StatePort** is for maintenance(still under development).

If you have set in **9.2.3.5 Storage setting** and choose the FTP, all alarms file will be uploaded to FTP server.

8.2.4.2. Local Network Setup

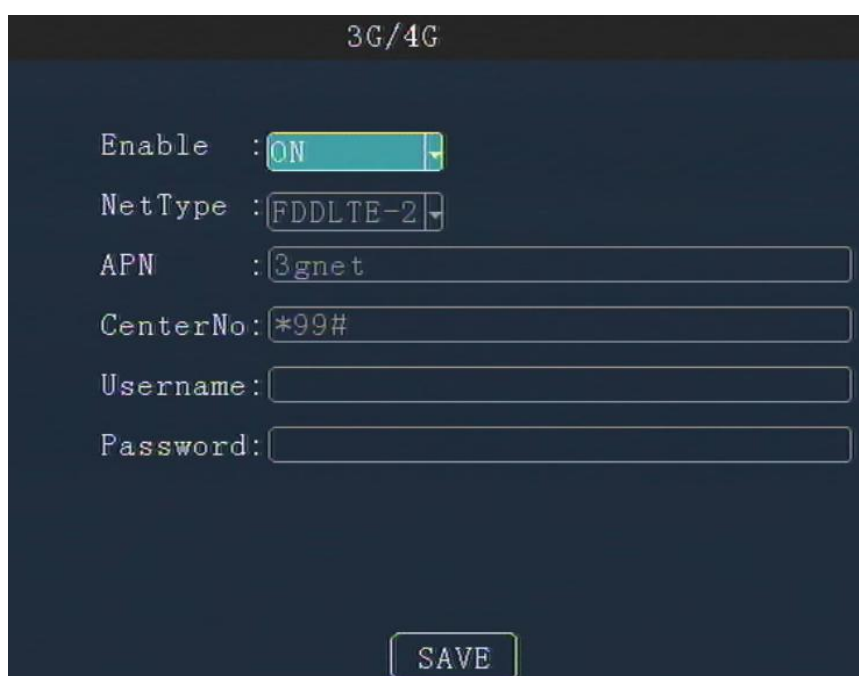


Local network IP

LAN is used for local connection.

The device supports LAN connect directly like as your PC. Set the same IP segment with your PC 's address(include IP, Mask, Gate, DNS address. For MAC, just use our default setting address,don't change), otherwise, it can not be connected. The LAN indicator will be lit. If your don't know this information, ask for your ISP supplier or IT team for help.

8.2.4.3. Dial settings



Enable: Press **【Enter】** to select: On / Off.

Net Type: Press **【Enter】** to select: WCDMA / EVDO / TD-SCDMA / TDDLTE / TDDLTE-1 / TDDLTE-2.

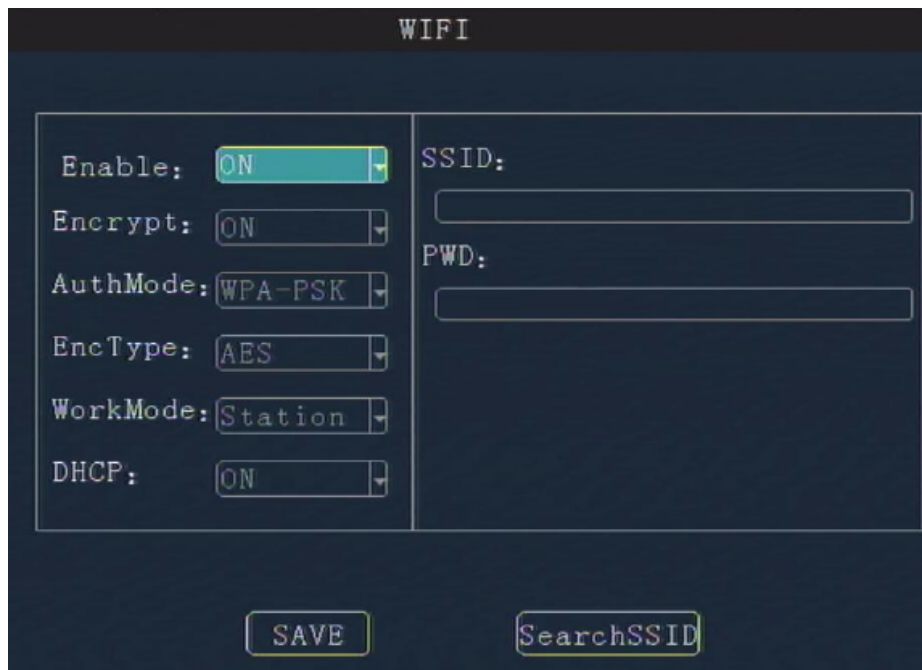
APN.: Set for access the internet, it will not transmit the video if set wrong .

Notice: Each telecom supplier has a different APN , please ask the local supplier first.

Center No. : Default setting is *99#. Please inquiry your supplier if any change.

User name, Password: set up a 3G/4G service user name and password. Also should inquiry your SIM card supplier!

8.2.4.4. WiFi settings



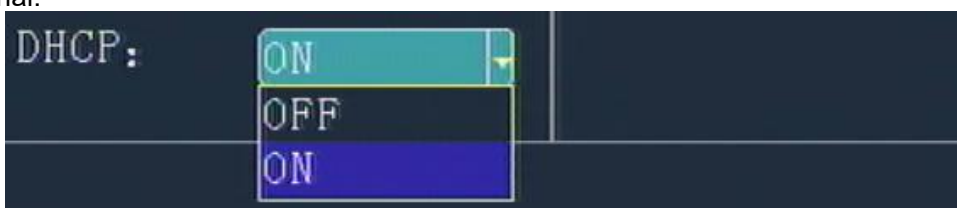
WiFi Enabled: Press **【Enter】** to select: On / Off.

Enable Encryption: Press **【Enter】** to select: On / Off.

Authentication Mode: Press **【Enter】** to select: Open / Shared / WPA / WPA-PSK.

Encryption Type: Press **【Enter】** to select: NONE /WEP/ TKIP / AES.

Work Mode: Station or AP. Station is default setting ,which enable the device link the internet or router 's wireless signal.



AP: Access point mode, the device will share a hot-spot for other devices .

Besides, user can set the parameters by our APP or mobile checker.

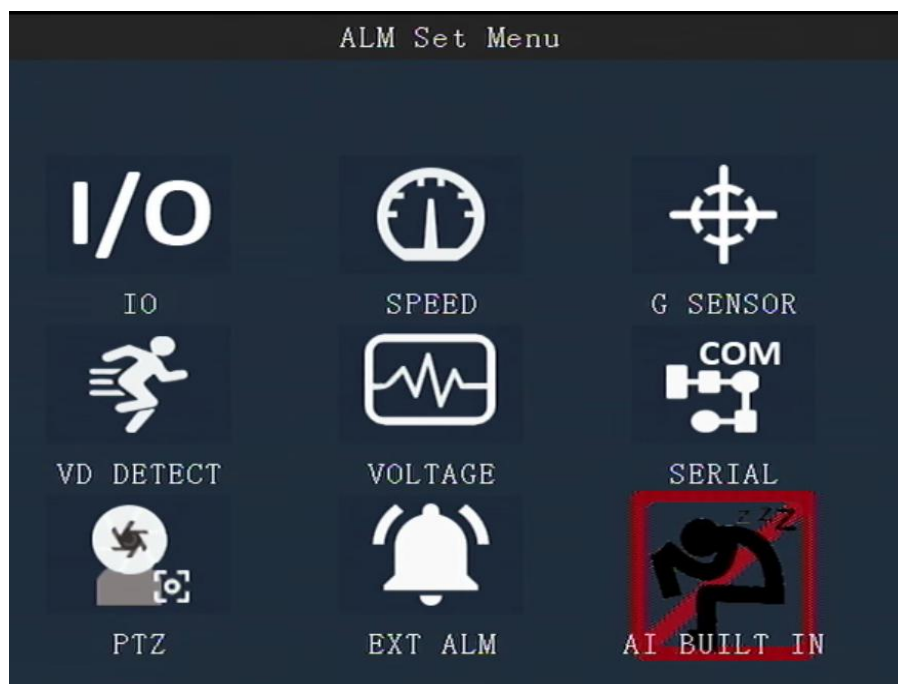
DHCP: Dynamic Host Configuration Protocol. **OFF:** Input the IP address manually. **ON:** Get the IP address automatically.

SSID, password : Input your own router's wireless signal name and password.You can click **Search SSID**.

IP, Gate, Mask : If the DHCP is off, you need to set this manually.

WiFi IP segment should be different with LAN IP.

8.2.5. Alarm



Alarms include: I/O alarm, speed alarm, G-sensor, motion detection, alarm voltage, Fatigue, serial port and PTZ control management.

8.2.5.1. IO Alarm



IN1-IN6 is for generally use (same with the I/O serials cable), IN8 and IN9 are for iButton, it must be OFF status if you don't use them. (on I/O serials cable , it is IN7 and IN9)

Enable: Press **【Enter】** key to select: off / emergency / front door / middle door / back door / driver door / other doors / low beam light / high beam light / turn right light / turn left light / brake / back / Customer definition(Press **Info** key to call out the keyboard for new firmware).

Notice:

There are 3 items need pay attention if you need to use.

Talk: If connect to the panic button, when driver press it, it will send the Push To Talk/intercom request to MOB VSS platform.

L/R-Turn: Need connect the Left/Right-Turn signal of vehicle for ADAS function.

Level: Press **【Enter】** to select: high / low.

High means it will trigger sensor alarm when the voltage of sensor input is changed from 0 to a high voltage[DC 4V - 12V].

Low means it will trigger sensor alarm when the voltage of sensor input falls from a high voltage[DC 4-12V] to 0 .

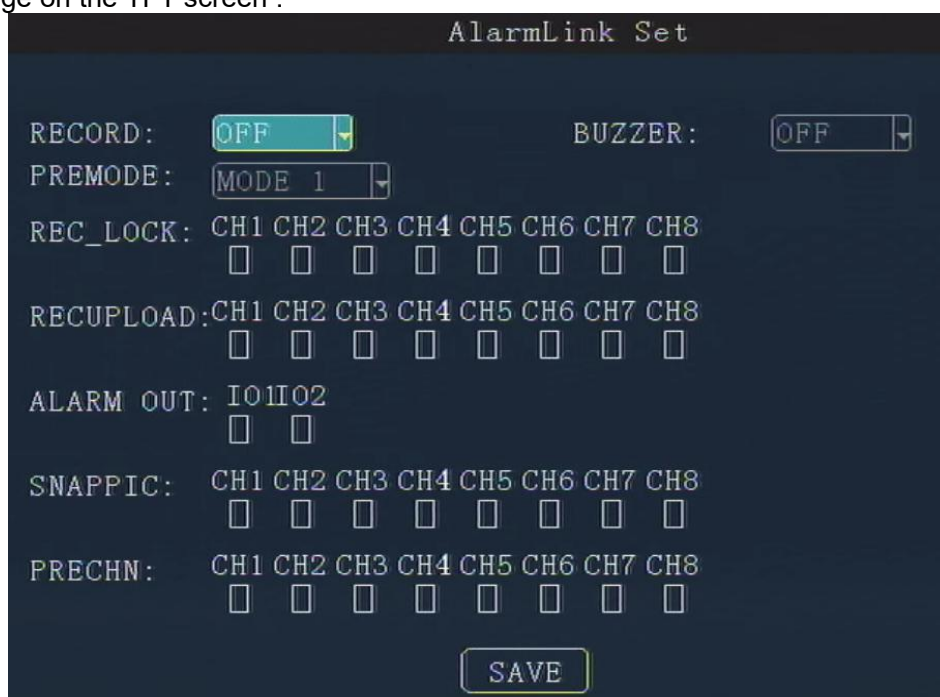
Delay: The alarm duration time after trigger source is removed, it is used for setting linkage's duration time. During this period, it will not response the new alarm if there is a continuous triggering on the I/O port.

Wait: The waiting time for trigger in case of mistaken touch.

Record: Press **【Enter】** to select: On / Off, enable when the alarm happens, it will record or not.

Linkage: Press **【Enter】** to select:

Preview: Press **【Enter】** to select the channel. When the alarms happen, it will pop-up the setting channel's image on the TFT screen .



RECORD: ON.

REC_LOCK: The alarm files will be locked in case of been deleted.

ALARM OUT: Choose output1, output2.

SNAPPIC: Take a snapshot. The picture will be saved in the device storage.

PRECHN: Preview channel when the alarm is triggered.

8.2.5.2. Speed Alarm

It contains Parking(parking time setting), L-Warn(low-speed warning), L-ALM(low-speed alarm), H-Warn(high-speed warning), H-ALM(high-speed alarm), Spd Up(speed up) ,Spd Down(speed down) these seven items.

Speed

Type	Enable	Limit	Delay	Wait	Linkage
Parking	OFF	0	0	0	LINK_SET
L-Warn	OFF	0	0	0	LINK_SET
L-ALM	OFF	0	0	0	LINK_SET
H-Warn	OFF	655	0	0	LINK_SET
H-ALM	OFF	0	0	0	LINK_SET
Spd Up	OFF	0	0	0	LINK_SET
Spd Down	OFF	0	0	0	LINK_SET

Speed Source: GPS Pulse: 10 Speed unit: km/h

SAVE

Set the parameters refer to the following text. When it break the rule ,it will trigger an alarm. For example , **L-ALM**(low-speed alarm) , set it **ON** and the **Limit** value and other settings. If the vehicle run a speed lower than the **Limit** value , it will trigger the alarm.

Enable: Press **【Enter】** to select: On / Off.

Limit: Set a speed value for system judgement.

Delay:Linkage’s duration time. Press number keys to set. **During this period, it will not response the new alarm if there is a continuous triggering.**

Wait: The waiting time in case of mistaken judgement or just wait.Press number keys to set.

Record: Turn on/off recording function.Press **【Enter】** to select: On / Off.

Speed Source: Press **【Enter】** to select: GPS / Vehicle / Mix.

Pulse: Not available.

Speed unit: km/h, MPH, nm/h for option.

For **Parking**, the Limit is also speed, you need set a speed first, if the vehicle under this speed, the device will deem it’s parking.

For **speed up/down**, set a value for it. If the vehicle harsh-accelerate or harsh-brake, the system will compare the current speed with the previous second’s speed all the time. If the change value more than the setting parameter, It will trigger an alarm.

8.2.5.3. Acceleration

The acceleration alarm first need to get coordinate correction, the vehicle may be parked on level ground to clear calibration.

Tilt: it refers to a device rollover angle, unit is degree.

Enable: Press **【Enter】** to select: ON/OFF.

Limit: Set a limited value for system judgement.Press the number keys to enter.

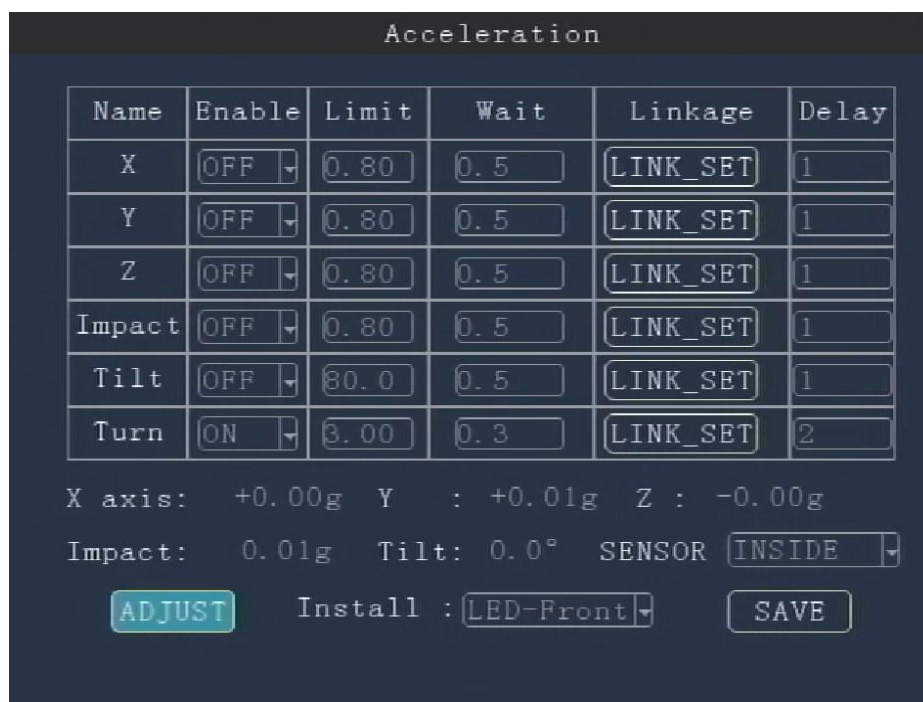
Wait : The waiting time in case of mistaken judgement . Press the number keys to enter.

Record: Turn on/off recording function.Press **【Enter】** to select: On / Off.

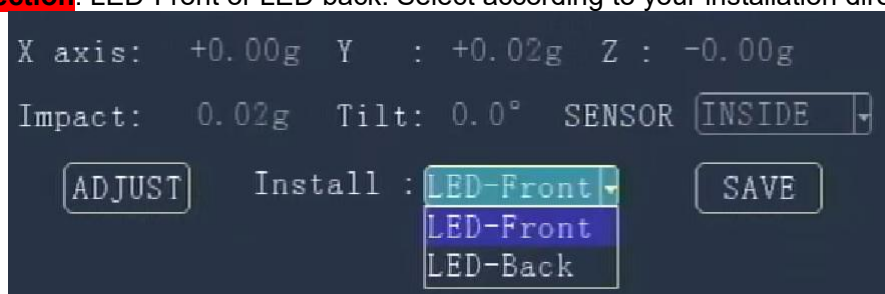
Alarm link: Press **【Enter】** to set.

Delay:Linkage’s duration time. Press number keys to set.

Adjust: *After you install the device, press this button to refresh all parameters to zero.*



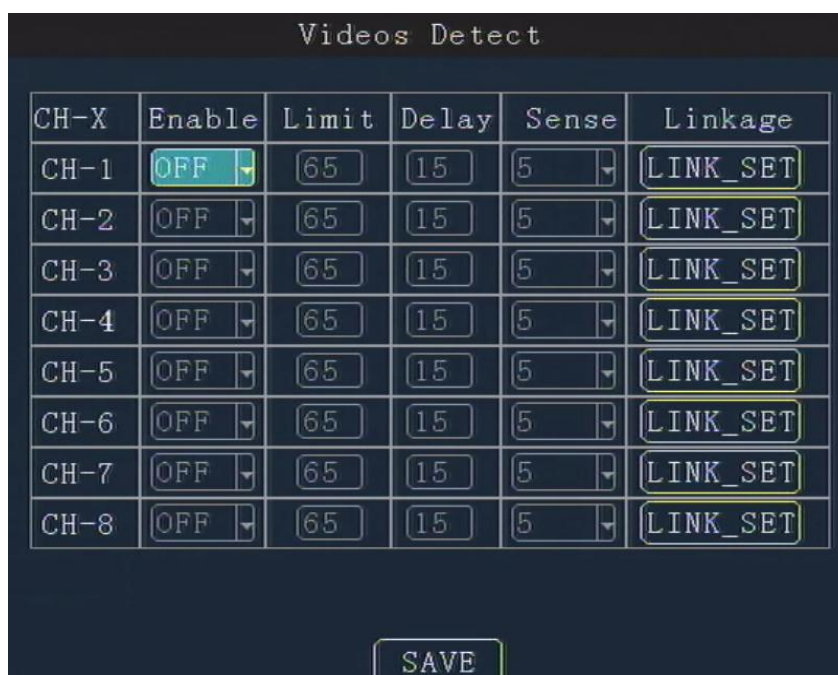
Install direction: LED-Front or LED back. Select according to your installation direction.



8.2.5.4. Motion Detection

For saving the space of the disk, you can turn on the motion-detect function. It will record only when camera has detected the movement objects or actions.

Besides, it also supports Occlusion alarm function. You can only choose one of them between Motion detect and video Occlusion at the same time.



Enable: Press **【Enter】** select: ON/MOVE/OCC.

Limit: Set the threshold of video area/detection area percentage . Suggest 65.

Sense: Sensitivity , it decides the detection sensitivity level .Press **【Enter】** to select: 1-8.

1 is the highest level. Suggest to use 3.

Record: Turn on/off recording function.Press **【Enter】** to select: On / Off.

Alarm linkage: Press **【Enter】** to set.

Delay:Linkage's duration time. Press number keys to set.

Attention:

1.Regarding the occlusion/motion detect function. we suggest choose 4 channels at most.

2 After you set the parameter, please restart the device.

8.2.5.5. Voltage alarm



If the operation voltage is low, it will trigger the alarm. The system can work at 8-36V (The lower voltage, the more current demanding), it's better work at 12/24V. So you can set a **Limit** value first.

Enable: Press **【Enter】** to select: ON/OFF.

Limit: Set the threshold of voltage level .Press the number keys to enter.

Wait: The waiting time in case of system mistaken detection . Press the number keys to enter.

Alarm linkage: Press **【Enter】** key to set.

Delay:Linkage's duration time. Press number keys to set.

8.2.5.6. Serial

Com port means the RS232 and RS485 communication ports, it's used for connecting the external devices, such as fuel level detection, IC card reader, fatigue driving camera, people counting etc. COM1 & COM2 is RS232, COM3 is RS485.

Attention:COM1 is for RX1/TX1, COM2 is for RX2/TX2.

Serial

Name	External	Baud	DataB	StopB	CheckB
COM1	OFF	38400	8	1	Even
COM2	OFF	57600	7	1	Odd
COM3	OFF	38400	6	1	None

SAVE

For different external device, the setting is different. We will provide the corresponding installation manual for reference.

External: Press **【Enter】** to select accessory type.

Baud Rate: Press **【Enter】** to select: 600/1200/1800/2400/4800/9600/19200/38400/57600/115200

Data Bit: Press **【Enter】** to select: 6/7/8

Stop Bit: Press **【Enter】** to select: 1/1.5/2

Check Bit: Press **【Enter】** to select: Even/Odd/None/Mark/Space

8.2.5.7. PTZ Control

PTZ

CH-X	Protocol	AddrNum	Preset
CH-1	Pelco-P	1	1
CH-2	Pelco-P	1	1
CH-3	Pelco-P	1	1
CH-4	Pelco-P	1	1
CH-5	Pelco-P	1	1
CH-6	Pelco-P	1	1
CH-7	Pelco-P	1	1
CH-8	Pelco-P	1	1

SAVE

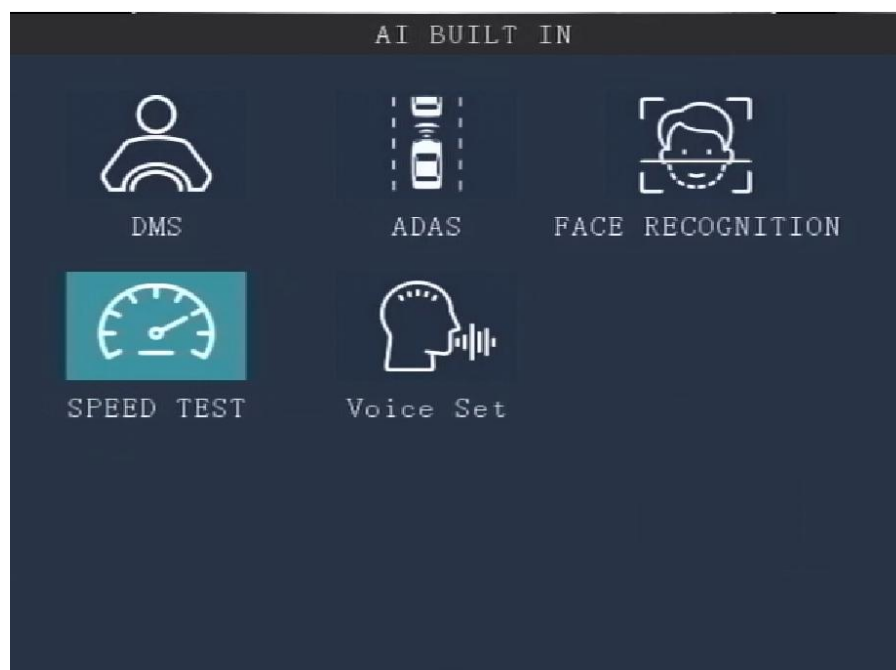
It's used for setting the PTZ device when control a PTZ camera(Press the **PTZ** button on the remote, then press **+ /-** button).

Protocol type: Pelco-D/Pelco-P for option.

Address code: Set a different address code for each channel, the MDVR will recognize this address and control it. Press number keys to enter.

Preset: Preset location when the system start-up. You can set the PTZ lots of the location first, and then choose one of them as the preset location.

8.2.5.8. Fatigue Driving



8.2.5.8.1. DMS

DMS supports Smoking, Phone call, Eye closing, Yawning, Distracted, Absent(No driver), Sunglasses, Seat belt and Camera Cover.

Camera Chn: Set the Channel for DMS.

Enable: Turn on/off this alert.

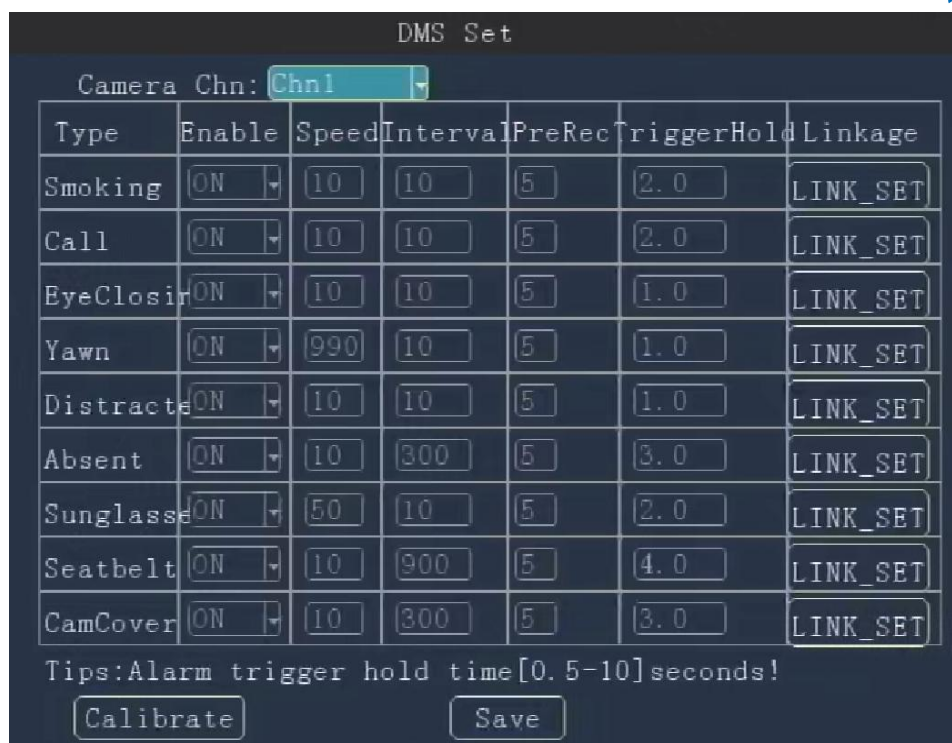
Speed: The alert triggering speed(km/H or MPH, switch in **Speed** menu), which you can configure it.

Interval: The interval(Unit:Second) for next same alert.

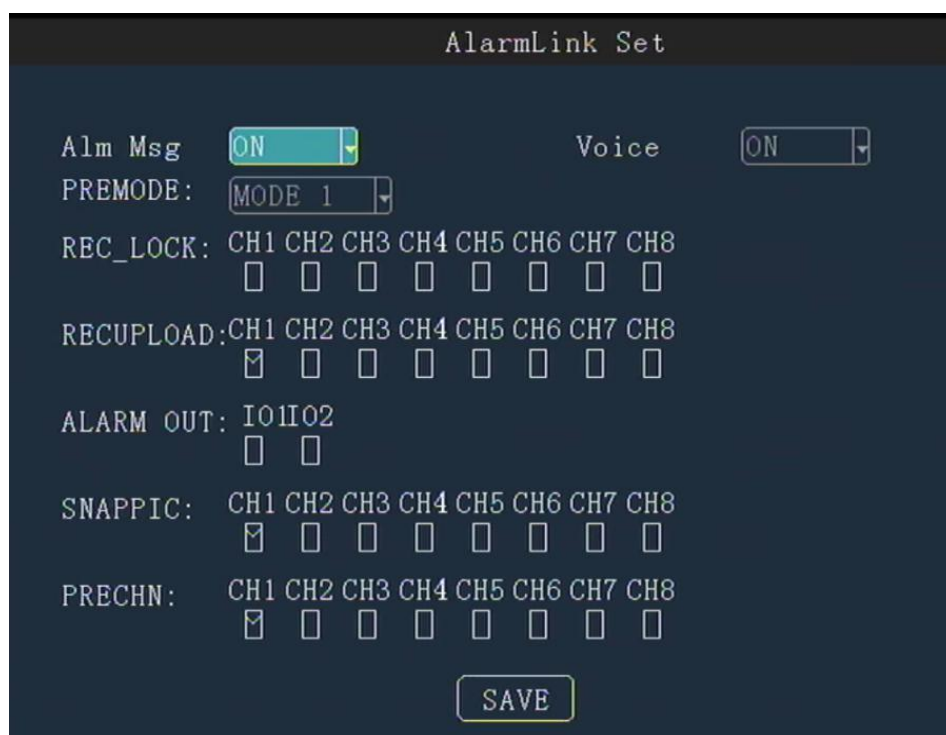
PreRec: Previous recording time(Unit:Second) , 1 to 5 seconds for option.

TriggerHold: The threshold to trigger the alert.

Linkage: Make the corresponding alarm linkage.



Click Alarm **LINK_SET**, it will show as this



Alm Msg: Alarm message on/off to platform.

Voice: Turn on /off alert announcement.

REC_LOCK: The alarm files will be saved in the visible area of HDD/SD card (there is a REC-ALARM folder), and be locked in case of been deleted.

RECUPLOAD: Not available.

ALARM OUT: Choose output1, output2.

SNAPPIC: Take a snapshot. The picture will be saved in the visible area of HDD/SD card.

PRECHN: Preview channel when the alarm is triggering.

8.2.5.8.2. ADAS

ADAS Set

Type	Enable	Speed	Interval	PreRec	Sensitivity	Linkage
FCW	ON	30	5	5	5	LINK_SET
HMW	ON	30	30	5	5	LINK_SET
LDW	ON	50	5	5	10	LINK_SET
PCW	ON	30	5	5	5	LINK_SET
FVS	ON	0	5	5	0	LINK_SET

Camera Chn: NULL

Calibration Config

Save

ADAS supports FCW(Forward Collision Warning), HMW(Headway Monitoring Warning), LDW(Lane Departure Warning), PCW(Pedestrian Collision Warning), FVS(Front Vehicle Start).

Camera Chn: Set the channel for ADAS.

Enable: Turn on/off this alert.

Speed: The alert triggering speed(km/H or MPH, switch in **Speed** menu), which you can configure it.

Interval: The interval(Unit:Second) for next same alert.

PreRec: Previous recording time, 1 to 5 seconds for setting.

Sensitivity: Set according to your local country's road condition, 0-15 for option. **15 is the most sensitivity.**

Linkage: Make the corresponding alarm linkage.

Click **Calibration Config** to do the calibration procedure, please refer to our dedicated manual for more details.

8.2.5.8.3. Face Recognition

Face Recognition Set

Driver ID :

Driver Name:

Face Collect:

Face Search :

FR Enable: ON

Type	Enable	PreRec	Linkage
DriverBack	ON	5	LINK_SET
DriverChange	ON	5	LINK_SET

Save

Driver ID: Input a ID for the driver.

Driver name: Input the name for this driver.

Face Collect: After you input the driver ID and name, Click “COLLECT” to register driver.
The device could register 20 faces as maximum.

Face Search: Check the drive list which have been registered.

FR Enable: Face Recognize enable or disable.

For **Driver Back** and **Driver Change**, the system will detect and analyze it’s same driver or another driver.

8.2.5.8.4. Speed test



Speed Test

Set Analog Speed:

L[-45, -35]:

R[25, 35]:

U[15, 25]:

D[-25, -15]:

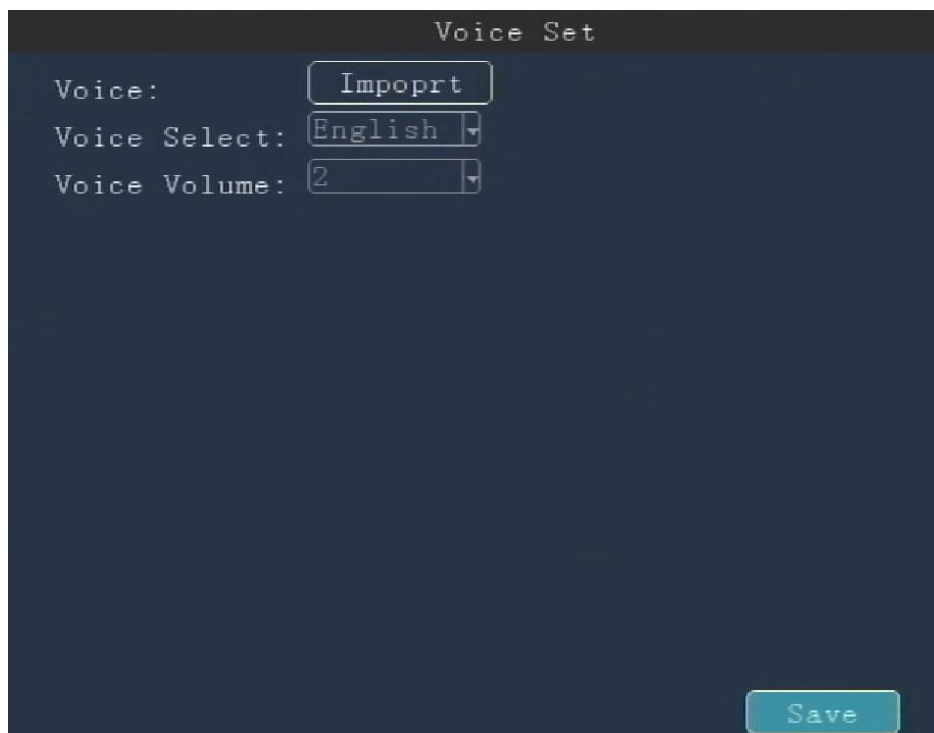
For office testing or demo mode, need set a speed for it.

Input a setting speed which should over than ADAS&DMS threshold speed, then click **Start Simulation Speed**.

For stopping it, click **Unsimulated Speed**.

LRUD: Set the angle for Distraction alert.

8.2.5.8.5. Voice Alert



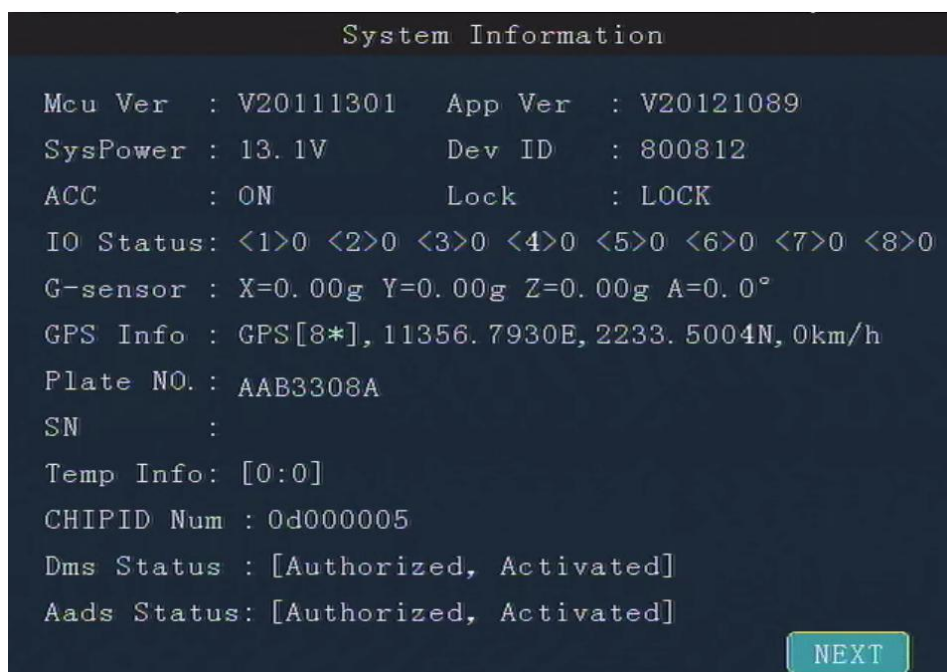
Voice: Import the customize audio.

Voice Select: English, Chinese or the customized language.

Voice Volume: 0-5 for selection, 5 is Max.

8.2.6. System Info

The shortcut key is **info** key on the remote, press **UP** or **DOWN** key to switch the information interface. It will show the whole information about the device status.



The important information as following:

MCU version : CPU firmware version

APP Version: The current firmware version.

System power: The device current operation voltage.

Phone NO.: Device ID actually.

I/O status: Check the I/O electrical level status. **1** is high, **0**(lower than 3V) is low. You can check after device had connected an I/O device, such as, a panic button.

G-sensor: It shows the G-sensor value. Move the MDVR check if this value is changing.

GPS info : It will show as **GPS[*N] + Location** data, **N** is satellite numbers, more than 3 is normal.

No work: there is no GPS signal.

None/Not exist: GPS module is not detected by device. Please restart device or update firmware to try.

CHIPID number: The chip-set ID which is for authorizing the DMS/ADAS.

DMS/ADAS status: Activated or not.

Click **NEXT**, it will display the Net information

In the info2 interface :

Net linked : Show the current connection method :

Inner WIFI (the device is linking with WIFI) , **3G**(the device is linking with 3G).

Wired(the device is linking by net cable)

3G/4G:

Module Type : WCDMA/FDD-LTE/TD-LTE

SIM Signal: Signal intensity.

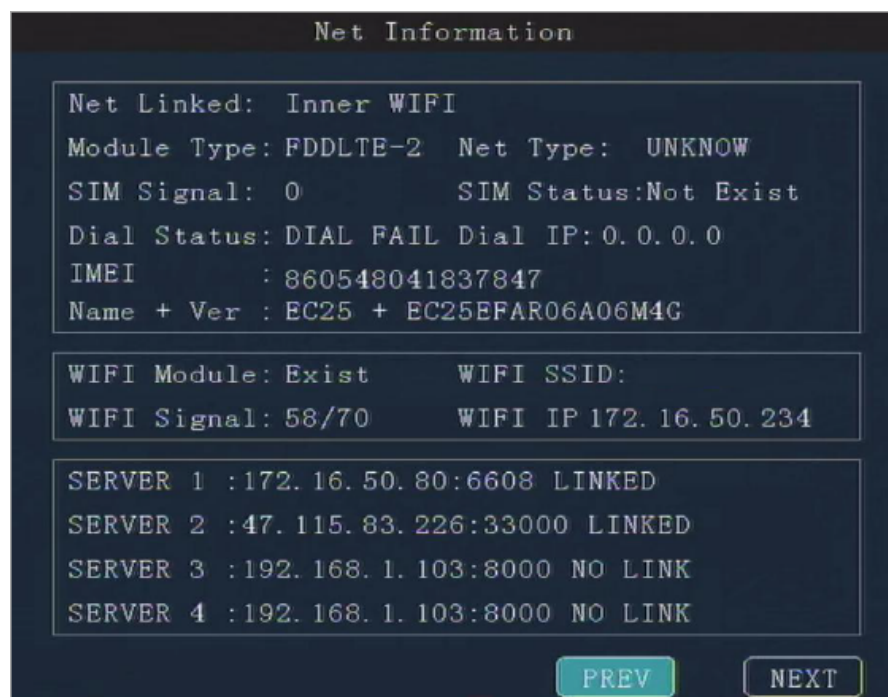
SIM status: If there is no SIM card or the system have not detected the SIM card, it will show **Not exist**.

Dial status: Dial Fail or success.

Dial IP: If dial success, it will show the dial IP address. If failed, you should check the **10.2.4.3 Dial setting**.

IMEI: It shows the IMEI of 4G module.

Name+Ver: 4G module name and version info.



WIFI:

WIFI module : Exist or not exist.

WIFI SSID: Show the current linked WIFI SSID.

WIFI signal: WIFI signal intensity ,100/100 is best.

WIFI IP: If the device had linked the wireless network, it will get a IP address.

Click **NEXT**, it will display the disk information;

Disk Information

Name	Total	Free	Status
SD1	29GB	11GB	Normal
SD2/HDD	0GB	0GB	Not Exist
SD3	0GB	0GB	Not Exist
USB	0GB	0GB	Not Exist

[PREV](#)

Disk storage : Check the status of disks or the USB storage drive .

If there is problem with device , please check these information interface first.