4CH SD Card
Mobile DVR Operation manual

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F.A.Q.:

1. **Why DVR can not start?**

A.: when you connect DVR with a stable power source, please connect red and yellow power wire together with +12V, and then connect black wire with GND. And please lock on the DVR front panel.

When you install the DVR on car, please make sure, the power wires connect correct. Red connect with battery +12V, yellow connect with CAR ACC, black wire connect with battery GND.

2. **Why my SD/HDD can not working after formatted by DVR.**

A.: when you first time insert SD card/HDD into DVR, please wait DVR to format it automatically.

DVR will detect SD first, and then it will start formatting automatically after 15s. and then, DVR will reboot. (do not format sd/hdd manually when first time use)

3. **When playback recorded files on player, the video is chopping, or slower, or faster, or has no sound.**

A: Please contact supplier for the latest version of player. Or you need to change another computer with higher process. Because of the high quality video file cost a lot of computer CPU when playing back file.

4. **When playback recorded files on TV/MONITOR, there has no sound.**

A.: yes, recorded file playback on TV/MONITOR without sound. If you want to hear the sound, please playback on computer.

5. **After set up "schedule", DVR can not working after reboot.**

A.: yes, you have to wait till reached starting time you set in DVR. (See page 15)

1. About DVR

It is an inexpensive type SD card CAR DVR designed for taxies, buses, mini vans, trucks and ships surveillance. This DVR used high-speed processor, an embedded Linux platform. Video processes such as H.264 Video Compression/Decompression.   SD MDVR enables CIF, HD1 and D1 video formats.   All video and GPS information will save in SD card.

1.1 Front panel instruction

| Interface	Name	Instruction
LED	PWR	LED light on as power normal
	RUN	working station indicator
	3G	3G module working status
	GPS	GPS exist or not
	REC	Recording LED light on as recording
	SD	SD card recording LED light on as SD exist.
	WIFI	Wifi net work (unavailable now)
IR receiver	IR	IR Receiver, Receive remote control signal
Electronic Lock	LOCK	DVR will not working if it unlock
SD slot	SD	Support 1pcs Max. 128GB sd card
Sim slot	Sim	When DVR works with 3G module, this slot for 3G sim card

1.2 Rear panel

Interface	Name	Instruction
Power	POWER	Power input interface, support DC 8-36V
AVOUT	Audio and Video out	Always connect with monitor or TV
A/V input	AV1,AV2,AV3,AV4	Connect with Camera
3G/4G antenna	3G	Connect with 3G/4G antenna (optional)
GPS antenna	GPS	Connect with GPS antenna (optional)
I/O	Alarm input	High/low signal input to trigger recording or full screen

Sweet tips:

Please use original type SD card, we recommend you use brand Kinstone, class 10, high speed, max. support 128GB

1.3 Power connection
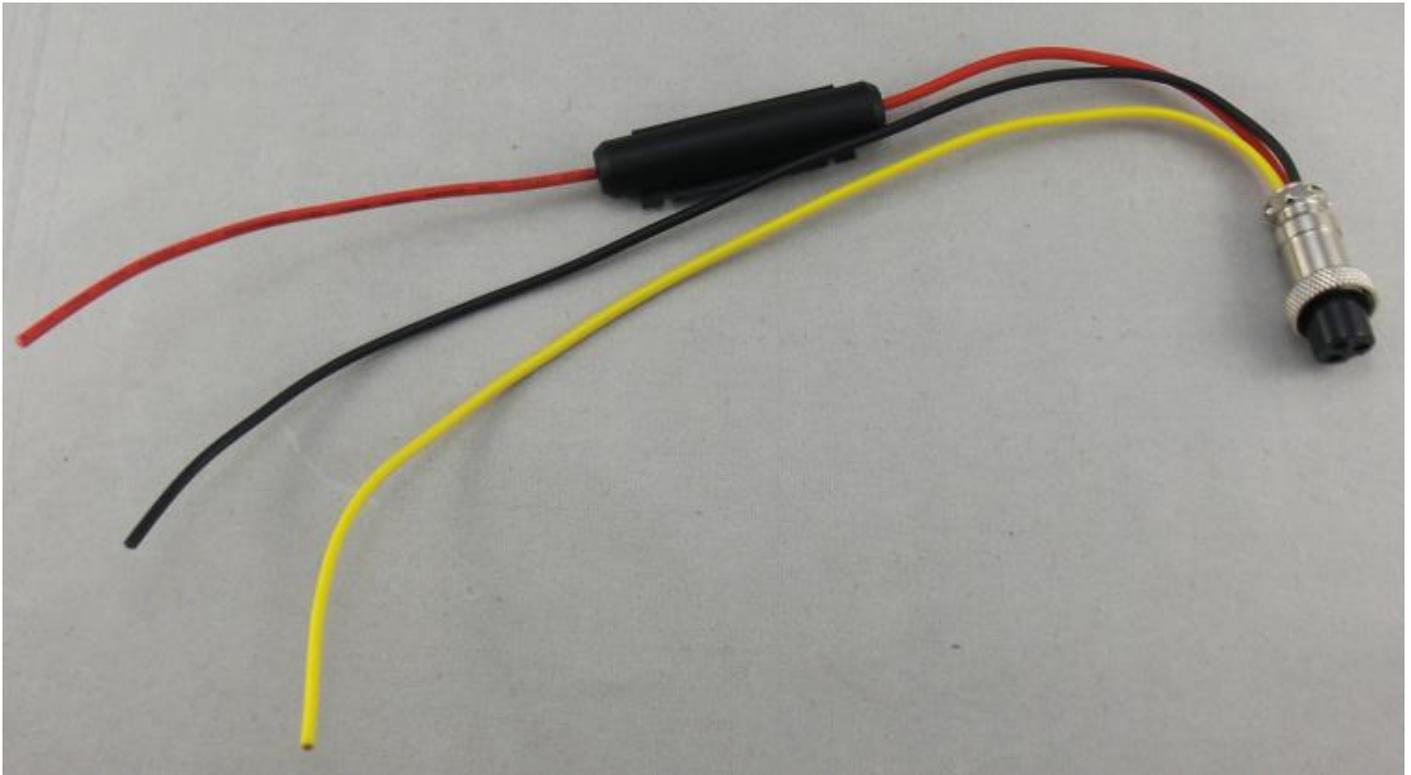
Red: POSITIVE

Black: NEGATIVE.

Yellow: FIREWIRE(ACC).

Tips: For testing in with a stable power source, RED+YELLOW connect with positive, and BLACK connect with negative will start DVR.

NOTES：

1）Please verify battery voltage before connecting with battery. DVR support 8V-36V power input. DVR will be damaged if power input over 36V.

2）After connecting the cables, ensure that power cables are insulated to prevent short circuiting and burning out the battery.

3）The Yellow cable must be connected to the vehicle ignition cable, otherwise the device will not be able to execute the delayed shutdown and the final moment of the video will be lost.

4）Note: Connection to the vehicle's engine must be connected directly to the positive anode of the battery. Do Not Use bond strap for grounding as it will produce negative pulses that would interfere the device's normal operation. The negative pole of the power code must be Φ1.5mm and above.

1.4 Packing list

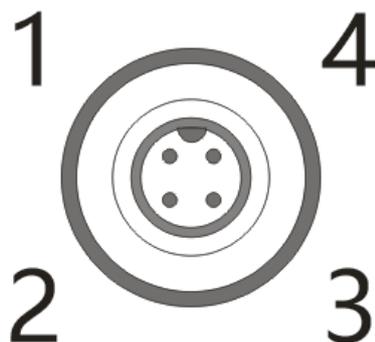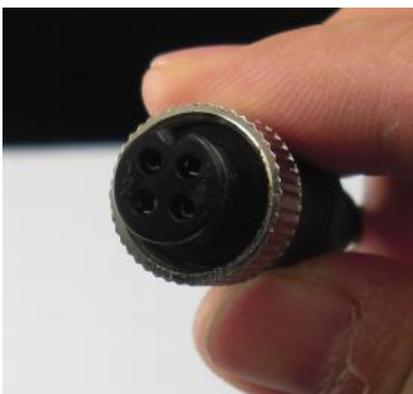**Packing list:**

4CH MDVR: 1pcs

IR remote controller: 1pcs

Video input cable: 4pcs (the other side is naked wires only)

Video output cable: 1pcs

Key: 2pcs

1.5 Video cable: pins instruction

1	12V
2	GND
3	Audio
4	Video

1.6　SD memory installation

Please use original SD card, Recommend brand Kinstone, class 10, high speed, max. support 128GB

1.7　DVR lock and keys

DVR will not working properly if DVR unlock.
When you testing or using DVR, please make sure the LOCK is on, otherwise DVR will reboot or power off automatically.
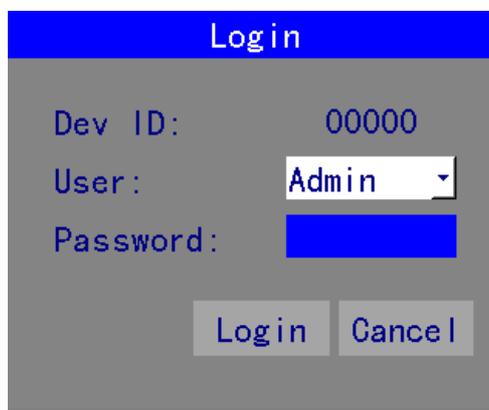
1.8　Remote control instruction

Keys	Function
Startup/power off	Power off/on DVR
LOGIN	Login into main menu
0-9 number keys	Type numbers into system, menu or login password
⊞ and Digit keys1,2,3,4	Switch between 1-channel and 4-channel version. Press it, show 4-channel. Press digit key 1,2,3,4, can separately switch to CH1,CH2,CH3,CH4
"＋" and "－" key	Adjust digit when plus or deduct
INFO	Check all DVR status and dvr info
▲,▼,◄,►	Direction key, move up,down,left and right
"ENTER"	Choose and save settings
RETURN	Return to last menu or previous steps
Cancel	Delete or cancel the data you typed into MENU.
PREV	REW for playback recording, 4 grades: 2X，4X，8X,16X
►（PLAY/Pause）	Start playback video Press it one time to pause the video playback durning playing back video.
NEXT	FAST FORWARD for playback recording, 4 grades: 2X，4X，8X，16X
Record ●	Start manual recording key
Stop ■	Stop playing

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2. DVR operation

2.1 Login

In preview mode, press "LOGIN" key, type password "111111", and then, press OK to login.

Note: Default password is 111111, please remember if you set up a new password. If you lost it, please contact your supplier for a reset password file.

After login, below is main menu

2.2 System set up

2.2.1 Basic set up

Instruction:

1. Press direction key to move to the item you want to set up, and type in correct data.

2. Press "cancel" key to delete the wrong data

3. DEV ID is used for 3G/4G function. If you have your own server, you can set up this ID by yourself, otherwise, please contact your supplier for this number.

4. After set up the data, press "SAVE" to save and exit.

Note: after you set up another language, you need to reboot DVR after you save the setting.

2.2.2 Power Setting

Instruction：

1. Power Mode: ACC/Timing. Press "Enter" to switch

2. Power off Delay: ACC/close selectable. Press "Enter" to switch.

   If choose ACC, the user could set the delay time. Press "Cancel" and number keys to input the number. (Note: Time range usually is 3-240min).After set up this, the MDVR will continue working after the vehicle ignition turned off till the time you set.

3. On time/Off time: When you set power mode in "Timing", you need to set up DVR power on/off time here. After setting this, the MDVR will auto power on/off by the time you set up.

2.2.3 Alarm I/O set up

	Name	Trigger	Delay	Record	Action	Preview
Io1:	None ▼	High ▼	3 ▼	Close ▼	None ▼	Close ▼
Io2:	None ▼	High ▼	3 ▼	Close ▼	None ▼	Close ▼
Io3:	None ▼	High ▼	3 ▼	Close ▼	None ▼	Close ▼
Io4:	None ▼	High ▼	3 ▼	Close ▼	None ▼	Close ▼

Prior IO Close ▼   Save

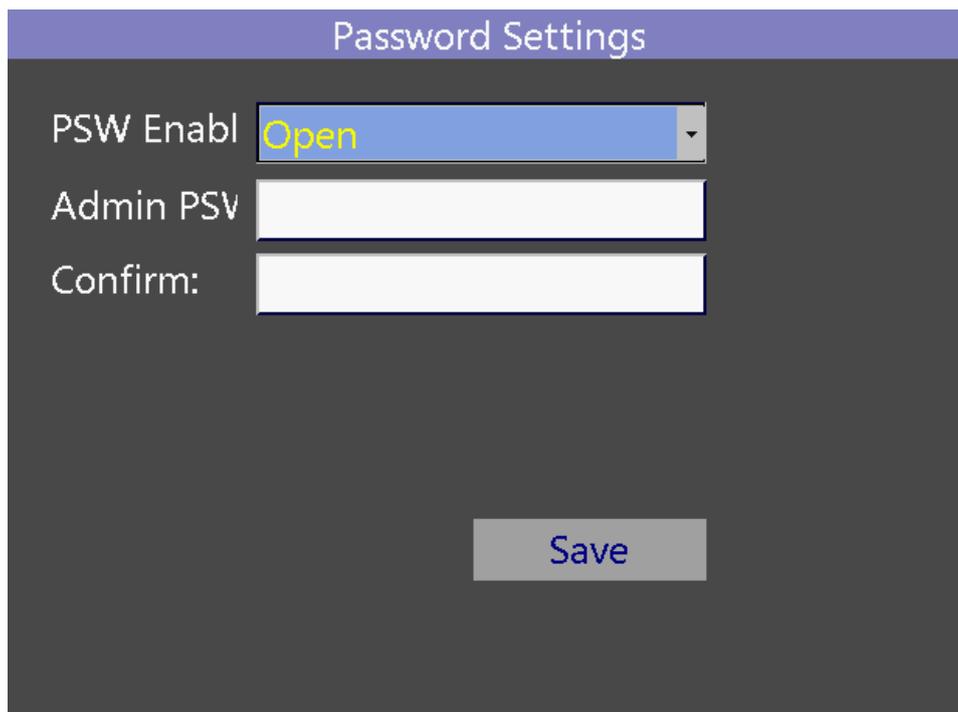**Instruction:**

1. Name: There are 5 different condition, such as turning left, turning right, brake, key alarm.

2. Trigger DVR by High/Low level

   High level: signal higher than 4V.

   Low level: signal lower than 4V.

3. Record open/close: DVR recording video or not by sensor triggered.

4. Action: set DVR action after it be triggered by alarm input.

5. Preview: DVR switch to full screen by the alarm channel

Sensor wire with video channels

Red wire to channel 1   **White wire to channel 3**

Black wire to channel 2   **Yellow wire channel 4**

2.2.4 Password Setting

Instruction：

PSW Enable: Press "Enter" to switch on/off.

User's PSW and Admin PSW could only be revised by admin.Press "Cancel" to pop up the number

keyboard and revise the new PSW.

3. Record Setting

3.1 Base Setting

Instruction：

1．Video mode: Press "Enter "to select PAL/NTSC

2．Record Mode: Press "Enter "to choose select Power/ Alarm/Timed

3．Bitrate: it is a fixed item, you can not set it here.

4．Camera type: DVR support 4 camera input type.

 A. all AHD: 4 channels works with AHD cameras

 B. AHD+Analog: channel 1 and 2 works with AHD camera, channel 3 and 4 works with analog

 C. Analog+AHD: channel 1 and 2 works with analog camera, channel 3 and 4 works with AHD

 D. All Analog: 4 channels works with Analog cameras

5. ALM prerecord time: DVR will pre-recording if DVR triggered by alarm signal. (time range 0S--10S);

6．ALM REC DELAY(S): DVR will keep recording after alarm signal gone. (delay range 1-900s).

7．Normal protect time:

8．Video overlay GPS: set up GPS data show on video or not

Note: After set up the data, press Save to save it and exit.

3.2 Channel Setting

Instruction:

1. **Set up video and working details for each channel.**

2. **Function**

Item	Function
Enable	Set up each channel working or not
Resolve	Set up video resolution in 720P/D1/CIF
Bitrate	Higher bitrate makes video better,but it will cost more memory
Audio	Set up each channel audio recording or not
Frame	Lower rate cost lower memory, but video quality lower too

3.3 Schedule setting

Record Schedule				
Day	Period 1		Period 2	
Everyday	00:00:00	-00:00:00	00:00:00	-00:00:00
Monday	00:00:00	-00:00:00	00:00:00	-00:00:00
Tuesday	00:00:00	-00:00:00	00:00:00	-00:00:00
Wednesd	00:00:00	-00:00:00	00:00:00	-00:00:00
Thursday	00:00:00	-00:00:00	00:00:00	-00:00:00
Friday	00:00:00	-00:00:00	00:00:00	-00:00:00
Saturday	00:00:00	-00:00:00	00:00:00	-00:00:00
Sunday	00:00:00	-00:00:00	00:00:00	-00:00:00
				Save

Instruction

1. Press direction key to move into the item you want to set.

2. Type in numbers or use "+" and "-" keys to adjust the time

3. Press Save to save the setting and exit

Warning:

1. If you set up DVR start and stop time here, when you power off DVR manually, you can not power on DVR again till DVR reached the start time.

2. If you set up start and stop time same, DVR will not power on again after you power off the DVR.

Solution for point 2: open DVR housing, take out the PCB board, you can find a small battery on PCB board, take off it, wait 10 minutes, and then power on DVR without battery. at this moment, all data reset.
Power off DVR, and then install battery on PCB again. DVR works.

3.4 CAM MD

Instruction:

1. Set up motion detection for each channel.

2. Function

| Item	Function
Enable	**Set up motion detection for each channel working or not**
Sensity	**The higher sensitive will trigger DVR recording easier**
Area	**Set up detection area for each channel**

How to set up motion detection working

A. Set "enable" Open. (you can set motion function on/off with the channel you need) No matter which channel was triggered by motion, all 4 channel will start recording video. And then click set up to set the motion detection area
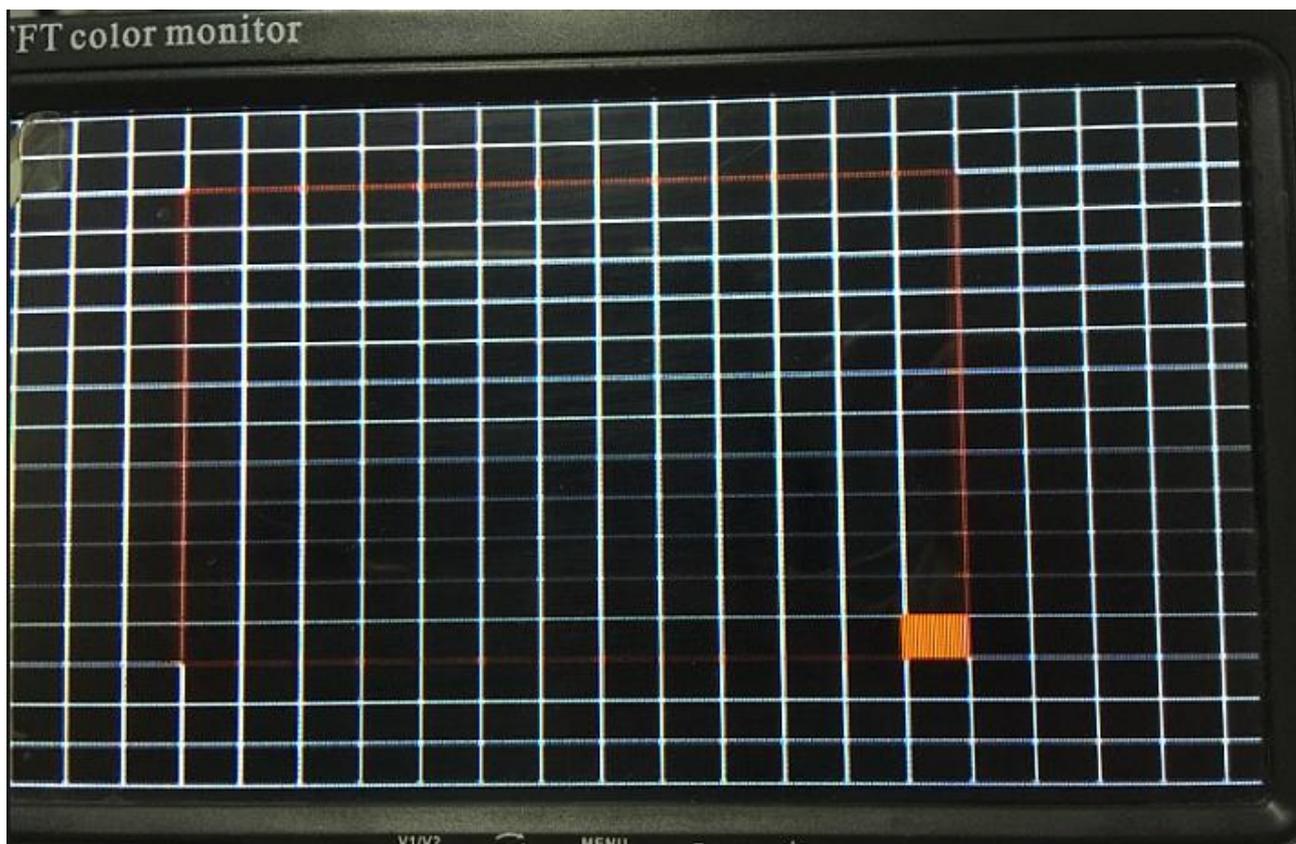
B. Motion detection area decided by 2 points. 1st is left upon corner, please press "+" to set this point   (see below picture)
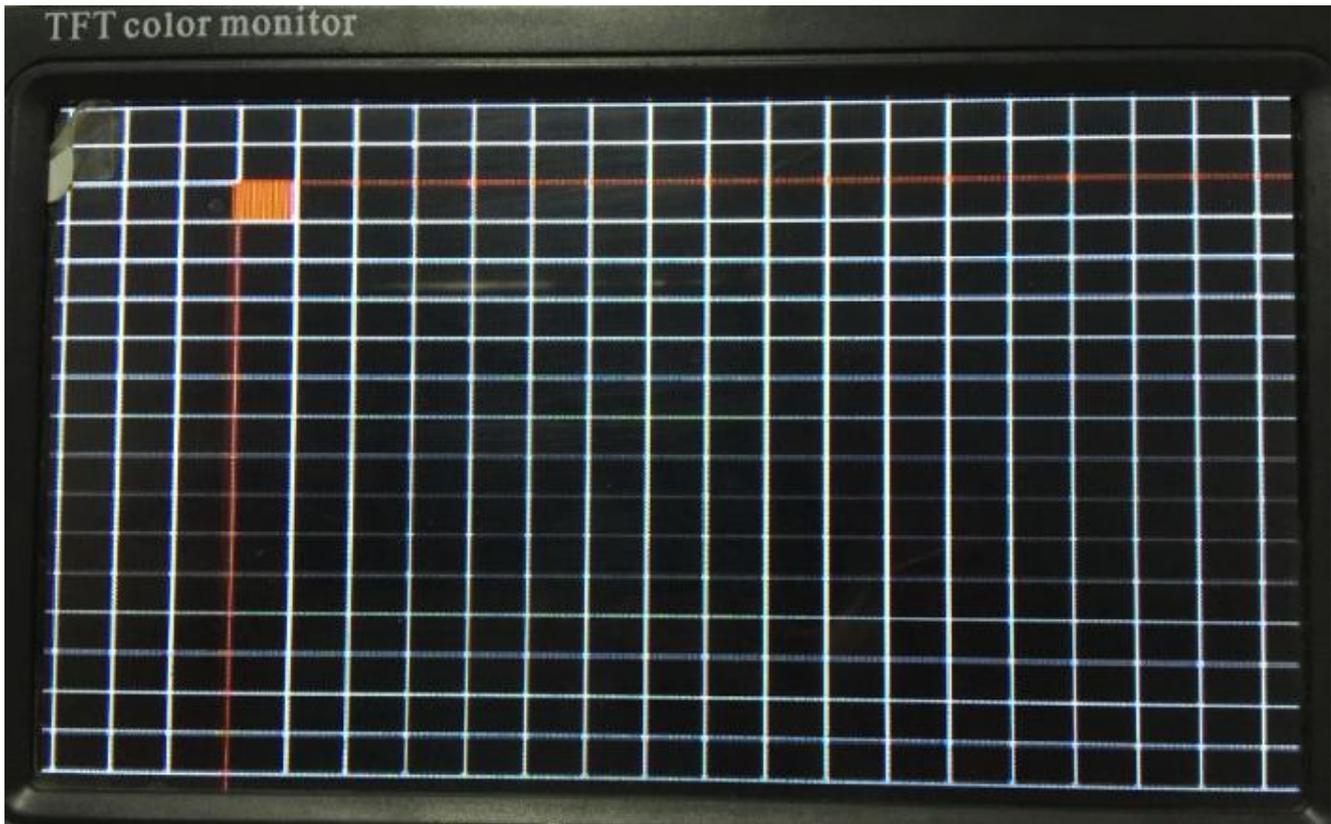
C. And then, click the direction key to move the icon
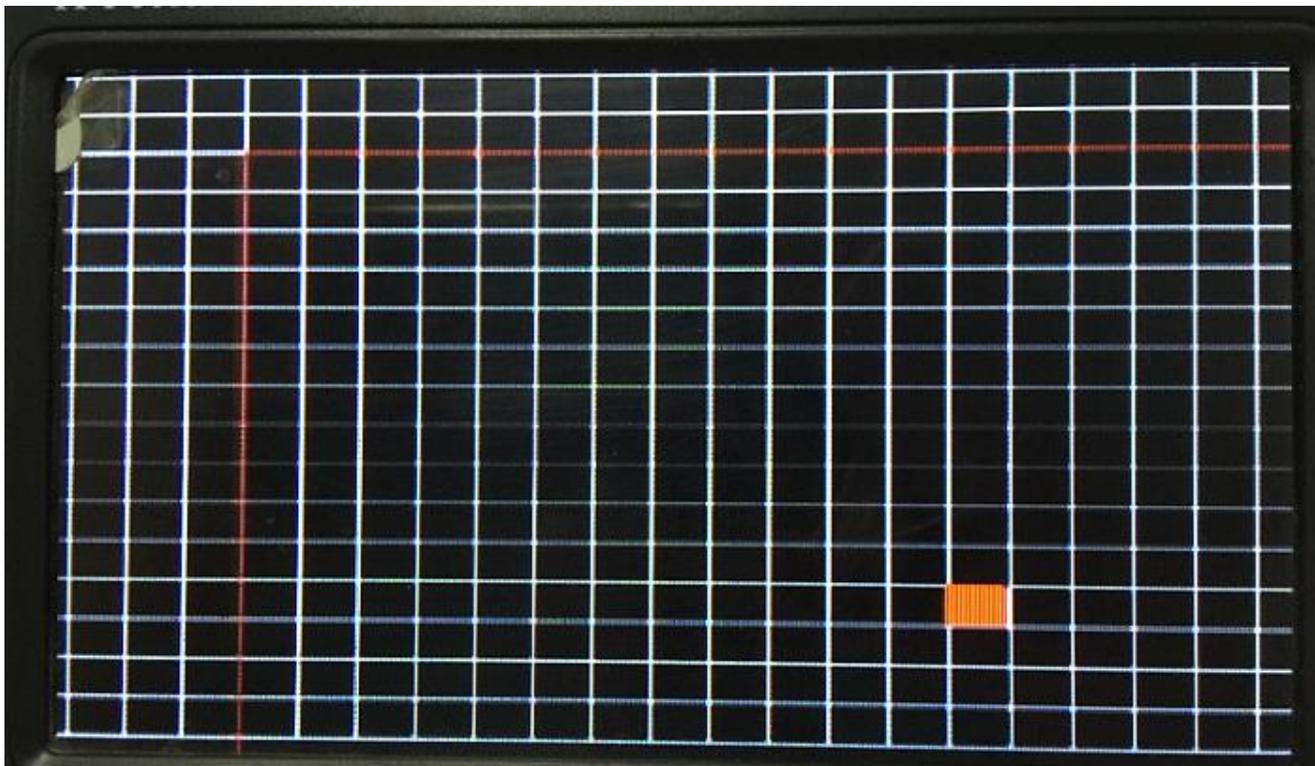
D. Press "-" key to set up the right down corner. After this, the final detection area had been set.

E. Power off DVR, and reboot it.

4.Network

4.1 Server

Set up 3G data into DVR MENU. Please contact your local SIM card supplier about these data.
1. The "phone" port, it is "center number", normally, it is *99#
2. The "access" port, it is "APN", please ask SIM supplier for that.
3. "User name" and "Password" should confirmed with SIM supplier too. If there has no data, just leave it blank.
4. If you test DVR with our server, you have to keep "Server" and "Port" data same as in DVR menu. (the IP may different as above picture, you just keep it same as in your DVR)

4.2eam

Instruction: Set up transmit data when DVR works with 3G network.

4.3 Other (Unavailable for now)

5. Tools

5.1 Fromat

FORMAT

Sd1	0	Invalid	Format
Sd2	0	Invalid	Format
HDD	0	Invalid	Format

Warning: The action will clear all data on the disk. please attention

If can't found any disk when started,will reboot   Close ▼

When the hard disk as the primary disk,SD can't work   Close ▼
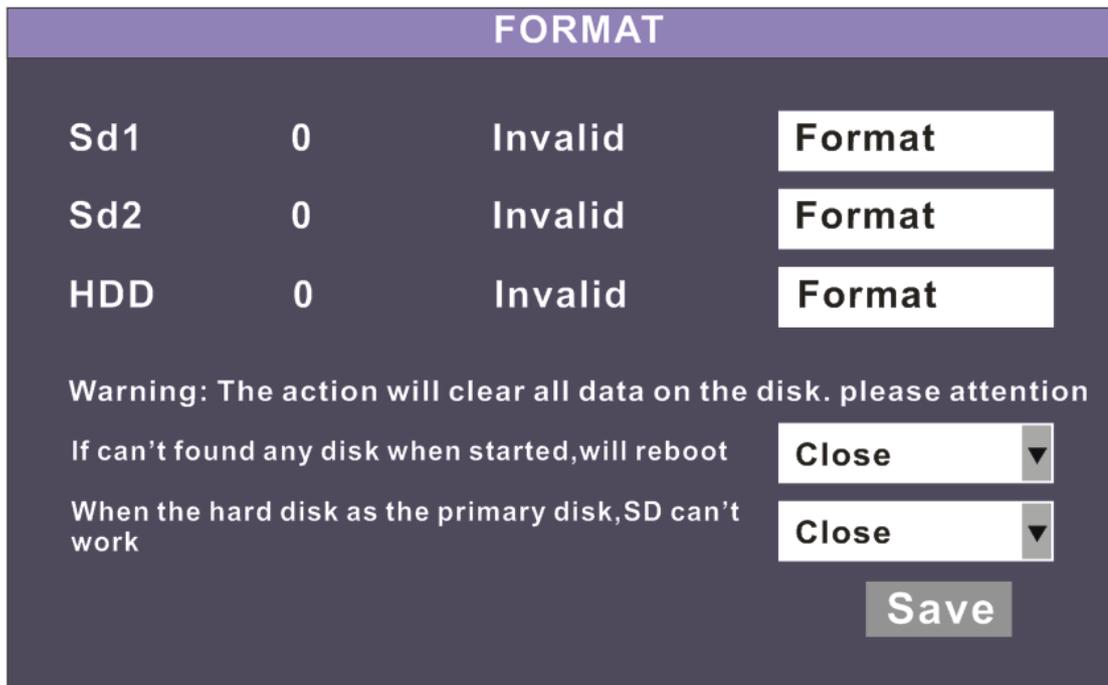
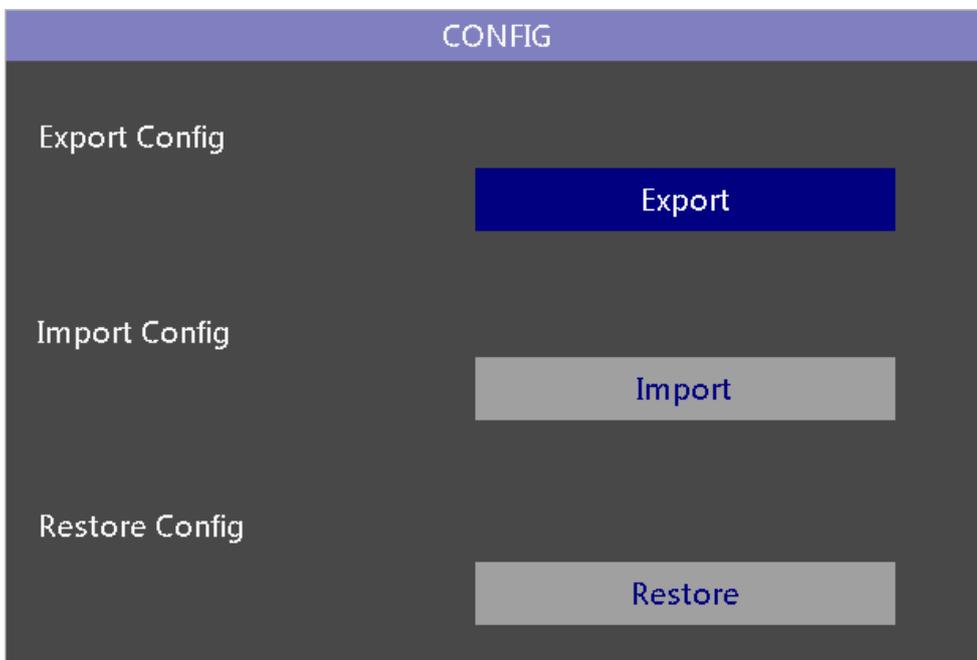Save

Sweet tips: when you first time insert SD card into DVR, please wait DVR to format sd card automatically.

DVR will detect SD first, and then it will start formatting SD card automatically after 15s.

5.2 Config

CONFIG
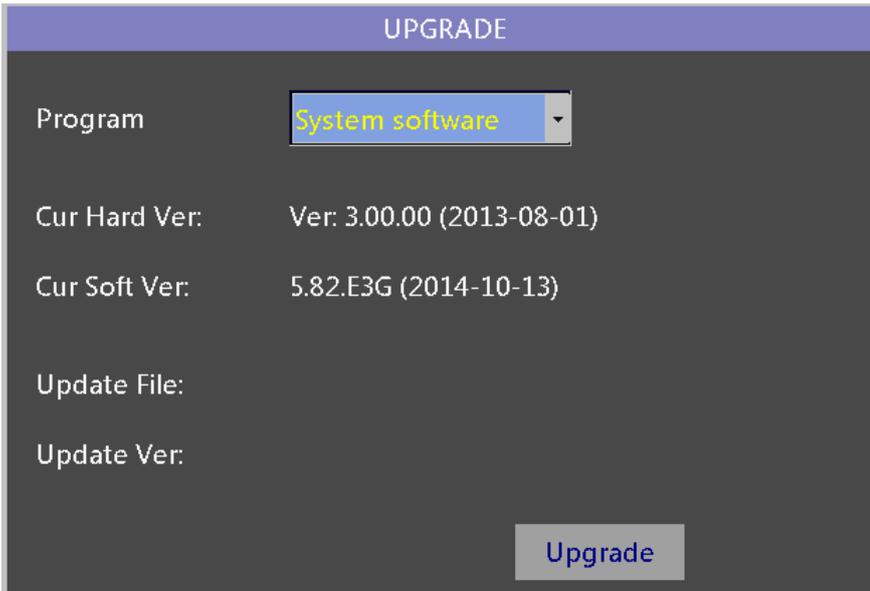
Export Config

Export

Import Config

Import

Restore Config

Restore

In order to set up many DVRs in save data, you can use this function.

1. Export: set up DVR in correct data, and then export this file.

2. Import: copy the exported file into memory, and import here.after imported, the new DVR will changed into correct data in menu.

5.3 Upgrade

Upgrade instruction:

1. Copy the update file into SD card
2. Insert SD card into DVR, power on DVR, DVR will find update file automatically, and then you click "Upgrade" key to update dvr automatically.

Note: DVR hardware and software version number can be find in this menu.

5.4 Logo customize. To make a special picture for DVR start screen

1. Copy the picture into SD card/HDD.
2. Picture format should be PNG, size 720x576, less than 300KB.
3. Power on DVR and save it.

5.5   Maintain (Useless in this version)

6. Video

6.1   Search recorded video
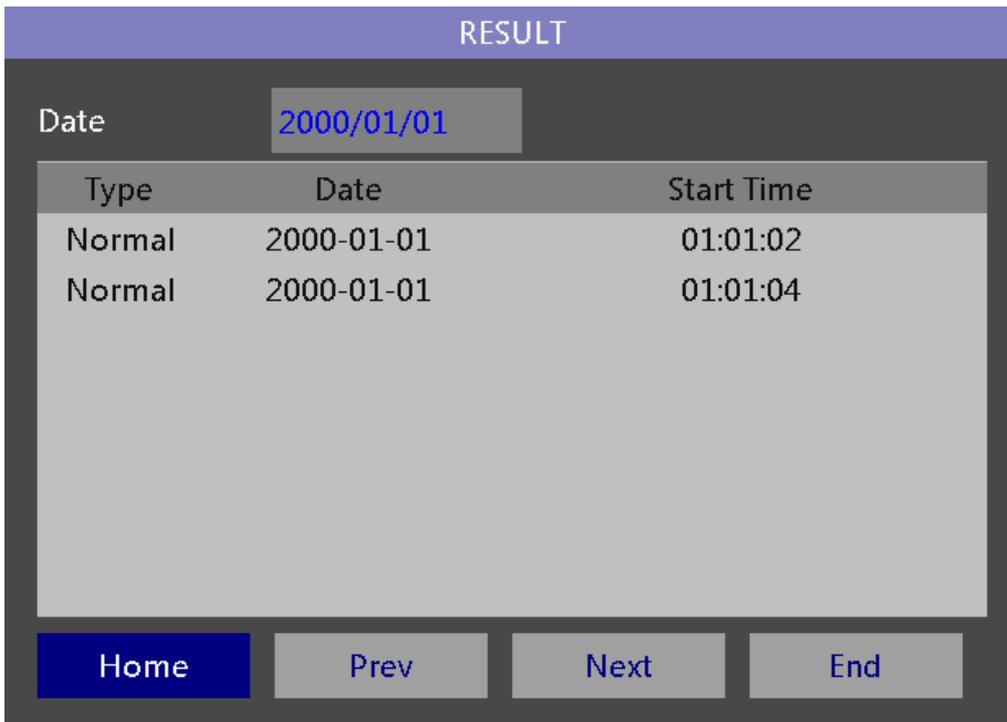

Instruction:

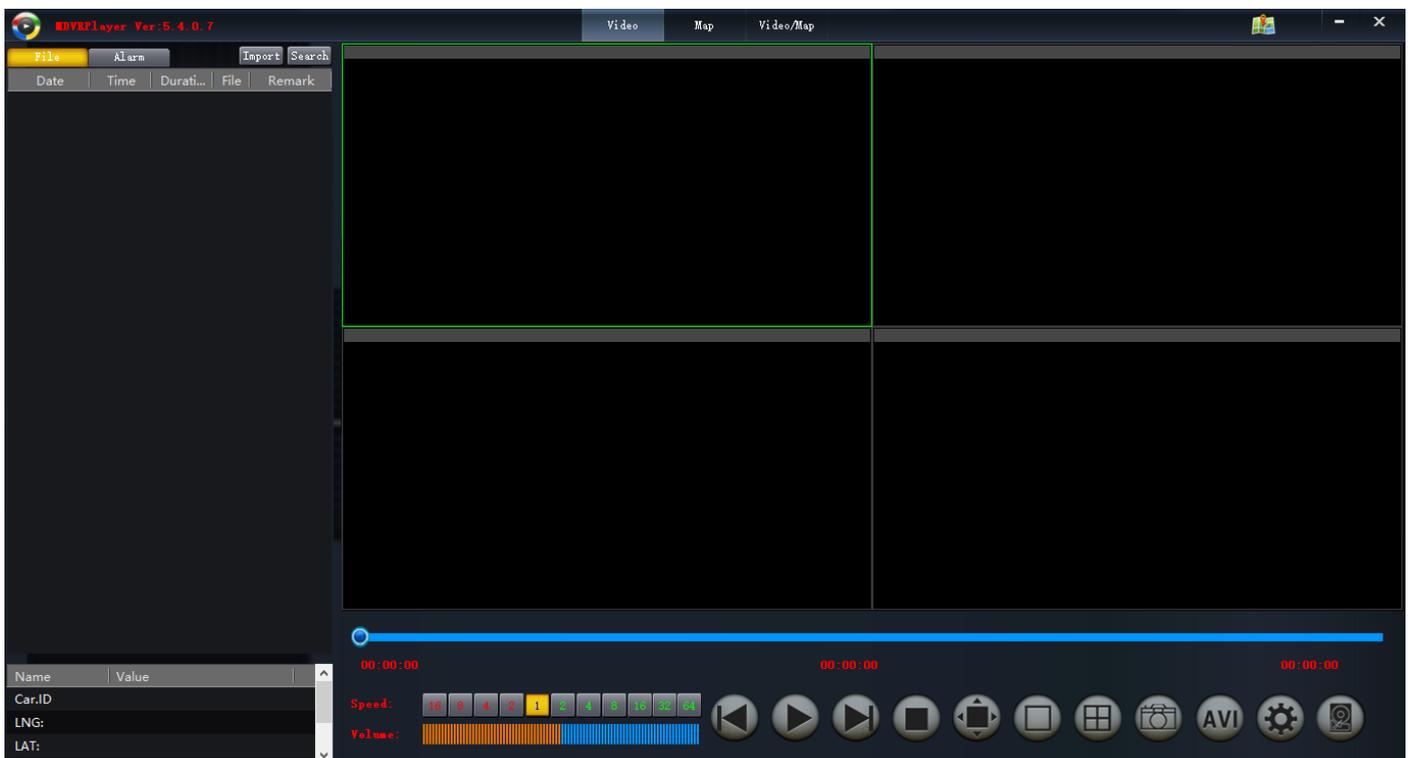**Type the search conditions to find the videos under this condition**

6.2 Playback recorded video

Choose the file and then press "enter" key to playback.

6.3 Playback video on computer by MDVR player.

Note: no audio output when you playback on TV/MONITOR

7. Info

Check DVR and memory info

```
                          SYSTEM INFO

Version:
Hardware: V 5.0        System: V2.04        Apps: V2.54.F007(2016.09.21)

GPS                    CMS
Modern: Not Exist      DevID:   00000         Io1:     0
Type:    GPS           IP:      114.119.7.90
Speed:   0KM/H         Port:    6608          Io2:     0
Lon.:    0.00000       Status:  Off Line
Lat.:    0.00000       Mileage: 0Km           Io3:     0

3G/4G                  Wifi                   Io4:     0
Modern: Not exist      Modern: Not exist
SIM:     Not exist     Signal:  0             TEMP: 0.0
Signal:  99            Status:                HUMI: 0.0
Status:  Dail failed   Wifi IP:  0.0.0.0      OIL:     0.0
IP:      0.0.0.0       Gate IP: 0.0.0.0

Disk
                                                    0
```

DVR parameter:

Items	Parameters	Specifications
System	Language	Chinese/English/Russian
	Operation Menu	Graphical User interface（OSD menu）
	Password	Users Password/ Administrator Password
Video	Video input	4-CH video input 1.0Vp-p，75Ω
	Video output	1-CH video COMPOSITE output 1.0Vp-p，75Ω
	Video Display	1 channel or synchronous 4 channels
	Video Signal	PAL/NTSC optional
	Video Compression	H.264 Main profile， 75fps D1/s
Audio	Audio input	4-ch Audio input
	Audio output	1-ch Audio output
	Recording mode	Audio & Video sync Recording
Image processing & storage	Video format	CIF/HD1/D1 Optional
	Video stream Standard	ISO14496-10
	Video bit rate	CIF: 1536Kbps ~ 128Kbps，8 levels optional. Highest:1 level HD1: 2048Kbps ~ 380Kbps，8 levels optional. Highest:1 level D1: 2048Kbps ~ 400Kbps，8 levels optional. Highest:1 level
	Audio Bit rate	8KB/s
	Storage	Support single SD card max. 128GB
Alarm	Alarm input	Unavailable in this version
Communication Interface	RS232 Interface	Unavailable in this version

MDVR Electrical parameter

Items	Parameters	Specifications
Power input	8—36V	＋8V--＋36V, When long-term under 8V, or long-term over 36V, Auto power off, enter protected mode.
Power output	12V	12V(+/-0.2V)，Max:2A.
Vehicle key signal	≤4V	OFF
	≥5V	ON
Video input impedance	75Ω	75Ω for each video input impedance
Video output Volt	2Vp-p	Input 2Vp-p CVBS analog signal, reveal device input need 75Ω impedance to fit
I/O interface	0—4V	Unavailable in this version
	Above 4V	Unavailable in this version
SD-card interface	1 SD CARD	1.128GB 2.SD-card for storage, support recording and system upgrade, etc.
Operating Temp	-40℃-80℃	Under well-ventilated enviroment.