

User Manual V1.5

4CH HDD MDVR



Address

Thanks for choosing our products. We hope this manual helps you with great convenience for operation. Welcome to contact us if you have any problem or suggestion.

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1. Preface

1.1. Purpose

The purpose of the manual is to assist users to understand specifications and functions of the MDVR, so that they can install and use it correctly. Meanwhile, it facilitates technical staff to maintain the product.

1.2. Warning

Please read the following warning before you install and use the MDVR:

- ①. Installation and maintenance should be conducted by professionals.
- ②. Working voltage should be STABLE 8V~36V to avoid power damage to device.
- ③. Output voltage is 12V for camera only, so please do not connect with any non-recommendable equipment.
- ④. Connect the correct ground wires from the MDVR to the vehicle to make a loop.
- ⑤. The MDVR should be installed in dry and ventilate place, and avoiding damp condition, heat source, dust and high-intensity magnetic field.
- ⑥. Please install the MDVR at place where the vibration is weak, so that the MDVR can work more stable and longer.
- ⑦. Around where the MDVR is installed, about 20cm, it is suggested to be empty. Please leave no heavy stuff on it and keep it cooling properly.
- ⑧. Hot-plug is NOT SUGGESTED while device is on power.
- ⑨. Please maintain the storage device or SD card periodically: copy video to your computer and format your storage device.
- ⑩. Please do not open or remove any part of the MDVR without the presence of professionals.

2. Introduction

2.1. Overview of the Product

This MDVR is a high extendable cost-effective device. It adopts high speed embedded Linux system, with most advanced H.264 video encoding method and 3G, GPS technologies. It can support 4D1 25fps FULL recording, resolution by CIF/HD1/D1 optional. It integrates functions of local recording and wireless uploading the driving data to cooperate with monitoring center of alarm linkage, remote management, and video playback.

This MDVR has simple but artistic outlook, stable and anti-vibration, and easy to install (either horizontally or vertically).

2.2. Functions of the Product

FUNCTIONS	DESCRIPTIONS
Wireless Communications	Data communication via WIFI or 3G to achieve remote real-time monitoring, video download, parameter config, remote update, remote control etc.
Recording	support 1-4CH real-time audio video video recording both locally and remotely
	PAL for example: support 4CH CIF/HD1/D1, 25fps.
	Support PAL; NTSC
	OSD overlay info such as time, channel, vehicle ID, GPS, speed etc.
	Support data overlay e.g: date, channel, Car ID, GPS, speed etc.
Playback	Support 2.5inch HDD 1TB storage (HDD TYPE DVR)
	Support 64G SD storage (SD TYPE DVR)
	Support 4CH audio video synchronous playback
	Support playback at PC
	Support remote search and playback
	Support play, pause, slow, fast etc.
Blackbox Function	Can record speed, GPS, temperature, oil level etc.
	Support 8 switching value data collect
	Support local record and vehicle data display
	Support remote real-time upload and history search and check

2.3. Product Specifications

2.3.1. Parameters

Item	Parameter	Performance
System	Language	Chinese / English
	Operation System	Linux
	Interface	Imaging menu operation interface(OSD Menu)
	Password Security	2 levels: Admin; Normal user
Video	Video Input	4 composite video input
	Video Output	1 composite video input
	Video on screen	Single or quadruple video on screen
	Video standard	PAL, NTSC
	video compression	H.264 Main profile, 100 frame / sec
Audio	Audio Input	4 audio input
	Audio Output	1 audio output
	Audio Code	G726
	Way of recording	Simultaneous recording of video and audio
Image Processing & Storage	Image format	CIF/HD1/D1 Available
	Standard of Video Stream	ISO14496-10
	Code rate of Video	CIF: 1536Kbps ~ 128Kbps.
		HD1: 2048Kbps ~ 380Kbps,
		D1: 2048Kbps ~ 400Kbps,
		8 levels of image quality: Class 1 the highest resolution, and class 8 the lowest.
	Audio Code Rate	8KB/s
Data Storage	2.5" SATA HDD 1TB SD card 64GB	
Alarm	Alarm input	8 Alarm Input
	Alarm output	2 Alarm Output
Communication Port	USB port	USB*1
	RS485 port	RS485*1
	RS232 port	RS232*2
	CAN port	CAN*1
	Ethernet Port	10M/100M Ethernet*1
Extend Port	Intercom port	Intercom*1
	Speaker port	Speaker*1
	Extend port	Connect control panel
	Speed port	Speed sensor*1

Wireless Modules	EVDO	EVDO module available
	WCDMA	WCDMA module available
	WIFI	WIFI 802.11b/g/n module available
	Bluetooth	support (optional)
GPS	Build-in module, to show Geo location, speed etc. Support wireless data upload Auto timing	
G-Sensor	Build-in $\pm 8g$ G-Sensor modules	
Softwares	Vehicle Network Management System (VNMS)	Video preview, GPS information, alarm upload and command download via wireless network
	Vehicle Analysis Software (VAS)	Video playback and information of floating vehicles analysis at PC
	Server software	Server structure, management etc.
	Smartphone software	Android, Iphone, Ipad

2.3.2. Working Environment

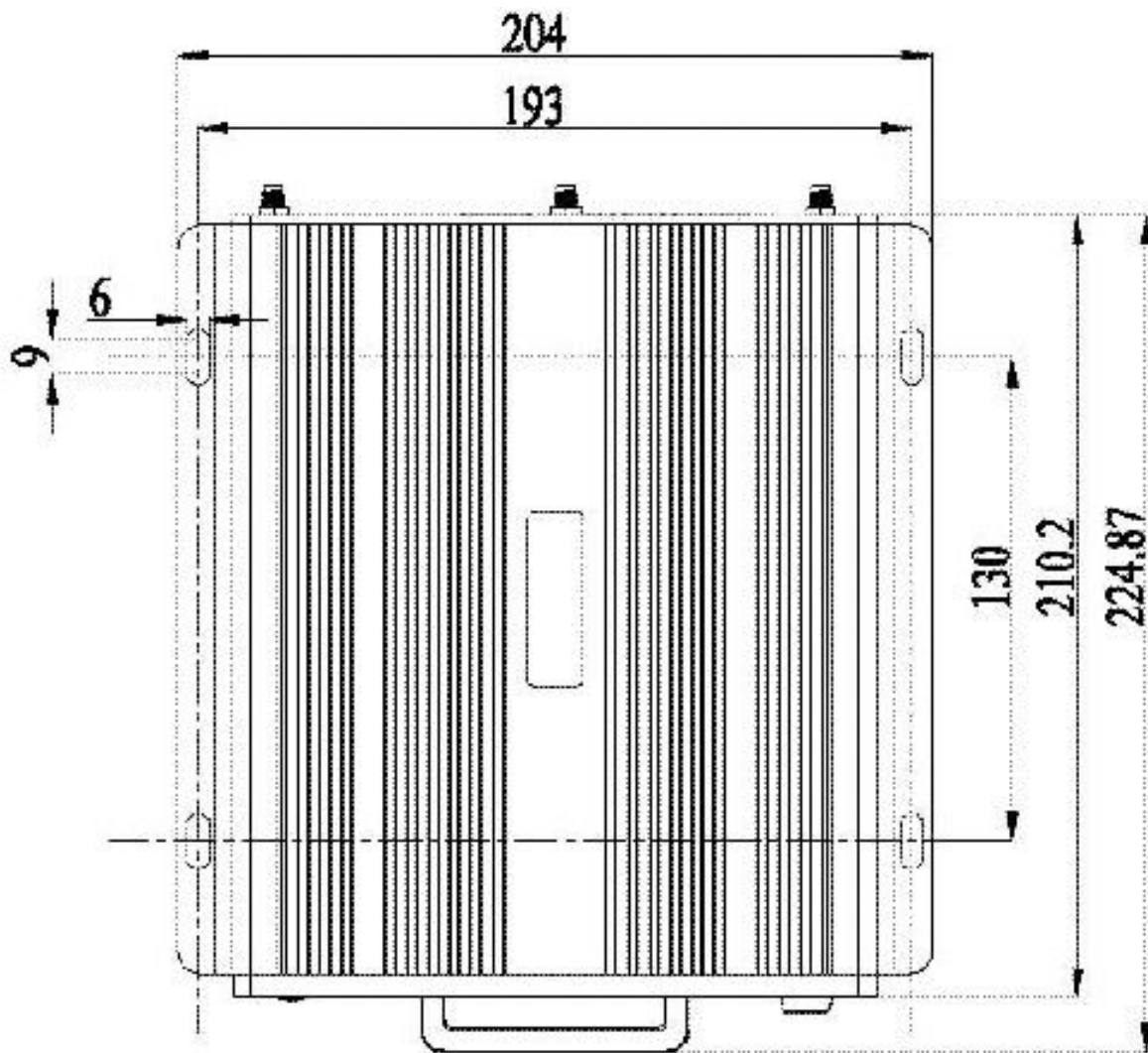
Item	Parameter	Instruction
Power Input	+ 8V ~ + 36V	Voltage Input: + 8V ~ + 36V; If device is beyond the range for long time, self-protection mode will be activated.
Power Output	12V	Voltage output 12V (+/-0.2V 0), current for max.2A; Supply power for camera and/or monitor
ACC	$\leq 6V$	ACC Off
	$\geq 7.5V$	ACC On
Video Input Impedance	75 Ω	Average 75 Ω
Video Output Voltage	1V p-p	1V p-p CVBS signal
I/O Interface	0-4V	Alarm for low level
	> 4V	Alarm for high level
SD Card Interface	SATA Port	2.5inch SATA HDD 1TB max. x1 SD 64GB max. x1 (>level 10)
Working Temperature	-20°C~+80°C	Temperature in well ventilated situation

2.4. Appearance

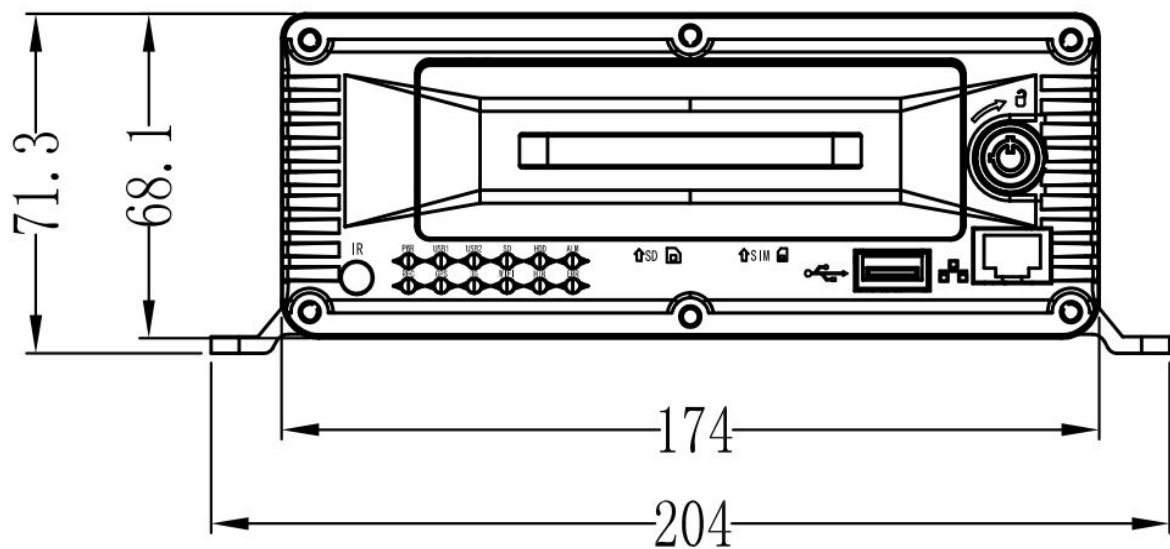
2.4.1. Overall Look



2.4.2. Size and Installation

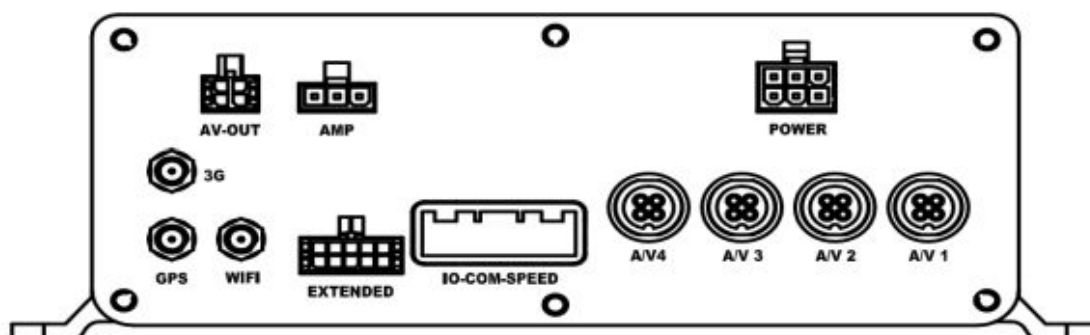


2.4.3. Front panel & indicator

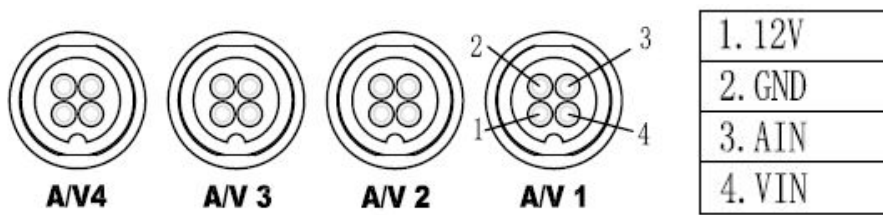


Definition of front ports & indicator:

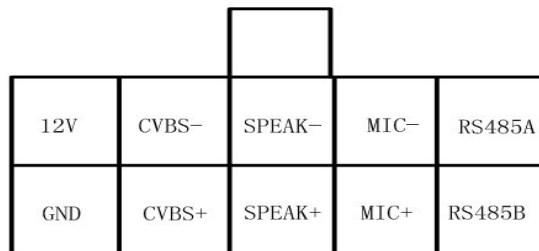
Type of Panel	Item	Definition
Panel Ports	SD card	SD card slot
	SIM card	3G net connection via dialup
	RJ45	Ethernet port
	USB	Front located, for data transfer and device upgrade
Indicator	PWR	Power light (blue) will be on when charging
	USB1	Connection made if lighted GREEN.
	SD	Connection made if lighted GREEN, otherwise lights off.
	HDD	Reading data if lighted GREEN
	REC	Video recording status if lighted GREEN, otherwise lights off.
	ALM	Lighted orange if there's alarm recording, otherwise lights off.
	GPS	Lighted GREEN if signal normal; flashing if searching signal; light off if detect no GPS module.
	3G	Lighted GREEN if signal normal; flashing if searching signal; light off if detect no 3G module.
	WIFI	Lighted GREEN if signal normal; flashing if searching signal; light off if detect no WIFI module.
	HTR	Lighted GREEN if HDD in auto heating.
ERR	Lighted RED if HDD in error	
IR	IR led	LED for remote controller operate (no obstacle from checking)
Electronic Lock	1) Switch for power on/off; 2) Device lock	
	NOTE: Must power off before remove HDD	

2.4.4. Back panel and Definition**Port Definitions:**

VIDEO INPUT Port

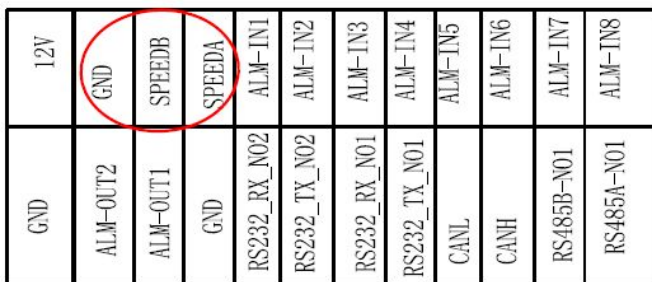


EXTEND Port

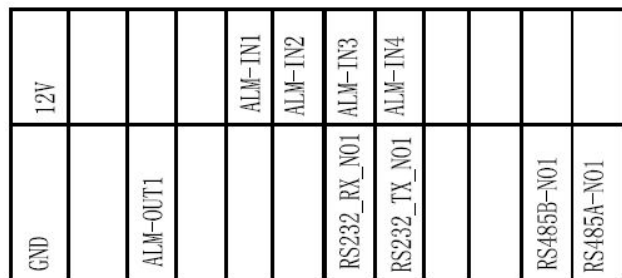


IO Series Port

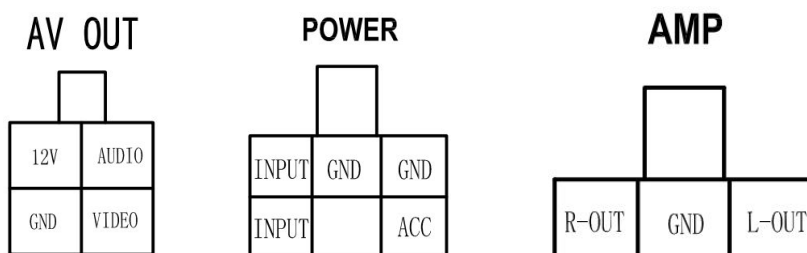
IO-COM-SPEED



IO-COM-SPEED



POWER & A/V out Port






Port	Define
USB	For storage or video backup
AV-IN1~AV-IN4	4 channels audio video input


EXTENDED	Connect two way talk device
IO—COM—SPEED	8CH IO alarm in, 2CH alarm out, 1 RS485, 2 RS232, vehicle speed pulse port
GPS	GPS antenna port
WIFI	WIFI antenna port
3G	3G antenna port
AV—OUT	Audio Video output port
AMP/CAN	Connect external power amplifier or CANBUS main line
POWER	Power input port DC8-36V



3. Operation Instruction

3.1. Remote controller functions guide

Button and functions introduction:

LOGIN	Press LOGIN and input password of the MDVR. NOTE password should be remembered as it cannot be retrieve or reset.
	Power button
0-9 number keys	Switch to single channel view by press 1-9. It can also be used as volume and lightness adjustment.
INFO	A shortcut key to check device running status, includes: 3G/GPS, alarm, disk recording and version status etc.
	Switch 4-8-1 image.
	UP, DOWN, LEFT, RIGHT. It also is used to



	control fast and slow speed of player. The UP and DOWN also be used to switch the 1-4, 5-8 image.	
【OK】	Confirm	
	Pause/Play when doing video playback.	
PLAY	Start to play video	
RETURN	Return to the last menu till the live video page.	
CANCEL	Cancel or backwards	
- + symbols	Space delimiter when in editing; volume adjustment	
F1, F2, F3, F4	Keys for backing up	

3.1.1. LOGIN



The default password is 111111.

The device support 2 USER level for login: user, admin. The “user” can only check but with no right for parameter setting which “admin” has.

USERS can set password or NO password for login.

3.1.2. System Operation and Setup

NOTE:

- The herein setting mentioned should be SAVED first before being effective.
- When in the setting page, device recording will be paused.

MAIN MENU: SYSTEM, RECORD, PLAYBACK, TOOLS, SERIAL, NET, ALARM, SYSTEM INFO



SYSTEM SET: TIME, PSW, POWER, VEHICLE INFO, VOLUME



TIME SET: Date and time setting



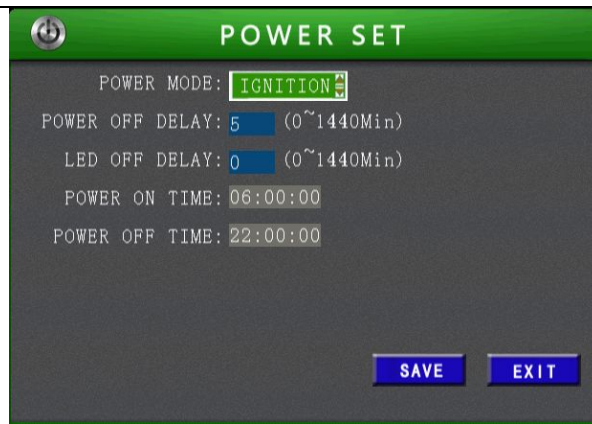
- **Date Format:** Year/month/date, month/year/date or date/month/year, press 【ENTER】 to switch among formats
- **Date:** displayed as the chosen format, if you input by number keys it can be proofed manually.
- **Time:** hour/minute/second, if you input by number keys it can be proofed manually.
- **OPR TIMEOUT:** Operation time support 30~3600sec adjusted, you need to login again if you didn't operate the unit in this period..
- **BOOT SCREEN:** Support 1/ 4/ 9 screen optional.
- **TIME FIX:** Support GPS and NET fixed, NET means it will automatically adjust via network when connect to 3G successfully .
- **TIME ZONE:** Select your local time zone.
- **DST:** Day night saving time can be edited.
-

PSW SET: login password setup



- If set ON, there must a psw for login; If set OFF, no any psw for login.
- Can set user psw and admin psw, length for 6 digits,
- Admin has all authority while normal user only can check functions and cannot do menu setting.

ON/OFF:



- **Power Mode:** switch by pressing OK between ignition and timing mode.
- **Power Off Delay:** it will be activated only in the mode of ignition. When the car key turns off the MDVR, it will be standby mode.
- **Power ON Time / Power OFF Time:** the MDVR will be on only it is due time, also it will be off when time dues.

VEHICLE INFO SET:



- **Dev ID:** there is an unchangeable serial number of the MDVR, which is the only ID when reporting to the surveillance center
- **SIM Num:** Enter by clicking ENTER (refer to the SIM number at DVR)
- **Company:** Enter by clicking ENTER (can self-define)
- **Service:** Enter by clicking ENTER (can self-define)
- **Licence:** Enter by clicking ENTER (can self-define)
- **SN:** Factory default serial number according to each device

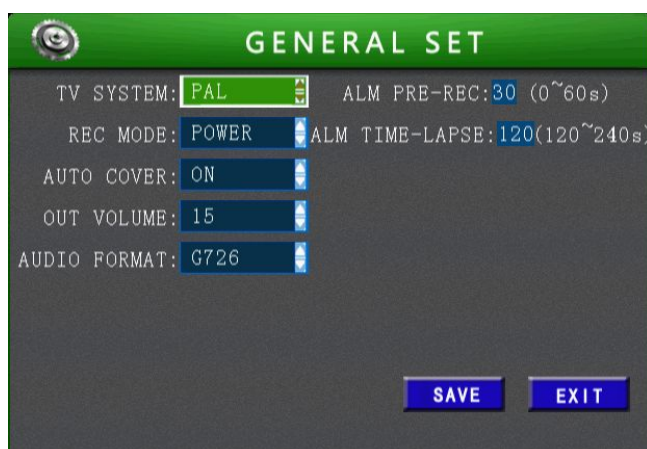


Volume SET: Playback, TTS, Intercom, Phone call, announcement volume can be adjusted from 0~15. Max is 15

RECORD SET: GENERAL, MAIN REC, SUB REC, TIMING, DISK MANAGE, MIRROR REC



GENERAL SET: general video recording setting



- **TV System:** PAL and NTSC modes available, press **【ENTER】** to switch

- **Rec Mode:** Record when power on, timing record or record when alarm modes available, press **【ENTER】** to switch
- **Auto Cover:** on/off, press **【ENTER】** to switch
 - On: when the storage is full, the earliest video will be covered by new ones
 - Off: when the storage is full, the MDVR will stop recording
- **Out Volume** (for video playback): grade 0-15 available, press **【ENTER】** to switch
- **Audio Format:** G726
- **Alm Per Rec:** record videos before alarming
- **Alm Time-Lapse:** after alarm is lifted, the recording will continue for the set time

CHANNEL SET: video recording setting for each channel



CH	ENABLE	RES	FRAME	LEVEL	AUDIO	PREVIEW	VOL
CH1	ON	HD1	25	3	OFF	ON	15
CH2	ON	HD1	25	3	OFF	ON	15
CH3	ON	HD1	25	3	OFF	ON	15
CH4	ON	HD1	25	3	OFF	ON	15

- **Enable:**
 - On: turning on the channel
 - Off: the channel will not record video and the log will not be lost even video is lost
- **Res:** D1, HD1 and CIF available, e.g.: D1 resolution is 704*576 in PAL mode, HD1 is 704*288, and CIF is 352*288.
- **Frame:** frames taken per second, in PAL mode is 1-25 frames/second, and in NTSC mode is 1-30 frames/second
- **Level:** the definition of video, 1-8 grade available, Grade 1 is the best quality
- **Audio:** on/off while video taking
- **Preview:** on/off while video taking
- **Vol:** input volume of the MDVR

SUB VIDEO SET: transmission of video stream in 3G network

SUB VIDEO SET

RESOLU:

BIT RATE:

FRAME:

SUB REC

	RES	FRAME	Kbps
CH1	<input type="text" value="CIF"/>	<input type="text" value="25"/>	<input type="text" value="256"/>
CH2	<input type="text" value="CIF"/>	<input type="text" value="25"/>	<input type="text" value="256"/>
CH3	<input type="text" value="CIF"/>	<input type="text" value="25"/>	<input type="text" value="256"/>
CH4	<input type="text" value="CIF"/>	<input type="text" value="25"/>	<input type="text" value="256"/>

- **Res:** D1, HD1 and CIF available
- **Kbps (Bit Rate):** 1/32/48/64/80/96/128/200/256/384 available
- **Frame:** Auto adjust the size of frame rate according to the set bitrate

TIME SET: time period for video recording

RECORD PLAN

DATE	PLAN 1	PLAN 2
EVERYDAY	<input type="text" value="00:00--00:00"/>	<input type="text" value="00:00--00:00"/>
MON	<input type="text" value="00:00--00:00"/>	<input type="text" value="00:00--00:00"/>
TUE	<input type="text" value="00:00--00:00"/>	<input type="text" value="00:00--00:00"/>
WED	<input type="text" value="00:00--00:00"/>	<input type="text" value="00:00--00:00"/>
THUR	<input type="text" value="00:00--00:00"/>	<input type="text" value="00:00--00:00"/>
FRI	<input type="text" value="00:00--00:00"/>	<input type="text" value="00:00--00:00"/>
SAT	<input type="text" value="00:00--00:00"/>	<input type="text" value="00:00--00:00"/>
SUN	<input type="text" value="00:00--00:00"/>	<input type="text" value="00:00--00:00"/>

- There are 2 periods can be set for each day.
- Everyday: set period works from Monday to Sunday.

- Setting of time period: the start time cannot be later than the finish time.

DISK MANAGE



- Channel for D1/ HDD/ USB HDD
- **Video:** main mode/ Mirror record/ NO
- **Priority:** 1 is lowest, 5 is highest.
- **User Log:** ON means the according channel is open; OFF means the according channel is closed with no log recorded.

MIRROR REC:



Enable: **ON:** Turning on the channel; **OFF:** the channel will not record video and the log will not be lost even video is lost

- **Res:** CIF
- **Frame:** Adjust according to the bit rate set
- **Quality:** Image quality can be adjusted from 1~8, and 1 is the best.

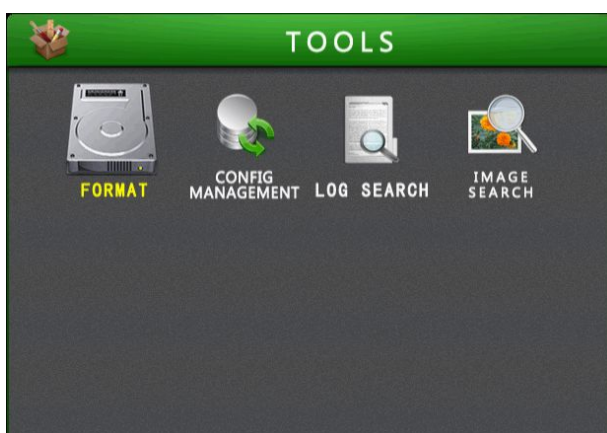
- **Audio:** ON means according channel open; OFF means according channel closed

VIDEO PLAY: Playback videos

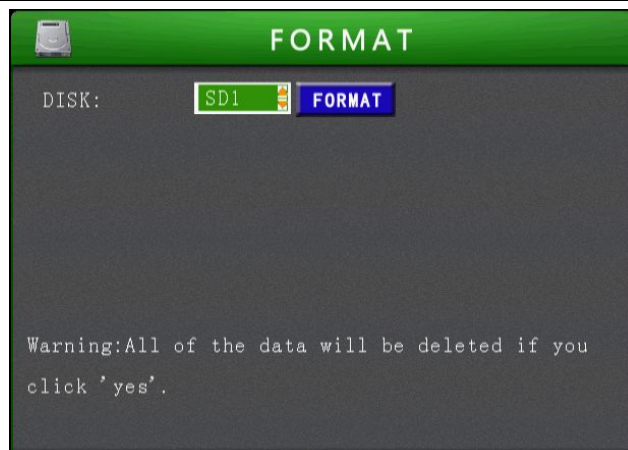


- **Calendar:** Green means normal video recorded, red means alarming video recorded and blank means no video recorded.
- **Rec Type:** All / alarm
- **Disk:** All / SD1 / SD2
- **Date:** Video can be searched by date, start time and end time.
-

TOOLS: *FORMAT, CONFIG MANAGEMENT, LOG SEARCH, IMAGE SEARCH*



FORMAT: Formatting video



Selection of disc: SD1/SD2 will consort with the SD port marks on the front end of the MDVR. After format, the SD card will be EXT3 format.

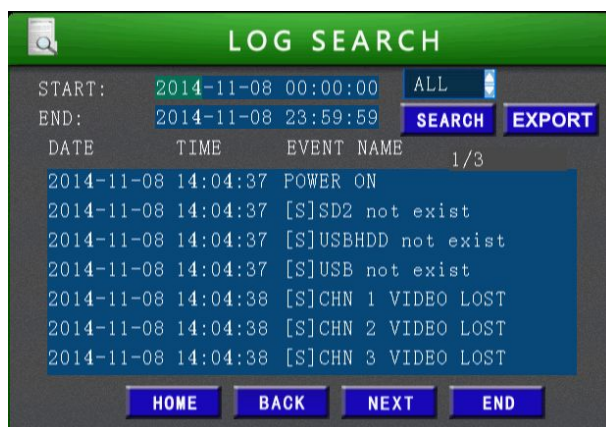
NOTE: Format will clear ALL data on the SD card.

CONFIG: Management of configuration



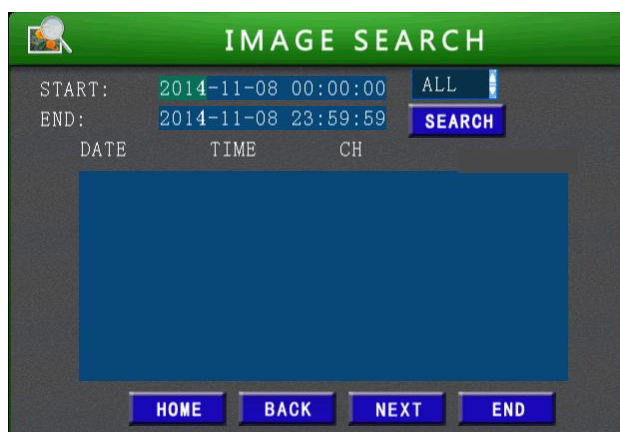
- **Export The Config:** Exporting configuration files from the MDVR to SD card, and the files can be imported to other MDVR of the same kind
- **Import The Config:** Import current configuration of the MDVR, and it simplifies the process of configuration to several MDVR manually.
- **Factory Default:** Restore to default setting.

LOG SEARCH:



- **START / END:** choose time info to check log in according period.

IMAGE SEARCH:



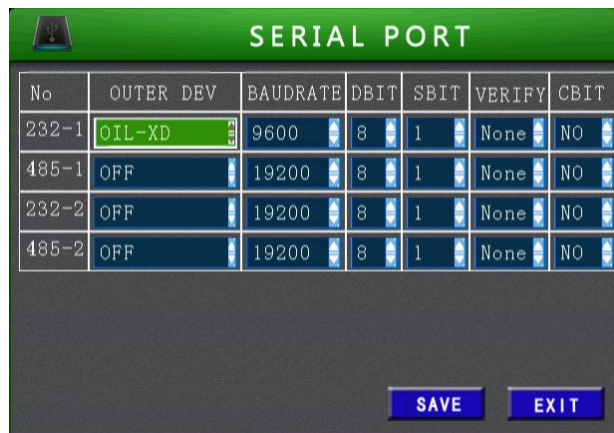
- **Start / End :** Choose time info to check snap photo in according period.

SERIAL: Setting of external equipment by serial ports



PTZ: PTZ setting

- **Protocol:** 2 protocols supportive at the present: PELCO-D and PELCO-P, for baud rate, data bits, stop bit, parity and address.

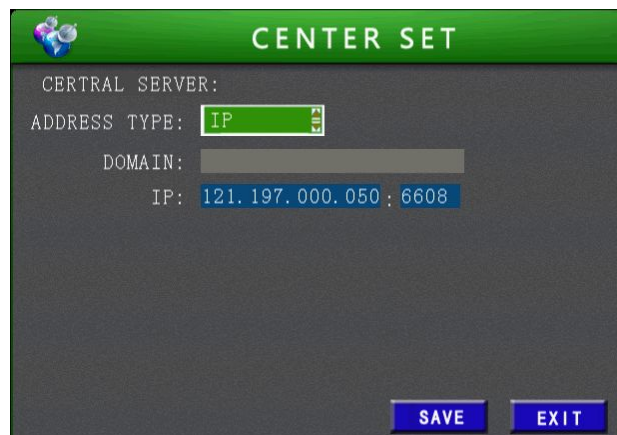
SERIAL PORT: 2 RS232 and 2 RS485 serial ports configuration

Select external equipment at serial ports and parameters as baud rate will be default. If the external parameters dis-accord from default ones, you can modify them manually and save them before you exit.

NET SET: CENTER, LAN, 3G, WIFI



Center: connect to the center server



2 center servers can be connect at the same time and report domain server supported.

LOCAL SET: IP of the computer



Setting of local IP, you can connect to RJ45 to Ethernet.

3G SET: 3G dialup setting

3G SET

TYPE: WCDMA WCDMA

APN: 3gnet

DIAL NUM: *99#

USER ID: card

PSW: card

AUTHTYPE: NOAUTH NOAUTH

ICCID:

SIM DATA: 46476336 0

SAVE EXIT

TYPE: WCDMA and EVDO optional. 3G dial up setting, select type of module, and you may change the default setting of public network, if you intend to connect to a private internal network.

APN: Check it with your local carrier.

DIAL NUM: Dialing number, check it with your local carrier.

PSW: Fill in it if you have.

AUTH TYPE: Check with your carrier, usually no auth..

SIM DATA: Fill in the SIM card number.

WIFI SET: WIFI module connecting to wireless router

WIFI SET

ENABLE: OFF IP: 192.168.001.010

IP SET: DHCP MASK: 255.255.255.000

AUTH MODE: WPA-PSK GATEWAY: 192.168.001.001

ENCRYPT TYPE: AES

SSID: COOINT

PASSWORD: cooint0512

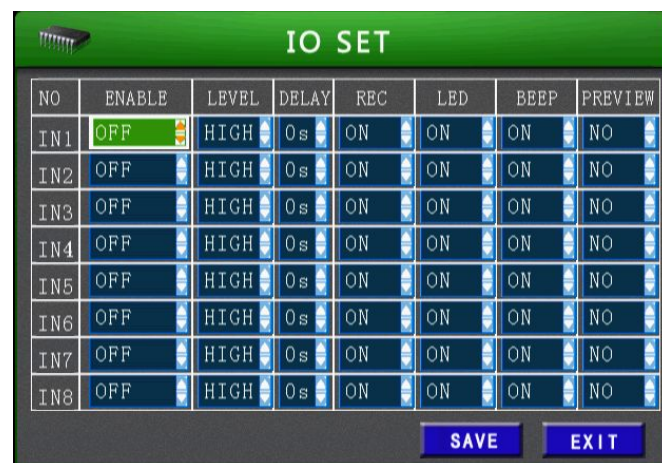
SAVE EXIT

WIFI SET: WIFI module connecting to wireless router

AUTH MODE: Set it as the same with your router. Usually use WPA-PSK.

The parameters of WIFI module connect to wireless router, static IP supportive, and you will set IP and AP in the same network segment manually.

ALARM SET: SENSOR, SPEED, G-SENSOR, TEMP, IO OUT, VOLTAGE

**IO SET:**

- **Enable:** if ON, alarm detect is activated, if OFF, no detect any alarm
- **Level:** 0~2V as low; 4~25V as high. Adjust according to external connecting device to triggered alarm recording.
- **Delay:** Delay time can be selected.
- **Rec:** ON/OFF to decide whether to enable recording when detects alarm.
- **Led:** ON/OFF to decide whether to enable indicator (front panel) when detects alarm.
- **Beep:** ON/OFF to decide whether to enable buzzer when detects alarm.
- **Preview:** For video check.

SPEED SET:

NAME	ENABLE	THRESHO	FILTER	REC	LED	BEEP
LOW	OFF	10	0	ON	ON	ON
HIGH	OFF	80	90	ON	ON	ON

- **Source:** GPS/Vehicle, if choose “vehicle”, speed pulse signal should be connected.
- **Date K:** Coefficient value set about speed
- **Unit:** Km/h; MPH
- **High:** Alarming if speed over the value
- **Low:** Alarming if speed below the value
- **Enable:** ON/OFF to enable speed alarming
- **Threshold:** speed range set.
- **Rec:** ON/OFF to enable speed alarming recording
- **Led:** ON/OFF to decide whether to enable indicator (front panel) when detects alarm.
- **Beep:** ON/OFF to decide whether to enable buzzer when detects alarm.

G-SENSOR SET:

NAME	ENABLE	THRESHO	FILTER	REC	LED	BEEP
X	OFF	2.00	0	ON	ON	ON
Y	OFF	2.00	0	ON	ON	ON
Z	OFF	2.00	0	ON	ON	ON
HIT	OFF	2.00	0	ON	ON	ON
FLIP	OFF	30	0	ON	ON	ON

X: +0.19g Y: -0.95g Z: +1.02g
HIT: 1.41g ANGLE: 92°

- Separate alarm for x, y and z axis of accelerate

- **Enable:** On/off, whether it needs testing alarm
- **Threshold:** It alarms when it exceeds the value
- **Rec:** On/off, whether it will be recording when there is a speed alarm
- **Led:** On/off, if the indicator light will be on while there is a speed alarm
- **Beep:** On/off, if the buzzer will be on while there is a speed alarm

TEMP SET:

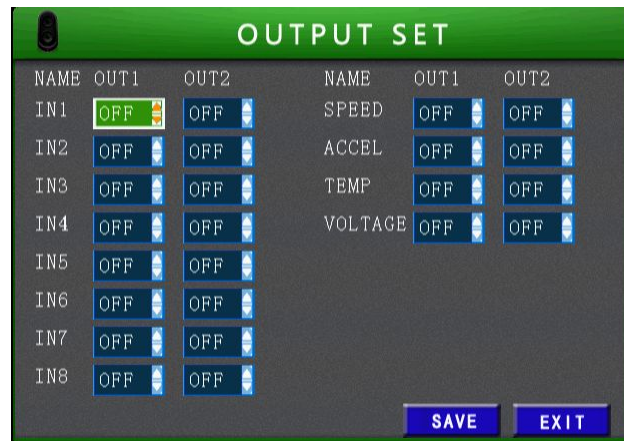


NAME	ENABLE	THRESHO	FILTER	REC	LED	BEEP
LOW	OFF	-20	0	ON	ON	ON
HIGH	OFF	60	0	ON	ON	ON

SAVE EXIT

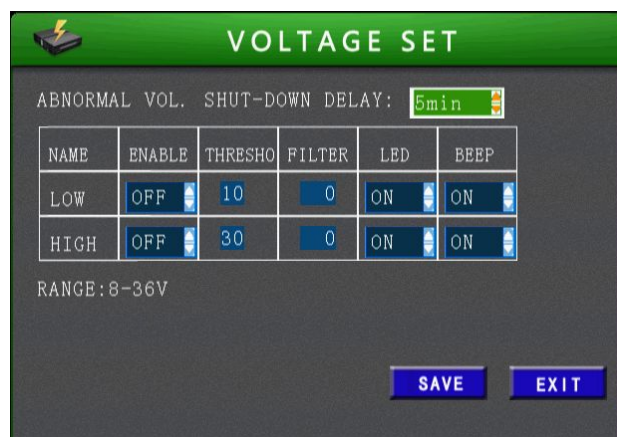
- **Low:** When the temperature is lower the threshold value and it will alarm
- **High:** When the temperature is higher the threshold value and it will alarm
- **Enable:** On/off, whether it needs temperature alarm
- **Threshold:** It alarms when it exceeds the value
- **Rec:** On/off, whether it will be recording when there is a temperature alarm
- **Led:** On/off, if the indicator light will be on while there is a temperature alarm
- **Beep:** On/off, if the buzzer will be on while there is a temperature alarm

OUTPUT SET:



- **Name:** about 8 I/O output ports and speed, accelerated speed, temperature, movable ports.
- **OUT1:**output port 1
- **OUT2:**output port 2

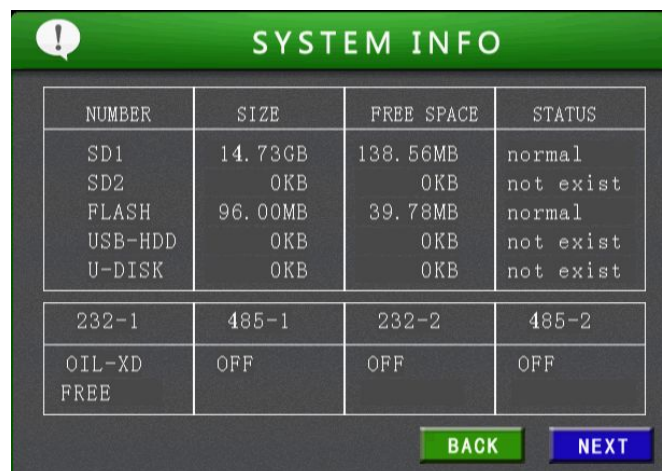
VOLTAGE SET:

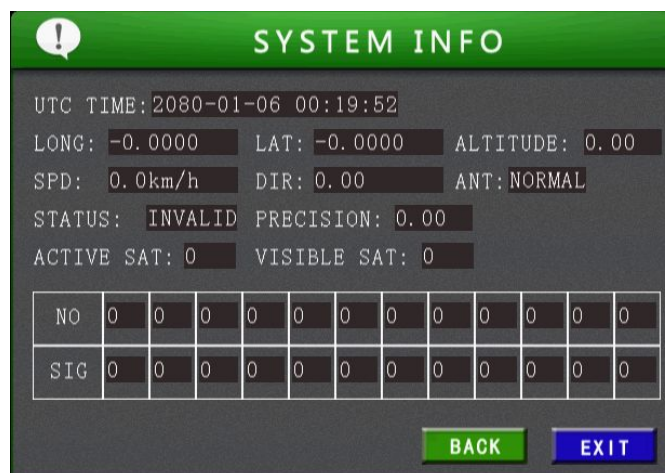


- **Low:** When the voltage is lower the threshold value and it will alarm
- **High:** When the voltage is higher the threshold value and it will alarm
- **Enable:** On/off, whether it needs voltage alarm
- **Threshold:** It alarms when it exceeds the value
- **Rec:** On/off, whether it will be recording when there is a voltage alarm
- **Led:** On/off, if the indicator light will be on while there is a voltage alarm
- **Beep:** On/off, if the buzzer will be on while there is a voltage alarm
- **Delay:** Unit will be auto powered off after XXX min due to the voltage extremely high or low.

SYSTEM INFO:

- **VERSION:** The software version number of the device
- **GPS:** Shows ON if connect successfully
- **NET:** Shows 3G/ WIFI module
- **SPEED:** Vehicle speed
- **MILEAGE:** Shows how far the vehicle has worked, it will calculate from the first time the unit be used. Data can be deleted on live monitoring platform alarm info.
- **LOCAL IP:** Shows the local IP when you connect unit via RJ45.
- **CENTER IP:** Shows the server IP you connect.
- **CENTER CONN:** Shows whether has connected to the platform successfully.
- **TEMP:** Shows the main board/ HDD temperature, it will enable fan to lower the temp.
- **VOLTAGE:** Car battery voltage.
- **ACC:** Car ignition voltage.
- **PHONE:** Shows SIM card mobile phone.





- **LONG:** Show vehicle's longitude.
- **LAT:** Show vehicle's latitude.
- **ALTITUDE:** Show vehicle's altitude.
- **SPD:** Show vehicle's speed.
- **DIR:** Show vehicle's direction.
- **ANT:** Show antenna working status
- **ACTIVE SAT. / VISIBLE SAT. :** Show satellite status

Press INFO and you can quick launch the menu to view the situation of module, connection to center server, alarm, version and storage disk.

4. Cable Connection

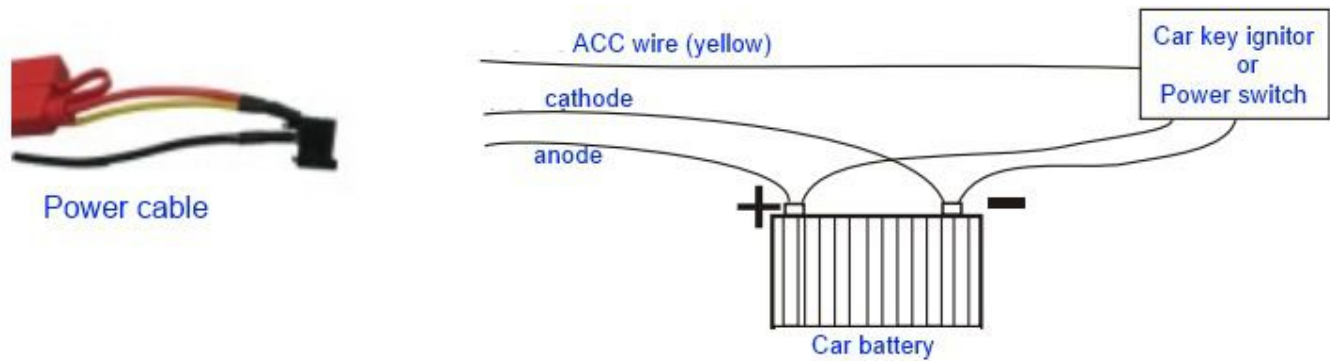
4.1. How to get DVR on power?

The anode (red) and cathode(black) should be directly connect with car battery. Any indirect way is not recommended.

The ACC(yellow) wire can either connect the anode of car battery directly(method A) or via the car igniter indirectly(method B). Pls note for schedule recording mode, connection should be A method.

Pls ensure power kept DC8-36V voltage with stable.

After, lock the device by the Key to boot up the MDVR.



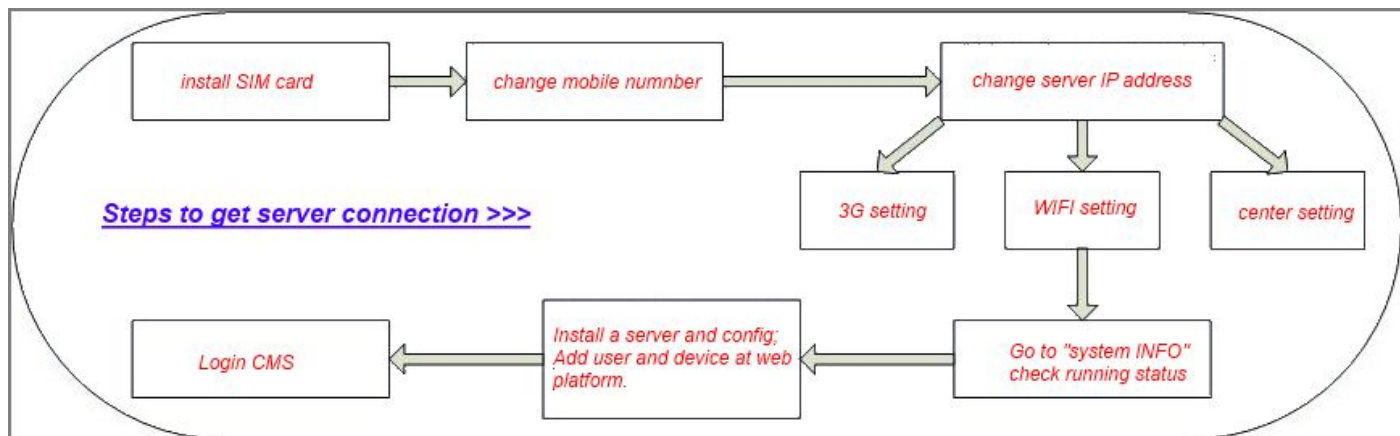
4.2. How to get connection with server?

*If device has no Wifi and/or 3G, this part can be ignored.

Step1. Get 3g/wifi ready with antenna and sim cards.

Step2. Turn on DVR, enter into setting, go to “system set – terminal set”, fill in the 3g sim number.

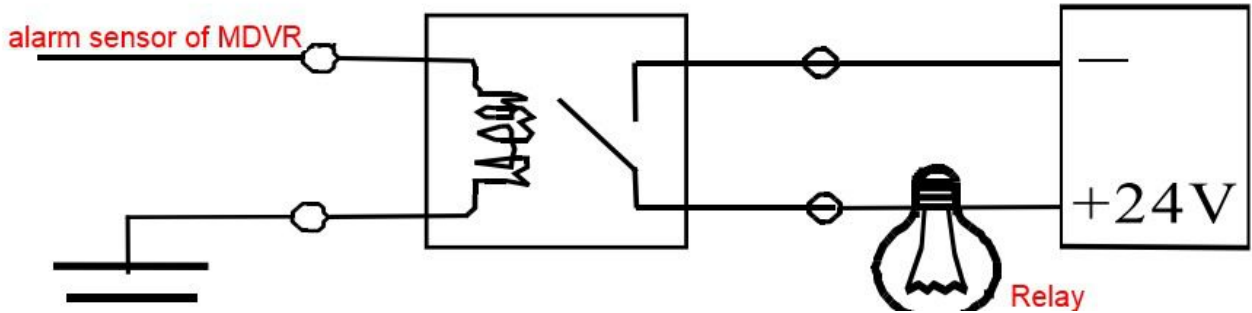
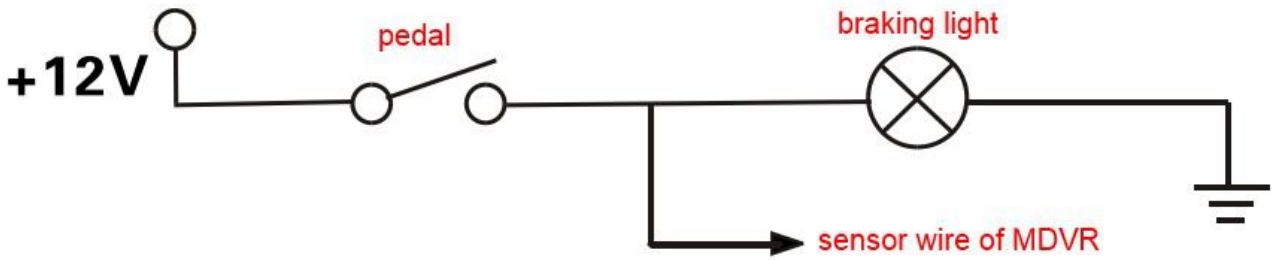
Step3. Back to setting, go to “net set – center set”, change the IP with server IP address (port keep default 6608)



4.3. How to use IO alarm series port?

The device has 12 alarm input, and 2 alarm output. Alarm is triggered by high and low voltage preset for actions such as “braking, sheering, car igniter, alarm button” etc. For example, when driver pushes the pedal down, MDVR sensor a high voltage, otherwise low voltage.

Pls note the herein alarm is of ability to accept max.200mA. To connect device of high power, an outer relay is a must for the connection.



4.4. How to connect PTZ (pan/tilt and zoom) camera?

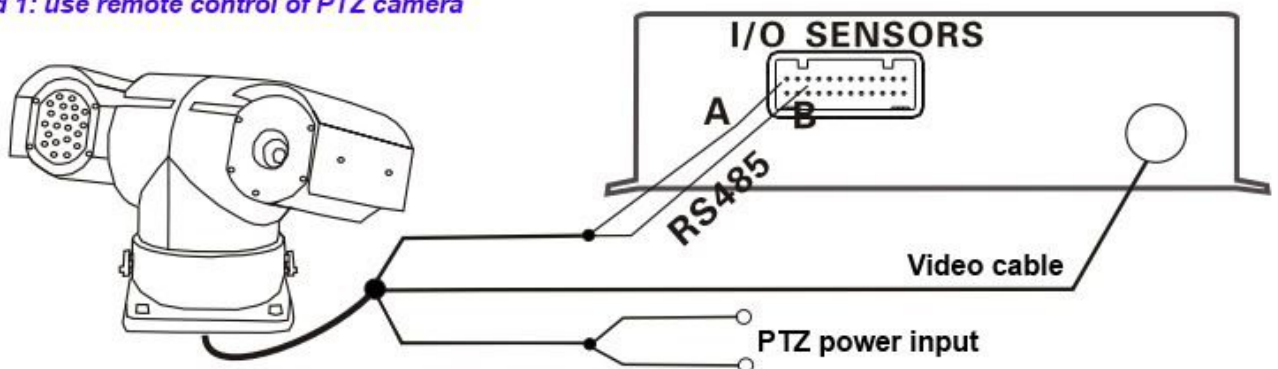
Step1. Select PTZ protocol: PELCO-D or PELCO-P

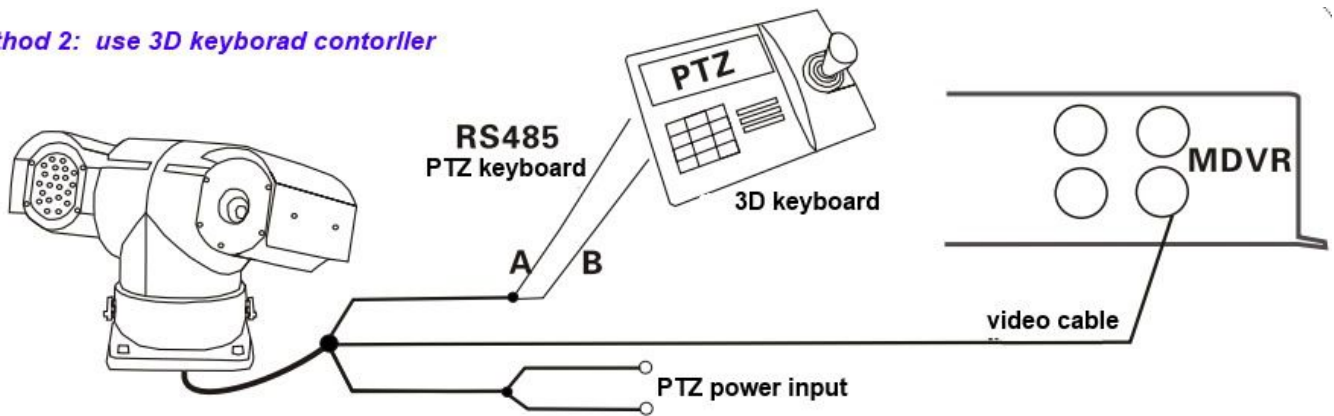
Step2. Select baud rate: values according to what's at PTZ camera.

Step3. Choose address code: values according to what's at PTZ camera

Step4. Cable connection: one 485 wire from PTZ camera to connect RS485-A of MDVR end (anode), the other wire connects RS485-B (cathode).

Method 1: use remote control of PTZ camera



Method 2: use 3D keyboard controller

5. F.A.Q

5.1. Recording Questions

5.1.1. Why is it not recording video after the MDVR is on?

- ①. Please check if there is a SD card in the SD card slot
- ②. If there is a SD card, please check the status of storage disk:
Status types: nonexistence, unformatted, normal volume of under usage and normal volume of full usage
Statement of status:
 - a. nonexistence, if the MDVR does not detect any SD card, please detect the SD card on your computer, or change it; see if it is the problem of SD card or the MDVR.
 - b. Unformatted, please format it. After finish, please see if the SD card volume is properly detected
 - c. normal volume of under usage, please check the video recording mode and see if it is alright to start video recording
 - d. normal volume of full usage, please check if auto cover is enabled

5.1.2. Why is the MDVR reboot when it is onboard?

- ①. Frequent reboot: the MDVR gets online and offline frequently, discontinuing video recording
- ②. Reason to frequent reboot:
 - a. Unstable onboard power supply: please test input voltage when the MDVR is not working properly. (This is common case.)
 - b. There is problem within the storage disk: please format it or change it after you save data.
 - c. Problem of software of hardware: please take out the storage disk or SD card, and see if the MDVR is working properly. If not, please notify your version of software to our technical engineers. It may be recalled and repaired

5.2. GPS Questions

5.2.1. Why can't I check out GPS information in the MDVR?

- ①. See if the GPS module exist on the MDVR
- ②. Check if GPS antenna is properly connected. GPS antenna should be put on places without shelter, otherwise it may not be able to receive signals. When floating vehicle going through tunnels or high-rises, it is normal to be no signal.

5.2.2. Why can't I check out location information of vehicles?

- ①. Please check the update time period of the GPS on the platform software
- ②. Location information will be updated to the platform only GPS signal is receiving normally, so please check if the GPS signal is displayed properly on the MDVR

5.3. 3G Questions

5.3.1. Fail to 3G Dial Up

- ①. Check module status, dialup setting
- ②. Check if the antenna is connected and 3G signal strength
- ③. Check SIM card status and see if it is internet-capable, arrearage.

5.4. Server Questions

5.4.1. Why can't I connect to back end servers when the MDVR is working?

- ①. Please make sure 3G module is dial up and connect to 3G platform
- ②. Check the IP and server port is right, and make sure report ID is not conflicting
- ③. Check back end server is working properly, and see if there is other vehicle online