# Mobile DVR Instructions

# **Contents**

Contents	3
1 Specification	4
2.Feature	6
2.1Remote control application	6
2.2 MDVR interface	7
3. Power	7
4 System User login	8
5 Main Menu.	9
5.1 Record Search	10
5.2 Record Setup	10
5.3 Basic Setup	11
5.3.1 Alarm Setup	12
5.3.2 PTZ Setup(Optional)	13
5.3.3 Time Setup	13
5.3.4 HD Management	14
5.3.5 System Maintain	15
5.3.6 Network Setup	15
5.3.7 System Setup	16
5.4 System Info	17
5.5 Vehicle Info	18
5.5.1 Basic Setup	18
5.5.2 ACC Setup	19
5.5.3 ON/OFF Setup	20
5.5.4 Wireless Setup(Optional)	21
5.5.5 Wi-Fi Setup(Optional)	22
5.5.6 GPS Setup(Optional)	22
5.6 Display Setup	23
5.7 Password Setup	24
6 I/O Interface	24
7 Check Networking Status(Optional)	25
8 CMSV7 Installation Instruction(Optional)	26
9 FAQ	28
10 Contact	29

# 1 Specification

#### **FEATURES:**

- ➤ Built-in high performance Hisilicon chipsets, coded with H.264 standard, high compression rate and image quality
- ➤ 4CH AV Inputs with AHD 1080p/720P/960H/D1/CIF optional, 1CH synchronized AV output, 1CH VGA output, 1CH HDMI output.
- ➤ 4CH (or 8CH) local recording with 1080p (1080N) resolution in real time

#### Power:

- ➤ Professional In-Vehicle power design,8-36V DC Wide Voltage Range
- Multi protection circuits like under-voltage, short, reversed plug-in
- > Smart power management system, shutdown under low voltage, low consumption

#### **Data Storage:**

- > Special file management system to encrypt and protect the data
- > Proprietary technology to detect the bad track of the hard drive which can make sure the continuity of video and long service life of the hard drive
- > Built-in ultra-capacitor, avoid data loss and SD card damage caused by sudden outage
- Support 2.5 inch HDD/SSD, maximum 2TB
- > Support 2 SD card storage, each SD supports maximum 256GB. Please use big size SD not micro SD with adapter.

#### **Transmission Interface(Optional):**

- Support 3G/4G transmission,LTE/HSUPA/HSDPA/WCDMA/EVDO/TD-SCDMA (Optional)
- Support GPS/BD optional, high sensitivity, fast positioning(Optional)
- Support wireless download by WiFi, 802.11b/g/n, 2.4GHz(Optional)

#### **MDVR Specification**

Technical	Technical parameter:	
Item	Device parameter	Performance
	Main processor	Hi3520DV300
	Operating system	Embedded Linux OS
System	Operating language	Chinese/English
	Operating interface	GUI, support mouse
	Password security	User password/Admin password
	Video standard	PAL/NTSC
A 1'	Video compression	H.264
Audio	Image resolution	1080P/1080N/720P/960H/D1/CIF
& Video	Playback quality	1080P/1080N/720P/960H/D1/CIF
Video	Compound mode	A variety of ways
	Decoding ability	1ch 1080p (1080N )real time
	Recording quality	Class 1-6 optional

	Image display	Single/QUAD display optional
	Audio Compression	G.726
	Audio recording	Audio & Video synchronized recording
	Recording mode	Manual/Alarm
	Video bit rate	Full frame 4096Mbps, 6 classes image quality optional
Recording	Audio bit rate	8KB/s
& Playback	Storage media	SD card + HDD/SSD storage
	Video inquiry	Inquiry by channel/Recording type
	Local playback	Playback by file
Firmware	Upgrading mode	Manual/Automatically/Remote/Emergency Recovery
upgrading	Upgrading method	USB disk/Wireless network/SD card
	AV input	4ch (or 8ch) aviation interface
	AV output	1ch VGA video output, 1ch aviation AV output
	Alarm input	4 digital inputs (4 Positive/Negative trigger)
	HDD/SSD	1 HDD/SSD (up to 2TB, support hot plug/unplug)
	SD card	2 SDXC High speed card (up to 512GB)
Interface	USB interface	1 USB 2.0 (support U disk/mouse)
	Ignition input	1 ACC signal
	UART	1 LVTTL Level
	LED Indication	PWR/RUN
	Disk /SD card lock	1
	Debug port	1
	GPS/BD(Optional)	Support detecting antenna Plug in/Unplug/Short circuit
Function extention	3G/4G(Optional)	Supports CDMA/EVDO/GPRS/WCDMA/FDD LTE/TDD LTE
	WIFI(Optional)	802.11b/g/n, 2.4GHz
	Power input	8~32V DC
		Standby 3mA
	Power consumption	Maximum consumption 30W @12V 2.5A @24V
Others		1.25A
	Working temperature	-20 70°C
		1080P 1.5G/h/channel
		1080N 1.2G/h/channel
	Storage	720P 1G/h/channel
		960H 750M/h/channel
		D1 300M/h/channal
	Dimension	148mm*188mm*60mm (Hard disk MDVR)
		147mm*180mm*41mm (SD card MDVR)

	Sne	Feature
	Spc.	Teature

Project		
Power Input	8—36V	DC+8V $\sim$ +36V, if lower than 8V, or higher than 36V, the MDVR will be shutdown, into protect status
Power Output	12V	Output :12V (+/-0.2V), max 2A <sub>o</sub>
Key Signal	≤4V	Key off。
	≥5V	Key on 。
Video Input(Ω)	75Ω	75Ω/CH。
Video Output	2Vp-p	One 2Vp-p CVBS One 75Ω
I/O	0—4V	Low voltage alarm
1/0	>4V	High voltage alarm
SD Card Slot	SD Card	Support SD Card up to 1TB, Support two SD Card Support upgrade MDVR software
Temperature	-40°C-80°C	-40°C-80°C with good environment

# 2.Feature

## 2.1Remote control application



## **Key Function**:

1."Info": view network status

2."Login": main menu

3. Number:

[0-9]:Under the configuration mode,  $0\sim9$  stand for numbers; under the playback mode, 1, 2, 3 and 4 are for switching between related single channel,

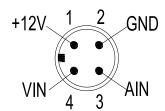
4. "↑ ↓ ": up,down;

"←→": left,right;

NOTE: If the remote controller does not contain battery. Please buy the battery in local market. Battery Model: CR2025.

Picture.3 Remote control

## 2.2 MDVR interface



1、12V: For camera and voice record, 2、Negative, 3、AIN: For Audio; 4、VIN: For Video

Picture.4 MDVR interface

#### **Back Panel**

#### **Back Panel**

Interface	item	Feature
Power	DC8-36V	Power input (red for positive, black is for negative, yellow is connect to ignition cable, when switch mode set up in ignition mode)
Video/Audio input	CAM1-4 (AV1-AV4)	Video/Audio Input interface
Video output	VOUT	Video output
Audio output	AOUT	Audio output
IO/ALARM	IO/ALARM	IO/ALARM
USB	USB	Mouse, USB Disk

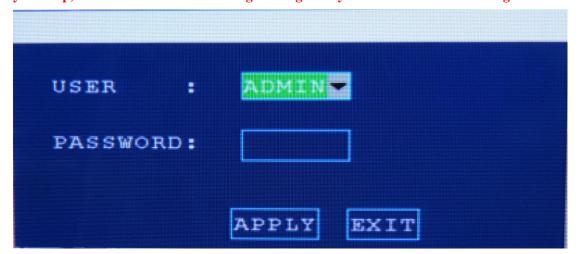
# 3. Power



- Make sure the volt is 8-36V before you connect with the battery , or the MDVR will be burn up
- Yellow cable must to connect with the ACC or Battery, or the MDVR cannot be delay shut down, the video will be lose.

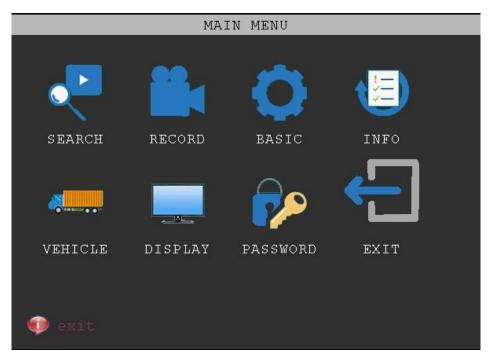
# 4 System User login

After connect the power, press "Login" to login without password. (There is no password before you setup). USER account cannot change settings. Only ADMIN account can change menu.



Picture.6 Login

## 5 Main Menu



Picture 7 Main Menu

- < SEARCH>: Search for video files stored in the hard disk/SD card and perform playback operations;
- <RECORD>: Set the audio and video parameters, working mode, etc.;
- <BASIC>: Set alarms, ptz, time, network, disk, system, etc.;
- <INFO>: Display device serial number, version number, SIM card, GPS module, WIFI, MAC address, etc.;
- <VEHICLE>: Set vehicle number, switch settings, wireless settings, WIFI settings, etc.;
- <DISPLAY>: Set monitor screen and video data content, channel name, time overlay, boot preview screen, etc.;
- <PASSWORD>: Set menu password.

#### 5.1 Record Search



Picture.8 Record Search

Record Search: Search, playback, and backup of video files on disk. It can Fast forward and rewind when playback on MDVR.

## 5.2 Record Setup



Picture.9 Record Setup

<RECORD>: You can select on/off to select whether the channel is recording;

<RESOLUTION>: D1 / HD1 / CIF / 720P / 1080N / 1080P resolution optional;

<BITRATE>: High / medium / low optional;

<FRAMERATE>: 1 to 25 (or 30) optional;

<QUALITY>: 1 to 6 optional; the smaller the value, the better the image quality;

<AUDIO>: Optional on/off;

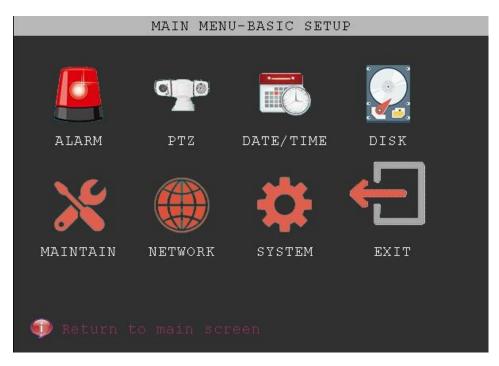
<REC. SIZE>: 3minutes / 15 minutes / 30 minutes / 45 minutes / 60 minutes optional;

<REC.MODE>: Optional boot recording / timer recording; when setup to timer, you can schedule the time that start and stop the recording. Also you can set to only record on alarm videos.

<SNAP RES>: D1/CIF/HD1/960H/720P/1080P optional.

**NOTE:** Click "APPLY" button to save settings.

## 5.3 Basic Setup



Picture.10 Basic Setup

<Alarm>: Set the switches and parameters of various alarm inputs;

<PTZ>: Set the PTZ parameters;

<Date/Time>: Set system time, daylight saving time;

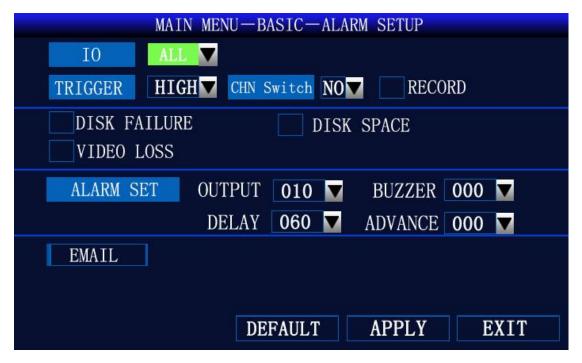
<Disk>: Display disk status, provide hard disk, SD card, U disk formatting function;

<Maintain>: Set automatic restart, system upgrade, factory reset;

<Network>: Set network, server IP;

<System>: Set system language, camera format, output resolution, camera type.

## 5.3.1 Alarm Setup



Picture.11 Alarm Setup

<IO>: Select interface;

<Trigger>: High and low optional;

<CHN Switch>: "YES/NO": switch or not when level is triggered;

<Disk Failure>: Alarm when there is no disk or the device does not recognize the disk;

<Disk Space>: Alarm when the disk is out of memory;

< Video Loss>: Alarm when there is no video input.

## **5.3.2 PTZ Setup(Optional)**



Picture.12 PTZ Setup

<Protocol>: Support PELCO-D and PELCO-P;

<Baud Rate>: 1200/2400/4800/9600 bps optional;

<Data Bit>: 5,6,7,8 optional;

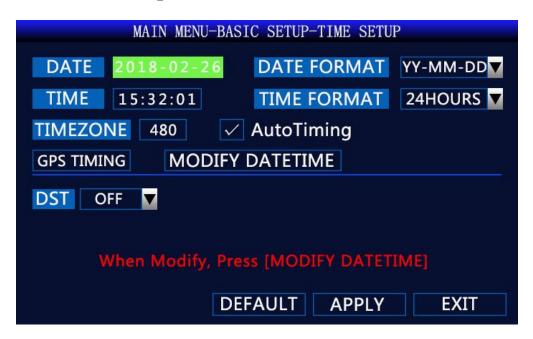
<Verify>: Odd/Even/Mark/Spac/None optional;

<Stop Bit>: 1/1.5/2 optional;

<Address>: 001~255.

**NOTE:** Click "APPLY" button to save settings.

## 5.3.3 Time Setup



#### Picture.13 Time Setup

<Date>: Set year, month, day; <Time>: Set hour, minute, second;

<Date Format>: MM/DD/YY or YY-MM-DD;

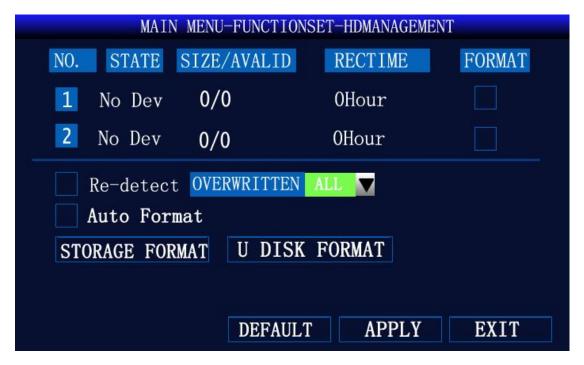
<Time Format>: 12-hour system or 24-hour system;

<Auto Timing>: Automatically synchronize with GPS satellite time; PLEASE DO NOT CHECK.

<Modify Datetime>: After modifying the time, click "Modify Datetime" to take effect.

**NOTE:** Click "APPLY" button to save settings.

#### **5.3.4 HD Management**



Picture.14 HD Management

<Auto Format>: Automatically formatted when a new hard disk or SD card is powered on;

<Overwritten>: Automatically overwrite the oldest video file when it is full.

**NOTE:** When mdvr shows "HDD ERR" on screen, please enter menu, check the SD/HDD/SSD, and click "STORAGE FORMAT" to format the SD/HDD/SSD, then it will start to record.

## **5.3.5 System Maintain**

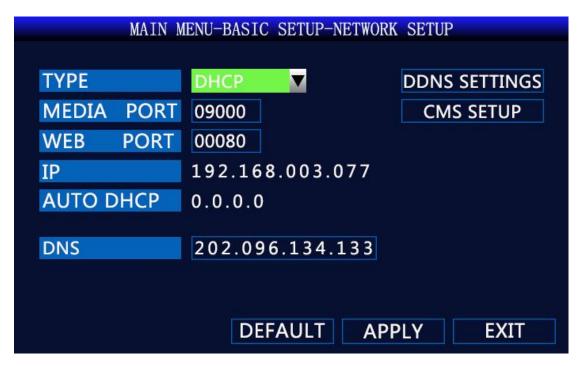


Pictures.15 System Maintain

<Default Settings>:Click to reset to factory reset all the settings.

**NOTE:** Click "APPLY" button to save settings.

## **5.3.6 Network Setup**

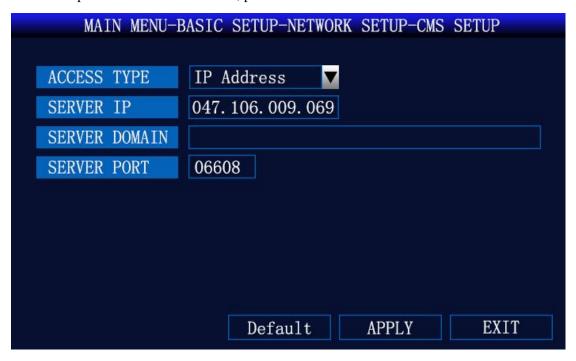


Picture.16 Network Setup

<Media Port>: Generally not modified

<WEB Port>: Generally not modified

<CMS Setup>: Set the server IP address, port



Picture.17 CMS Setup

<Access Type>: select "IP Address"

<Server IP>:47.106.9.69 (Configure according to your own server IP)

#### NOTE

- \* 47.106.9.69 is IP of our free server. When you setup your own server, change the IP to the IP of your own server.
- \* Only mdvr that supports wifi or 4G module need to check this network setup.
- \* Click "APPLY" button to save settings.

## 5.3.7 System Setup



Picture.18 System Setup

- <Video System>: PAL/NTSC (DEFAULT)
- <VGA RES>: VGA output display resolution
- <Camera Type>: "SD" stands for analog camera, "720P" stands for AHD 720P camera,
- "1080N/1080P" stands for AHD 1080P camera, Select the corresponding camera type to display properly
- < System Language>: Set system language, including Chinese, English, and Traditional Chinese

**NOTE:** Switch system mode, system restart

Default setting on mdvr is for NTSC mode 1080P AHD camera. If your camera is not 1080P AHD

NTSC mode. Please setup the menu according to the specification of your own cameras.

**NOTE:** Click "APPLY" button to save settings.

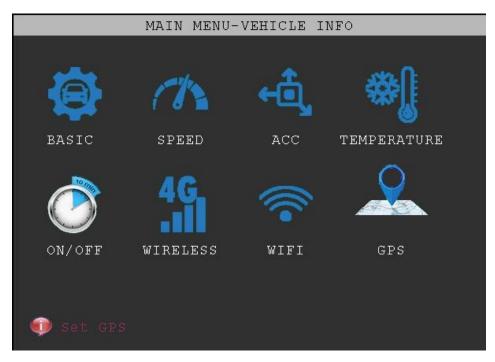
#### 5.4 System Info



Picture.19 System Info

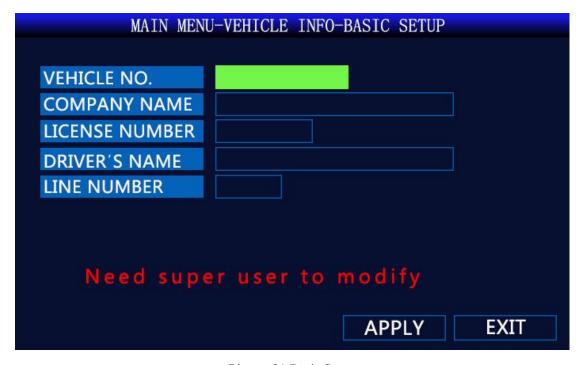
- <SIM Card>: "Yes" means the SIM card is recognized, "NO" means not
- <GPS Module>: "Yes" means the GPS module is recognized, "NO" means not
- <GPS Signal>: "INVADLID" indicates that there is a signal
- <Wi-Fi Module>:"Yes" means the Wi-Fi module is recognized, "NO" means not
- <Wi-Fi Connect>:"Yes" means successful networking, "NO" means not
- <Wireless Module>: "Yes" means the 3G/4G module is recognized, "NO" means not
- <Wireless Connect>:"Yes" means successful networking, "NO" means not

#### 5.5 Vehicle Info



Picture .20 Vehicle Info

## 5.5.1 Basic Setup



Picture.21 Basic Setup

<Vehicle NO.>: Set the number of the machine (3G\4G function device requires super

administrator setting). PLEASE DO NOT CHANGE UNLESS USE YOUR OWN SERVER.

<Company Name>: Enter your company's name;<License Number>: Enter license number of the car;

<Driver's Name>: Enter driver's name;<Line Number>: Enter line number.

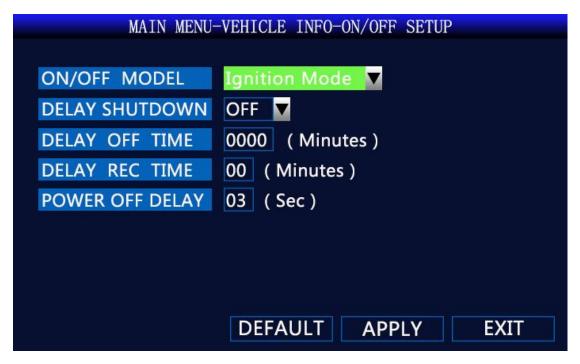
## 5.5.2 ACC Setup



Picture.22 ACC Setup

Mdvr has built-in G-sensor. If you turn on the alarm. It will save G-sensor alarm.

## 5.5.3 ON/OFF Setup



Pictures.23 ON/OFF Setup

<ON/OFF Model>:Ignition Mode / Timing Mode (In the ignition mode, the MDVR will automatically turn on after the car is started, and in the timing mode, the MDVR will be turned on at the time set by the user.)

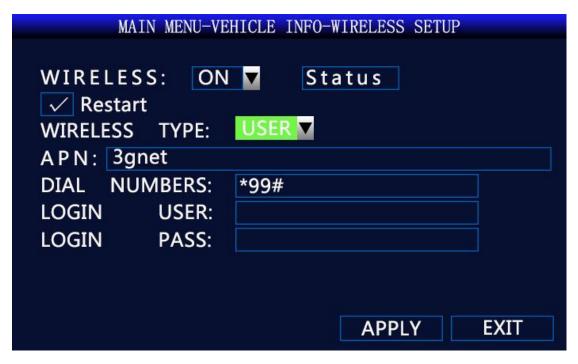
<Delay Shutdown>: OFF/ON. If set to ON, red power wire to battery, yellow power wire to ACC

<Delay OFF Time>:1~1440 minutes (Effective after restarting)

<Delay REC Time>:1~1440 minutes (Effective after restarting)



## **5.5.4** Wireless Setup(Optional)



Picture.25 Wireless Setup

<Restart>: When the module cannot be reconnected after disconnection, the module will automatically power off and reset.

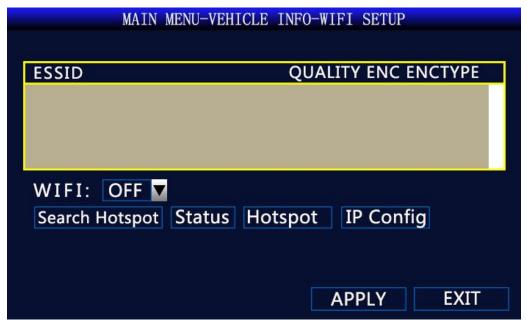
APN: Please input according to the 4G SIM card you use.

APN of T-mobile in United States:fast.t-mobile.com

APN of AT&T in United States:BROADBAND

Please keep the dial number as \*99#

## 5.5.5 Wi-Fi Setup(Optional)



Picture.26 Wi-Fi Setup

- <Search Hotspot>: Search for nearby WiFi hotspots.
- < Status>: View WiFi connection status, IP address and other information
- <Hotspot>:It can save 5 WiFi hotspots
- <IP Config>: Set to AUTO

NOTE: No special character in the SSID and password of the wifi hotspot. Turn off the firewall in

the wifi router. Work with 2.4G wifi hotspot only.

**NOTE:** Click "APPLY" button to save settings.

## **5.5.6 GPS Setup(Optional)**

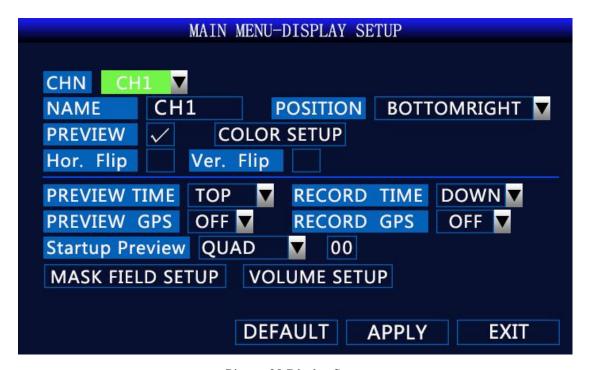


Picture.27 GPS Setup

<Overspeed Value>: Above the set speed, the device will alarm <Lowspeed Value>: Below the set speed, the device will alarm

**NOTE:** Click "APPLY" button to save settings.

### 5.6 Display Setup



Picture.28 Display Setup

<Hor. Flip>: Flip the video image horizontally<Ver. Flip>: Flip the video image vertically<Startup Preview>: Set the display mode.

## 5.7 Password Setup

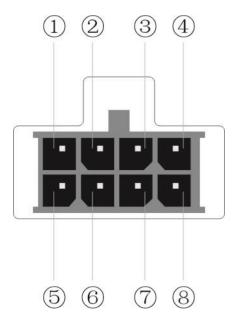


Picture.29 Password Setup

Only "Admin" can set "Admin Password" and "User Password"

**NOTE:** Click "APPLY" button to save settings.

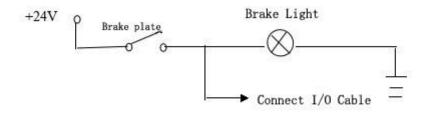
# 6 I/O Interface



Picture.30 IO Interface

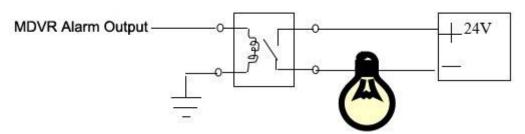
- ① Alarm-2 ② Alarm-4 ③Alarm Output ④ 485B ⑤ Alarm-1 ⑥ Alarm-3 ⑦GND ⑧ 485A
- There is 4 alarm input,2 alarm output. Alarm input detection are voltage; can be accessed by variety of vehicles driving status, such as brakes, steering ,horn and so on. Brake testing schematic

shown below, when the brake pedal is depressed, MDVR able to detect high or low voltage.



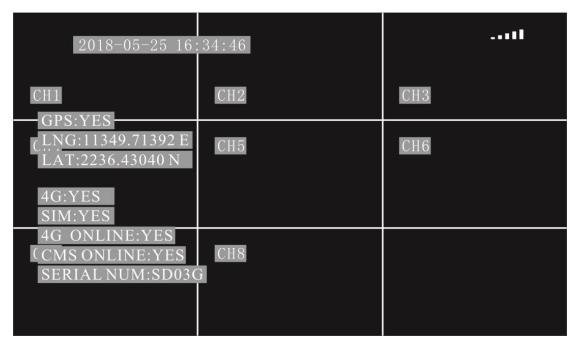
Picture.31 Brake testing schematic

Alarm outputs are voltage output. Drive capability of 200mA, if you want large power devices, must be externally relays. Alarm output photoelectric schematic shown below.



Picture.32 Alarm Schematic

# 7 Check Networking Status(Optional)



Picture.33 Check Networking(Online) Status

Press the button "Info" on remote control, will be showed the online information.

GPS:YES means recognize the GPS module; GPS:NO means not recognize GPS module

LNG:11349.71392 E Display longitude, 0.0 means GPS not working

LAT:2236.43040 N Display latitude, 0.0 means GPS not working

4G:YES means recognize module, 4G:NO means not recognize module

SIM:YES means recognize the SIM card, SIM:NO means not recognize the SIM card

4G ONLINE:YES means networked, 4G ONLINE:NO means no connecting network

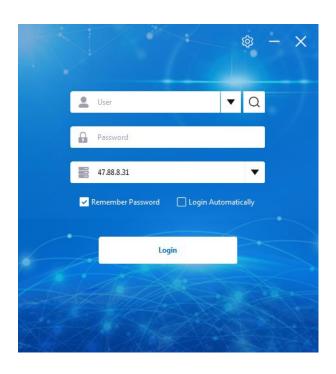
CMS ONLINE:YES means connected the server, CMS ONLINE:NO means not connect the server

# **8 CMSV7 Installation Instruction(Optional)**

1.For PC download from http://47.88.8.31/808gps/login.html



Picture.34 CMSV6 download



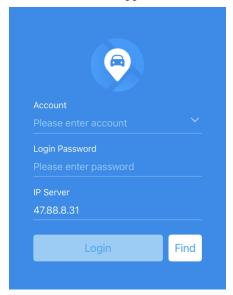
Picture.35 login interface on PC

User: Mark on the device label

Password: 000000 (can change on CMSV6 webpage or client software)

Server: 47.88.8.31

2. For smart phone, search "CMSV7" in the app store and download.



Picture.36 login interface on phone

Account (User): Mark on the device label

Password: 000000(can change on CMSV7 webpage or client software)

Server (IP): 47.88.8.31

NOTE: The remote controller does not contain battery. Please buy the battery in local market. Battery Model: CR2025.

# 9 FAQ

We have channel on YouTube, we upload many operation videos on YouTube, please search "JOINLGO" on YouTube.

#### Q: Why MDVR don't power on?

- A: Please make sure the SD card door is locked.
- B: Please make sure the YELLOW ACC wire gets power too.
- C: Please take out the SD or HDD out to test.

#### Q: How to set rearview image of camera?

Enter OSD menu via Admin account.

Operation->Display-> Check Horizontal Flip

#### Q: How to do when system shows "HDD ERR" after insert a SD card?

It needs to format the SD card when use the SD card first time. Please check the video. If it still shows "HDD ERR" after formatting the SD card, please change to use another SD card.

Enter OSD menu via Admin account.

Main->Basic-> Disk. Select the SD and Click "Format".

#### Q: How to do when MDVR turns on and off automatically all the time?

Please remove the SD card or change another SD card. Bad SD card will lead to this issue.

#### Q: How to set up recording resolution?

Please enter OSD menu via Admin account, default password is empty.

Main->Record->Resolution (it can set CIF/HD1/D1/960H/720P).

#### Q: How to connect and use the IO cable?

It supports 4 channel alarm input.

Please refer to section 6 I/O interface in this manual.

#### Q: Where to download the APP, CMSV6 software and PC playback software?

Please check below link to download the software.

http://47.88.8.31/808gps/login.html

#### Q: How to configure 4G?

Kindly remind you that it needs to input APN according to your 4G SIM card.

MAIN->VEHICLE->WIRELESS->USER setup APN.

#### Q: How to change plate number on CMSV6?

Please log in CMSV6 client software or webpage.

Enter Operation->Vehicle->Edit.->Plate NO. then save.

If you want to change the company name, please contact us, we will create your company name and allocate your mdvr under your company. Our server is free.

Note: It cannot change the vehicle ID. Actually, it does not need to change the vehicle ID, please just change the plate NO. then it will show the new name on CMSV6 platform.

Q: Why cannot use Google map?

Google map service is not free. The fee of google map per year is much more expensive than the full Mdvr kit. Baidu map is free now, and it shows English language on map. Most of our customers use Baidu map, and if you want to use google map, it have to build up your own server, and put the Mdvr on your own server. Then you can bug google map API key and replace the API

key on your server,

Q: Why can not show video remotely?

First, please make sure the mdvr is online. Make sure it connects with 4G or wifi successfully.

1. APP: Please click search button, and select the mdvr, then back to Video page will show the

videos,

2. Webpage: Please install flash and enable it runs on webpage.

Q: How to build up my own server?

A PC with a fixed IP can install the CMSV6 server. Please contact us, we will send the latest

CMSV6 server software to you.

Sincerely,

JOINLGO Customer Service Team

10 Contact

 $\textbf{Website:} \ \underline{www.joinlgo.com}$ 

Email: service@joinlgo.com

Whatsapp/Phone: +8618124010269

29