Mobile DVR Installation Instruction Guide

V1.0.0

Table of Contents

1 Preparation

1.1 General Installation Process

Before installation, you need to know the installation includes the following steps:

- You need to select the installation plan and installation technique according to your vehicle type.
- You need to properly arrange the schedule for the vehicle to be installed.
- Write down the vehicle plate number and its corresponding device number.
- Select the installation position and complete the preparation works (dig holes, dismantle and etc.).
- Lay down the cable.
- DVR cable connection
- DVR installation
- Whole system debug and test.

1.2 Installation Plan

The installation engineer and the people from vehicle technical department shall work together to draw out the installation plan and techniques. The both sides shall select the instillation vehicle together and the on-site engineer is responsible to get the device and accessory, check the quality and upgrade the mobile DVR software. During the installation process, the installation group is responsible to record the device corresponding code, technique check, cable connection and system debug.

1.3 Installation Tools

The mobile DVR installation tool list is shown as below:

- Phillips screwdriver
- Bent strippers
- Wire strippers
- Needle nose pliers
- Adjustable wrenches
- Electronic runner (Dry cell runner is preferred since on the site you need to connect to the 220V power, it is not convenient.)
- Multimeter
- LCD for debug
- A 2-meter steel cable (diameter 1.5mm.) to cable layout
- 3.2mm and 4.5mm aiguille

1.4 Installation Material

1.4.1 Cable

Cable is used to connect the power and the vehicle signal. For cable connected to the power, please use 1.0 square meter or higher 3-pin cable. For cable connect the vehicle signal, please use 0.25 square meter or higher 2-pin or 3-pin cable (including shielded layer).

1.4.2 Screw

Usually we use M5×12/ M5×14 self tapping screw to fix the camera. You can select according to you actual environment.

1.4.3 BS Thread Rod and Screw Cap

They are used to fix the device. Usually, we do not need these two accessories. If the installation position is difficult to choose, maybe you need them.

1.4.4 Protection Coil, Electrical Conduit and Protection Groove

The trunking protection is shown as in Figure 1-1.

Figure 1-1

The tube protection is shown as below. See Figure 1-2.

Figure 1-2

1.5 Preparation

- Before installation please arrange the installation device and accessories. At the same time, record the device test and code.
- The installation group includes: one carriage worker, one electrician, one locksmith, one technical instructor and one technical engineer from your local retailer.
- The construction side shall provide the necessary installation condition such as the external power.
- If necessary, you can complete necessary preparation work, such as put the cable into the bellows).

1.6 Installation Principle

Mobile monitor system installation includes: mobile DVR installation, camera installation, and cable layout and cable connection.

1.6.1 Mobile DVR Installation

Mobile DVR installation shall following the listed principles:

- Please fix the mobile DVR firmly.
- The mobile DVR shall be away from the great vibration. You can install it at the rear of the driver seat or the front part of the vehicle. Please note the installation location shall not disturb the driver operation.
- Please guarantee the sound ventilation and keep general distance from other devices. Do not install in the locked box such as the vehicle tool box.
- The external cable shall have sound distance and protection to guarantee cable electronic safety.
- Please make sure the mobile DVR is away from the heating objects.
- Please check the installation is even. Any unstable installation may result in device damage.

1.6.2 Camera Installation

The camera installation position is depending on the monitor area your client focus.
Camera installation shall following the listed principles:

- The installation position shall allow the client to view the specified zone.
- Camera shall be easy to install and fix.
- Camera cable layout is convenient.
- There shall be no object to obstruct the camera.
- Please take the light direction factor into consideration.

1.6.3 Cable Layout

The cable layout is very important for mobile monitor system. The standard cable layout can guarantee system stability and reliability. Please note:

- All cable shall be in the protection cable. The cable installation shall go along with the original cable and binding with the previous one. Please make sure the cable layout is neat and hidden in case the driver or passenger may break it.
- Mobile DVR power cable: The mobile DVR shall connect to the storage battery of the vehicle and there shall be no control button. The cable is 3-pin power cable and its diameter shall be over than 1.0 square millimeters. (The cable connection shall be interlaid in case there is short circuit.). The cable length is depending on client requirement. Please note the battery position end and negative end shall be uniform. ACC signal cable shall connect to the vehicle key live cable. The video cable and audio cable shall adopt 4-pin flame retardation insulation protection cable and its diameter shall be over 0.5 square millimeters.
- GPS antenna: For the mobile DVR to get the signal from GPS satellite, please install the GPS signal receive antenna at the proper front position of the vehicle. Then dig a hole to connect the transmission cable to the vehicle. Please use the glass cement or other way to seal the cable so that there is sound airproof of the vehicle. Please note, you should handle carefully, otherwise it may result in antenna damage.
- During the cable layout, please make sure all cable are safe and will not be damaged. All connections and welding are safe and secure. The installation cable in the vehicle shall be properly tied and the two ends shall be neat and plain. The installation cable outside of the vehicle shall be fixed by the glass cement. The entire cable layout in the vehicle shall avoid the friction and the entire layout shall adopt the proper fasten way.
- The cable strap shall be tighten and even. When use protection cable, please make sure there is no displacement and the cable can bend easily.
- All cable can work properly. There is no short circuit or wrong connection. Cable shall not open to the air directly. Please fasten the cable each 50cm when system adopts invisible cable layout. Please use rubber insulating blanket when the cable strap goes through the metal or side panel.

- All the cable layout and device installation here shall conform to your local electronic safety code.

1.6.4 Cable Connection

Please connect the cable according to the signal symbol and the cable color.

Note: before connection, please make sure all the cable is OK and the signal is valid. After connection, please weld the connection point and use the heat-shrinkable tube to guarantee the intensity.

Important

- All working engineers shall prepare the necessary installation tool.
- All the connection shall be done by the professional engineer.
- Please make sure the mobile DVR and vehicle are sound earthed, otherwise it may result in property damage or property loss!

2 Device Installation

2.1 Device General Introduction

2.1.1 Front Panel

The front panel is shown as in Figure 2-1.

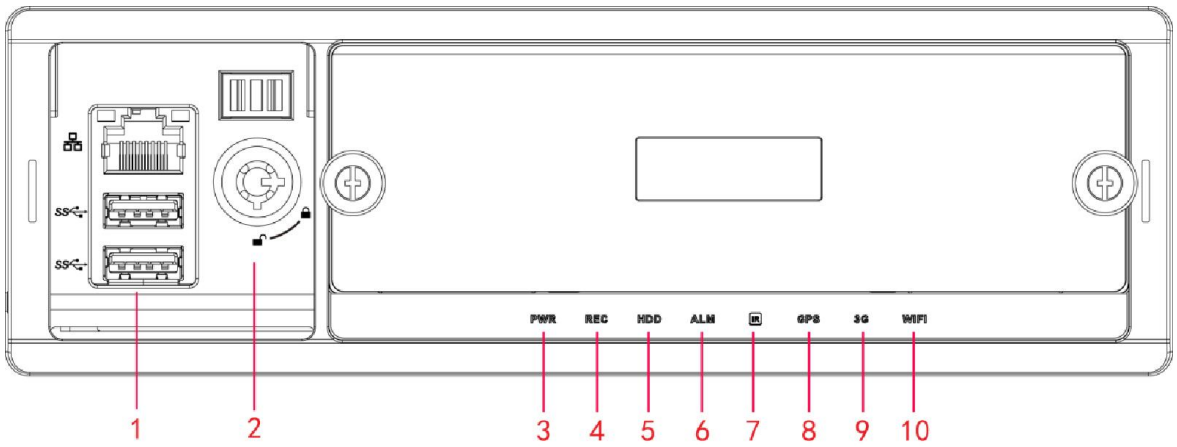


Figure 2-1

Please refer to the following sheet for front panel button information.

SN	Name	Port and Indicator Light
1	RJ45 Ethernet port	1 network port.
	USB port	2 USB ports to connect to mouse or flash disk to backup data.
2	Door lock/unlock (Device on/off button)	● Please unlock the device before you remove the HDD box. Otherwise system is going to shut down automatically. ● System cannot boot up once the button is unlock. Please lock the device first and the boot up the device. It is to protect the HDD.
3	PWR	Power indicator light. ● The red light is on when the device is running. ● The light is off when the device is off.
4	REC	Record indicator light. ● The blue light is on when system is recording. ● The light is off when system is not recording.
5	HDD	HDD indicator light. ● The blue light is on when there is HDD. ● The light is off when there is no HDD.
6	ALM	Alarm indicator light. ● The blue light is on when there is an alarm. ● The light is off when there is no alarm.
7	IR	It is to receive the signal from the remote control.

SN	Name	Port and Indicator Light
8	GPS	GPS indicator light. ● The blue light is on when GPS function is OK. ● The light is off when GPS function is disabled. **Note** Only the device of GPS module supports this function.
9	3G	3G indicator light. ● The blue light is on when 3G connection is OK. ● The light is off when 3G connection is offline. **Note** Only the device of 3G module supports this function.
10	Wi-Fi	Wi-Fi indicator light. The blue light is on when Wi-Fi connection is OK. The light is off when Wi-Fi connection is offline. **Note** Only the device of Wi-Fi module supports this function.

2.1.2 Rear Panel

The mobile DVR rear panel is shown as in Figure 2-2. **Please note slight difference may be found in the rear panel. Your DVR may not support all the functions listed below.**

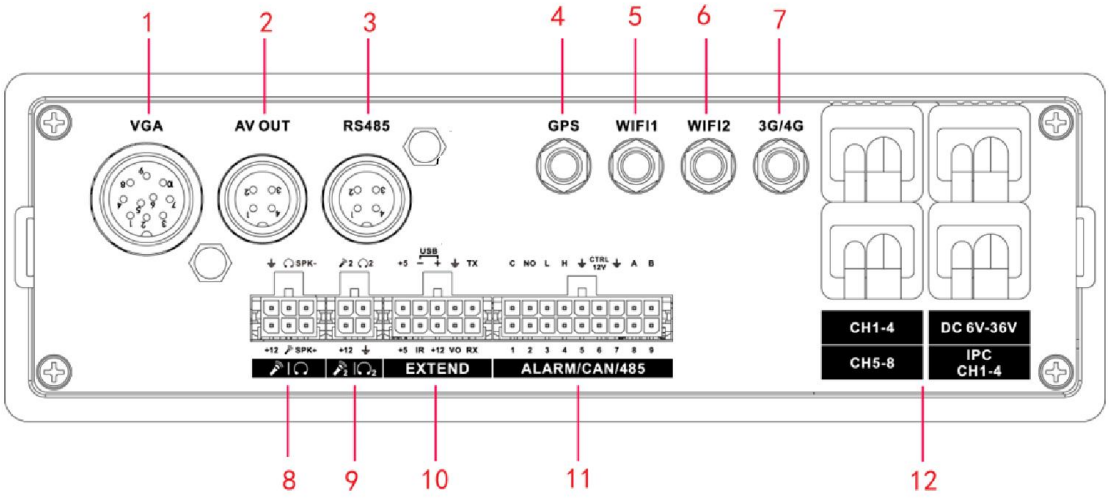


Figure 2-2

Please refer to the following sheet for detailed information.

SN	Name	Function
1	VGA	VGA port, including VGA all kinds of signal ports.
2	AV OUT	Audio/video output port. Connect to mobile screen.
3	RS485	Reserved port

SN	Name	Function
4	GPS	GPS antenna port **Note** Only the device of GPS module supports this function.
5	Wi-Fi 1	Wi-Fi antenna port **Note** Only the device of Wi-Fi module supports this function.
6	Wi-Fi 2	Reserved port.
7	3G/4G	3G/4G antenna port **Note** Only the device of 3G/4G module supports this function.
8	Bidirectional talk input and output port.	Bidirectional input and output port. Refer to chapter 2.1.4 Bidirectional talk port for detailed information.
9	Bidirectional talk input and output port 2.	Connect to pickup. Peripheral pickup for detailed information.
10	EXTEND	Extension port. Each port has specified function. Extension port for detailed information.
11	ALARM/CAN/485	● Alarm input/output port. It includes alarm input port, alarm output port, GND cable and 12V output/ ● CAN BUS port: Reserved port. It is to exchange data with the vehicle CAN network and other devices of CAN port. ● A,B：Control PTZ.
12	CH1-4	Connect to HDCVI mobile camera or analog mobile camera.
	CH5-8	
	DC 6V-36V	Power input port
	IPC CH1-4	Reserved function. Connect to network camera.

2.1.3 Extension Port

This series has the built-in power; you do not need the mobile power supply sourcing.

The following contents are to introduce function of each port. You can make connection cable by yourself or you can contact your local retailer to purchase.

The extension port1 is shown as in Figure 2-3.

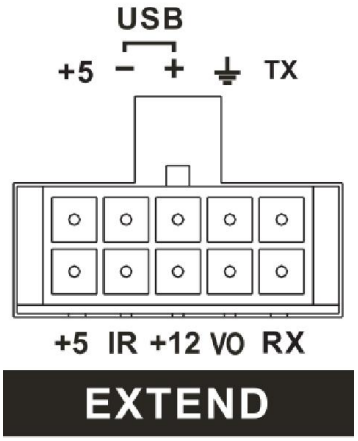


Figure 2-3

Please refer to the following sheet for detailed information.

SN	Function
+5	+5V Output (The bottom line)
+5	USB 5V (The top line)
IR	IR receiver port
-	USB data
+12	+12V output
+	USB data+
VO	AV video output
⏚	GND
RX	RS232 RX
TX	RS232 TX

2.1.4 Bidirectional talk port

The following contents are to introduce function of each port. You can make connection cable by yourself or you can contact your local retailer to purchase.

The bidirectional talk port is shown as in Figure 2-4.

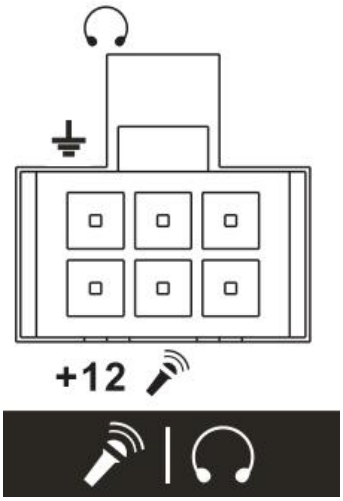


Figure 2-4

Please refer to the following sheet for detailed information.

SN	Function

SN	Function
+12	+12V output
⏚	GND
	Mic In
	Mic Out

2.2 Connecting Audio/Video Input & Output

2.2.1 Video Input

The input video format includes: composite signal PAL/NTSC $1.0V_{P-P}$,75Ω.

The video signal should comply with your national standards.

The input video signal shall have high SNR, low distortion; low interference, natural color and suitable lightness.

Guarantee the stability and reliability of the camera signal:

The camera shall be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

The camera and the DVR should have the same grounding to ensure the normal operation of the camera.

Guarantee stability and reliability of the transmission line

Please use high quality, sound shielded BNC. Please select suitable BNC model according to the transmission distance.

If the distance is too long, you should use twisted pair cable, and you can add video compensation devices or use optical fiber to ensure video quality.

You should keep the video signal away from the strong electromagnetic interference, especially the high tension current.

Keep connection lugs in well contact

The signal line and shielded wire should be fixed firmly and in well connection. Avoid dry joint, lap welding and oxidation.

4-pin aviation output port: for audio/video input. See Figure 2-5.

SN	Function
1	VCC
2	Signal GND
3	Power GND
4	Signal

Figure 2-5

2.2.2 Video output

Video output includes a BNC(PAL/NTSC　BNC（1.0VP- P， 75Ω）output and a VGA output.

When you are using pc-type monitor to replace the monitor, please pay attention to the following points:

- To defer aging, do not allow the pc monitor to run for a long time.
- Regular demagnetization will keep device maintain proper status.
- Keep it away from strong electromagnetic interference devices.

Using TV as video output device is not a reliable substitution method. You also need to reduce the working hour and control the interference from power supply and other devices. The low quality TV may result in device damage.

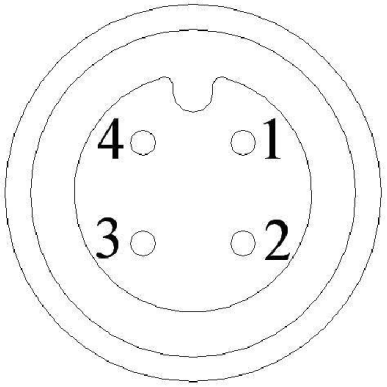
Important

Please use the connection cable (not provided) when you use the VGA output.

2.2.3 Audio Output

The audio output signal parameter is usually over 200mv 1KΩ. It can directly connect to low impedance earphone, active sound box or amplifier-drive audio output device.

Please refer to Figure 2-6. It is for audio and video output.



SN	Function
1	12V camera external power
2	GND
3	Audio
4	Video

Figure 2-6

2.3 Installation Dimension

Please refer to the following figure for installation dimension information. Please note the unit is mm. See Figure 2-7.

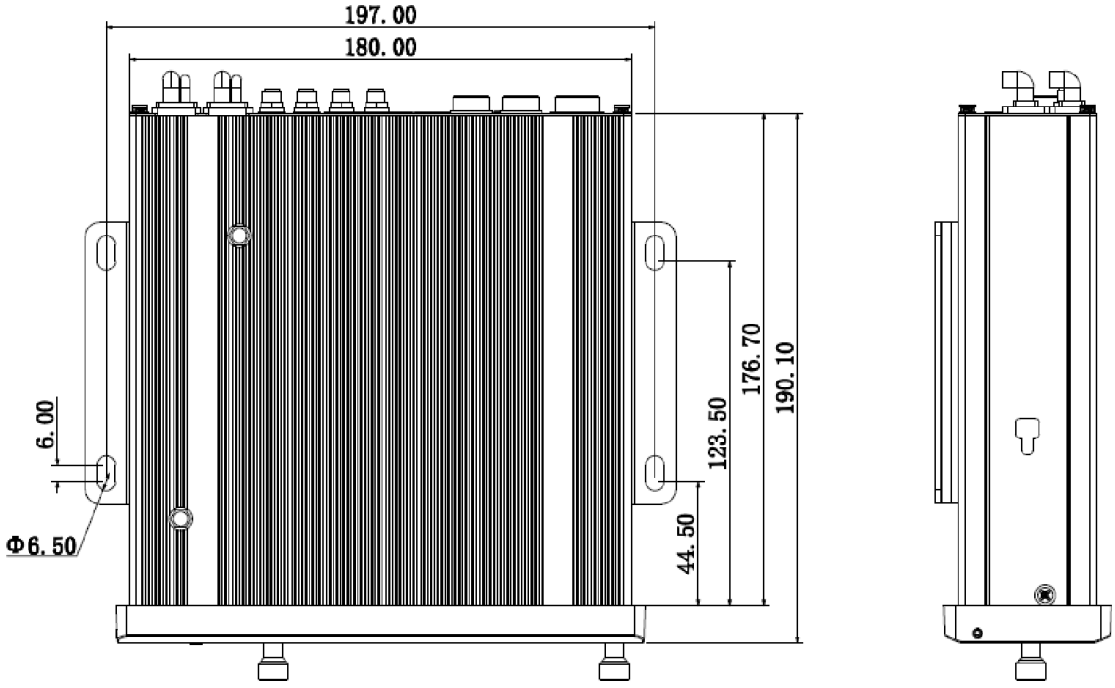


Figure 2-7

2.4 General Installation Layout

The installation position can cover the whole surveillance area and there is no blind spot. See Figure 2-8.

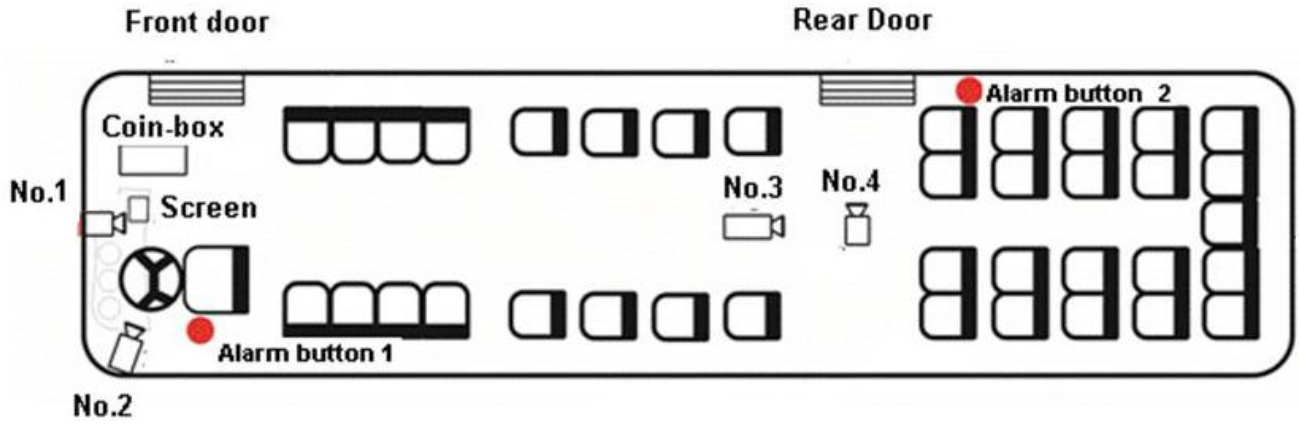


Figure 2-8

2.5 Device Installation

2.5.1 Installation Position and Space

The DVR should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc. At the same time, the installation position can guarantee convenient and reasonable cable layout.

Please note, you need to reserve a proper distance to draw out the HDD.

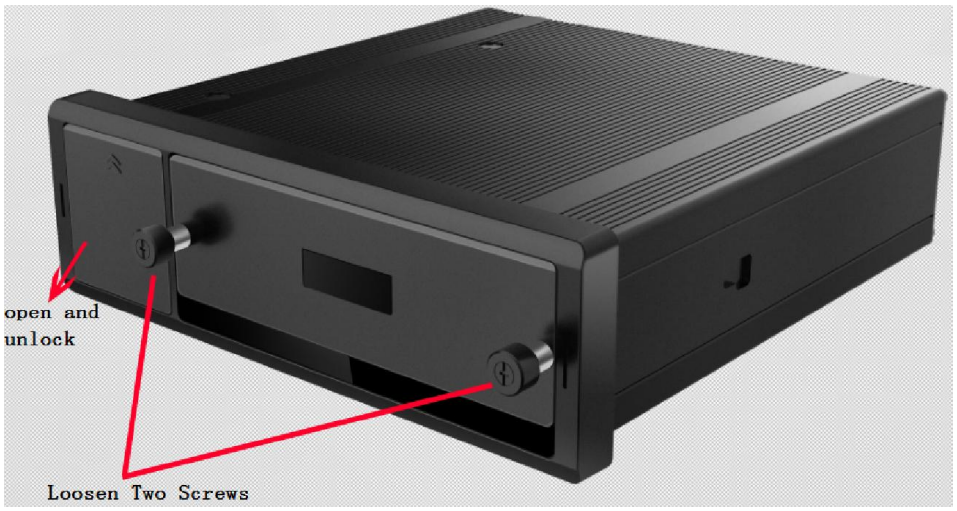


Figure 2-9

Figure 2-10

Do remember using vibration isolation rubber gasket (provided) below the device.

The recommended positions:

- For the city public bus: Use the chassis to install at the back of the driver seat.
- For the passenger transportation bus: Install at the front of the rack or in the luggage cabin.

2.5.2 SIM card Installation (For the product of 3G module only)

This series product supports built-in SIM card/SD card. See 错误!未找到引用源。

Step 1 Remove the HDD box.

Step 2 Insert the SIM card and the SD card to the corresponding slot.

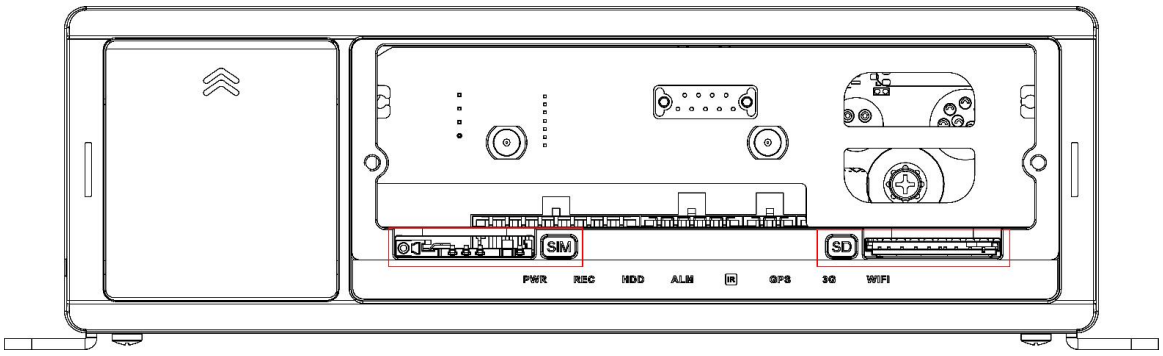


Figure 2-11

Step 3 Install HDD box.

2.5.3 Technical Requirements

There shall be a fixed installation bracket or the slide. The bracket and the slide shall be 20mm above the chassis bottom. See Figure 2-12.

It has the following advantages:

- It is easy to lay the cable, install and remove the device.
- It is easy to realize daily maintenance.
- The chassis has anti-vibration, anti-shock design and can guarantee the sound ventilation.
- It remove the risk of the human touch or trample,

Figure 2-12

2.5.4 Embedded Installation

This series product can be installed in the radio box position. See Figure 2-13.

Figure 2-13

2.6 Camera Installation

2.6.1 Quantity

The whole vehicle can install max four cameras.

2.6.2 Installation Position

The installation position can cover the whole surveillance area and there is no blind spot. See Figure 2-14.

- No.1 camera: It is at the top of the front roof to monitor the environment of the front bus.
- No.2 camera: It is at the left top of the driver seat. It can clearly view the coin-box, the whole front door and the 1 meter area of the front door.
- No.3 camera: It is at the top of the middle roof to monitor the environment of the back bus.
- No.4 camera: It is at the middle of the back door to monitor the back door status and passenger getting in/out status.

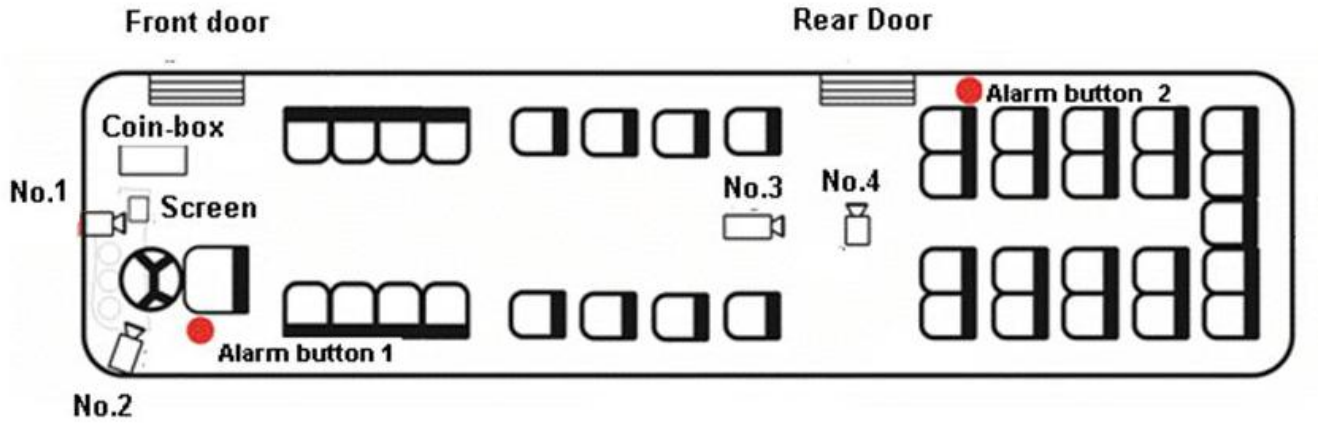


Figure 2-14

2.6.3 Installation Requirements

- There shall be the metal embedded part in vehicle and its thickness shall be more than 1mm.
- The installation position shall be stable, easy to lay the cable and suitable for daily maintenance.

2.6.4 Installation Reference Image

Please refer to the following image for the installation effect. See Figure 2-15.

Figure 2-15

2.7 The Alarm Button Chassis Installation

2.7.1 Installation Quantity

The whole bus max supports six alarm inputs.

Alarm input and output interface is shown as in Figure 2-16.

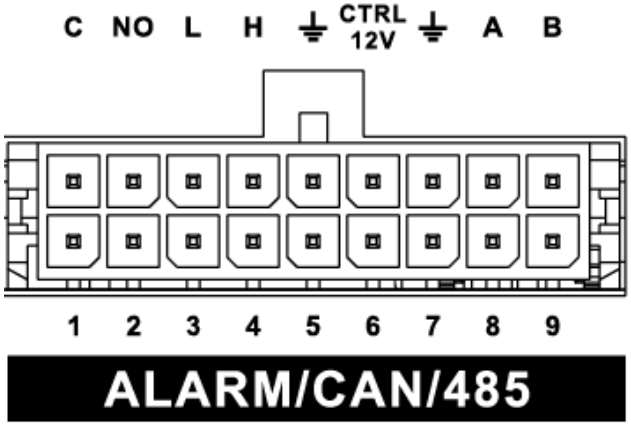


Figure 2-16

Please refer to the following sheet for detailed information.

Name	Pin Introduction
1～9	Alarm input 1～Alarm input 9. Alarm 1-Alarm 7 is the local alarm input. Alarm 8/9 is pulse input.
C, NO	NO/C of alarm output on-off signal
L, H	CAN port.
⏚	Alarm GND
CTRL 12V	Controllable 12V
A, B	485 port. Connect to the PTZ camera.

2.7.2 Installation Requirements

- The cable shall be hidden. The installation shall be secure and it is easy to lay the cable.
- It is easy to realize the daily maintenance and to activate the alarm. It can avoid the misuse.
- Alarm input voltage is DC 12V.
- There are two modes: Controllable 12V ,NO/NC.

2.8 Cable Layout

Please use the hidden cable layout. Bundle the cable for each 50cm. Reserve 100mm at the both ends of the cable and use the cable clip to secure. Please mark the clear cable number. Use the integration video and power cable wiring harness and make sure the cable is secure.

2.9 Device Cable Connection

Device cable connection is an important step. Please note before cable connection, please unplug the power cable.

Please follow the steps listed below:

- Please make sure the e-lock is locked.
- Turn on the vehicle main switch and turn the key position to off.
- Use multimeter to check the vehicle power voltage.

- Search the ACC signal cable. When the key position is off, the ACC signal is o voltage, and when the key is on or to the ACC, the ACC signal is 24V/12V.
- Turn off the vehicle power button and turn the key to the off position.
- Make the vehicle power port: Black: GND. Red: storage battery power. Yellow: ACC signal cable.
- Make the port for camera and device connection and make the camera power button.
- Connect to the device.
- Check the device cable connection.
- Plug the power cable and then debug.

3 Setup and Debug

After installation, please following processes listed below to check the device installation and electric connection and then begin system debug. The whole system needs to pass the all test and debug before it begins trial run.

Before connect to the power socket. Please check:

- The cable connections listed in chapter 2.9 are all OK. .
- The signal connection is OK.

Then you can boot up the device and begin debug.

- Check the power button, mobile DVR indication light is OK.
- The indication light is proper after DVR boots up.
- Debug after DVR boots up normally.

3.1 Log in

System is in multiple-window preview mode after boots up and record setup is continuous record mode. You can see corresponding channel indication light becomes on and record indication light becomes on too.

After the system boots up, default video display is in multiple-window mode.

Click Enter or left click mouse, you can see the login interface. See Figure 1.

System consists of four accounts:

- Username: **admin**. Password: **admin**. (administrator, local and network)
- Username: **888888**. Password: **888888**. (administrator, local only)
- Username: **666666**. Password: **666666**(Lower authority user who can only monitor, playback, backup and etc.)
- Username: **default**. Password: **default**(hidden user)

For your system security, please modify you password after first login.

You can use USB mouse, front panel, remote controller or keyboard to input. About input method:

Click  to switch between numeral, English character (small/capitalized) and denotation.

Figure 1

3.2 Remote Control

The remote control interface is shown as in Figure 2.

Please note remote control is not our standard accessory and it is not included in the accessory bag.

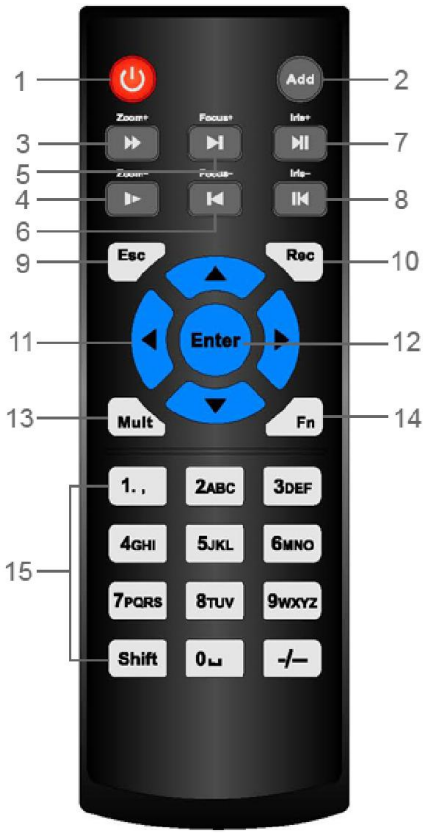


Figure 2

Please refer to the following sheet for detailed information.

Serial Number	Name	Function
1	Power button	Click it to boot up or shut down the device.
2	Address	Click it to input device number, so that you can control it.
3	Forward	Various forward speeds and normal speed playback.
4	Slow play	Multiple slow play speeds or normal playback.
5	Next record	In playback mode, playback the next video.
6	Previous record	In playback mode, playback the previous video.
7	Play/Pause	In pause mode, click this button to realize normal playback.
		In normal playback click this button to pause playback.
		In real-time monitor mode, click this button to enter video search menu.
8	Reverse/pause	Reverse playback pause mode, click this button to realize normal playback.
		In reverse playback click this button to pause playback.

9	Cancel	Go back to previous menu or cancel current operation (close upper interface or control)
10	Record	Start or stop record manually In record interface, working with the direction buttons to select the record channel. Click this button for at least 1.5 seconds, system can go to the Manual Record interface.
11	Direction keys	Switch current activated control, go to left or right. In playback mode, click up/down button to switch playback channel. In 1-window playback mode, click left/right button to control playback speed. . Aux function(such as switch the PTZ menu, enable/disable reuse button)
12	Confirm /menu key	go to default button go to the menu
13	Multiple-window switch	Switch between multiple-window and one-window.
14	Auxiliary key	In 1-ch monitor mode: pop up assistant function：PTZ control and Video color.
		Switch the PTZ control menu in PTZ control interface.
		In motion detection interface, working with direction keys to complete setup.
		In text mode, click it to delete character.
15	0-9 number key	Input password, channel or switch channel.
		Shift is the button to switch the input method.

3.3 Mouse

Left click mouse	System pops up password input dialogue box if you have not logged in. In real-time monitor mode, you can go to the main menu.
	When you have selected one menu item, left click mouse to view menu content.
	Implement the control operation.
	Modify checkbox or motion detection status.
	Click combo box to pop up drop down list

	In input box, you can select input methods. Left click the corresponding button on the panel you can input numeral/English character (small/capitalized). Here ← stands for backspace button. __ stands for space button. In English input mode: _stands for input a backspace icon and ← stands for deleting the previous character.   In numeral input mode: _ stands for clear and ← stands for deleting the previous numeral. When input special sign, you can click corresponding numeral in the front panel to input. For example, click numeral 1 you can input"/" , or you can click the numeral in the on-screen keyboard directly. 
Double left click mouse	Implement special control operation such as double click one item in the file list to playback the video.
	In multiple-window mode, double left click one channel to view in full-window. Double left click current video again to go back to previous multiple-window mode.
Right click mouse	Exit main menu and go to the preview interface.
	Exit current menu without saving the modification.
Press middle button	In numeral input box: Increase or decrease numeral value.
	Switch the items in the check box.
	Page up or page down
Move mouse	Select current control or move control
Drag mouse	Select motion detection zone
	Select privacy mask zone.

3.4 Menu Operation

After you logged in, the system main menu is shown as below. See Figure 3.
There are total seven icons: search, Information, vehicle, setting, backup, advanced and shutdown.
Move the cursor to highlight the icon, then double click mouse to enter the sub-menu.

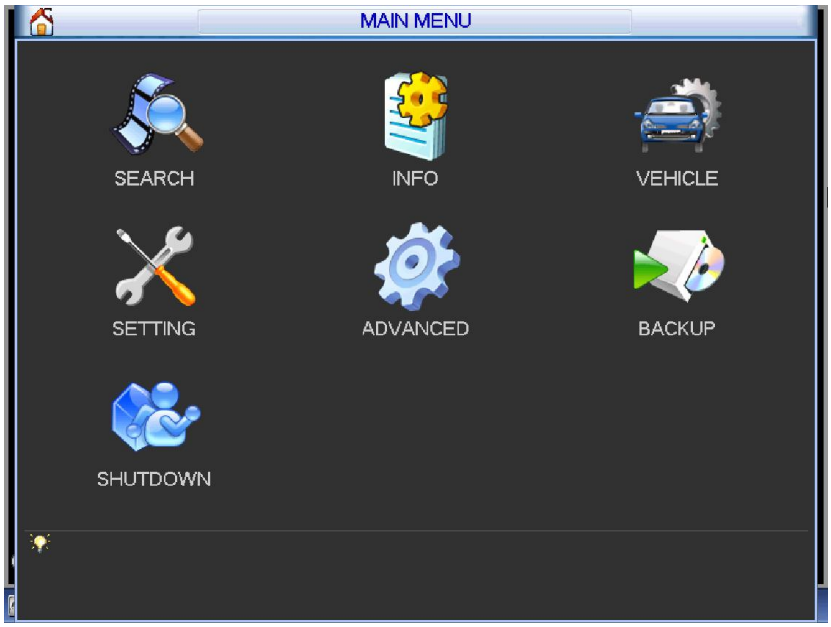


Figure 3

3.4.1 Time Setup

From Main menu->Setting->General, you can see general setup interface is shown as in Figure 4.

- System time: here is for you to set system time.

Note:

- Since system time is very important, do not modify time casually unless there is a must!
- After completed all the setups please click save button, system goes back to the previous menu.

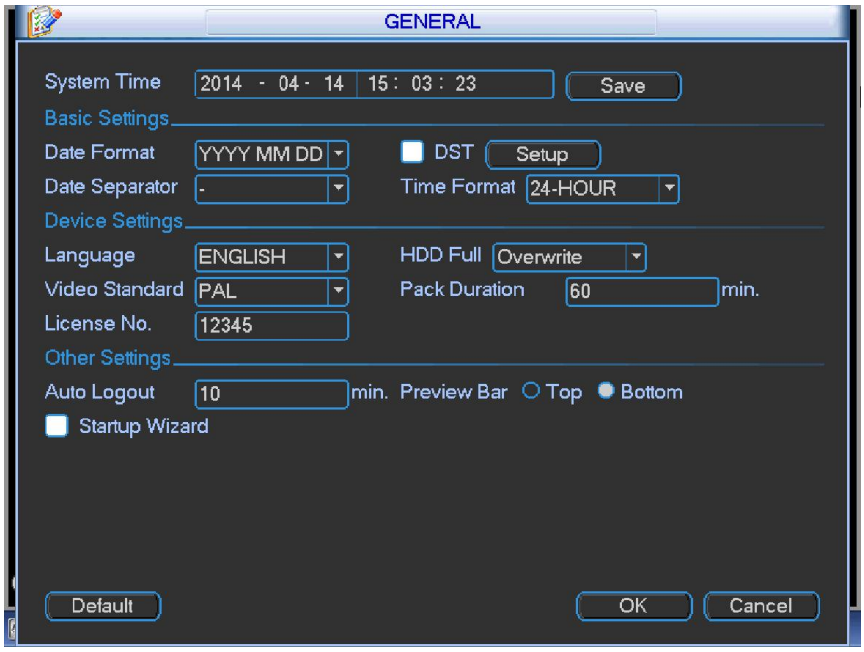


Figure 4

3.4.2 Auto Maintenance

From Main menu->Vehicle->Auto Maintain, Here you can set auto-reboot time and auto-delete old files, auto shutdown, and auto ACC delay (0-65535 minutes) setup. You can set to delete the files for the specified days. See Figure 5.

You can select proper setup from dropdown list. After all the setups please click save button, system goes back to the previous menu.

Note

- The auto boot up and ACC delay function is only valid when vehicle ACC signal connection is OK. The auto shut down has higher priority than ACC delay. If you enable these two functions at the same time, the ACC delay function is null.
- System default setup is to restart on each 2:00 Tuesday.

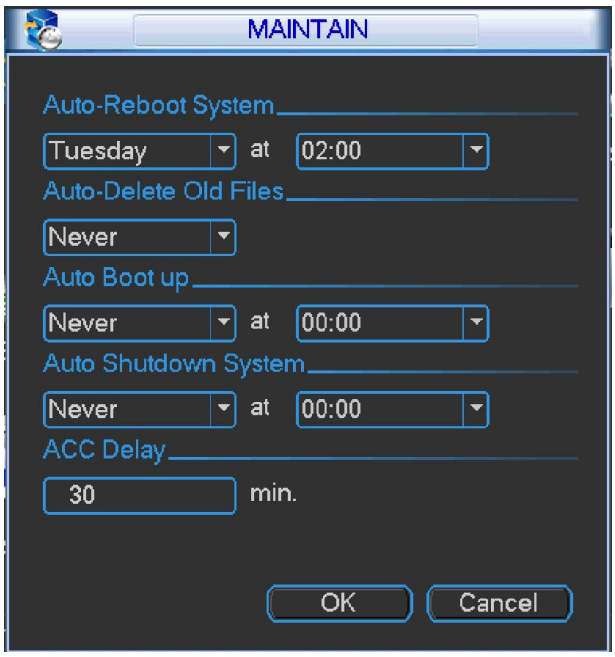


Figure 5

3.4.3 Encode

From main menu->Setting->General, you can see encode setting includes the following items. See Figure 6.

- Channel: Select the channel you want.
- Type: Please select from the dropdown list. There are two options: regular/alarm.
- Compression: System supports H.264.
- Resolution: System supports various resolutions, you can select from the dropdown list. The first two channels support HDCVI 1080P resolution. The last two channels support HDCVI 720P resolution. System default setup is HDCVI 720P. Please make sure you are connecting to the HDCVI 1080P camera if you want to realize 720P/1080P resolution. For 4-channel analog channel, system supports 4-channel 960H resolution. System does not support audio function.
- Frame rate: It ranges from 1f/s to 25f/s in NTSC mode and 1f/s to 30f/s in PAL mode.
- Bit rate type: System supports two types: CBR and VBR. In VBR mode, you can set video quality.
- Quality: There are six levels ranging from 1 to 6. The sixth level has the highest image quality.
- Video/audio: You can enable or disable the video/audio.

- Overlay: Click overlay button, you can see an interface is shown in Figure 3-8. Please note the following overlay titles can not be in the same position. **Please note only the unit of GPS module supports GPS overlay function.**
- Cover area (Privacy mask): Here is for you to set privacy mask section. You can drag you mouse to set proper section size. For remote control operation, you can use <Fn> and the direction buttons to set. In one channel video, system max supports 4 zones.

✧ Preview/monitor: privacy mask has two types. Preview and Monitor. Preview means the privacy mask zone can not be viewed by user when system is in preview status. Monitor means the privacy mask zone can not be view by the user when system is in monitor status.

✧ Time display: You can select system displays time or not when you playback.

✧ Channel display: You can select system displays channel number or not when you playback.

✧ Car No. display: You can select system displays car number or not when you playback.

✧ GPS display: You can select system displays latitude and longitude or not when you playback.

You need to enable the corresponding function and then click set button to set the specified position to display the information.

Please highlight icon  to select the corresponding function.

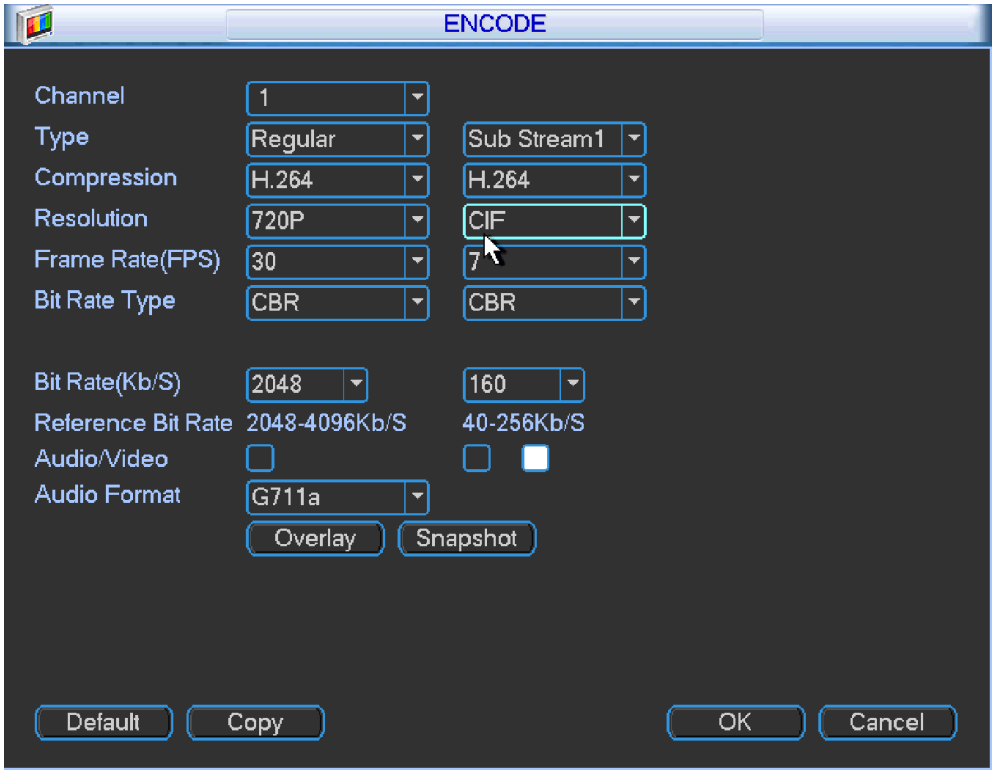


Figure 6

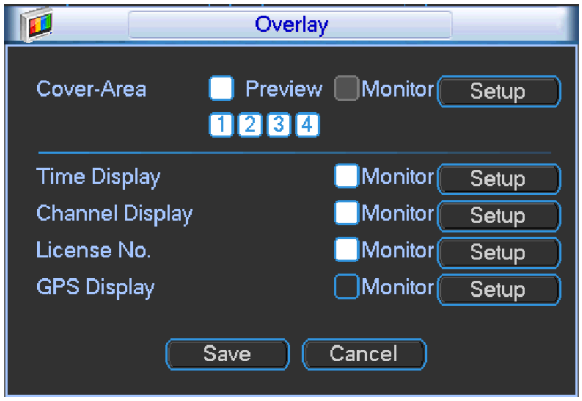


Figure 7

3.4.4 3G

From main menu->Vehicle ->3G, you can see 3G setup interface is shown as below. See Figure 8.
Please follow the steps listed below to set.

a) Boot up 3G module and then check the 3G Enable box to enable this function.
b) Please set AUTH, dial number, user name, and password. Please contact the VPN administrator or your 3G service provider for detailed setup information.
c) 3G network is to connect to a platform so that you can view vehicle real-time information such as real-time video, driver status, vehicle position and etc.
d) The WIFI has the higher priority than the 3G network when these two signals are available at the same. In this situation, the device uses WIFI network by default and disconnect 3G network.
e) If you find the 3G module can not connect to the platform after dial. Please refer to the FAQ or contact your local retailer for help.

Please refer to the following contents for the parameter information.

- Pane 1: Display 3G signal intensity after you enabled 3G function.
- Pane 2: Display 3G module configuration information after you enabled 3G function.
- Pane 3: Display 3G module status information after you enabled 3G function.

It is to display current wireless network signal intensity such as EVDO, CDMA1x, WCDMA, WCDMA, EDGE and etc.

- 3G network: It is to display current wireless network adapter name.
- 3G Enable/Disable: Check the box here to enable 3G module.
- Network type: There are various network types for different 3G network modules. You can select according to your requirements.
- APN: It is the wireless connection server. It is to set you access the wireless network via which method.
- AUTH: It is the authentication mode. It supports PAP/CHAP/ NO AUTH.
- Dial number: Please input 3G network dialup number you got from your ISP.
- User name: It is the user name for you to login the 3G network.
- Password: It is the password for you to login the 3G network.
- 3G wireless network: Here is to display wireless network status, SIM card status, dial status. If the 3G connection is OK, then you can see the device IP address the wireless network automatically allocates.

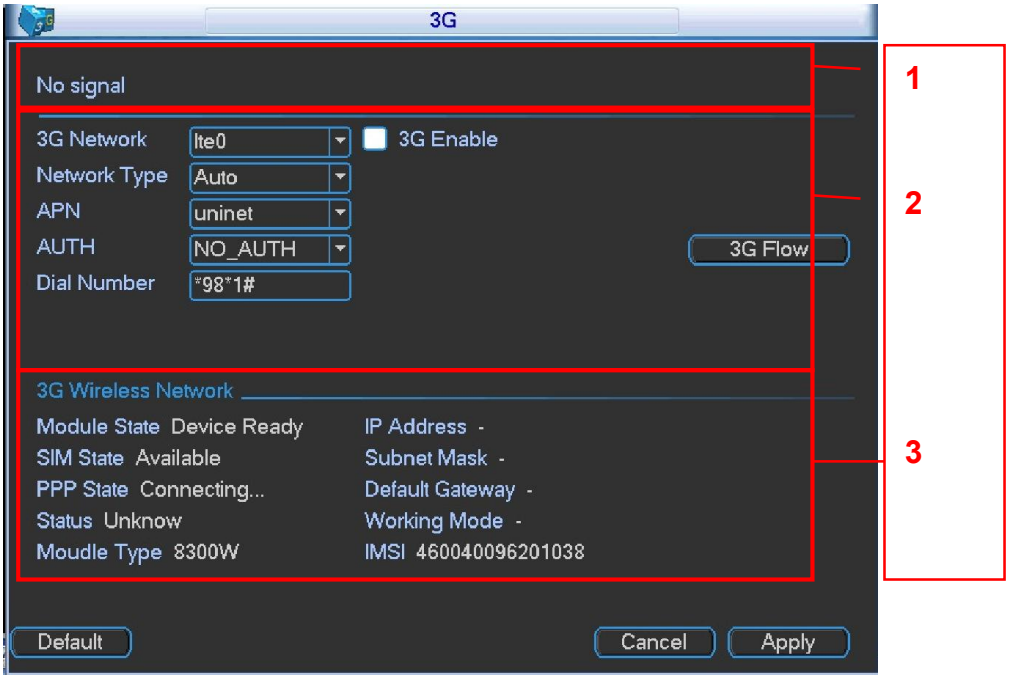


Figure 8

- 3G flow control: It is to show the 3G flow you used. See Figure 9.

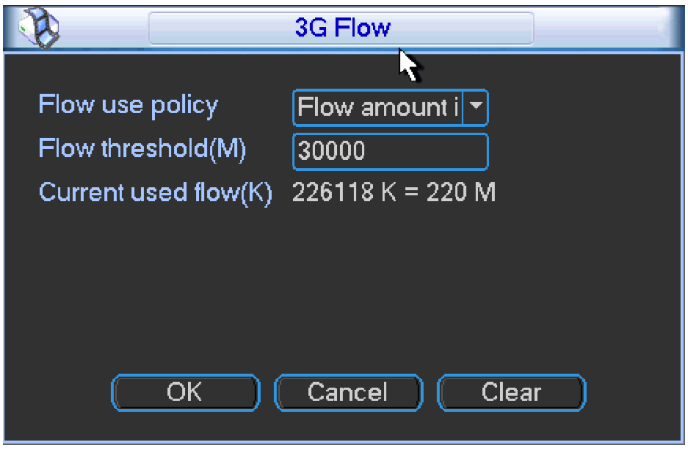


Figure 9

3.4.5 Schedule

In the main menu, from setting to schedule, you can go to schedule menu. See Figure 10.

- Channel: Please select the channel number first. You can select “all” if you want to set for the whole channels.
- Week day: There are eight options: ranges from Saturday to Sunday and all.
- Pre-record: System can pre-record the video before the event occurs into the file. The value ranges from 1 to 30 seconds depending on the bit stream.
- Redundancy: System supports redundancy backup function. It allows you backup recorded file in two disks. You can highlight Redundancy button to activate this function. Please note, before enable this function, please set at least one HDD as redundant. (Main menu->Advanced->HDD Management). **Please note this function is null if there is only one HDD.**
- Snapshot: You can enable this function to snapshoot image when an alarm occurs.

- Record types: There are two types: regular, Alarm.
- Holiday: Highlight the button here, the holiday settings in General interface (Chapter 3.4.1) becomes activated.

Please highlight icon to select the corresponding function. After completing all the setups please click save button, system goes back to the previous menu.
At the bottom of the menu, there are color bars for your reference. Green color stands for regular recording and red color stands for alarm recording.

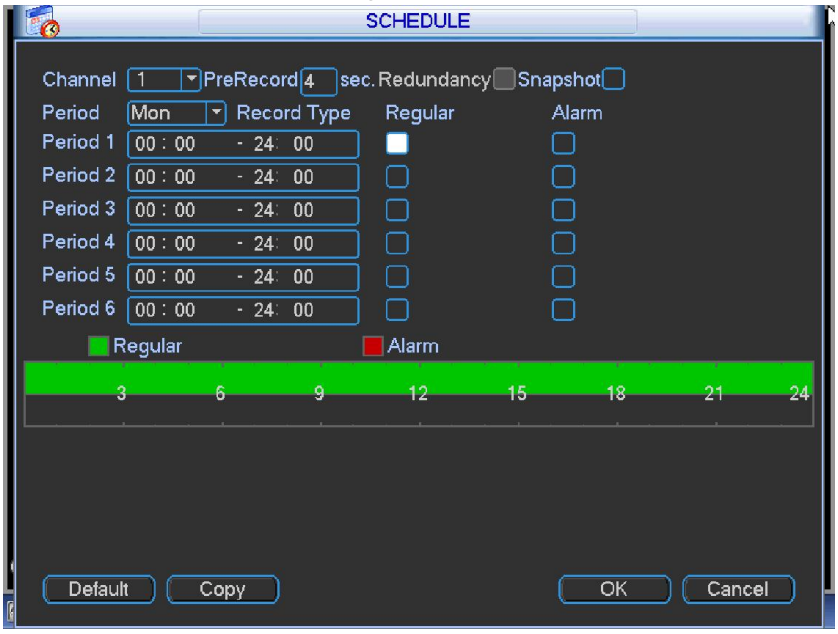


Figure 10

3.4.6 Search

Search interface is shown as below. See Figure 11.

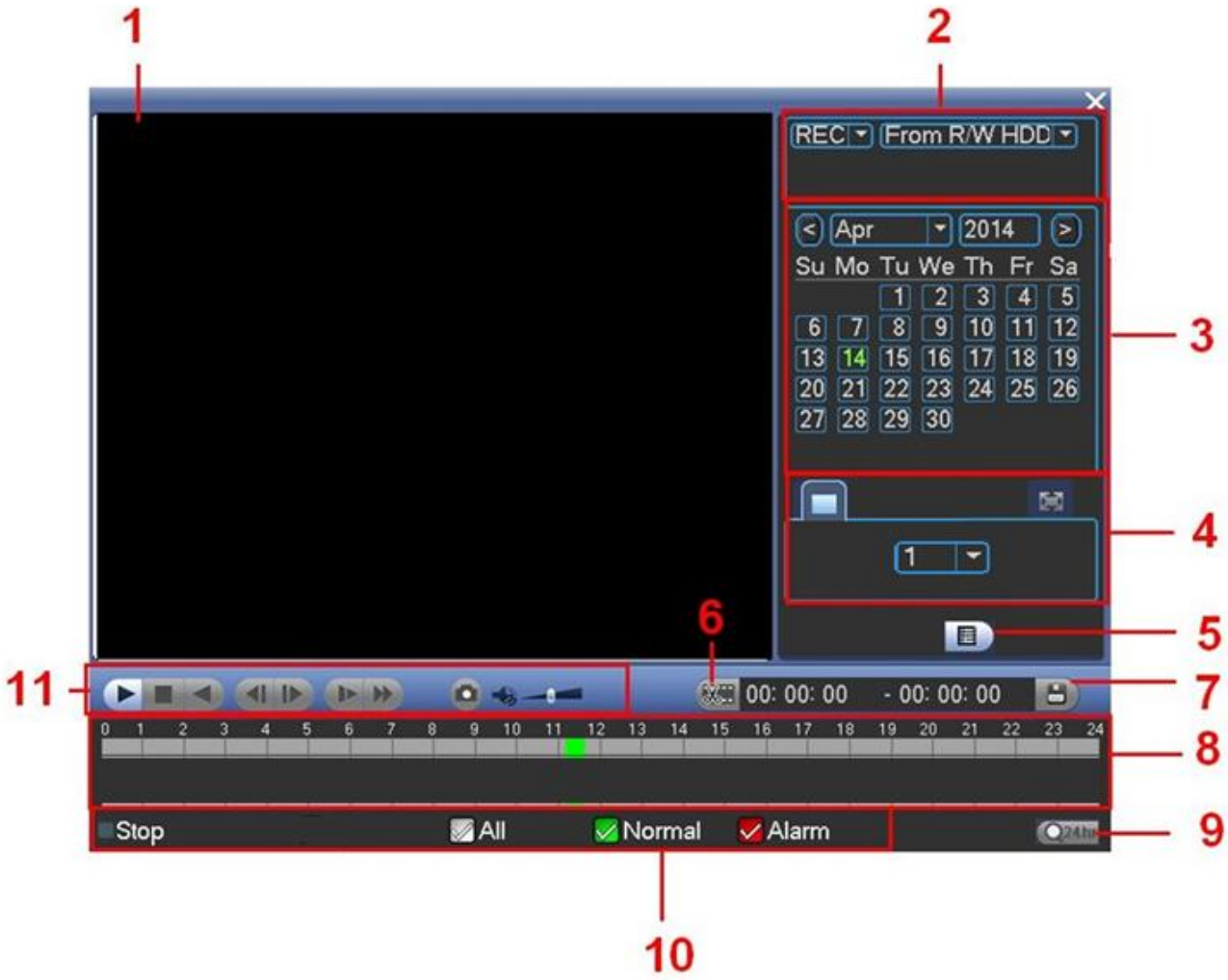
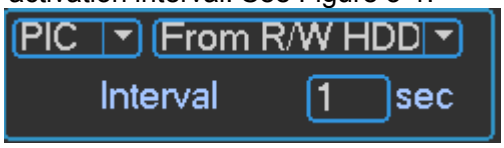


Figure 11

Please refer to the following sheet for more information.

SN	Name	Function
1	Display window	●Here is to display the searched picture or file. ●For this series product, it supports 1-channel playback.
2	Search type	●Here you can select to search the picture or the recorded file. ●You can select to play from the read-write HDD, from I/O device. ●The interface is shown as below if you want to search a picture. You can set activation interval. See Figure 3-1.  Figure 3-1
3	Calendar	●The blue highlighted date means there is picture or file. Otherwise, there is no picture or file. ●In any play mode, click the date you want to see, you can see the corresponding record file trace in the time bar.
4	Playback mode and channel	●Playback mode：1 channel. ●The time bar will change once you modify the playback mode or the channel option.

	selection pane.		
5	File list switch button	●Double click it; you can view the picture/record file list of current day. ●The file list is to display the first channel of the record file. ●The system can display max 128 files in one time. Use the ▲/▼ or the mouse to view the file. Select one item, and then double click the mouse or click the ENTER button to playback. ●You can input the period in the following interface and click button  to begin accurate search. ●File type：R—regular record； A—external alarm record. ●Lock file. Click the file you want to lock and click the button  to lock. The file you locked will not be overwritten. ●Search locked file: Click the button  to view the locked file. ●Return: Click button  , system goes back to the calendar and channel setup interface.	
6	Clip	● Please play the file you want to edit and then click button  when you want to edit. You can see the corresponding slide bar in the time bar of the corresponding channel such as  and  . Click button  to save current contents in a new file. ● You can adjust the slide bar or input the accurate time to set the file end time. Click button  to save current contents in a new file.	
7	Save		
8	Time bar	Display current record type and its corresponding period.	
9	Time bar unit	● The option includes: 24H, 12H, 1H and 30M. The smaller the unit, the larger the zoom rate. You can accurately set the time in the time bar to playback the record. ● The time bar is beginning with 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file.	
10	Record type	There are three modes: Alarm/regular/all. In any play mode, the time bar will change once you change record type.	
11	Playback control pane.	►/ II	Play/Pause There are three ways for you to begin playback. ● The play button ● Double click the valid period of the time bar. ● Double click the item in the file list. In slow play mode, click it to switch between play/pause.
		■	Stop
		◄	Backward play In normal play mode, left click the button, the file begins backward play. Click it again to pause current play. In backward play mode, click ►/ II to restore normal play.

		⏮/⏭	In playback mode, click it to play the next or the previous section. You can click continuously when you are watching the files from the same channel. In normal play mode, when you pause current play, you can click ◀⏮ and ⏭▶ to begin frame by frame playback. In frame by frame playback mode, click ▶/⏸ to restore normal playback.
		▶·	Slow play In playback mode, click it to realize various slow play modes such as slow play 1, slow play 2, and etc.
		⏩	Fast forward In playback mode, click to realize various fast play modes such as fast play 1,fast play 2 and etc.
		Note: The actual play speed has relationship with the software version.	
			The volume of the playback
			Click the snapshot button in the full-screen mode, the system can snapshot 1 picture per second. System supports custom snap picture saved path. Please connect the peripheral device first, click snap button on the full-screen mode, you can select or create path. Click Start button, the snapshot picture can be saved to the specified path.
Other Functions			
13	Other channel synchronization switch to play when playback		When playing the file, click the number button, system can switch to the same period of the corresponding channel to play.
14	Digital zoom		When the system is in full-screen playback mode, left click the mouse in the screen. Drag your mouse in the screen to select a section and then left click mouse to realize digital zoom. You can right click mouse to exit.

Note:

All the operations here (such as playback speed, channel, time and progress) have relationship with hardware version. Some series DVRs do not support some functions or playback speeds.

3.4.7 Register

From Main menu->Vehicle->Register, you can see an interface shown as in Figure 12

This function allows the device to auto register to the proxy you specified. In this way, you can use the client-end to access the DVR and etc via the proxy. Here the proxy has a switch function. In the network service, device supports the server address of IPv4 or domain.

Please follow the steps listed below to use this function.

Please set proxy server address, port, and sub-device name at the device-end. Please enable the auto register function, the device can auto register to the proxy server.

1) The setup interface is shown as in Figure 12.

Important

Do not input network default port such as TCP port number.

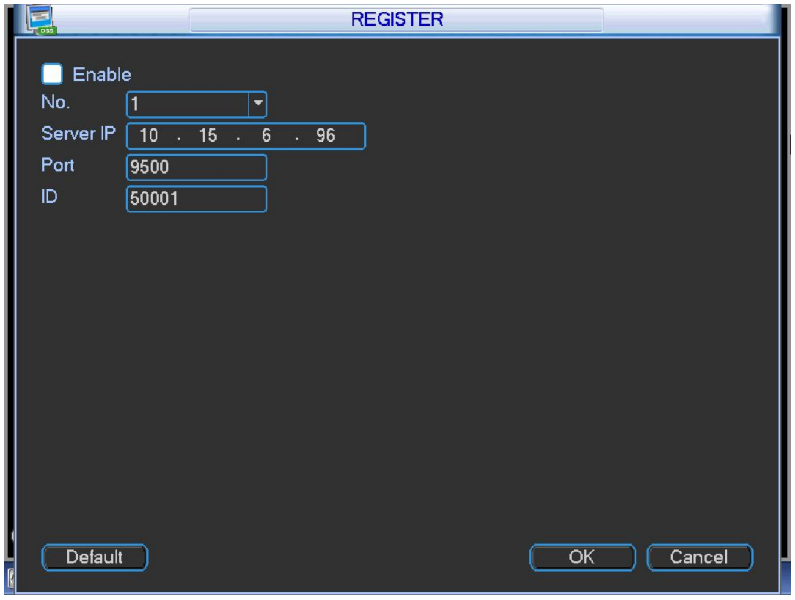


Figure 12

2) The proxy server software developed from the SDK. Please open the software and input the global setup. Please make sure the auto connection port here is the same as the port you set in the previous step.
3) Now you can add device. Please do not input default port number such as the TCP port in the mapping port number. The device ID here shall be the same with the ID you input in Figure 12. Click Add button to complete the setup.
4) Now you can boot up the proxy server. When you see the network status is Y, it means your registration is OK. You can view the proxy server when the device is online.

Important

The server IP address can also be domain. But you need to register a domain name before you run proxy device server.

3.5 FAQ

Q: I can not boot up the mobile DVR.
A: Please check power supply is proper or not. Then check the key power is open or not (ACC signal). The device can boot up after you enabled the power.

Q: One channel video is missing in preview mode.
A: Please check corresponding channel signal input is proper or not.

Q: Device does not delay but I have enabled key power (ACC) latch function.
A: Please check power cable and ACC signal cable connection is OK or not.

4 Appendix Mobile DVR Installation Acceptance Certificate

Here is a sheet for you reference

<table>
<tr><td colspan="6">Mobile DVR Installation Acceptance Certificate
Date: ____Y____M_____D</td></tr>
<tr><td>Client Name</td><td colspan="2"></td><td colspan="2">Manufacturer Name</td><td></td></tr>
<tr><td rowspan="2">Initial Check</td><td colspan="5">First, you can check the following items：
● Device quantity and model.
● Check the product warranty card, certificate card, user’s manual.
● Device appearance and accessories bag.
Vehicle Supervisor Signature:

Installation engineer signature:

Date: ____Y____M_____D</td></tr>
<tr><td colspan="5">Then you can check the following items:
● Camera position and its angle.
● Device installation position.
● Cable layout.</td></tr>
<tr><td rowspan="7">Installation</td><td>Device</td><td colspan="4">Installation Position</td></tr>
<tr><td>Mobile DVR</td><td colspan="4"></td></tr>
<tr><td>Camera</td><td colspan="4"></td></tr>
<tr><td>Pickup</td><td colspan="4"></td></tr>
<tr><td>Regulated Power</td><td colspan="4"></td></tr>
<tr><td>Power supply</td><td colspan="4"></td></tr>
<tr><td rowspan="4">Function Test</td><td>Main Function</td><td>Item</td><td>Details</td><td>Accept</td></tr>
<tr><td>Monitor</td><td></td><td>4-ch real-time monitor. When select one channel, it can reach standard definition resolution.</td><td></td></tr>
<tr><td>Search</td><td></td><td>Record search and playback. It can display record type, record time , channel title and etc.</td><td></td></tr>
<tr><td>User Account</td><td></td><td>Provide different rights for different users.</td><td></td></tr>
</table>

	System Information	HDD Info	HDD connection status, HDD total capacity, free capacity, record start/end time and etc.	
		BPS	Use wave to display current bit stream and its HDD use within per hour.	
		Log	Display system log and can specify the log type.	
		Version	Hardware specification, software version and release date.	
	System Setup	General	System time, record storage mode, DVR number and etc.	
		Encode	Audio/video encode mode, frame rate, quality and etc.	
		Record	Schedule record, external alarm record and etc.	
		COM	Set COM, baud rate and etc.	
		Network	Set network address, port and etc.	
		Alarm	Set external alarm output and record respond parameter setup.	
		Motion Detection	Set video loss parameter.	
		PTZ	Set PTZ communication protocol, baud rate and etc.	
		Default	Select some item(s) or select all items to restore factory default setup. Please note user account does not support this function.	
	Advanced	HDD management	HDD management, clear data and etc.	
		Abnormity	Alarm setup for no HDD, HDD error and etc.	

		Auto Maintenance	Set the auto maintenance item.	
		TV Adjust	Adjust the playback output video zone.	
	Backup	Detect	Check backup device, list the backup devices available, display name and capacity.	
		Backup operation	Backup the file(s) to the device.	
	Vehicle Supervisor Signature: Installation Engineer： Date: ____Y____M_____D			
Accept Signature	Client Authorized Representative Signature: Date：____Y____M_____D			

SN	Plate Number	Self-defined Number	Device SN	Version Number	Note

Note:

- **This document is for reference only. Slight difference may be found in the user interface.**
- **All the designs and software here are subject to change without prior written notice.**
- **All trademarks and registered trademarks mentioned are the properties of their respective owners.**

- **If there is any uncertainty or controversy, please refer to the final explanation of us.**
- **Please visit our website or contact your local retailer for more information.**