

# SS8 & SS8C

## User Manual



**American Bus Video Inc.**

Toll Free 866.468.8042

[AmericanBusVideo.com](http://AmericanBusVideo.com)

[VehicleVideoCameras.com](http://VehicleVideoCameras.com)

[FleetDriverRiskManagement.com](http://FleetDriverRiskManagement.com)

30+ Years of Mobile Digital Sales & Service Experience

All Rights Reserved. © American Bus Video Inc. 2020

The contents of this manual are subject to change without notice. V1.4

# Important User Information

## **Minimum System Requirements for HDPlayer Function:**

CPU: Intel Core i5 3.4 GHz, RAM: 6GB (4GB, 8GB would be better), Video standard: Intel(R) HD Graphics

## **System Administrator Access Required**

Some PC Operating network driven environments, like school districts, limit access permissions and control as well as require applications to be downloaded, opened and run as an Administrator, making Limited User access problematic for the proper operation of the programs. It is the customer responsibility to secure IT authority to run the video player or CMS programs as Administrator, if the customer PC is operating in a limited access user environment. The GUI aka Video Player used to decrypt files and playback the video requires "Administrator" permissions to function properly in as evidence chain of custody. Without Administrator privileges the user will not be able to run the program, unless they operate a standalone PC for use as an isolated video player off the network.

## **About On Screen GPS Mapping**

This feature requires unrestricted access to Google maps, so some highly restricted proxies servers may prevent this. If the Internet access is prevented at the customer side, the free On Screen Mapping feature may be prevented from functioning. This does not affect the speed of the vehicle recorded on the screen during the trip. Also we have found the GPS antenna location needs to be on the vehicle roof to assure the best function.

## **Memory Storage Required**

The SS8 & SS8C series are sold WITHOUT memory storage device, as the size of the SDXC memory cards or 2.5 inch SATA SSD 2TB Internal drive will not only be up the customer but in many cases customers can source the cards at a lower cost than ABV can. ABV recommends use of Sandisk Extreme or Kingston SDXC memory cards "U3" processor speed or faster, for optimum use as some other brands have had issues with several mobile DVR brands over the last 10 years.

## **Basic PC Skills Are Required**

The Mobile Digital Video Recorders (MDVR) we provide operate on a PC program viewer program called HDPlayer. These programs have been designed to be intuitive and require no formal training to operate the program without a manual for those who seek additional guidance, as long as the user possesses basic PC skills.

This is where some problems with PC skills begin for some who are not well versed in the use of their district or company computers. Use of these GUI programs are predicated on the assumption/requirement that the customer of this high tech video file evidence management tool has authorized personnel who will be operating this program who are competent with the basic operation of their own company PCs.

Companies lacking a trained PC competent authorized user for this system will need to have their designated persons trained on the basic use of their company PC prior to using this product, as lack of basic PC operation skills and use could compromise the integrity of the product application, the video files and possibly their admissibility as evidence in a court litigation procedure. The manufacturer and their representatives are not responsible, licensed or certified to train users of this program on the basic functions of a customer or company's own company PCs.

ABV does not supply the resources required to teach customers how to operate their PCs to a degree that they may then operate programs running on them. It is the customer's responsibility to learn how to operate their own PC before implementing a product that requires operation on their PC. Simply stated; if the intended customer system operator is incapable of downloading files from the internet, opening programs under Administration access, running or executing application files under Administration access, cannot save a file, cannot transfer a file or browse for a file, nor make a screen capture of the program viewer GUI, cannot send a saved file by e-mail, cannot plug a USB SD card Reader into a removed memory storage device, cannot save a file to a portable digital storage device, then you are not ready for a digital vehicle surveillance system. Basic PC skills are a requirement of all who intend to operate these products.

### **Network System Administrator (In-House) Required for CMS Operation (Wi-Fi & Cellular)**

Should you have Wi-Fi equipped DVRs but are not using the Wi-Fi Wireless function then this does not apply, as you will not be using the CMS software.

Those customers incorporating the Central Management Software (CMS) Server or Client Software in order to enable the Wi-Fi or Cellular functionality in their mobile video application must have in-house a Network Administrator with at least the training and certification of Microsoft Certified Systems Administrator (MCSA) or Microsoft Certified Systems Engineer (MCSE) to manage all aspects of the Network Server operation including; CMS software install, CMS Network Server configuration, CMS Network Server operation, CMS Network Server Maintenance, troubleshoot the DVR Server & CMS software, and or operate the higher functions of the program capabilities as they require access to your Wi-Fi or Cellular network, your mail server, creating SQL databases and many other network administrator functions. (1<sup>st</sup> Warning)

It is solely the responsibility of the purchaser to provide competent certified Network Administrator with at least the training and certification of Microsoft Certified Systems Administrator (MCSA) or better yet Microsoft Certified Systems Engineer (MCSE) to install, configure, operate, maintain and troubleshoot the DVR Server & CMS software, and or operate the higher functions of the program capabilities as they require access to your Wi-Fi or Cellular network, your mail server, creating SQL databases and many other network administrator functions. This is a Customer CMS Server Hosted solution for those who wish to maintain all data in-house, with free software intended for those who know what they are doing only. Cellular CMS

Server Network driven solution is not for those who know a little about networks and feel lucky. (2<sup>nd</sup> Warning)

American Bus Video Inc (ABV) provides network solutions that require at a minimum Microsoft Certified Systems Administrator (MCSA) or better yet Microsoft Certified Systems Engineer (MCSE) in house, to assure you are competent and able to assume all functions of the network server and DVR that communicates with it without assistance, as ABV provides no support, training, technical service, phone support for CMS Server/DVR Server or Client Server software for Wi-Fi/3G/4G /4G LTE systems that we offer. (3<sup>rd</sup> Warning)

In simple terms, if you do not have a competent in house certified Network Administrator with at least the training and certification of Microsoft Certified Systems Administrator (MCSA) or better yet Microsoft Certified Systems Engineer (MCSE) to install, configure, operate, maintain and troubleshoot the DVR Server & CMS software, and or operate the higher functions of the program capabilities as they require access to your Wi-Fi or Cellular network, your mail server, creating SQL databases and many other network administrator functions, then you should not be purchasing a Wi-Fi or Cellular Network driven system that requires a CMS Server, DVR Server or Client Server. (Final Warning)

### **Minimum Requirements for CMS Server:**

Dell T320 server or better

SQL Server 2003,SQL\_server 2005 or newer

Wan IP (Fixed IP): The IP address is never changed. Small Fleets: Windows 7,Windows 8

Large Fleets will require: Window Server 2012 or newer

### **Operational Verification**

It is solely the responsibility of the user of the product to provide verification of product functionality when installed, each time the vehicle is operated, as well as pulling video files for viewing weekly, as a way to verify the system is operating properly, in order to prevent missing the documentation of important events due to operational problems, that could have been detected before they prevented important video evidence from being documented. Operational verification can be a simple daily visual verification of the

DVR LED Status LEDs displaying on the unit faceplate to verify the unit is powered up and recording, or by use of the Remote DVR Status module (option). ABV Recommends weekly verification via memory card files playback test, to insure the cameras are all properly aimed, that the camera lenses are clean, that the audio is functional for each camera, and that the DVR is recording when the ignition is on.

"Agency implies Stewardship" is a time proven principal, meaning if you own a product, it is your responsibility to maintain the product to insure you are able to obtain value from the use or operation of that product.

ABV recommends daily LED DVR status and weekly video recording system check, to insure all systems are recording properly so when you need them most in an incident you do not learn the DVR blew a 10 cent fuse 7 years ago (actual case) and has not worked a day since.

# Contents

Contents.....	1
1. Specifications.....	1
2. Precautions.....	3
3. Main Features.....	4
4. Wiring Diagram.....	6
5. Connection - Front Panel.....	7
5.1 Electronic Lock.....	7
5.2 LED.....	8
5.3 Remote Receiver.....	8
5.4 SSD.....	9
5.5 Conversion Box (SATA to USB).....	14
5.6 SD Card Slot.....	15
5.7 USB Slot.....	15
6. Back Plate.....	16
6.1 Power.....	16
6.2 Camera.....	17
6.3 LCD Monitor.....	18
6.4 Buzzer.....	19
6.5 Alarm, Speed Interface, DB26.....	20
6.6 Panic Button (Optional).....	23
6.7 Built-in GPS Antenna.....	25
7. Menu.....	26
7.1 Menu Introduction.....	26
7.2 Menu Lock.....	27
7.3 Keyboard Operation Instructions.....	29
7.4 Manually Record.....	31
7.5 Playback.....	31
7.6 Log.....	34
7.7 Display Mode Switching.....	34
7.8 System.....	35
7.9 Disk.....	35
7.10 Volume.....	37
8. Record Setup.....	37
8.1 Power On Rec.....	37
8.2 Cyclic Rec.....	38
8.3 Event Rec.....	38
8.4 Video Quality.....	39
8.5 Record Channel.....	41
8.6 Event Duration.....	41
8.7 File Length.....	41
8.8 Motion Sensitivity.....	42
8.9 G-Force Sensitivity.....	42
8.10 File Type.....	42

9. Display.....	43
9.1 Camera Display Setting.....	43
9.2 Camera Name Setting.....	43
9.3 System Language Setting.....	44
9.4 Audio Out.....	44
9.5 OSD Display Setting.....	45
9.6 Menu on.....	45
9.7 Speed.....	46
9.8 GPS.....	47
9.9 Mirror.....	47
10. Network.....	48
10.1 LAN Port and Server Setting.....	48
10.2 Wi-Fi Network Setup and Server Setup.....	50
10.3 2G/3G/4G Control and Network Setup.....	52
10.4 Ap Internet.....	53
10.5 Network Status.....	54
10.6 Server.....	55
10.7 FTP.....	56
11. System.....	57
11.1 Log in Setup.....	58
11.2 License Plate Number Setup.....	58
11.3 System Time Setup.....	59
11.4 Scheduled Recording.....	62
11.5 Exception.....	63
11.6 ACC Settings.....	63
11.7 Alarm Information Setting.....	64
11.8 Update.....	66
11.9 Configuration.....	70
11.10 System Info.....	71
12. FAQ.....	71
13. APPENDIX.....	72
APPENDIX I : Abbreviation & Description.....	72
APPENDIX II : Accessories.....	73
APPENDIX III: Compatibility Storage List.....	73

# 1. Specifications

8CH HD DVR		
System	Operating system	Linux
	Operating interface	Graphical menu operation interface (OSD)
	Video permission	Administrator & user setting
Video	Video input	8 x 1080P analog high definition
	CVBS output	1 x PAL / NISTC
	Video display Mode	Single / Split / Quad / 8 Cam / 9 Cam display
	Video standard	PAL: 25FPS, NTSC: 30FPS
	Compression	H.264 main profile
Audio	Audio input	8 channels
	Audio output	1 channel
	Record format	Synchronized video & audio recording
	Audio compression	ADPCM
Digital processing & storage	Image resolution	Max 8 x 1080P(1920*1080)
	Video bit rate	64kbps~4Mbps/channel
	Storage	56~2700MB/(channel*hour)
	Audio bit rate	32kbps
	Storage	2.5 inch SATA SSD x 1, max 2TB; SD card x 1, max 128GB
Alarm	Alarm input	8 channels
	Alarm output	2 channels, 1 buzzer
	Motion detection	High/low sensitivity adjustable
Interface for communication	IR	1 channel
	RS232	2 channel
	RS485	2 channel
	CAN	1 channel
	RJ45	1 channel
	USB mini-B	Not available

	USB2.0	1 channel
	USB3.0	1 channel
Wireless	2G / 3G / 4G	Optional
	Wi-Fi	Default
	Wi-Fi hotspot / AP	Optional
GPS		Internal or external GPS / GLONASS module, coordinate/speed can be encoded in video stream and upload to server by wireless communication
G-Force / Gyroscope	Available	6 axis sensor
Software	Windows client	Available
	IOS client	Available
	Web portal	Available
Power	Input	10~32V
	Output	12V@4A
	Max Power Consumption	60W
	Standby Power Consumption	100mW
Electrical	Operating temp. & humidity	-20~+70 degree/ <80%
	Super Capacitor	Available
	Clock	Built-in clock, Calendar



## 2. Precautions

1. Motion detection function is set to OFF by default. Alarm files will be created when there's motion detected when set ON.
2. G-Force recording is recommended to set ON during driving for emergency recording use. G-Force level is optional.
3. If the DVR can not boot up, try to remove all storage disks from the DVR, and then restart the DVR to check whether it can boot normally or not.
4. Make sure the yellow ACC wire is connected to the ignition wire and the red V+ wire to the positive pole of the battery. In this case, the DVR can continue to record for some time after the vehicle engine is off. If the ACC wire (the yellow one) and the V+ wire (the red one) are connected directly to the positive pole of the battery, the DVR will still work even if the vehicle is not started. If the ACC wire and the V+ wire (the red one) are connected directly to the ignition wire of the vehicle, the recording files will be easily damaged when the vehicle engine is off.
5. All the disks must be formatted on the DVR before use.
6. The login user name can not be changed. Password is editable
7. All types of video files including event recording files will be overwritten by default. If user does not want the event files to be overwritten, set [Event Rec. Lock] to ON in the menu of [Event Rec.] under [Record].
8. The corresponding types of SENSOR-IN1~8 on the trigger line are as follows:

SENSO R-IN1	SENSO R-IN2	SENSO R-IN3	SENSO R-IN4	SENSO R-IN5	SENSO R-IN6	SENSOR -IN7	SENSO R-IN8
ALARM INPUT 1~4				Reversa l input	Brake input	Turn left input	Turn right input

## 3. Main Features

### Controlled by Touch Screen

- All settings and operations can be made through the monitor if connected with the suggested touch screen.

### Video and Audio

- 8 channels X 1080p, 8 video inputs with audio.
- 3 video output with audio.
- 2 CVBS outputs (1 X 6 PIN OUT, 1 X 4 PIN OUT), 1 X VGA (1080P).

### Recording

- 8-CH Video & Audio Recorder (with image resolution up to 1920 X 1080), and with G-Force data and GPS data.
- Multiple recording modes: power on recording, normal recording, schedule recording, event recording (i.e., G-Force recording, speed recording, motion detection recording, Alarm recording 1~8, Panic button recording). Cyclic recording and 15 seconds pre-recording are supported.
- Recording files are stored in the SSD or SD card. Cyclic recording is optional.
- Real-time recording of license plate numbers, driving speed, G-Force/Gyroscope 6D accelerated speed, longitude and latitude, and GPS tracks.

### Preview and Playback

- Support single channel, or 8 channels audio and video play simultaneously.
- Support searching recording files by recording date, recording type.
- Able to drag the progress bar when playing back.
- Indicate recording status, alarm status.

### Storage Types

- Support SSD, SD cards (SDHC, SDXC).
- If both SSD and SD card are used for storage, SSD will be preferred. SD card. can be stored only when SSD is not installed.
- SD card can be removed conveniently when not in recording or playing status.

### Backup

- Support USB disk or USB hard disk to backup copy of recording files.

## Network

- Support LAN, WI-FI, 2G / 3G / 4G, automatic network switching;
- LAN, WI-FI and 2G / 3G / 4G have the priority of connections which will switch automatically to save 2G / 3G / 4G data;
- Add FTP file upload function. File list can be searched/downloaded on CMS Client;
- Wi-Fi supports STATION and AP mode, in which Wi-Fi AP mode supports mobile direct connection devices, which is convenient for preview and configuration on mobile;
- Support remote real-time video stream, image stream pre-view function
- Support alarm recording, alarm information, log information, GPS trajectory automatic upload function, which is convenient for vehicle abnormal conditions analysis and vehicle trajectory tracking;
- Support remote configuration, remote upgrade which achieve real remote control function;
- Support web portal, PC Windows Client, mobile IOS and Android APP. Users can remotely monitor vehicles on computer or mobile phone.

## Alarm

- 8 channels alarm inputs, one channel buzzer output and 2 channels alarm outputs.
- Over-speed alarm.
- Motion detection alarm.
- G-Force alarm.
- Panic button alarm.

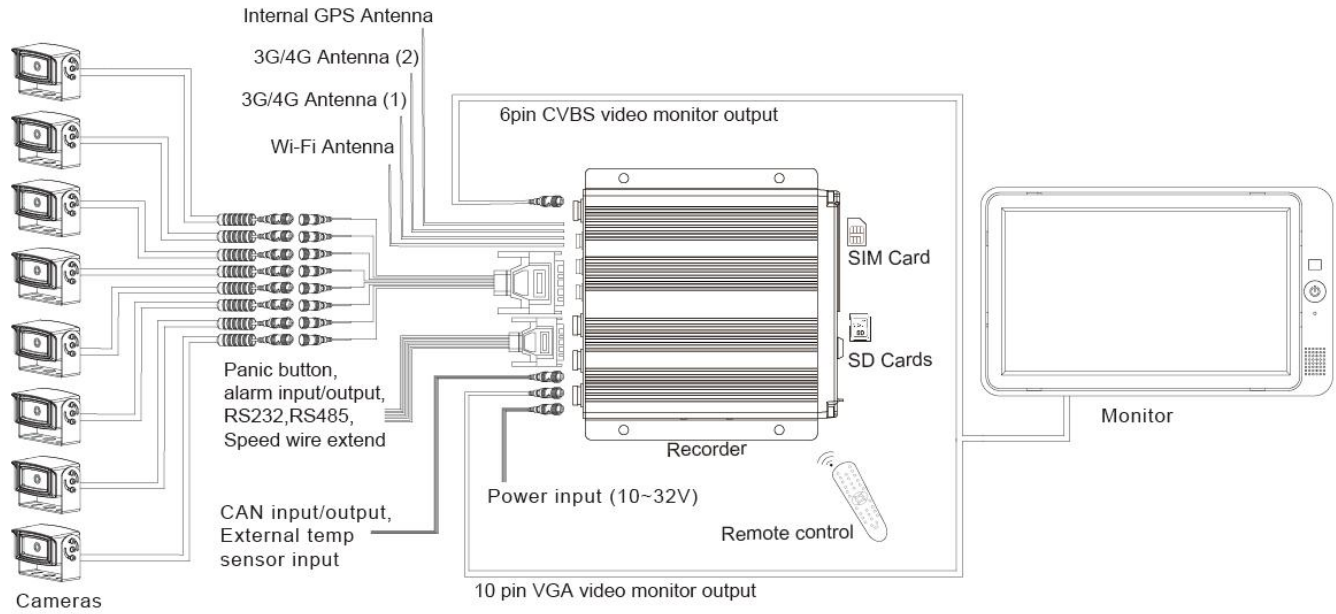
## Charger

- 5V, 1.5A output from the USB interface to mobile devices, such as mobile phone.

## Security

- User password protection. The DVR can only be accessed with correct password.
- Support account management.

# 4. Wiring Diagram



## 5. Connection - Front Panel



① Front Cover Buckle

② Electronic lock

③ LED Indicators

④ IR Receiver

⑤ Hard Driver Box

⑥ SD Card Slot

⑦ USB 3.0 Interface

⑧ SIM Card Slot

### 5.1 Electronic Lock

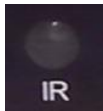
- Close the front cover and turn the groove by the key to the icon “off”, so as to prevent hard disk drive from moving out. Or turn to the icon “on” to open the front cover.
- Electronic Lock Function: DVR will stop recording and buzzer will beep when the front cover is open.

## 5.2 LED

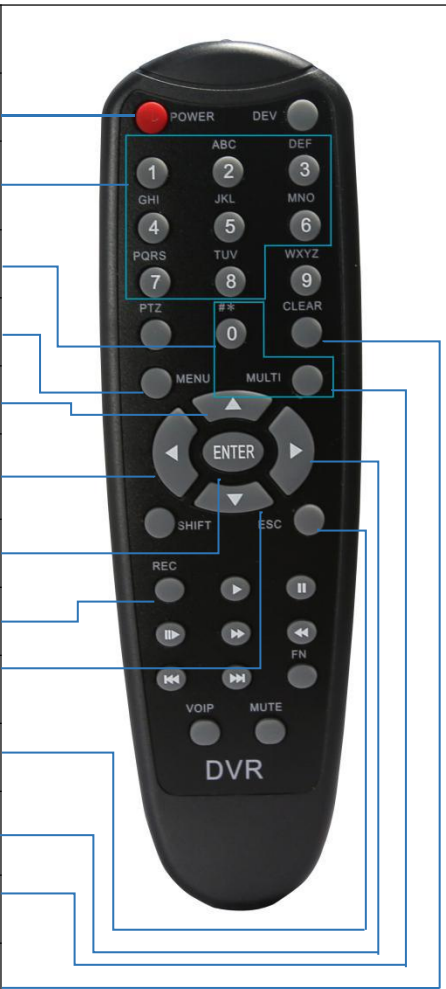


- PWR: Power indicator. It always lights up when the DVR is powered on.
- RUN: Working status indicator. It will flash slowly when DVR is running.
- ALM: Alarm indicator. It keeps on with the record when there is Alarm-in, G-Force activation or motion detection or speed or panic button event alarm.
- GPS: GPS indicator. It lights up when GPS is running.
- CAM: Camera indicator. It keeps on when camera is working and off when not working.
- SD: SD card indicator. It flashes when recording, keeps on when not recording, and off when SD card in abnormal status.
- SSD: SSD indicator. It flashes when recording, keeps on when not recording, and off when SSD in abnormal status.
- CELL: Cellular indicator. It always lights up when uploading data and off when no or cellular module in abnormal status.
- Wi-Fi: Wi-Fi indicator. It always lights up when uploading data and off when no or Wi-Fi module in abnormal status.

## 5.3 Remote Receiver



The IR Receiver is for the DVR to receive command from the remote control. Remote control instructions:

DESCRIPTION	KEY	
Not in use	POWER	
Switch the screen to channel 1~8 for live view	1~8	
Switch to quad view	0	
Call up main menu	MENU	
Upward for MENU selection	Up	
Towards to left for MENU selection or MENU setup	Left	
Enter the sub-menu to set and confirm	ENTER	
Manual recording button	REC	
Downward for MENU selection	Down	
Exit	ESC	
Towards to right for MENU selection or MENU setup	Right	
Switch to display mode	MULTI	
Clear the input info	CLEAR	

## 5.4 SSD

- Hard disk Type: SSD (Max. capacity: 2T )
- Size: 2.5 inches
- Installation of the disk

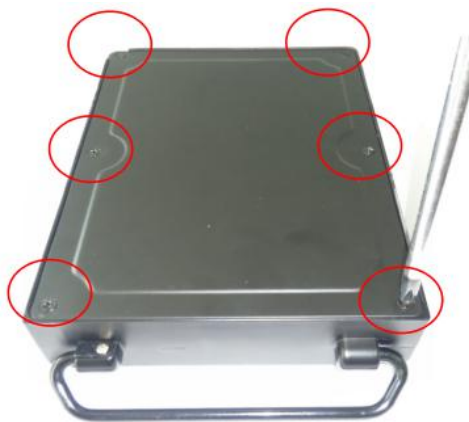
Step 1: Make sure the lock is OPEN, open the two ears of the front panel, and pull down the front plate.



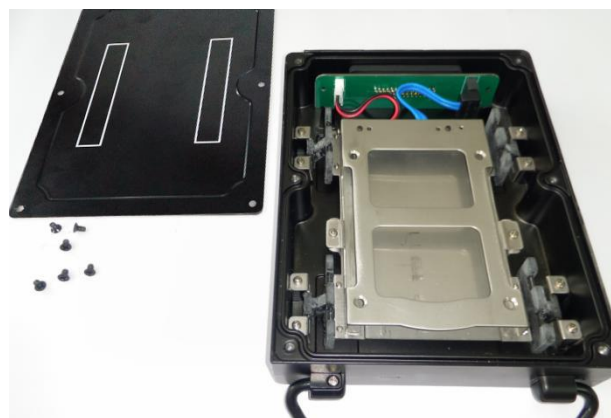
Step 2: Pull the hard disk case from the DVR by the ring.



Step 3: Take the 6 screws on the bottom side out of the disk case by screw driver.

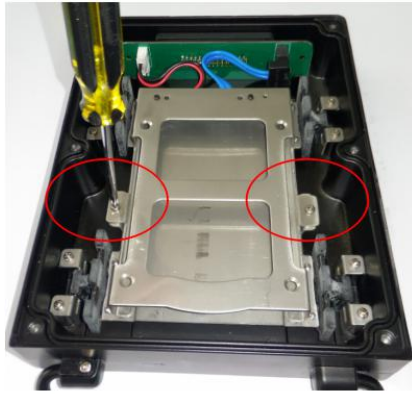


Step 4: Take down the bottom panel of the case and check the wiring of the hard disk.

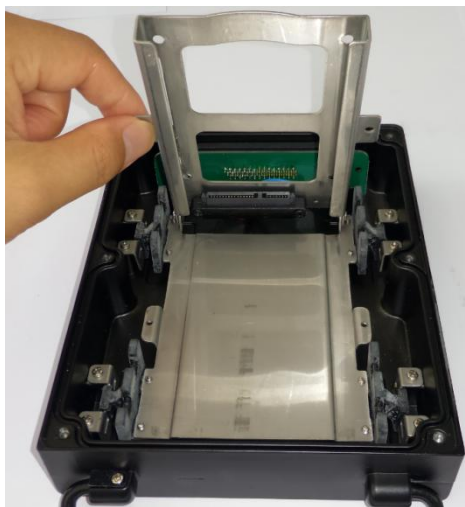




Step 5: Take out the 2 screws on the movable supporting shelf.



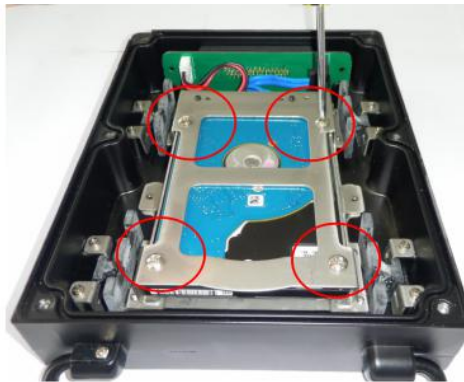
Step 6: Revolve the shelf into the vertical direction.



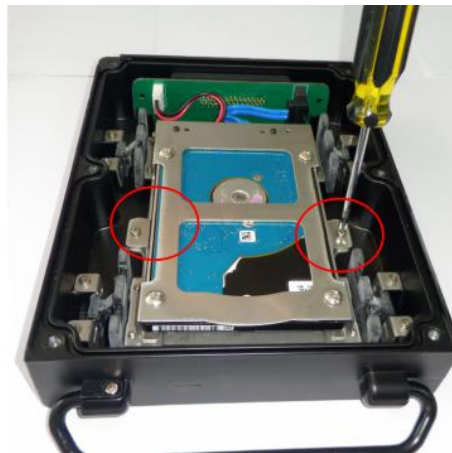
Step 7: Insert the 2.5" SSD.



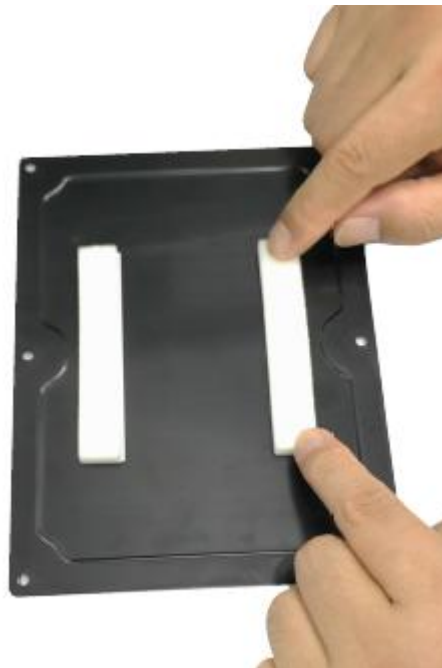
Step 8: Revolve the shelf back to the horizon direction and lock the disk with 4 screws in the accessory packet.



Step 9: Lock the shelf with the 2 screws.



Step 10: Stick two pieces of cushioning sponge on the white-marked area of the bottom cover.



Step 11: Check if the waterproof plastic on the bottom is missing or not. If not, place the bottom plate on the case and lock it with the 6 screws.



Step 12: Insert the disk case back into the DVR.

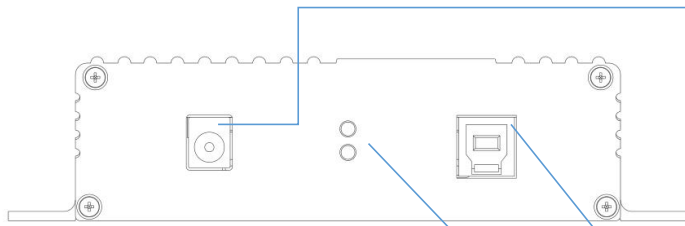


Step 13: Pull back the front plate back and lock the 2 ears. And then revolve the key back to CLOSE position.



## 5.5 Conversion Box (SATA to USB)

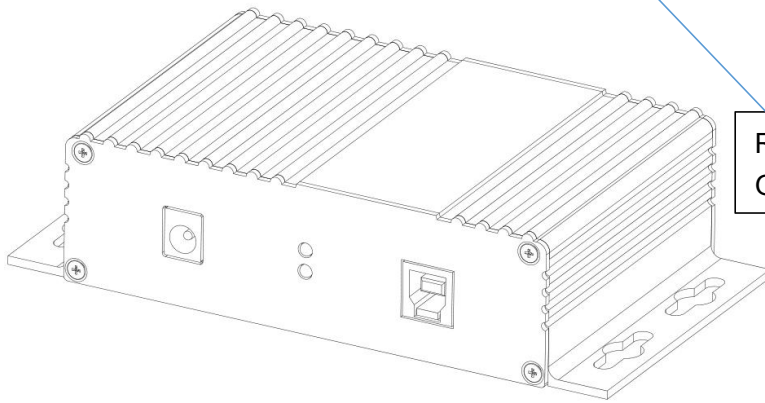
Box back side :



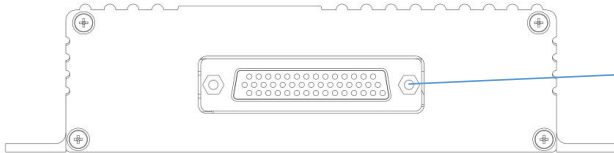
DC power connector--supply power (12v).When USB interface to PC front Panel, need to supply power by DC connector;  
When USB interface connect to back Panel, don't need to supply power by DC connector, PC will supply power directly to Conversion box.

USB2.0

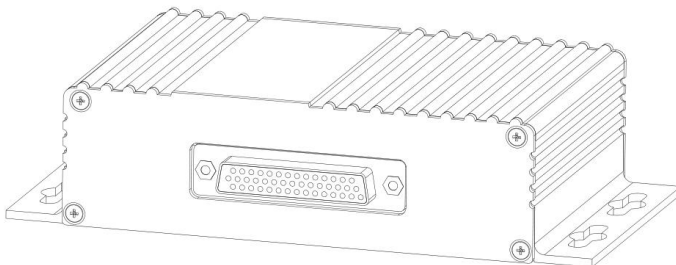
Red light: power on  
Green light: Conversion box is working



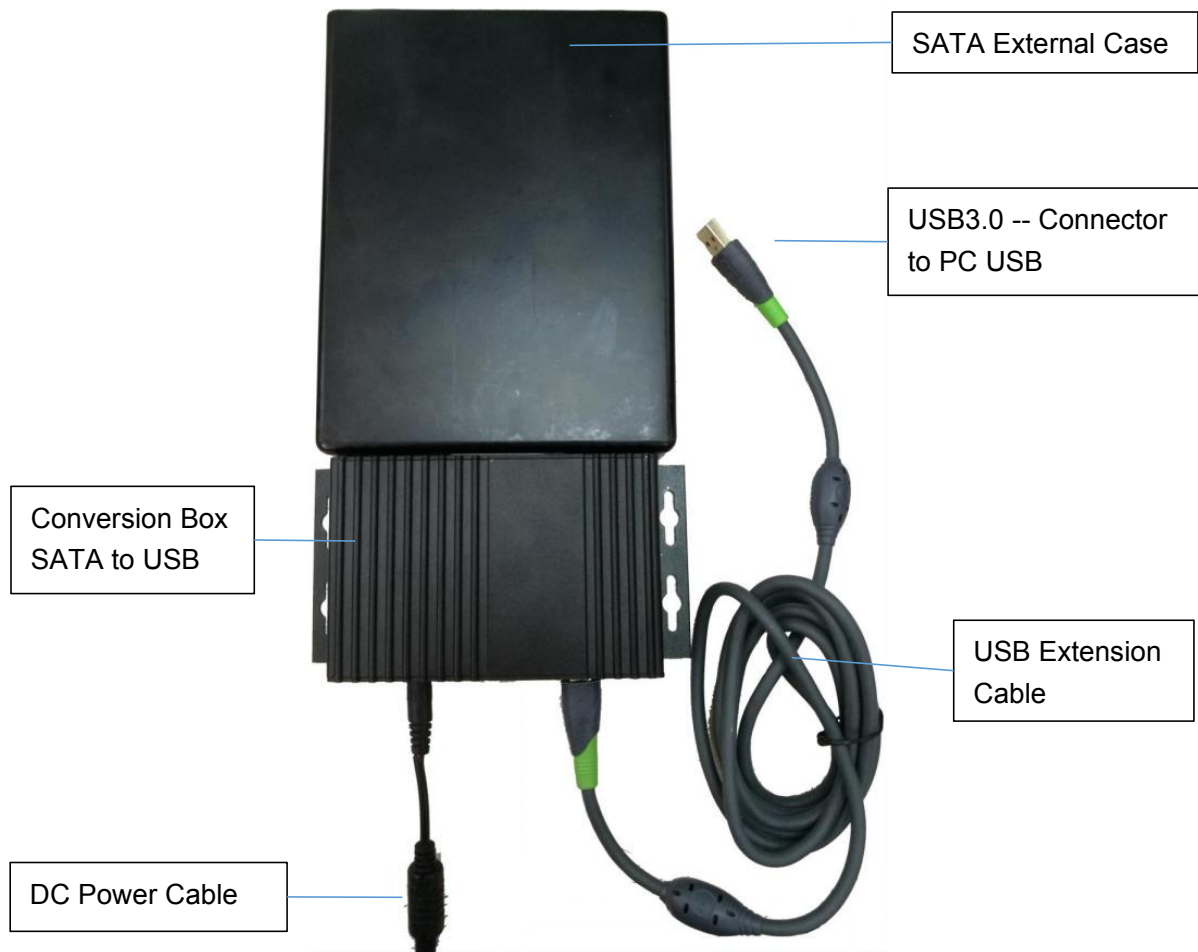
Box front side :



SATA Connector



Connection :



## 5.6 SD Card Slot

- SD card capacity:  $\leq 128G$ .
- Insert, remove SD card
  - Step 1: Use the key to unlock and open front plate
  - Step 2: Insert SD card to SD card slot
  - Step 3: Close the front plate and use the key to lock

## 5.7 USB Slot

USB 2.0/3.0, Max. capacity: 2T

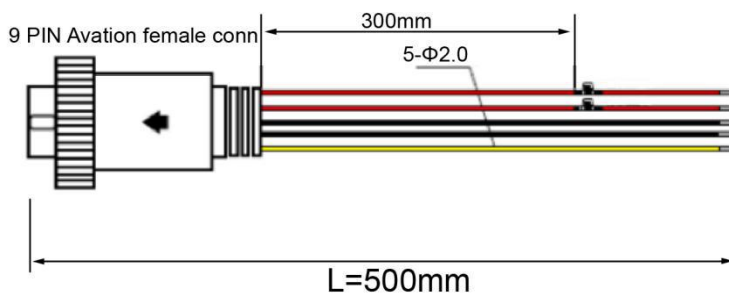
## 6. Back Plate



- |   |                                    |
|---|------------------------------------|
| ① Power input (10~32V)  | ⑧ 10 PIN VGA video monitor output  |
| ② Camera cable input  | ⑨ Ethernet (RJ45)                  |
| ③ Panic button, alarm input/output, RS232, RS485, Speed wire extend | ⑩ 6 PIN CVBS video monitor output  |
| ④ GPS Connector   | ⑪ USB 2.0 input                    |
| ⑤ Cellular Connector, TX/RX   | ⑫ Debug                            |
| ⑥ Wi-Fi Connector   | ⑬ Cellular Diversity Connector, Rx |
| ⑦ CAN input/output, External temp. sensor input                     |                                    |

### 6.1 Power

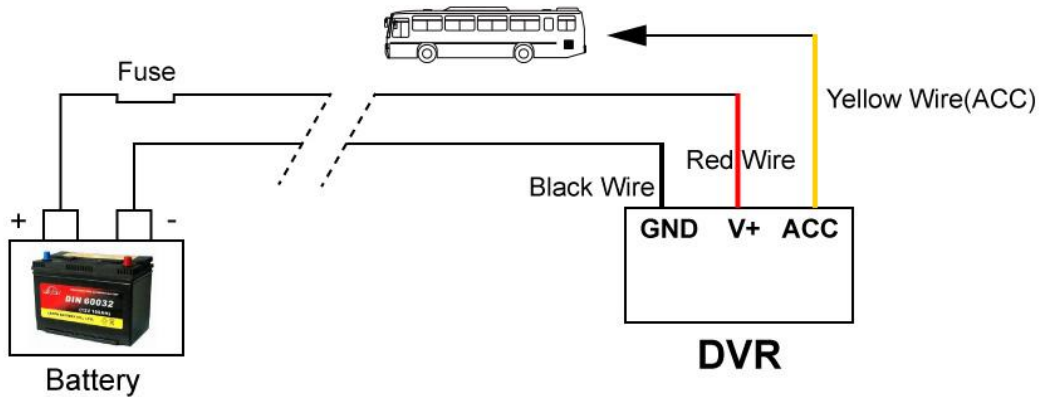
- Power input



9 PIN Aviation female connect to 9 PIN Aviation male on the DVR

- Connection

Connect ignition wire to yellow ACC wire of DVR, battery Positive to V+ (Red wire), Negative to GND (black wire).



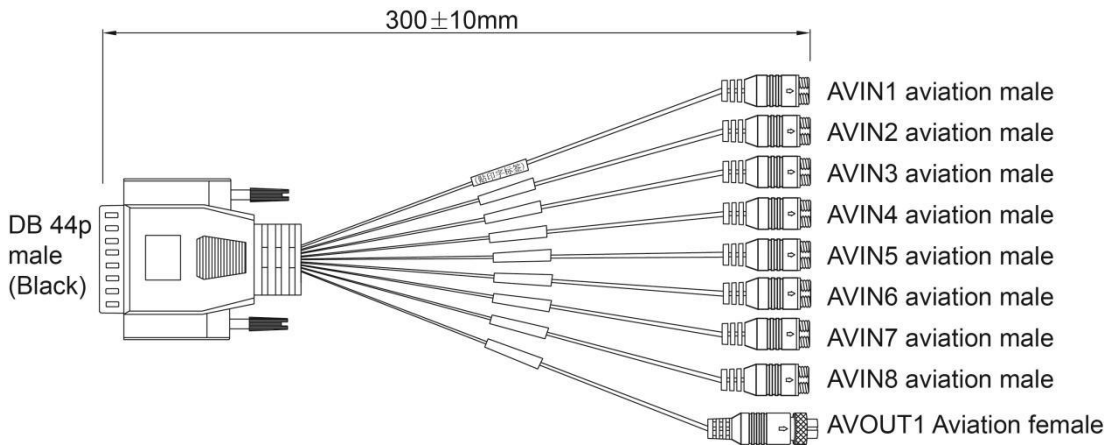
## 6.2 Camera

- See below for 8 cameras diagram

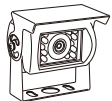


- How to connect cameras

Connect 8 cameras on below cable which connects to back plate of DVR



DB44P female on the DVR connect to DB44P male



Connect No.1 camera to AVIN1 4 PIN Aviation male



Connect No.2 camera to AVIN2 4 PIN Aviation male



Connect No.3 camera to AVIN3 4 PIN Aviation male



Connect No.4 camera to AVIN4 4 PIN Aviation male



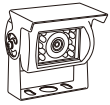
Connect No.5 camera to AVIN5 4 PIN Aviation male



Connect No.6 camera to AVIN6 4 PIN Aviation male



Connect No.7 camera to AVIN7 4 PIN Aviation male



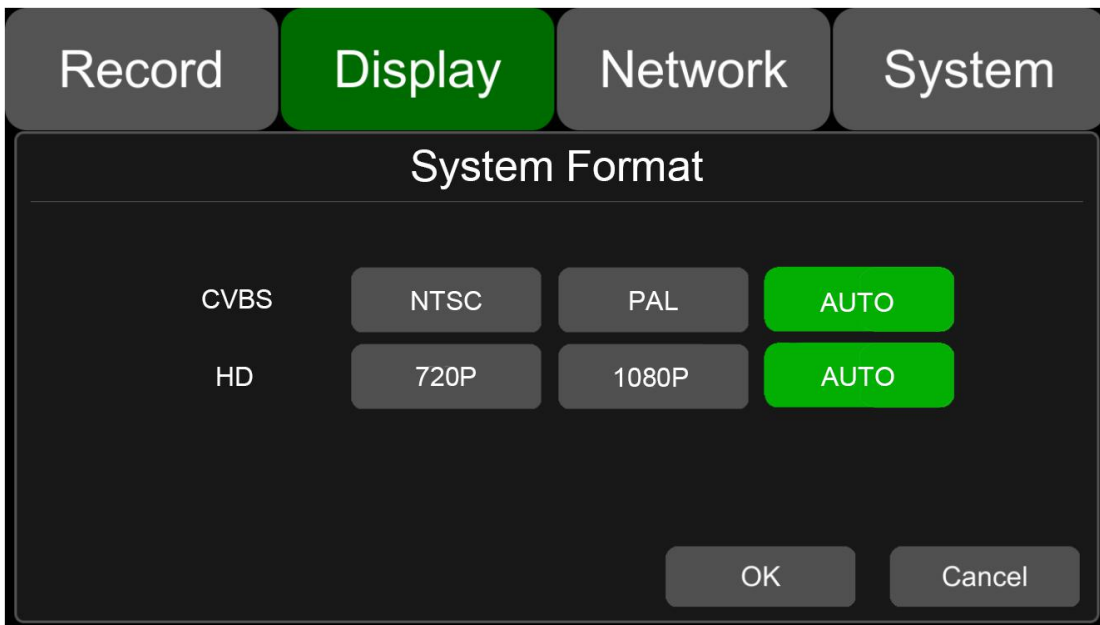
Connect No.8 camera to AVIN8 4 PIN Aviation male



Connect monitor to AVOUT1 4 PIN Aviation female

### 6.3 LCD Monitor

EDID (Extended Display Identification Data) is automatically acquired when power is turned on. Output resolution of the LCD monitor can be selected. Settings are as follows:



AUTO system format will be recognized as above

System Format		
	CVBS	HD
AUTO	NTSC/PAL	1080P/720P



- 7"/10.1" HD monitor introduction (Recommended)



- The parameter list of 7"/10.1" inches HD monitor

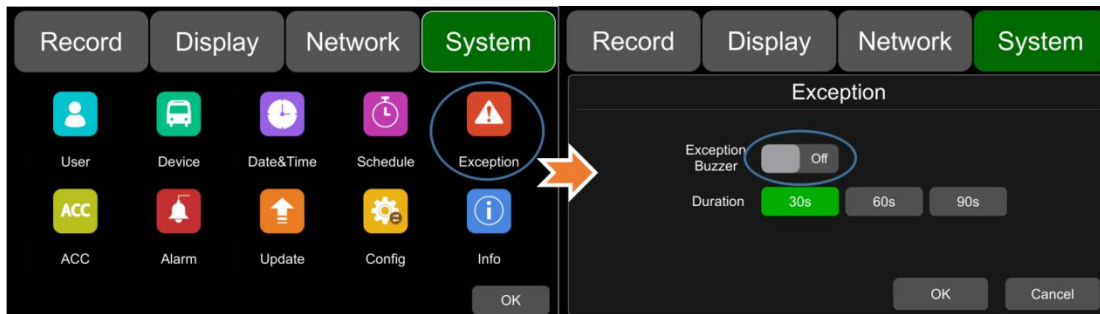
Description	HD 10.1"Color monitor	HD 7"Color monitor
Features	Used for HD DVR	Used for HD DVR
Resolution	1024 x 600 (RGB)	1024 x 600 (RGB)
Maximum Number of Cameras	1	1
Audio Input	1	1
Audio Output (Loudspeaker)	1W	1W
HDMI Input	/	/
VGA Input	1	1
CVBS Input	1	1
Trigger	No	No
Max. Brightness	500 cd/m <sup>2</sup>	450 cd/m <sup>2</sup>
Contrast	600 : 1	800 : 1
Minimum Operating Temperature	-20°C, RH 90%	-20°C, RH 90%
Maximum Operating Temperature	+70°C, RH 90%	+70°C, RH 90%
Viewing Angle Monitor	U: 70/ D: 50, R/L: 70/70	U: 75/ D:75, R/L: 75/75
Mirror Function	No	No
Monitor Diameter (mm)	267mm (W) × 159.5mm (H) × 30mm (T).	203mm (W) × 112mm (H) × 28mm (T).
Split Screen	No	No
Volts	10-32V	10-32V
Consumption	Less than 8W	Less than 5W

## 6.4 Buzzer

If the DVR is not connected to the monitor, check the DVR's recording status through the buzzer. Buzzer will alarm if the DVR is not recording under Normal Mode which is set by default. To stop the buzzer from alarming, check whether the DVR is recording under the Normal Mode or not. Buzzer warning functions are as follows:

Buzzer beep alarm will last for a while for all types of alarm event recording

If the buzzer beep alarm is not needed, you can go to “System - Exception” page, and set Buzzer to OFF. And please note that if Buzzer is OFF, the buzzer will not alarm whether the alarm event is triggered by DVR or panic button.



If the Buzzer beeps intermittently, it means that the DVR is unable to record.

Different beeping modes stand for different working status as below:

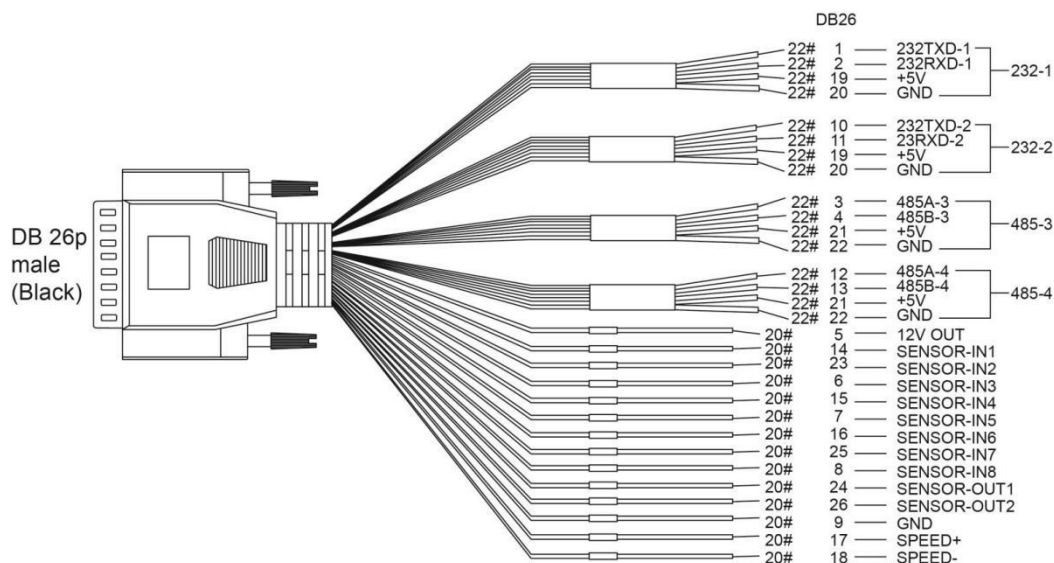
- a. If the electronic lock is open: one long beep and one short beep
- b. Diskless: one long beep and two short beeps
- c. Disk file system exception : one long beep and three short beeps
- d. If disks are normal but the alarm video files are full : two short beeps and one short beep
- e. No camera input: two short beeps , and two short beeps after a second
- f. If disks are normal but DVR is not in recording: two short beeps and three short beeps

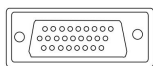
## 6.5 Alarm, Speed Interface, DB26



Alarm, speed interface cable

See the picture below





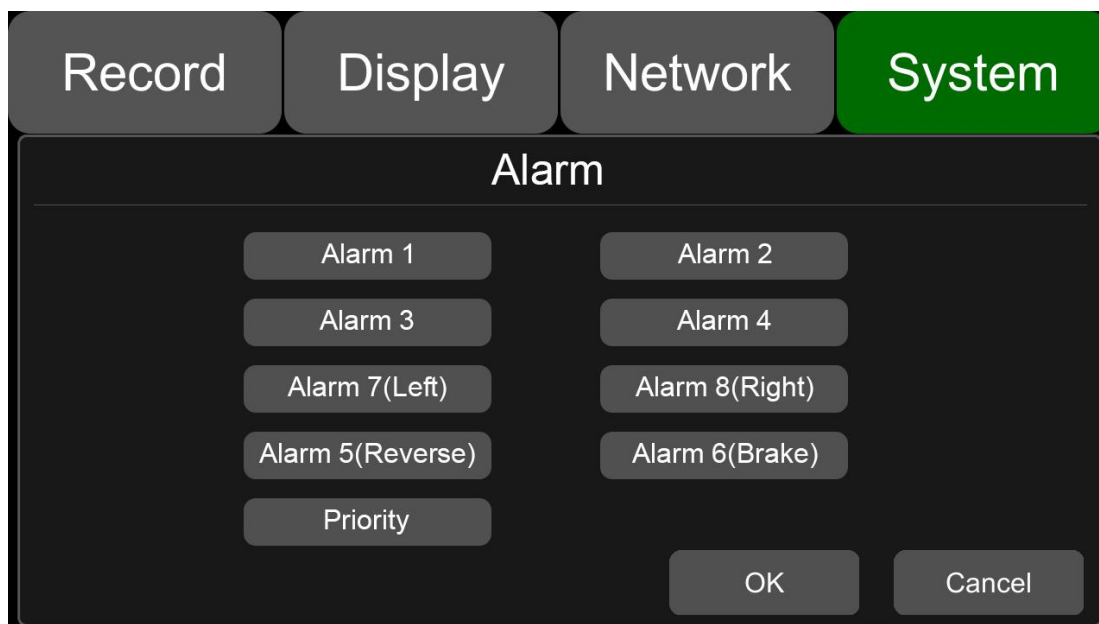
DB26p female head on the DVR connect to DB26p male head

● PIN Definition:

PIN 14	PIN 23	PIN 6	PIN 15	PIN 7	PIN 16	PIN 25	PIN 8
SENSOR-IN1	SENSOR-IN2	SENSOR-IN3	SENSOR-IN4	SENSOR-IN5	SENSOR-IN6	SENSOR-IN7	SENSOR-IN8
ALARM INPUT 1~4				Reversal input	Brake input	Turn left input	Turn right input
red	red	red	red	red	red	red	red

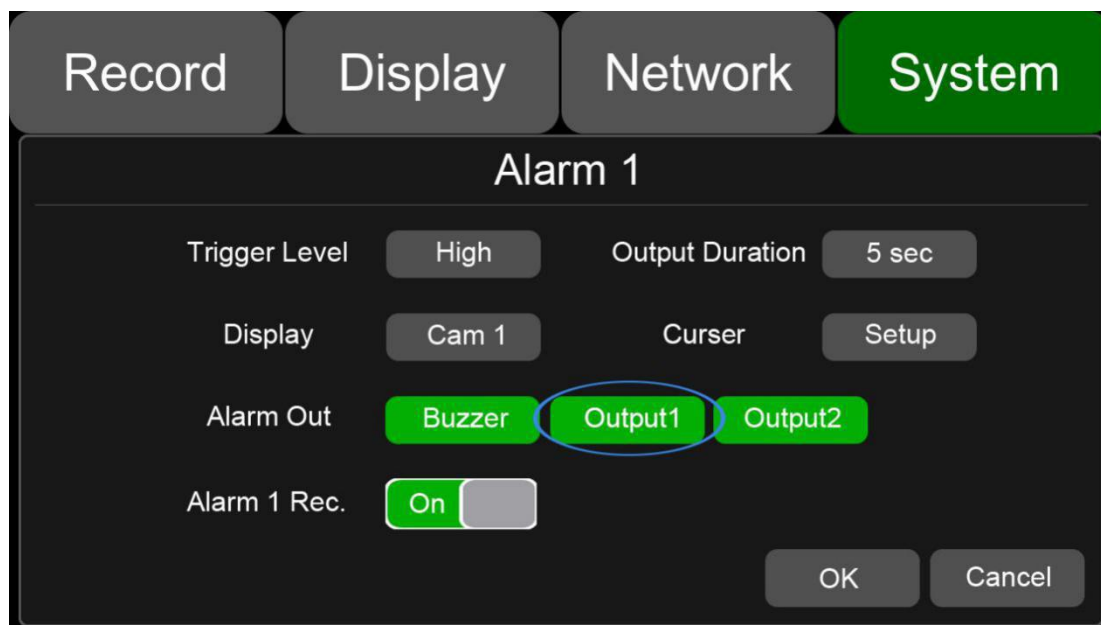
PIN 5	PIN 24	PIN 26	PIN 9	PIN 17	PIN 18
12V OUT	SENSOR-OUT1	SENSOR-OUT1	GND	SPEED+	SPEED-
12V DC power output	Alarm output 1	Alarm output 2	GND line	SPEED+	SPEED-
red	black	black	black	black	black

1. There are 8 alarm inputs including alarm inputs 1 ~ 4, reversal input, brake input, turn left input, turn right input, which can trigger the alarm recording. Cursor will be displayed when the alarm input channel is working. The first 4 ones can be self-defined by user.



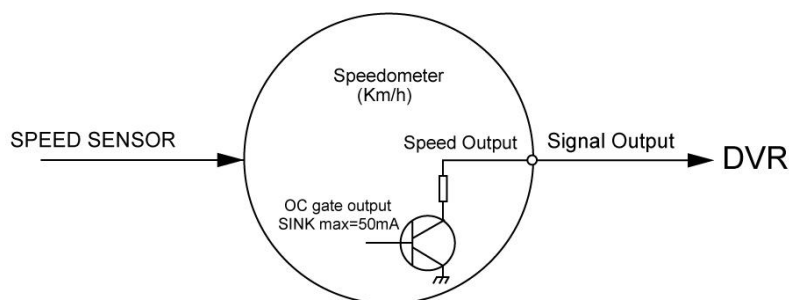
2. Alarm output 1 and Alarm output 2 are 12V output by default, which can be used as a trigger and need to be set up to combine with alarm input . You can also setup BUZZER for the output.

- If Alarm input 1 is active and combined with Alarm output 1, the Alarm output 1 will output a high-level voltage to trigger other device.



#### 4. SPEED+ & SPEED-

These 2 cables are for speed detection and need to be connected to the speed wire on vehicle. Check the real-time speed of the vehicle with the vehicle speedometer:

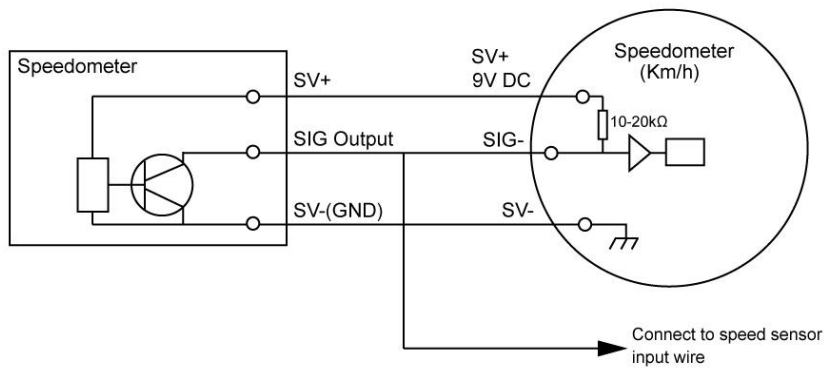


- Wiring diagram:

The vehicle speedometer is driven by the Speed sensor. See the picture below.

If the speedometer has a speed signal output, it can be connected directly to the PIN17 of the DB26 cable and PIN18 for reference level.

If the speedometer does not have the speed signal output, then connect SIG Output of the speedometer which is output by Speed sensor to the PIN17.



## 6.6 Panic Button (Optional)

- Overview

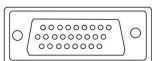
The LEDs are used to show the device's working status. But when the device is installed in the vehicle, it is not easy to check the LED on the front panel. Each of the LED indicates the corresponding status.

Furthermore, the panic button on the panel makes it easier to trigger alarm for emergency by bookmarking a manual event.

The panic button has four main functions, including LED indicator lamp, emergency button, buzzer alarm and infrared function.



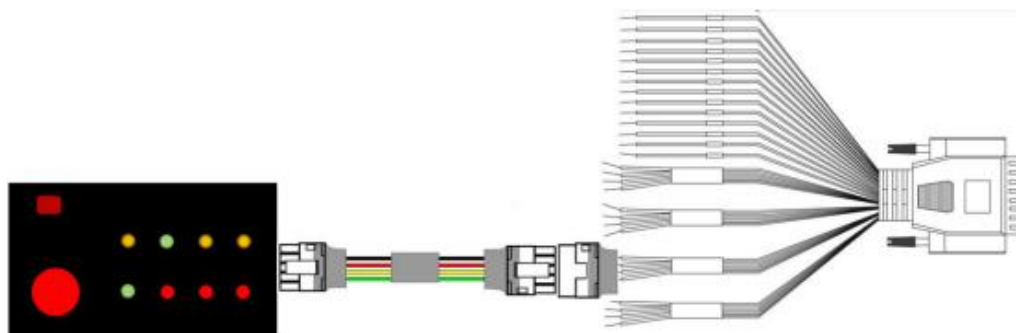
- PIN Definition



DB26p male head connect to DB26p female head on the DVR



2\*5 PIN/3.0 interface connect to the interface on the panic button



- LED

LED	Color	ON	OFF
VLoss	Yellow	Check camera loss via the recording channels set in [Setting]-[Record]-[Record Channel]. (E.g. If only Cam 1 , Cam 2 , Cam 3 are set and all of the three channels are connected, then the yellow light will not be on if Cam 4 is not connected. But the yellow light will be on if Cam 1 is not connected.)	Normal Operation
Rec	Soft green	Recording Normal driving	Not recording
GPS	Yellow	GPS cannot latch	Normal Operation
Mem	Red	Storage Alarm or no Storage device	Normal Operation
Comm	Yellow	Device is not connected to server	Normal operation or device is connected to server if this feature is disabled
Power	Soft green	Device has power	Device does not have power
Error	Red	Error with device	Normal Operation
Event	Red	Event-based Recording (remains lit during Event)	Normal Operation

- Button

Panic button, printed as “Bookmark”

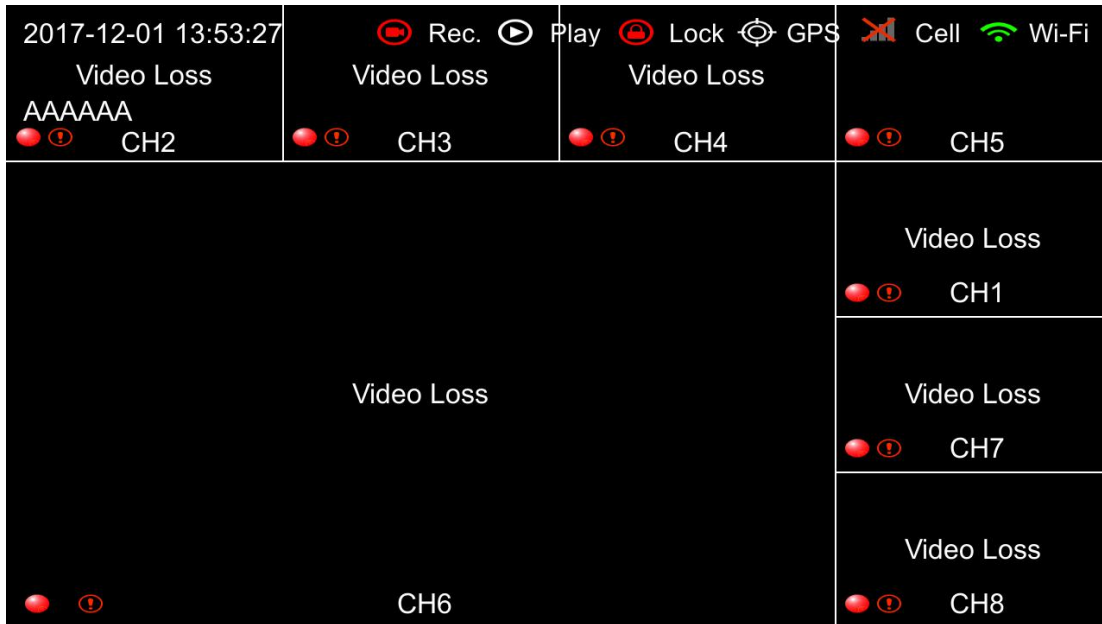
a. When pressed, a manual event will be triggered.

b. When pressed, the Event LED will be temporarily illuminated.

If the panic button alarm recording cannot be triggered, check if the alarm recording button is open as shown below:



If the alarm recording is triggered, there will be an alarm sign on the screen, as shown below:



- IR

When the remote control aims to the IR on panic button, it has the same effect of aiming to that on DVR. Sometimes the DVR will be installed in a relatively hidden place in the vehicle, which is not possible for users to directly control the DVR via IR. So it will be more convenient for users to operate with the panic button.

- Buzzer

The alarm from the buzzer in panic button is convenient for checking the status of DVR.

No matter the Buzzer is set as ON or OFF in the menu System->Exception, the buzzer will alarm for 4 seconds when the DVR is booted up and when the panic button is hot plugged.
When the Buzzer is set as ON in the menu System->Exception, the buzzer will continuously alarm when the alarm is triggered.
When the Buzzer is set as OFF in the menu System->Exception, the buzzer will not continuously alarm when the alarm is triggered.

## 6.7 Built-in GPS Antenna

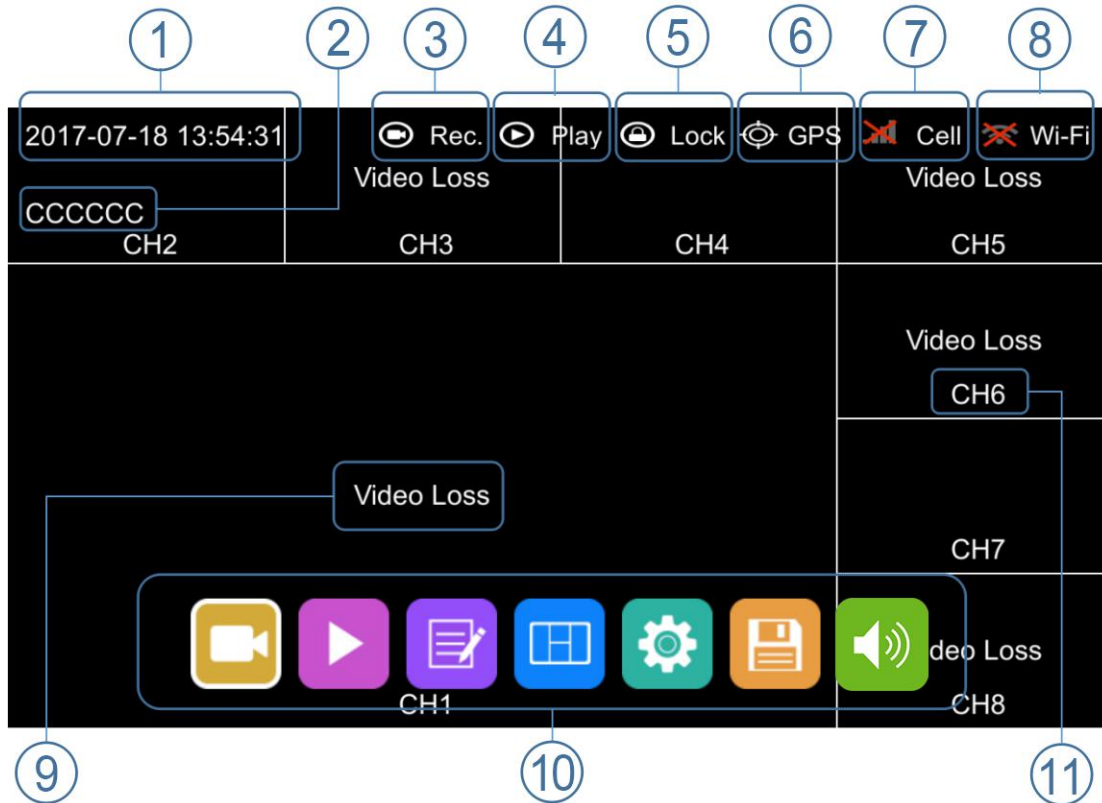
Built-in GPS antenna socket and GPS antenna, as shown in the picture.



# 7. Menu

## 7.1 Menu Introduction

Touch [MENU] on the remote or touch the bottom area, the Shortcut Menu will be displayed on the LCD screen. Please log in before entering the menu. If you Press [MENU] on the remote or Touch the bottom area again, the Shortcut Menu will be displayed.



- ① System Time Display
- ② License plate number Display
- ③ Recording Sign  
The Recording Sign will turn red when recording
- ④ Playback Sign  
The Playback Sign will turn red during playback.



- ⑤ Electronic Lock Sign
  - Lock indicator turns red when electronic lock is locked and front cover is closed.
  - Electronic lock is different from menu lock.



⑥ GPS Sign

The GPS Sign will be flashing when connecting. It will be always ON if successfully connected.

⑦ Cell Sign

⑧ Wi-Fi Sign

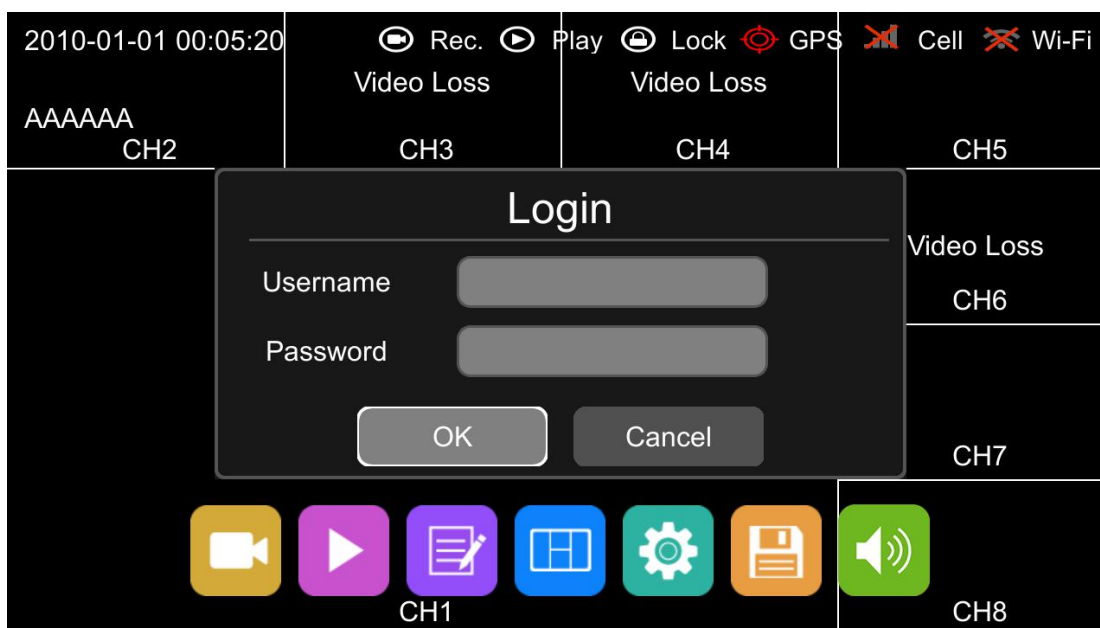
⑨ Video Loss Sign

⑩ Menu



Press [Area 10] to display MENU Sign

⑪ Channel Name Sign

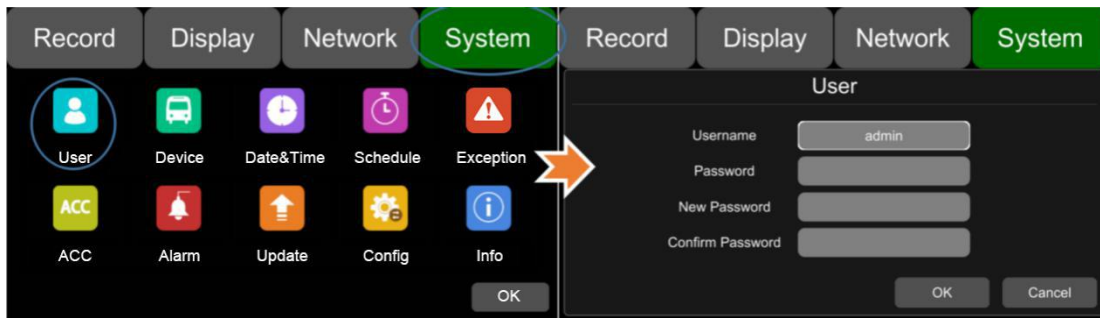
## 7.2 Menu Lock



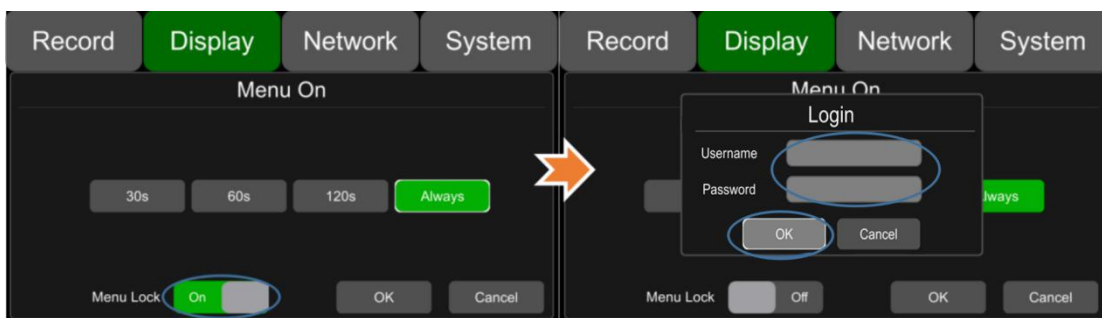
- DVR supports two kinds of permissions: admin permissions and guest permissions.
- User permissions list.

User Name	admin	guest
Password Modification	yes	no
Initial Password	123	321
Permissions	Enter all menus	Enter the menu of Playback , Display mode switching and Volume
		

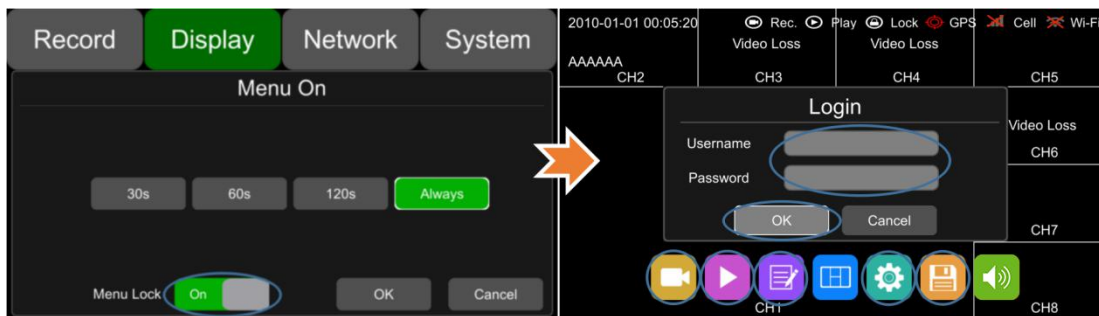
- User name can not be changed, but user password is changeable. (See the following instructions for changing password.)



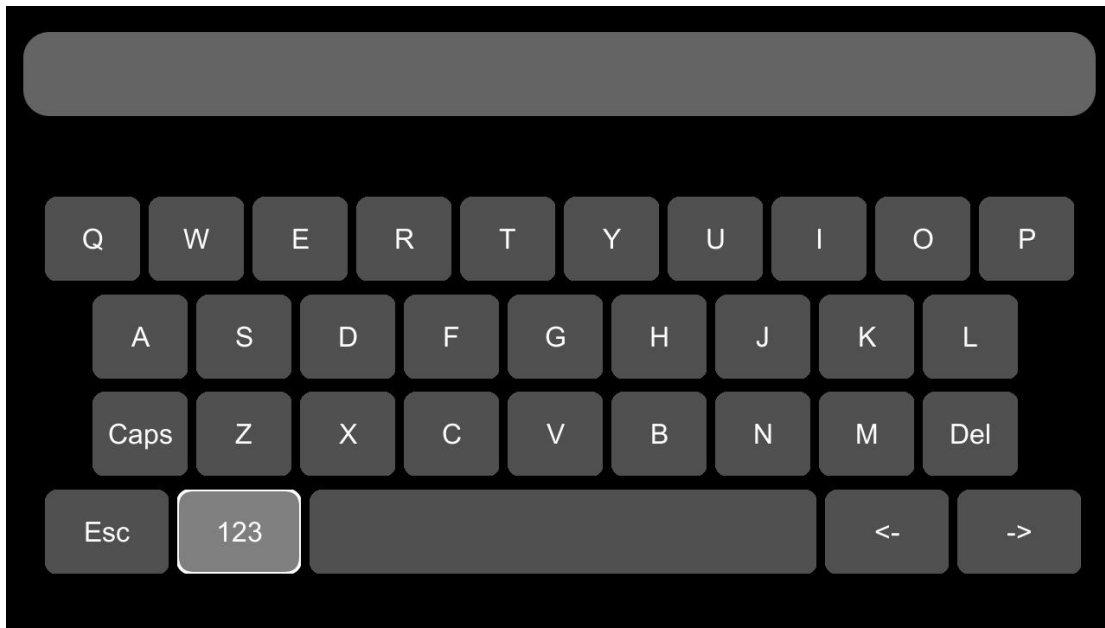
- Username admin and password are needed to change the status of Menu lock. The following picture shows how to change the Menu Lock status from ON to OFF.



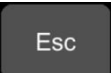
- When the status of Menu Lock is On, username admin and password are needed to enter menus like Record, Playback, Log, System and Disk. With username "guest" and password, only the Playback menu can be accessed.





## 7.3 Keyboard Operation Instructions





 : Switch letter case

 : Exit the keyboard interface

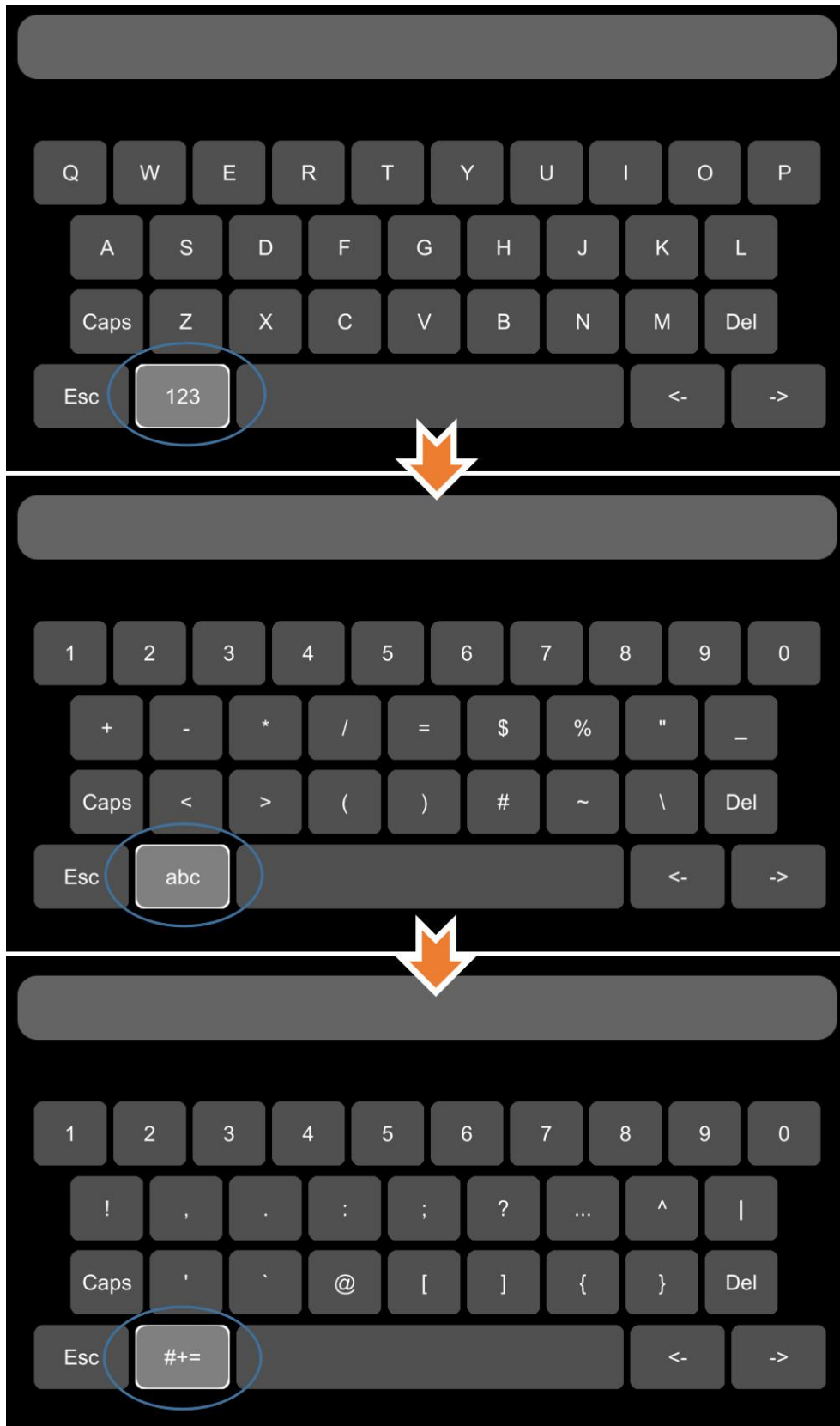
 : Delete the input letters

 : Switch to the numeric interface

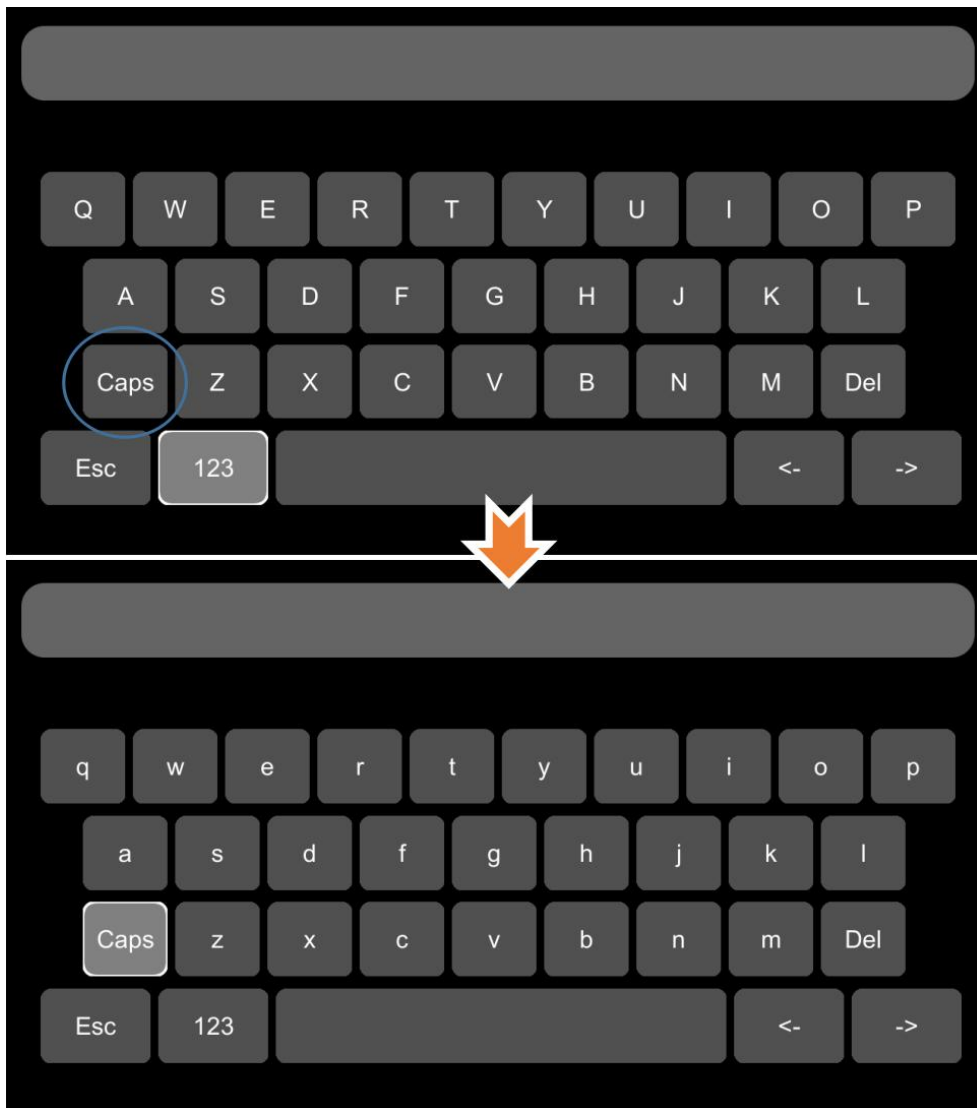
 : Switch to the English alphabet interface

 : Switch to the special character interface

## Character Switching Instructions



## Letter Case Switching Instructions



### 7.4 Manually Record



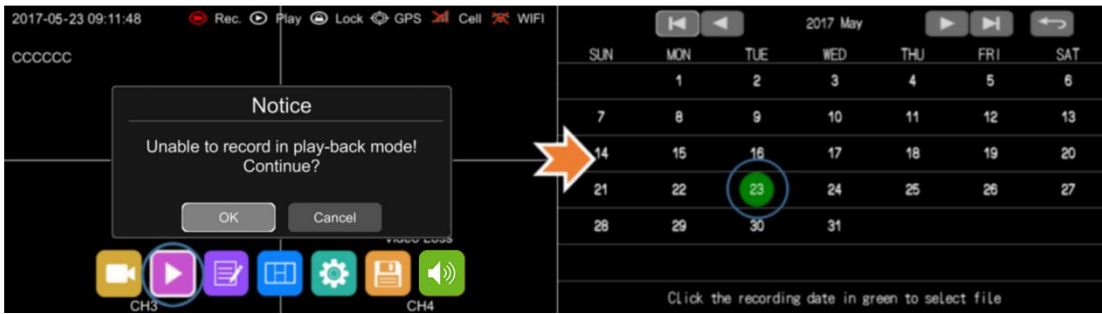
Touch this icon to start or stop recording. Video files can be found in the Normal list of Player menu.

### 7.5 Playback



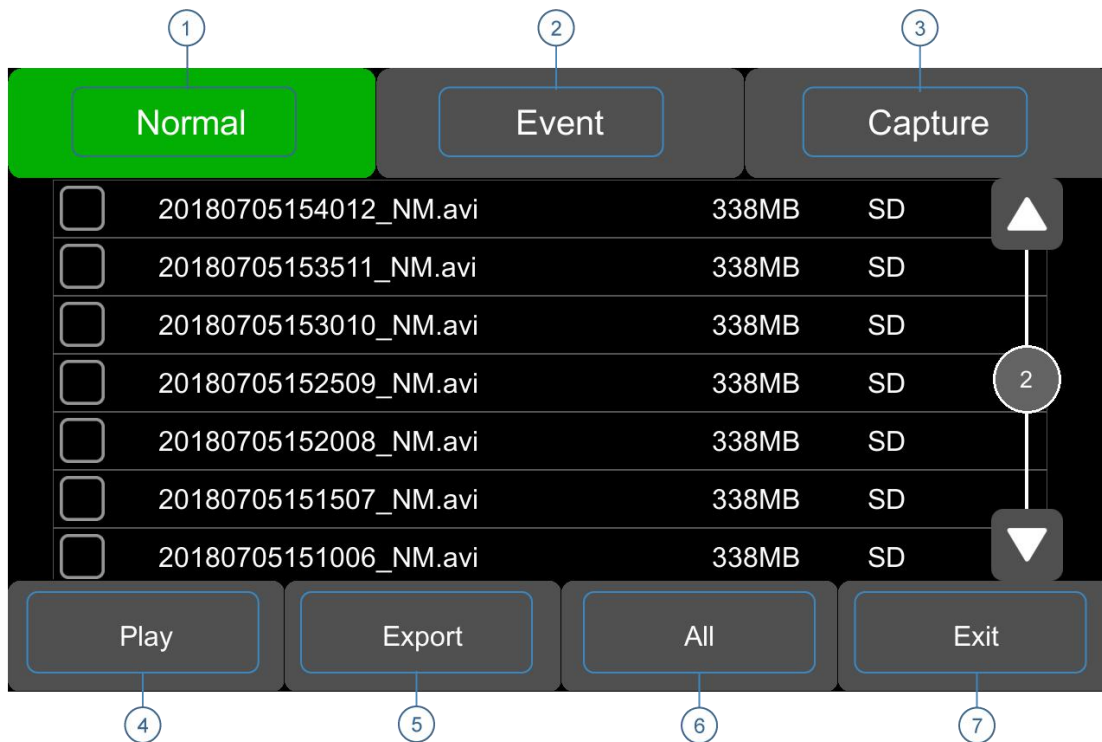
Video Playback button: Touch this icon to enter the calendar menu.

Green marked date means it has recording files saved on that day. Select the date to enter the video file list, then select the file and touch Play icon to play video. You can select single or multiple videos at a time. Multiple videos can be played in sequence and can be shifted to the next or the previous one. Specific operation sees below.



◀ ▶ : Search by month

⏪ ⏩ : Search by year

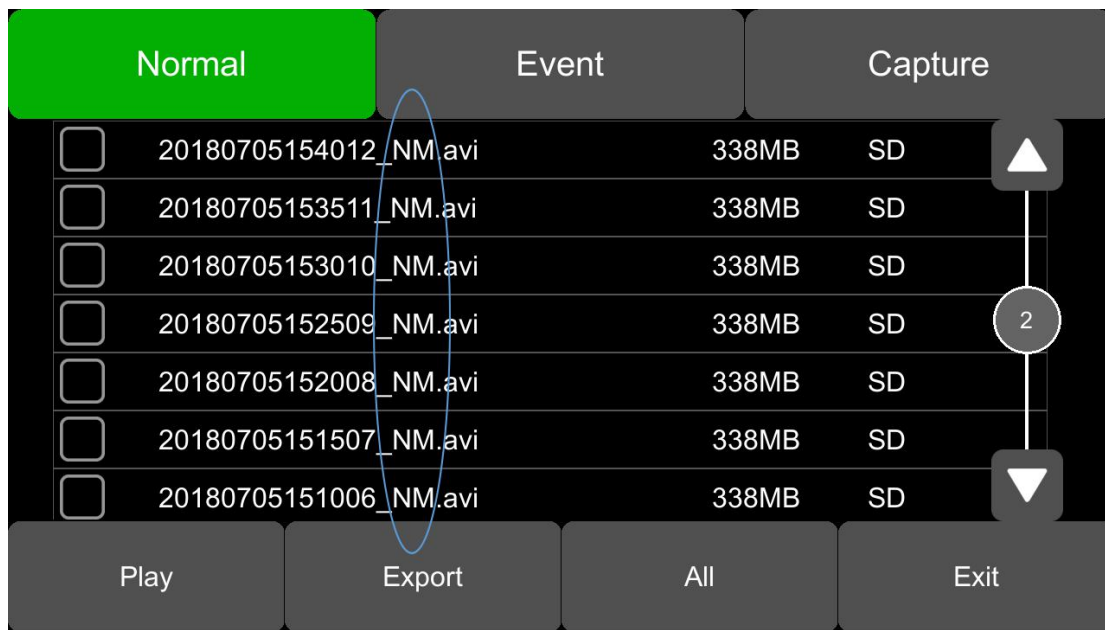


①Normal: Normal recording list, including Normal Recording, Power on Recording, Schedule Recording

②Event: Alarm recording list, including alarm recording 1~8, Motion detection recording, G-Force recording, Speed recording, Panic button recording

Type	Recording Time Control Mode	View Position
Normal recording	Manual control	Normal list
Power on recording	Manual control	Normal list
Schedule recording	Pre-setup time	Normal list
Alarm recording 1~8	Event recording setup time	Event list
Motion detection recording	Event recording setup time	Event list
G-Force recording	Event recording setup time	Event list
Speed recording	Event recording setup time	Event list
Panic button recording	Event recording setup time	Event list

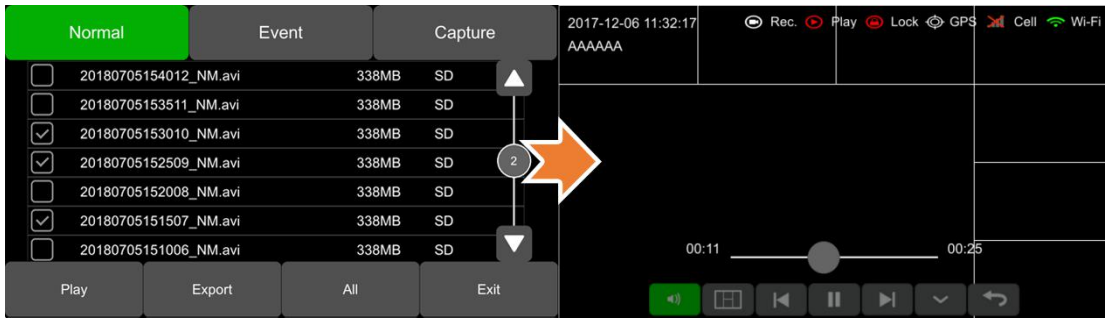
There is a abbreviation of record type in the file name, from which you can understand the record type of this file.



The abbreviations of record types are as follows:

NM	Normal recording	TI	Scheduled recording
MO	Motion detection recording	SP	Speed recording
TP	Temperature recording	BT	Panic button recording
A1	Alarm 1 recording	A2	Alarm 2 recording
A3	Alarm 3 recording	A4	Alarm 4 recording
A5	Reverse recording	A6	Brake recording
A7	Left recording	A8	Right recording
GS	G-Force recording		

- ③ Capture: Screenshot list
- ④ Play: Play the selected video files
- ⑤ Export: Export selected video files to USB
- ⑥ All: Select all video files on the current page
- ⑦ Exit: Exit



: Volume adjusting button



: Mode switch button



: Play the previous/next video



: Pause/Resume playing



: Hide the play menu. And press [Area 1] to display.

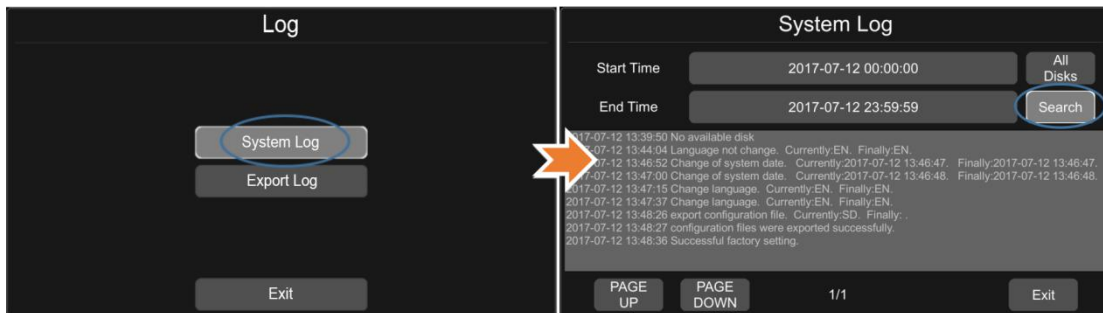


: Exit playing

## 7.6 Log



System memo check, memo output

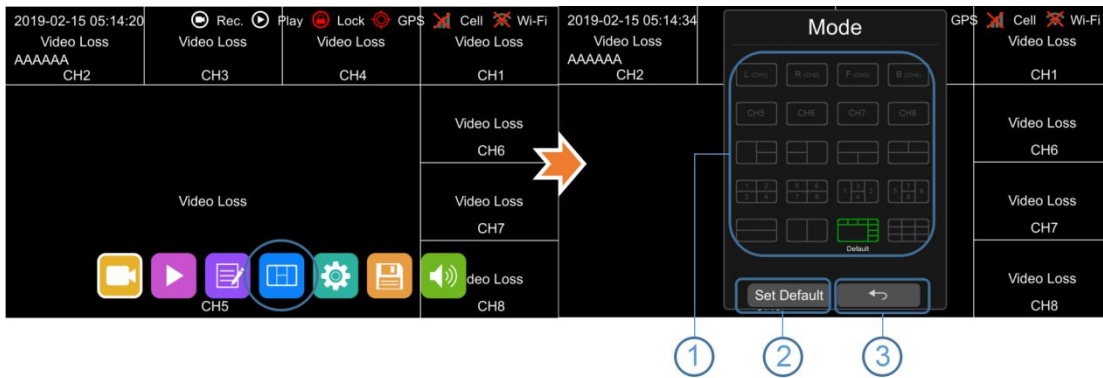


## 7.7 Display Mode Switching



Mode switch button: Touch this icon to enter the Mode switch interface.



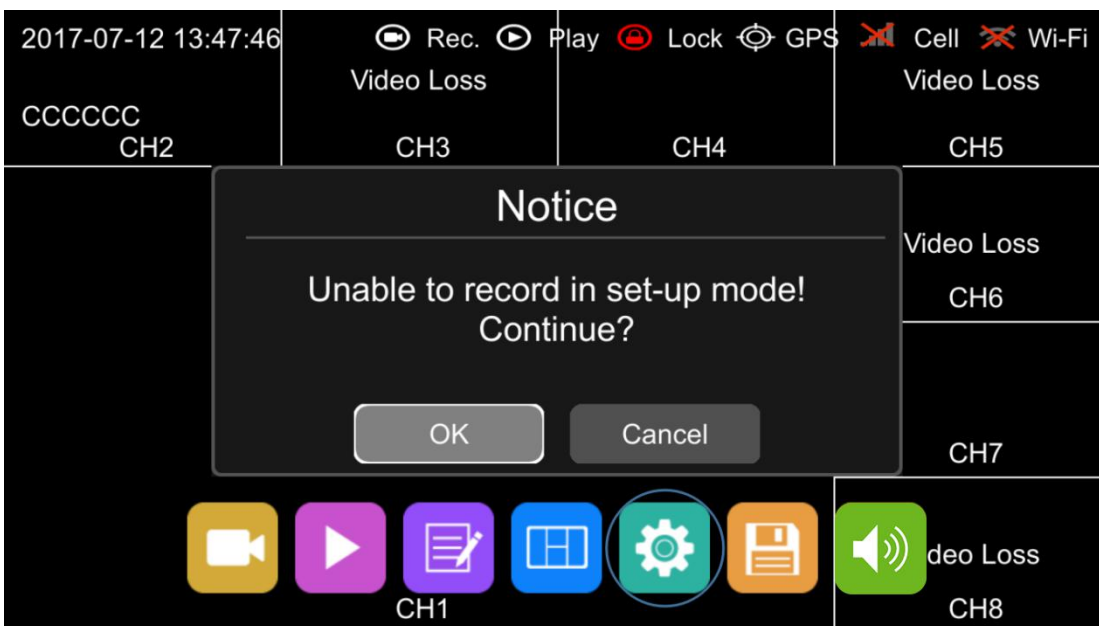


- ① Mode selection
- ② Touch this icon to set the current selected mode as default.
- ③ Touch to exit.

## 7.8 System



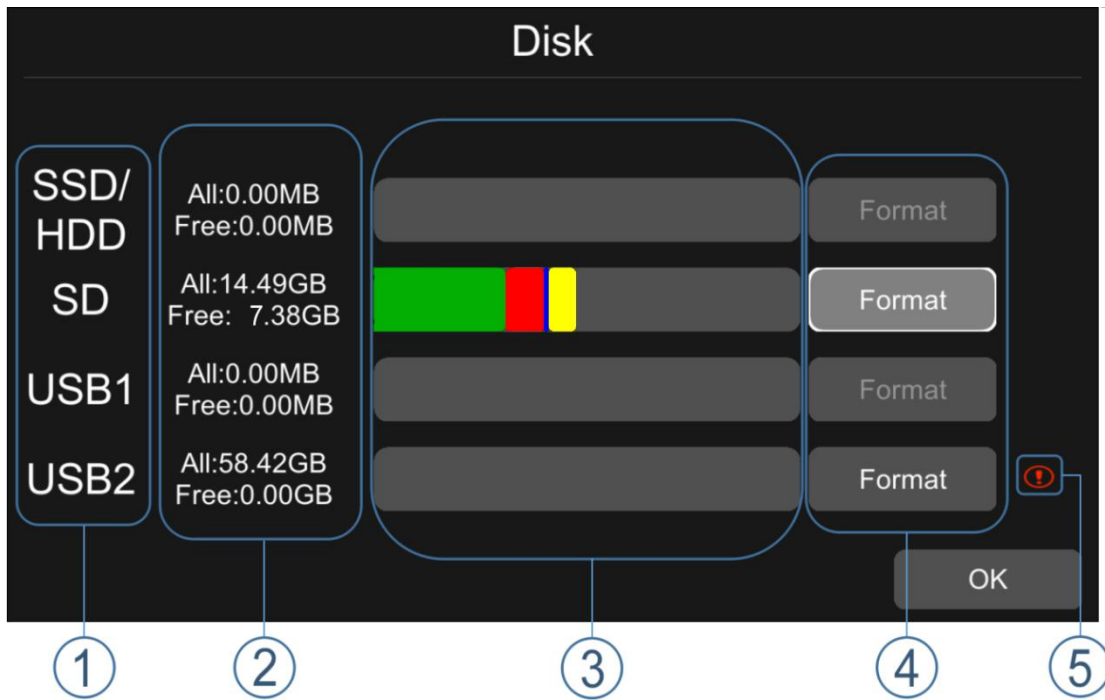
System settings button: Touch System to enter the setup menu. A prompt dialog will display "Unable to record in set-up mode! Continue?" Touch OK to enter.



## 7.9 Disk



Disk management button: Touch the disk management icon, then you can view the status of SSD, SD card and USB.



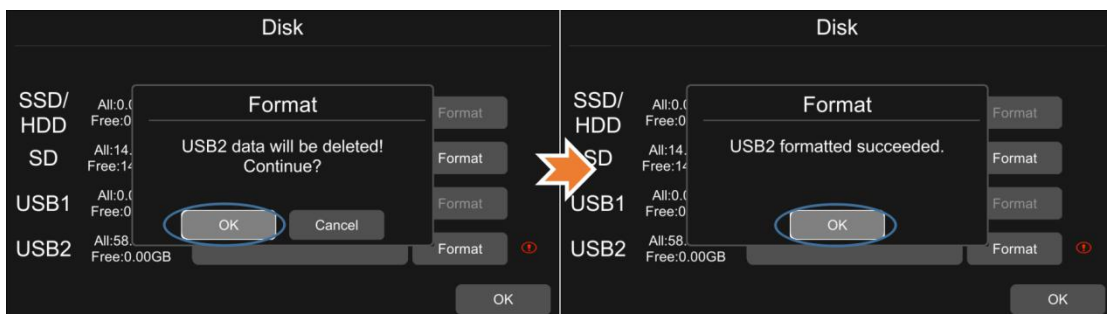
① Disk type

② ALL: The total capacity of disk, free: The remaining capacity of disk  
If ALL shows 0.00MB, it means that DVR does not have access to this type of disk.

③ Green area shows the capacity of all the recording files in the Normal list  
Red area shows the capacity of all the recording files in the Event list  
Blue area shows the capacity of all the pictures in the Capture list  
Yellow area shows the capacity of all the other files except those above

④ Touch to format the disk.

- A dialog box displaying “Disk data will be deleted! Continue?” will pop up. Press OK to start formatting the disk
- The following picture is an example of formatting USB2



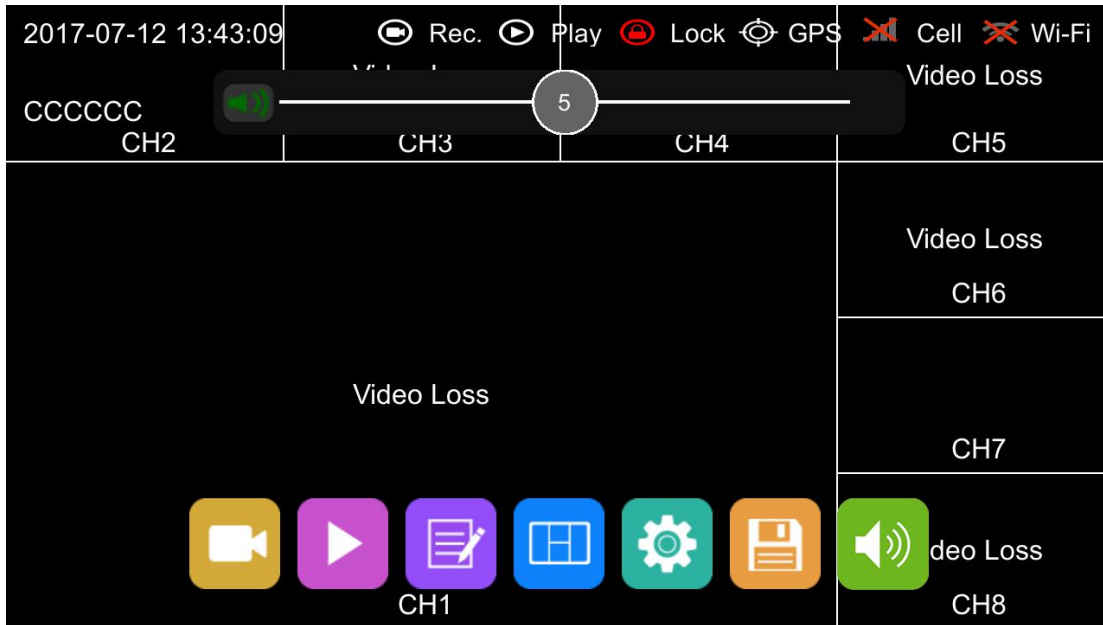
- If the disk cannot be formatted, please check if:
  - a. There is a disk in the slot
  - b. All recordings are set off
  - c. The FTP is set off

⑤ It shows that the disk needs to be formatted before use.  
All new disks must be formatted before use.

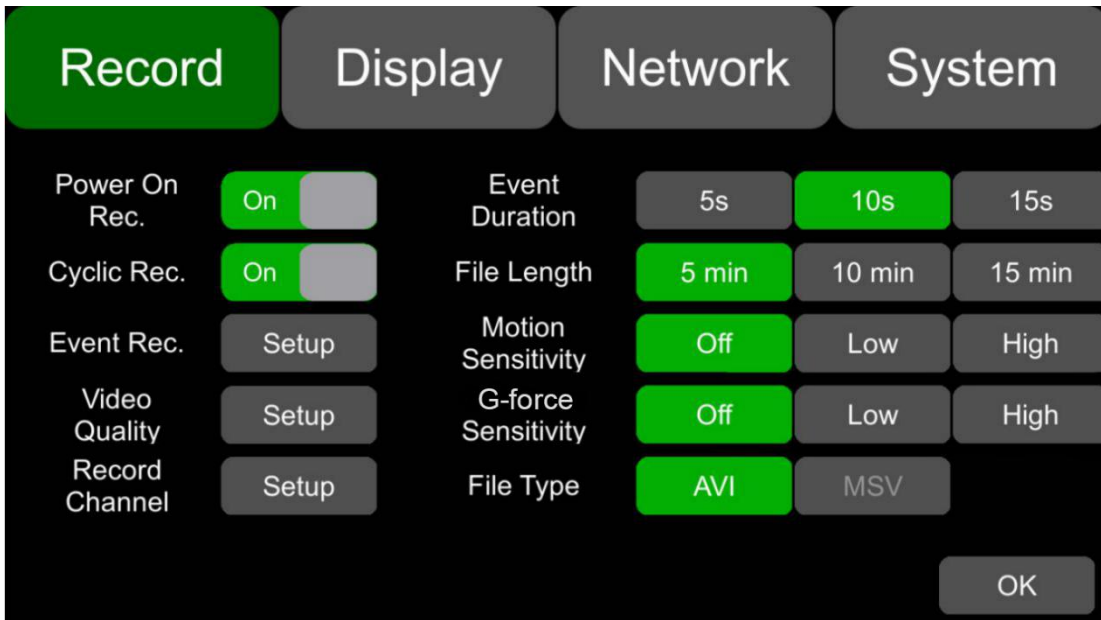
## 7.10 Volume



**Volume** : Value 0~10, Default value is 5.



## 8. Record Setup



### 8.1 Power On Rec



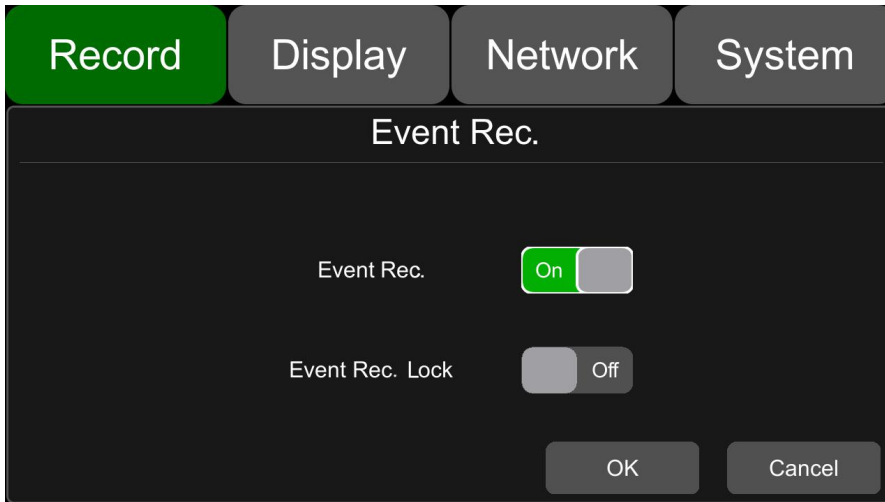
The DVR will start recording after power on when 'Power On Rec' is set to ON. Default is ON.

## 8.2 Cyclic Rec



New video files will overwrite the previous ones when disk is full if setting the Cyclic Rec ON. Otherwise, it will stop recording when disk is full. Overwriting will cover all recording files including Event recording files by default.

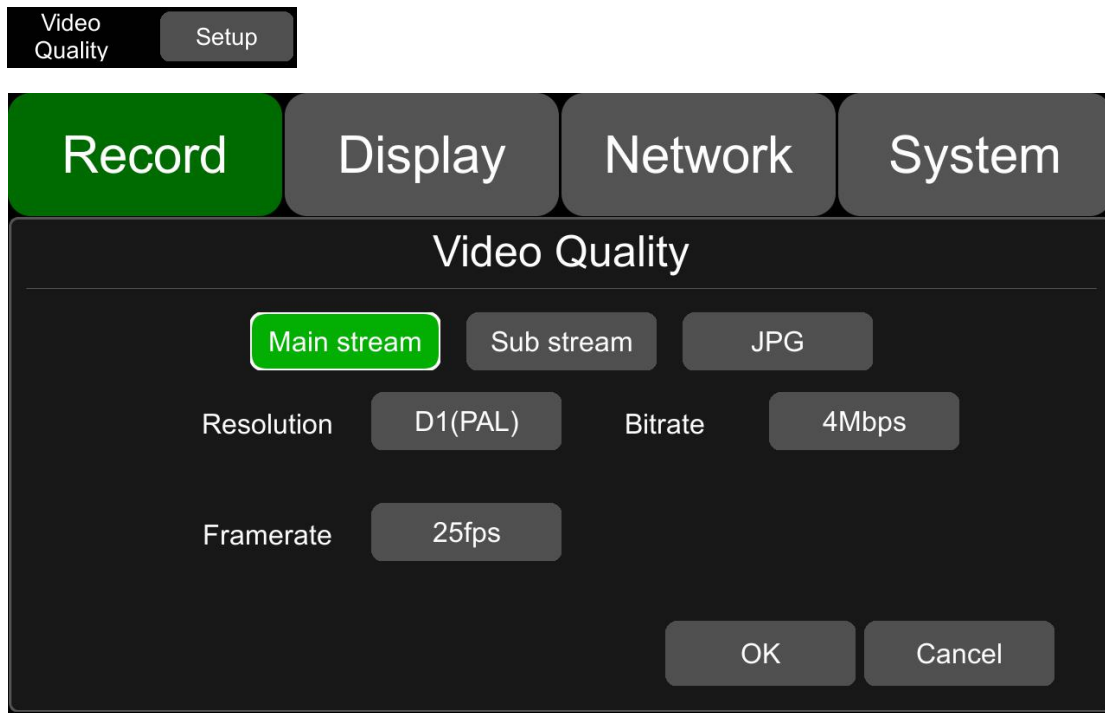
## 8.3 Event Rec



**Event Rec.:** Event recording type includes motion detection triggered alarm, G-Force triggered alarm, alarm 1 ~ 8 triggered alarm, Panic button triggered alarm and over speed alarm. If the Event Rec is ON and corresponding alarm parameters are set, event recording will be activated when the events above are triggered. If the Event Rec is OFF, event recording will not be activated even if event is triggered.

**Event Rec. Lock:** If both the Event Rec. Lock and the Cyclic Rec. is On and all disks are full, new video files will overwrite the previous ones (all recording files except Event Recording files) . When the Event Rec. Lock is Off, Cyclic Rec. is On and all disks are full, new video files will overwrite the previous ones (all recording files include Event Recording files).

## 8.4 Video Quality



The main stream is used for video storage. The sub stream is used for video backup and network transmission.

### ① Resolution

There are 5 levels of resolution in main stream menu for option, 1080P, 720P, D1 (PAL), D1 (NTSC), AUTO. And 3 kinds of optional resolution in Sub stream menu, CIF (PAL), CIF (NTSC), AUTO. The higher the resolution & the better the video quality is, the larger the video file will be. Therefore, the file size should be taken into account during configuration.

In the Resolution options, AUTO is defined as follows:

Resolution		
	Main stream	Sub stream
AUTO	DVR automatically gets the television mode of the camera, and records in this mode at the corresponding channel	DVR automatically gets the PAL/NTSC television mode of the camera, and records in CIF(PAL)/CIF(NTSC) mode at the corresponding channel

### ② Bit rate

There are 8 levels of bit rates in Main stream and Sub stream menu for selection, including 4Mbps, 2Mbps, 1Mbps, 512Kbps, 256Kbps, 128Kbps, 64Kbps, AUTO. The higher the bit rate and the clearer the image is, the larger the video file will be. Therefore, all factors should be considered comprehensively.

In the Bit rate options, AUTO is defined as follows:

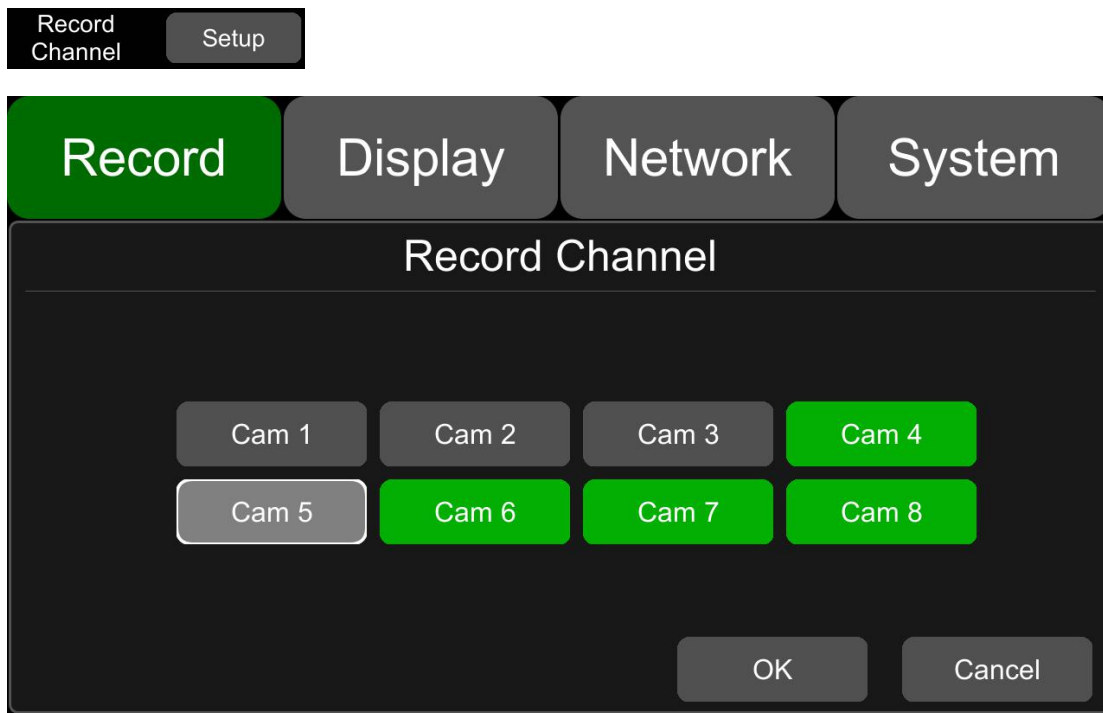
Bit rate		
	Main stream	Sub stream
AUTO	If 1080P camera is connected, the bit rate will be 4Mbps. If 720P camera, 2Mbps. And if D1 camera, 1Mbps.	Whatever cameras are connected, the bit rate will always be 64Kbps.

### ③ Frame rate

There are 7 levels of frame rates in Main stream and Sub stream menu for option: 28fps, 25fps, 20fps, 15fps, 14fps, 10fps, 5fps. The higher the frame rates and the smoother the picture is, the larger the video file will be.

SSD / SD Capacity	Video Quality	File length
2T	8 * 1080P / 4Mbps	≈150h
	8 * 720P / 2Mbps	≈300h
	8 * D1 / 1Mbps	≈600h
	1 * 1080P / 4Mbps	≈1200h
	1 * 720P / 2Mbps	≈2400h
	1 * D1 / 1Mbps	≈4800h
512G	8 * 1080P / 4Mbps	≈38h
	8 * 720P / 2Mbps	≈75h
	8 * D1 / 1Mbps	≈150h
	1 * 1080P / 4Mbps	≈304h
	1 * 720P / 2Mbps	≈608h
	1 * D1 / 1Mbps	≈1216h

## 8.5 Record Channel



After set on recording (including all types) and selecting the recording channels, the corresponding channels will be recorded. If turning off a video channel, the corresponding channel will not be recorded even if the recording function is on.

Note: The config is for normal recording, but not for event recording. Event recording will record all channels by default and it can't be changed.

## 8.6 Event Duration



When Event Rec is on, the file length of Event recordings can be set to 5s, 10s, 15s. The file length will be maximum 5 minutes if the alarm is continuously triggered.

## 8.7 File Length



The video file length can be set to 5 min, 10 min, 15 min.

## 8.8 Motion Sensitivity



Motion detection recording and sensitivity level setting: When there is an object moving and its movement amplitude exceeds the preset motion detection sensitivity level, Motion detection recording will be triggered. For this kind of event recording, the pre-record time will be set as 15s and the post-event time is configured by Event Duration above.

Total video file length = pre-recording file length (default time 15s) + file length (configured by Event Duration).

If motion detection is off, event recording will not be triggered. Motion detection sensitivity can be set to two levels, low / high. Motion detection recording is on when low / high is selected. Motion detection recording is off when OFF is selected.

## 8.9 G-Force Sensitivity



G-Force recording and the setting of sensitivity level: When the acceleration or gyroscope of the G-Force reaches the preset sensitivity value, G-Force recording will be triggered. For this kind of event recording, the pre-record time will be set as 15s and the post-event time is configured by Event Duration above.

Total video file length = pre-recording file length (fixed 15s) + file length (configured by Event Duration).

If G-Force triggered recording is off, event recording will not be triggered. G-Force sensitivity can be set to two levels, low / high. G-Force triggered recording is on when low / high is selected. G-Force triggered recording is off when OFF is selected.

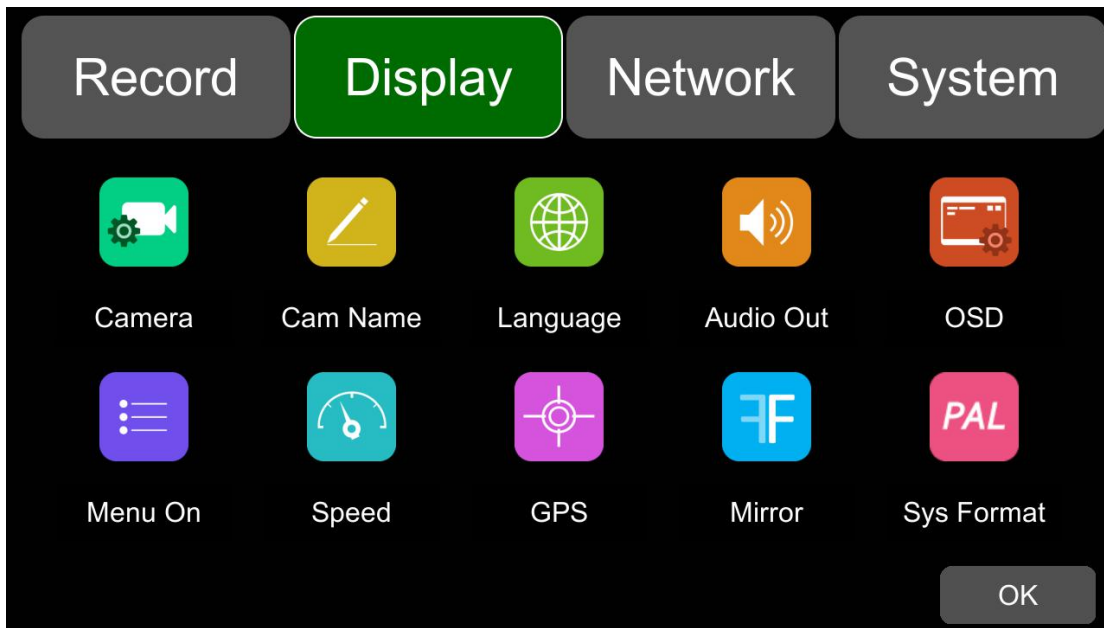
## 8.10 File Type



File format setting.



## 9. Display

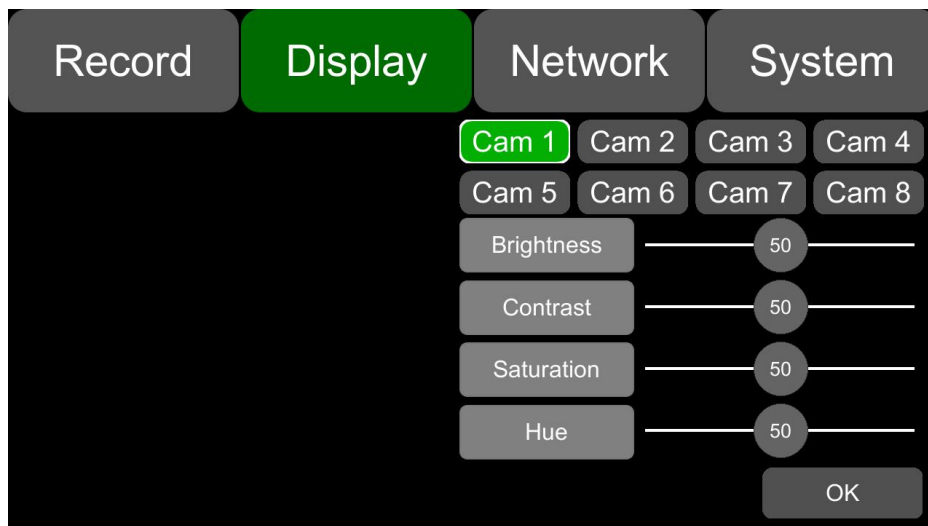


### 9.1 Camera Display Setting



Camera: Parameter setting for each corresponding camera channel: including brightness, contrast, saturation and hue. All values for default setting are 50.

To change the value, drag the bar to left or right to decrease or increase.



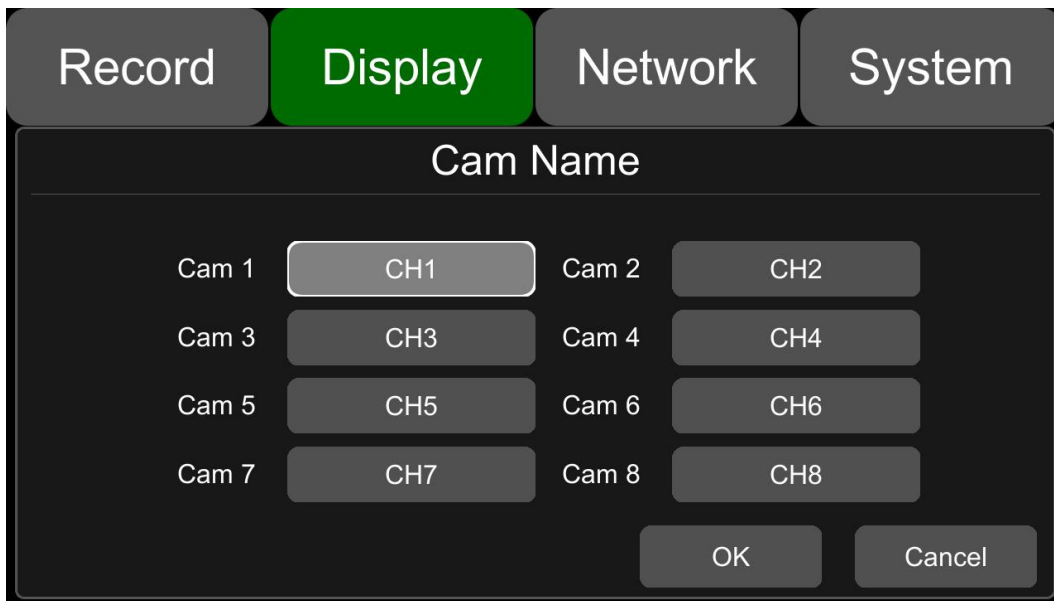
### 9.2 Camera Name Setting



Camera name: Set a camera name, then the camera name will be displayed at the bottom of the camera display.

Touch the camera name on the menu, then a keyboard menu will pop up to input a new camera name.

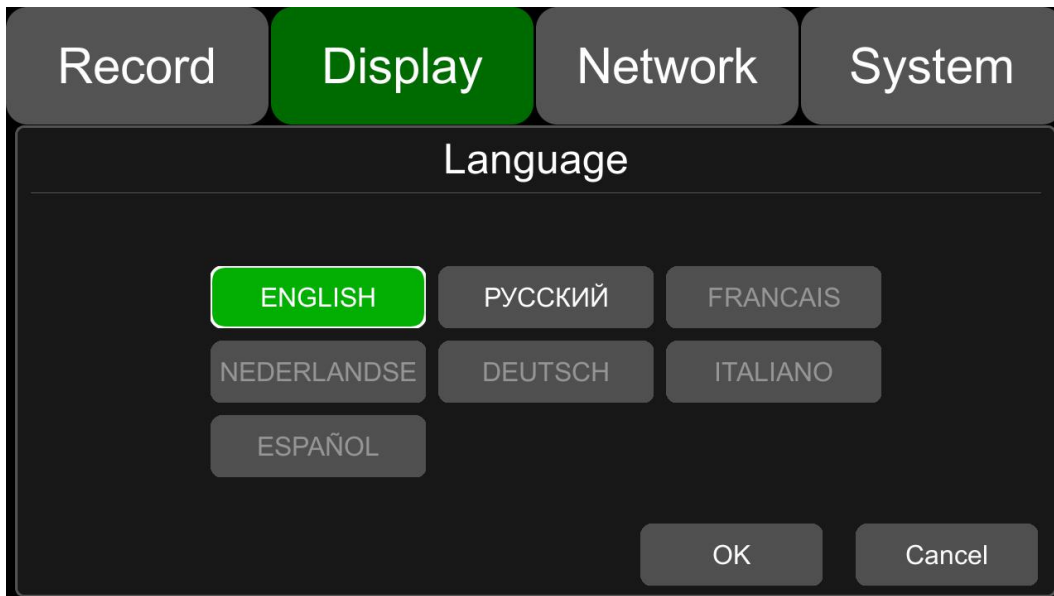
Each camera name contains 8 characters in max. And camera name must NOT be blank.



### 9.3 System Language Setting



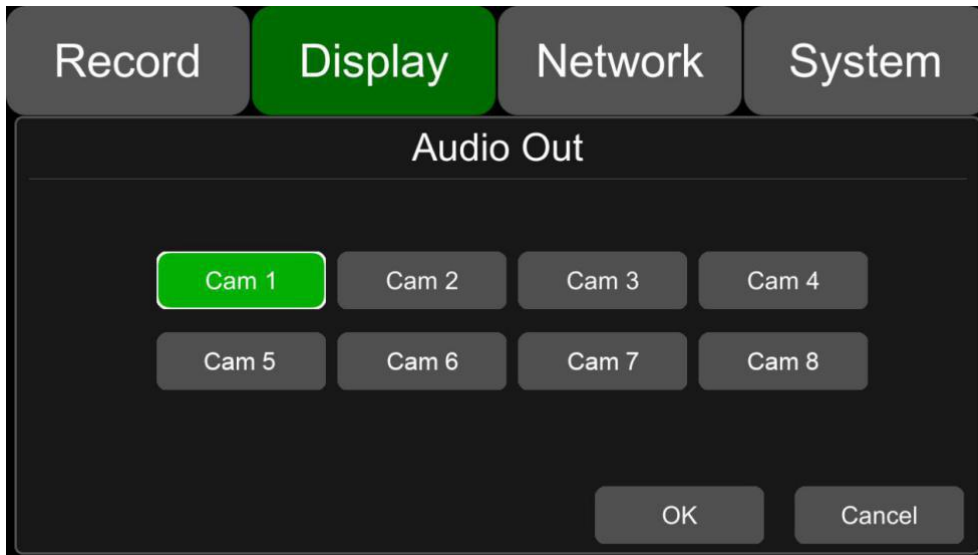
Menu language for option: English, Russian.



### 9.4 Audio Out



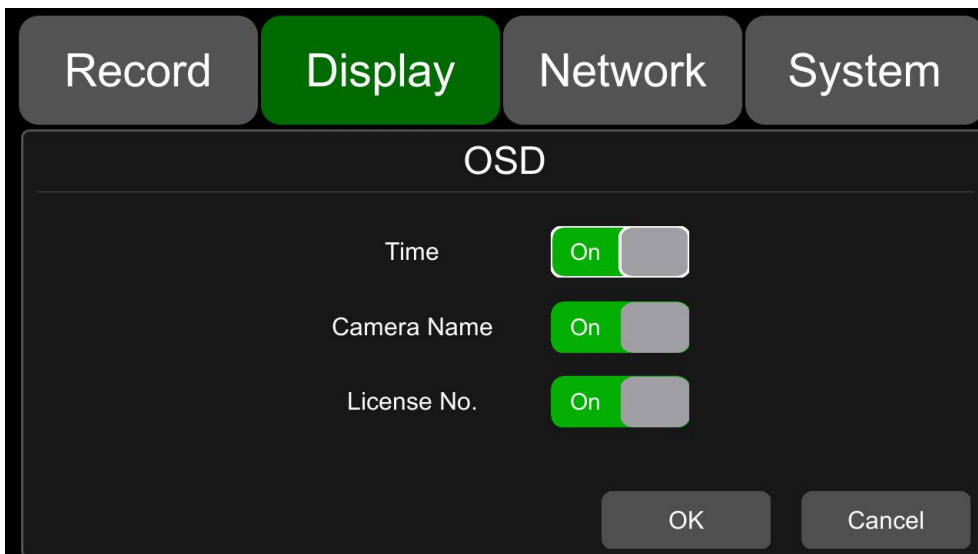
Audio out: Select the audio output channel in split mode.



### 9.5 OSD Display Setting



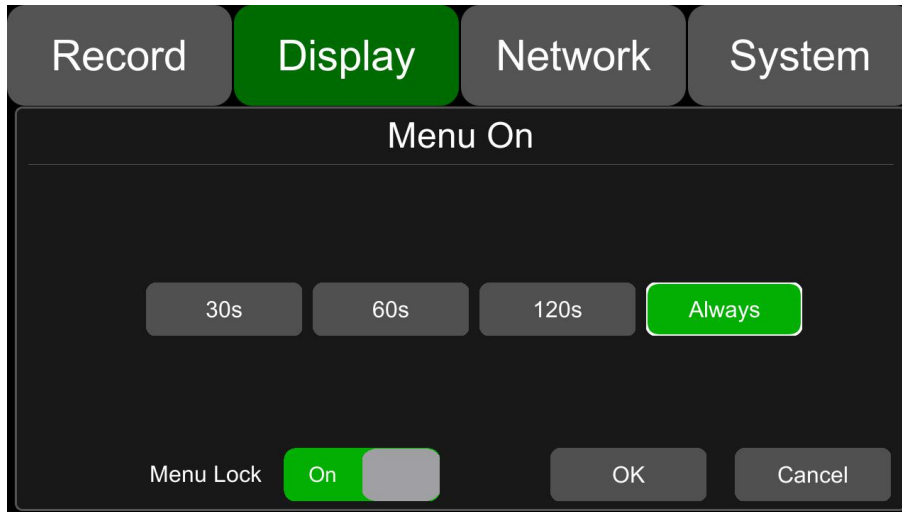
OSD configuration: Select whether to display time, channel name, license plate in video or not (if On, all the information above will be written in video and can be displayed in playback).



### 9.6 Menu on



Menu on: Set duration of menu display.



Menu on: Menu on duration can be set to 30s, 60s, 120s and Always. When it is set to 30s, 60s, 120s, it means that the menu will be hidden if there is no operation in 30s, 60s or 120s after it is open. When it is set to Always, the menu will always be there. Please be noted that if enter the menu, the recording will stop. In order not to affect the recording, it is not suggested to set the duration to Always.

Menu lock:

On means permission is required to enter the menu;

Off means permission is not required to enter the menu;

Username admin and password are required if to change the status of the menu lock.

## 9.7 Speed

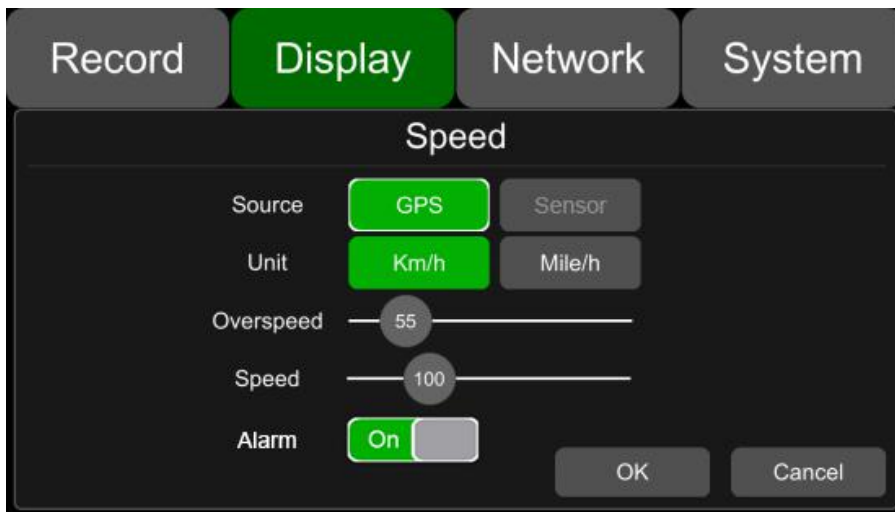


Speed setting:

The data source of overspeed comes from GPS. Speed units are optional:, Km/h or Mile/h.

Overspeed is the threshold of overspeed, which can be set by user. Speed refers to the current speed of the vehicle. If the value of Speed exceeds the value of overspeed, the overspeed alarm recording will be triggered.

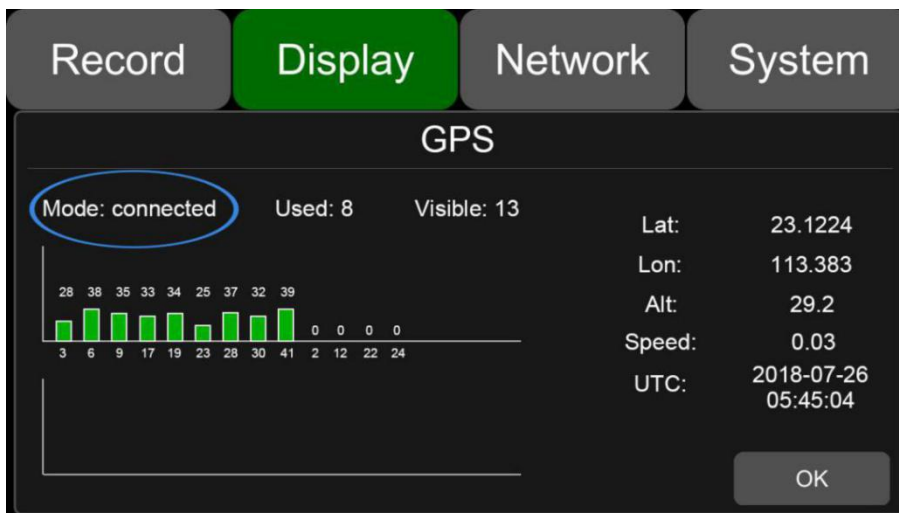
The alarm switch is used for setting the overspeed alarm recording ON/OFF. If it is ON, the overspeed alarm recording will be triggered when the vehicle is overspeed. If OFF, the overspeed alarm recording will not be triggered.



## 9.8 GPS



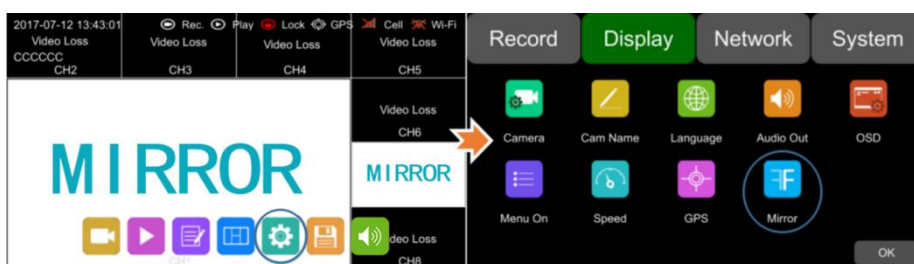
GPS: When the GPS antenna is properly installed, latitude, longitude and speed will be recorded into video files. The menu provides GPS information of latitude / longitude, detectable satellites, accessible satellite etc.



## 9.9 Mirror

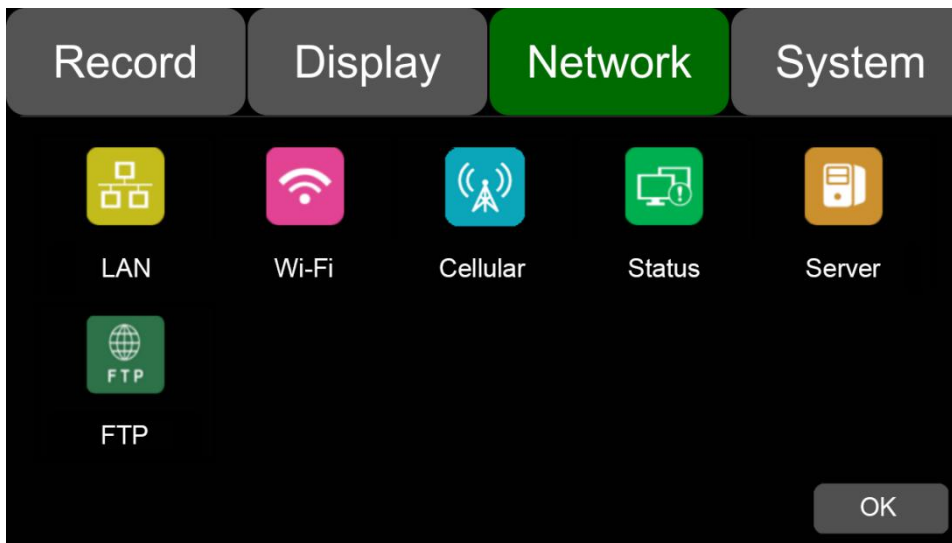


ON: Turn on Mirror function.  
OFF: Turn off Mirror function

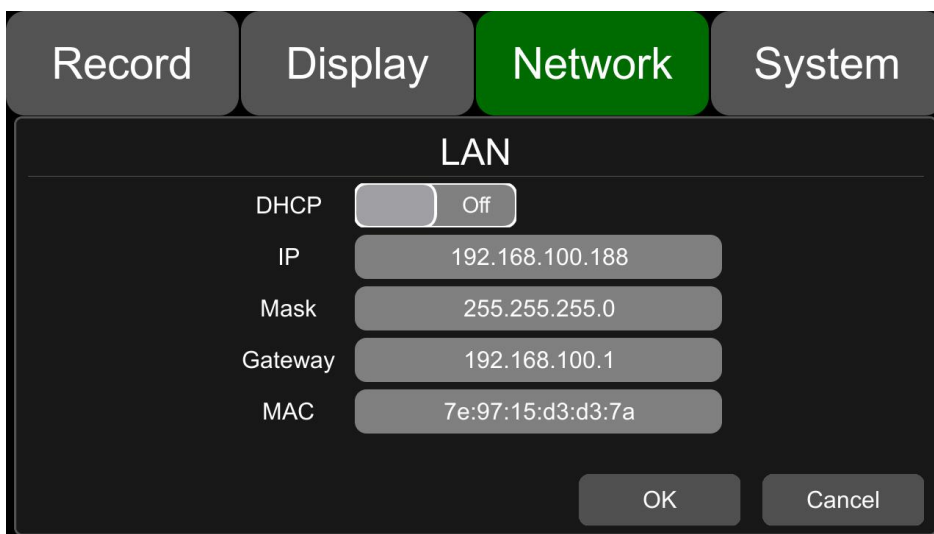




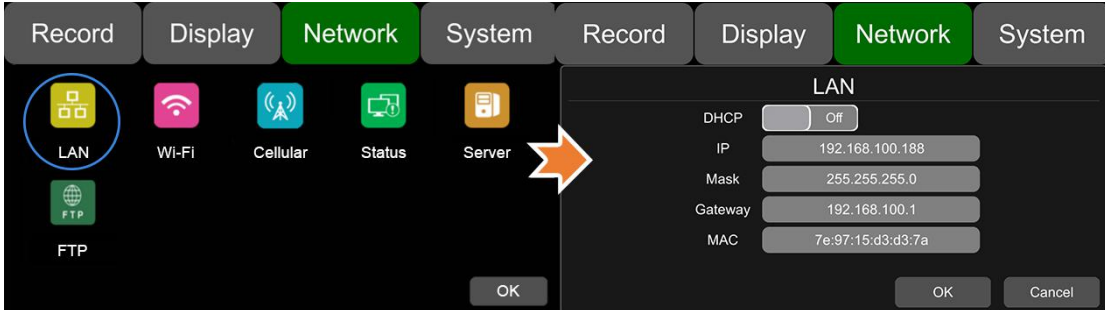
## 10. Network



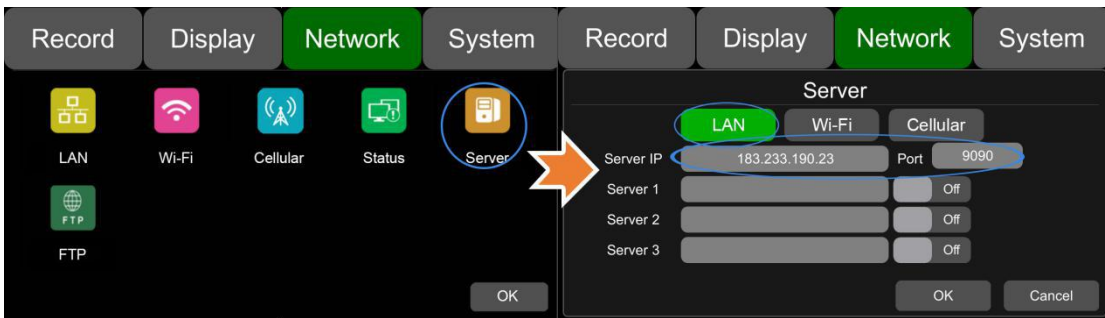
### 10.1 LAN Port and Server Setting



- DHCP: Dynamic Host Configuration Protocol. To set it on stands for dynamic IP and off, for static IP. Static IP must be manually input with IP address, mask and gateway. MAC address can be automatically assigned or revised.
- Enable LAN
  - Step 1: Connect the LAN cable to the DVR.
  - Step 2: Go to “Network - LAN” page.

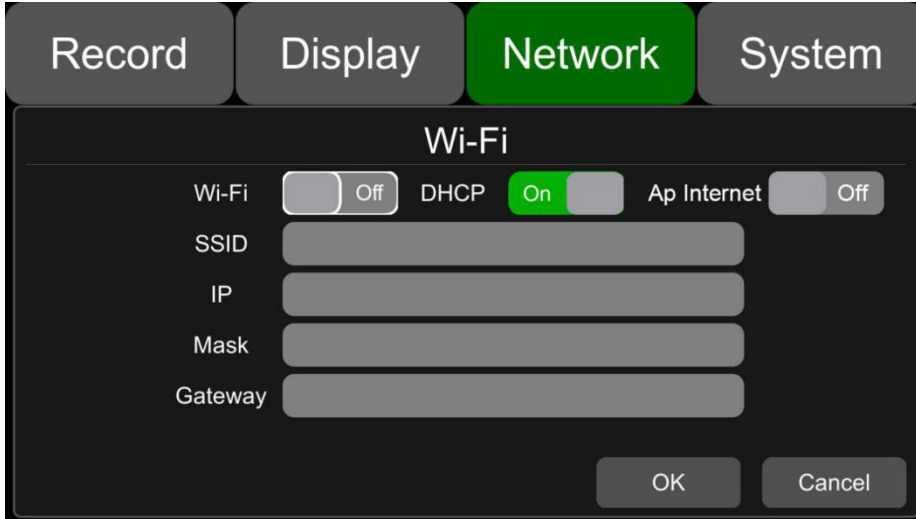


- Step 3: If DHCP is set to ON, a dynamic IP will be automatically matched. If DHCP is set to Off, input the IP, mask, gateway and MAC manually.
- Step 4: Touch OK to exit.
- Step 5: Go to “Network - Server” page and touch the LAN icon.



- Step 6: Input LAN Server IP and Port. Touch OK to save the setting.

## 10.2 Wi-Fi Network Setup and Server Setup



Wi-Fi: Wi-Fi on/off

DHCP: Dynamic Host Configuration Protocol. To set it on stands for dynamic IP and off, for static IP. Static IP must be manually input with IP address, mask and gateway. MAC address can be automatically assigned or revised.

SSID: Wi-Fi hot spot list

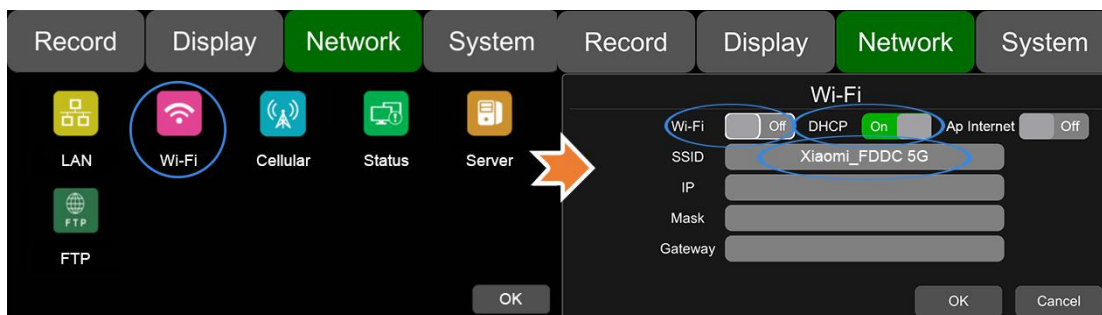
Ap Internet: If it is ON, the hot spot of this DVR can be found on mobile phones.

- Enable Wi-Fi

Step 1: Wi-Fi hot spot available

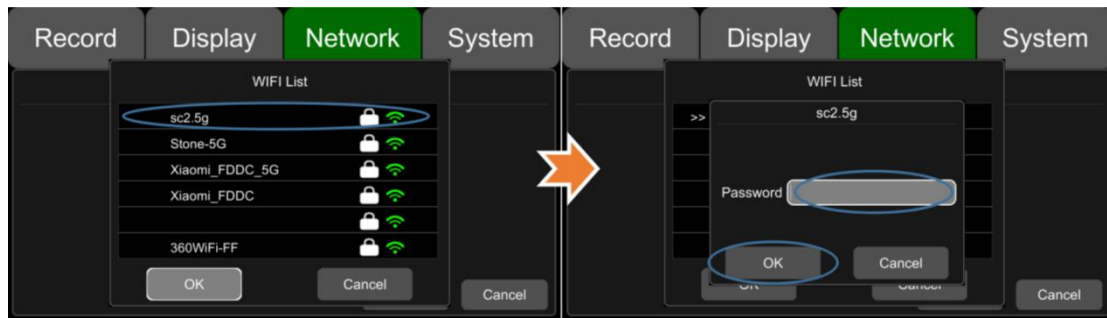
Step 2: Connect the Wi-Fi antenna at connector ⑥ of device rear panel

Step 3: Go to Wi-Fi setup interface, set Wi-Fi to ON and open the dynamic IP button.



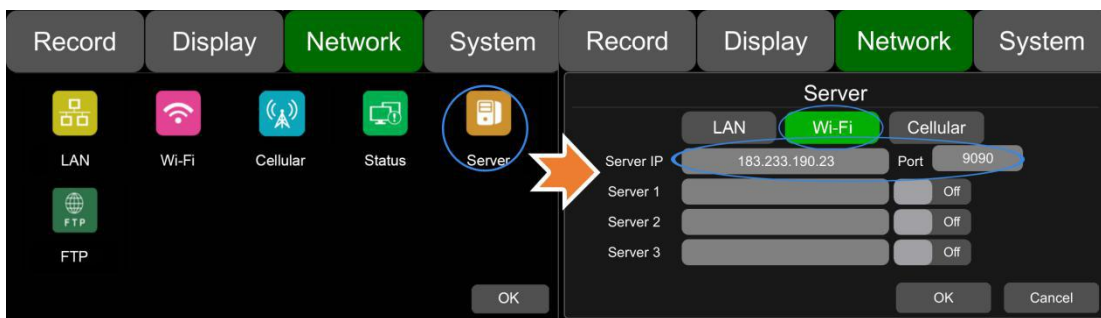


Step 4: Touch SSID sub-menu and the Wi-Fi hot spot shows up. Select the hot spot to connect and input password.

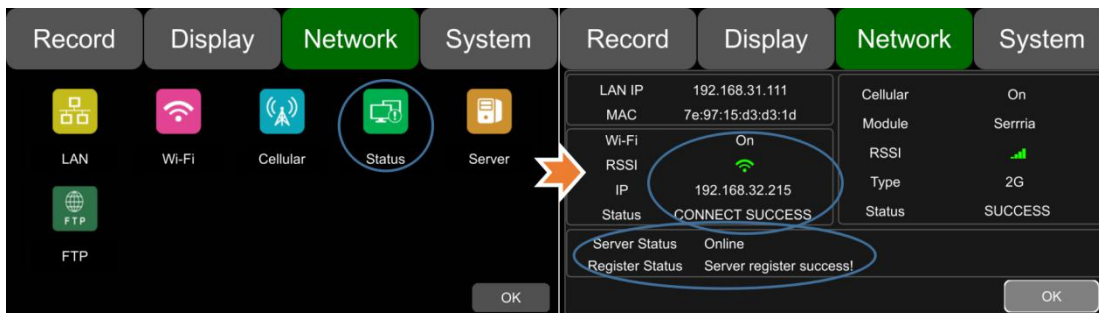


Step 5: Touch OK and quit the Wi-Fi setup interface.

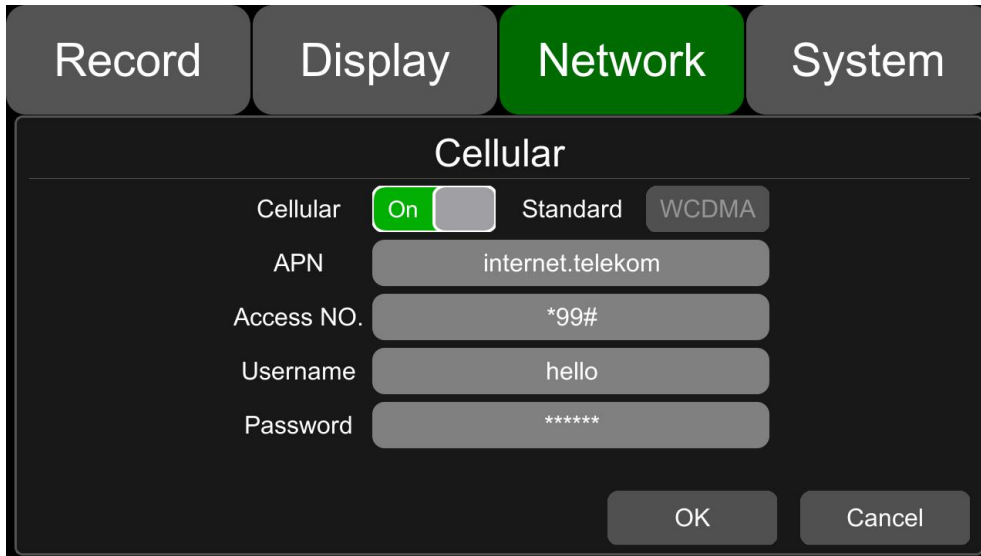
Step 6: Input Wi-Fi Server IP and Port in "Network-Server Setup" page.



Step 7: Wi-Fi network status shows "CONNECT SUCCESS" and server status shows "Online".



## 10.3 2G/3G/4G Control and Network Setup



Cellular: Cellular is on, meaning that 2G/3G/4G is on.

Network Standard: WCDMA by default.

APN & Access Number: Normally, the user doesn't need to input user name and password for APN and Access number. The default setting is available. If it can't communicate with the network under the default setting, please consult your local network carrier.

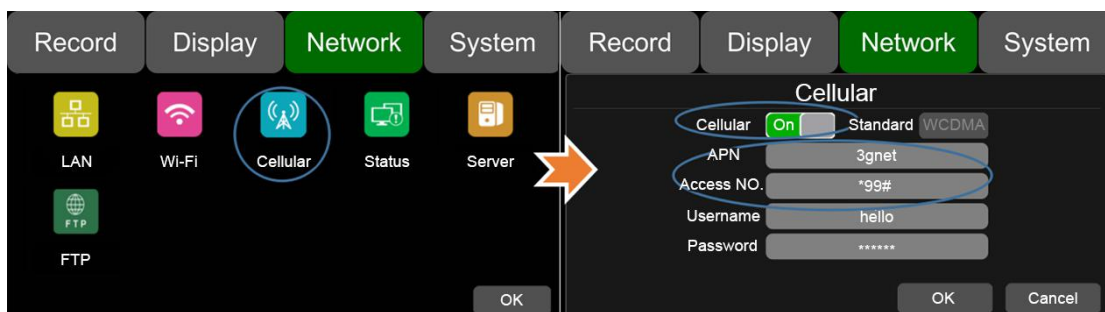
- Enable 2G/3G/4G

Step 1: DVR can search 2G/3G/4G signal locally.

Step 2: Connect the 2G/3G/4G antenna at connector ⑤ of DVR rear panel.

Step 3: Open the DVR front housing and insert the 2G/3G/4G SIM card.

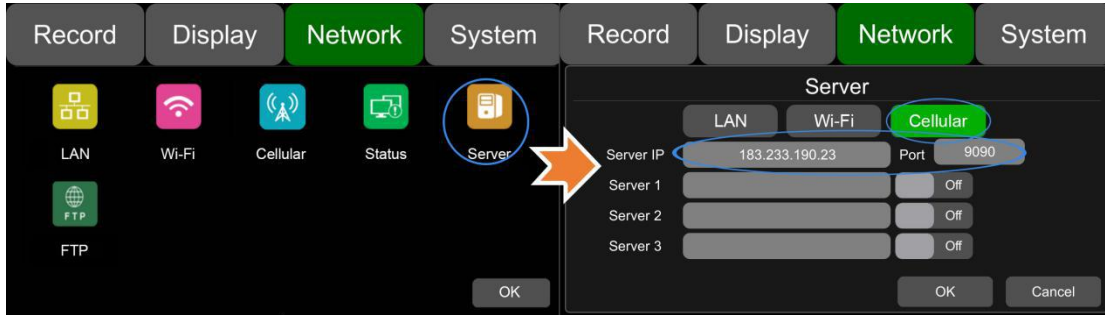
Step 4: Go to Cellular setup interface and set Cellular to ON.



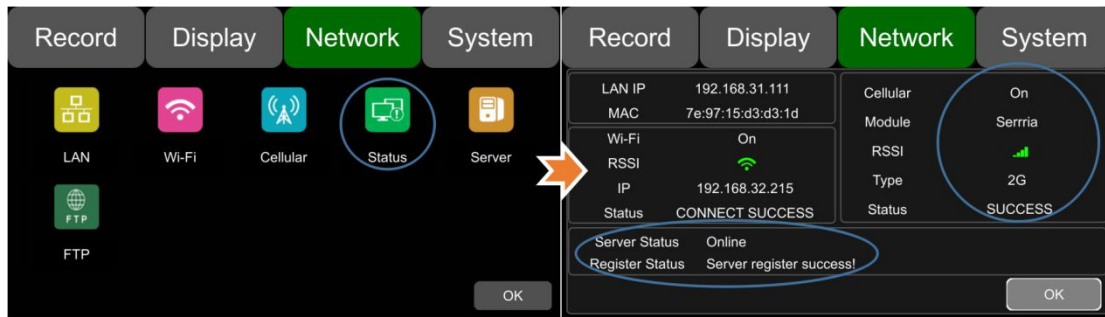
Step 5: Input the APN and Access Number correctly. Access Number can be skipped.

Step 6: Touch “OK” to exit.

Step 7: Input 2G/3G/4G Server IP and Port in “Network-Server Setup” page.



Step 8: Cellular network status turns into “Success” and server status turns into “Online”.

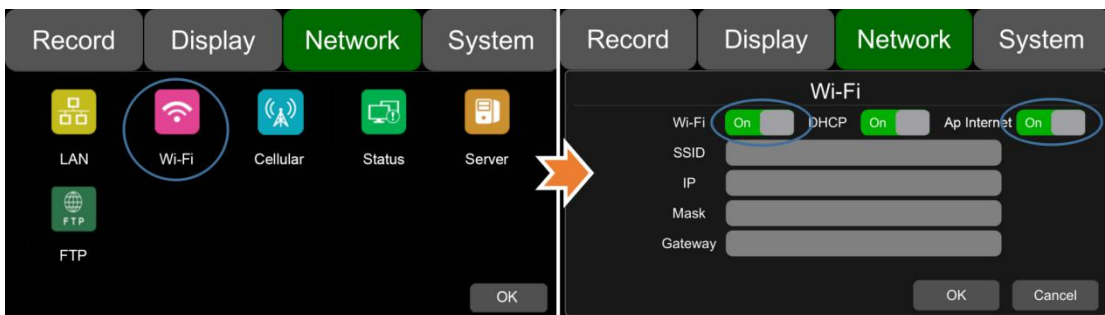


## 10.4 Ap Internet

- Steps of connecting to Ap Internet

Step 1: Please refer to chapter 10.2 and 10.3, connect the DVR to the Internet through Wi-Fi or 2G/3G/4G.

Step 2: Click the button Ap Internet to ON



Step 3: Search the WiFi hotspot that DVR has connected on the mobile phone. The SSID name of the DVR hotspot started with “WifiAp-” and is followed by the serial number of the DVR. The default password of the hotspot “WifiAp-” is ap12345678.

## 10.5 Network Status



Network Status: Users can check information such as LAN IP address, MAC address, Wi-Fi network status, Wi-Fi IP address, Wi-Fi signal strength, 2G/3G/4G network status, 2G/3G/4G signal strength, and Server status.

Additionally, users can verify whether network connection is successful or not.

Record	Display	Network	System
LAN IP	192.168.31.111	Cellular	On
MAC	7e:97:15:d3:d3:1d	Module	Serrria
Wi-Fi	On	RSSI	
RSSI		Type	2G
IP	192.168.32.215	Status	SUCCESS
Status	CONNECT SUCCESS		
Server Status	Online		
Register Status	Server register success!		
			OK

LAN IP: Refers to the static IP set on Network-LAN page or the dynamic IP which is obtained automatically.

MAC: Refers to the static physical address set on Network-LAN page or dynamic physical address which is obtained automatically.

Wi-Fi: Wi-Fi on/off status obtained from Network-Wi-Fi page.

Wi-Fi RSSI: Wi-Fi signal strength icon.

Wi-Fi IP: Static IP obtained from Network-Wi-Fi pages or dynamic IP.

Wi-Fi status: Wi-Fi status will be shown as below:

CONNECT SUCCESS

GET IP ERROR

Cellular : The on/off status of cellular acquired from Network-Cellular page.

Module: Display the Cellular module brand.

Wireless RSSI: 2G/3G/4G signal strength icon.

Wireless Type: Display the types of 2G/3G/4G module, the parameters and the corresponding types are shown as follows.

2G: Receive 2G signal.

3G: Receive 3G signal.

4G: Receive 4G signal.

Wireless Status: Value and corresponding meanings.

Description	Meaning
Module initialization	Cellular module is initializing.
Module exception	Cellular module is in exception.
No SIM card	No SIM card is found in the DVR.
Cpin locked	Cpin is locked.
Signal abnormal	Signal is abnormal
Networking failure	Connect to the network is failed.
SUCCESS	Connect to the network is successful.

Server Status: Online / Offline

## 10.6 Server



The function of server setting is described as above (10.1,10.2,10.3).

The screenshot shows a menu with four tabs: Record, Display, Network (selected), and System. Below the tabs is a 'Server' configuration screen. At the top of this screen are three buttons: LAN (selected), Wi-Fi, and Cellular. Below these are fields for 'Server IP' (183.233.190.23) and 'Port' (9090). There are three rows for 'Server 1', 'Server 2', and 'Server 3', each with a toggle switch set to 'Off'. At the bottom are 'OK' and 'Cancel' buttons.

## 10.7 FTP



Record Display **Network** System

FTP

Username  Port

Password  FTP  Off

Normal File  Off Cellular  Off

Uploading

Filename

Status

**Username/Port/Password:** Correct Username / Port / Password of the FTP server must be filled in.

**FTP:** ON/OFF

**Normal File:** Two states, OFF and ON

- **OFF:** Upload other recordings files except regular recordings files. Other recordings files refer to alarm recording files and timing recording files
- **ON:** Upload all files (including Normal Files).

**Cellular:** Two states, OFF and ON

- **OFF:** Files are not allowed to be uploaded when Cellular is connected to the Internet
- **ON:** Files are allowed to be uploaded when Cellular is connected to the Internet. To save network flow data, please select OFF.

Record Display **Network** System

FTP

Notice

Network flow consuming, continue?

Username

Password

Normal

Upload

Filename

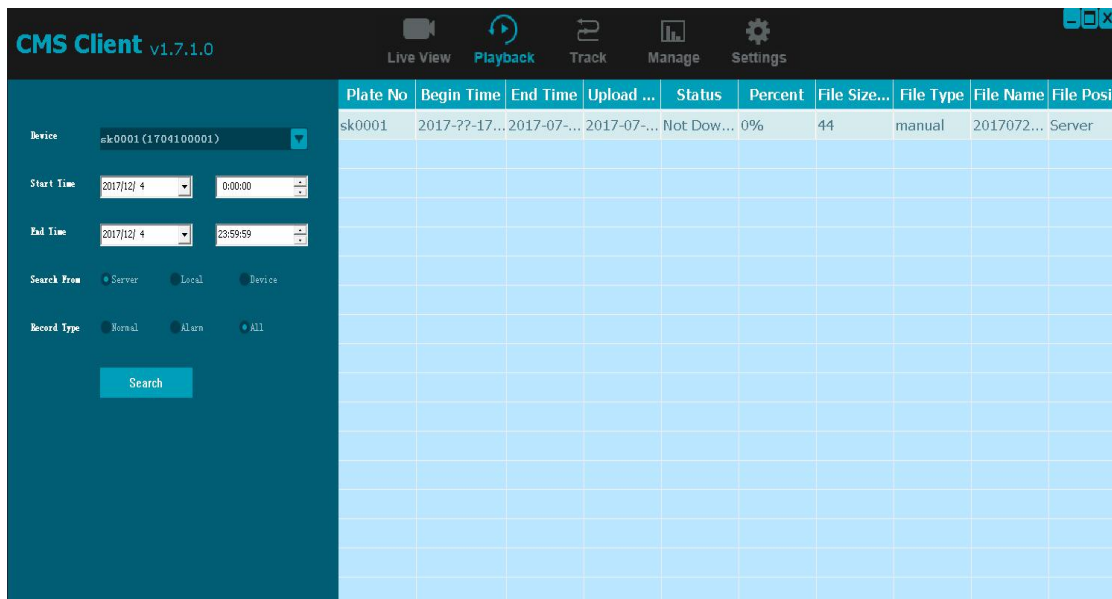
Status   FTP FORBID

**Uploading:** Display the progress bar of the uploaded file

**Filename:** Display the file name of the file being uploaded

**Status:** Display the working status of the FTP function

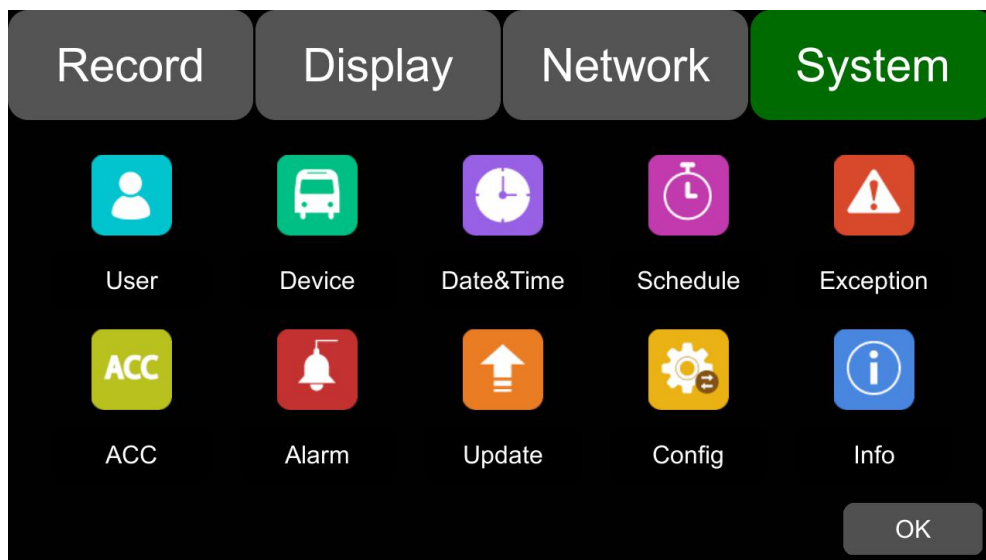
Successfully uploaded files can be found on the client as below:



The screenshot shows the CMS Client v1.7.1.0 interface. On the left, there are search filters for Device (sk0001 (1704100001)), Start Time (2017/12/4 0:00:00), End Time (2017/12/4 23:59:59), Search From (Server, Local, Device), and Record Type (Normal, Alarm, All). A Search button is at the bottom of the filters. The main area is a table with the following data:

Plate No	Begin Time	End Time	Upload ...	Status	Percent	File Size...	File Type	File Name	File Posi
sk0001	2017-??-17...	2017-07-...	2017-07-...	Not Dow...	0%	44	manual	2017072...	Server

## 11. System



## 11.1 Log in Setup



Set user name and password for booting up. The initial password is 123.

The screenshot shows a dark-themed menu with four tabs: 'Record', 'Display', 'Network', and 'System'. The 'System' tab is highlighted in green. Below the tabs is a 'User' section with four input fields: 'Username' (containing 'admin'), 'Password', 'New Password', and 'Confirm Password'. At the bottom right are 'OK' and 'Cancel' buttons.

## 11.2 License Plate Number Setup



Input license plate number.

The screenshot shows a dark-themed menu with four tabs: 'Record', 'Display', 'Network', and 'System'. The 'System' tab is highlighted in green. Below the tabs is a 'Device' section with two input fields: 'License No.' (containing 'AAAAAA') and 'Device ID' (containing '1711280010'). At the bottom right are 'OK' and 'Cancel' buttons.



## 11.3 System Time Setup



### Format Setup:

The screenshot shows the 'Dates&Time' configuration screen. At the top, there are four tabs: 'Record', 'Display', 'Network', and 'System' (which is highlighted in green). Below the tabs, the screen is titled 'Dates&Time'. It contains several input fields and buttons:

- Date:** Year (2018), Month (06), Day (21)
- Time:** Hour (11), Minute (17), Second (38)
- Format:** A button labeled 'Setup' is circled in blue. To its right are 'Time Sync' and another 'Setup' button.
- DST:** A button labeled 'Setup'.
- Keypad:** A numeric keypad with buttons for 0-9 and a 'Del' button.
- Bottom:** 'OK' and 'Cancel' buttons.

The screenshot shows the 'Format' configuration screen. At the top, there are four tabs: 'Record', 'Display', 'Network', and 'System' (which is highlighted in green). Below the tabs, the screen is titled 'Format'. It contains three numbered items:

- 1 Time Zone:** A dropdown menu showing 'UTC', followed by a minus sign, a numeric input field with '8', and a plus sign.
- 2 Date Format:** Two dropdown menus, the first showing 'YYYYMMDD' (highlighted in green) and the second showing 'MMDDYYYY'.
- 3 24 Hour:** A toggle switch with 'On' selected (highlighted in green).

At the bottom, there are 'OK' and 'Cancel' buttons.

Go to "System - Date&Time - Format\_Setup" page.

①Time Zone: Time zone setting.

②Date Format: Set the format of date.

③24 Hour: If it is ON, time format will be displayed in 24-hour system. If OFF, in 12-hour system.

## Time Ssync Setup:

The screenshot shows the 'Dates&Time' configuration screen. At the top, there are four tabs: 'Record', 'Display', 'Network', and 'System' (which is highlighted in green). Below the tabs, the screen is titled 'Dates&Time'. It contains several input fields and buttons:

	Year	Month	Day	Keypad		
Date	2018	06	21	1	2	3
				4	5	6
Time	Hour: 11	Minute: 17	Second: 38	7	8	9
				0	Del	
Format	Setup	Time Sync	Setup			
DST	Setup			OK	Cancel	

The screenshot shows the 'Time Sync' configuration screen. At the top, there are four tabs: 'Record', 'Display', 'Network', and 'System' (which is highlighted in green). Below the tabs, the screen is titled 'Time Sync'. It contains three numbered callouts pointing to specific settings:

- ① GPS: A toggle switch currently set to 'Off'.
- ② NTP: A toggle switch currently set to 'Off'.
- ③ NTP Server: A text input field containing the URL 'time.windows.com'.

At the bottom right, there are 'OK' and 'Cancel' buttons.

Go to "System - Date&Time - Time Sync\_Setup" page.

①GPS: Set GPS to ON/OFF

②NTP: Set NTP to ON/OFF

③NTP Server: Show the URL of the NTP Server

## DST Setup:

The screenshot shows the 'System' tab selected, with the 'Dates&Time' menu open. The menu contains fields for Date (Year: 2018, Month: 06, Day: 21) and Time (Hour: 11, Minute: 17, Second: 38). There are also buttons for Format (Setup), Time Sync (Setup), and DST (Setup). A blue circle highlights the 'DST Setup' button. At the bottom right are 'OK' and 'Cancel' buttons.

The screenshot shows the 'DST' setup menu. It has five numbered callouts: 1 points to the 'Enable' toggle (set to 'On'); 2 points to the 'Offset' dropdown (set to 'one hour'); 3 points to the 'Mode' dropdown (set to 'week'); 4 points to the 'Start Time' dropdown (set to 'Feb.' and '01:01'); 5 points to the 'End Time' dropdown (set to 'Mar.' and '02:02'). At the bottom right are 'OK' and 'Cancel' buttons.

Go to “System - Date&Time - DST\_Setup” page.

- ①Enable: Set DST setting to ON/OFF
- ②Offset: Adjust the offset after enabling DST
- ③Mode: Select the mode of DST (setup DST according to week or date)
- ④Start: Set start time of DST
- ⑤End: Set end time of DST

## 11.4 Scheduled Recording



	Record	Display	Network	System
<b>Schedule</b>				
	Enable	Start	End	Weekday
Schedule 1	<input type="checkbox"/> Off	16:12	16:59	Every day
Schedule 2	<input type="checkbox"/> Off	00:00	00:00	Every day
Schedule 3	<input type="checkbox"/> Off	00:00	00:00	Every day
Schedule 4	<input type="checkbox"/> Off	00:00	00:00	Every day
		OK		Cancel

Enable: Set scheduled recording ON/OFF.

Start: Set start time of scheduled recording.

End: Set end time of scheduled recording.

Week-day: Set scheduled recording by weekdays. Select the weekdays to set preset.

Scheduled Recording:

- Support up to four appointed tasks. The recording duration is counted in minutes.
- Recording time can overlap.
- The start time of scheduled recording must be set ahead of the end time.

## 11.5 Exception



Record Display Network **System**

Exception

Exception Buzzer  On

Duration **30s** 60s 90s

OK Cancel

Exception Buzzer: Set the exception buzzer to ON/OFF.

Power On Buzzer: Set the power on buzzer to ON/OFF.

Duration: Set the duration time of the buzzer.

## 11.6 ACC Settings



Record Display Network **System**

ACC

Current Voltage  V

Shutdown Voltage  V

ACC Duration **5s** 60s 30min 60min

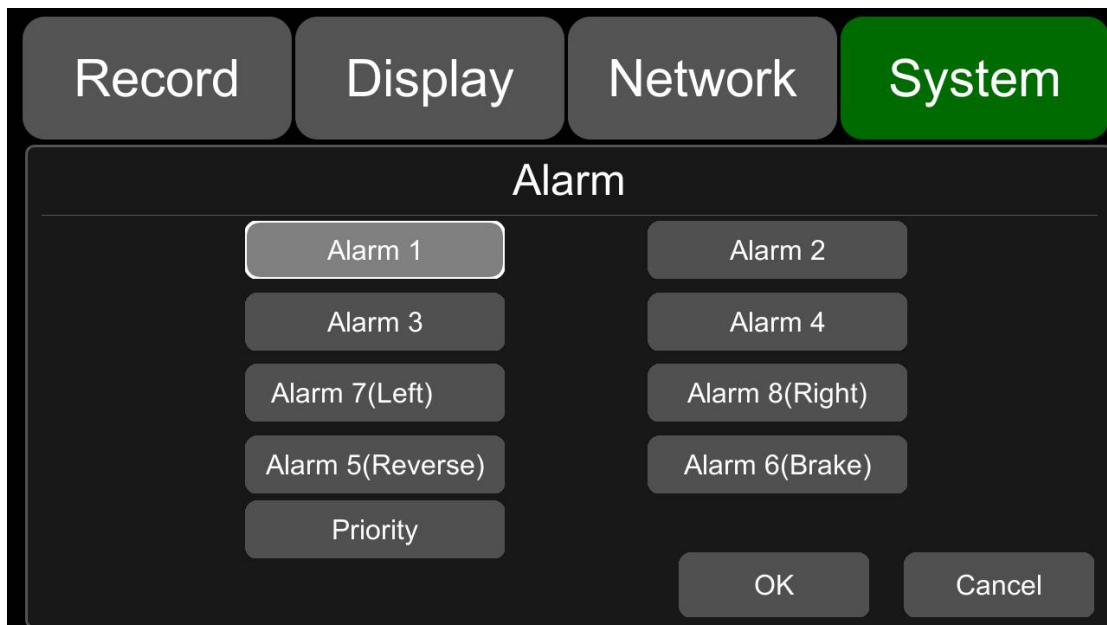
OK Cancel

Current voltage: Voltage of the working DVR.

Shutdown voltage: When the current or voltage is lower than the shutdown voltage, DVR will shut down automatically. When the current or voltage is higher than the shutdown voltage, DVR works normally. When the current or voltage is lower than shutdown voltage, if users power off and on the DVR, then DVR can come back to work for 1 minute, during this time users can change the value of shutdown voltage.

ACC Duration: DVR will continue recording for a few seconds after ACC is disconnected. ACC delay time can be set to be 5s, 60s, 30min or 60min.

## 11.7 Alarm Information Setting



**Alarm1~Alarm4:** Customized alarm recording.

**Reverse:** Reversing alarm recording.

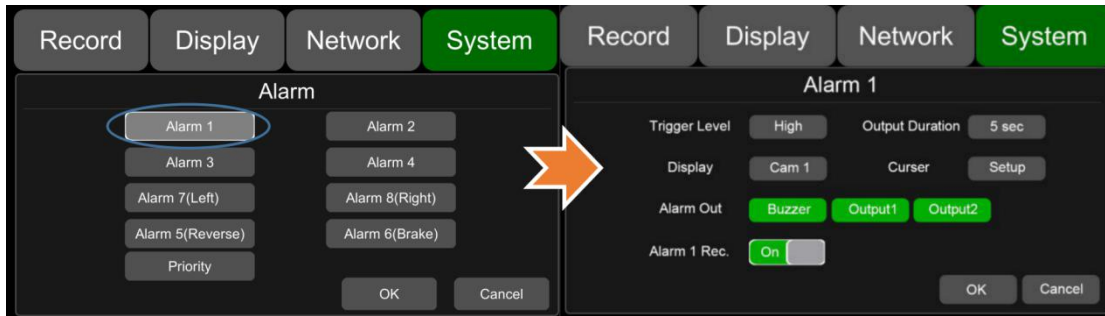
**Brake:** Brake alarm recording.

**Left:** Turning- left alarm recording.

**Right:** Turning- right alarm recording.

**Priority:** Set priorities for Alarm1~Alarm4, Reverse, Brake, Left, and Right.

When different types of alarm are triggered at the same time, alarms with the highest priority will work first.



**Trigger Level:** There are 3 options of Trigger Level. The options “Low” and ”High” are used for turning on alarm function. “Low” is generally used for debugging while “High” will be selected to turn on alarm function for on-road use. “Off ” means turning off alarm trigger function.

**Output Duration:** Duration of alarm video recording.

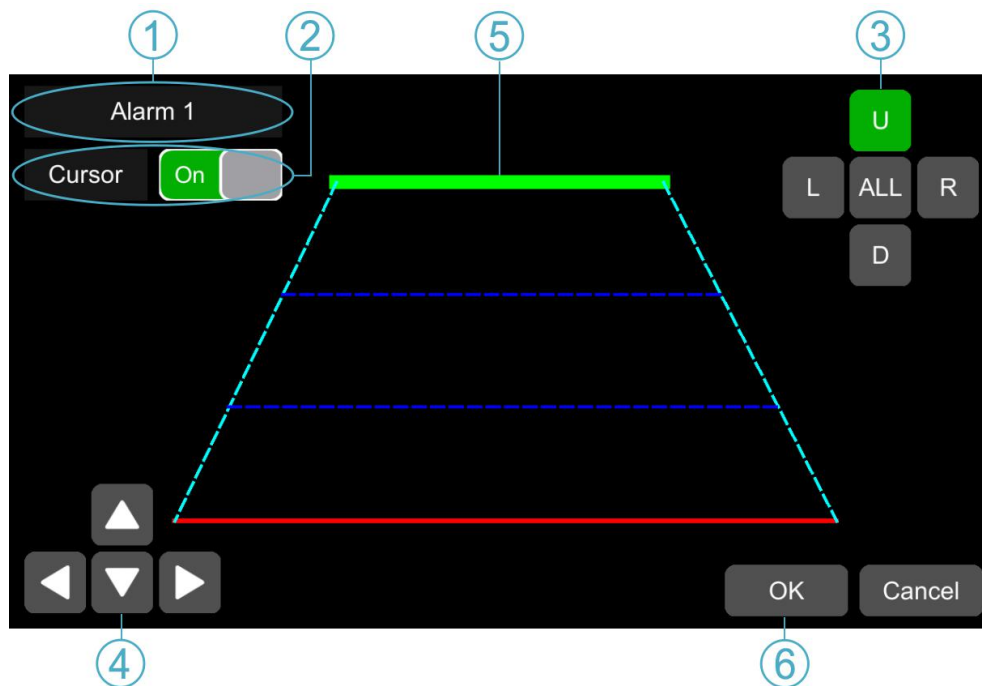
**Alarm Out-Buzzer:** Set the Buzzer ON, then it would beep for 5 seconds when alarming.

**Alarm Out-Output1:** Set it ON, then 12V level output would come from the alarm wire of Output 1

**Alarm Out-Output2:** Set it ON, then 12V level output would come from the alarm wire of Output 2

**Display:** A full screen of one channel will display when this channel is triggered.

**Cursor:** See the picture below.



①Camera name of the alarm-triggered channel.

②Touch this button to turn on/off cursor.

③Line selecting: There are five lines to be selected. Line U (up), Line D (down), Line L (left), Line R (right) and ALL. The button is green if selected. You can use remote control to operate.

④There are four directions to adjust the shape of the cursor, Up, Down, Left and Right.

If Line U (the green one) or Line D (the red one) is selected, the selected line can be moved with these directions.

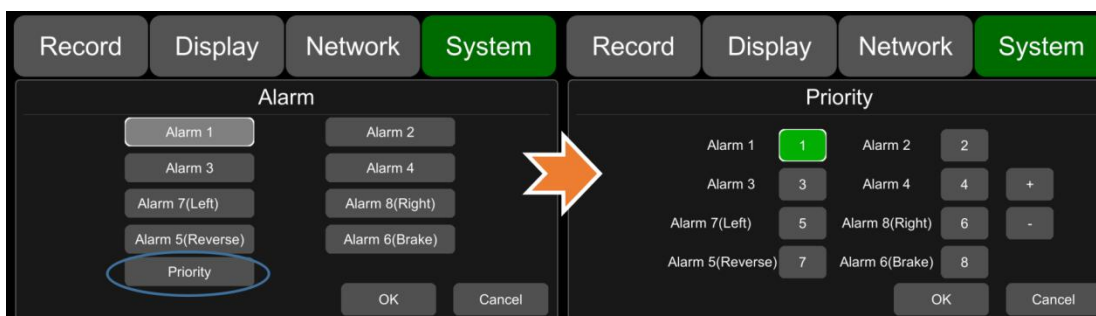
If Line L or Line R is selected, the top point of the selected line can be moved to left or right with Direction Up and Direction Down, and the bottom point of the selected line can be moved to left or

right with Direction Left and Direction Right.

⑤ Lines of cursor. The selected one will be thickened for three times. The two lines in the middle will not be processed.

⑥ Touch OK to save the settings and exit. Cancel to exit without saving any settings.

**Priority:** See the picture below.



: Press it, then the priority value of the selected alarm will be added by 1. The bigger the value is, the lower the priority will be.



: Press it, then the priority value of the selected alarm will be reduced by 1. The smaller the value is, the higher the priority will be.

- Alarms with higher priority will be triggered first.
- 1 is the highest priority, and 8 is the lowest.
- If two alarms A and B are triggered at the same time, and A's priority is higher than B's, then A will record first. After A finishes the recording, if B is still being triggered, B will then record. However, if B is no longer being triggered now, it will not record.
- If alarm B is triggered and at the process of recording, however, alarm A, whose priority is higher than B, is triggered then, B will not stop recording.

## 11.8 Update

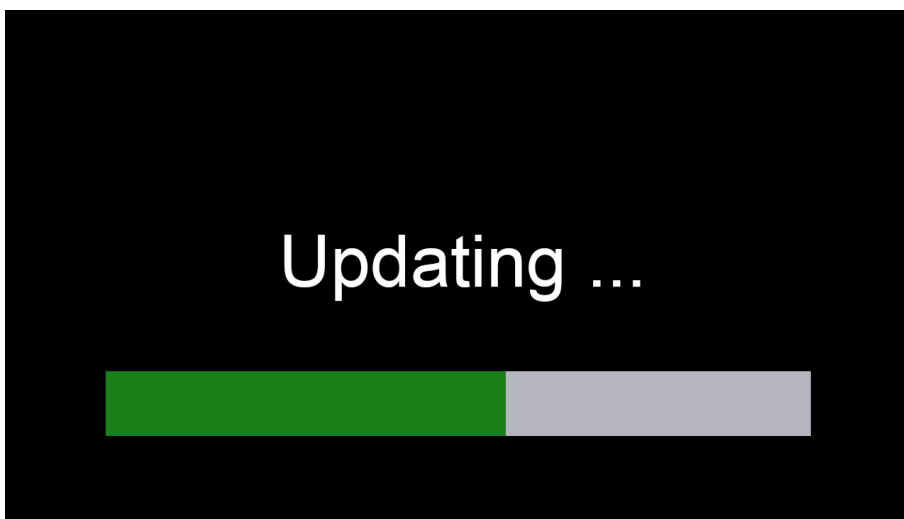
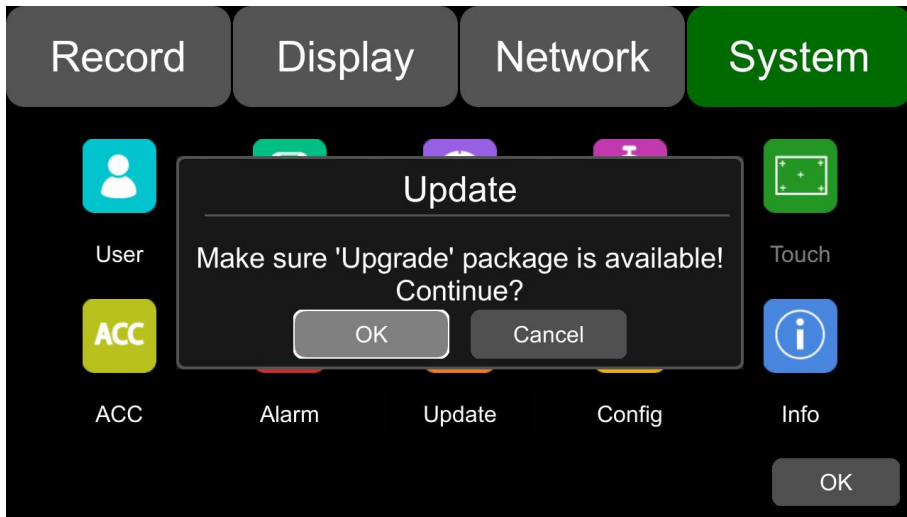


- For single device

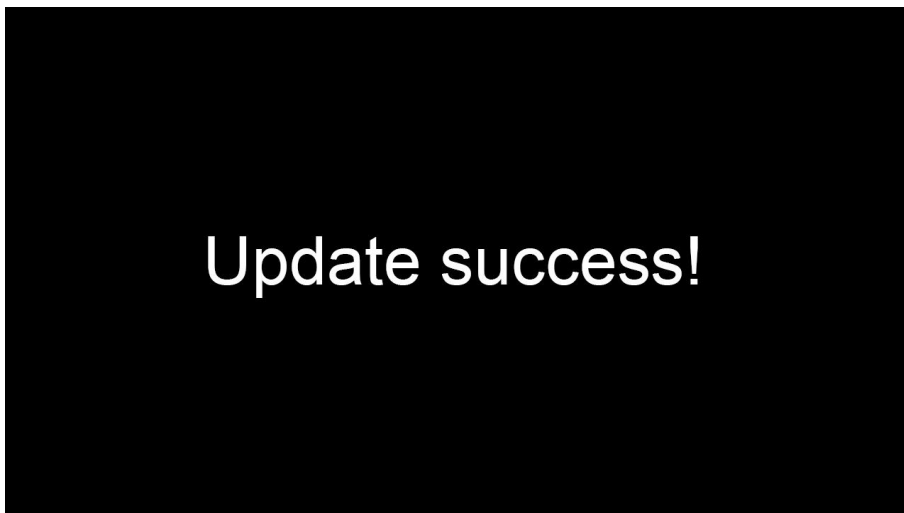
Step 1: Copy the folder to USB disk or SD card root directory and insert the USB disk or SD card into DVR.

Step 2: Power off the DVR and reboot it, then it will upgrade automatically. Or in the menu Menu -> System -> Update, touch OK to confirm to upgrade. Both methods can start the upgrade process.





Step 3: When "Update success!" is shown on the DVR monitor, the DVR will reboot automatically.



Step 4: After rebooting, please check if the version is the same as the one you copy into "upgrade" folder. Please go to Menu -> System -> Info to check it.

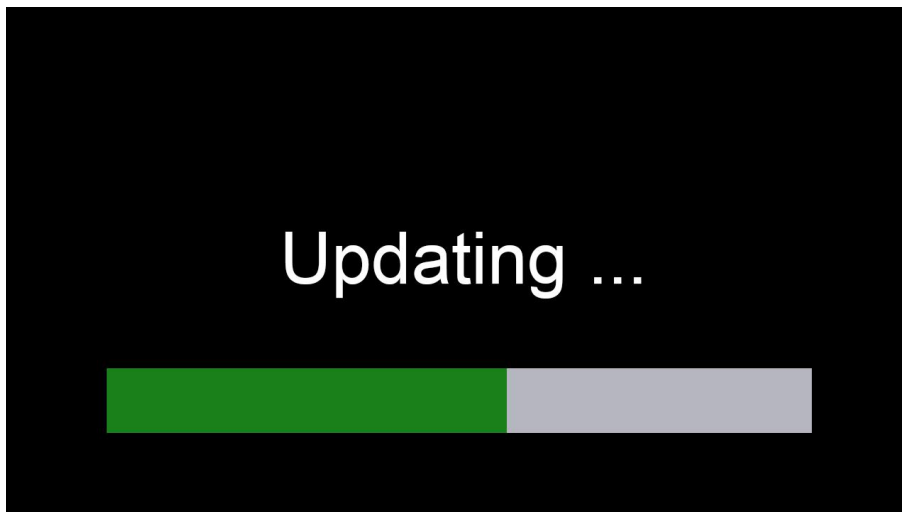
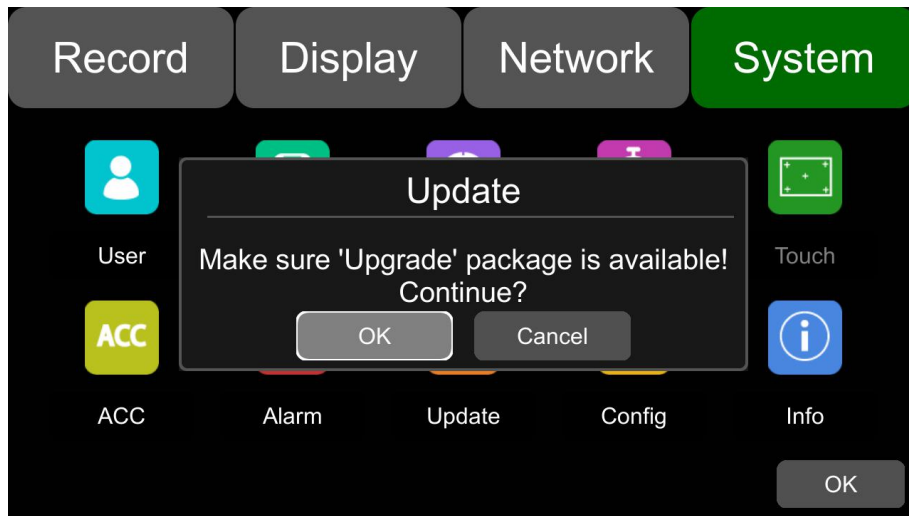
- For batch upgrade

As the upgrade package will be deleted after the upgrade process is done on device, so if you need to upgrade more than one device, please carry out as follows:

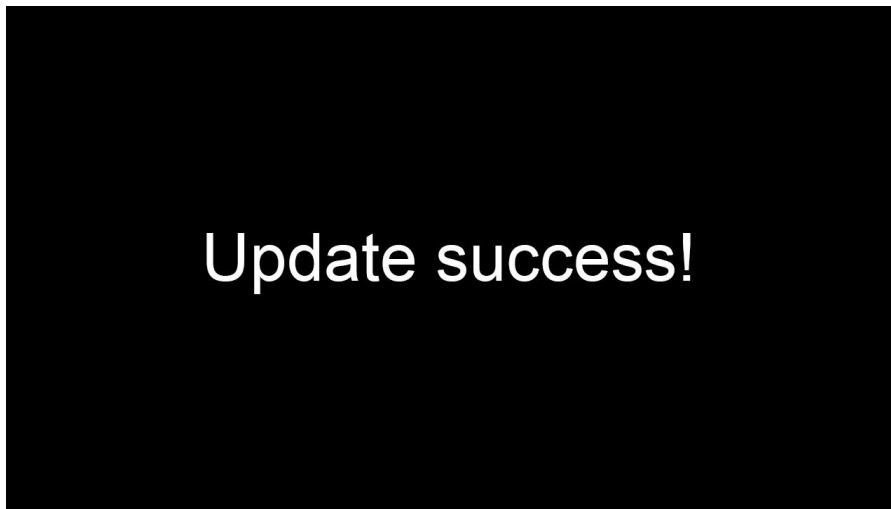
Step 1: Rename the package “dvxxx\_upgrade\_201xxxxxxxx” to “dvxxx\_upgrade\_never\_rename”( "xxx" in the "dvxxx\_upgrade\_never\_rename" is the corresponding product model number).

Step 2: Copy the package to the root directory of USB disk or SD card , and insert it to DVR.

Step 3: Power off the DVR and reboot it, then it will upgrade automatically. Or in the menu Menu -> System -> Update, touch OK to confirm to upgrade. Both methods can start the upgrade process.



Step 4: After When “Update success!” shows, unplug the USB disk or SD card with upgrade package, then DVR will reboot automatically.



Note: If using “dvxxx\_upgrade\_never\_rename” package to upgrade, we must unplug the USB disk or SD card when “update success!” is shown on the screen, or else the DVR will go into infinite loop of upgrade and will not boot up.

Solution: Unplug the USB disk or SD card with upgrade package, and then DVR will stop the upgrade process and boot up successfully.

- Remote upgrade

Step 1 : DVR connects to server.

Step 2 : Open the Windows client and log in.

Step 3 : Find the license number of the target DVR device in the device list of the client, right click and select “Update” to open the Batch Upgrades interface. If you need to upgrade more than one device, you can click the Add button to select other devices. The selected ones will be displayed on the device list to upgrade. If you want to remove devices from the list, please select them and click the Del button.

Step 4 :Select the device to upgrade, and then click the Browser button to select the upgrade package “dvxxx\_upgrade\_201xxxxxxxx”.

Note: For remote upgrade the package can't be named as “dvxxx\_upgrade\_never\_rename”. (“xxx” in the “dvxxx\_upgrade\_never\_rename” is the corresponding product model number)

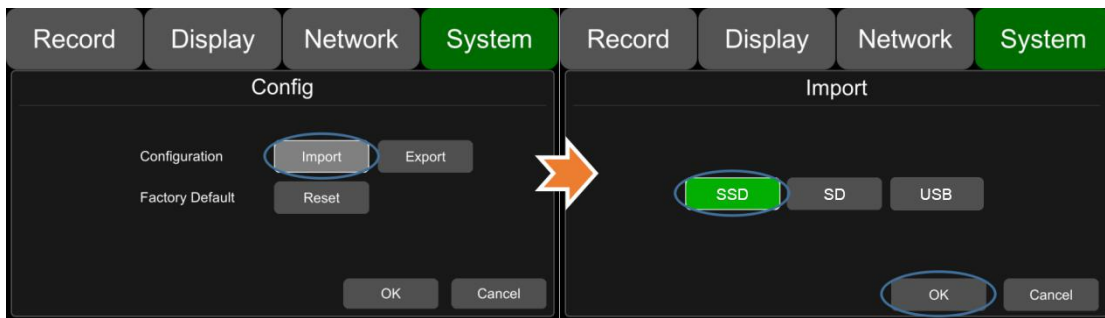
Step 5: Click the Start button to upload the upgrade package. When uploading is finished, the device will start to upgrade automatically. If it is failed to upload, the reason of failure will be displayed in the Remark column in the list.



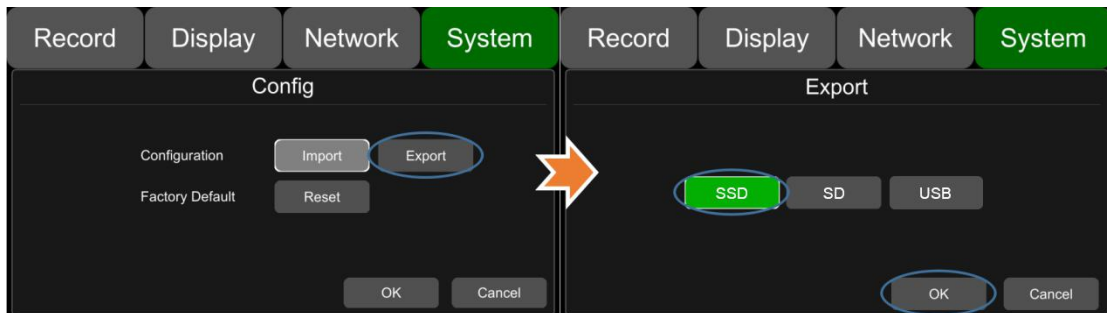
## 11.9 Configuration



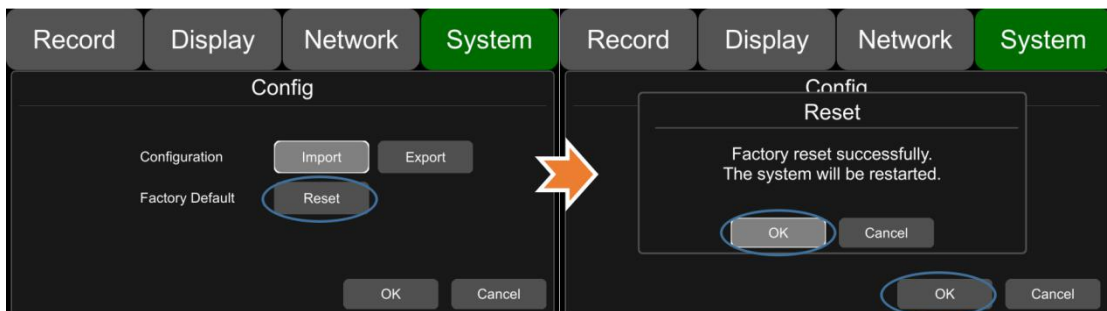
Configuration Import: Import the configuration information from SSD, SD or USB memory flash devices.



Configuration Export: Export Log to SSD,SD or USB memory flash devices.



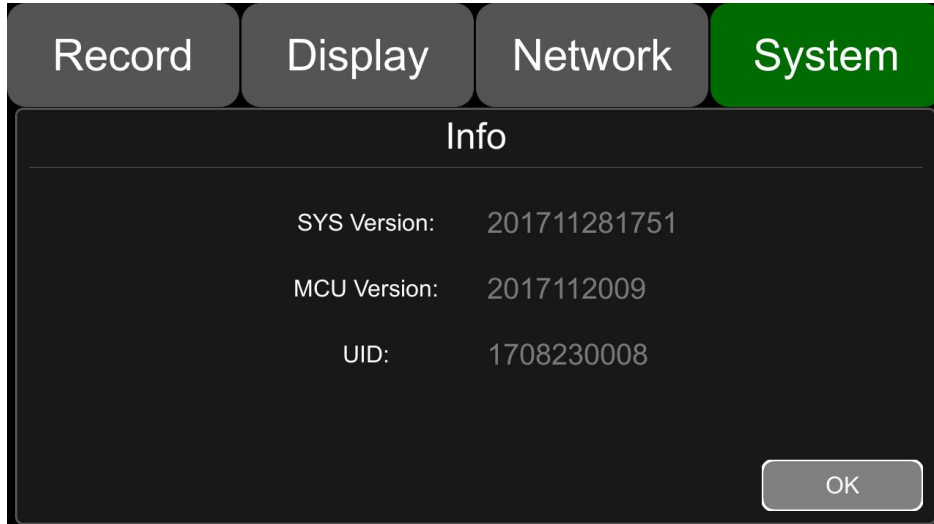
Factory Default: Press Reset to restore factory settings.



## 11.10 System Info



System Info : Software version number.



## 12. FAQ

### 1) The system can't start up?

Check power connection. Please follow the steps below to check the power connection:

1. Check the input power: if the power wire is connected correctly, if the ground wire is connected to the battery, and if the fuse on the power wire is in good condition.
2. Check if the voltage of the ACC signal wire is higher than 6 V.
3. Check if the input voltage of the device is higher than the shutdown voltage set on the screen of HD DVR.

### 2) The HD DVR restarts uninterruptedly?

Please follow the steps below to check it:

1. Check if the supply voltage of DVR is insufficient. If it is lower than the start-up voltage of the device, the device would restart repeatedly.
2. Restart HD DVR to see if it can work properly this time.

### 3) Unable to recognize disks ?

1. Check if the disk itself is in good condition and make sure that it is installed and of fine contact.
2. The disk has been formatted by DVR.
3. Restart DVR to see if it can work properly this time.

#### 4) Unable to recognize cameras ?

1. Make sure the camera is intact and the connection is correct.
2. Refit all wires (e.g, DB44 wire & extended wires) between cameras and the device .
3. Restart DVR to see if it can work properly this time.

#### 5) GPS anomaly ?






Check if the GPS antenna is properly installed.

## 13. APPENDIX

### APPENDIX I : Abbreviation & Description

Rec.	Record	SD	Secure Digital Memory Card
G-Force	Accelerometer sensor	USB	Universal Serial Bus
GPS	Global Positioning System	DB44	44 PIN Connector, A/V Input, Output. IO/ALARM Output
Wi-Fi	Wireless-Fidelity	DB26	26 PIN connector, Alarm Input/RS232/RS485
Cam	Camera	ALM	Alarm
AVI	Audio Video Interleaved	VLOSS	Video Loss
OSD	On-Screen Display	COMM	Communication
APN	Access Point Name	ERR	Error
DHCP	Dynamic Host Configuration Protocol	MEM	Memory
SSID	Service Set Identifier	MMSHOW	Media Player
IP	Internet Protocol	FTP	File Transfer Protocol
MAC	Media Address Control	DVR	Digital Video Recorder
RSSI	Received Signal Strength Indication	IR	Infrared Radiation
SSD	Solid State Drive	SYS	System
LED	Light Emitting Diode	DST	Daylight Saving Time

## APPENDIX II : Accessories

Accessories	Quantity	Description	Accessories	Quantity	Description
	1	9 PIN Aviation Power Input Wire		1	DB44 Wire
	1	8CH HD DVR Key		1	Remote Controller
	1, Optional	GPS Antenna		1, Optional	10 Inches HD Monitor
	1, Optional	Wi-Fi Antenna		1, Optional	Panic Button
	1	DB26 Alarm Input/Output, RS 232, RS485, Speed Wire		2, Optional	2G/3G/4G Antenna
	1, Optional	Conversion Box (SATA to USB)		1	5 PIN CAN Input/Output, External Temp. Sensor Input Wire
	1, Optional	USB Extension Cable		1, Optional	10 PIN to VGA Wire
	1, Optional	Four-in-one Antenna (GPS-3G-4G-Wi-Fi)			

## APPENDIX III: Compatibility Storage List

### SATA 3.0 SSD

NAME	Description
SSD 32G	TS32GSSD420I
SSD 64G	TS64GSSD420I
SSD 128G	TS128GSSD420I
SSD 256G	TS256GSSD420I
SSD 512G	TS512GSSD420I
SSD 1T	TS1TSSD420I

### SD Card

NAME	Description
32G SD Card	32G, MLC, NCSXDAB-032G, Longsys
64G SD Card	64G, MLC, NCSXJAB-064G, Longsys