

4CH HD DVR Operating Manual



DVR-4000HDQ - 4CH HD DVR

Thank you for using our Mobile DVR. Please read this User's Manual carefully to ensure that you can use the device correctly and safely.

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

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Specifications

4CH HD DVR		
System	Operating system	Linux
	Operating interface	Graphical menu operation interface(OSD)
	Video permission	Administrator & user setting
Video	Video input	Max 4 x 1080P analog high definition
	CVBS output	1CH 6pin aviation connector output PAL/NTSC
	HDMI output	1CH type-A connector output, 1080P
	Video display	1 or 4CH
	Video standard	PAL: 25FPS, NTSC: 30FPS
	Compression	H.264 main profile
Audio	Audio input	4 channels
	Audio output	1 channel
	Record format	Synchronized video & audio recording
	Audio compression	ADPCM
Digital processing & storage	Image resolution	Max 4 x 1080P(1920*1080)
	Image quality	1~8 level adjustable
	Video bit rate	64kbps~4Mbps/channel
	Storage	56~2700MB/(channel*hour)
	Playback resolution	Max 4 x 1080P(encoding & decoding at the same time)
	Audio bit rate	32kbps
	Storage	Max 4 x 128GB SD
Alarm	Alarm input	8 channels
	Alarm output	2 channels, 1 buzzer
	Motion detection	High/low sensitivity adjustable

Interface for communication	IR	1 channel
	RS232	1 channel
	RS485	1 channel
	CAN	NULL
	RJ45	1 channel
	USB2.0/USB3.0	USB3.0 x 1
Wireless	3G/4G	HSPDA/EVDO/FDD-LTE/TDD-LTE module optional
	WIFI	optional
	WIFI 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-Sensor /Gyroscope	Available	G-Sensor
Software	Windows client	Available
	iOS client	Available
	Android client	Available
	Web portal	Available
Electrical spec	Power supply & consumption	DC 9~36V, less than 15w(without camera)
	Operating temp. & humidity	-20~70 degree/ <80%
	Super Capacitor	Available
	Clock	Built-in clock, Calendar

1 Main Features

Controlled by touch screen

- All settings and operations could be done through the monitor if connected with the suggested touch screen. The main function is specially needed in awkward occasions for using mouse, like in vehicles.

Video and Audio

- 4 channels * 1080p, 4 video inputs with audio
- 1 CVBS output(1 * 6 PIN OUT), 1 HDMI(1080P), total 2 video output with audio

Recording

- 4-CH Video & Audio Recorder (with image resolution up to 1920*1080), and with G-sensor data and GPS data
- Multiple recording modes: power on recording, normal recording, schedule recording, event recording (i.e., G-sensor recording, speed recording, motion detection recording, Alarm recording 1~8, Panic button recording). Support cyclic recording and 15 seconds pre-recording.
- Recording files saved by 4 SD cards. Cyclic recording is optional.
- Real-time recording of license plate numbers, bus line numbers, driving speed, G-Sensor 3D accelerated speed, longitude and latitude, and GPS tracks.

Preview and Play Back

- Support single channel, or 4 channels audio and video play **simultaneously**
- Support searching recorded files by recording date, recording type
- Able to drag the progress bar when playing back
- Indicate recording status, alarm status.

Storage Types

- Support SD cards (SDHC, SDXC)
- The SD cards can be removed conveniently when they are not in recording or playing status.

Backup

- Support USB disk or USB hard disk for backup

Network

- Transfer through LAN / Cellular / WIFI. Picture is preferred rather than video to transmit to save cellular traffic.
- LAN / WIFI / Cellular connection (default priority: LAN > WIFI > Cellular); auto switch to LAN / WIFI connection when available to save Cellular traffic.
- File uploading function via FTP function, enables users to search or download in file list on the client.

Alarm

- 8 channels alarm inputs one channel buzzer output and 2 channels alarm

outputs

- Over-speed alarm and accelerated-speed alarm
- Motion detection alarm
- G-sensor alarm
- Video loss alarm
- Panic button alarm

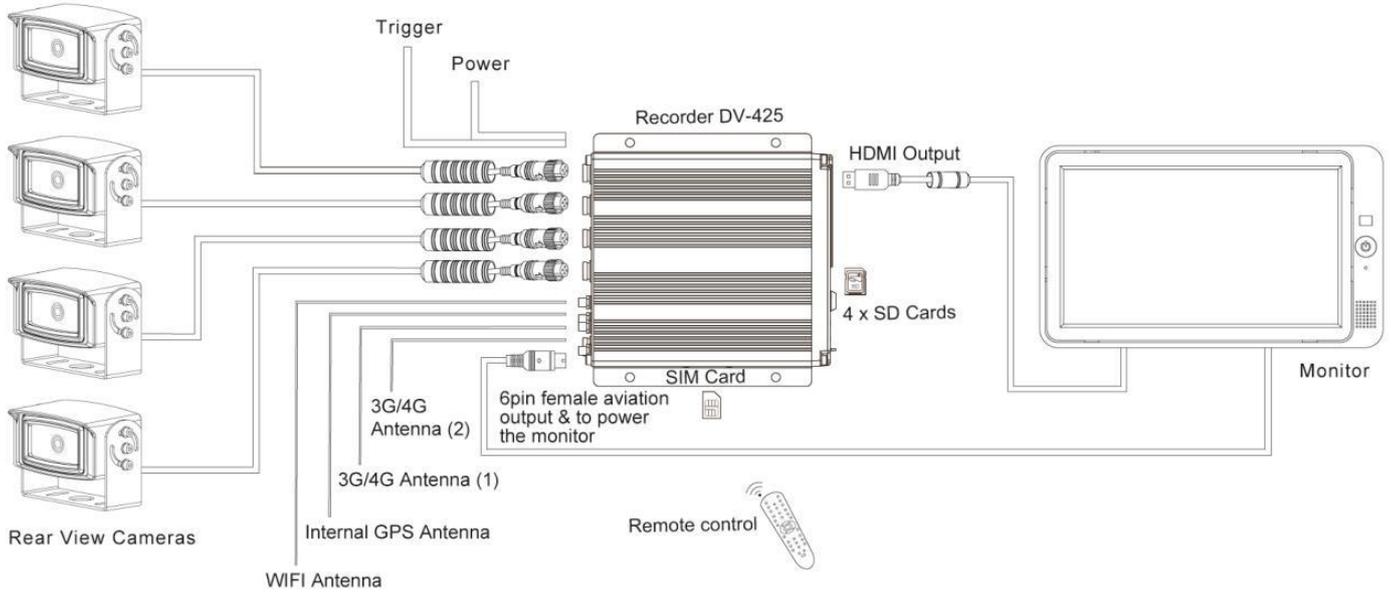
Charger

- 5V, 1.3A 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.

2 Wiring Diagram



3 Connection - Front Panel



- | | |
|-------------------|------------------|
| ① SD Card Slot | ④ IR Receiver |
| ② Ethernet(RJ45) | ⑤ LED Indicators |
| ③ Electronic lock | ⑥ HDMI output |

3.1 SD card slot

SD card type: Each card Max. Capacity 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

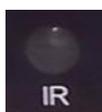
Step 3: Close the front plate and use the key to lock

3.2 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 beeps when lock is open.

3.3 IR 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 ~ 4 for live view.	1~4	
Switch to quad view.	0/MULTI	
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	
Clear the input info	CLEAR	

3.4 LED Indicators



PWR: Red LED, lights up when DVR is powered on, and goes out when power is cut off.

RUN: Keeps on when DVR is being launched and flashes when DVR is running.

ALM: Alarm indicator. It keeps on with the record when there is Alarm-in, G-sensor activation or motion detection or speed or panic button event alarm.

GPS: Lights up when GPS is running.

CH1~4: Lights up when corresponding camera is running.

SD1~4: Lights up when corresponding SD card is available, and flashes when recording.

CELL: Cellular indicator. It always lights up when uploading data and off when CELL has been off or cellular module in abnormal status.

WIFI: WIFI indicator. It always lights up when uploading data and off when WIFI has been off or WIFI module in abnormal status.

3.5 LCD monitor

EDID (Extended Display Identification Data) is automatically acquired when powered on. DVR will read the recommended resolution of the monitor at startup. If the recommended resolution of the monitor is 1080P, the DVR output will be 1080P; otherwise it will be 720P.

- 10 inches HD monitor introduction



- ① HD monitor power button, LED red for standby mode, and green for working mode
- ② HDMI connector
- ③ HDMI cable
- ④ HD monitor 6pin aviation cable connector, with Power and Video/Audio pin.

- The parameter list of 7/10 inches HD monitor

	10 inches HD monitor	7 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	1	1
VGA input	/	/
DVD input	/	/
Trigger	No	No
Max. Brightness	500 cd/m ²	450 cd/m ²
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

- **Monitor remote control**



Monitor power button

CVBS(DVD) / HDMI mode switching

1. CVBS (DVD) mode Connection:



2. HDMI mode connection:

connect monitor and DVR as follow, then press “MODE” button on monitor remote control, the video output will switch between HDMI and CVBS mode. After pressing the MODE button, the monitor screen will show which mode it is currently, lasts 3 seconds.



Note:
Only these two buttons marked are workable, others are empty.

- **How to connect the monitor**

- a. Connect to high-definition LCD monitor (7/10 inches HD monitor)
 - 1 . By HDMI cable
 - 2 . By 6pin aviation cable

Each of the method can display and touch control the DVR.
- b. Connect to standard LCD monitor (CVBS)
 - 1 . By 4pin AVOUT on the DB44 camera cable.

There is no touch control in this way. You can use remote control to operate the menu.

3.6 NO LCD monitor

If the DVR is not connected to any monitors, it will remind the customer of the exception by Buzzer alarm .

Buzzer warning functions are as follows :

- No matter what types of alarm event occur(including Alarm recording 1~8, Motion detection recording, G-force recording,Speed recording and Panic button recording), the Buzzer alarm will last for a while
- When the Buzzer alarms intermittently, it means that the DVR is unable to record currently.

Modes of intermittent alarm and their corresponding indications are as follows:

- a. The electronic lock is open: one long Whistle and one short Whistles
- b. Diskless: one long Whistle and two short Whistles
- c. Disk file system exception : one long Whistle and three short Whistles
- d. The disks are normal but the alarm video files fill the disks: two short Whistles and one short Whistles
- e. The disks are normal, but DVR is not recording: two short Whistles and three short Whistles

4 Connection - Front Panel



- | | |
|-----------------------------|----------------------------------|
| ① Camera cable input | ⑥ Alarm-In & Alarm-Out |
| ② Wifi Connector | ⑦ RS485 & RS232 |
| ③ GPS Connector | ⑧ Debug port |
| ④ Cellular Connector, TX/RX | ⑨ USB3.0 connector |
| ⑤ Power input (9-36V) | ⑩ 6pin CVBS video monitor output |

4.1 Camera cable input

Camera connection on rear panel is 4CH aerial port. Pin-out:



Camera Connection

Four cameras can be directly, or via extension cable connected to the 4CH aerial ports on the DVR rear panel.



4.2 Wifi Connector

Wifi antenna socket and wifi antenna, as shown in the picture.



4.3 Built-in GPS Connector

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



4.4 External GPS Connector

External GPS socket and external GPS, as shown in the picture.



4.5 Cellular Connector, TX/RX

Cellular antenna socket and Cellular antenna, as shown in the picture.



4.6 Power input (10-36V)

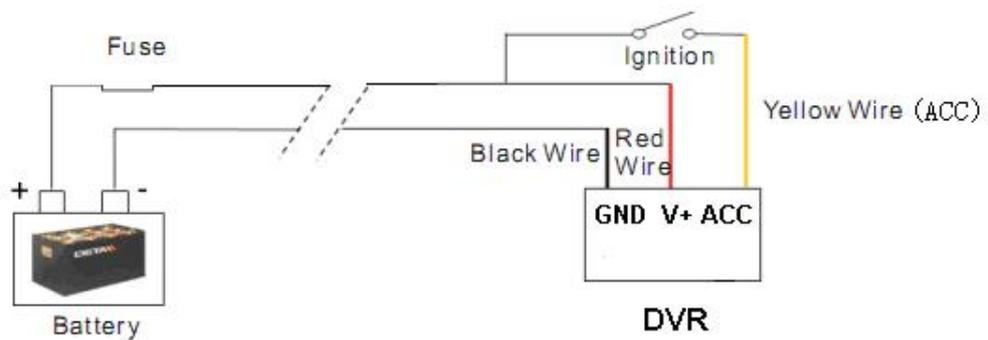


Signals:

3. V+ (9~36V)	4. ACC
1. GND	2. GND

Connection Method:

Connect the ignition to ACC (the yellow wire of the power cable). Connect the "+" and "-" pole of battery to V+ (the red wire) and GND (the black wire) of the DVR.

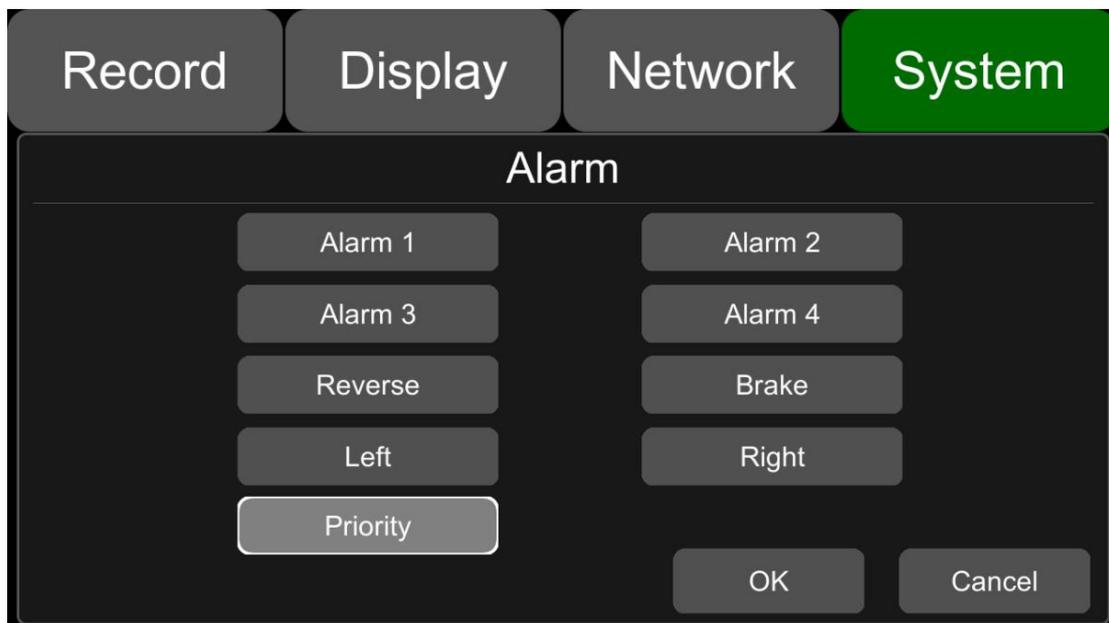


4.7 Alarm-In & Alarm-Out

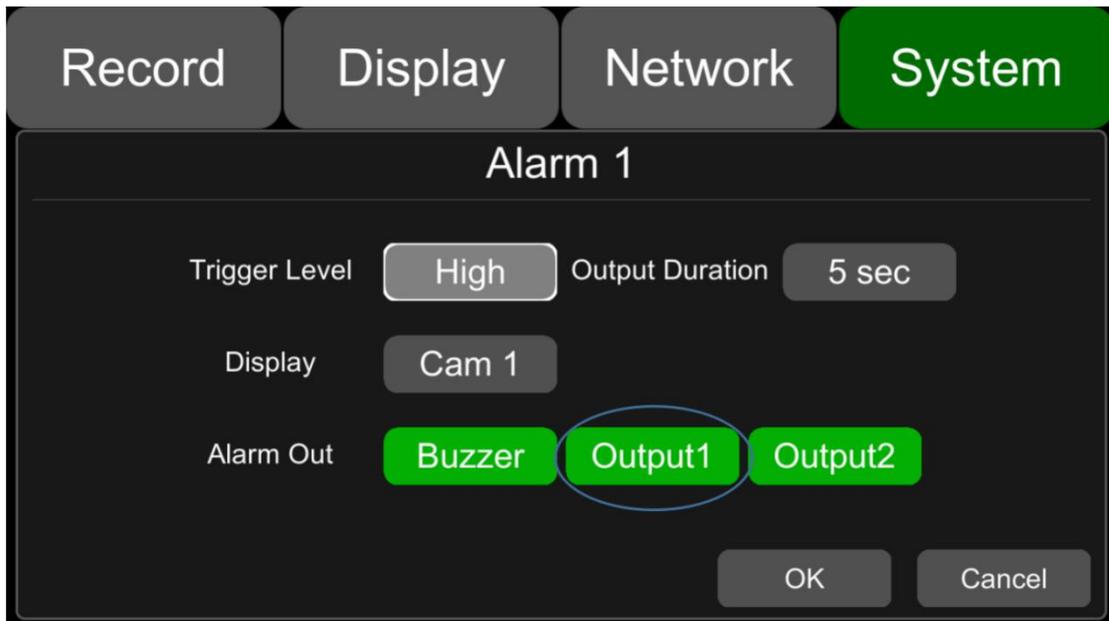
- Alarm, speed sensor, temperature sensor connecting cable:

Pin-1	Pin-3	Pin-5	Pin-7	Pin-9	Pin-11	Pin-13	Pin-15	Pin-17	Pin-19
Alarm1	Alarm2	Alarm3	Alarm4	Reverse	Brake	Left	Right	Speed	GND
Alarm Input 1~4				Reverse Input	Brake Input	Left Input	Right Input	Speed Input	GND
Pale Yellow	Pale Green	Pale Pink	Pale Red	Pale Purple	Pale Brown	Pale Orange	Pale Blue	White	Black
Pin-2	Pin-4	Pin-6	Pin-8	Pin-10	Pin-12	Pin-14	Pin-16	Pin-18	Pin-20
Temp In	ADC0	PC6	PC7	PC8	Alarm Out1	Alarm Out2	GND	12V Out	Vtemp
Temp In	Tire pressure input (to be developed)				Alarm Out1	Alarm Out2	GND	12V Out	5V Out
Grey	Blue	Green	Brown	Light Green	Orange	Purple	Yellow	Red	Pink

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. The first 4 alarm inputs are normal alarm input defined by user. The last 4 are specific alarm input and display cursor for each channel.



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.



3、 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.

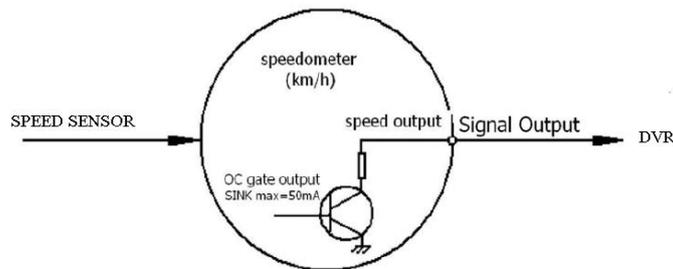
4、 SPEED+&SPEED-

These 2 cable is for speed detection and needs to connect to speed line on vehicle. Check the real-time vehicle speed with the vehicle speedometer:

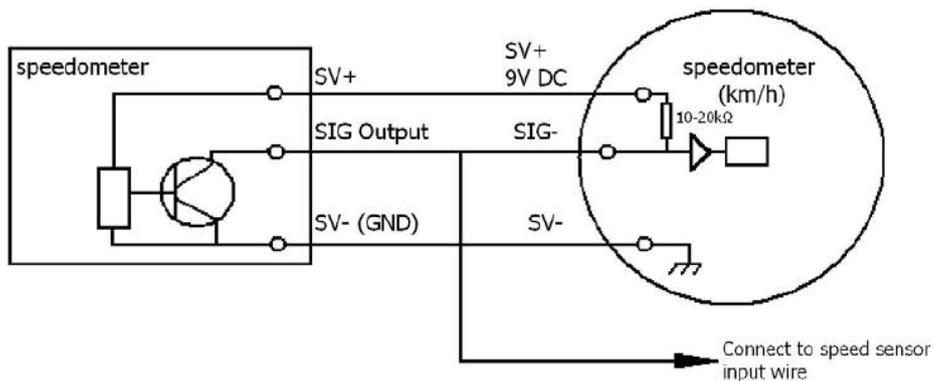
Wiring diagram:

The vehicle speedometer is driven by the Speed sensor, see the right figure.

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.



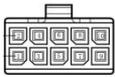
4.8 Panic button (Optional)

- 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 or bookmarking a manual event.



- Pin Definition



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

- LED

LED	Color	ON	OFF
VLoss	Amber	Any of the cameras have no signal alarm	Normal Operation
Rec	Soft green	Recording Normal driving	Not recording
GPS	Amber	GPS cannot latch	Normal Operation
Mem	Red	Storage Alarm or no Storage device	Normal Operation
Comm	Amber	Device is not connected to server	Normal operation or device is not connected to server if this feature is disabled
Power	Pale Blue	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"

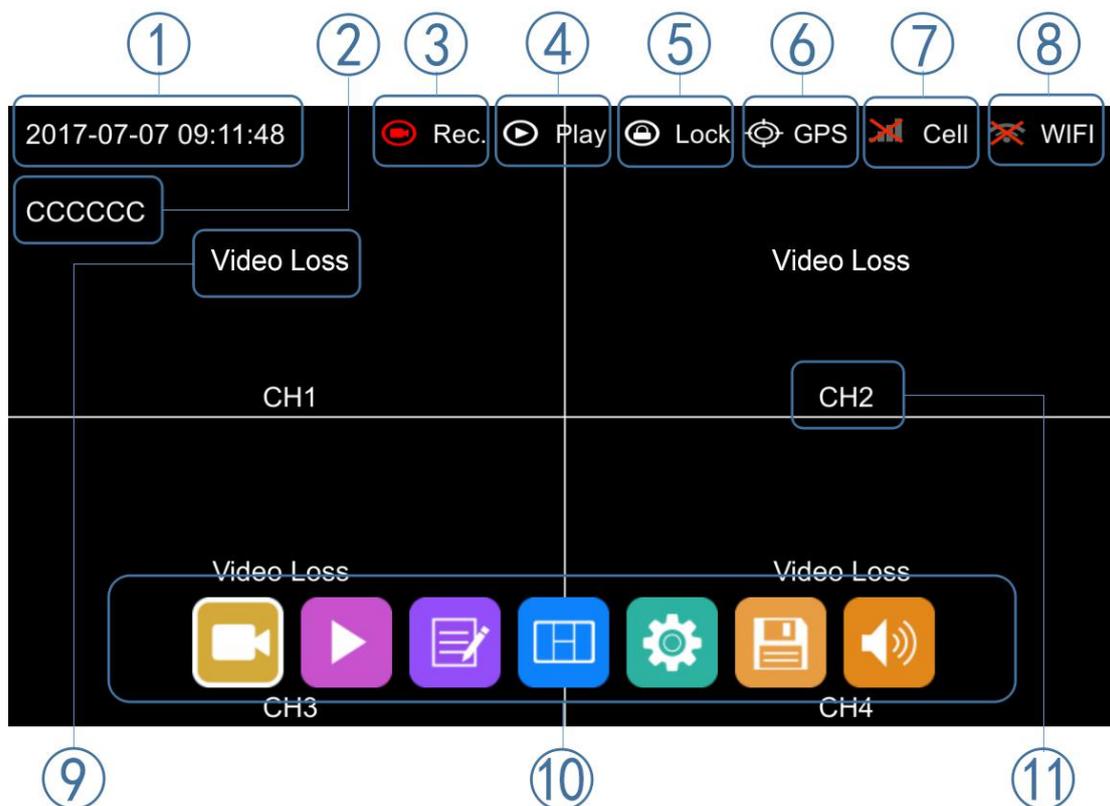
- a. When pressed, will trigger a manual event
- b. When pressed, will temporarily illuminate the Event LED

5 The Menu

The default setting can meet the requirement of most of users.

Menu Introduction

Press [MENU] on the remote or Touch the bottom area, the LOGIN page will be displayed on the LCD screen. The Shortcut Menu will be displayed after login. If you press [MENU] on the remote or Touch the bottom area again, the Main 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.
 - Electronic lock is different from menu lock.
- ⑥ GPS Sign
The GPS Sign will be flashing when connecting, it will turn red when successfully connected.
- ⑦ Cell
- ⑧ WIFI
- ⑨ Video Loss
- ⑩ Video Loss
- ⑪ Video Loss

- ⑦ Cell Sign
- ⑧ WiFi Sign
- ⑨ Video Loss Sign
- ⑩ Menu

Press [Area 10] to display MENU Sign

- ⑪ Channel Name Sign

5.1 Manually Record



Click this icon to start or stop recording. Video files are saved in NORMAL list of Player menu.

5.2 Playback



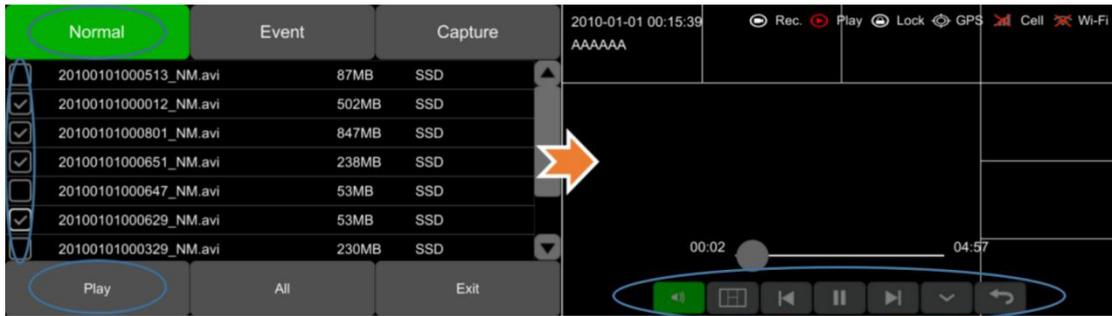
Video Playback button: Click this button to enter the calendar menu.

If a date is marked green, that means it has recording files saved on this day. Click the icon to enter the video file list and choose the one you want to play and press Play button. You can play single or multiple videos. Multiple videos can be played in sequence and can shift into the next or the previous one. Specific operation sees below.



  :Search month

  :Search year



①

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

Event: 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

Capture: Screenshot list

Play: Play the selected video files

All: Select all video files

Exit: Exit

 : Volume adjusting button

 : Switch

  : Play the previous/next video

 : Pause/Resume playing

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

 : Exit playing

5.3 Log



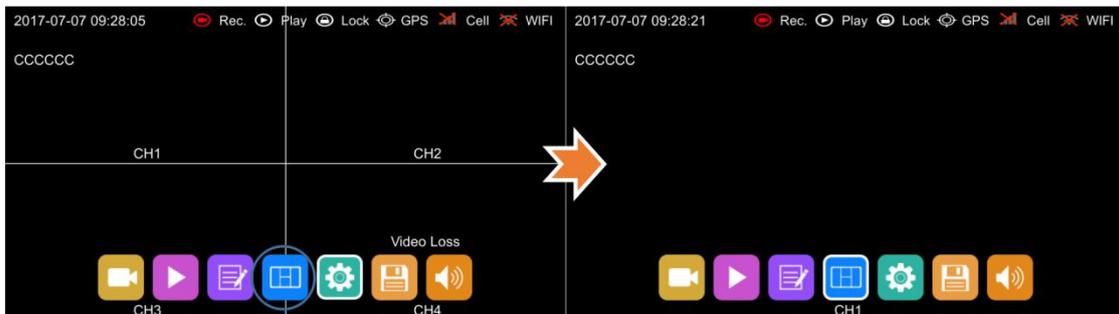
System memo checking, memo output



5.4 Display mode switching



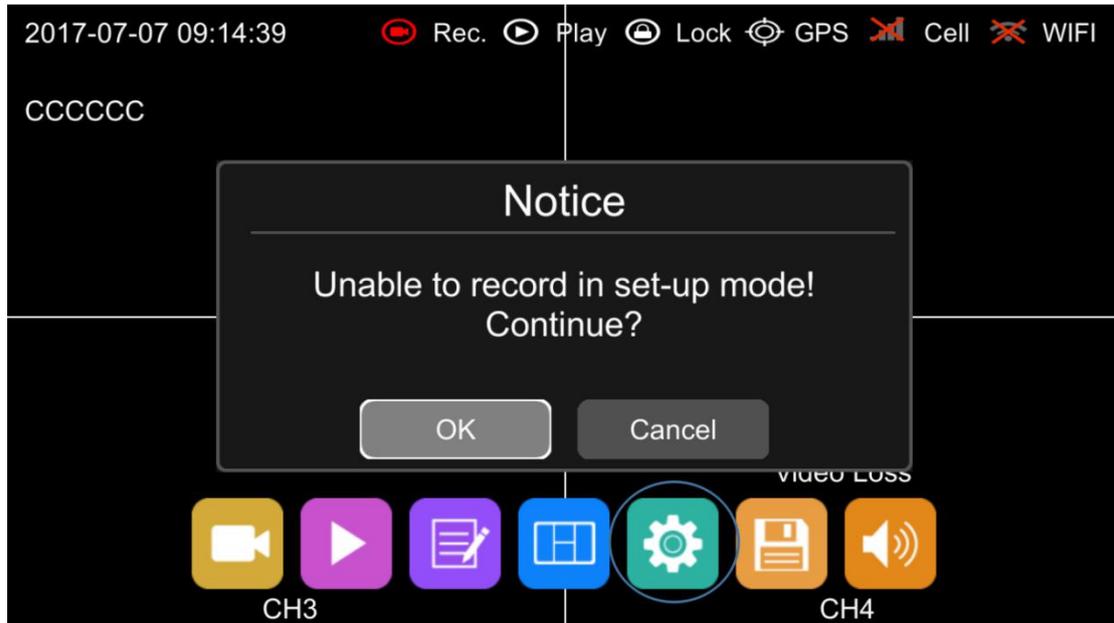
Mode switch button: click the button, preview interface will switch from the quad display to single display, CH1.



5.5 System



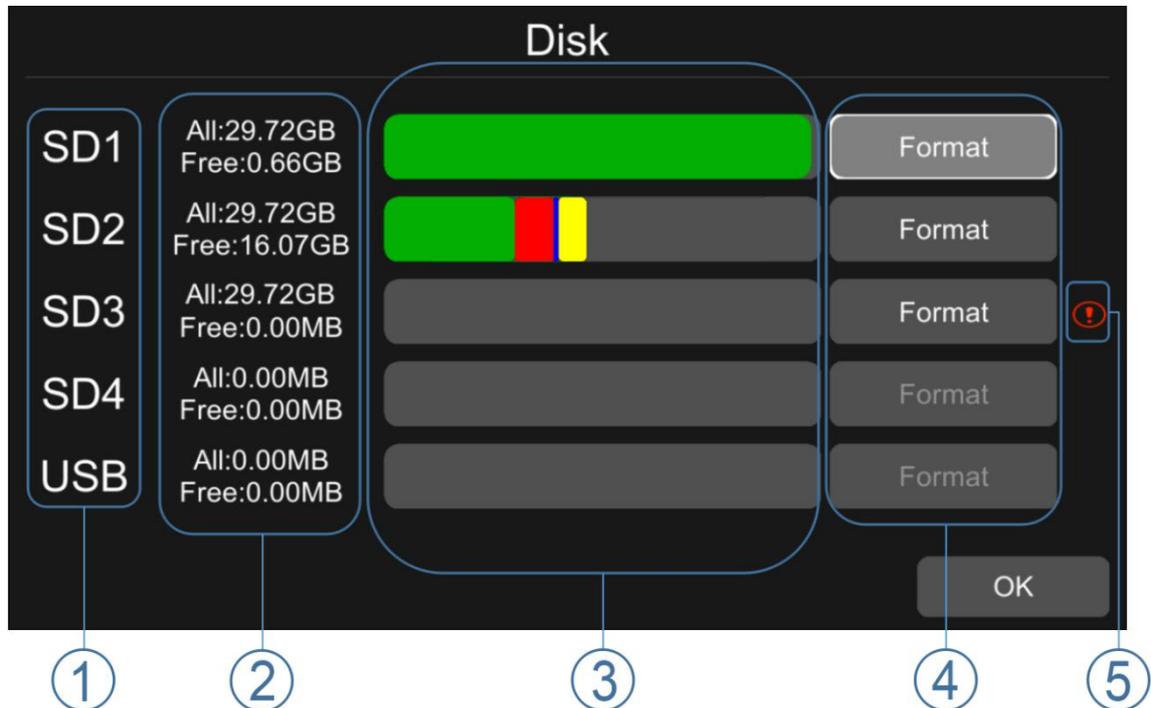
System settings button: Click the button system will enter the setup menu. A prompt dialog will display "Unable to record in set-up mode! Continue?" Click OK to enter.



5.6 Disk



Disk management button: click the disk management button, you can view the SD cards and USB status.



① Disk type

② ALL : The total capacity of disk , free : The residual capacity of disk

If ALL shows 0.00MB, it means that DVR does not have access to this type of disk

③ Green shows the size of all the recording files in the Normal list

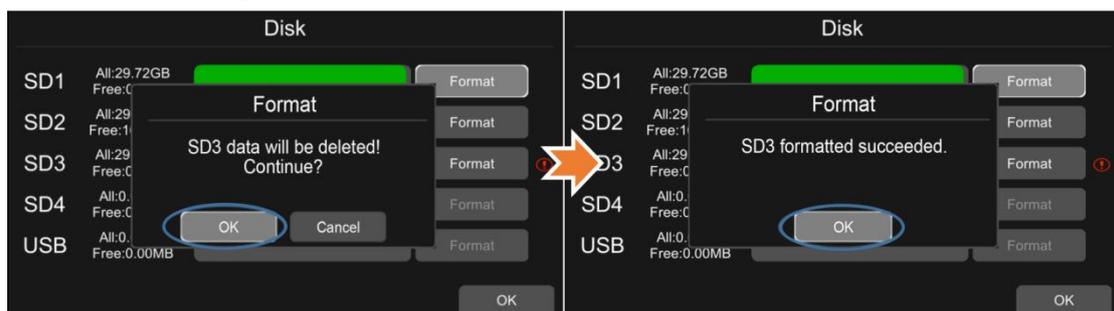
Red shows the size of all the recording files in the Event list

Blue shows the size of all the recording files in the Capture list

Yellow shows the size of all the other files except those above

④ Click the button to format the disk .

- A dialog box displaying “Disk data will be deleted! Continue?”will pop up. Click OK to start formatting the disk
- The following picture is an example of formatting SD3



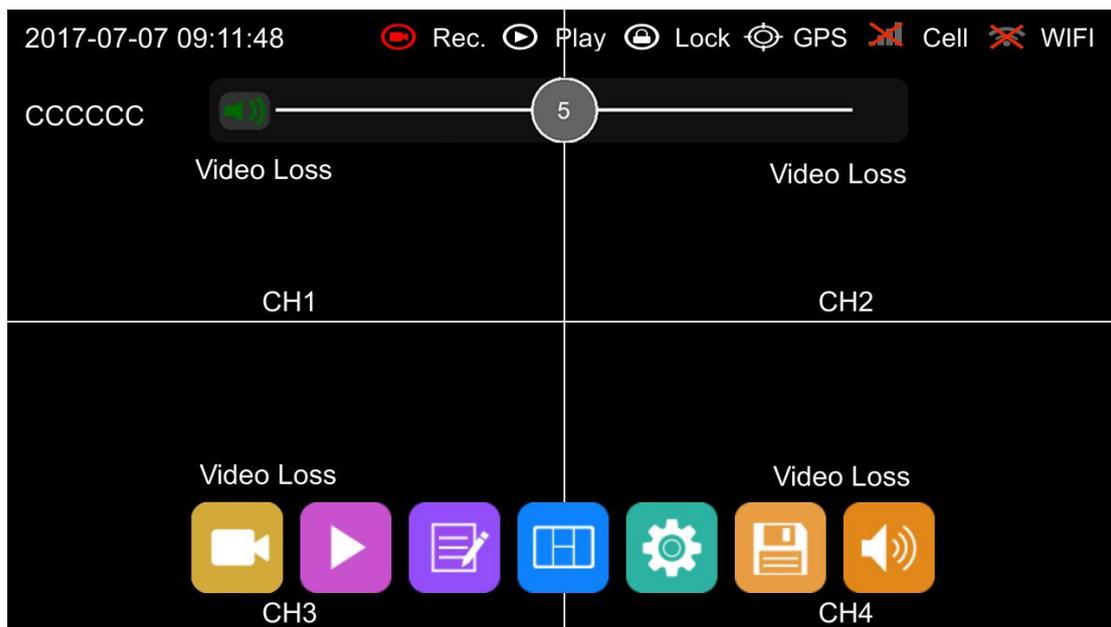
- If the disk cannot be formatted, please check whether:
 1. There is a disk in the slot
 2. All recordings are turned off
 3. The FTP button is turned off

⑤ It shows that the disk needs to be formatted before it can be used.
Generally all new disks need to be formatted before they can be used

5.7 Volume



Modulation : 0 is the minimum volume, and 10 is the maximum volume



6 Record Setup

Record	Display	Network	System
Power On Rec.	<input checked="" type="checkbox"/> On	Event Duration	<input type="checkbox"/> 5s <input checked="" type="checkbox"/> 10s <input type="checkbox"/> 15s
Cyclic Rec.	<input checked="" type="checkbox"/> On	File Length	<input checked="" type="checkbox"/> 5 min <input type="checkbox"/> 10 min <input type="checkbox"/> 15 min
Event Rec.	<input checked="" type="checkbox"/> On	Motion Sensitivity	<input checked="" type="checkbox"/> Off <input type="checkbox"/> Low <input type="checkbox"/> High
Video Quality	<input type="button" value="Setup"/>	G-Sensor Sensitivity	<input checked="" type="checkbox"/> Off <input type="checkbox"/> Low <input type="checkbox"/> High
Record Channel	<input type="button" value="Setup"/>	File Type	<input checked="" type="checkbox"/> AVI <input type="checkbox"/> MSV
<input type="button" value="OK"/>			

6.1 Power On Rec



Recording will start when power is on if set the 'Power On Rec' ON. Default is ON.

6.2 Cyclic Rec



New video files will overwrite the previous ones when disk is full if setting the Continuous Rec ON. Recording will stop when disk is full if setting the Continuous Rec OFF. Overwriting will not cover event recording files.



6.3 Event Rec

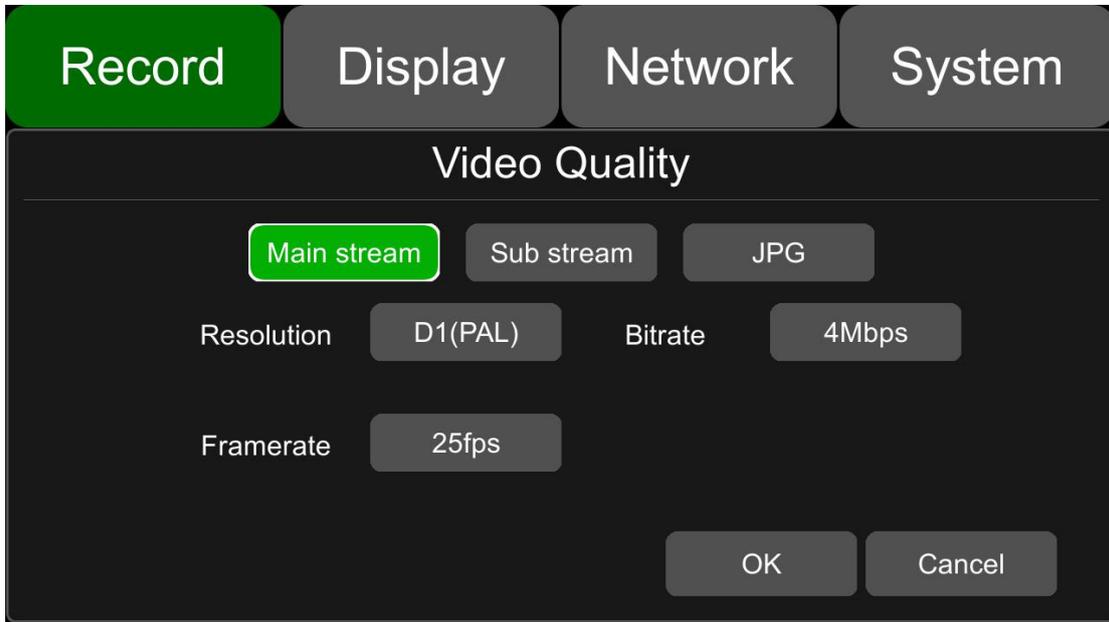


Event recording type includes motion detection triggered alarm, G-sensor triggered alarm, alarm 1 ~ 8 triggered alarm, Panic button triggered alarm and over speed alarm. If the event switch is on and corresponding alarm parameters are set, event recording will be activated when above events are triggered. If the event switch is off, event recording will not be activated even if the event is triggered.

6.4 Video Quality



The major stream is used for video storage. The minor stream is used for video backup and network transmission.



① Resolution

There are 4 kinds of optional resolution in Main stream menu, 1080P, 720P, D1 (PAL), D1 (NTSC), and 2 kinds of optional resolution in Sub stream menu, D1 (PAL), D1 (NTSC). The higher the resolution & the better the video quality, the larger the video file. Therefore, the configuration should be taken into account together with the file size

② Bit rate

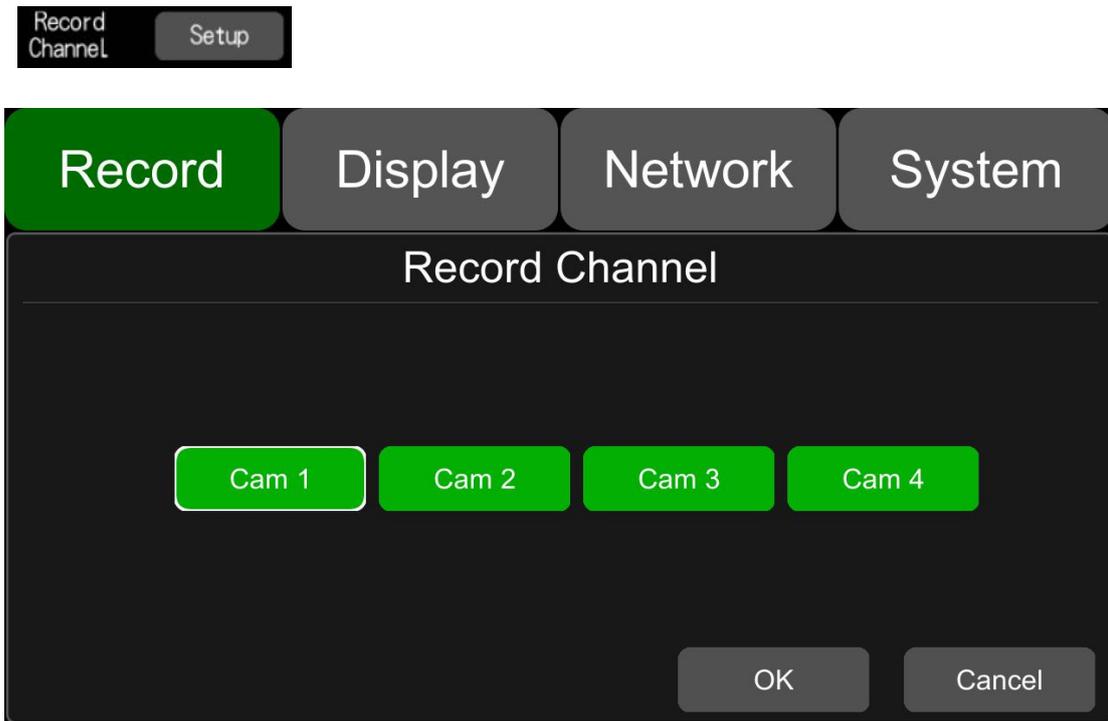
There are 7 levels of bit rates in Main stream and Sub stream menu for selection, 4Mbps, 2Mbps, 1Mbps, 512Kbps, 256Kbps, 128Kbps, 64Kbps. The higher the bit rate, the clearer the image, the larger the video file. Therefore, all factors should be considered comprehensively.

③ Frame rate

There are 5 levels of frame rates in Main stream and Sub stream menu for option : 25fps, 20fps, 15fps, 10fps, 5fps. The higher the frame rates is, more smooth the picture is and the larger the video file is.

SSD/HDD/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
4*128G	8 * 1080P、4Mbps	≈38h
	8 * 720P、2Mbps	≈75h
	8 * D1、1Mbps	≈150h
	1 * 1080P、4Mbps	≈304h
	1 * 720P、2Mbps	≈608h
	1 * D1、1Mbps	≈1216h

6.5 Record Channel



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

Note: The config is for normal record and NOT for event record. event record will record all channels by default and can't be changed.

6.6 Event duration



When alarm recording is on, the video file length can be set to 5s, 10s, 15s after the event happens.

6.7 File Length



When normal recording is on, the video file length for each file can be set to 5mins, 10mins, 15mins.

6.8 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, event recording will be triggered. For this kind of event record or alarm record, 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 motion detection is off, event recording will not be triggered. Motion detection sensitivity can be set to two levels, middle / high. Motion detection recording is on when middle / high is selected. Motion detection recording is off when OFF is selected.

6.9 G-sensor Sensitivity



G-sensor triggered recording and sensitivity level setting: When the acceleration or gyroscope of the G-sensor reaches the preset sensitivity value, G-sensor recording will be triggered. For this kind of event record or alarm record, 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).

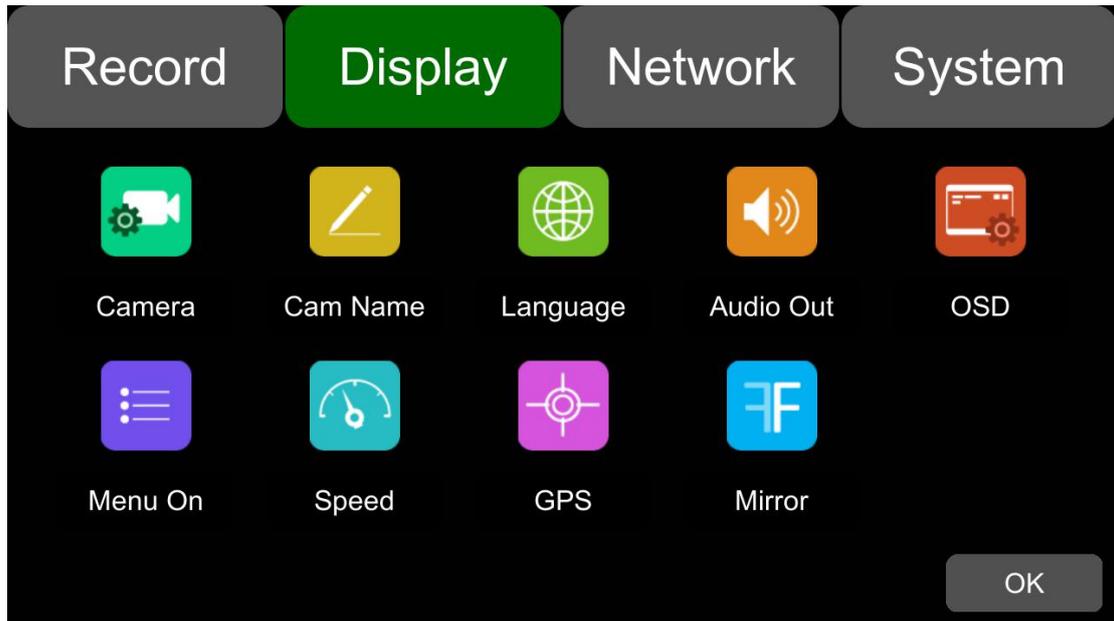
If G-sensor triggered recording is off, event recording will not be triggered. G-sensor sensitivity can be set to two levels, low / high. G-sensor triggered recording is on when low / high is selected. G-sensor triggered recording is off when OFF is selected.

6.10 File Type



File format setting.

7 Display

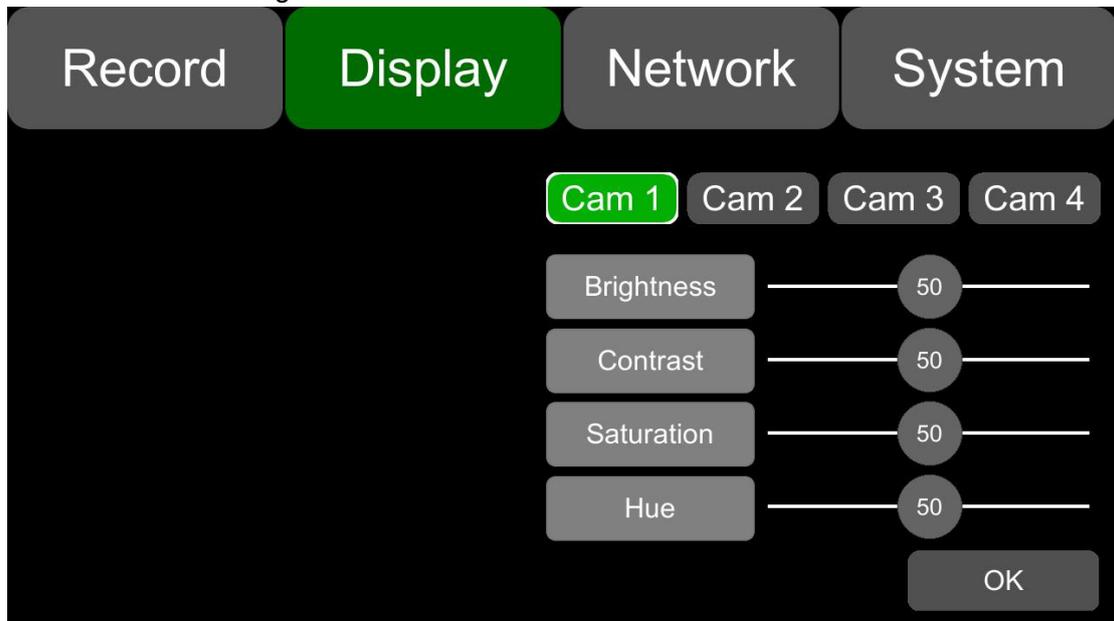


7.1 Camera display setting



Parameter setting for each corresponding camera channel: including brightness, contrast, saturation, hue. By default, all setting values are 50.

Corresponding value can be changed by pressing and moving the bar to left or right.



7.2 Camera name setting



Camera name : Set channel name, the channel name then will be displayed at the bottom of that channel. Press the channel name on menu, there will be a keyboard menu pop up to input a new channel name.

The screenshot shows a menu with four options: Record, Display (highlighted in green), Network, and System. Below the menu is a 'Cam Name' screen. It features four camera channels arranged in a 2x2 grid. Each channel has a label (Cam 1, Cam 2, Cam 3, Cam 4) and an input field containing a channel name (CH1, CH2, CH3, CH4). At the bottom right of the screen are two buttons: 'OK' and 'Cancel'.

Each channel contains max. 8 characters. And camera name must not be blank.

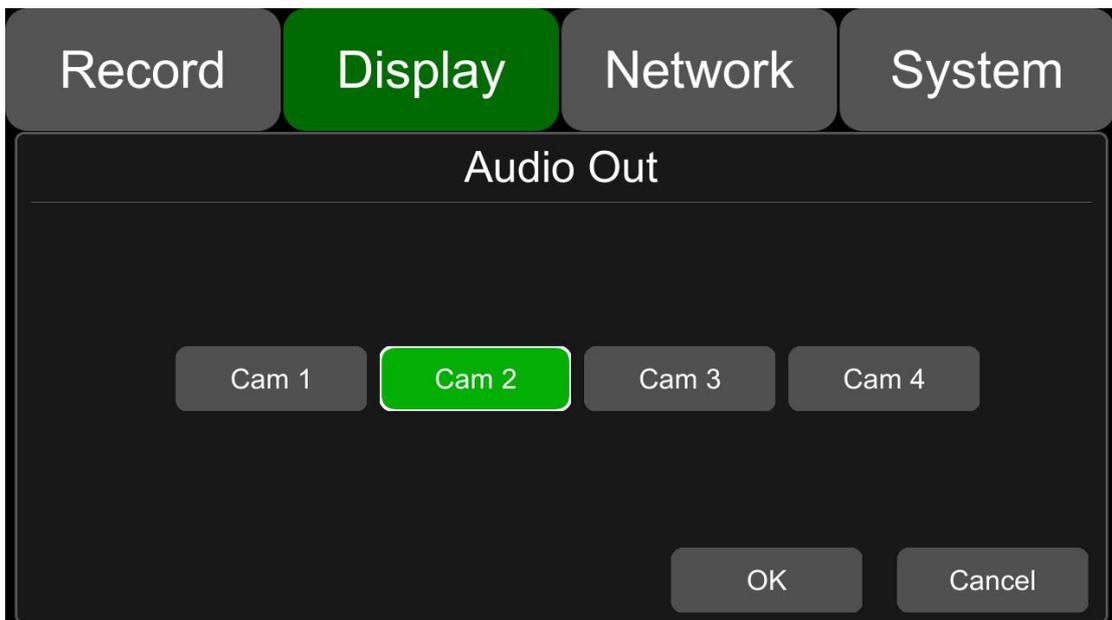
7.3 System Language setting



7.4 Audio Out



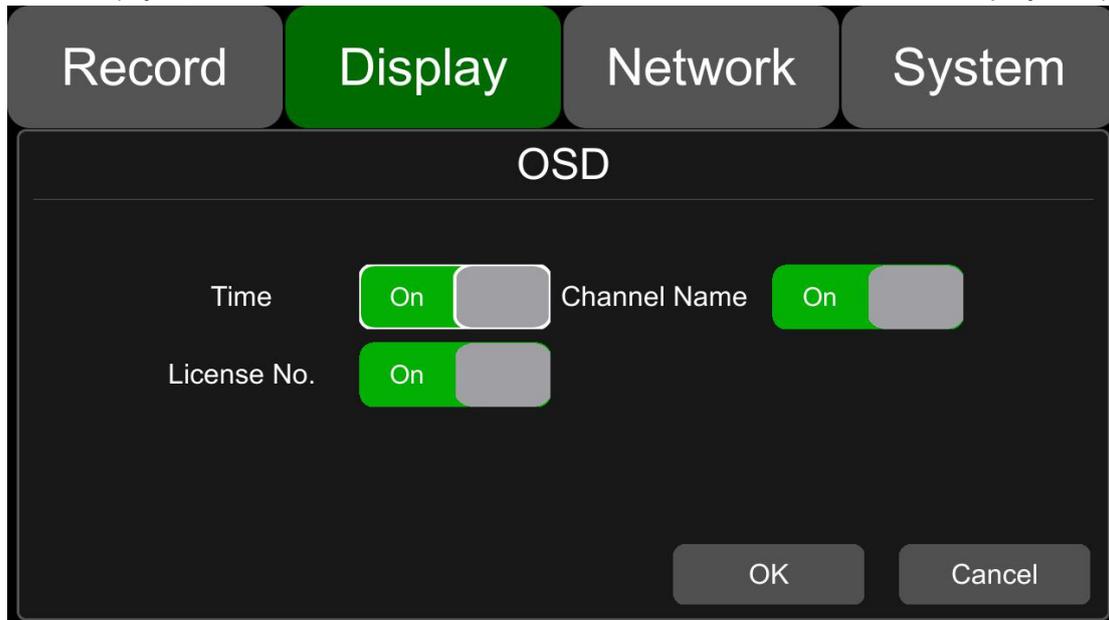
Audio out: choose the audio output channel in split mode



7.5 OSD display setting



OSD configuration, select whether to display time, channel name, license plate in video (if yes, all these information will be written in video and can be seen in playback)



Record Display Network System

OSD

Time On Channel Name On

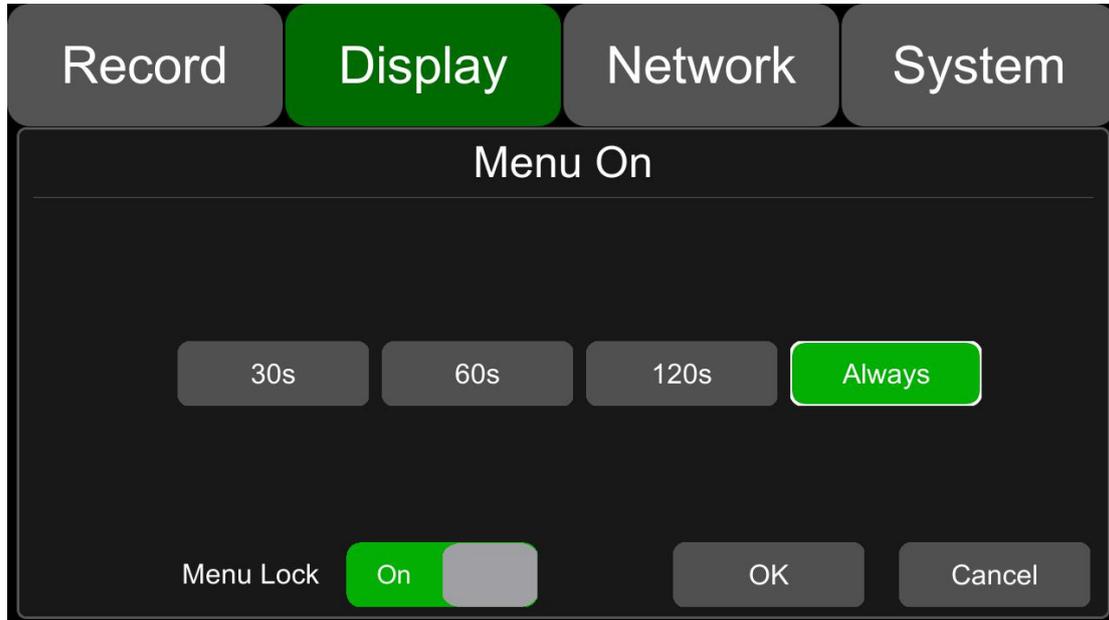
License No. On

OK Cancel

7.6 Menu on



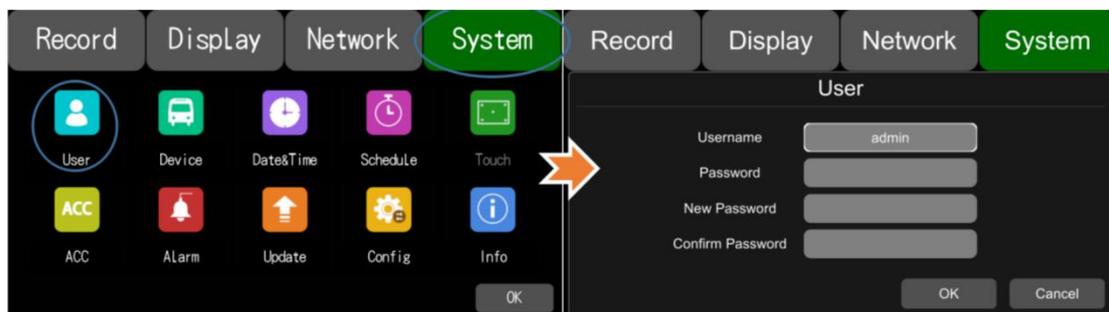
Set duration of menu display



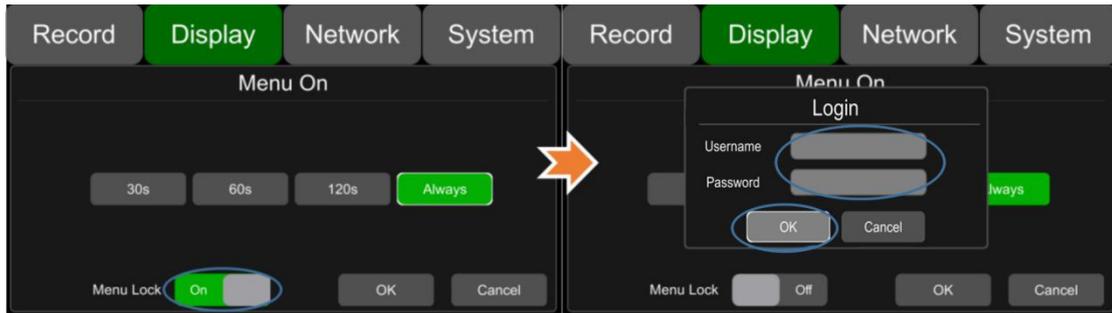
- User permissions list

User Name	admin	guest
Password Modification	yes	no
Initial Password	123	321
Permissions	Enter menus	all Enter the menu of Playback

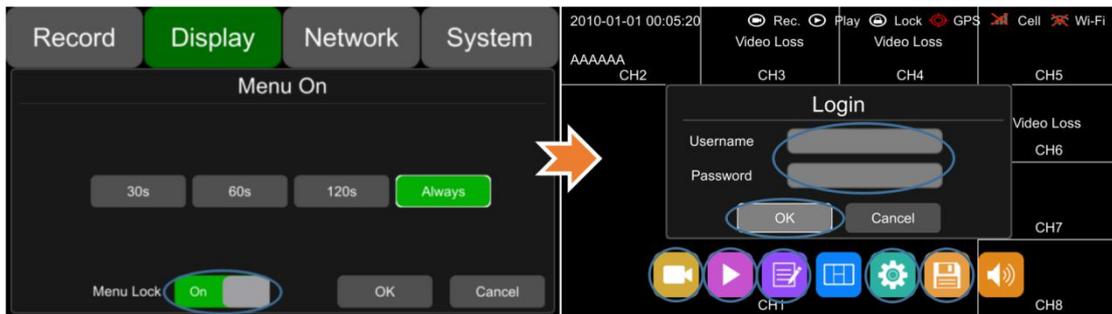
- DVR has two kinds of permissions: admin permissions and guest permissions
- User name cannot be changed, but user password can be changed. (See the following instructions for changing password)



- 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.



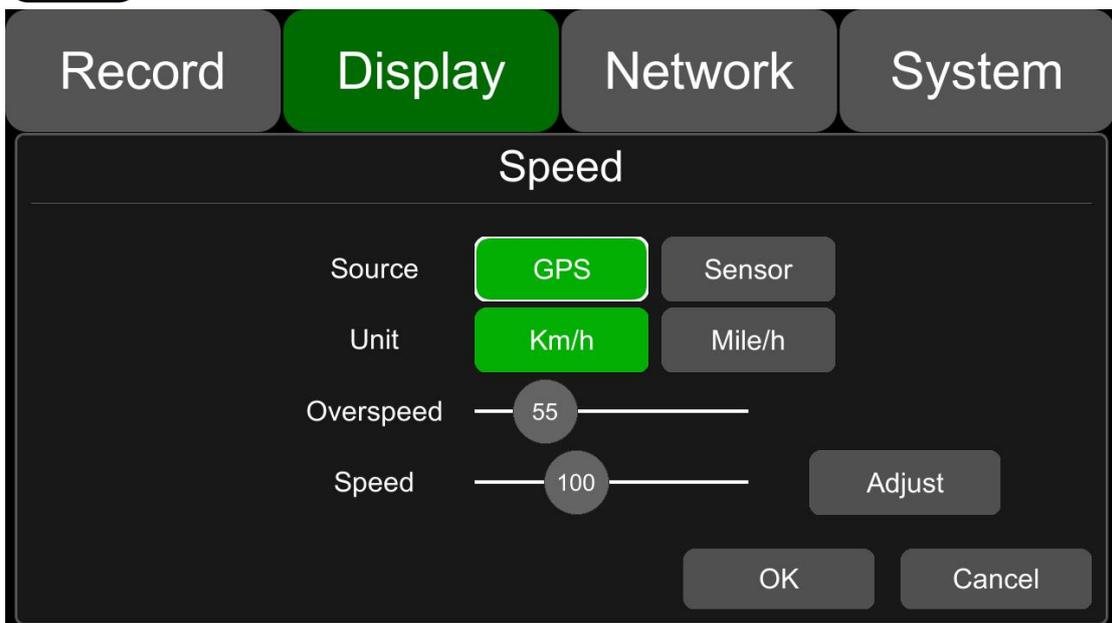
- When the status of Menu Lock is On, username *admin* and password are needed to enter menus like Record, Playback, Log, System and Disk. Only the Playback menu can be entered when user name *guest* and its password are entered



7.7 Speed



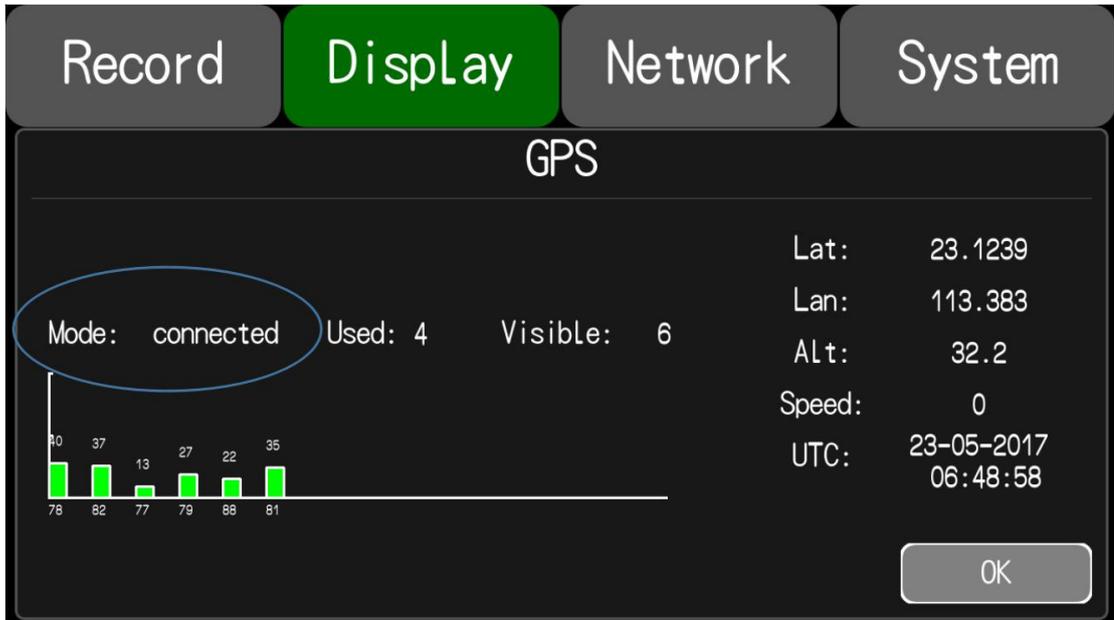
There are two speed source, one is from GPS and the other from vehicle speedometer, as described above about DB26 cable.



7.8 GPS



When GPS is set as on, latitude, longitude and speed will be recorded into video files. The menu provides GPS information of latitude / longitude, detectable satellites, accessible satellite etc.



Mode:GPS status,it will be shown as below:

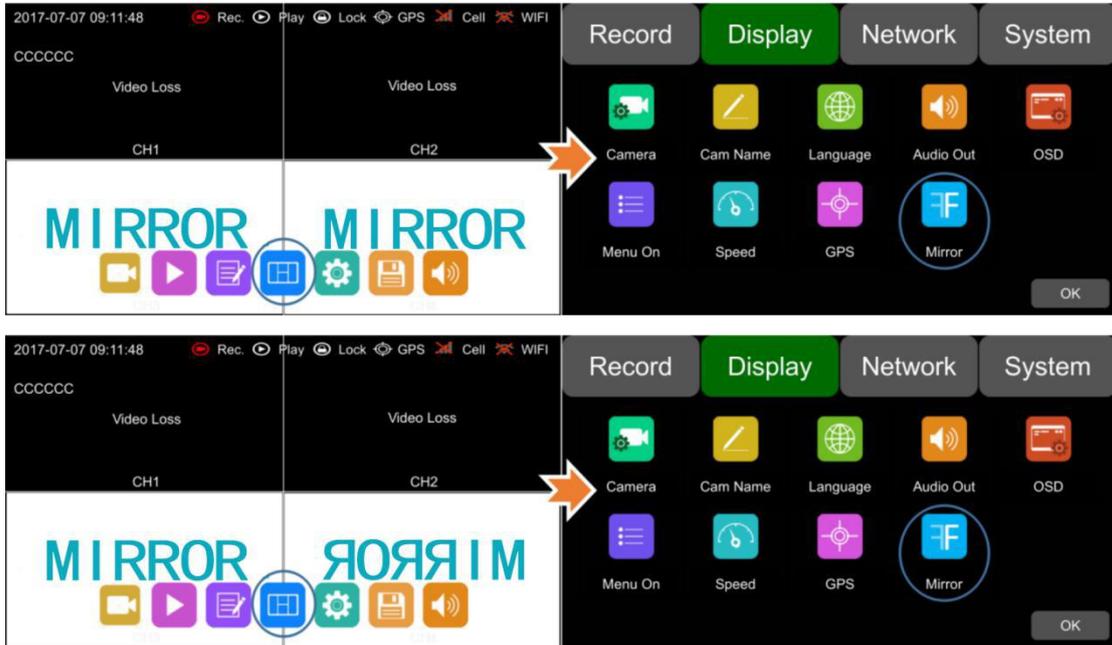
- connected
- disconnected
- Connecting

7.9 Mirror

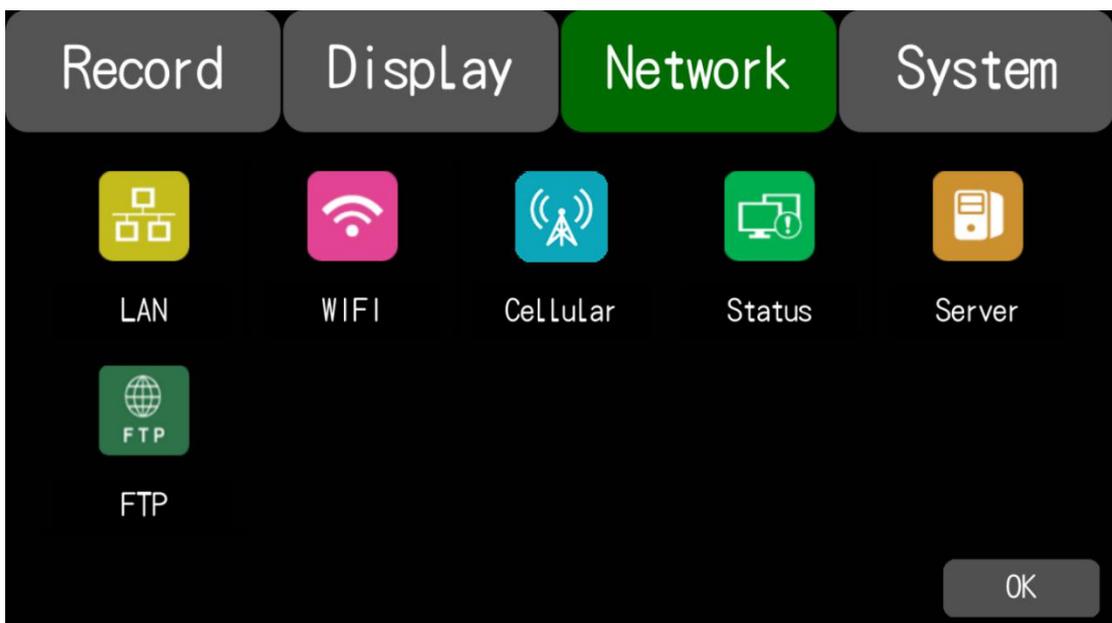


ON: Turn on Mirror function

OFF: Turn off Mirror function



8 Network



8.1 LAN port and server setting



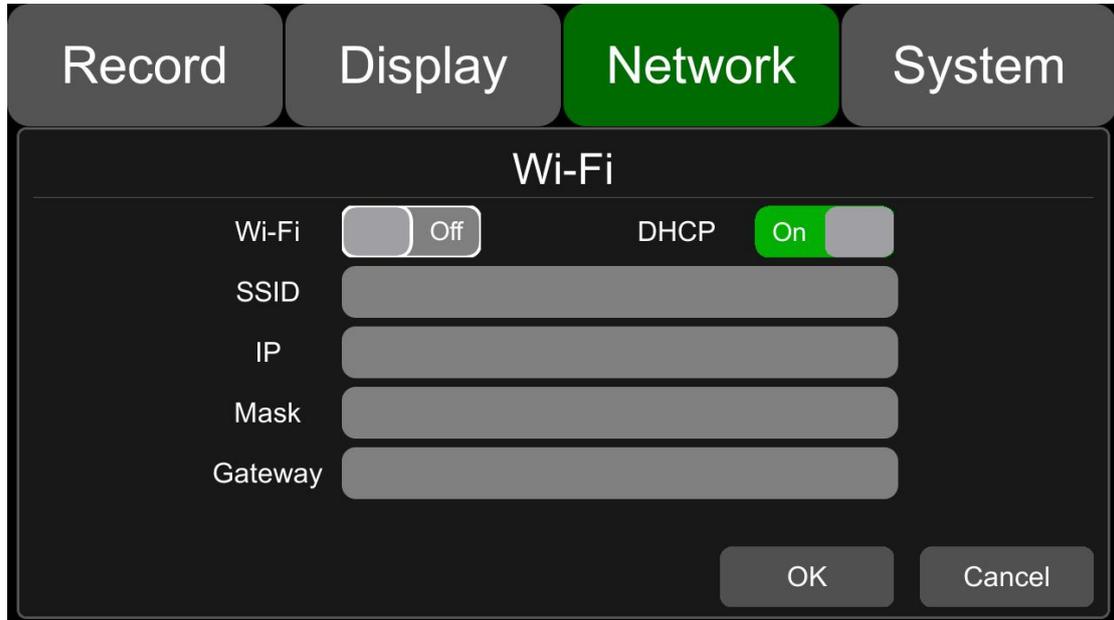
Record	Display	Network	System
LAN			
DHCP	<input type="checkbox"/>	Off	
IP	<input type="text" value="192.168.100.188"/>		
Mask	<input type="text" value="255.255.255.0"/>		
Gateway	<input type="text" value="192.168.100.1"/>		
MAC	<input type="text" value="7e:97:15:d3:d3:7a"/>		
			<input type="button" value="OK"/> <input type="button" value="Cancel"/>

DHCP: Dynamic Host Configuration Protocol, when it is on, it is dynamic IP, when it is off, it is static IP, you need to input IP address, sub-net mask and gateway manually. MAC address can be auto assigned or revised

OK : Press OK to save setting and exit

Cancel : Press cancel to exit menu without saving settings

8.2 WIFI network setup and server setup



WIFI : WIFI on/off

DHCP : DHCP means Dynamic IP switch. When DHCP is on, that is dynamic IP. If DHCP is off, that is static IP. Static IP requests to manual input IP address, mask and gateway. Mac address can be automatically assigned or revised.

SSID : WIFI hot spot list

- **Enable WIFI**

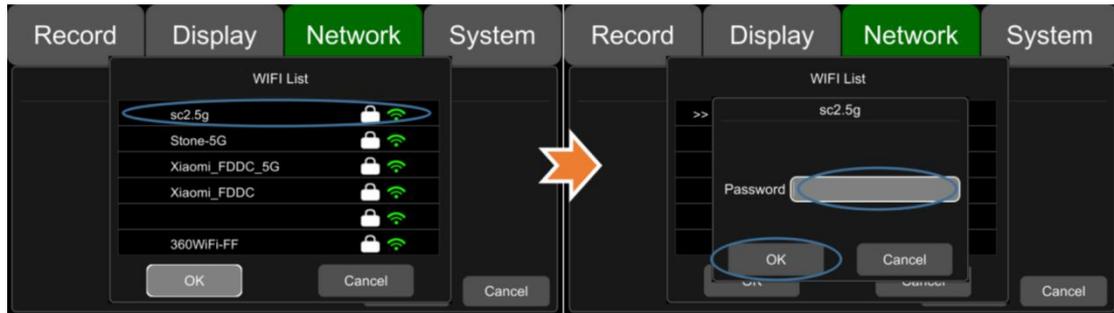
Step 1: WIFI hot spot available

Step 2: Connect the WIFI antenna at connector ⑦ of device rear panel

Step 3: Go to WIFI setup interface and set WIFI on and open the dynamic IP button.



Step 4: Click SSID sub-menu and the WIFI hot spot shows up. Select which hot spot to connect and enter the password.

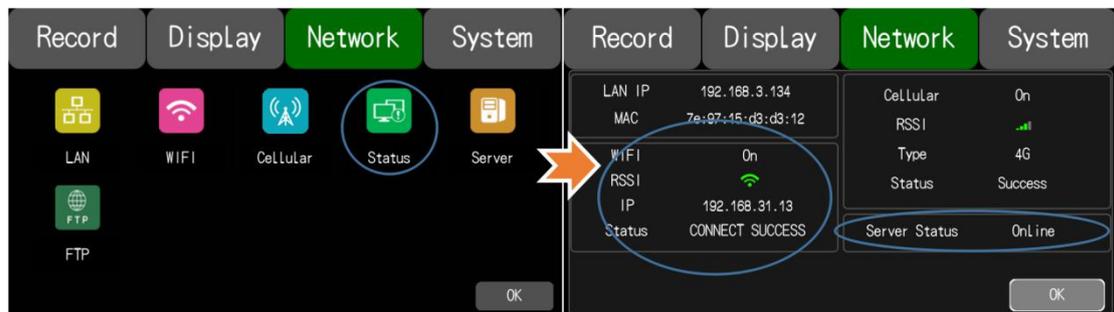


Step 5: Click OK and quit the WIFI setup interface.

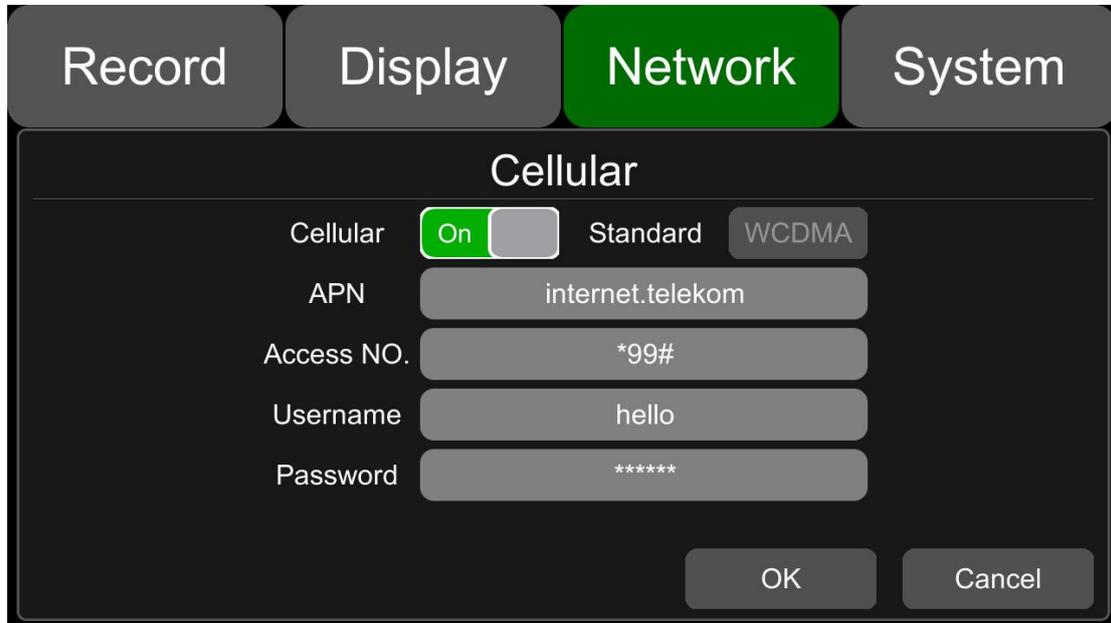
Step 6: Input WIFI Server IP and Port in "Network-Server Setup" page.



Step 7: WIFI network status is "CONNECT SUCCESS" and server status is "Online"



8.3 3G/4G control and its network setup



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

Network Standard: WCDMA by default.

APN & Access Number: Normally, user don't need to enter 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.

Username & Password: Reversed.

OK: Save the setting and quit

Cancel: cancel the setting and quit

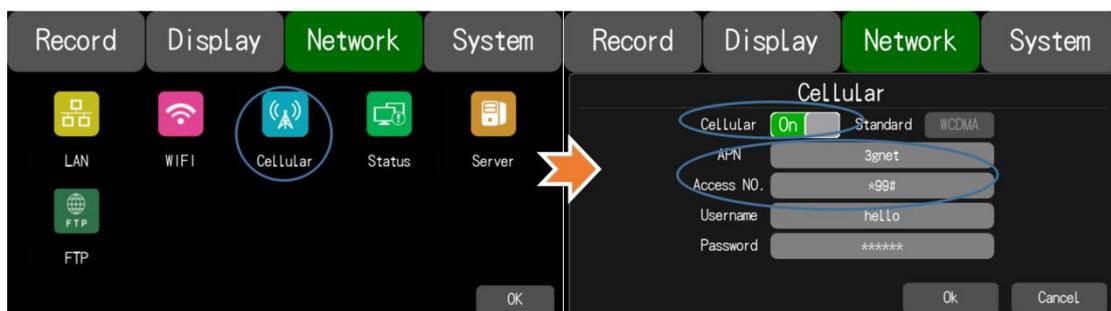
- Enable 3G/4G

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

step 2: Connect the 3G/4G antenna at connector ⑥ of DVR rear panel

step 3: Open the DVR front housing and insert the 3G/4G SIM card

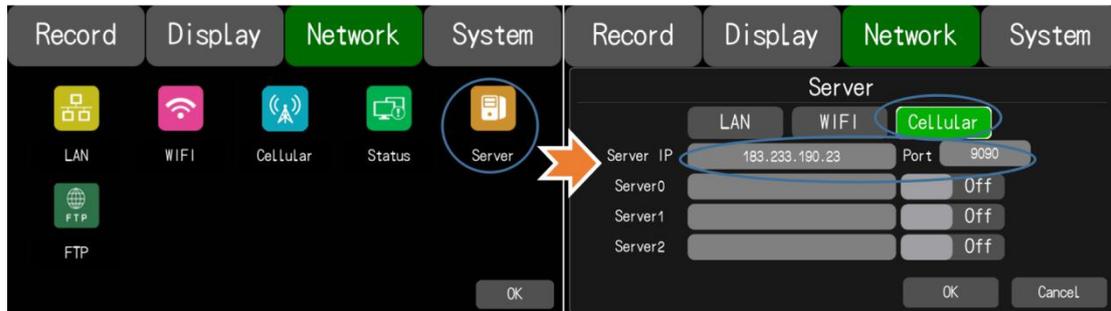
step 4: Open Cellular setup interface and click Cellular.



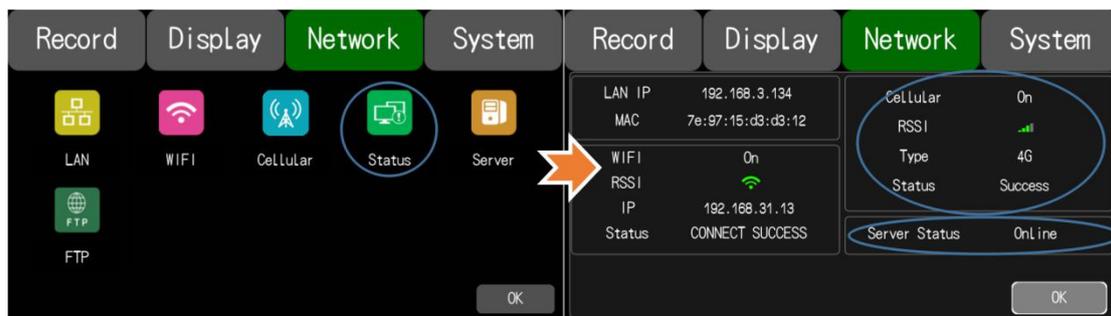
step 5: Input the APN and Access Number correctly. Access Number can be skipped.

step 6: Click "OK" to exit CELL setup menu.

step 7: Input 3G/4G Server IP and Port in "Network-Server Setup" page.



step 8: Cellular network status is "Success" and server status is "Online"



8.4 Network Status



The user can check information such as LAN IP address, MAC address, WIFI network status, WIFI IP address, WIFI signal strength, 3G/4G network status, 3G/4G signal strength, and Server status.

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

Record	Display	Network	System
LAN IP	192.168.3.134	Cellular	On
MAC	7e:97:15:d3:d3:12	RSSI	
WIFI	On	Type	4G
RSSI		Status	Success
IP	192.168.31.13	Server Status	Online
Status	CONNECT 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.

WIFI : WIFI on/off status obtained from Network-WIFI page

WiFi RSSI : Wifi signal strength icon

WiFi IP : Static IP obtained from Network-LAN pages or dynamic IP.

WIFI status : WIFI status will be shown as below:

CONNECT SUCCESS

GETIP ERROR

...

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

Wireless RSSI : 3G/4G signal strength icon

Module type : Display the types of 3G/4G module, the parameters and the corresponding types shown are as follows

3G:3G module

4G:4G module

Wireless Status: Value and corresponding meanings

1:Module initialization

2:Module exception

3:No SIMcard

4:Cpin locked

5:Signal abnormal

6:Networking failure

SUCCESS: Networking success

...

Server Status: Online / Offline

8.5 Server



Record Display **Network** System

Server

LAN WIFI Cellular

Server IP 183.233.190.23 Port 9090

Server0 Off

Server1 Off

Server2 Off

OK Cancel

8.6 FTP



Record Display **Network** System

FTP

Username 424ftp Port 21

Password ***** FTP Off

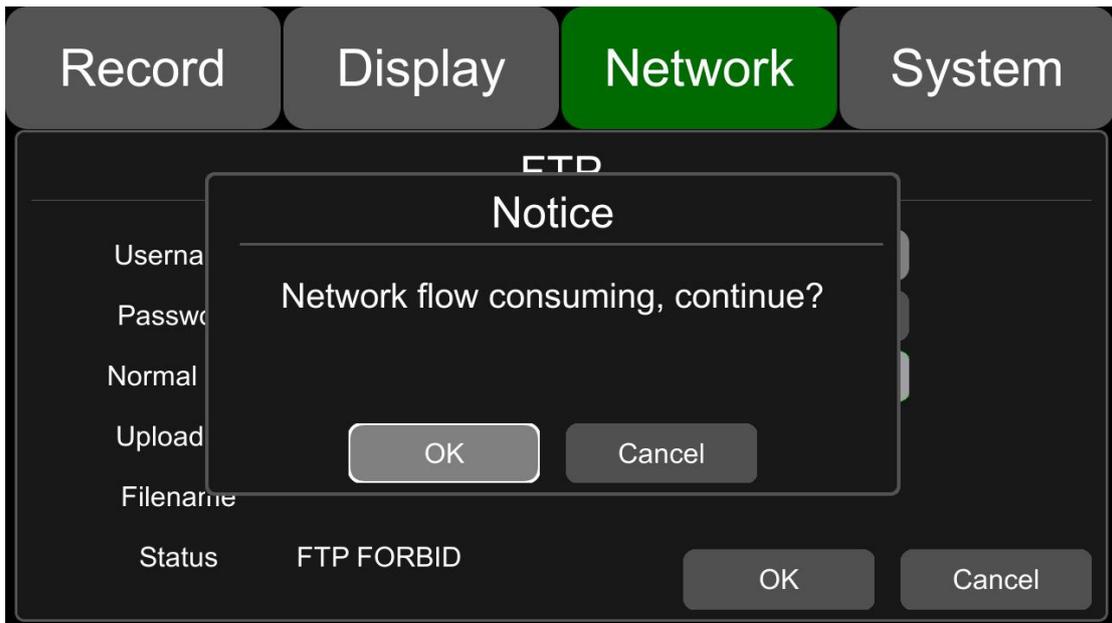
Normal File Off Cellular Off

Uploading 0%

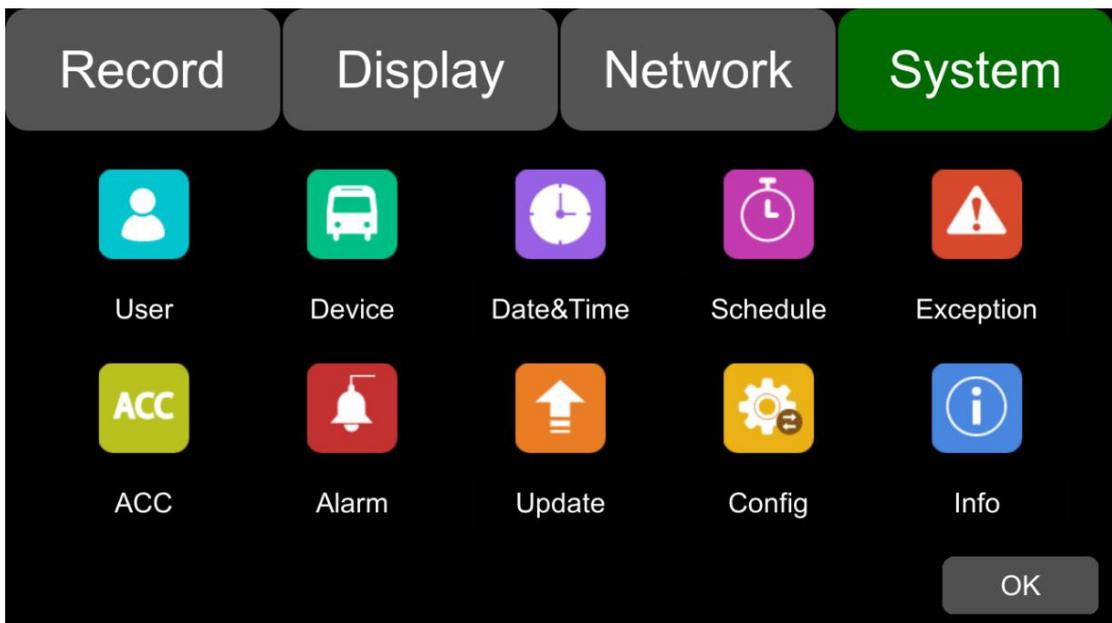
Filename

Status

OK Cancel



9 System



9.1 Log in setup



Set user name and password for boot up

Record	Display	Network	System
User			
Username	<input type="text" value="admin"/>		
Password	<input type="password"/>		
New Password	<input type="password"/>		
Confirm Password	<input type="password"/>		
		OK	Cancel

9.2 License plate number setup



Set license plate number and IP number

Record	Display	Network	System
Device			
License No.	<input type="text" value="CCCCCC"/>		
Device ID	<input type="text" value="AAAAAA"/>		
Path No.	<input type="text" value="BBBBBB"/>		
		OK	Cancel

9.3 System time setup



The screenshot shows the 'System' menu with two sub-menus: 'Date&Time' and 'Format'. In the 'Date&Time' sub-menu, the 'Date' is set to 2017-07-12 and 'Time' to 13:46:48. The 'Format' sub-menu shows 'Time Zone' as UTC-9, 'Date Format' as YYYYMMDD, and '24 Hour' as On. An orange arrow points from the 'Setup' button in the 'Date&Time' sub-menu to the 'Format' sub-menu.

9.4 Scheduled Recording



The screenshot shows the 'System' menu with the 'Schedule' sub-menu. It displays a table of recording schedules with columns for Enable, Start, End, and Weekday.

	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

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:

- * Supports 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.

9.5 Exception



Record Display Network **System**

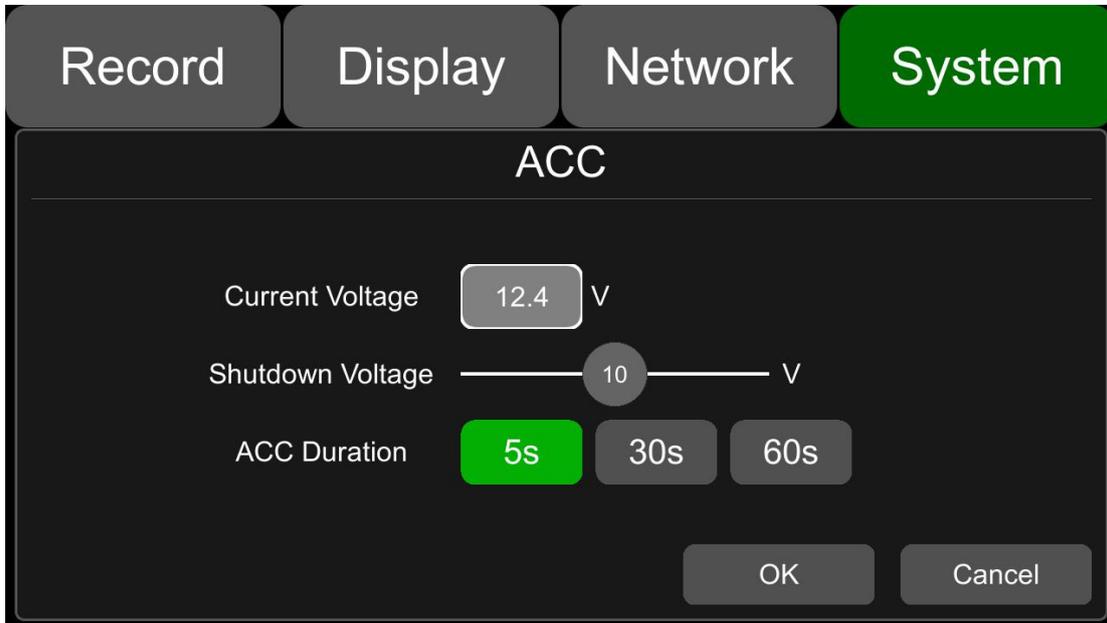
Exception

Buzzer On

Duration

OK Cancel

9.6 ACC settings



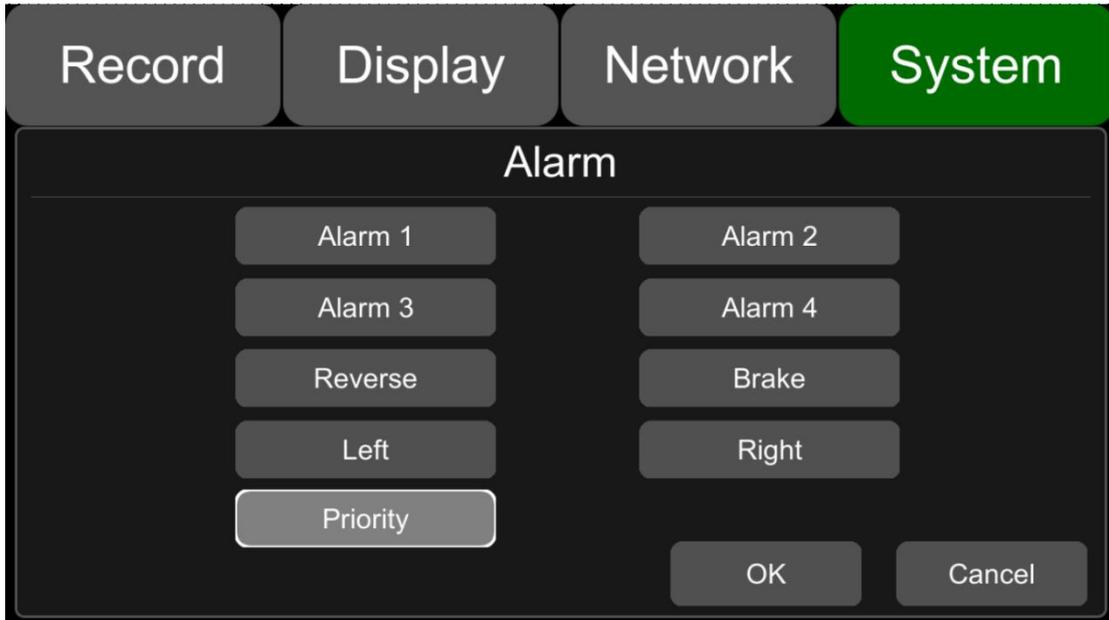
Current vol.: Voltage of the working DVR

Shutdown vol.: Shutdown voltage function will take effect after DVR starts working for 10mins. DVR would shut down automatically if current voltage is lower than shutdown voltage, it would reboot only when the voltage is above the value.

ACC Delay: DVR will continue recording for a few seconds after ACC is disconnected. ACC delay time can be set to be 5s, 10s or 15s.

9.7 Alarm information setting





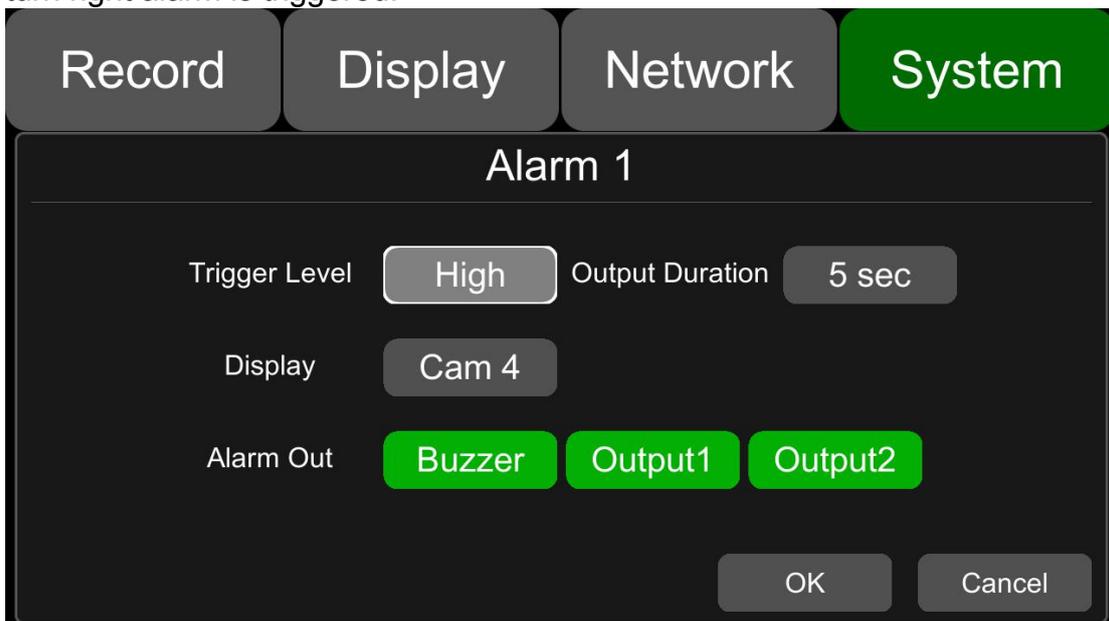
Alarm1~Alarm4 : Customized alarm recording

Reverse : Reversing alarm recording, parking line cursor will display when reverse alarm is triggered.

Brake : Brake alarm recording, brake sign will display when brake alarm is triggered.

Left : Turning- left alarm recording, turn-left cursor will display when turn left alarm is triggered.

Right : Turning- right alarm recording, turn-right cursor will display when turn right alarm is triggered.



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 turn off alarm trigger function.

Duration : Duration of alarm video recording

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

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

Alarm Out-Output2 : Set it ON, 12V level output would come from the alarm wire of Output 1

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

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.



: Click, the priority value of the selected alarm will be added by 1. The bigger the value, the lower the priority



: Click, the priority value of the selected alarm will be reduced by 1. The smaller the value, the higher the priority

- Alarms with higher priority will be triggered first
- 1 is the highest priority, and 8 is the lowest.
- The diagram above is the default sort of priority
- The priority sort of the diagram above is:

Alarm 1>Alarm 2>Alarm 3>Alarm 4>Reverse>Brake>Left>Right

- If two alarms A and B are triggered at the same time, and A’s priority is higher than B’s, 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 stop recording at once, and A will start to record

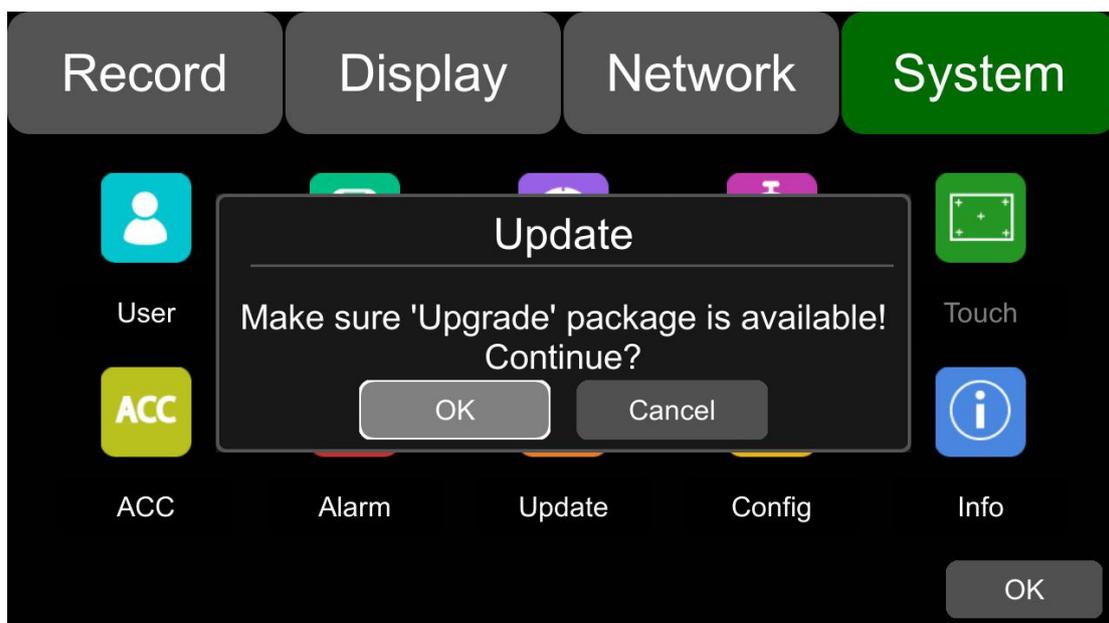
9.8 Update

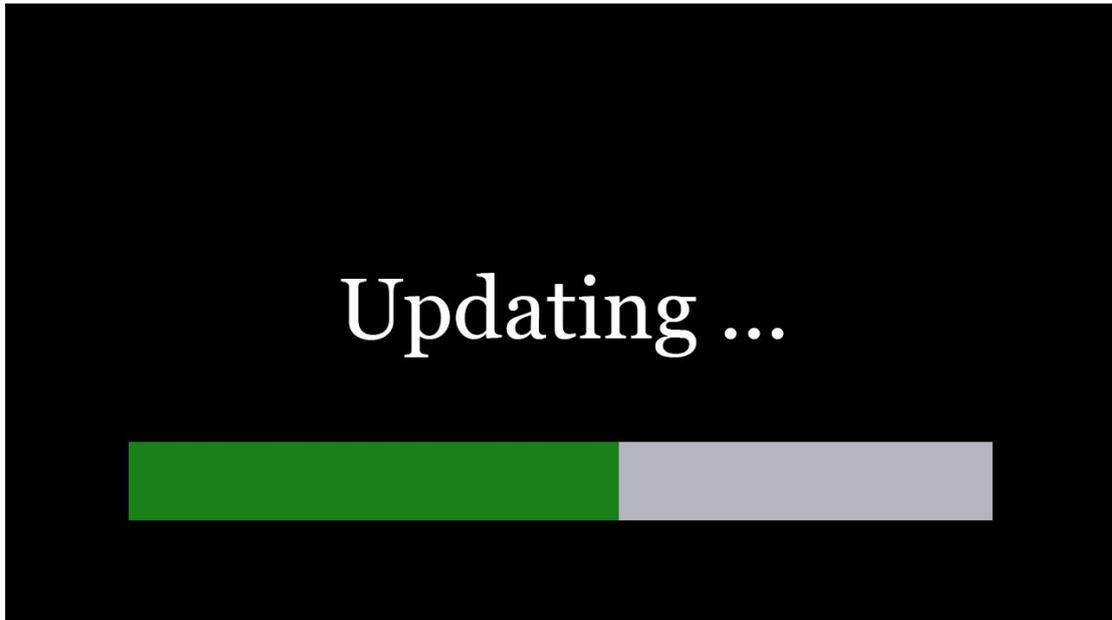


- For single device

Step 1 : Copy the upgrade package like “dv425_upgrade_2017xxxxxxx” 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 auto upgrade. Or in the menu Menu -> System -> Update, click OK to confirm to upgrade. Both method can start the upgrade process.





Step 3 : When “Updated success!” shows on the DVR monitor, DVR will auto reboot.



Step 4 : After reboot, please check if the version is the same as the one you copy to USB disk or SD card. Please go to Menu -> System -> Info to check.

- For batch upgrade

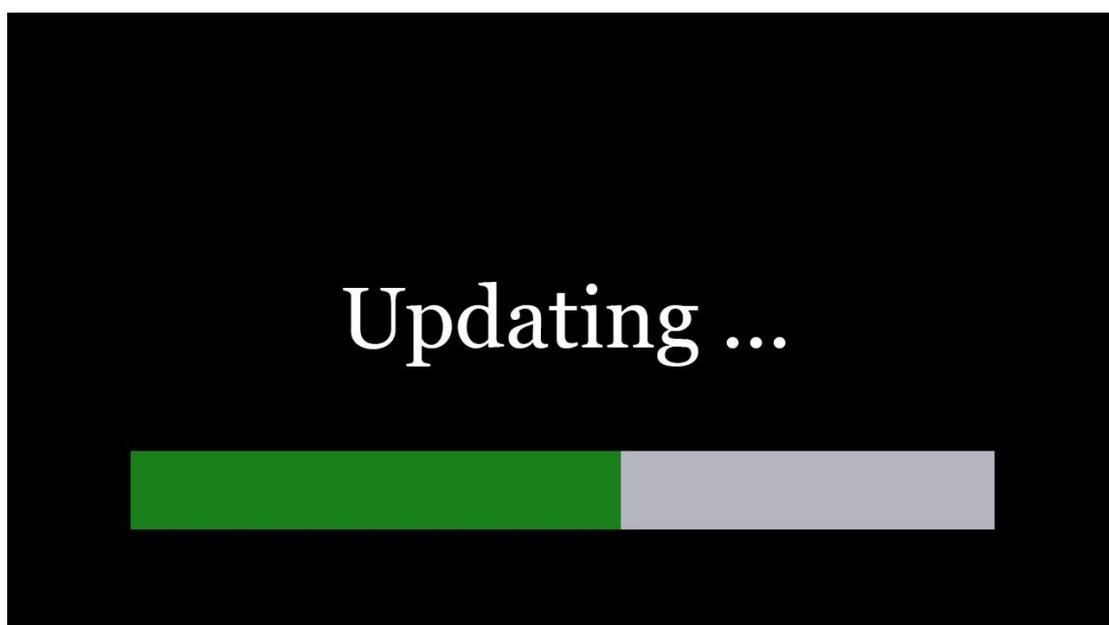
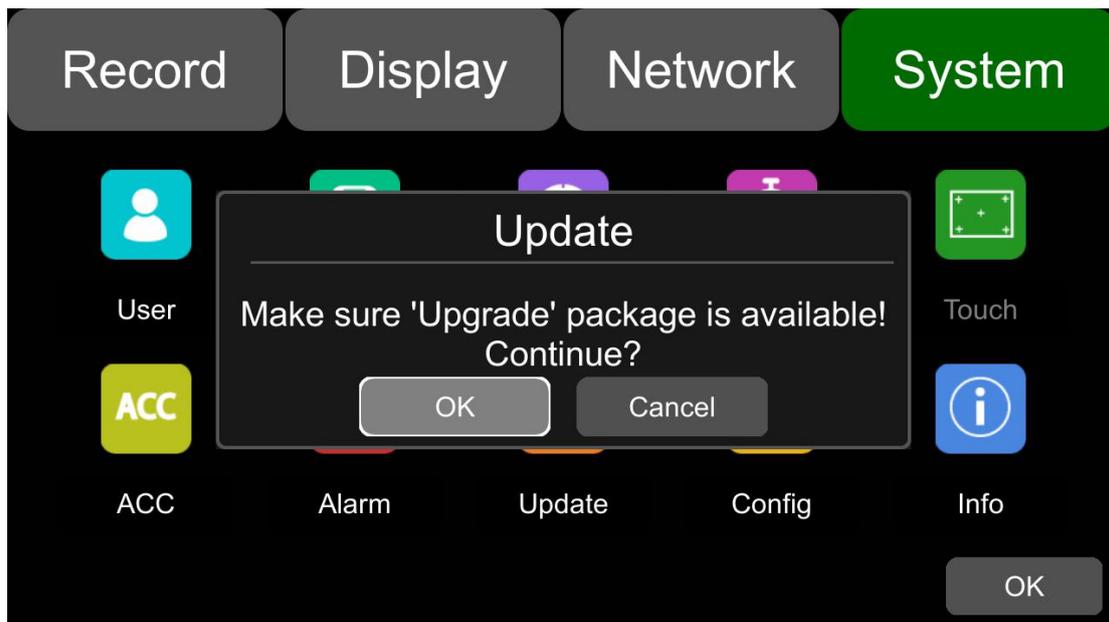
Currently, as the upgrade package will be deleted after the upgrade process is done on on device, we need to copy the package again from PC. And that is troublesome. So please carry out as follows:

Step 1 : Rename the package “dv425_upgrade_2017xxxxxxx” to

“dv425_upgrade_never_rename”

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

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



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

Update success !

Note: Use “dv425_upgrade_never_rename” package to upgrade, when “update success!” shows on the screen, we must unplug the USB disk or SD card, or else the DVR will go into infinite loop for upgrade and will not boot up.

SOLUTION: Unplug the USB disk or SD card with upgrade package. 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 exact DVR device’s license number in the device list of the client, right click and select “upgrade” and select the upgrade package “dv425_upgrade_2017xxxxxxx”

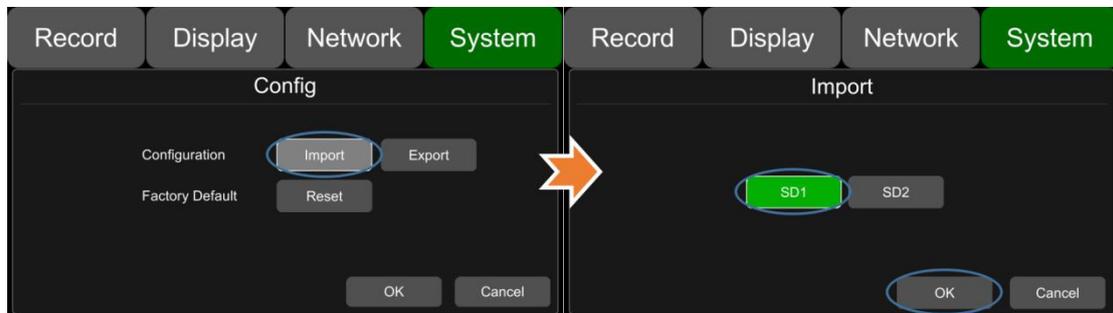


Note: For remote upgrade the package can't be named as "dv425_upgrade_never_rename".

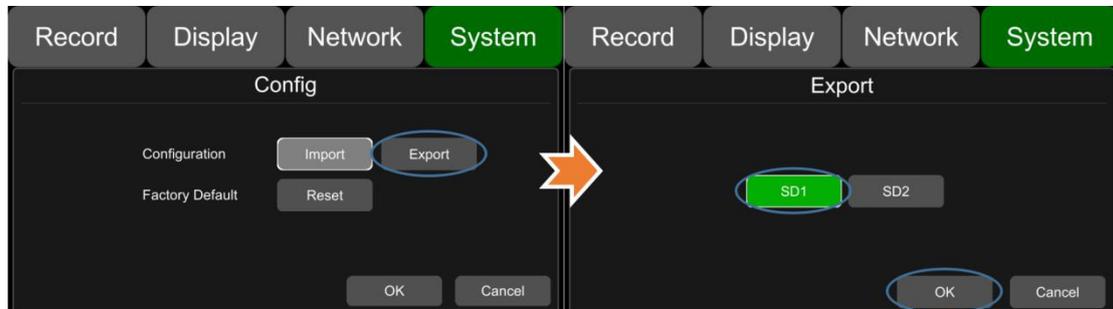
9.9 Configuration



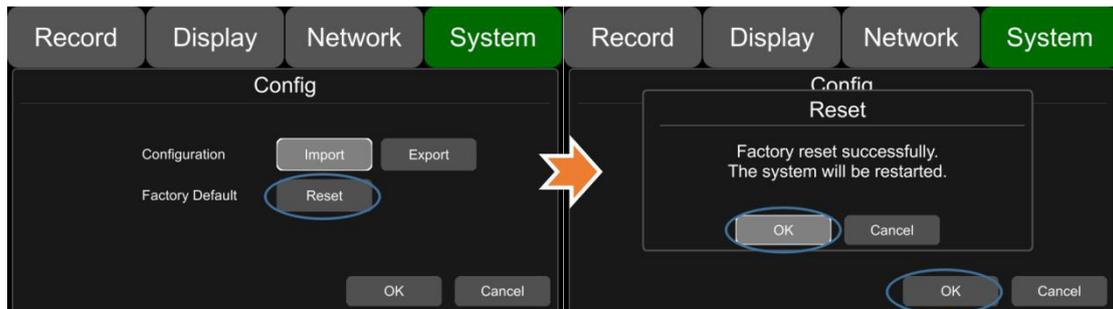
Configuration Import: Import the configuration information from USB memory flash devices.



Configuration Export: Export Log to USB memory flash devices.



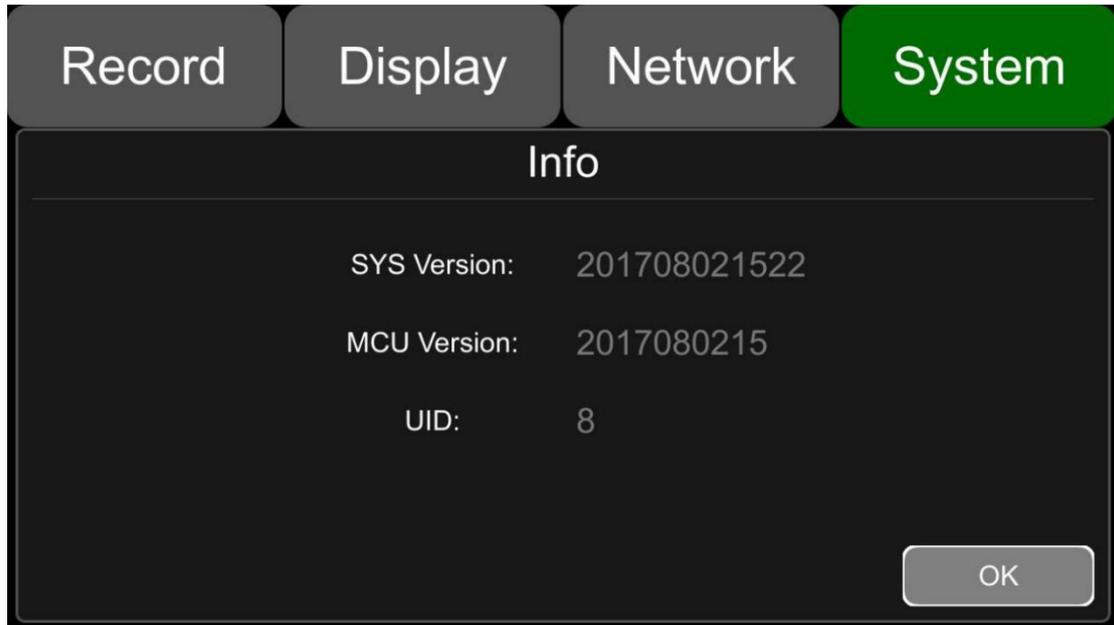
Factory Default: Click RESET to restore factory setting.



9.10 System Info



System Info : Software version number.



10 FAQ

1) The system can't start?

Usually this problem results from the incorrect power connection. Please follow the steps below to check the power connection:

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

2) The DVR restarts uninterruptedly?

Please follow the steps below to check it:

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

3) Unable to recognize disks?

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

4) Unable to recognize cameras?

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

5) GPS anomaly?

Check whether the GPS antenna is properly installed

11 APPENDIX

APPENDIX I : Abbreviation & Description

Rec.	Record	HDD	Hard Disk Drive
G-sensor	Accelerometer sensor	SD	Secure Digital Memory Card
GPS	Global Positioning System	USB	Universal Serial Bus
WIFI	Wireless-Fidelity	ALM	Alarm
Cam	Camera	VLOSS	Video Loss
AVI	Audio Video Interleaved	COMM	Communication
OSD	On-Screen Display	ERR	Error
APN	Access Point Name	MEM	Memory
DHCP	Dynamic Host Configuration Protocol	MMSHOW	Media Player
SSID	Service Set Identifier	FTP	File Transfer Protocol
IP	Internet Protocol	DVR	Digital Video Recorder
MAC	Media Address Control	IR	Infrared Radiation
RSSI	Received Signal Strength Indication	SYS	system
SSD	Solid State Drive	LED	Light Emitting Diode

APPENDIX II : Accessories

Accessories	Quantity	Description	Accessories	Quantity	Description
	1	Power Cable		1	Remote Control
	1	4CH HD DVR Key			
	1 optional	GPS Antenna			
	1 optional	WIFI Antenna			
	1	Alarm, speed sensor, temperature sensor connecting cable			
	1	6p to 4p conversion cable, supplied			

APPENDIXIII: Compatibility Storage List

- SD Card

Brand Name	Model Name	Card Type	Typical Read Speed (MB/s)	Typical Write Speed (MB/s)	Capacity (GB)	Interface	Hot Plug	Test Read Speed (MB/s)	Test Write Speed (MB/s)	Remarks
Lexar	Lexar 128G 633X	SDXC UHS-I	95	45	128	Standard SD	OK	7.1	9.4	Test Read/Write, Update software, HotPlug
SanDisk	SDXXG-032 G-ZN4IN	SDHC 10	95	90	32	Standard SD	OK	9.2	12.6	Test Read/Write, Update software, HotPlug
SanDisk	SDSDUNC-128G-ZN6IN	SDHC 10	80	75	128	Standard SD	OK	7.4	11.5	Test Read/Write, Update software, HotPlug
TOSHIBA	THN-N302R 0320C4	SDHC 10	90	40	32	Standard SD	OK	6.5	10.1	Test Read/Write, Update software, HotPlug
TOSHIBA	THN-N302R 0640C4	SDHC 10	90	40	64	Standard SD	OK	7.8	6.2	Test Read/Write, Update software, HotPlug
TOSHIBA	THN-N302R 01280C4	SDHC 10	90	40	128	Standard SD	OK	7.2	9.3	Test Read/Write, Update software, HotPlug
Transcend	Transcend 64GB UHS-I U3	SDXC UHS-I	95	60	64	Standard SD	OK	7.3	10.6	Test Read/Write, Update software, HotPlug
Transcend	Transcend 32GB UHS-I 600X SD	SDHC 10	90	40	32	Standard SD	OK	6.9	7.5	Test Read/Write, Update software, HotPlug
Transcend	Transcend 64GB UHS-I 600X SD	SDHC 10	90	40	64	Standard SD	OK	6.0	6.3	Test Read/Write, Update software, HotPlug
Transcend	Transcend 128GB UHS-I U3	SDHC 10	95	60	128	Standard SD	OK	7.1	9.0	Test Read/Write, Update software, HotPlug