

NSR-90AHDDVR

Operating Instructions



9" HD Digital LCD Color Monitor with 4 Channel Recorder

Please read all instructions before using the product and keep the manual for future reference.

The product may differ from the manual description according to the upgraded.

S/W version or performance, and it may be altered without notice.

V1.1

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1. Precautions

● Storage and Keeping

- 1) Do not expose the monitor to excessive heat or coldness. Storage temperature is $-30\sim+80^{\circ}\text{C}$; Operating temperature is $-20\sim+60^{\circ}\text{C}$; Humidity is Rh90%.
- 2) Never use this device near a bathtub, wash basin, kitchen, damp basement, swimming pool or similar places.
- 3) Never use this device in the environment with excessive moisture, dust or smoke.
- 4) Avoid dropping or striking.
- 5) Never use this device in enclosed spaces, areas with excessive vibration or subject to severe impacts.
- 6) Never puncture, scratch or use abrasive cleaning materials on this device.
- 7) Do not place cables where they may be pinched or stepped on.
- 8) Leave at least a 2" space between the monitor and walls, cabinets or other objects to allow adequate air circulation around the device.
- 9) The monitor is not designed to be waterproof.

● Operating Precautions

- 1) The device can be powered by DC power 10V ~ 32V (e.g. 12V or 24V ACC).
- 2) Make sure all cables are connected properly, and check the polarity, as improper cable connections may damage the monitor. Remove the power cable connections when you do not intend to use the device.



Warning!

1. High voltage is present within the monitor. The opening of the case should be by professionals.
2. Do not watch the video while driving unless you are monitoring the display.





Special Notice

Occasionally, a few highlights or dark spots may occur on the LCD screen. This is a very common phenomenon in active matrix display technology, and doesn't necessarily indicate any defects or faults.

Never try to repair this device by yourself. In case of any problems, please turn off the display at once and notify our company or the authorized dealer. The monitor is a complex device, and any disassembly or modification may lead to damage and void the warranty.

- **Maintenance**

- 1) Remove all the cable connections from the monitor before cleaning the device.
- 2) Use a mild household detergent and clean the unit with a slightly damp, soft cloth.
- 3) Never use strong solvents such as thinner or benzine, as they might damage the finish of the device.

| | | |
|--|---|---|
|  | Caution |  |
| | Risk of electric shock. Do not open. | |
| <p>Caution: to reduce the risk of electric shock, Do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.</p> | | |



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



This symbol is intended to alert the user to disposing of electrical and electronic items in separate collection facilities for recovery and recycling.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your warranty and necessitate expensive repairs.

- **Declaration of Conformity**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:



la FCC (Comisión Federal de Comunicaciones). El funcionamiento está sujeto a dos condiciones:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.



2. Features and Specifications







- 1) 9" HD quad-view monitor, and resolution is 1024 x 600.
- 2) Support 4 HD camera inputs and split-view display mode.
- 3) Multiple video formats available: 1080P30/1080P25/720P30/720P25/PAL/NTSC.
- 4) Many display modes available.
- 5) Each channel supports independent image adjustment for horizontal-mirror, vertical-mirror view display.
- 6) Support capacitive touch screen with gestures detection; iconic menu operation.
- 7) Support remote operation.
- 8) Five trigger wires, with trigger display image, delay and priority adjustable.
- 9) Adjustable parking lines available.
- 10) Support 60-level manual adjustment of the LCD backlight.
- 11) Multiple languages available (English, Russian, Chinese).
- 12) With 1.5W speaker.
- 13) Wide voltage input: 10 ~ 32V; Support 12V or 24V automobile battery; with short circuit protection.
- 14) Supports up to 4 SD cards (max 512G per card) for recording, supports 4 channels of audio and video synchronous recording, and supports event triggered recording.
- 15) Supports WLAN, users can log into the web interface through a browser for preview and configurations.
- 16) Applicable to indoor / outdoor security systems, vehicle and ship surveillance.
- 17) Compliance with CE/FCC standards.




Special Notice

Accessory supply may vary due to features.

3. Accessories

| | |
|--|--|
|  <p>U-Support Bracket</p> |  <p>Center Mount Bracket</p> |
|  <p>Sun Shield</p> |  <p>IR Remote Control</p> |
|  <p>Angle Adjustment Screws</p> |  <p>Power Cable</p> |

 **Special Notice**
Accessory supply may be different for different application.

4. Parts Identification



① Remote Receiver.

② LDR.

③ Reserved now.

④ Power Key.

⑤ Lock.

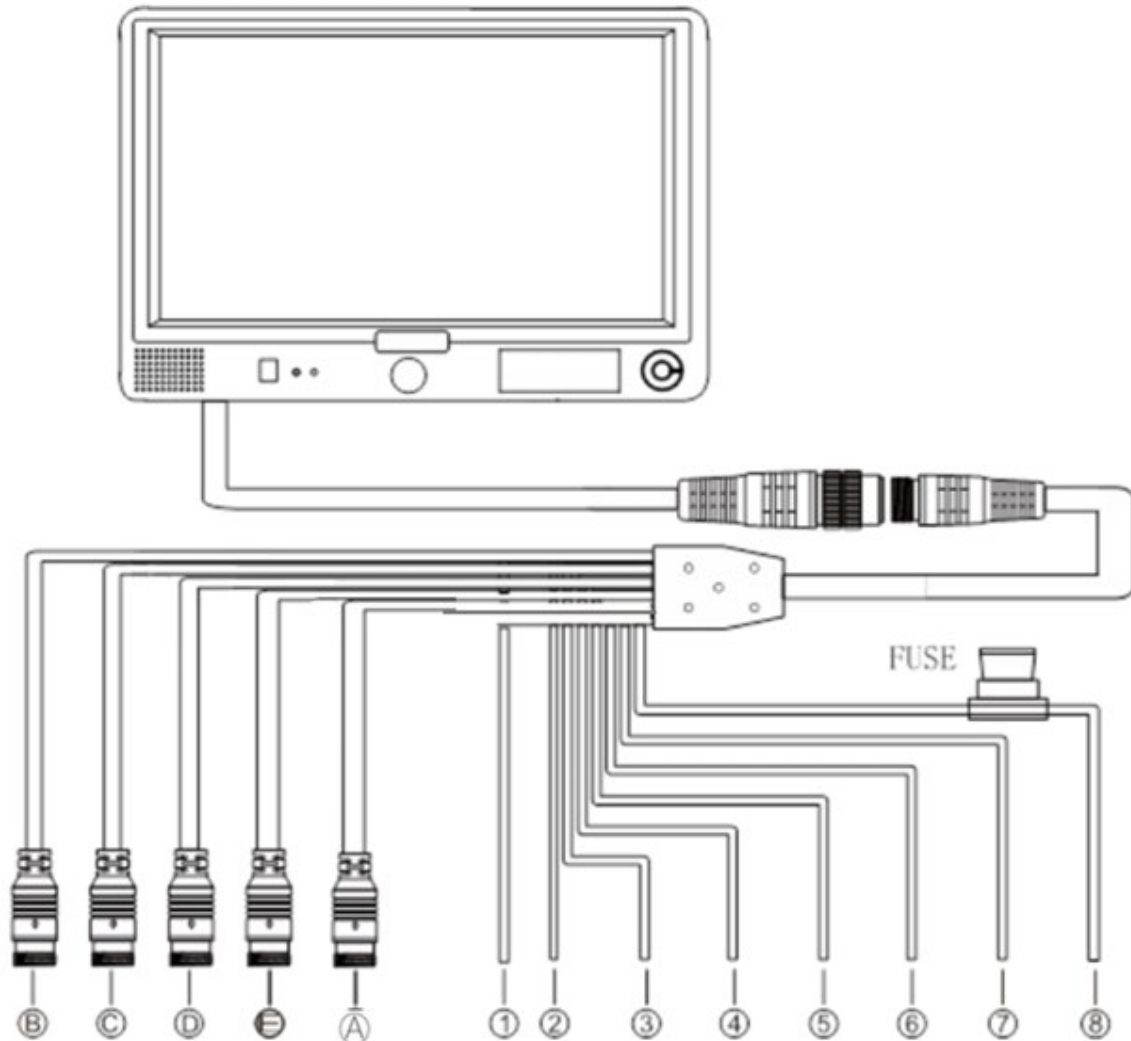
⑥ Micro SD Slot.

⑦ Insert Direction.

⑧ Slot Number.

⑨ Sketch of slots & micro SD card direction.

5. Connections



(A) Black 5P: USB Output, along with USB to CVBS conversion cable for CVBS output.

(B) White 4P male for Camera 1.

(C) Blue 4P male for Camera 2.

(D) Green 4P male for Camera 3.

(E) Brown 4P male for Camera 4.

① Single white wire to positive power wire of Camera 1.

② Single blue wire to positive power wire of Camera 2.

③ Single green wire to positive power wire of Camera 3.

④ Single brown wire to positive power wire of Camera 4.

⑤ Single yellow wire to positive power wire of Camera Split.

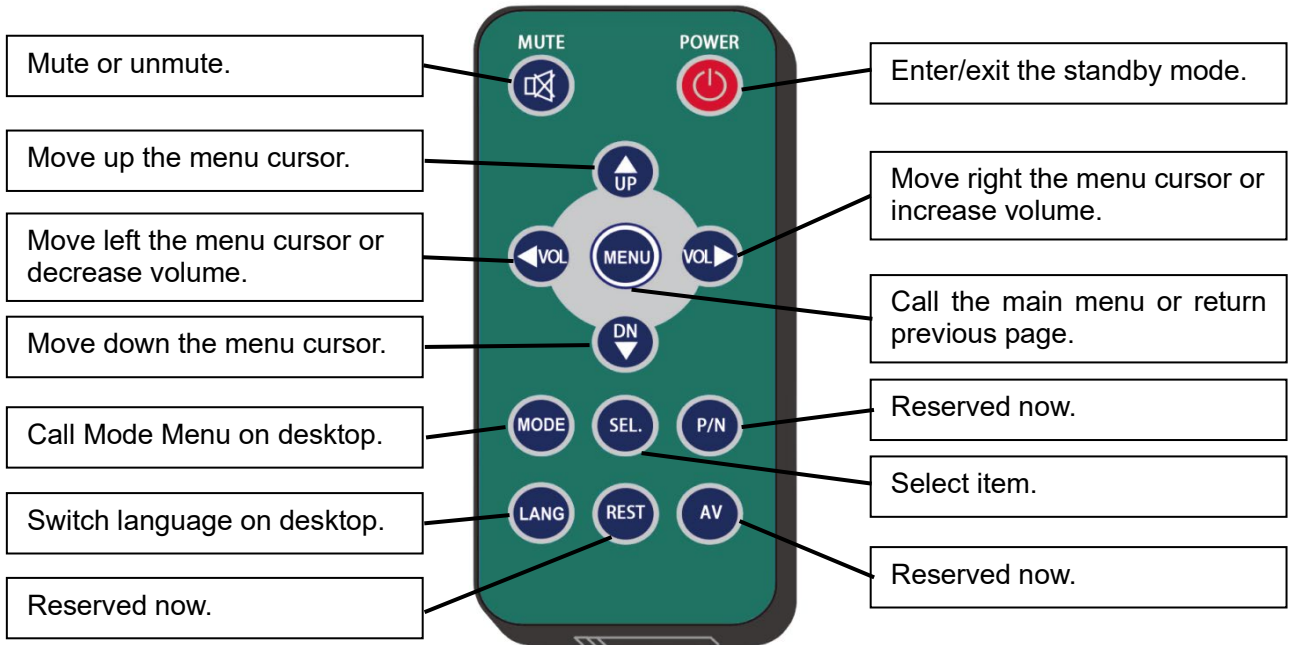
⑥ Single orange wire to vehicle ACC.

⑦ Single black wire to GND.

⑧ Single red wire to power wire of DC: 10-32V.

6. Menu Operation

6.1 IR Remote Control



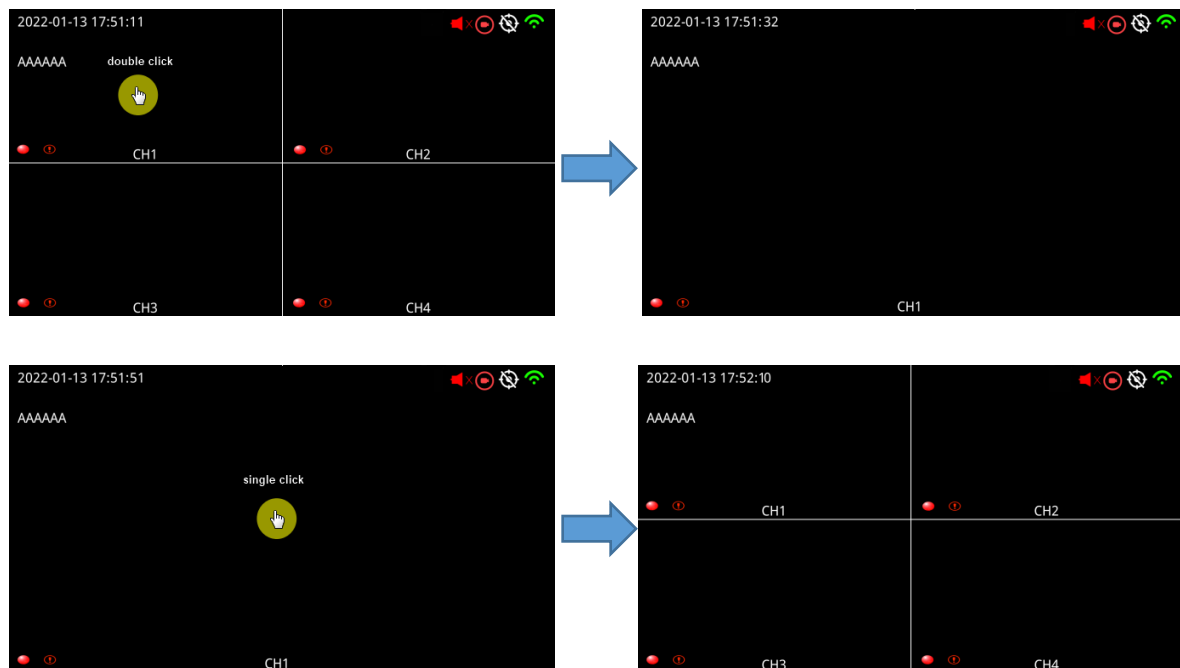
Remote Control

- **MUTE:**
Mute or unmute the monitor.
- **Power:**
Enter or exit the standby mode.
- **VOL ▷ :**
Open the volume adjustment menu;
Move right the menu cursor.
- **VOL ◁ :**
Open the volume adjustment menu;
Move left the menu cursor.
- **UP:**
Move up the menu cursor.
- **DOWN:**
Move down the menu cursor.
- **MENU:**
Call the main menu or return previous page.

- **MODE:**
Call Mode Menu on desktop.
- **LANG:**
Switch to different languages on desktop.
- **SEL.:**
Select item.

6.2 Touch Screen Function

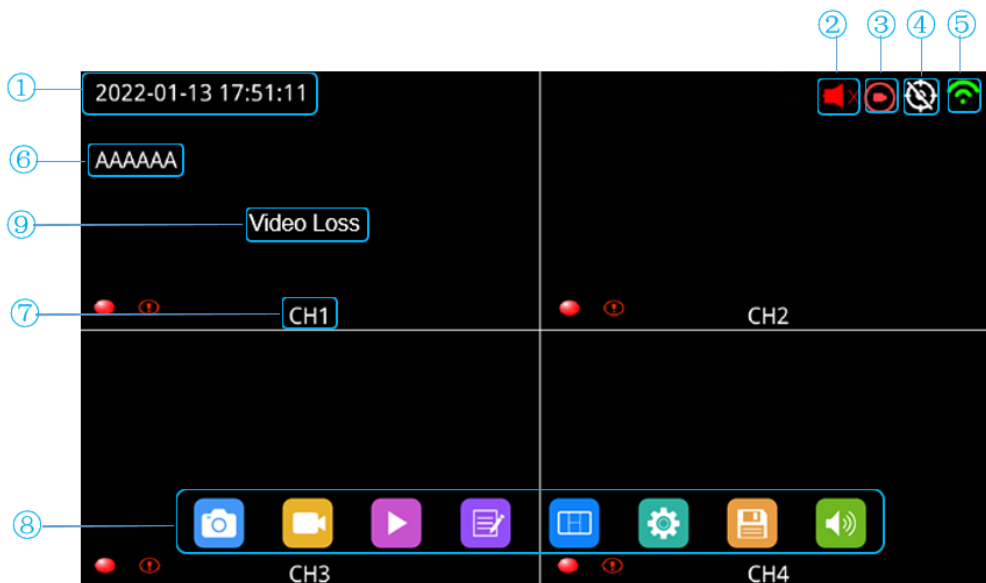
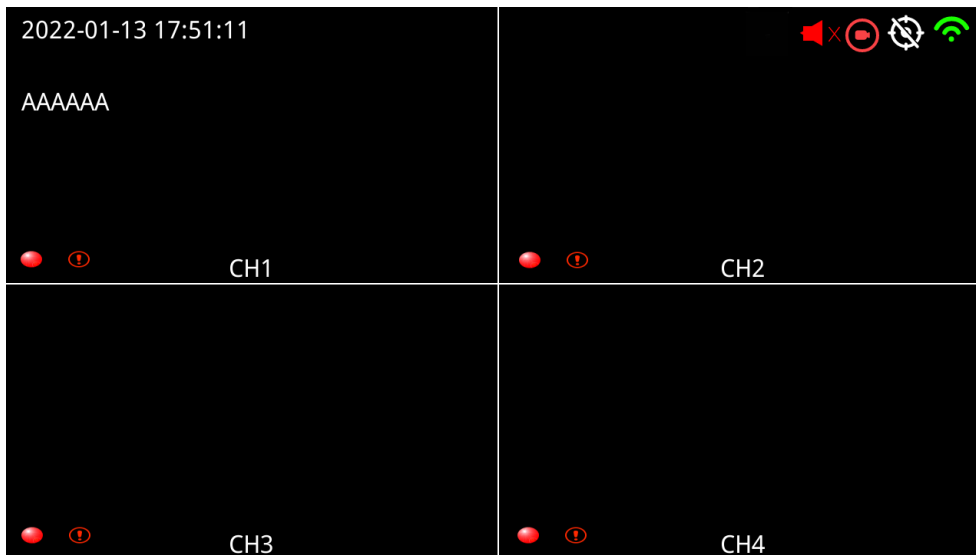
When the display shows a split mode and hides the menu, double clicking on one channel will switch to the single screen of that channel. Click again to return to the original split screen. Other menu operation please refer to the corresponding sections.



7. Menu

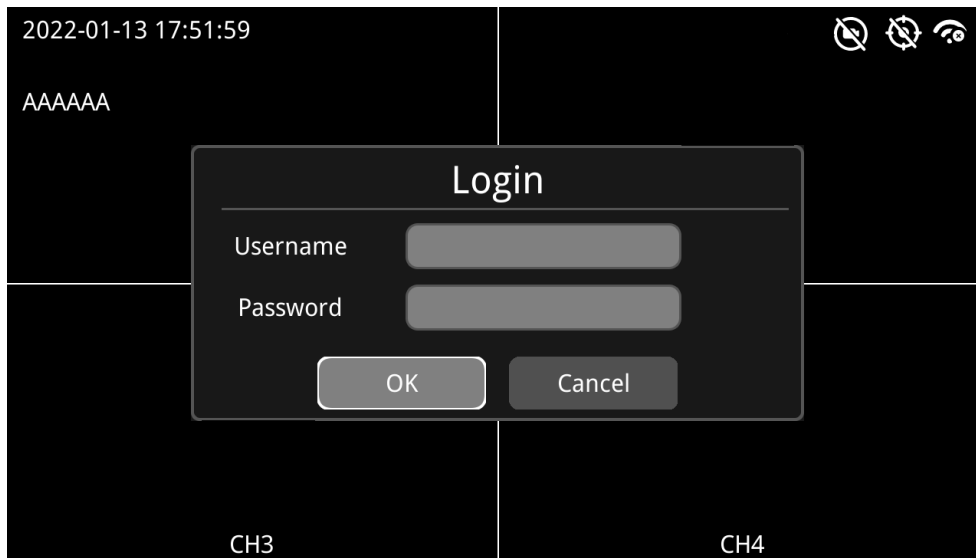
7.1 Menu Introduction

Before logging in, press the [MENU] button on the remote control or click on the bottom area of the touch screen, and the LCD screen will display the menu interface. To access the detail contents of the menu, we need to log in first. After logging in, you will have access to all configurations.



- ① System time.
- ② Mute icon (appears when device is muted).
- ③ Record icon.
- ④ GPS signal icon: flickering when connecting, long lit when connected.
- ⑤ WLAN icon.
- ⑥ License plate number.
- ⑦ Channel name.
- ⑧ Menu zone: Click to show the menu icon.
- ⑨ Video loss warning.

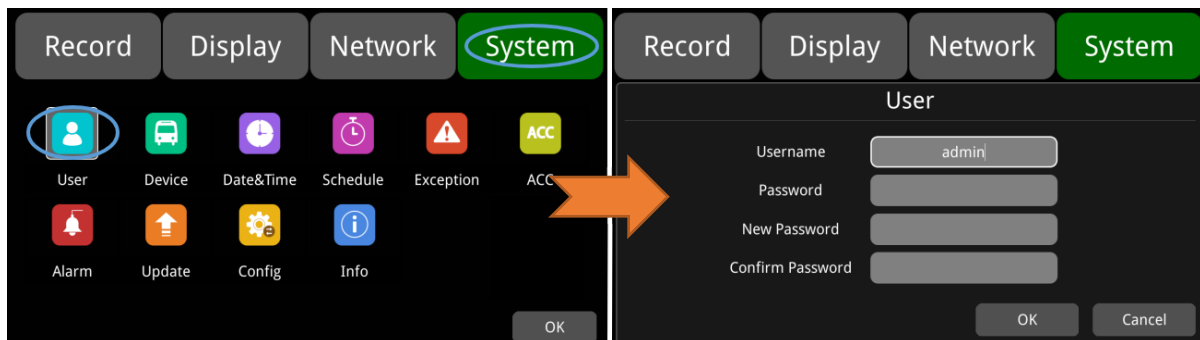
7.2 Menu Lock



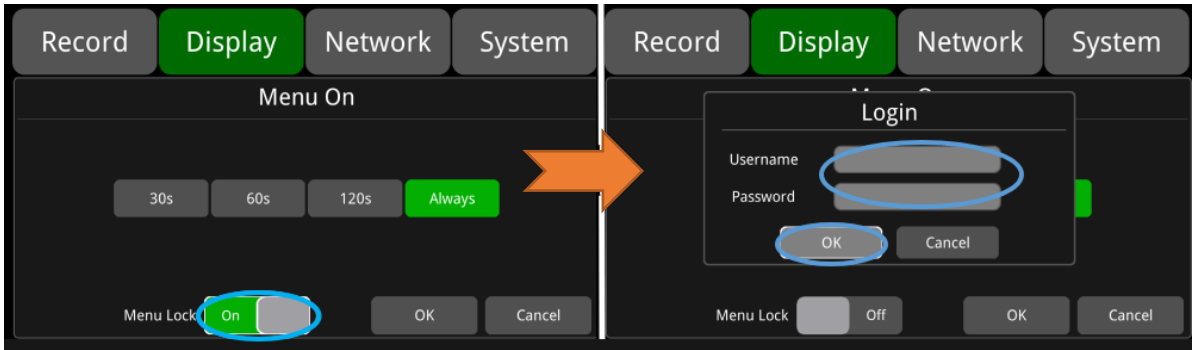
- Two types of menu access: administrator access and guest access
- User permission list

| | Administrator | Guest |
|------------------|---------------|---|
| Username | admin | guest |
| Default password | 123 | 321 |
| Menu access | all | Only snapshot menu, play menu, display mode menu and volume menu. |
| | | |

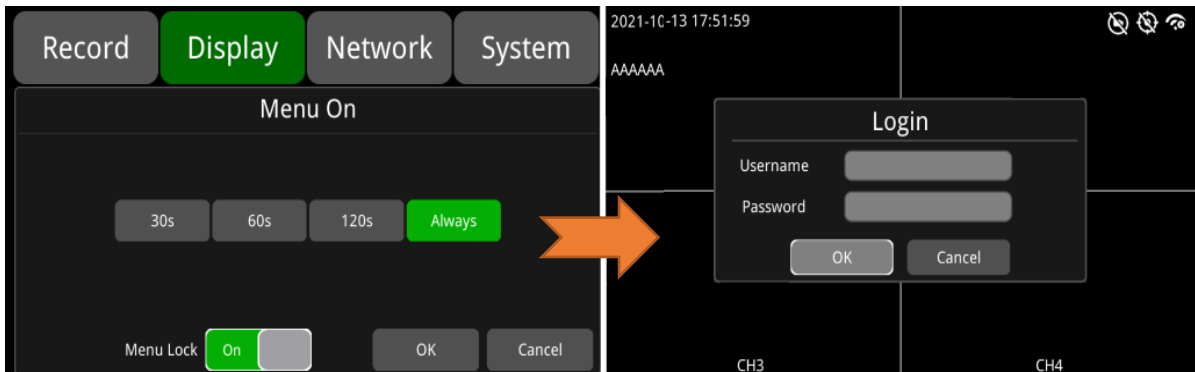
- Username cannot be changed, but the password can be changed. Guests do not have access to the settings menu, so password changing is not available. (For changing passwords, please refer to the following instructions)



- Username admin and password are required to change the menu lock status. Below figure shows how to change the menu lock status from “on” to “off”.





- When the menu lock status is “on”, we need to enter the username admin and password to access the “Record”, “Play”, “Log”, “Settings”, “Disk” and other menus. Username guest and password will only allow access to the “Play” menu. “Layer switching” and “volume adjustment” are open without the need to input any information. When the menu lock status is “off”, no username and password are needed to enter all menu setting.

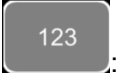


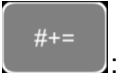
7.3 Keyboard Instruction

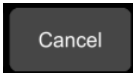



: Uppercase /lowercase switch.

: Exit after saving configuration.

: Switch to numbers.

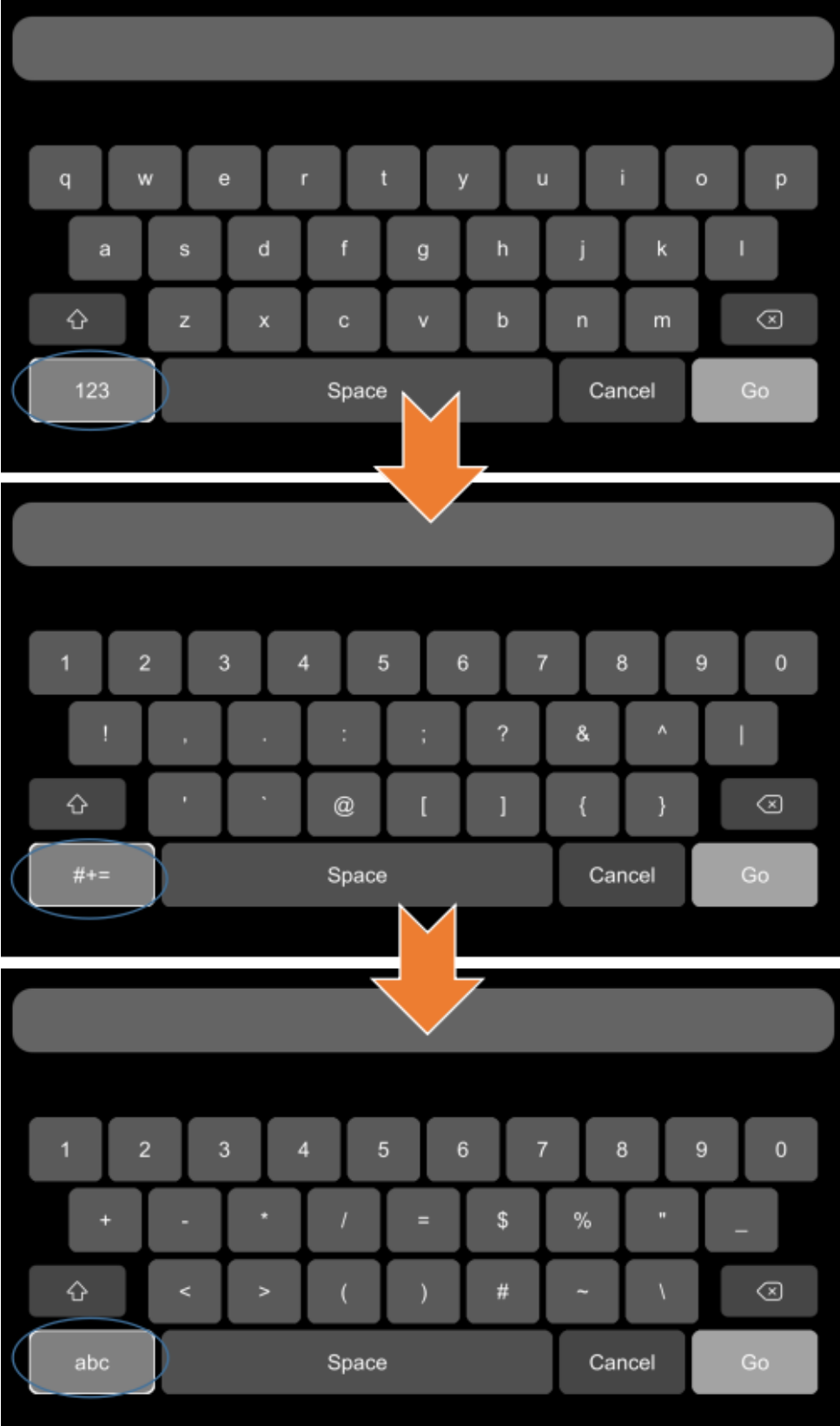
: Switch to special characters.

: Exit without saving configuration.

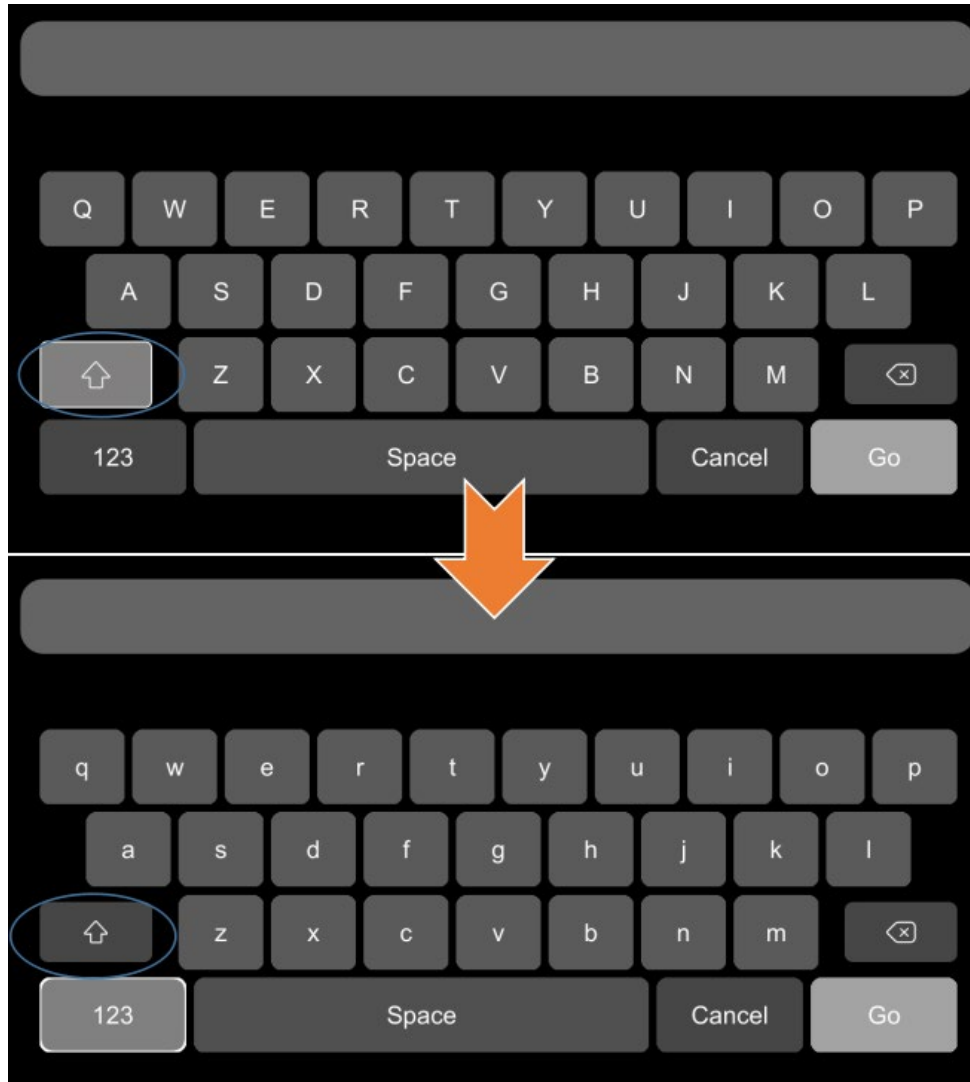
: Delete input characters.

: Switch to english.

Character Switching:



Uppercase /lowercase switch:



7.4 Snapshot



Snapshot button: Click this button or press SEL to snapshot a photo and save the screen image as a JPEG image.

7.5 Manual Recording



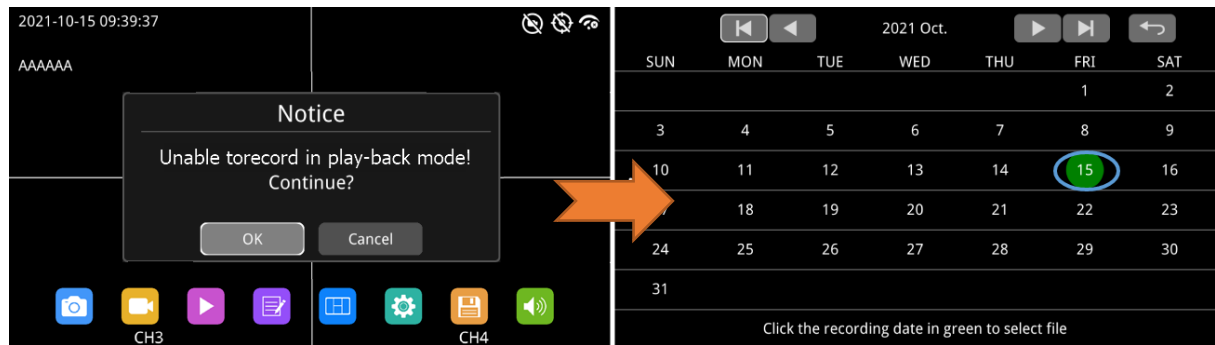
Record button: Click this button, or select it and then press the SEL button to close or open the recording.

7.6 Video Playback/Picture Viewing



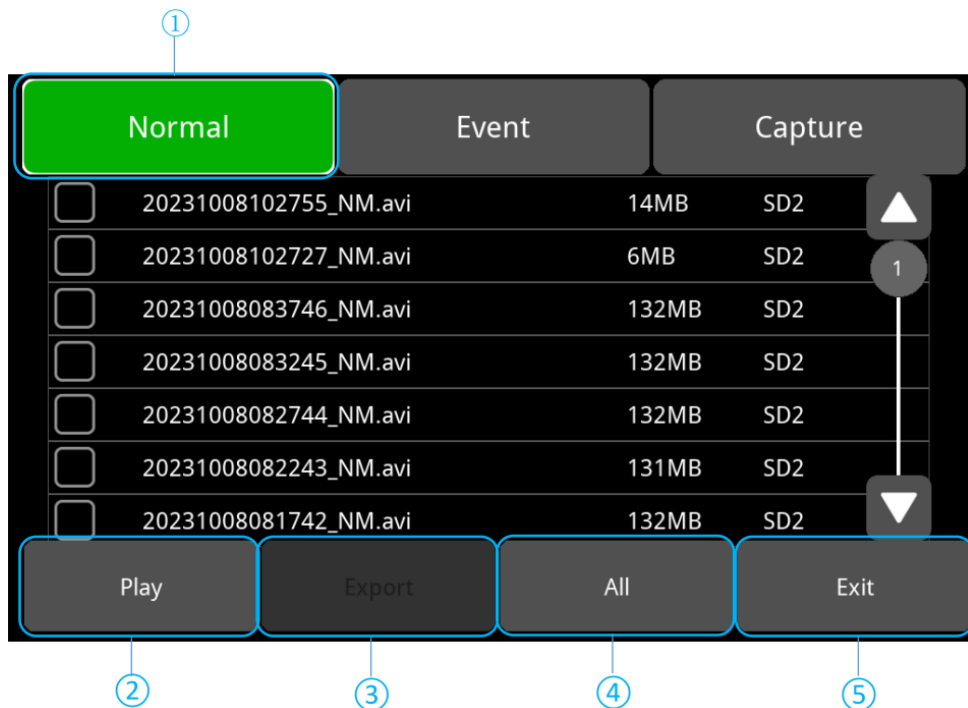
Video playback button: Click this button, or select it and press the SEL button. The system will enter the recording calendar. The prompt dialog box will display “Unable to record in play-back mode! Continue?”. Press “OK” to proceed. If the date mark in the calendar interface is green, it means there’s video files or pictures saved on that day. Press this icon to enter the video/picture file list, select the video file or the picture want to check, and then press the "Play" button. You can select one or more videos/pictures at a time. Multiple videos/pictures can be played in sequence and can switch to the next or previous video/picture. The specific operation will be shown in the below.

● Calendar Interface



: Switch months.

: Switch years.

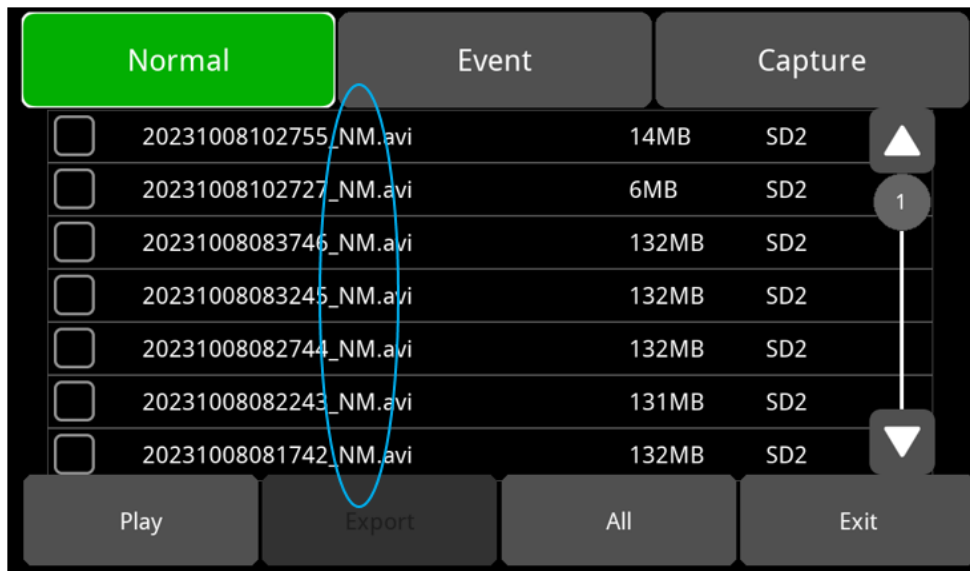


● Recording List Interface (1)

- ① Select the recording type button. Two recording types: normal and event. Capture Saved image for snapshot.
- ② Play: Play selected video file.
- ③ Export: export the selected video file to USB (currently not supported).
- ④ All: select all files on that page.
- ⑤ Exit: Exit.

- Recording List Interface (2)

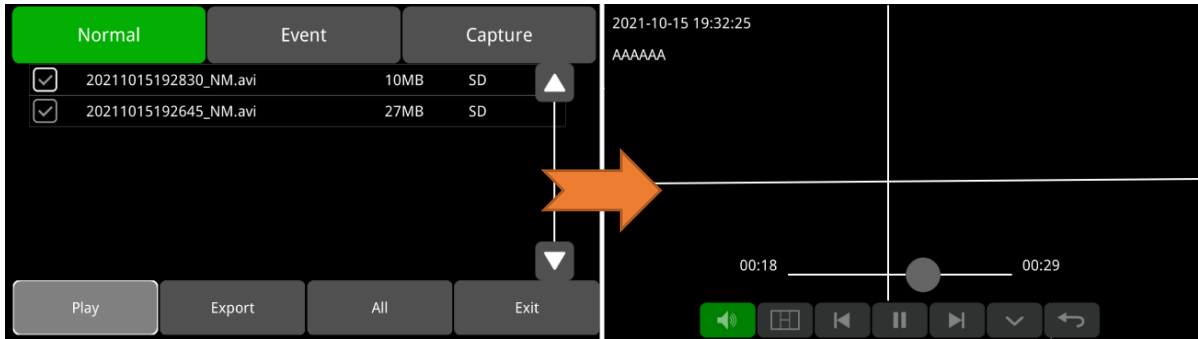
The file name contains abbreviation for the recording type, which can help identify the recording type.





Abbreviations for recording types are as follows:



| | | | |
|----|--|----|---|
| NM | Normal recording /manual recording | TI | Timer recording |
| GS | G-Sensor alarm recording (simple mode) | SP | Overspeed alarm recording (speed source is GPS) |
| A1 | Alarm 1 recording | A2 | Alarm 2 recording |
| A3 | Alarm 3 recording | A4 | Alarm 4 recording |
| A5 | Alarm 5 recording | SS | Snapshot picture (capture interface) |


- Playback Interface





: Volume adjust button (Only for the video playback interface) .

: Click the video playback split mode button to switch the split screen to single screen or single screen to segmentation mode (Only the video playback interface has) .

 : Play the previous or the next video / Check the previous or the next picture.

: Pause or resume playback (Only for the video playback interface) .

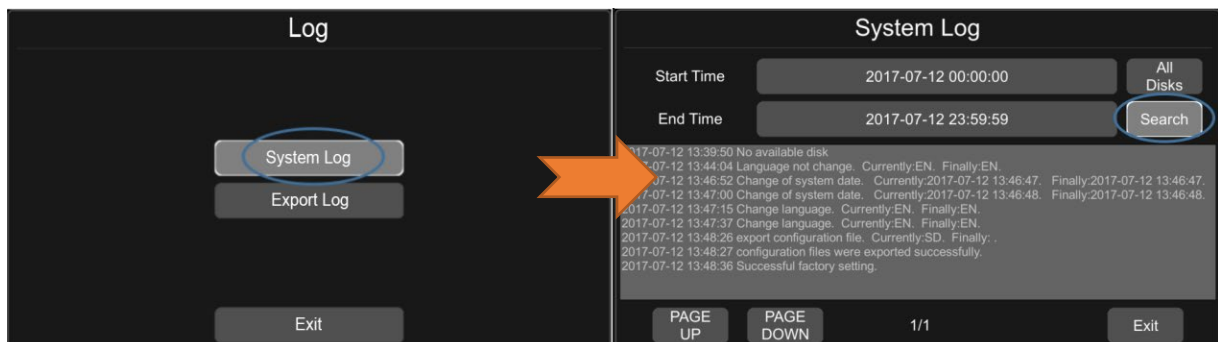
: Click to hide or show the playback menu.

: Exit playback.

7.7 Log



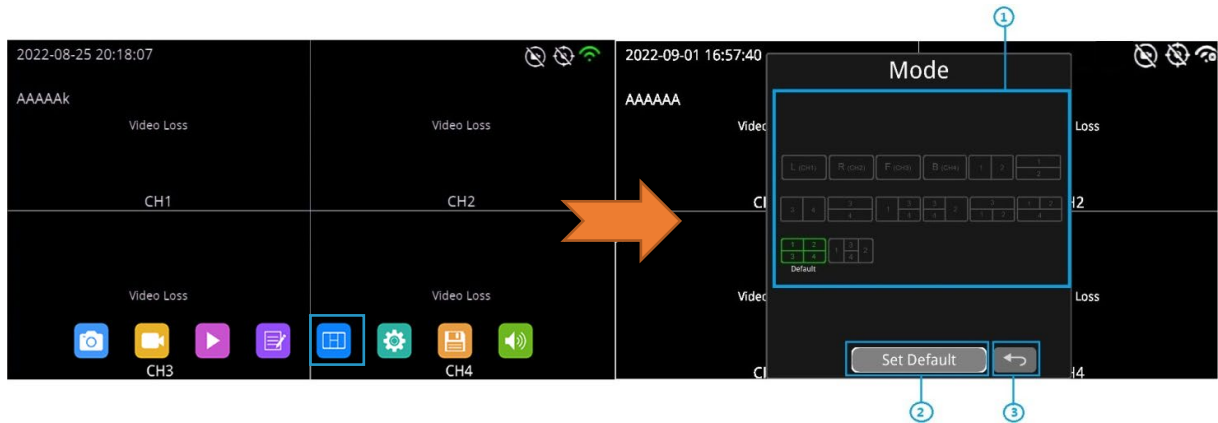
System log button: Click this button, or select it and press SEL to enter the log interface to query or export system logs.



7.8 Display Mode Switch



Display mode button: Click this button, or select it and press the SEL button to enter display mode switching interface.

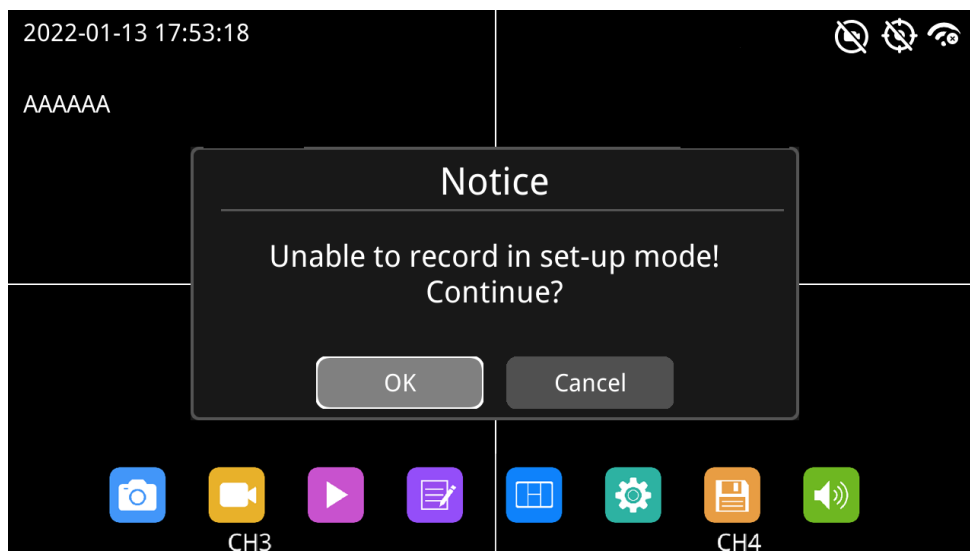


- ① Mode selecting.
- ② Press this button to set the currently selected mode to the default mode.
- ③ Click to exit.

7.9 System Setting



System settings button: Click this button, or select it and press the SEL button to enter the settings menu. The prompt dialog box will display “Unable to record in set-up mode! Continue?”. Press “OK” to enter.



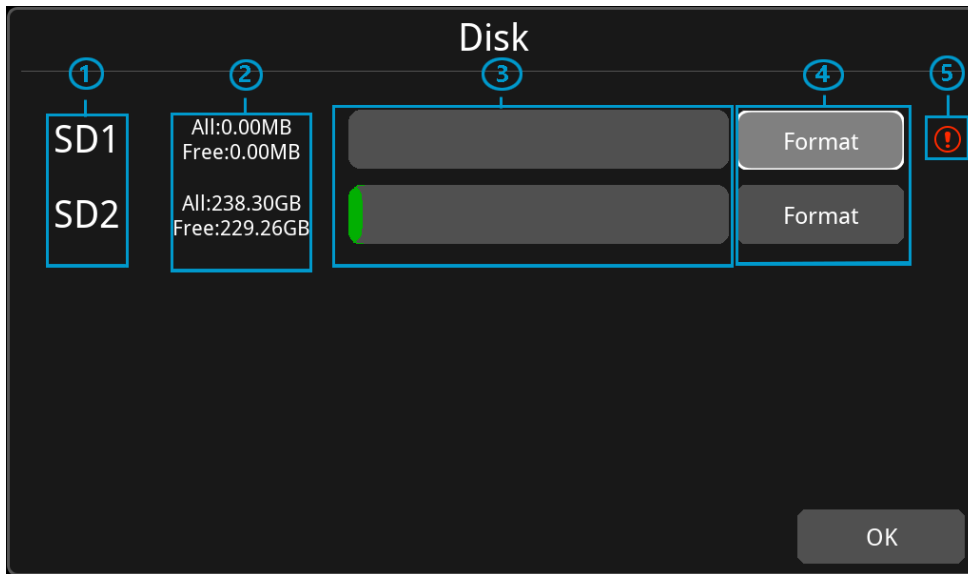
7.10 Disk Management



Disk management button: Click this button, or select it and press the SEL button

to view the status of the storage device.

If no storage device is inserted, a prompt of “No Disk Available” will appear.

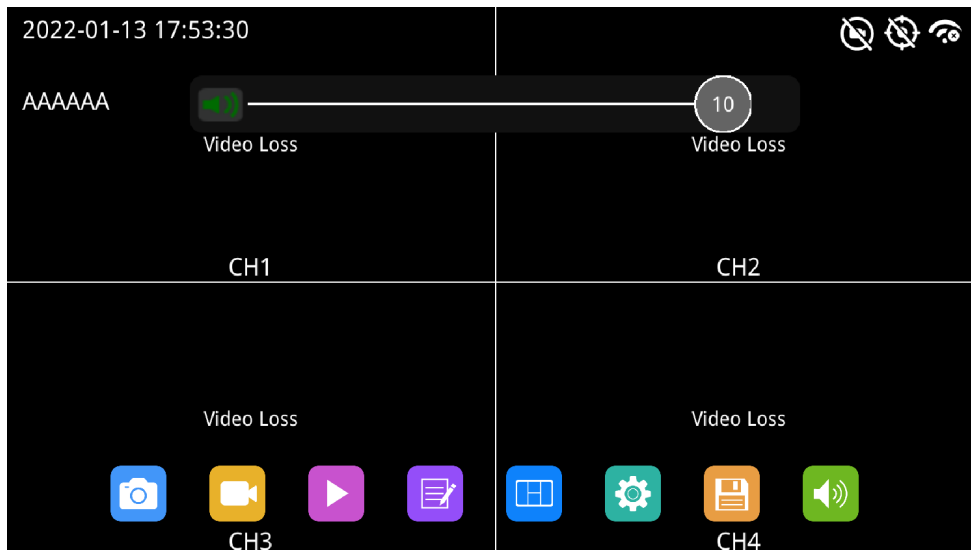


- ① Disk type.
- ② Disk capacity.
 - All: Total capacity of the storage device.
 - Free: The rest available storage.
 - If all displays 0.00MB, it means that the monitor cannot access such disks.
- ③ Disk capacity bar.
 - Green displays the size of all recording files in the “normal” list.
 - Yellow displays the size of all other files except for the above ones.
- ④ Press this button to format the SD card.
 - The prompt dialog box will display “SD1 card data will be deleted! Continue?”. Press “OK” to start formatting the disk.
 - If the disk cannot be formatted, please check if it is damaged.
- ⑤ This indicates that the disk need to be formatted before use.
 - Normally, all new disks need to be formatted before use.

7.11 Volume

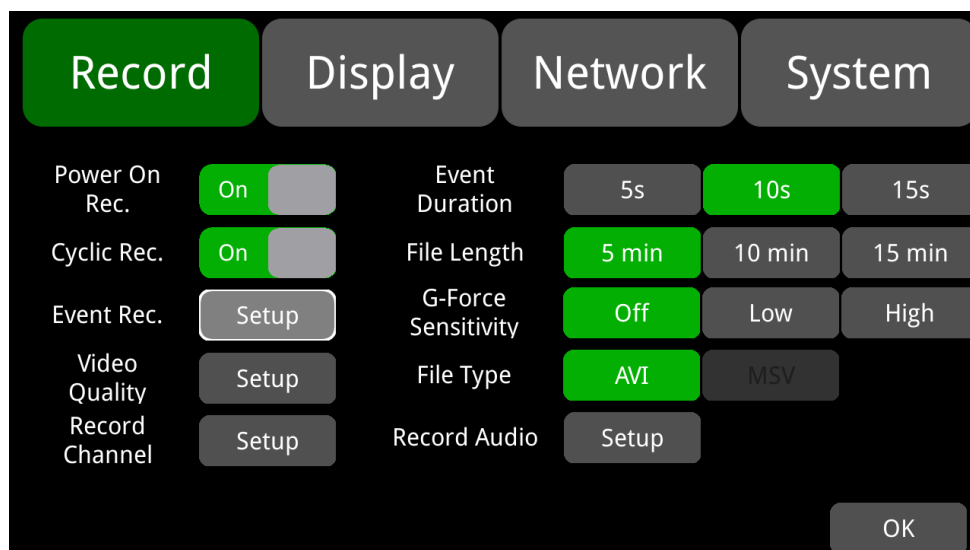


Volume Adjustment: On a scale of 0-10, default as 10.



| Function | Min. | Max. | Default |
|----------|------|------|---------|
| Volume | 0 | 10 | 10 |

8. Record Setting



8.1 Power-on Recording



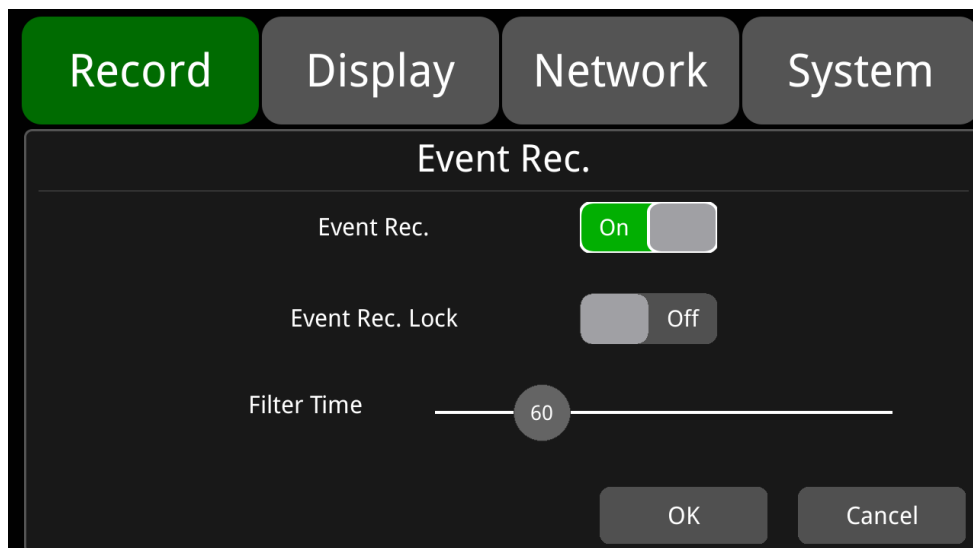
Power-on recording: If this option is set on, the system will start recording after powering on, and this function is set on by default.

8.2 Cyclic Recording



Cyclic recording: If cyclic recording is set on, the new video file will overwrite the previous video files when the disk is full. Otherwise, recording will stop when the disk is full. This function is on by default and will soon overwrite recording files.

8.3 Event Recording



Event recording: Types of event recording include acceleration sensor triggered alarms and 1-5 triggered alarms. If event recording is on and the alarm parameters are set, the event recording will be triggered when the above event occur. If event recording is off, even if the event occurs, it will not trigger event recording. This feature is set on by default.

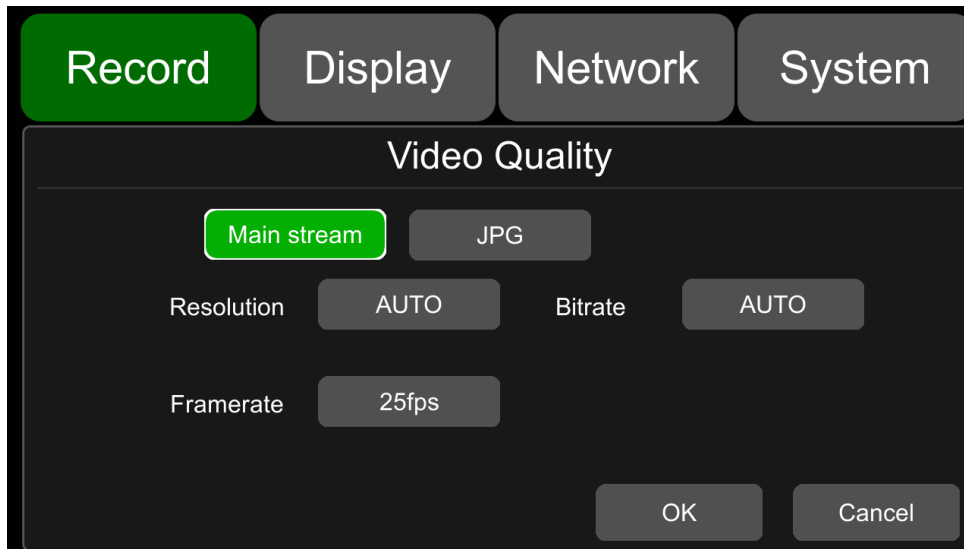
Event recording lock: When it is off, and when 20% of the disk storage is used by event recording, the new event recording will start overwriting the earliest recording file. When set on, recording overwrite will only cover normal recordings, not event recordings. Default setting is off.

Filter time: Time filtering. As shown in the figure above, if the same alarm is triggered continuously, an alarm message is generated every 60 seconds, and every 60 seconds will there be a detection to confirm whether new alarm recording is generated. The minimum filtering time is 1 second, maximum 300 seconds. Default value is 60 seconds.

8.4 Video Quality



Main stream is for video storage, while JPG is for WLAN streaming.



Default settings of Main stream and JPG are as follows:

| | Main stream | JPG |
|------------|-------------|------|
| Resolution | AUTO | none |
| Bitrate | AUTO | none |
| Framerate | 25fps | Low |

① Five resolution options available for main stream: 1080P, 720P, D1(PAL), D1(NTSC), AUTO. The higher the resolution, the better the video quality, and the larger the video file. All factors should be considered during configuration.

In the "Resolution" option, "AUTO" is defined as follows:

| | Main stream |
|------|--|
| AUTO | The monitor will identify camera format and record videos of that format |

② There are 8 levels of bitrate available in the mainstream menu: 4Mbps, 2Mbps, 1Mbps, 512Kbps, 256Kbps, 128Kbps, 64Kbps, **AUTO**. The higher the bitrate, the clearer the image, and the larger the recording files. All factors should be considered during configuration.

In the “Bitrate” option, “AUTO” is defined as follows:

| | Main stream |
|------|---|
| AUTO | If a 1080p camera is connected, the bitrate is 4Mbps. Likewise, 2Mbps for a 720p camera, 1Mbps for a d1 camera. |

③ Framerate

There are 8 levels of framerate available in the mainstream menu: 30fps, 28fp, 25fps, 20fps, 15fps, 14fps, 10fps, 5fps. The higher the framerate, the smoother the image, and the larger the recording files. All factors should be considered during configuration.

| SD capacity | Video Quality | File length |
|-------------------------|-------------------|-------------|
| 2TB (4x 512GB cards) | 4 x 1080P / 4Mbps | ≈298h |
| | 4 x 720P / 2Mbps | ≈596h |
| | 4 x D1 / 1Mbps | ≈1193h |
| | 1 x 1080P / 4Mbps | ≈2387h |
| | 1 x 720P / 2Mbps | ≈2400h |
| | 1 x D1 / 1Mbps | ≈4772h |
| 512GB | 4 x 1080P / 4Mbps | ≈75h |
| | 4 x 720P / 2Mbps | ≈149h |
| | 4 x D1 / 1Mbps | ≈298h |
| | 1 x 1080P / 4Mbps | ≈298h |
| | 1 x 720P / 2Mbps | ≈596h |
| | 1 x D1 / 1Mbps | ≈1193h |

④ JPG

Four options for JPG framerate: Excellent, High, Mid, Low. Definitions are as follows:

| | |
|-----------|--|
| Excellent | The speed at which images are uploaded to a webpage is unlimited (the fastest), thus rendering the smoothest image effect. |
| High | Upload speed: 1s for 1 image. |
| Medium | Upload speed: 3s for 1 image. |
| Low | Upload speed: 5s for 1 image. |

8.5 Recording Channel



Select the recording channel. The selected channel will be recording the normal videos.

8.6 Event Duration

Default settings are as below:



When event recording is on, its file length can be set as 5s, 10s and 15s.

8.7 File Length

The default recording file length for AVI format is 5 minutes:



The length of AVI format video files can be set as 5 min, 10 min, and 15 min.

| File Format | File Length |
|-------------|-----------------------|
| AVI | 5 min, 10 min, 15 min |

8.8 G-force Sensitivity



- The default configuration is shown above.
- G-Sensor recording and the setting of sensitivity level: 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 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 equals to the pre-recording file length (default time 15s) plus the file length, configured in 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.

8.9 File Type



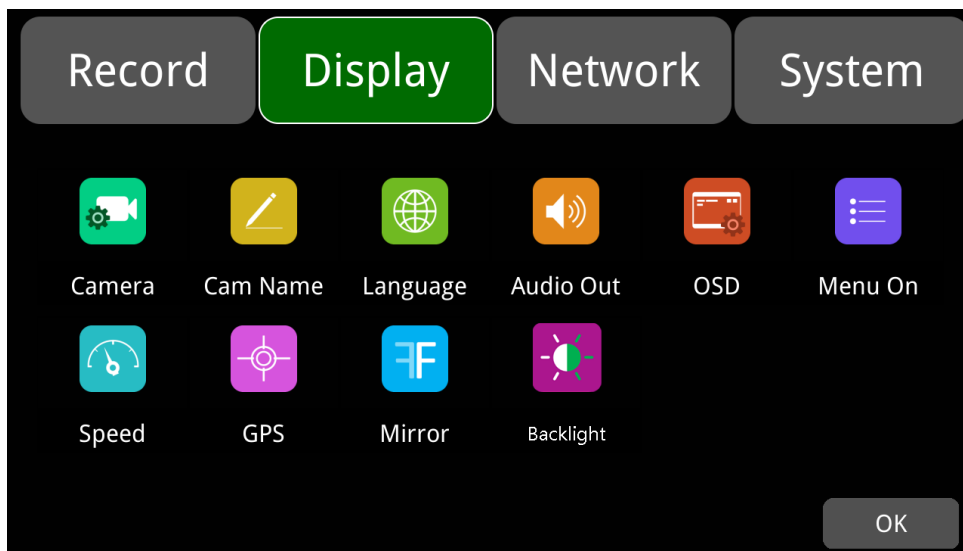
Set video format. Currently only AVI format is available.

8.10 Record Audio



Set the recording audio of the channel. When the recording channel is selected, the audio of the channel will be recorded in the recording file. If this channel is not selected, there is no audio in the recording of this channel.

9. Display

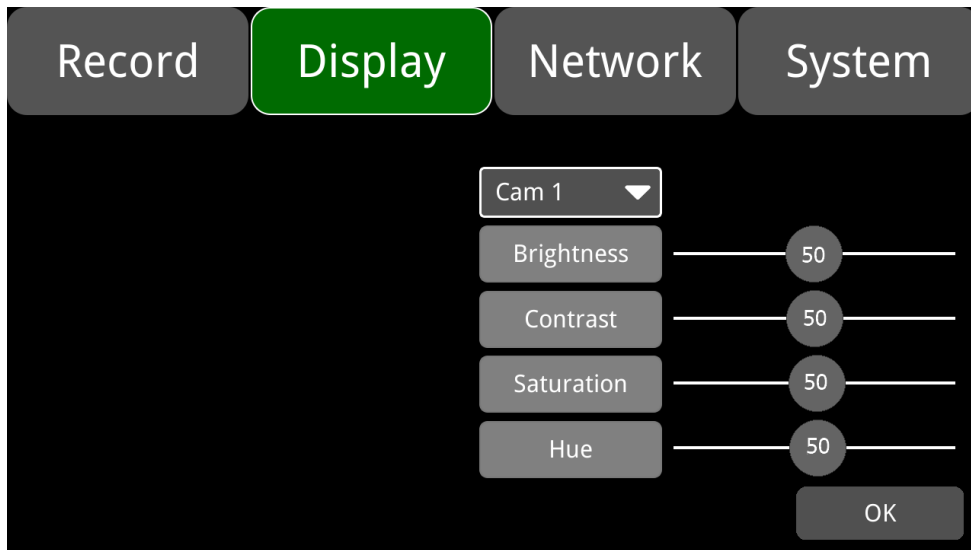


9.1 Camera Display Setting



Camera parameter setting for each corresponding channel includes brightness, contrast, saturation and hue. The default values of brightness, contrast, saturation and hue of all channels are shown in the figure below.

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

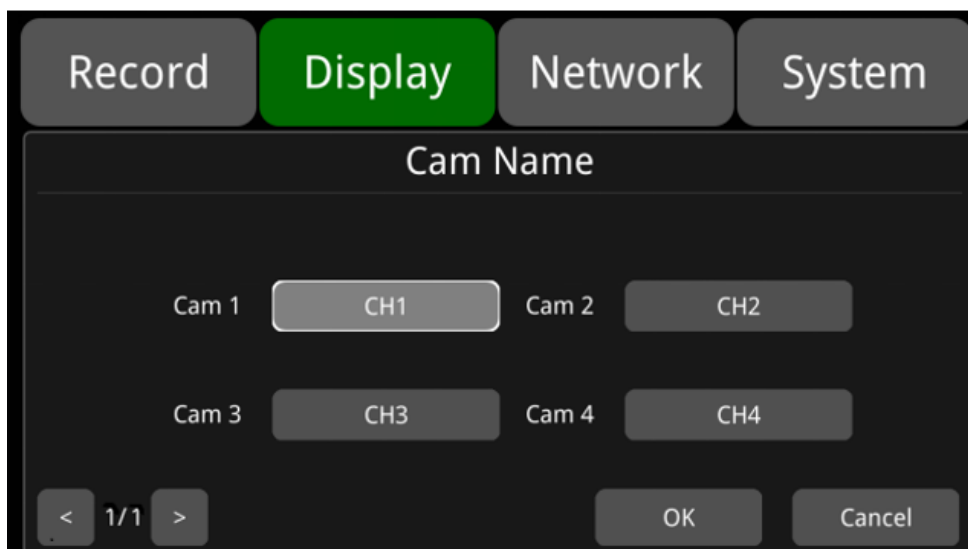


| Camera Display | Min. | Max. | Default |
|----------------|------|------|---------|
| Brightness | 0 | 99 | 50 |
| Contrast | 0 | 99 | 50 |
| Saturation | 0 | 99 | 50 |
| Hue | 0 | 99 | 50 |

9.2 Camera Name Setting



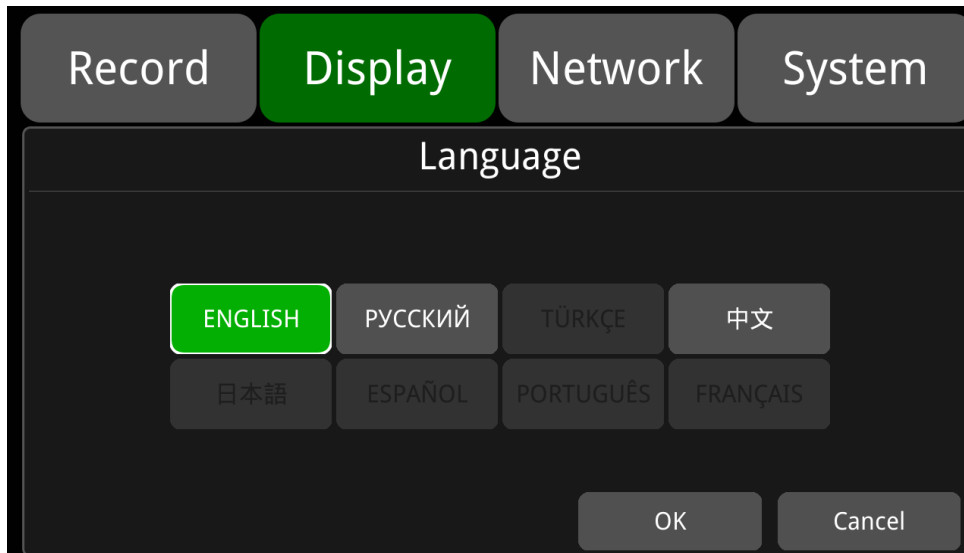
Camera Names are displayed at the bottom of each channel. Touch the “Display->Camera Name->Cam * ” on the menu, a keyboard will pop up to input a new camera name. Maximum 8 characters can be entered and the camera name must NOT be blank. The default configuration is shown below.



9.3 System Language Setting



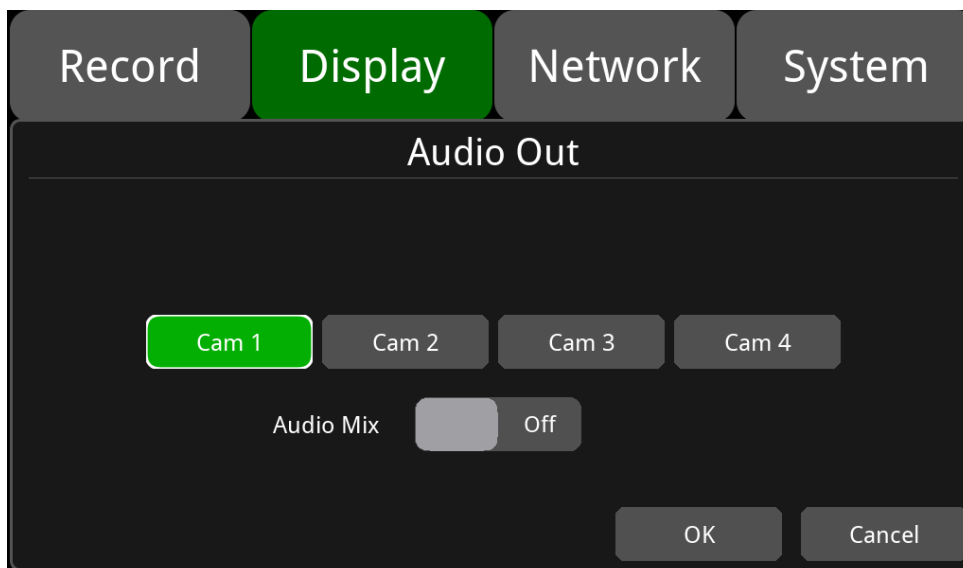
Menu languages: currently only English, Russian, Chinese are available. The default language is English.



9.4 Audio Out



Audio out: Select the audio output channel in multi-display mode. The default configuration is shown below.

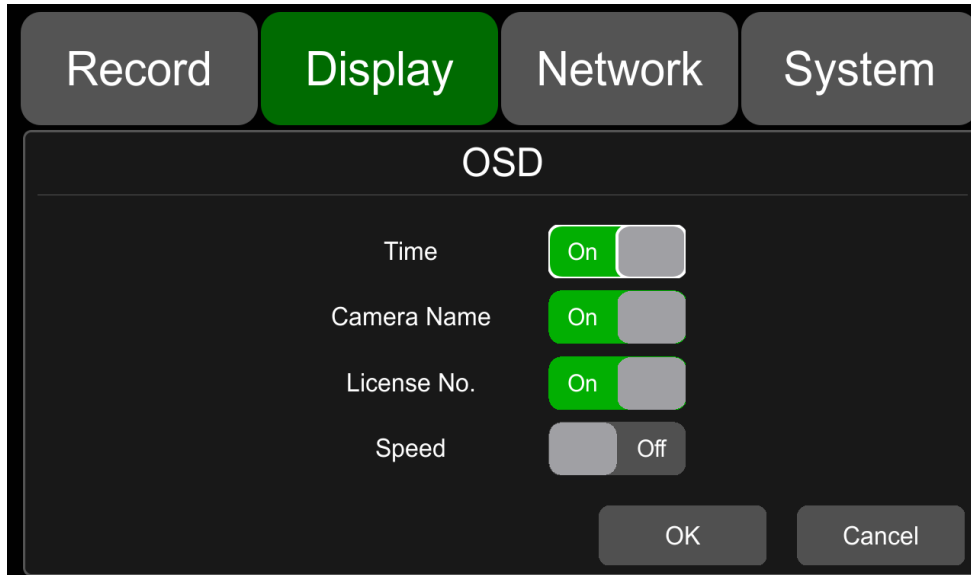


Audio Mix: Audio Mix is on, there's audio output from all channels.

9.5 OSD Display



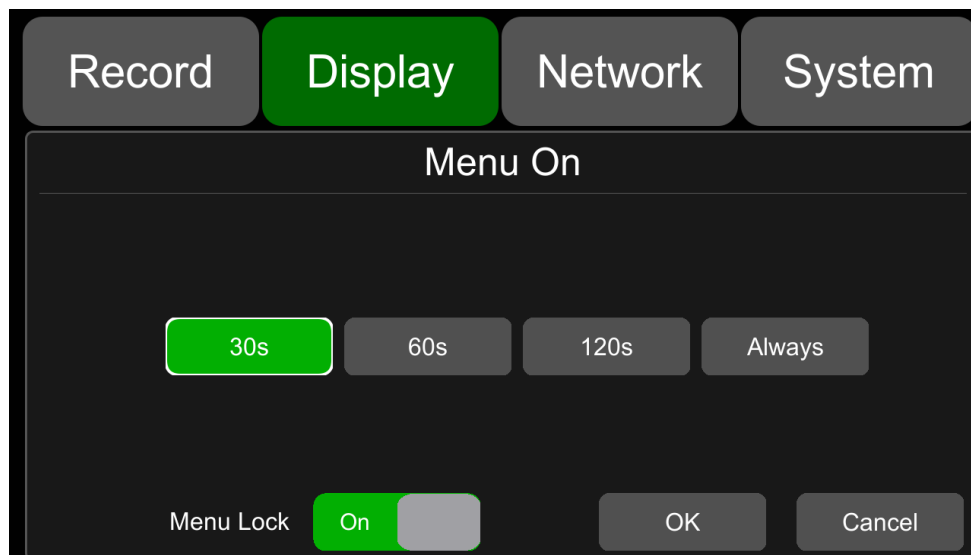
Time, Camera name, License number and Speed can be selected whether or not to be displayed. If selecting on, the information will be shown in the live and the playback video. The default configuration is shown below.



9.6 Menu on



Set the menu display duration. The default configuration is shown below.



Menu lock: Menu on duration can be set to 30s, 60s, 120s, and Always. When set to 30s, 60s, or 120s, that is, after opening the menu, if there is no operation in 30s, 60s, or 120s, the menu will be hidden. When it is set to always, the menu will always be open.

Please be noted that the recording will stop when menu is on. It is not suggested to set the duration to Always in order not to affect the recording.

Menu lock:

On: When it is On, permission is required to enter the menu.

Off: When it is Off, no permission is required to enter the menu.

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

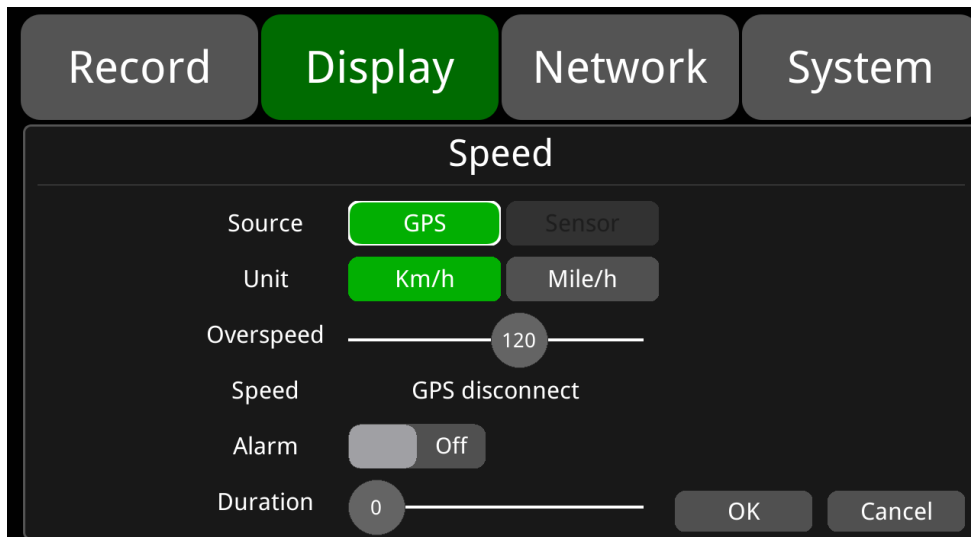
9.7 Speed



Speed setting: The overspeed info comes from GPS (Source). Speed unit is optional: Km/h or Mile/h; Overspeed threshold can be set by user. Duration is the overspeed alarm time. Speed means the current vehicle speed. If the Speed continues to exceed the Overspeed value for a time longer than Duration, the monitor will trigger an overspeed alarm recording.

The alarm switch is to set the over-speed alarm recording status. If it is ON, the overspeed alarm recording will be triggered when there is an overspeed event. If it is OFF, the overspeed alarm recording will not be triggered.

The default configuration of each item is as follows.

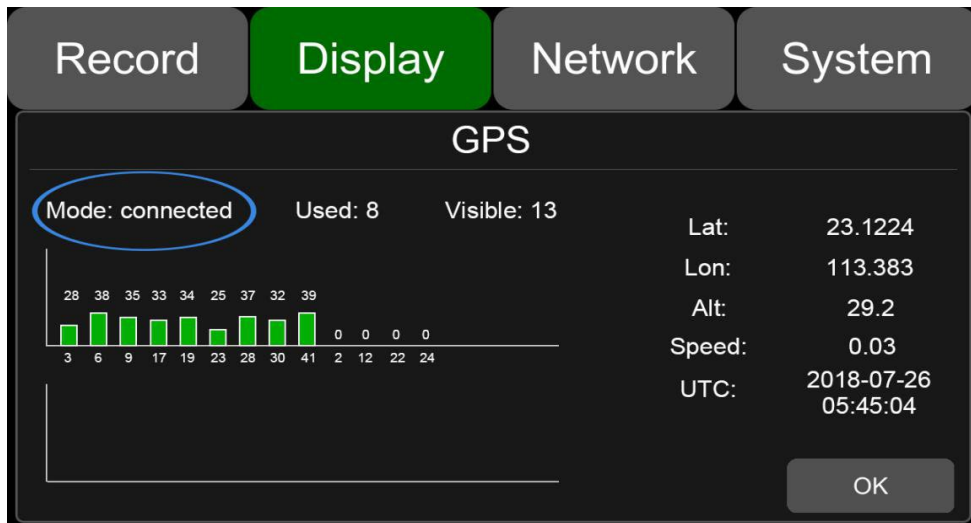


| Overspeed | Min. | Max. | Default |
|-----------|------|------|---------|
| Km/h | 0 | 200 | 120 |
| Mile/h | 0 | 125 | 75 |

9.8 GPS



GPS: When the GPS antenna is properly installed, the speed info will be recorded to the files. The menu provides GPS information including latitude, longitude, detectable satellites, and accessible satellites etc.



Mode: GPS connection status.

Used: the number of available satellites.

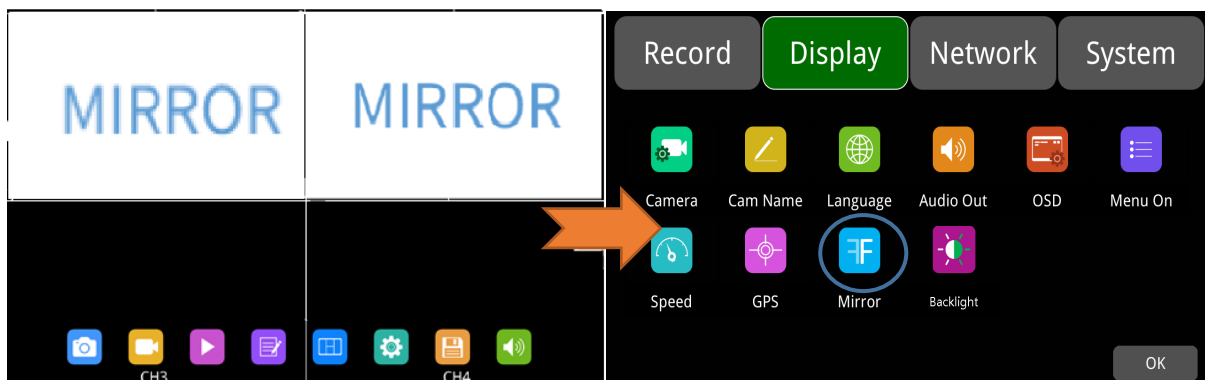
Visible: the number of searchable satellites.

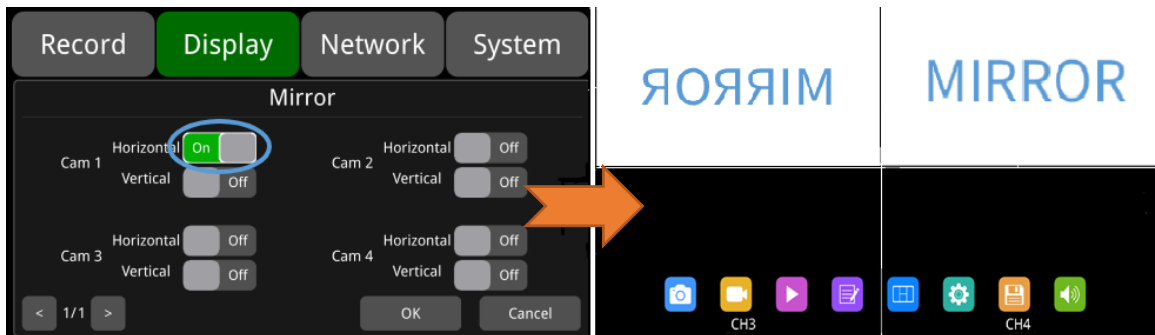
9.9 Mirror



Horizontal and vertical flips of all channels are turned off by default.

Horizontal: when it is set to ON, the corresponding recording channel will flip horizontally; when it is set to OFF, there will be no flip. Below are setting steps.





Vertical: when it is set to ON, the corresponding recording channel will flip vertically; when it is set to OFF, there will be no flip. Below are setting steps.

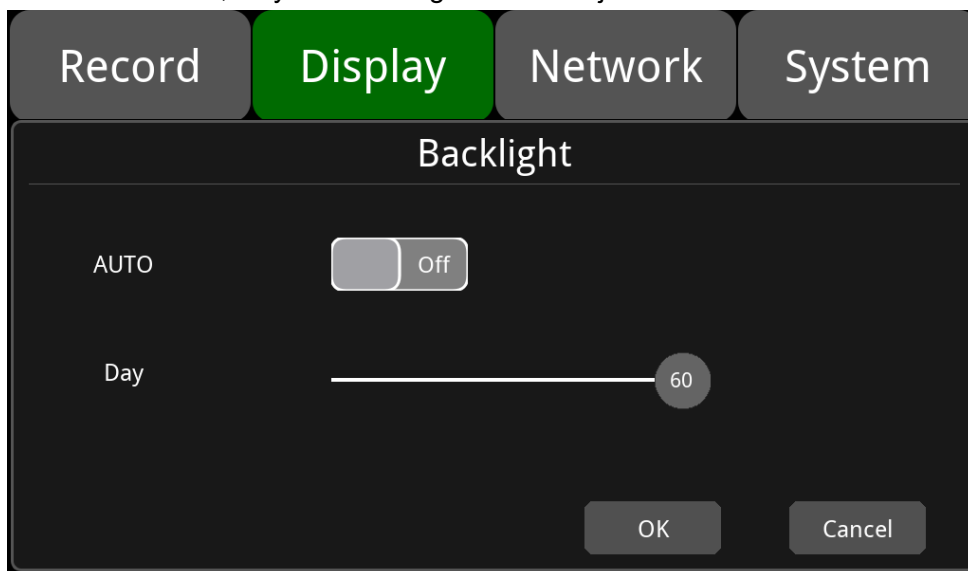


9.10 Backlight

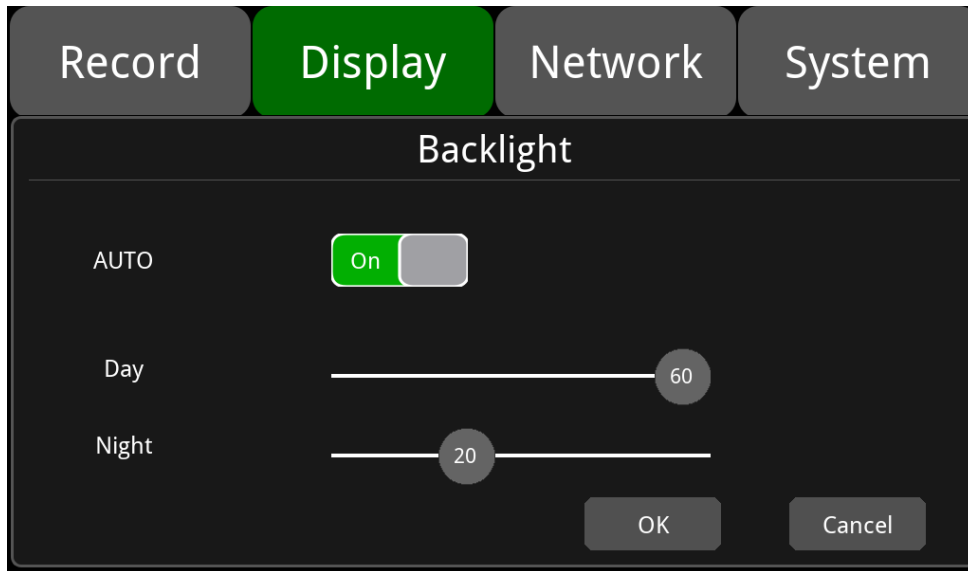


Backlight adjustment: Adjust monitor backlight brightness.

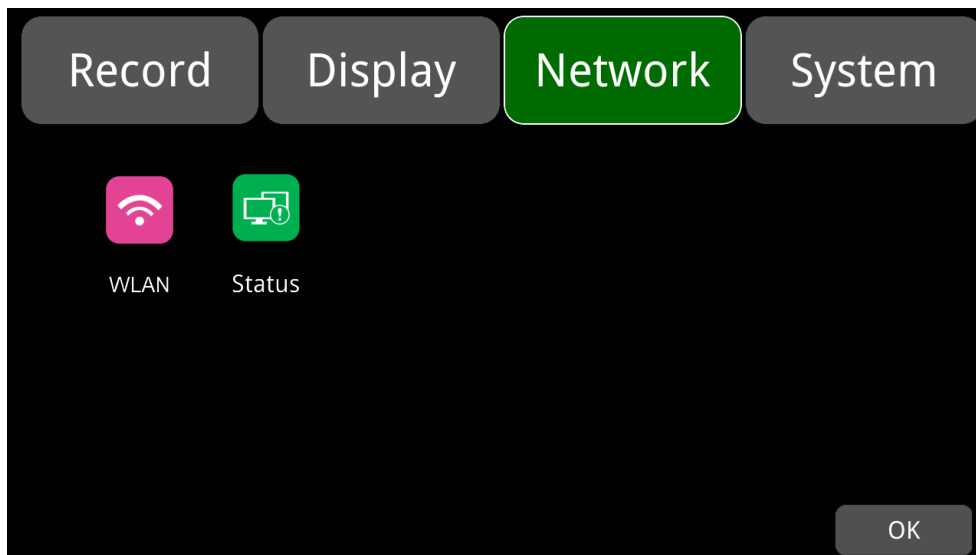
- When AUTO is set OFF, only DAY backlight can be adjusted.



- When AUTO is set ON, both DAY and NIGHT backlight can be adjusted. The monitor will automatically adjust the backlight brightness based on the ambient light. When the environment is bright, the backlight of the monitor is set to DAY, and when it is dark, the backlight will be set to NIGHT.

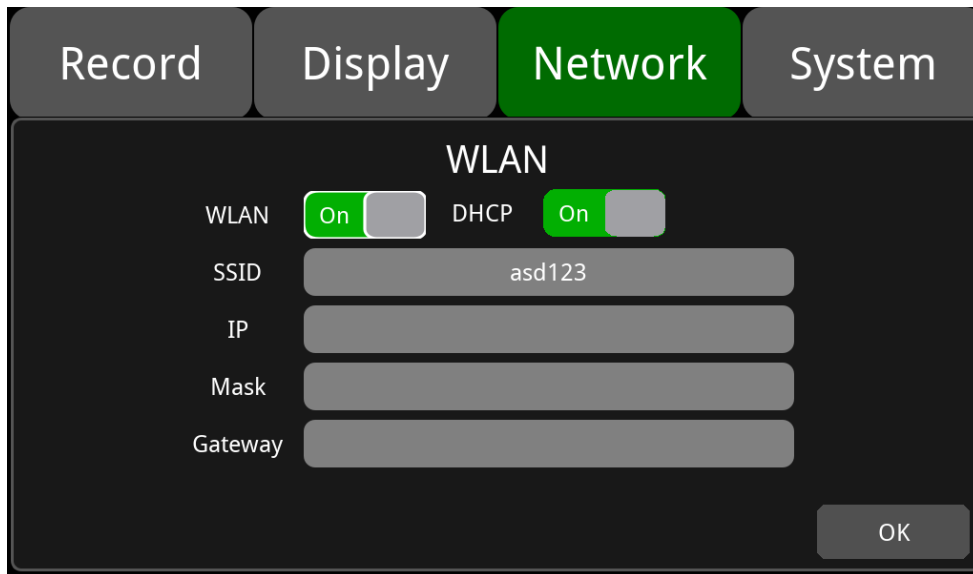


10. Network



10.1 WLAN Network Setting





WLAN: ON/OFF status of WLAN

DHCP: Dynamic Host Configuration Protocol. Set On for dynamic IP and Off for static IP. Static IP requires input with IP address, mask and gateway.

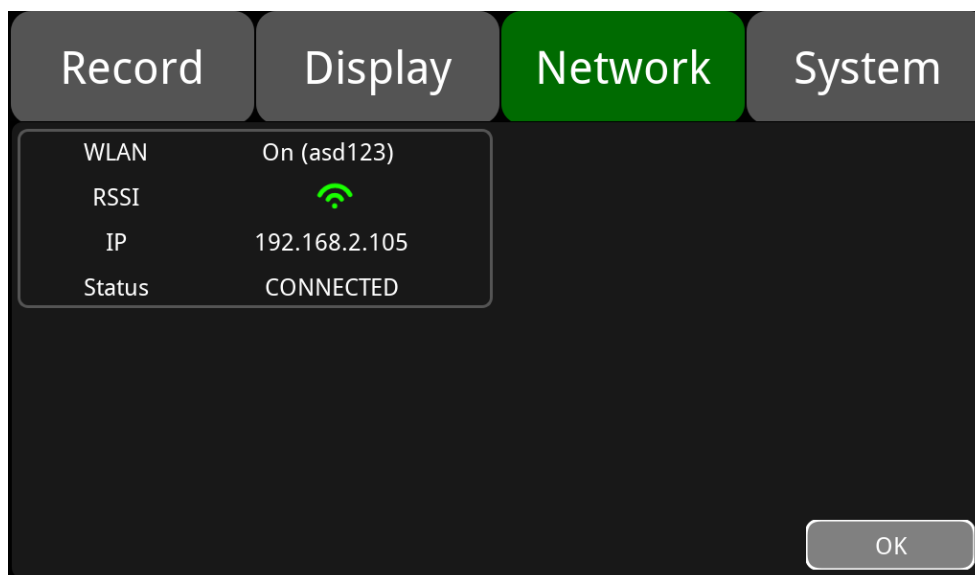
SSID: Click to view the available WLAN networks. Click on WLAN network and input the correct password to connect to WLAN.

10.2 Network Status



Network status: Users can view information such as local wired network IP address, MAC address, WLAN network connection status, WLAN IP address, WLAN signal strength, etc.

In addition, users can verify whether the network connection is successful.



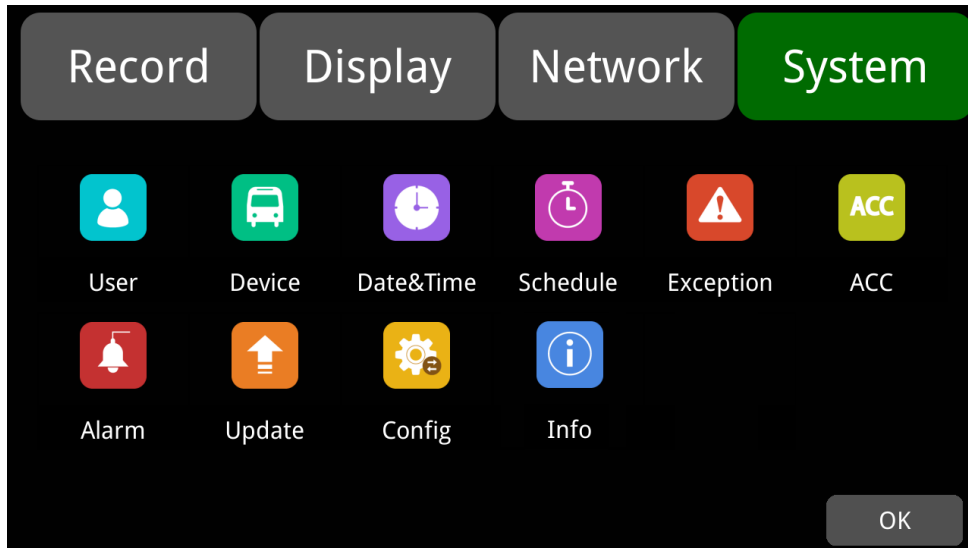
WLAN: WLAN ON/OFF status.

RSSI: WLAN signal strength.

IP: WLAN IP address.

Status: WLAN connection status.

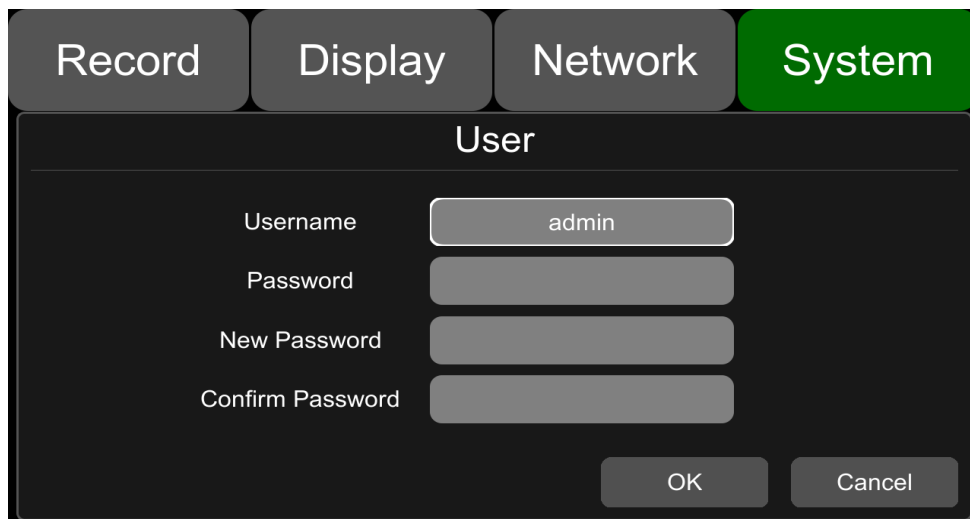
11. System



11.1 Log in setting



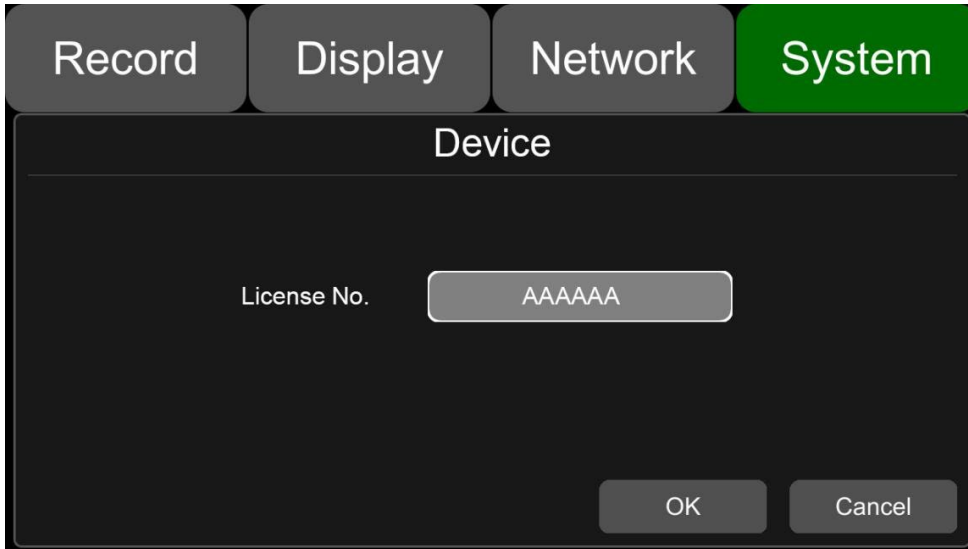
Set user name and password for entering the menu. The initial password is 123.



11.2 License Plate Number



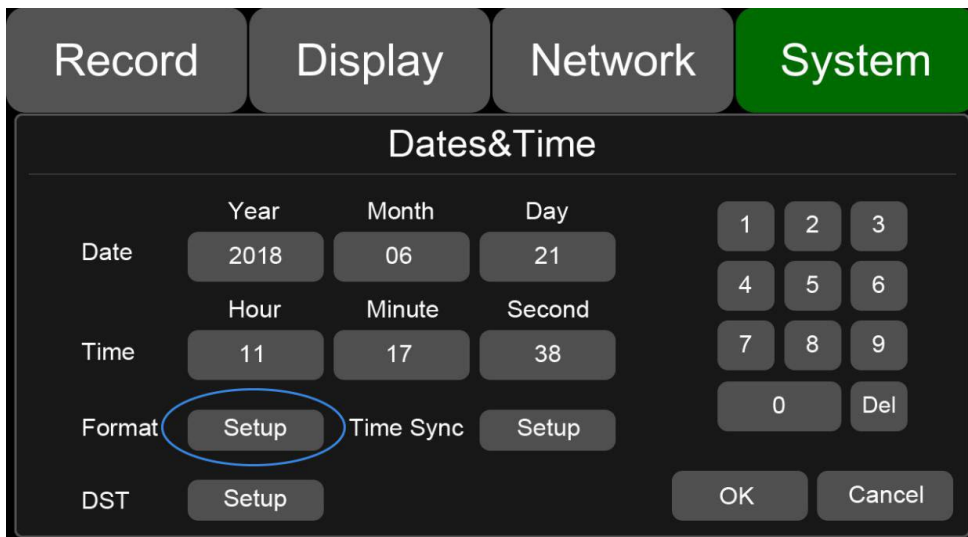
License No.: Input license plate number. Default setting is as below.

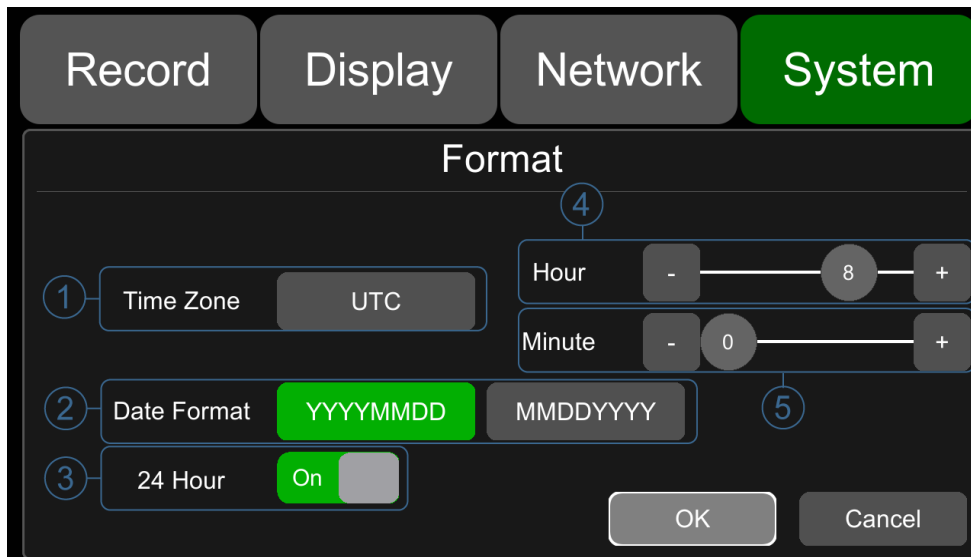


11.3 System Time



Format Setup: system time format setup.



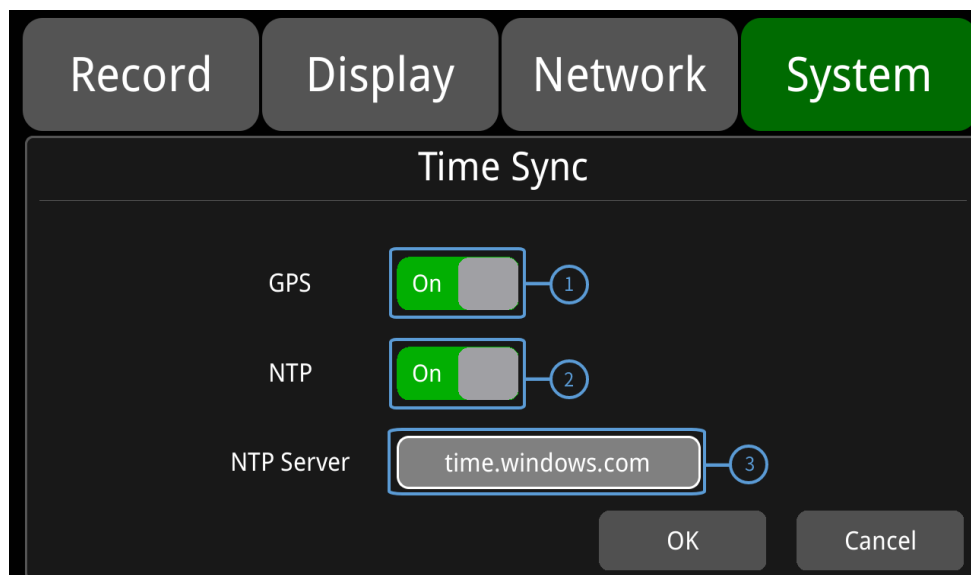


“Format” default configuration are shown above.

Go to “System -> Date & Time -> Format -> Setup” page.

- ① **Time Zone:** Time zone setting.
- ② **Date Format:** Date format setting.
- ③ **24 Hour:** If it is ON, time will be displayed in 24-hour format. If OFF, 12-hour format.
- ④ & ⑤ **Hour & Minute:** Time zone setting is accurate to minute.

| Hour & Minute | Min. | Max. | Default |
|---------------|------|------|---------|
| Hour | -12 | 14 | 8 |
| Minute | 0 | 59 | 0 |



“Time Sync” default configuration is as shown above.

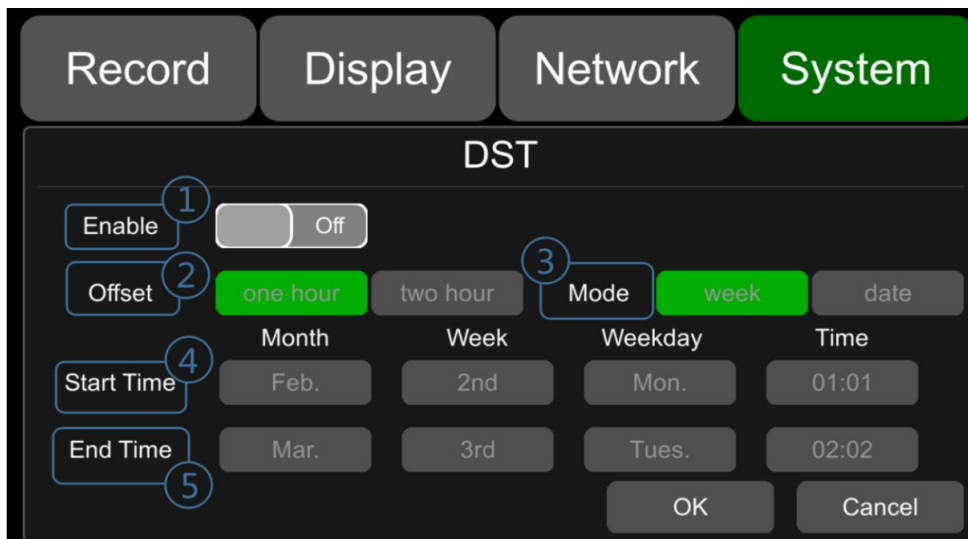
Time Sync Setup:

Go to “System -> Date &Time ->Time Sync->Setup” page.

- ① **GPS:** Set GPS to ON/OFF.
- ② **NTP:** Set NTP to ON/OFF.
- ③ **NTP Server:** Show the URL of the NTP Server.

| Application scene | Usage |
|-----------------------|--|
| GPS: OFF and NTP: OFF | Set the time zone and daylight saving time (DST) first, then set the date and time |
| GPS: ON or NTP: ON | Time zone and daylight saving time (DST) must be set, no need to set date and time |

Note: when “Time Sync” -> “GPS” or “Time Sync” -> “NTP” is ON, the time zone and daylight saving time must be set; if the time zone is not set, GPS and NTP will change the system time to the default East 8 zone time, which might cause incorrect device time.



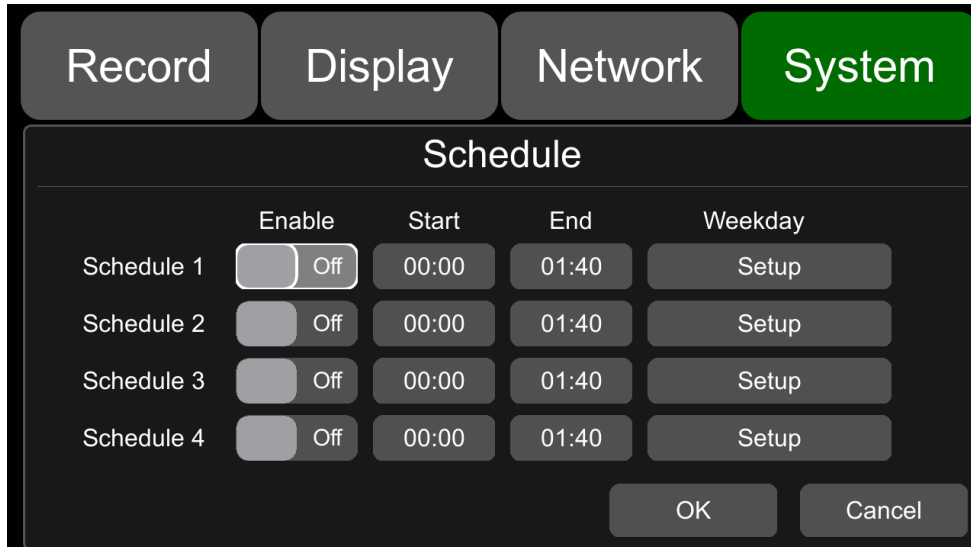
“DST” default configuration as shown above.

Go to “System -> Date &Time -> DST-Setup” page.

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

11.4 Scheduled Recording





The default configuration is shown above.

Enable: Set scheduled recording ON/OFF.

Start: Set start time of scheduled recording.

End: Set end time of scheduled recording.

Weekday: Set scheduled recording by weekdays. Select the weekdays to schedule recording.

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

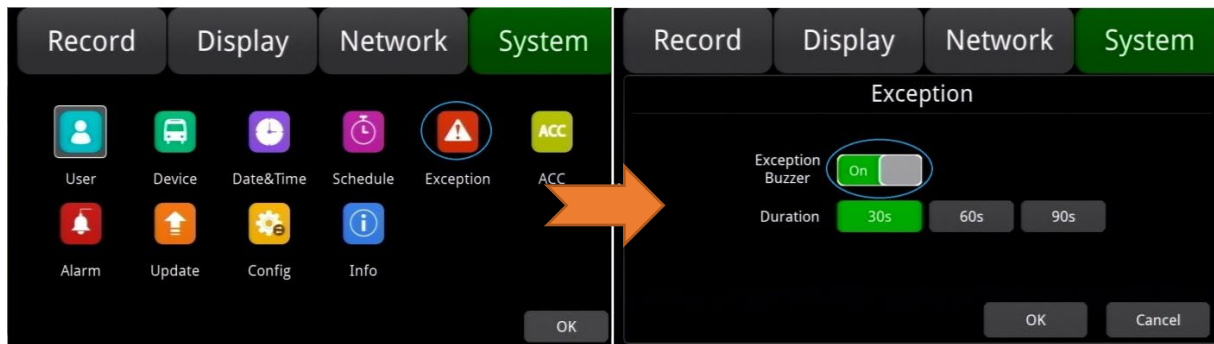


It can be set to examine the recording status of the monitor.

If the monitor does not generate normal recording videos, the buzzer will issue an alarm. For stopping the alarm, please check whether the monitor is recording.

Buzzer alarm function works as below.

- The buzzer issues a prolonged alarm sound for all types of alarm recordings.
- If you do not need the buzzer alarm, you can go to "System - Exceptions" page and set the buzzer from on to off. Please note that when the buzzer is set to off, no buzzer will sound for all event recordings.

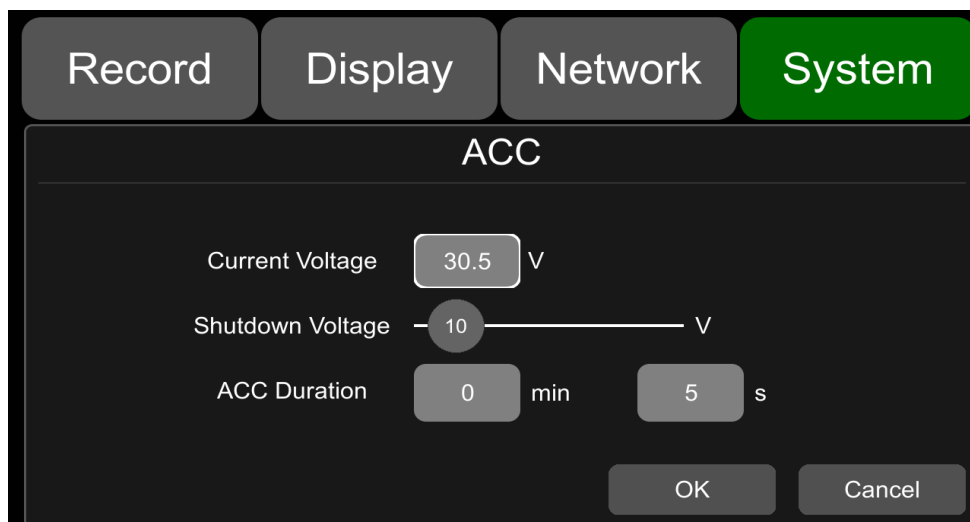


Different beep modes represent different working states, as shown below:

If the buzzer beeps intermittently, it indicates that the monitor is not recording.

- (1) Without SD card: one long beep+ two short beeps;
- (2) SD card file system bug: one long beep+ three short beeps;
- (3) When the SD card is normal, the recording file is full, and the recording overlay is not opened: two short beeps+ one short beep;
- (4) No camera input: two short beeps+ two short beeps;
- (5) When the SD card is normal but the monitor is not recording: two short beeps+ three short beeps.

11.6 ACC



The default configuration of “Shutdown Voltage” and “ACC Duration” is shown above.

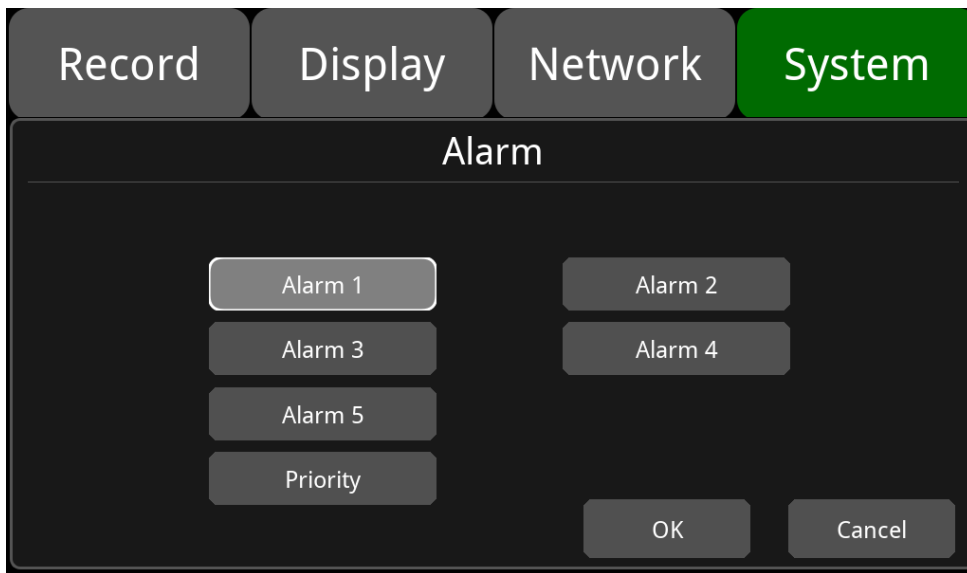
Current voltage: Working voltage of the monitor.

Shutdown voltage: When the current or voltage is lower than the shutdown voltage, the device will shut down automatically.

ACC Duration: The device will continue recording for some time after ACC is disconnected. ACC duration can be set to 5s to 60 min.

| ACC | Min. | Max. | Default |
|---------------------|------|------|---------|
| Shutdown Voltage(V) | 9 | 24 | 10 |
| ACC Duration(s) | 5 | 3600 | 5 |

11.7 Alarm



Alarm 1~ Alarm 5: Customized alarm recording.

Priority: Set priorities for Alarm 1 to Alarm 5.

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

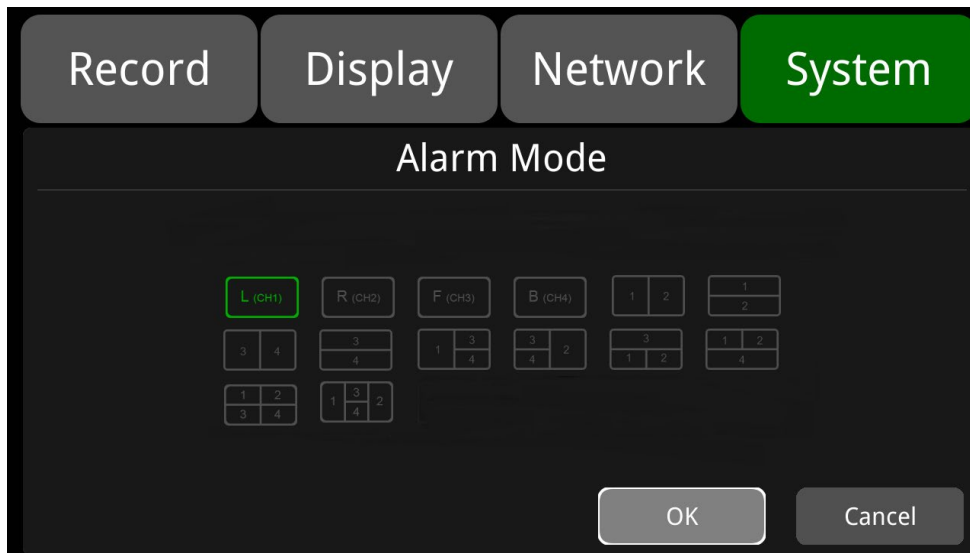


“Alarm 1” default configuration are shown above.

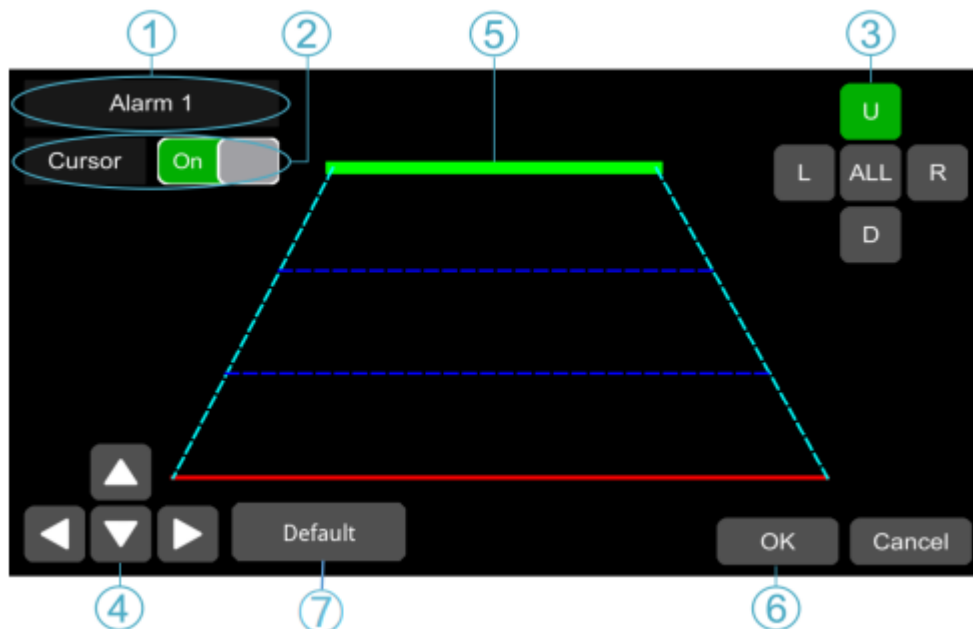
- **Trigger Level:** There are 3 options of Trigger Level. The options “Low” and “High” are for turning on alarm function. “Low” is generally used for debugging while “High” is set to enable

alarm function for on-road use. "Off" is to disable trigger alarm function.

- **Output Duration:** "Display" "Cursor" "Alarm Out" effect duration. Output Duration time is optional: 0s, 5s, 10s, 30s, 60s, 5min, 10min, 30min, 60min, Always.
- **Alarm Out-Buzzer:** Switch ON or OFF of the Alarm Out-Buzzer. Alarm time is 5 seconds by default.
- **Alarm Out-Output1:** When it is set ON, then 12V level output would come from the alarm wire of Output 1.
- **Alarm 1 Rec.:** Alarm 1 event recording switch, the recording duration is set in [System] -> [Record] -> [Event Duration].
- **Display:** When the alarm is triggered, the selected split mode will be displayed; the available split modes are shown in the figure below.



- **Cursor:** It is "OFF" by default. The picture below shows the "On" state.



- ① Alarm type.

- ② Touch to turn on/off the cursor.
- ③ Line selecting: Line U (up), Line D (down), Line L (left), Line R (right) and ALL. Green means being selected. Remote control operation is available.
- ④ Click the 4 directions (Up, Down, Left and Right) to adjust the shape of the cursor. The movements only affect the selected lines.
- ⑤ Lines of cursor: The selected line will thicken for threefold. The two lines in the middle will not.
- ⑥ Touch "OK" to save the settings and exit. Cancel to exit without saving any settings.
- ⑦ Click "Default" to turn back original state.

- **Priority:** The default configuration is shown below.



: Touch to decrease trigger priority. The bigger the value, the lower the priority.



: Touch to increase trigger priority. The smaller the value, the higher the priority.

- Alarms with higher priority will be triggered first.
- 1 stands for the highest priority, and 5 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 be recorded first. After A finishes the recording, if B is still being triggered, B will be recorded then. If B is no longer being triggered, it will not be recorded.
- If alarm B is triggered and recorded, and then alarm A, whose priority is higher than B is triggered, alarm B recording will not stop.

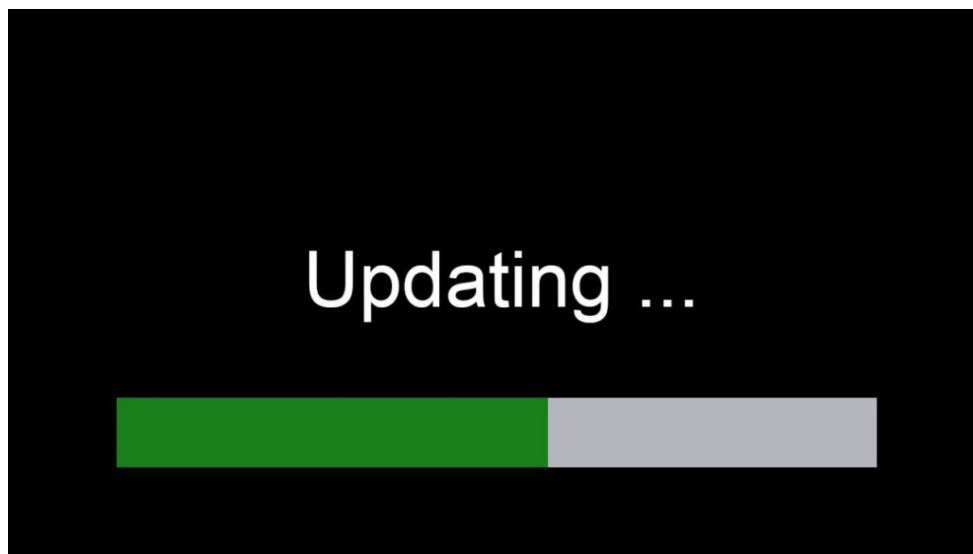
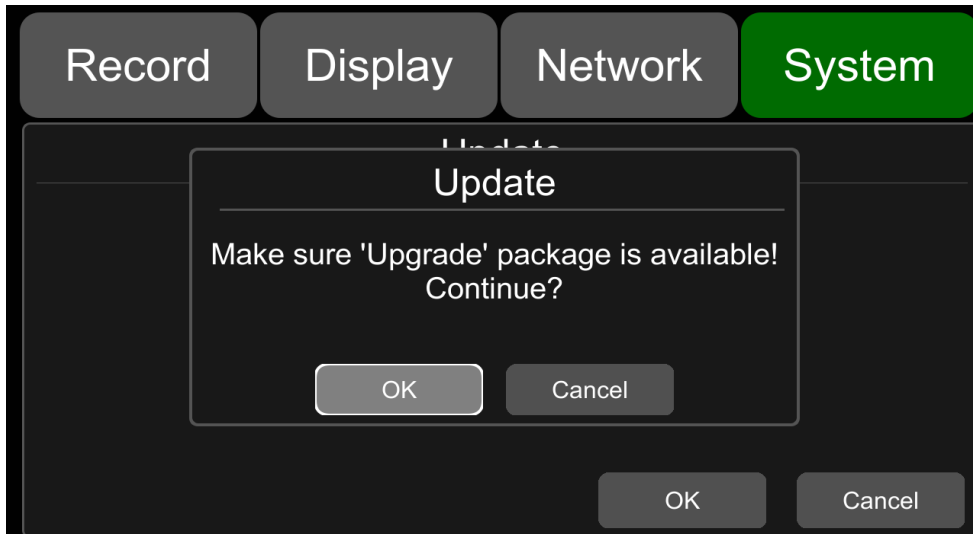
11.8 Update



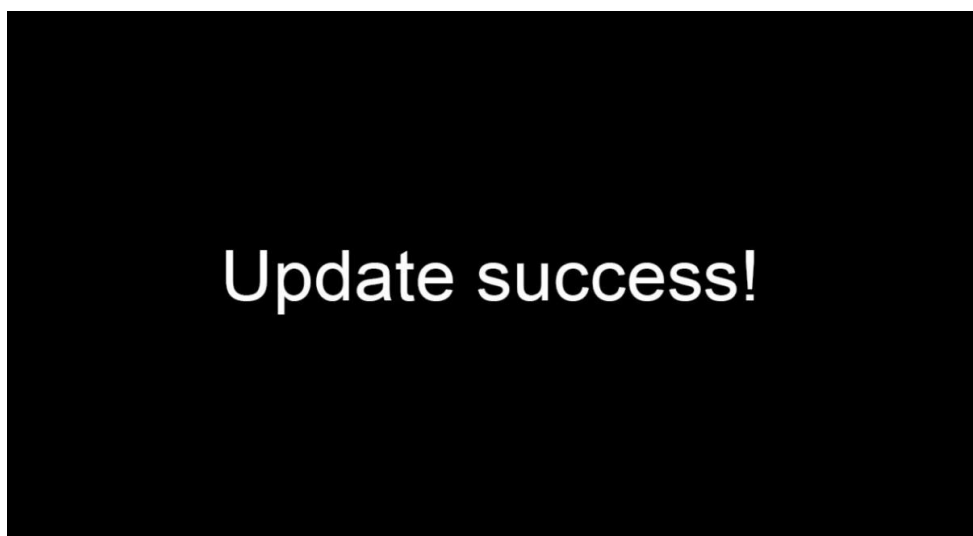
- For single device

Step 1: Copy the files to the SD card/upgrade/packet/local directory, insert the SD card into the monitor.

Step 2: Power off the monitor and reboot it, then it will upgrade automatically. Or go to Menu -> System -> Update -> Software, touch "OK" to confirm the update. Either way can proceed the upgrade process.



Step 3: When “Update success!” is shown on the display, the device will reboot automatically.



Step 4: After rebooting, please check if the version is the same as the one you copy into “upgrade”

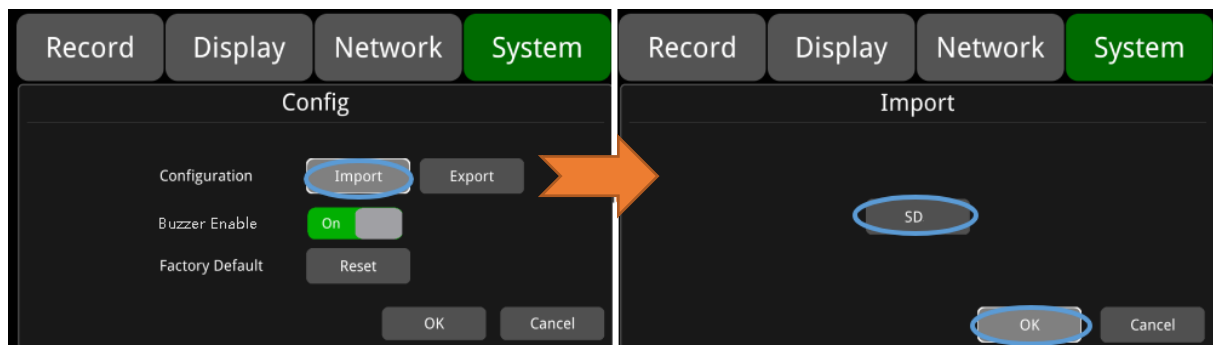
folder. Instruction: Menu -> System -> Info.

Note: After the upgrade is completed, the upgrade package in the SD card/upgrade/package/local directory will be renamed as “old_update_packet”.

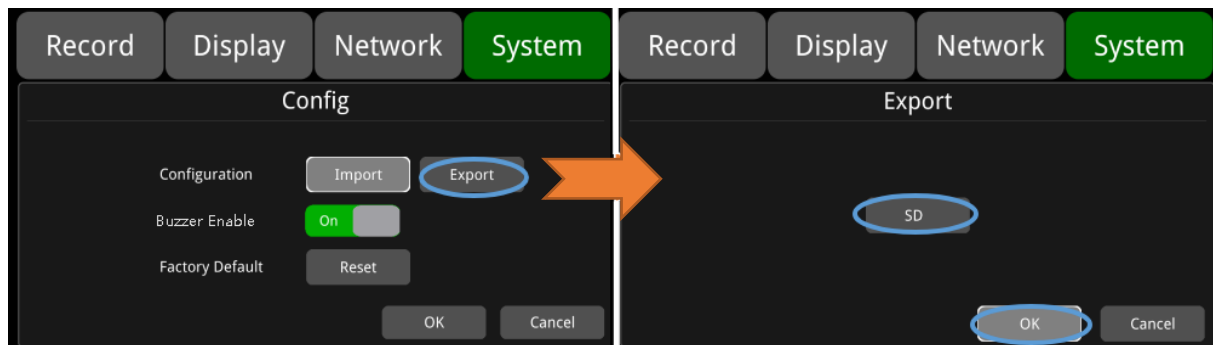
11.9 Configuration



Configuration Import: Import the configuration information from the flash memory device and place the configuration file in the “sd/export_file/config” directory.



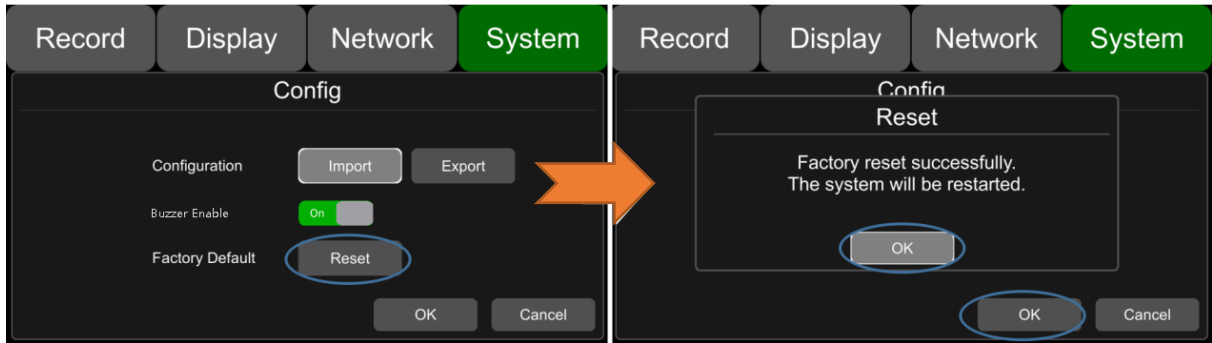
- **Configuration export:** Export configuration information to a flash device.



- **Buzzer Enable:** When turn On, buzzer will alarm when there is touch screen operation and the device is responding the remote control demand.



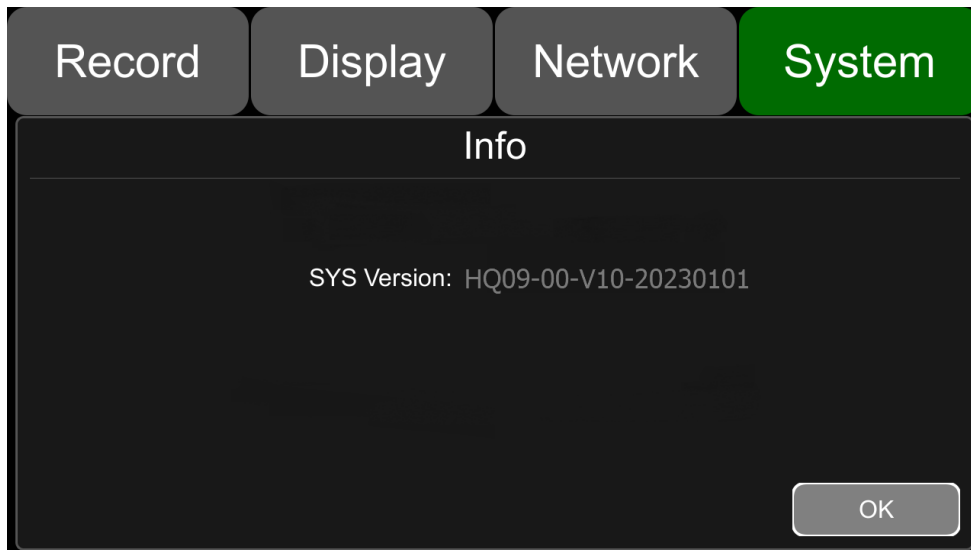
- **Factory Default:** Press “Reset” to restore factory settings.



11.10 System Information



System Information: Soft version.



Appendix: Frequently Asked Questions and Answers

1) The system cannot be turn on?

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

- ① Check the power input: Whether the power cord is connected correctly, whether the ground wire is successfully connected, and whether the power cord fuse is intact.
- ② Check if the voltage of the ACC signal line is greater than 6V.

2) The monitor restarts repeatedly?

Please follow the following steps to check:

- ① Check if the power supply voltage of the monitor is insufficient. If it is lower than the starting voltage of the device, the device will start repeatedly.
- ② Restart the monitor to see if it can function properly this time.

3) Unable to recognize storage device?

- ① Check if the storage device itself is in good condition and ensure that it is installed successfully and in good contact.
- ② Restart the monitor to see if it can function properly this time.

4) Unable to recognize the camera?

- ① Ensure that the camera is intact and connected correctly.
- ② Rewiring the unrecognized camera and the device.
- ③ Restart the monitor to see if it can function properly this time.

5) GPS abnormal?

Check if the GPS antenna is installed correctly.