

# **P1 Integrated Machine Manual**



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# 1 Precautions

Before installation and use, please read the instruction manual carefully so that you can use and protect your machine correctly. The front part of this manual is for precautions and installation and use instructions, please read it first.

## ➤ Precautions

- To protect your rights, please read this manual carefully before installing and using this product.
- This product is a device used in the car. To prevent the risk of short circuit or electric shock, please do not place the machine in the rain or in a humid environment.
- This product is a high-tech equipment, and there is almost no original part that can be repaired by the user. In the event of a malfunction, you must ask a qualified technician to check and repair it, or contact the dealer.

## ➤ Installation Environment

- This equipment uses DC 9 ~ 36V power supply, and the local power supply voltage must be confirmed before use;
- If you do not use the machine for a long time, it is best to completely disconnect the power supply of the video recorder;
- Please choose an appropriate installation position so that air can circulate freely around the machine to prevent the machine from overheating;

The machine should not be installed near heat sources such as radiators, ventilation ducts, or where there is direct sunlight, excessive dust, or mechanical vibration or shock.

# 2 Product Specifications

The 4G all-in-one is a cost-effective and highly scalable all-in-one, which is specially developed for video surveillance and remote monitoring of cars and trains. Developed with high-speed processor and embedded **Linux** platform, built-in active safety algorithm to assist the driver in driving safely, combined with the most advanced video compression/decompression technology in the IT field, TF card as the storage medium, 4G all-round-one machine can achieve 5 channels of 720P audio Video recording and driving information recording function.

**The product specifications of the 4G all-in-one are shown in the table below:**

Features:

## Features: **Power supply:**

- Professional vehicle power supply design 9—36V DC wide voltage input design;
- Various protection circuits such as undervoltage, short circuit, reverse connection, etc., suitable for various car models;
- Support intelligent power management recognition, automatic shutdown at low power, low power consumption when flameout;

## **Data storage:**

- Adopt a special file management mechanism to encrypt data to effectively protect data security;
- Proprietary TF card bad track detection technology not only ensures the continuity of recording, but also prolongs the service life of TF card;
- Built-in super capacitor to avoid data loss due to abnormal power failure;
- Support single card 256GB large capacity TF card

## **Interface transmission:**

- Support GPS/Beidou positioning, high sensitivity, fast positioning;
- Built-in 3G/4G module, support LTE/HSUPA/HSDPA/WCDMA/EVDO

Built-in WIFI module

## **Algorithm:**

- Built-in BSD algorithm;
- Built-in ADAS algorithm;
- Built-in DSM algorithm;

## **Product Specifications:**

| project         | Device parameters       | Performance                                                                   |
|-----------------|-------------------------|-------------------------------------------------------------------------------|
| display         | All-in-one display size | 10.1 inch                                                                     |
|                 | Resolution              | 1024*600                                                                      |
|                 | brightness              | 600 brightness IPS                                                            |
| system          | Main processor          | ARM Cortex A7                                                                 |
|                 | operating system        | Embedded Linux operating system                                               |
|                 | Operating language      | Chinese/English                                                               |
|                 | Operation interface     | Graphical menu operation interface, support touch and voice control operation |
| Audio and video | Video format            | PAL/NTSC                                                                      |
|                 | Compression standard    | MPEG2-TS                                                                      |
|                 | Image Resolution        | 720P /960H/D1/CIF                                                             |
|                 | Playback quality        | 720P                                                                          |
|                 | Combination method      | Multiple combinations                                                         |
|                 | Decoding ability        | 5CH 720P real-time                                                            |
|                 | Screen display          | Support 1, 2, 4, 5 screen display                                             |
|                 | Audio compression       | MP3                                                                           |
|                 | Recording method        | Synchronous recording of sound and video                                      |
| Recording and   | Video mode              | Manual, alarm                                                                 |
|                 | Video bitrate           | Full frame 4096Mbps                                                           |

|                  |                             |                                                                   |
|------------------|-----------------------------|-------------------------------------------------------------------|
| playback         | Audio bit rate              | 8KB/s                                                             |
|                  | Storage medium              | TF card storage                                                   |
|                  | Video query                 | Search by channel and video type                                  |
|                  | Local playback              | Playback by file                                                  |
| software upgrade | Upgrade mode                | Manual upgrade, automatic upgrade, remote upgrade                 |
|                  | Upgrade method              | TF card or remote upgrade                                         |
| interface        | Audio and video input       | 5-way aviation head interface                                     |
|                  | Alarm input                 | 3 level signal inputs                                             |
|                  | Alarm Output                | 1 alarm output                                                    |
|                  | Ignition input              | 1 channel ACC signal                                              |
|                  | Serial port                 | 2 232 ports                                                       |
| extensions       | GPS/BD                      | GPS or Beidou positioning                                         |
|                  | 3G/4G                       | Support CDMA/EVDO/GPRS/WCDMA/FDD LTE/TDD LTE                      |
|                  | WIFI                        | Support 2.4G WIFI                                                 |
| other            | power input                 | DC: 9V~36V                                                        |
|                  | Power consumption           | Standby 3mA<br>Maximum power consumption 18W @12V 1.5A @24V 0.75A |
|                  | Operating temperature       | -20 --- 70℃                                                       |
|                  | Compressed storage capacity | 720P 500MB/hour/channel<br>D1 250MB/hour/channel                  |

表1: 4G一体机 产品规格列表

## 3 Main Menu

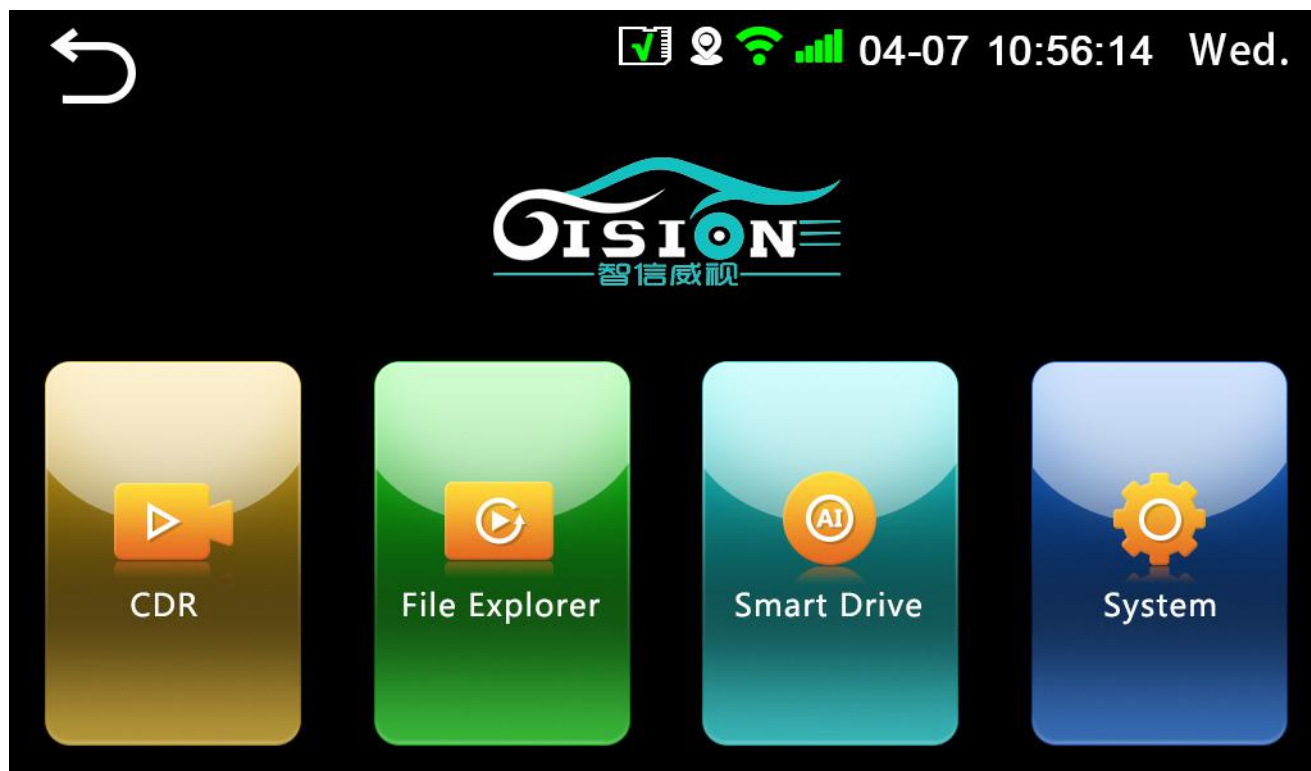


Figure 1 Menu home page interface

The functions corresponding to each menu item are defined as follows:

<Video Surveillance>: Watch real-time video, image capture, view network status information, set up split-screen display;

<Video playback>: Play back the video, view the video files and captured pictures and related operations;

<Intelligent Driving>: enable, calibrate and set ADAS, DMS, and BSD functions;

<System Settings>: System function settings.

### 3.1 Video Surveillance

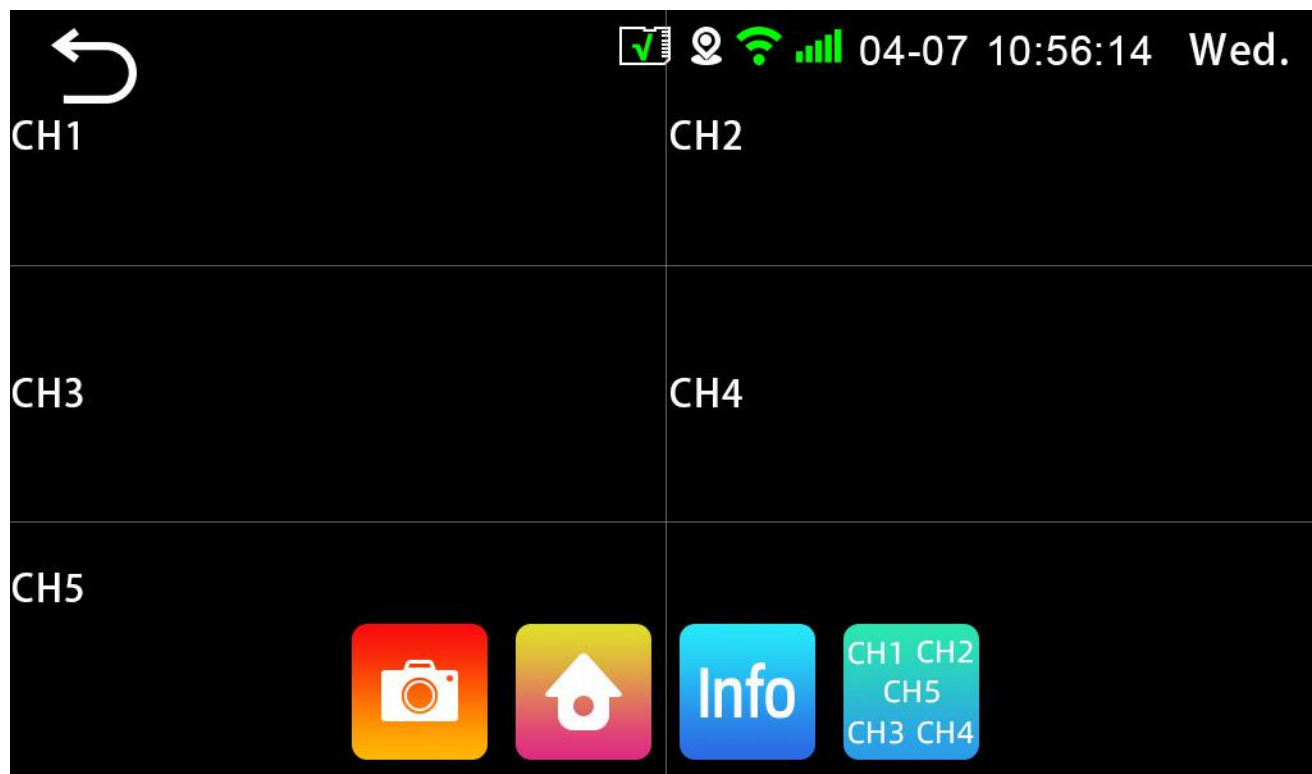


figure 2 Video surveillance interface

- 〈Image capture〉  One-click image capture;
- 〈Menu Home〉  Back to the main menu;
- 〈Info〉:  View status information such as IP address, 4G network, location, wireless network, etc;
- 〈Split screen display〉  Set the video screen split screen display.

### 3.1.1 Status Information

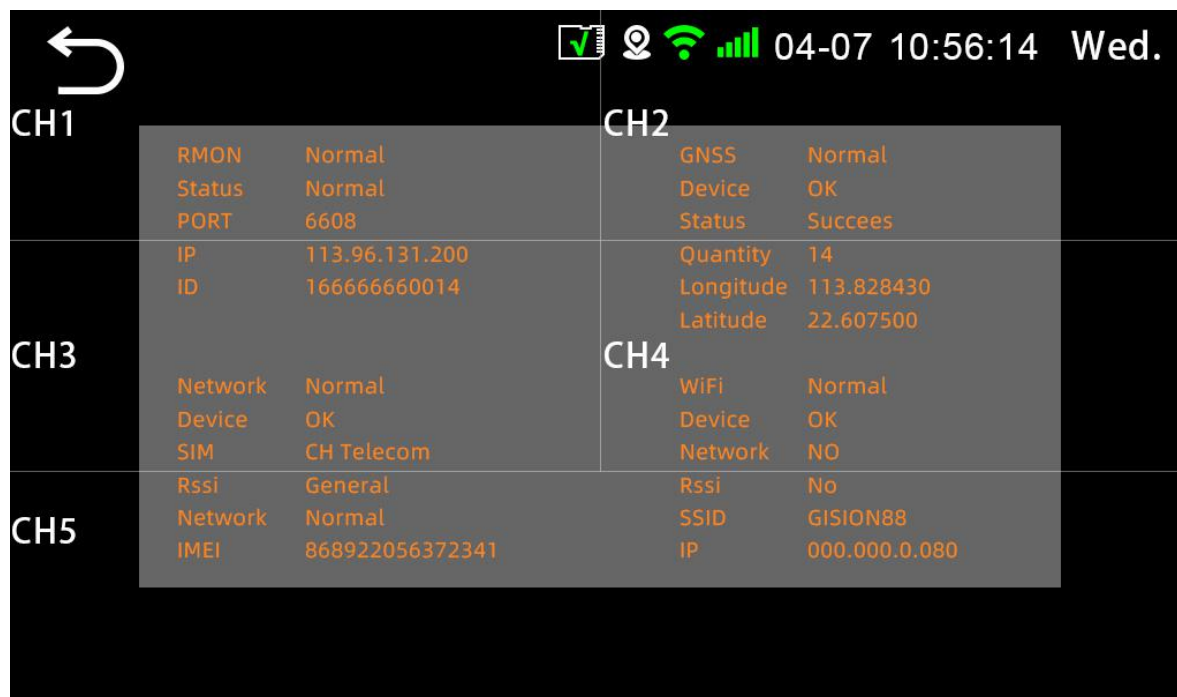


Figure 3 Info status information interface

### 3.1.2 Split Screen Display settings

Five channel display

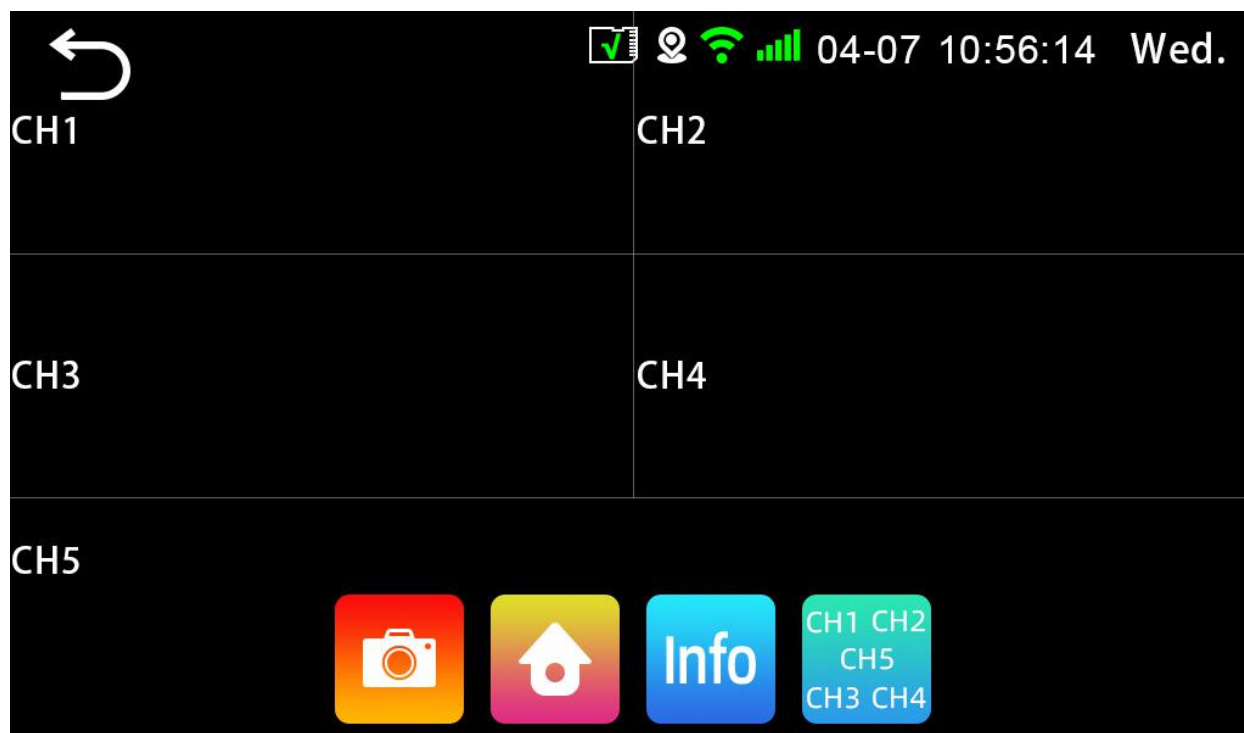


Figure 4 Five-way display interface

Four-channel display

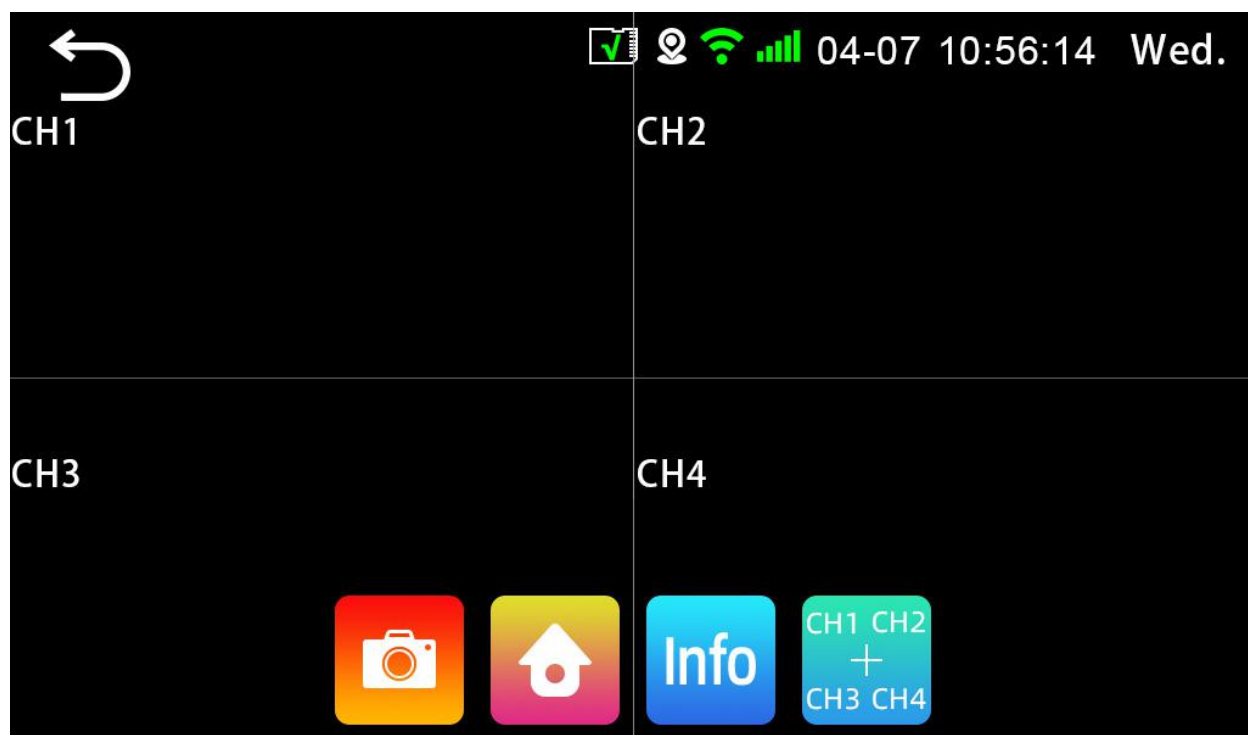


Figure 5 Four-way display interface

## Two channel display

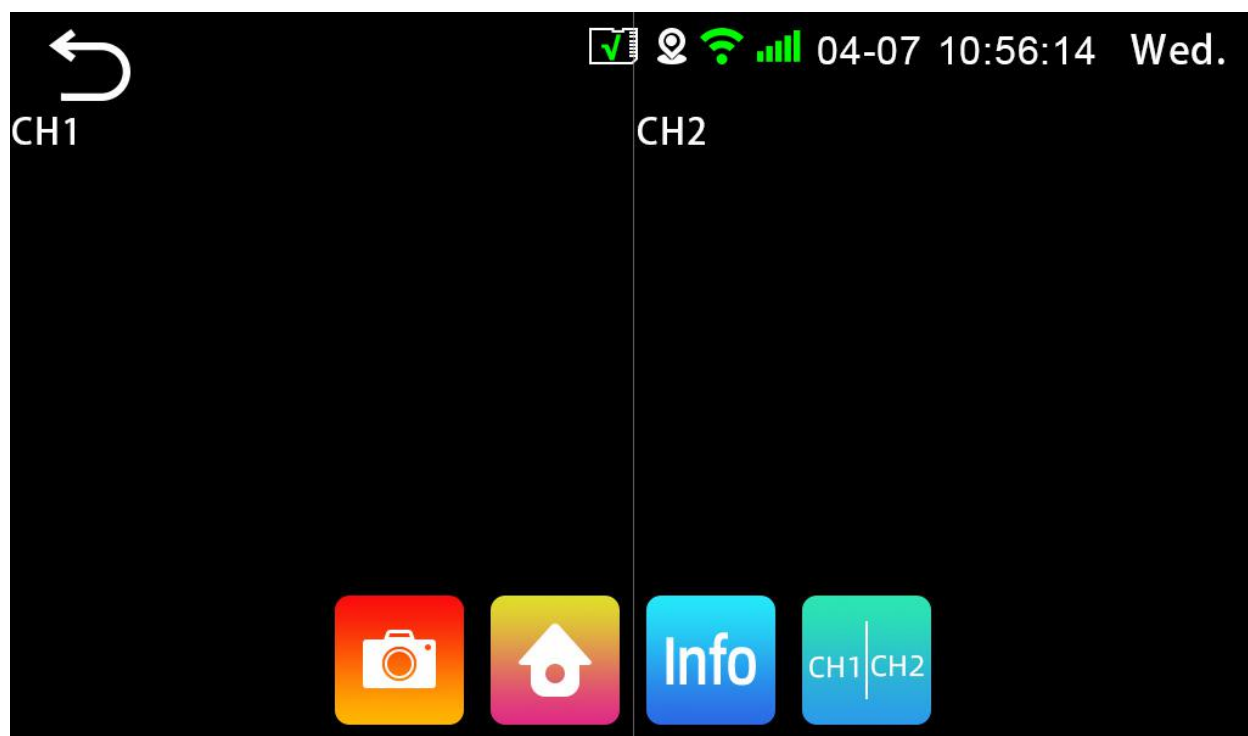


Figure 6 Two-way display interface

## 3.2 Video Playback

### 3.2.1Video

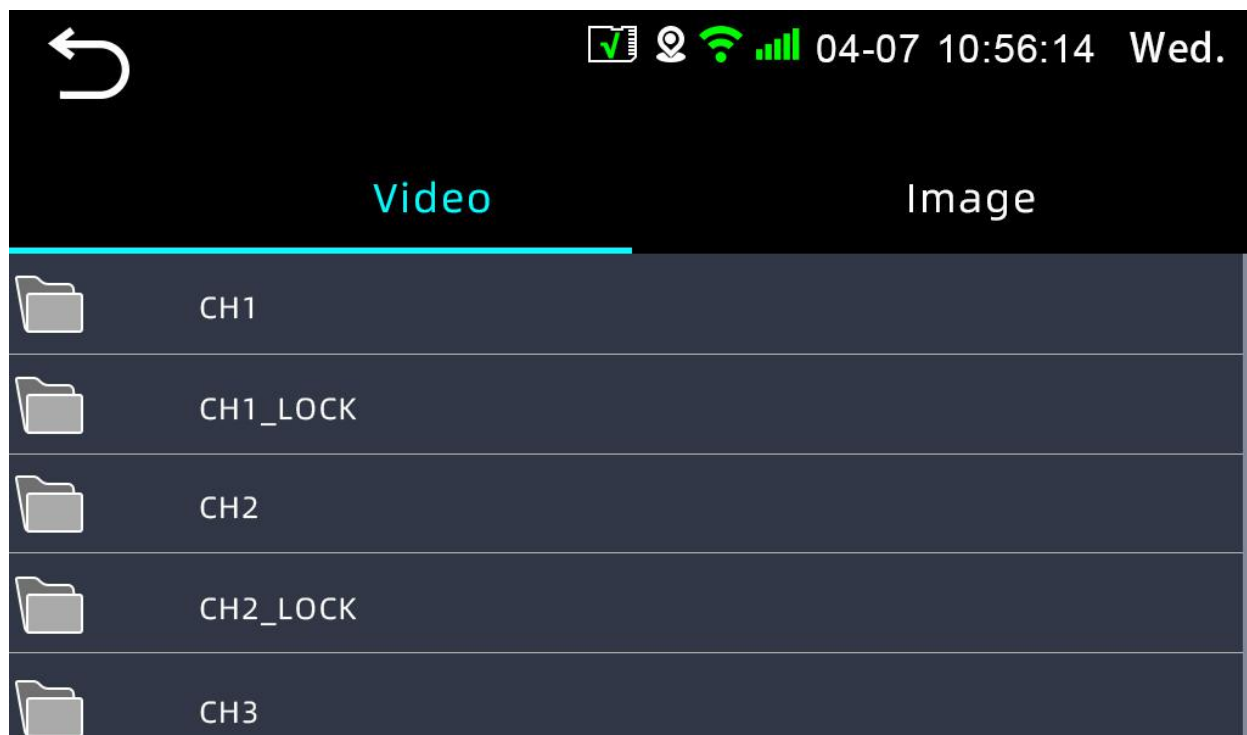


Figure 7 Video interface

- 〈CH1 folder〉: Store 1 channel video file;
- 〈CH1\_LOCK folder〉: Store 1 channel locked video file;
- 〈CH2 folder〉: Store 2 channel video files;
- 〈CH2\_LOCK folder〉: Store 2 channels of locked video files;
- 〈CH3 folder〉: Store 3 channel video files;
- 〈CH3\_LOCK folder〉: Store 3 channels of locked video files;
- 〈CH4 folder〉: Store 4 channel video files;
- 〈CH4\_LOCK folder〉: Store 4 channels of locked video files;
- 〈CH5 folder〉: Store 5 channel video files;
- 〈CH5\_LOCK folder〉: Store 5 channels of locked video files。

### 3.2.1.1 Lock/delete recording files

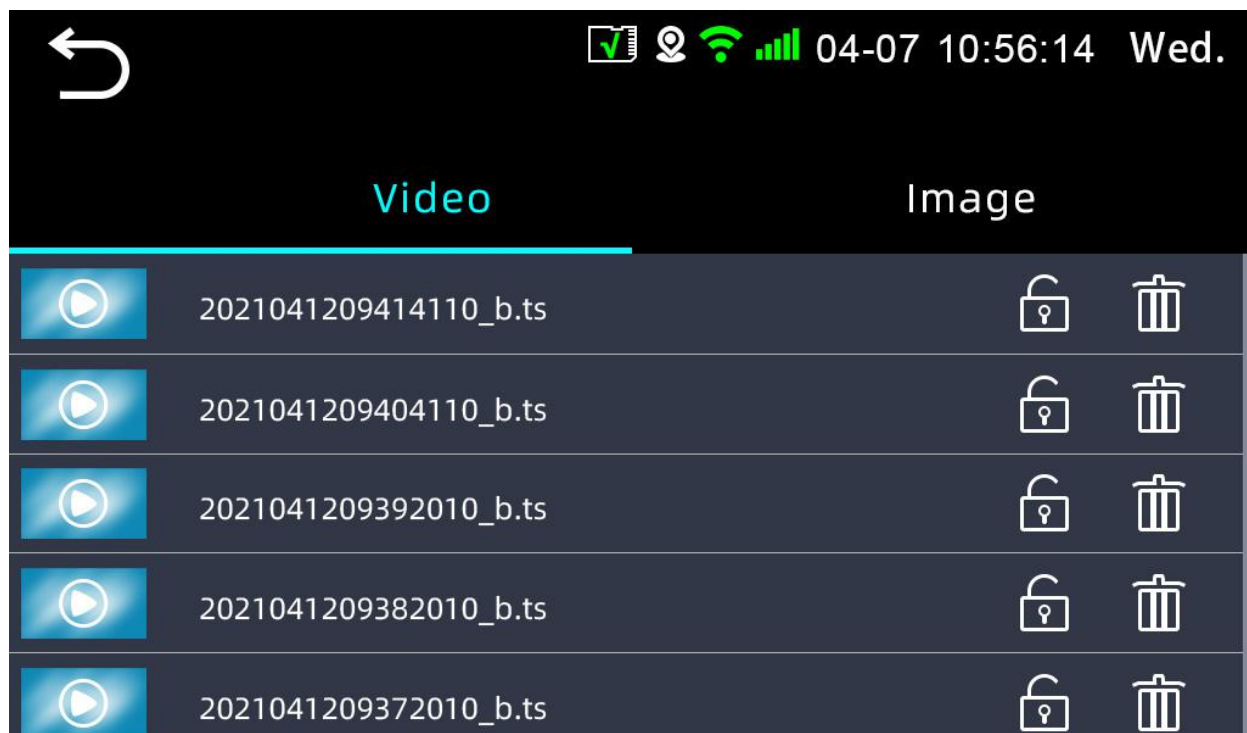


Figure 7 Lock and delete video file interface

- 〈Lock file〉:  Indicates that the file is not locked, click the icon to lock the selected video file.
- 〈Delete Files〉  Delete the selected video file.

### 3.2.1.2 Unlock recording files

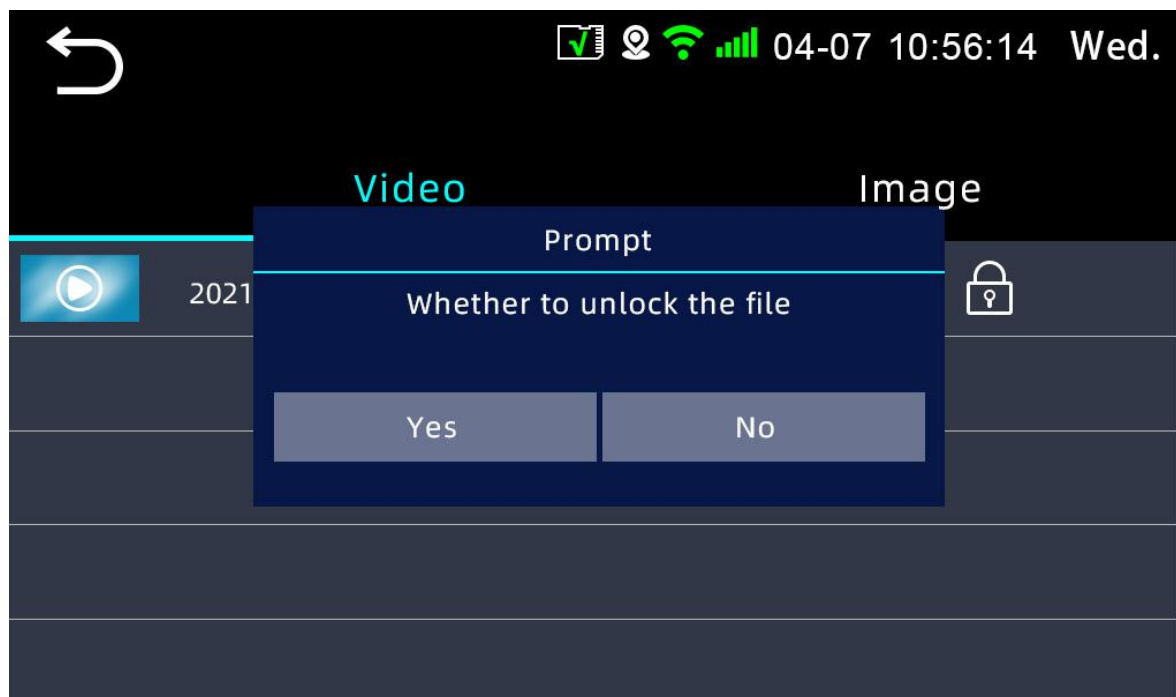


图 7 锁定删除录像文件界面

<Unlock file>  Indicates that the file is locked, click the icon to unlock the selected video file。

### 3.2.2 Image

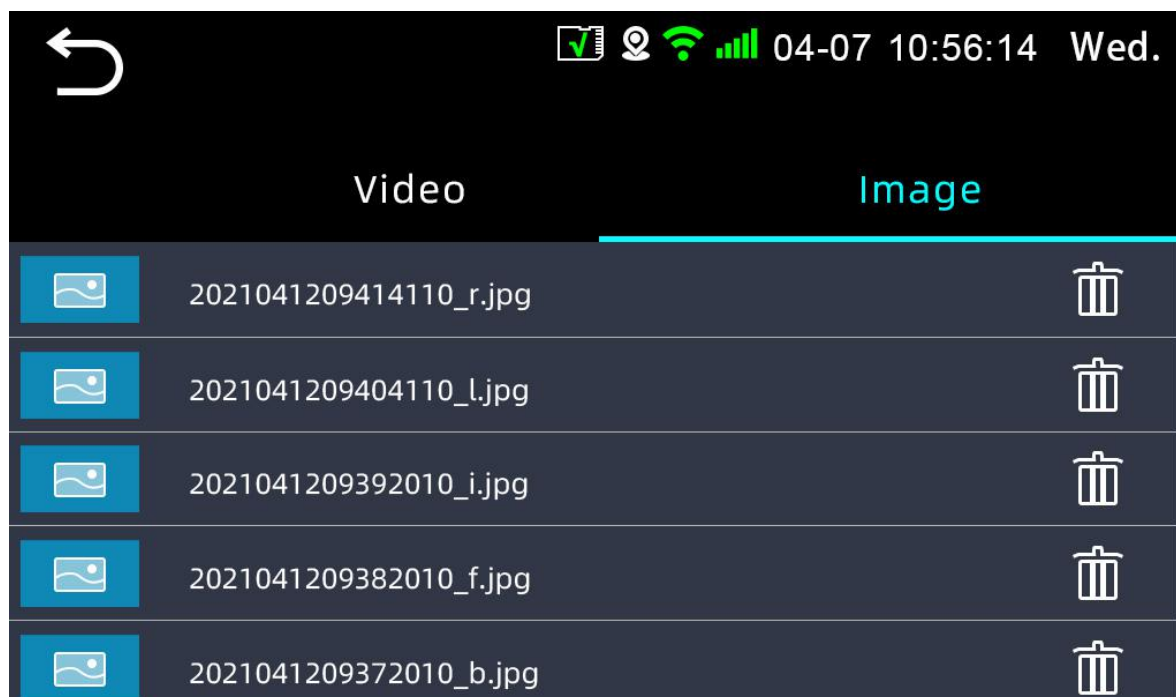


Figure 8 Picture file interface

Click on the picture to view, click  Icon delete picture。

### 3.3 Smart Driving

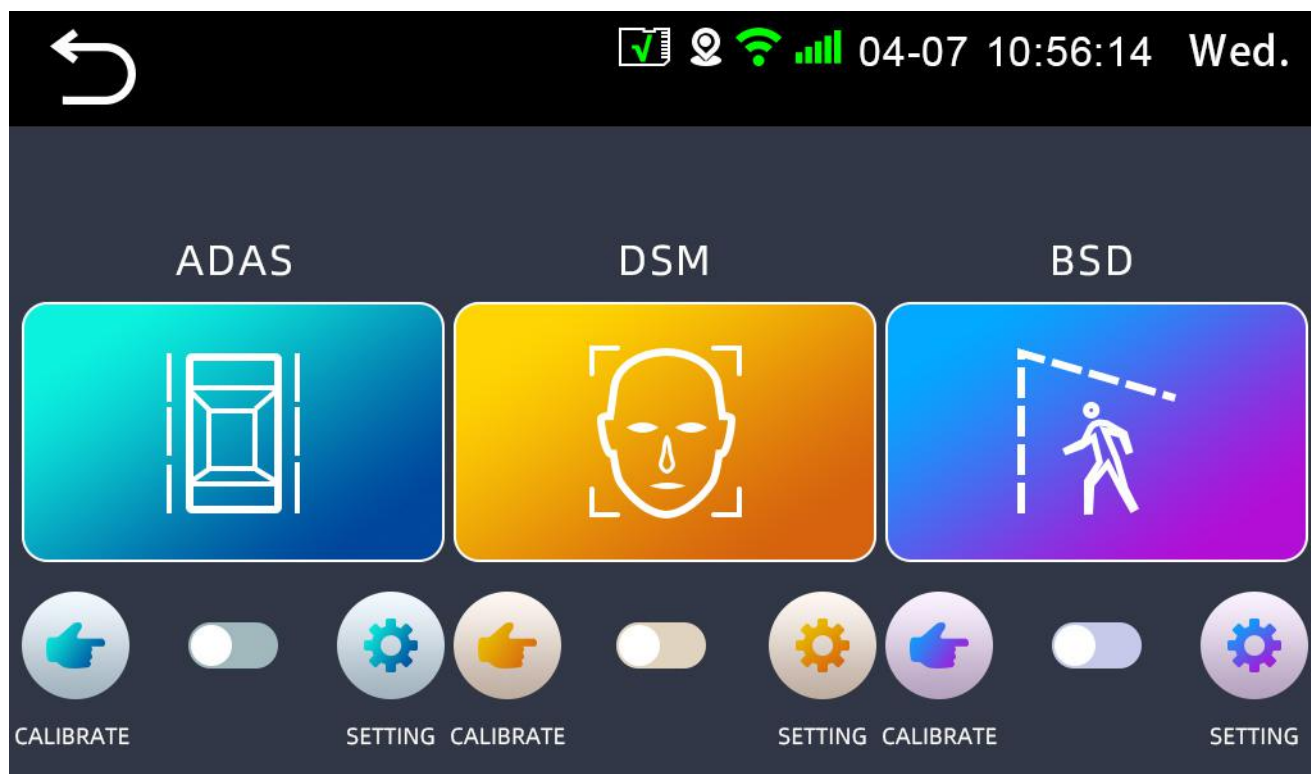


Figure 9 Smart driving interface

The three functions of ADAS, DMS, and BSD can be enabled/disabled, calibrated, and set respectively。

#### 3.3.1 ADAS

##### 3.3.1 .1 ADAS Calibration

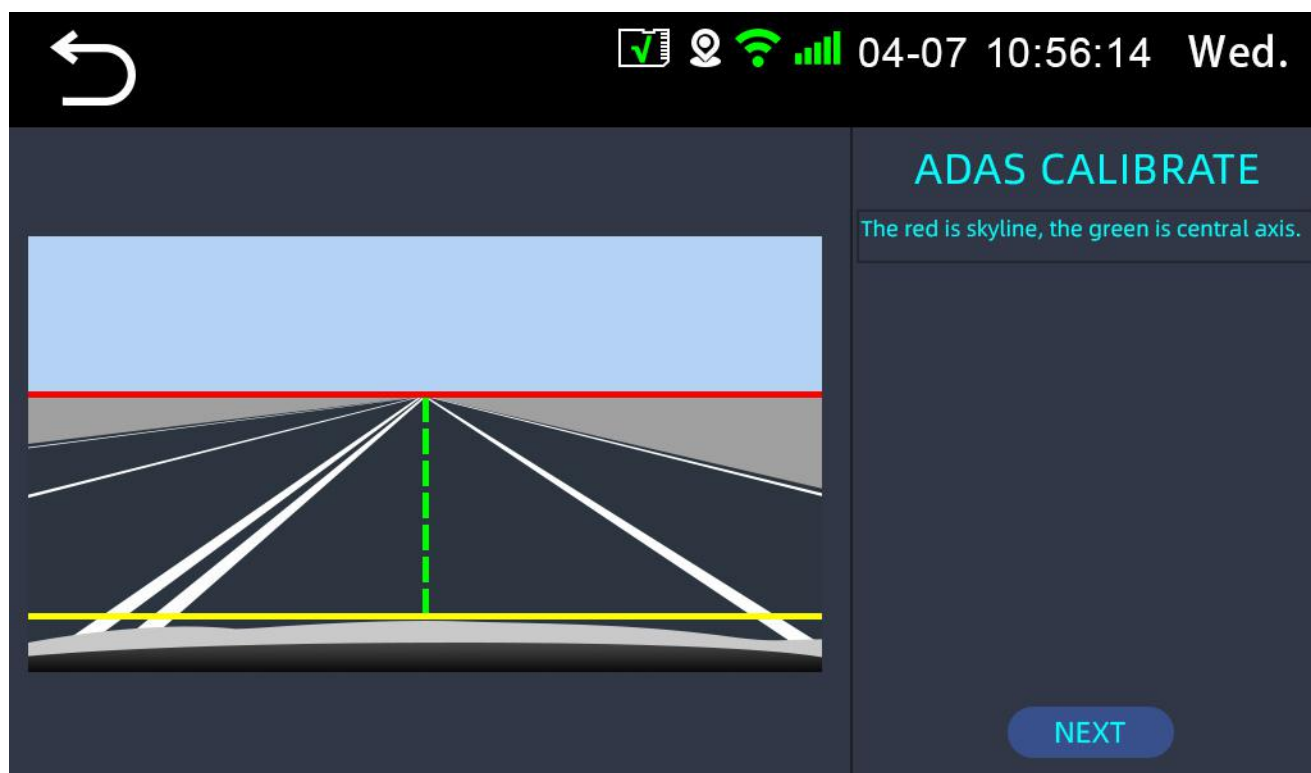


Figure 10 Schematic diagram of ADAS calibration

Here is the schematic diagram of ADAS calibration, click "Next" to proceed with ADAS calibration。

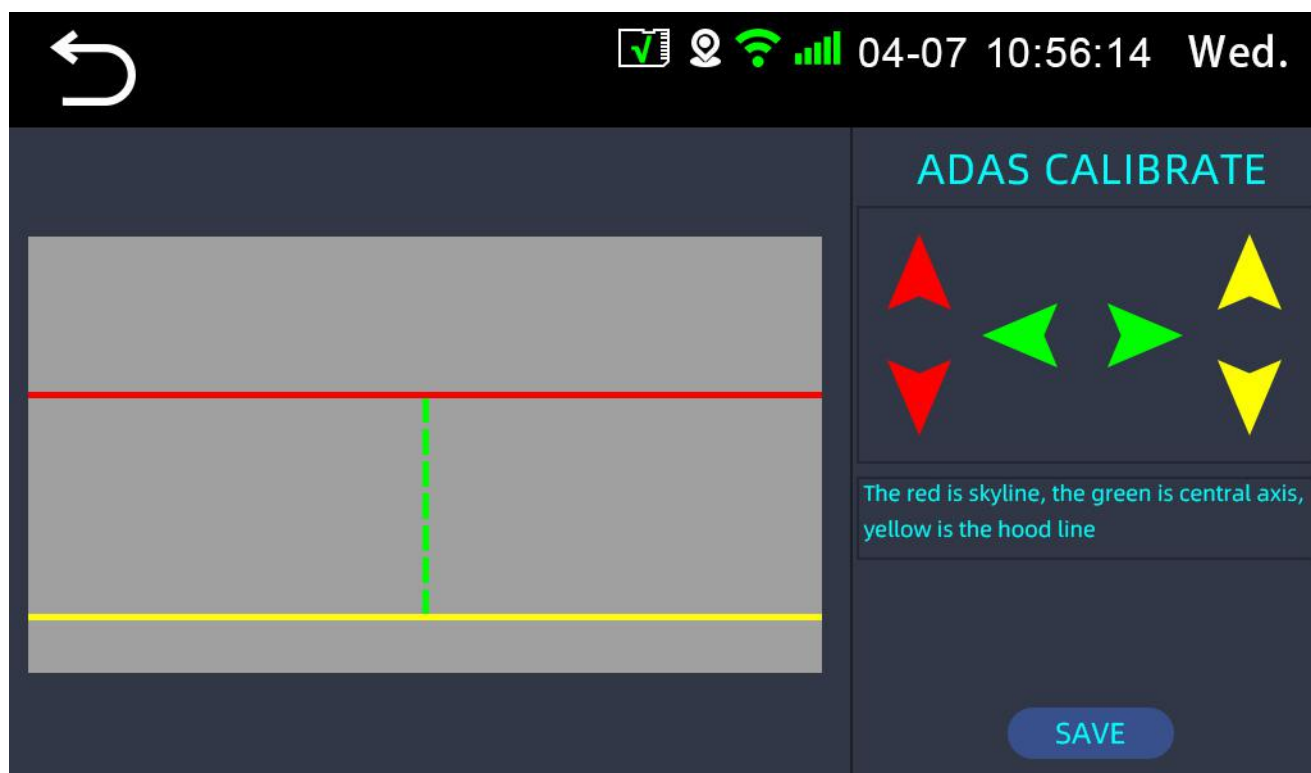


Figure 11 ADAS calibration interface

Refer to the ADAS calibration diagram for calibration: move the red line to the junction of the sky and the earth, move the green line to the intersection of the road and the skyline, and move the yellow line to the junction of the hood and the ground。



The red arrow icon is used to move the red line up and down ,



The green arrow icon is used to move the green line left and right ,



The yellow arrow icon is used to move the yellow line up and down. After the calibration is complete, click the "Save Results" icon。

### 3.3.1 .2 ADAS Settings

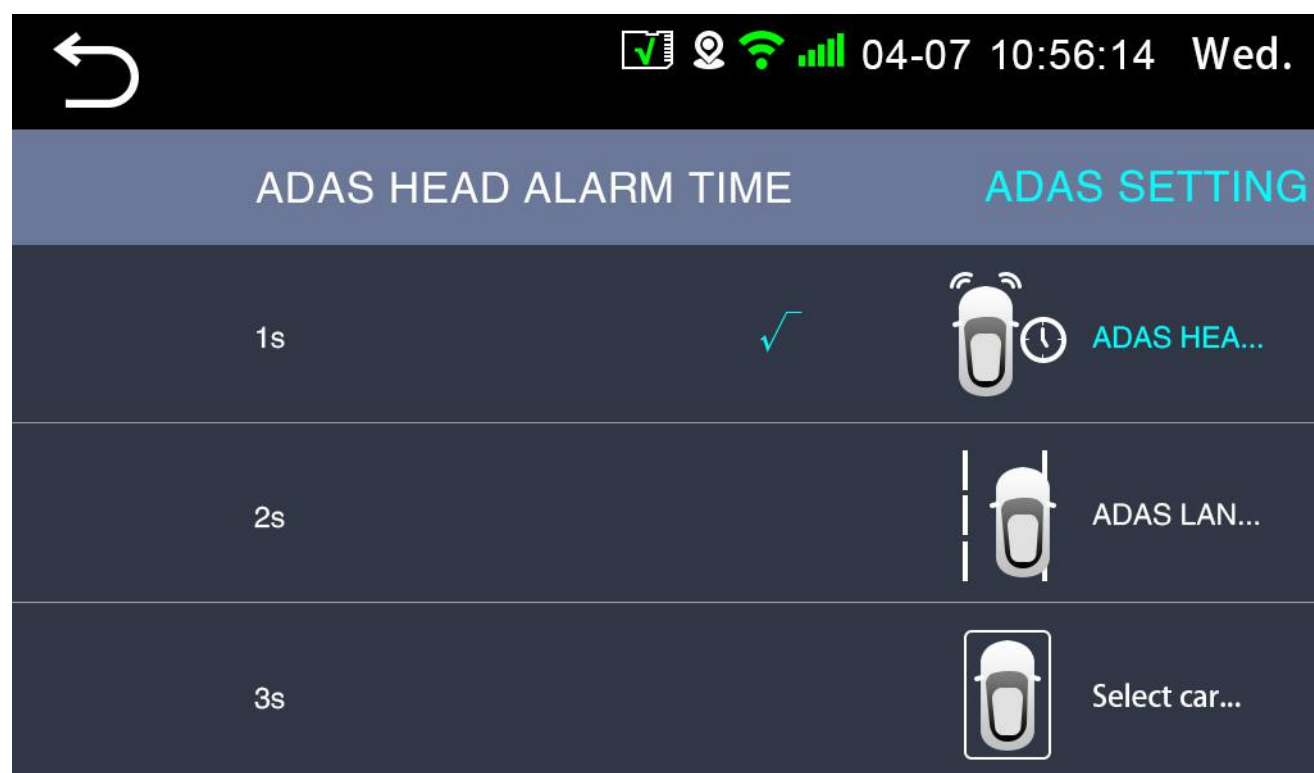


Figure 12 Setting of the alarm time of the preceding vehicle

〈**Alarm time of the preceding vehicle**〉: Can be set to 1 second, 2 seconds or 3 seconds。

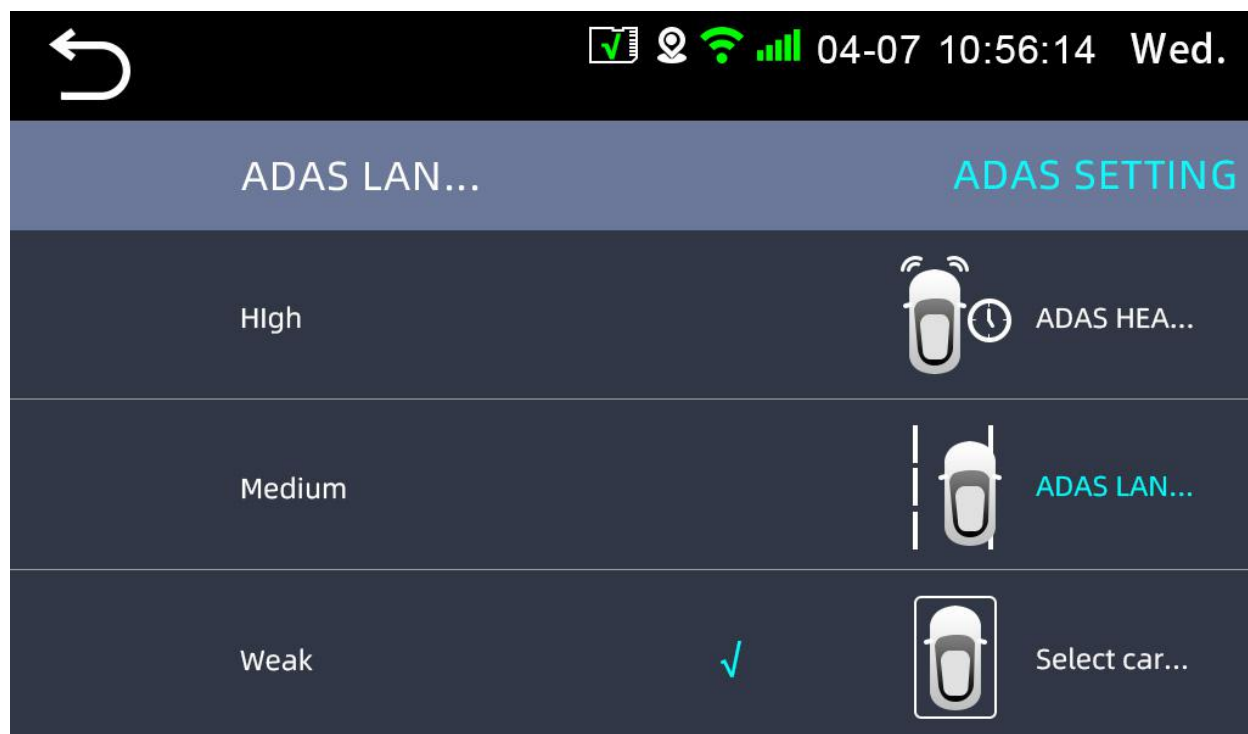


Figure 13 Lane change pressure line alarm setting

〈**Lane change pressure line alarm**〉: Can be set to high, medium and weak。

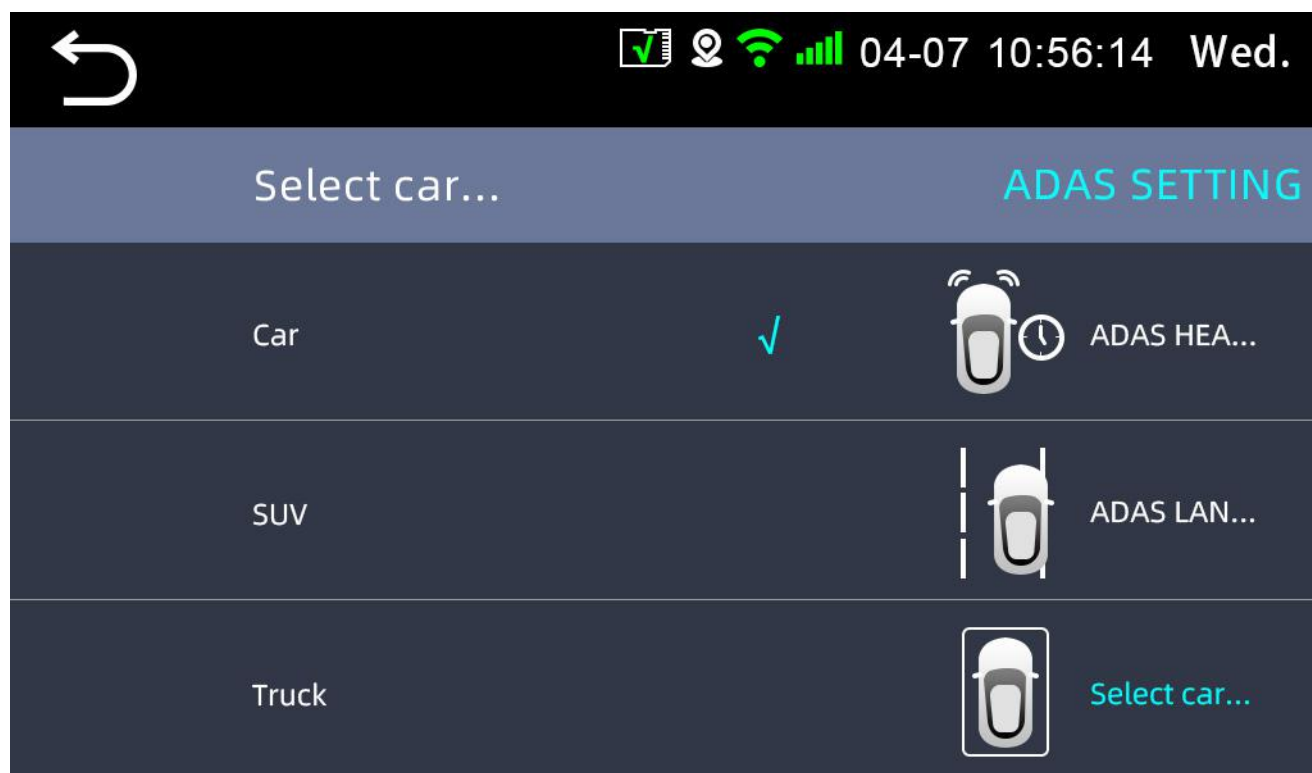


Figure 14 Select car type settings

〈 **Choose a car model** 〉: You can choose from three types of cars, SUVs and trucks。

### 3.3.2 DMS

#### 3.3.2 .1 DMS Calibrate

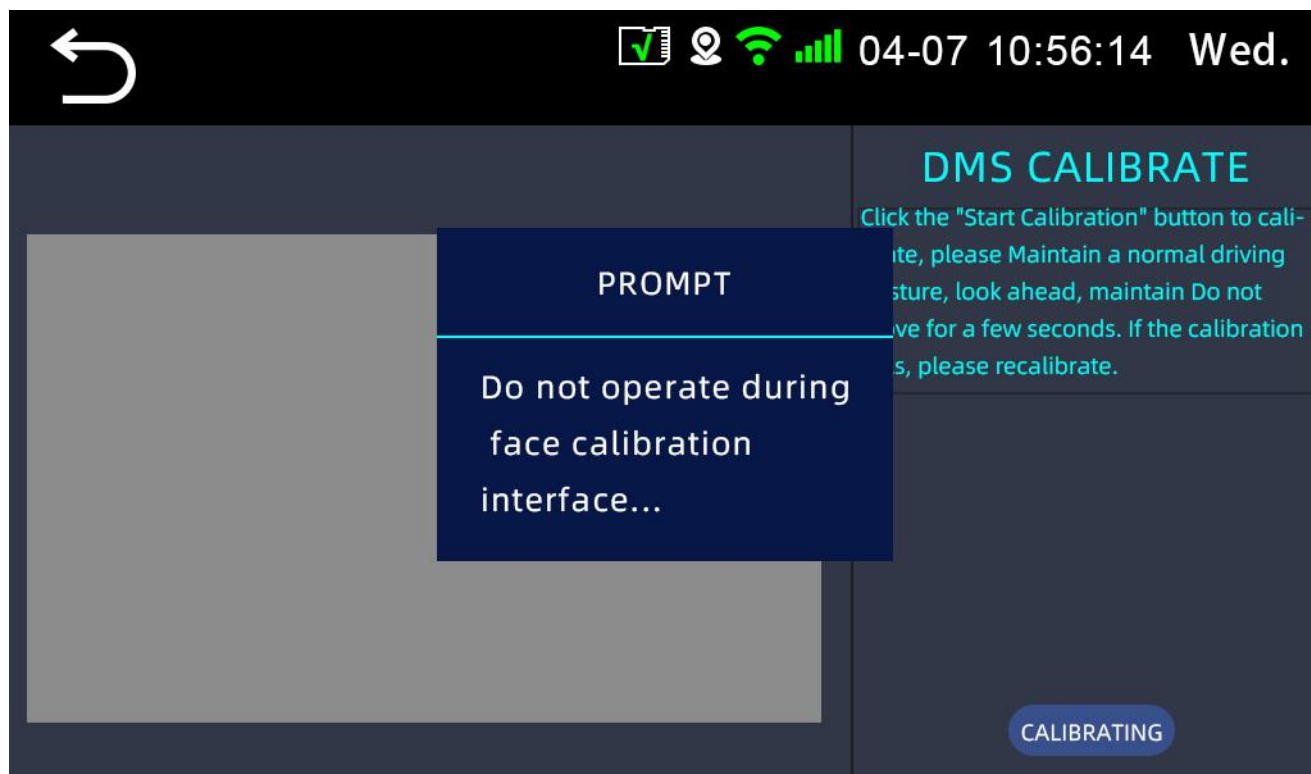


Figure 15 DMS calibration interface

Click the "Start Calibration" button to calibrate. Please keep your normal driving posture, look ahead and keep it still for a few seconds. If the calibration fails, please recalibrate. During the calibration process, please do not operate the interface.

### 3.3.2 .2 DMS Settings

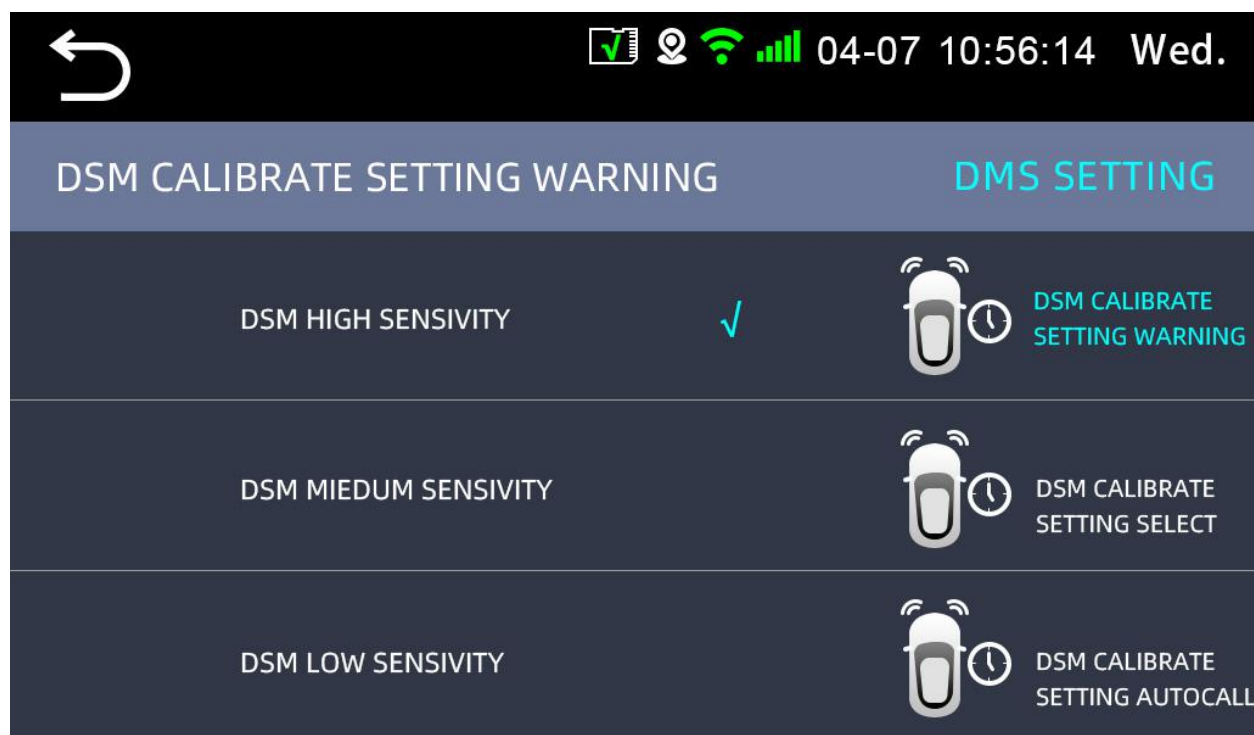


Figure 16 DMS alarm sensitivity setting

〈**DMS alarm sensitivity**〉: Can be set to high sensitivity, medium sensitivity and low sensitivity。



Figure 17 DMS alarm project

〈**DMS alarm project**〉: Contains "drinking water", "calling", "smoking", "yawning", "eyes closed", "looking left and right", "off-post", "camera blocking", "anti-infrared glasses" detection items. Each item can be individually set to enable or disable.

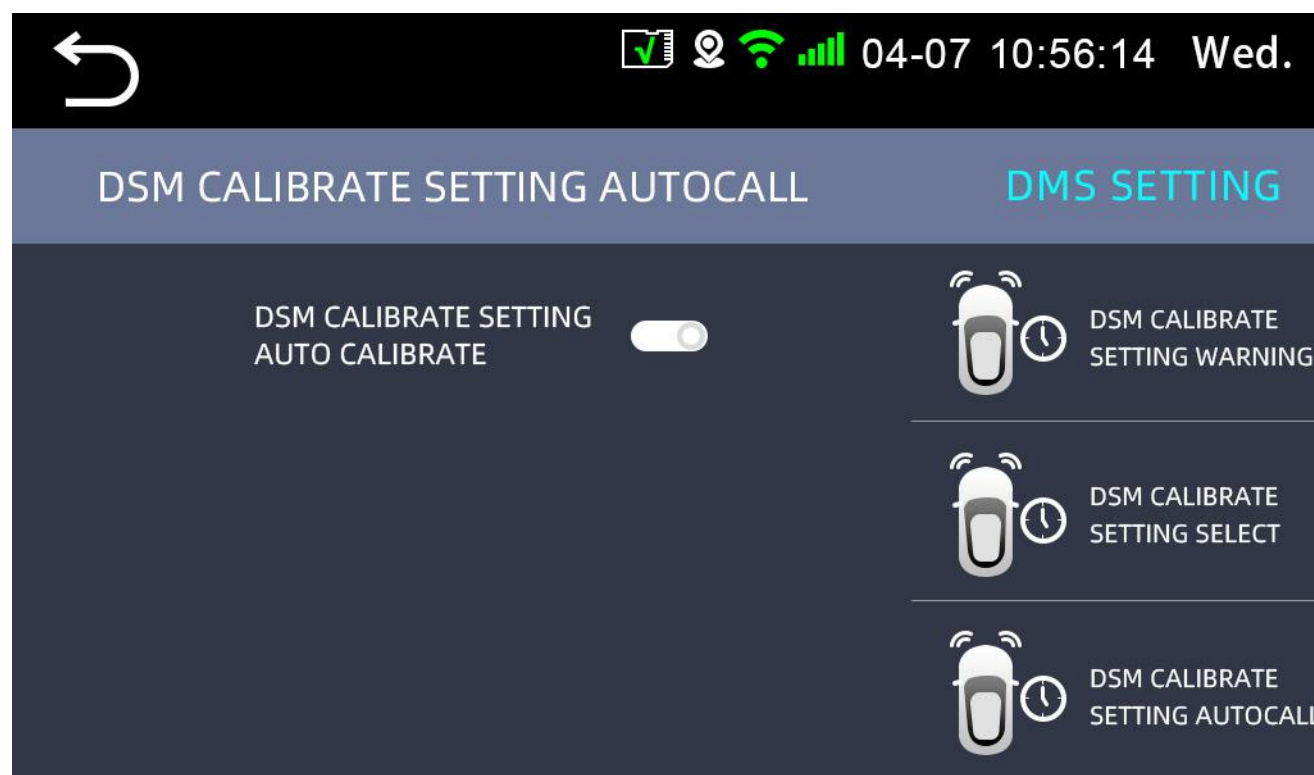


Figure 18 DMS alarm automatic calibration

〈**DMS alarm automatic calibration**〉: Can be set to enable or disable。

### 3.3.3 BSD

#### 3.3.3 .1 BSD Calibration

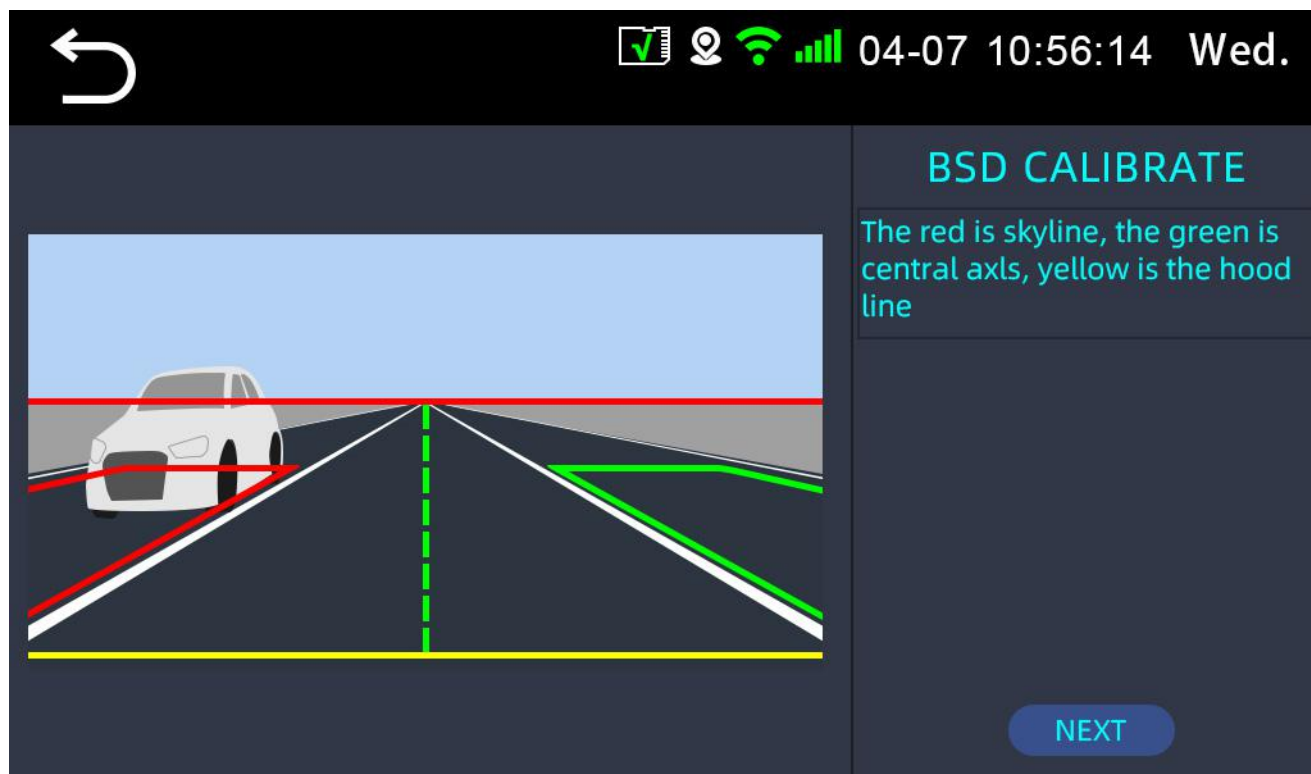


Figure 19 Schematic diagram of BSD calibration

Here is a schematic diagram of BSD calibration, click "Next" to proceed to BSD calibration.

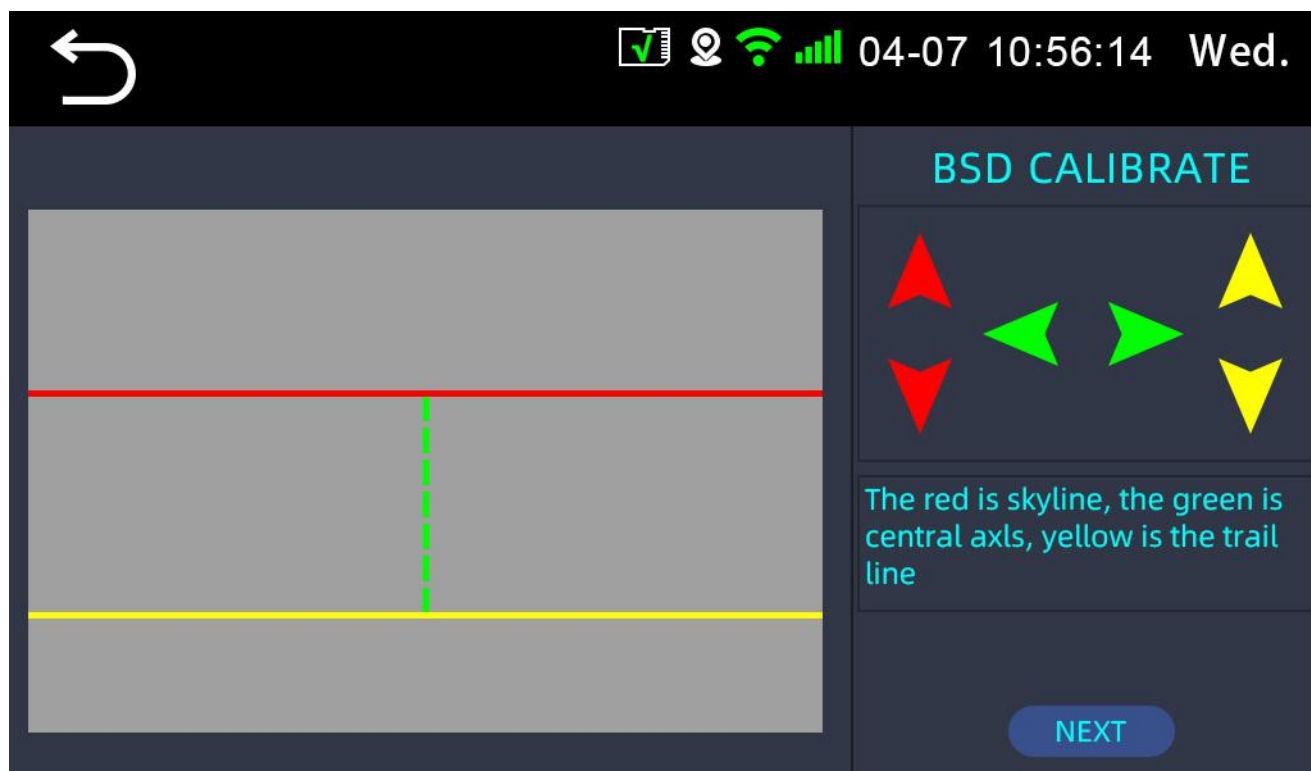


Figure 20 BSD calibration

Refer to the BSD calibration diagram for calibration: move the red line to the junction of the sky and the earth, move the green line to the intersection of the road and the skyline, and move the yellow line to the junction of the rear of the car and the ground.

 The red arrow icon is used to move the red line up and down.
  The green arrow icon is used to move the green line left and right,
  The yellow arrow icon is used to move the yellow line up and down. Click "Next" to continue calibration.

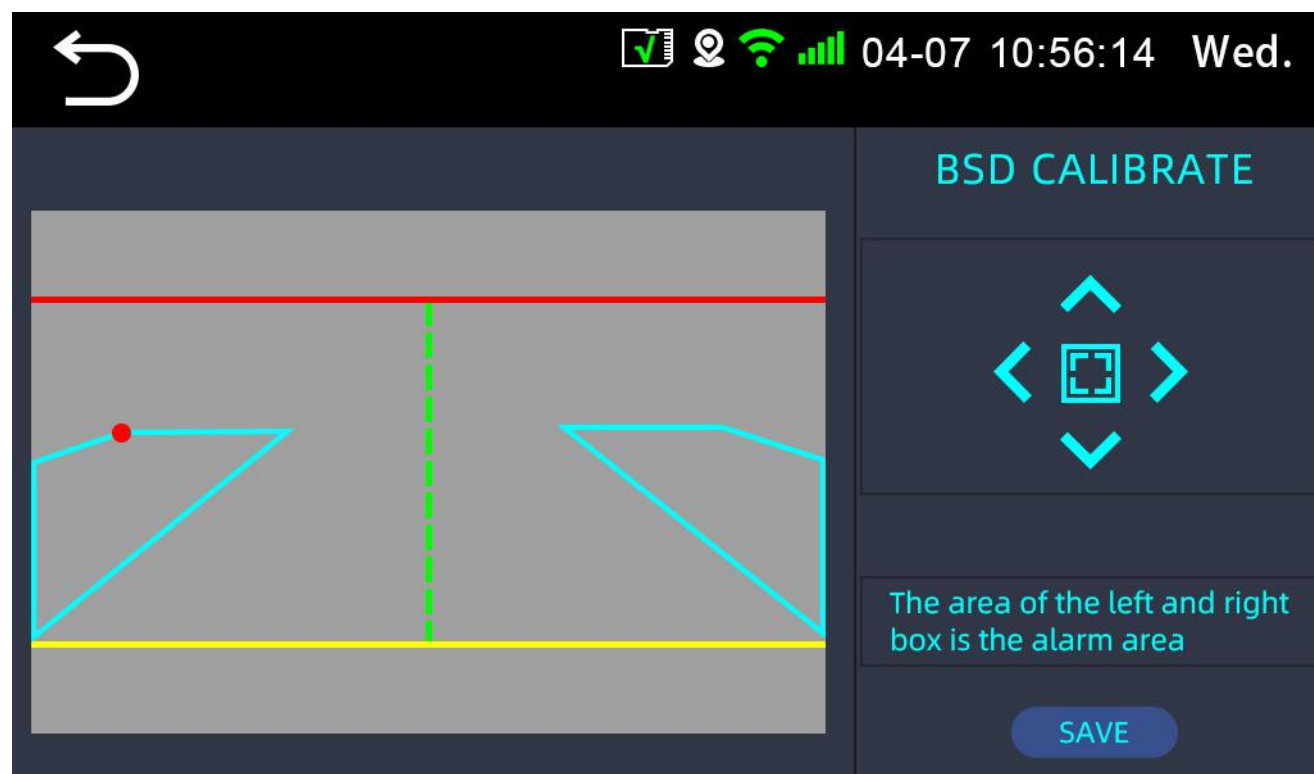
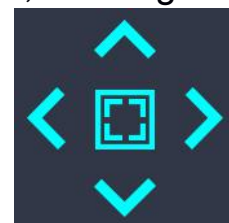


Figure 21 BSD alarm zone calibration

The area of the left and right boxes is the alarm area, and the box can be set.

Setting method: There is an adjustable red dot on each corner of the box, through the arrow on the right You can move the red dot up, down, left, and right . Click to switch the red dot and adjust the next red dot.



After the calibration is complete, click the "Save Results" icon。

### 3.3.3 .2 BSD Settings

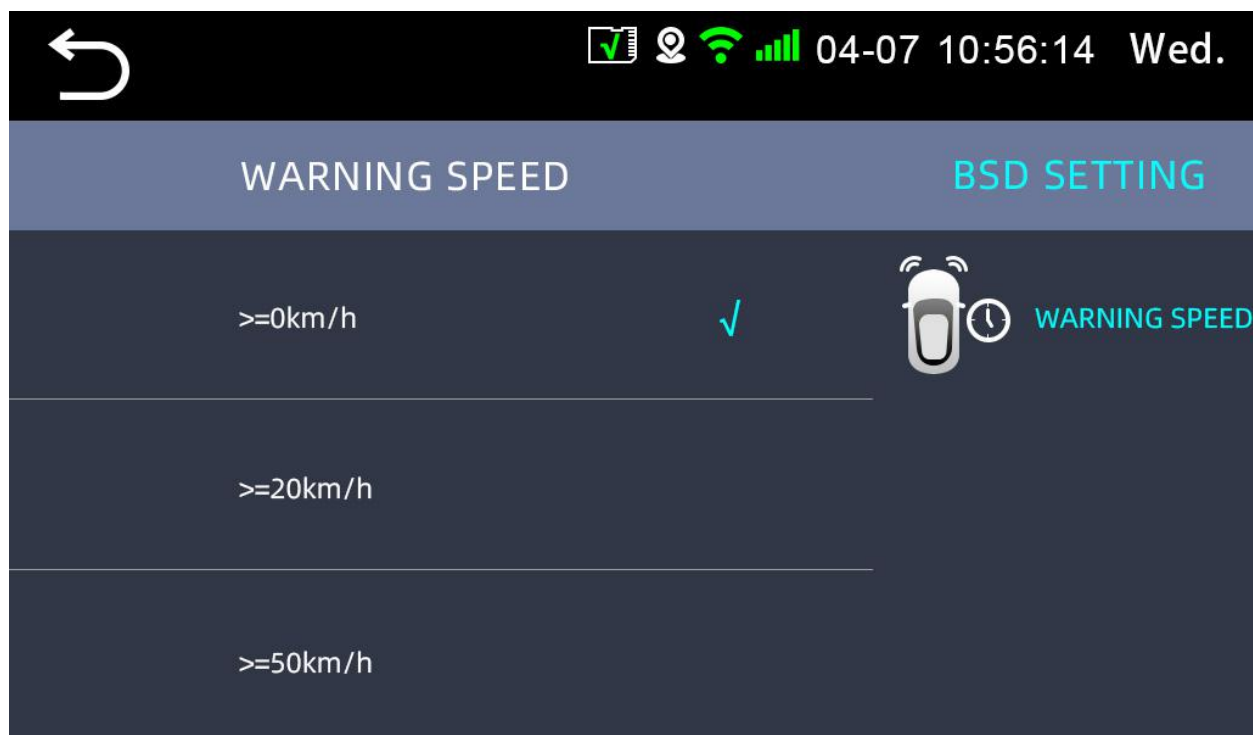


Figure 22 The alarm speed setting of the vehicle

〈The alarm speed of the car〉: Can be set to >=0 km/h, >=20 km/h, >=50 km/h。

## 3.4 System Settings

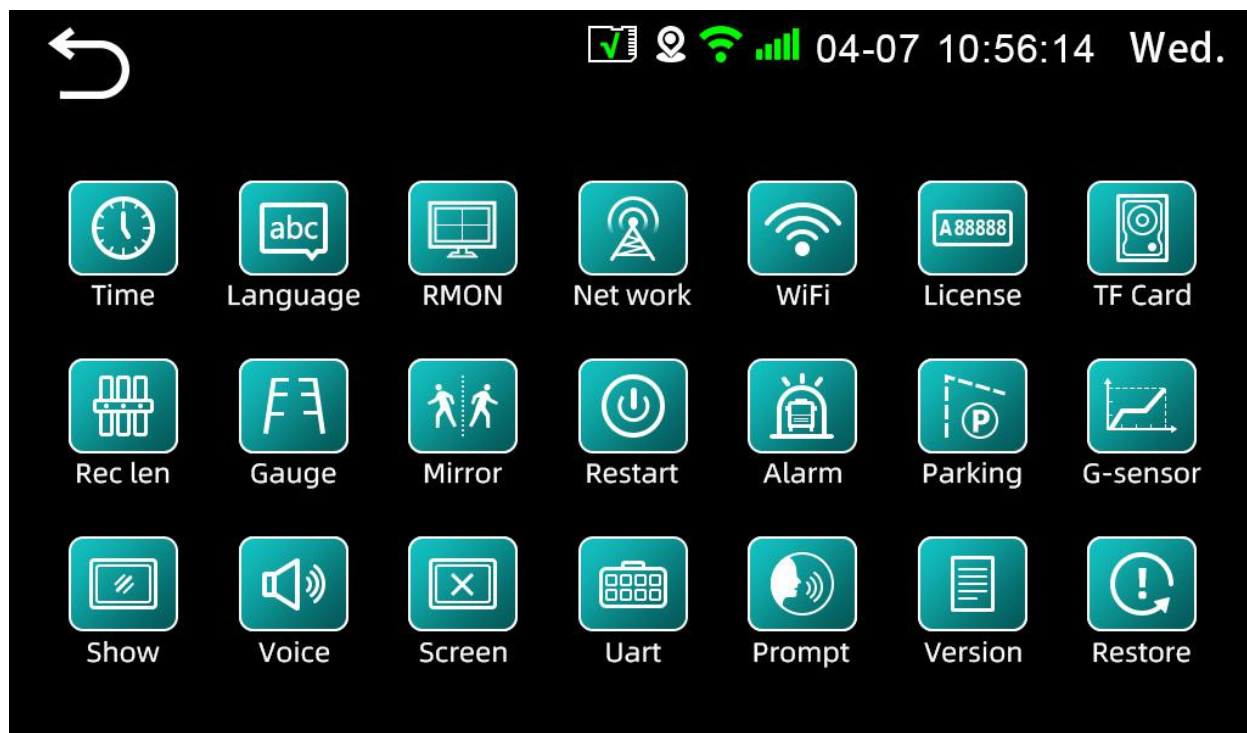


Figure 23 System Settings

### 3.4.1 Time Setting

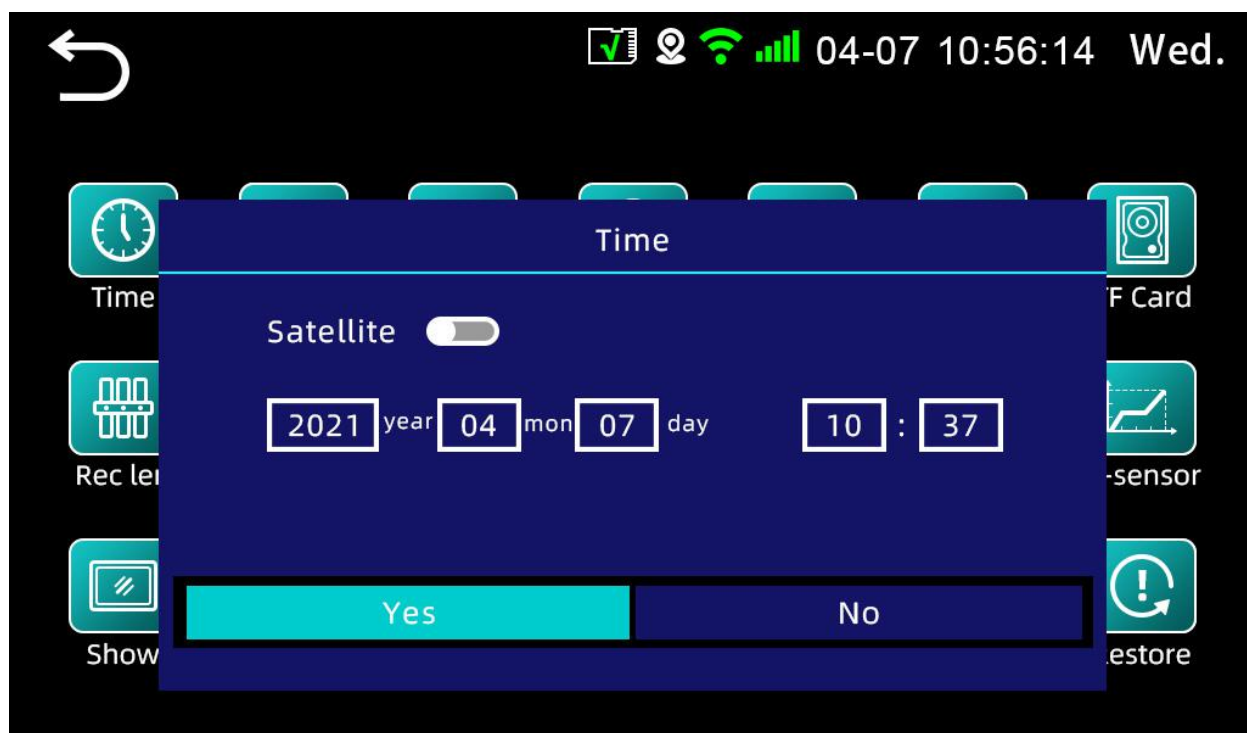


Figure 24 Time setting

〈**GPS time calibration**〉 :If this function is turned on, the device will automatically check the time every time it is turned on and positioned。

Grey icon  , It means this function is off, click the icon to enable。

### 3.4.2 Language Settings

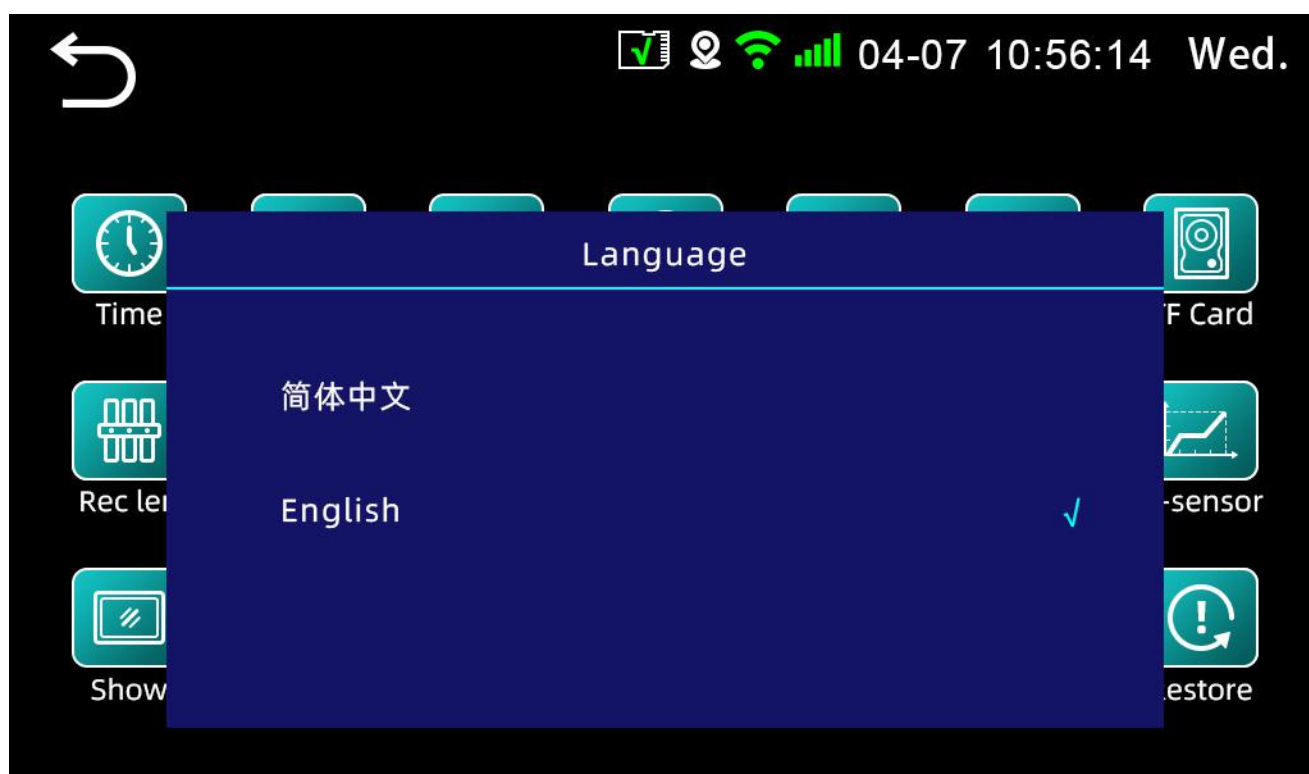


Figure 25 Language setting

< language settings > : Support Chinese and English. Click to select the corresponding language.

### 3.4.3 Remote Monitoring Settings



Figure 26 Remote monitoring interface

〈**Enable**〉 :Turn on or off the remote monitoring function;

〈IP〉 :Enter the remote platform server IP address;

〈PORT〉 :Enter the corresponding port number;

〈ID〉 :Enter the corresponding device number;

〈License〉 :Enter the corresponding license plate number。

### 3.4.4 4G Network Settings

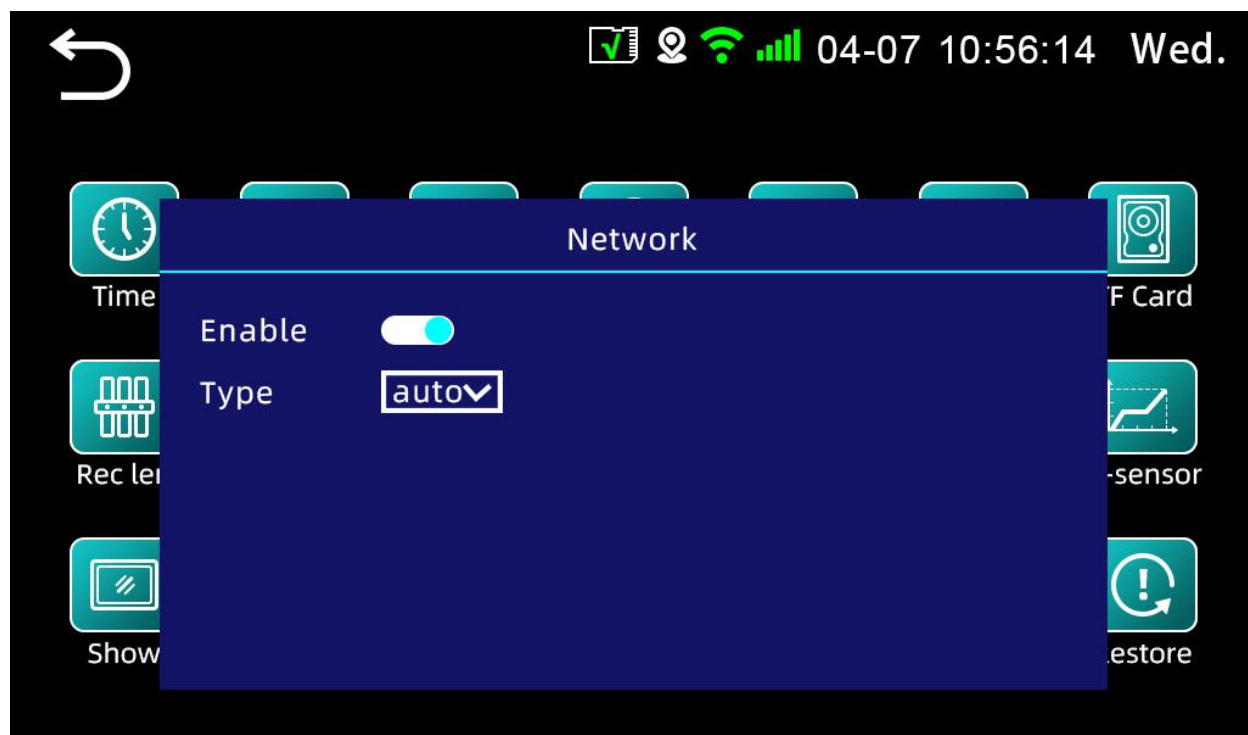


Figure 27 4G network automati

〈Enable〉 :Turn 4G network on or off;

〈Type〉 :Two types of automatic and custom are supported. Click the  ,  
Make a switch selection.。

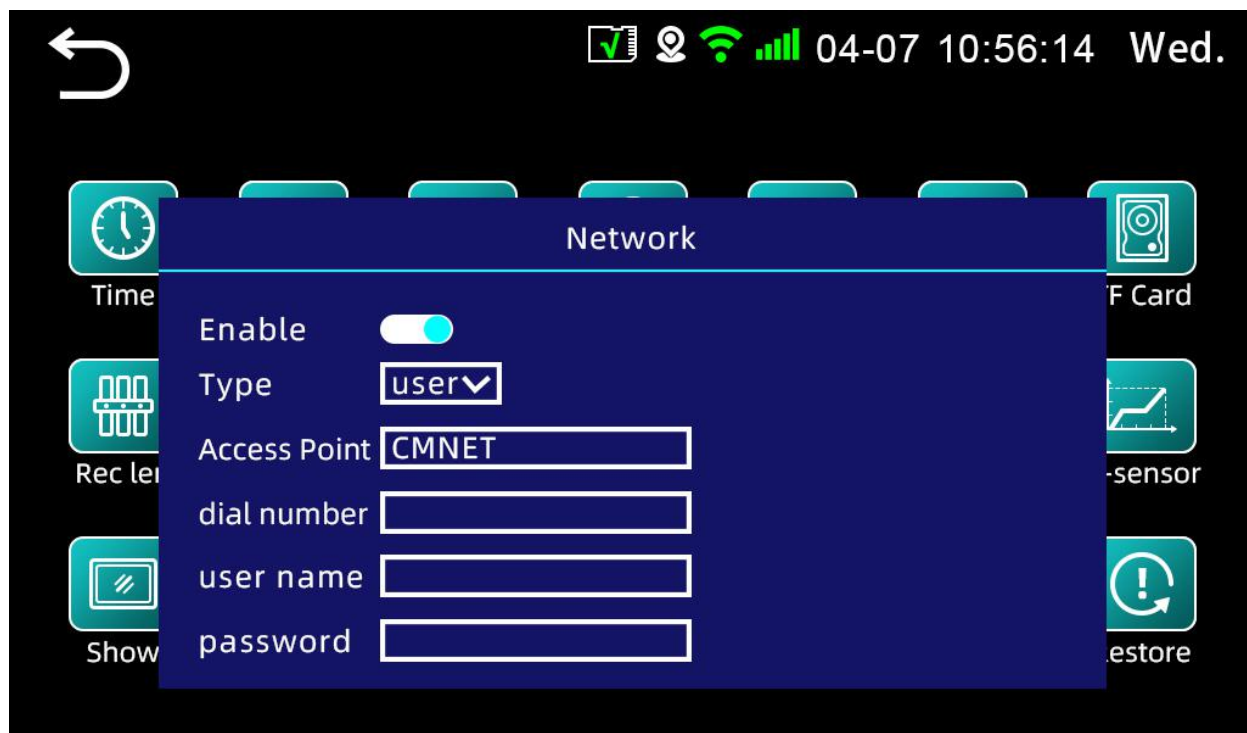
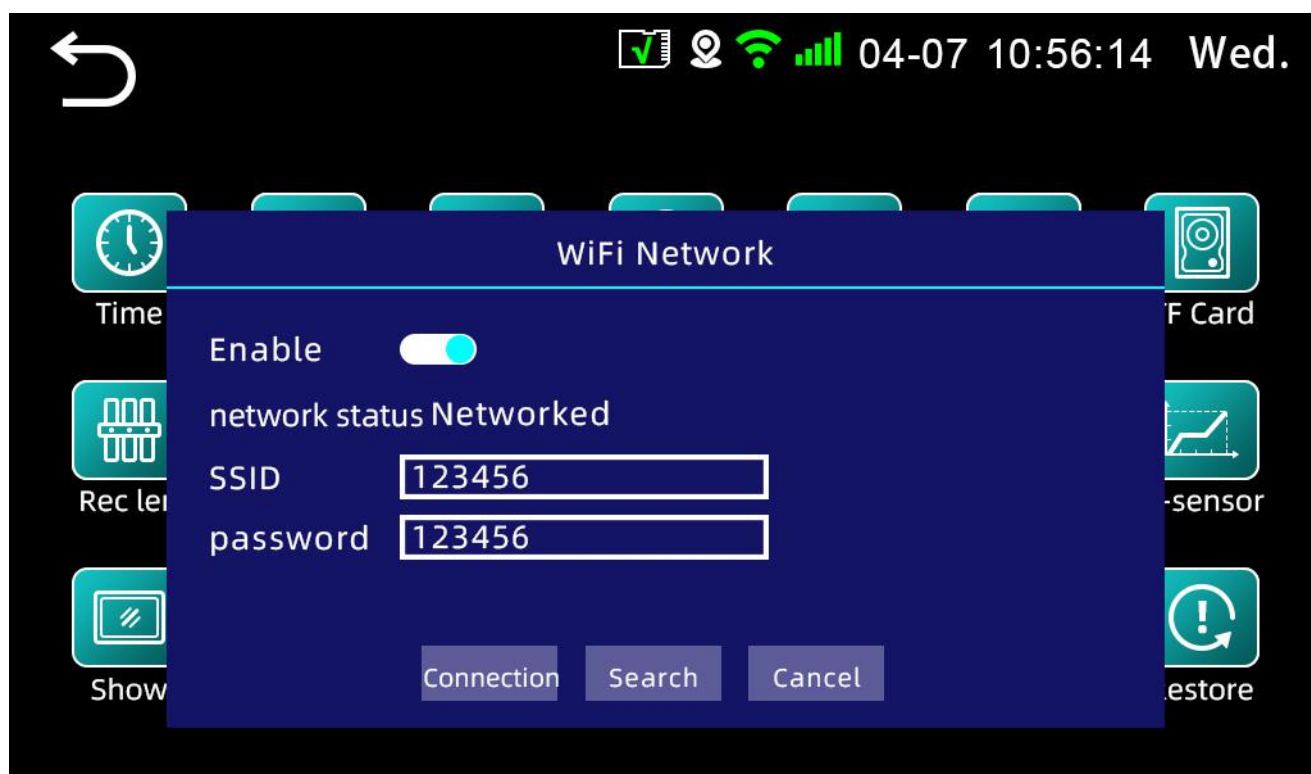


Figure 28 4G network customization

### 3.4.5 WiFi Network Settings



iFigure 29 WiFi network

〈Enable〉 :Turn WiFi network on or off;

〈**Network Status**〉 :Connected means connected to a WiFi network;

〈**SSID**〉 :WiFi network name;

〈**password**〉 :WiFi network password。

First click the "Search" button to search for WiFi networks, select the WiFi network you want to connect to, enter the password, and click the "Connect" button to connect.。



Figure 30 Input box interface

Click the "1#"  key to switch to the numeric and special symbol keyboard.

Click the "abc" key to return to the English alphabet keyboard.

Click the "ABC"  button to switch to capital letters。

Click the "en"  button to switch to the Chinese input method, you can input Chinese characters。

Click the OK  button after input。

### 3.4.6 License Plate Settings

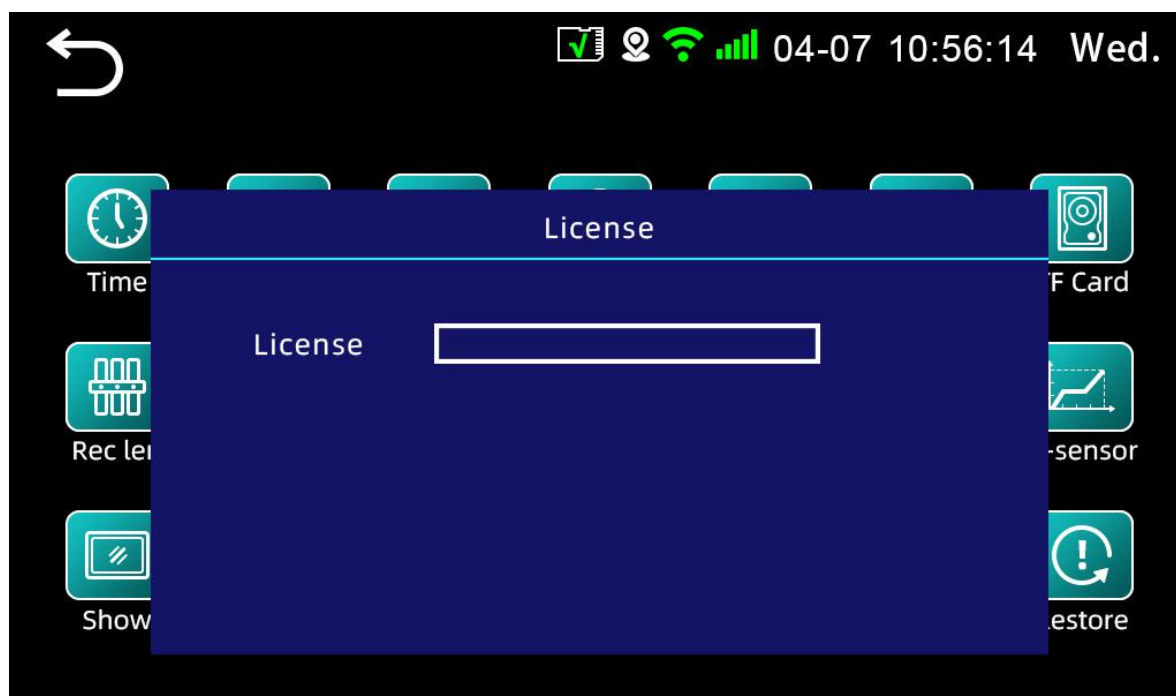


Figure 31 License plate setting

〈License〉 :Enter the corresponding license plate number

### 3.4.7 Disk Management

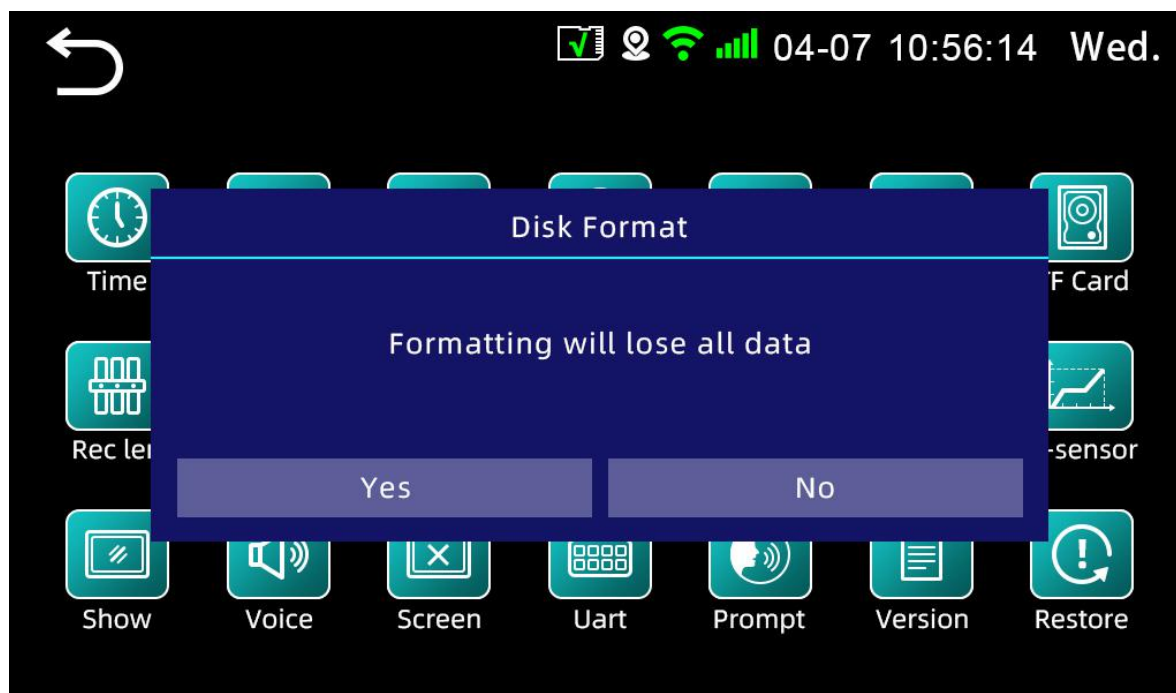


Figure 32 Disk formatting

〈Disk format〉 :Formatting will lose left and right data

### 3.4.8 Segment Recording Settings

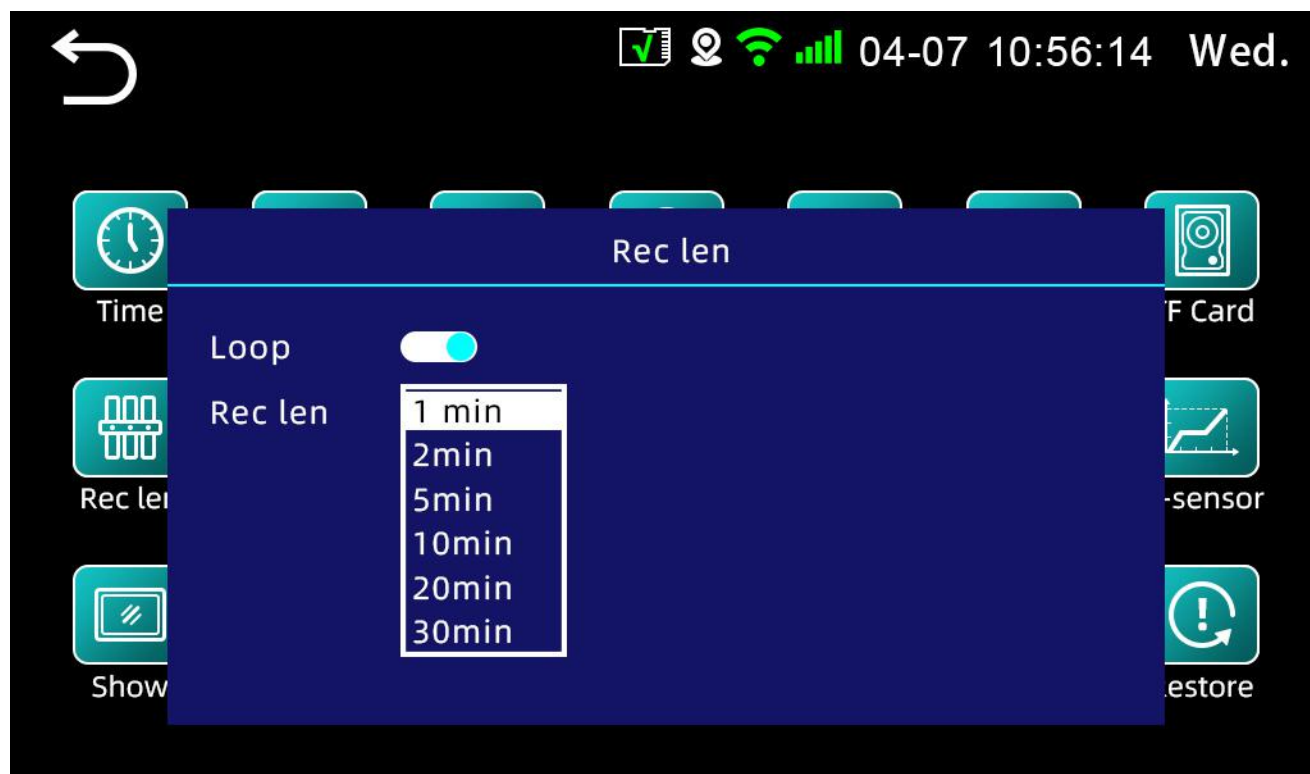


图 33 分段录像

〈Loop recording〉 :Turn on this function, the device will automatically overwrite the earlier video files after the memory card is full, and continue to record in a loop。

〈 Segment recording 〉 :Set the packaging time of recording file. Click the arrow to select. Can be set to 1 minute, 2 minutes, 5 minutes, 10 minutes, 20 minutes, 30 minutes。

### 3.4.9 Reversing Ruler Settings

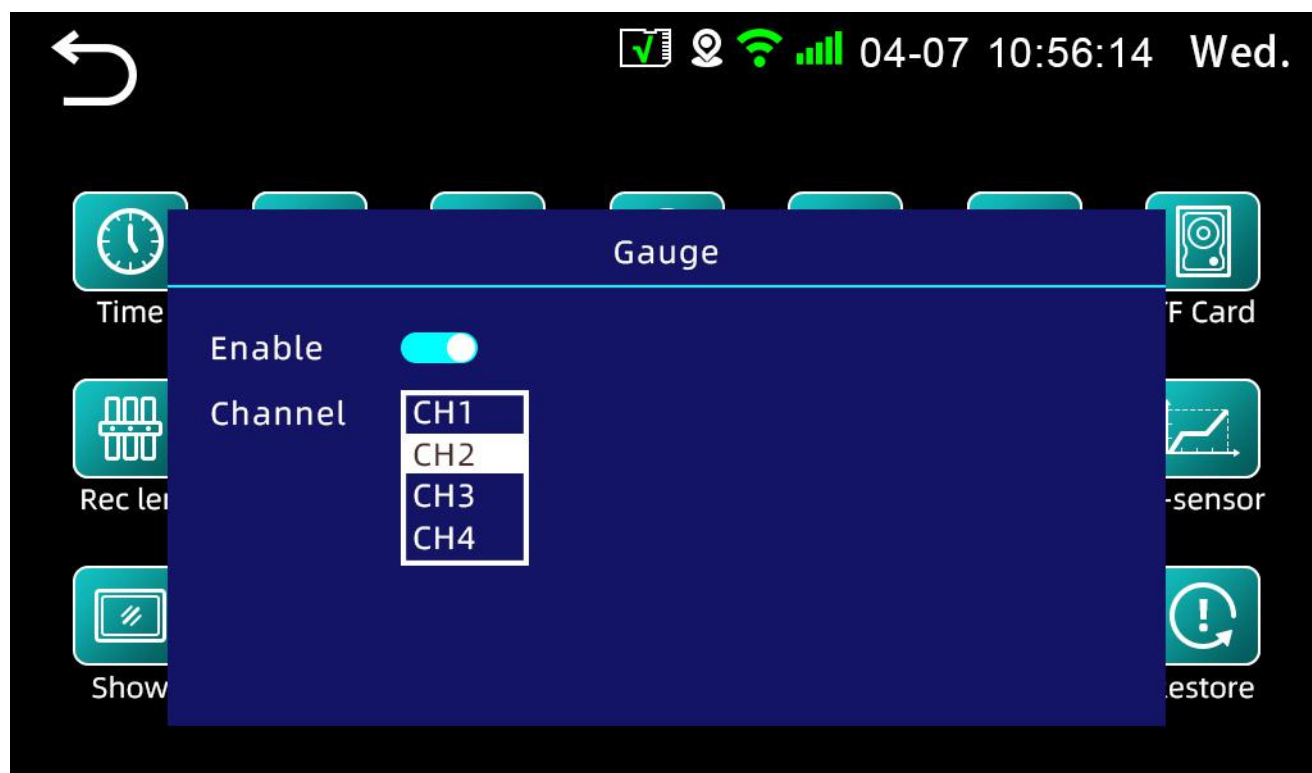


Figure 34 Reversing scale

〈Enable〉 :Turn on this function, a ruler will be displayed on the video screen of the display。

〈Channel〉 :Set to display the reversing ruler channel. Click the  arrow to select。

### 3.4.10 Mirror Flip Settings

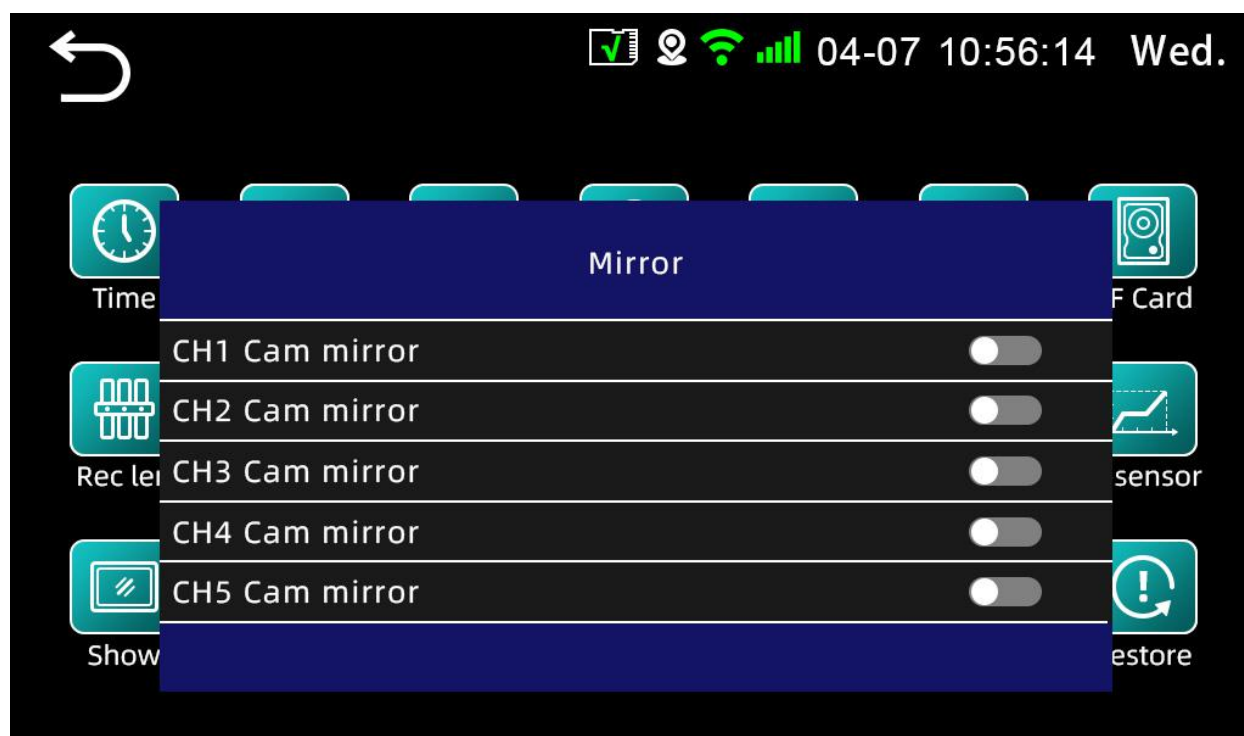


Figure 35 Mirror flip

Each channel can be individually set to mirror or  The button means turn off the mirror, click to turn on the mirror。

### 3.4.11 Switch Machine Settings

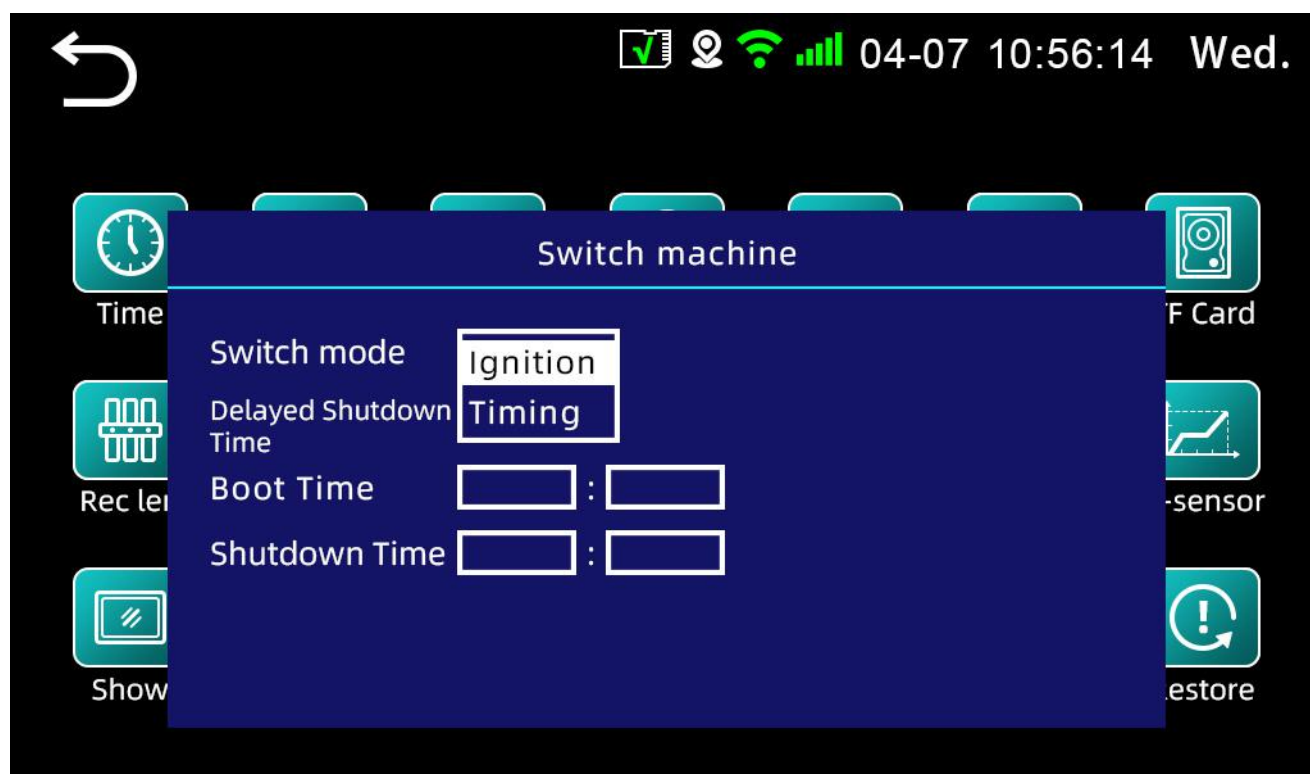


Figure 36 Power on and off

〈Switch mode〉 : It is divided into ignition mode and timing mode. Click the arrow to switch between options. The system defaults to ignition mode (ignition mode means that the machine automatically turns on after the car is started, and timing mode means it turns on at the time set by the user)。

〈Delayed shutdown time〉 : When the user selects the ignition mode, the user can set whether to delay the shutdown. If the delayed shutdown is turned on, the user must set the delay time. After the setting is completed, the machine will continue to record within the delay time set by the user after the car is turned off.。

〈Turn on and off time〉 : When the user selects the timing mode, he needs to set the timing for the timing to turn on/off here. After the setting is saved, the machine will turn on and off at the set time.

### 3.4.12 Alarm Settings

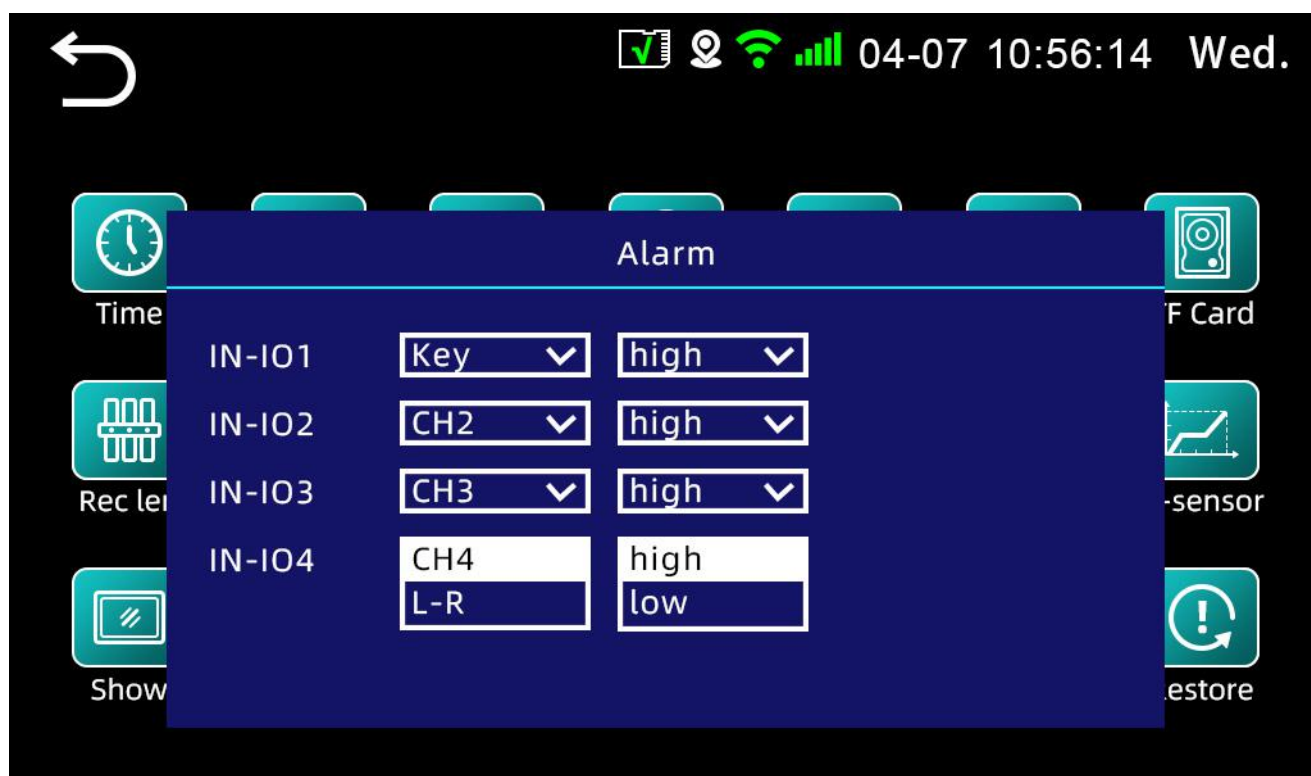


Figure 37 Alarm setting

〈IN-IO1〉: The first alarm signal input, support one-key platform alarm。A total of four alarm signal inputs are supported. Alarm trigger can be set to "high level" and "low level"。

### 3.4.13 Parking Monitoring Settings

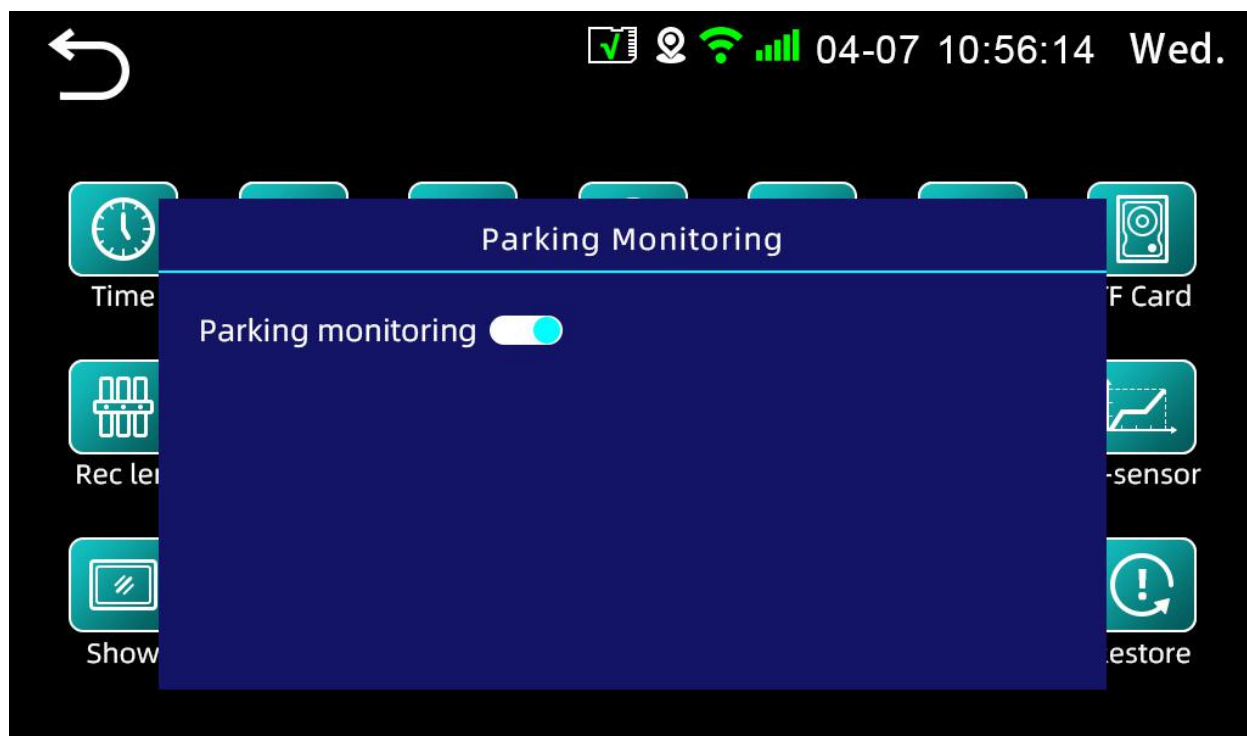


Figure 38 Parking monitoring

〈Parking monitoring〉: After enabling this function, in the case of uninterrupted power, the acc device will continue to record if the acc device is disconnected。

### 3.4.14 Gsensor Settings

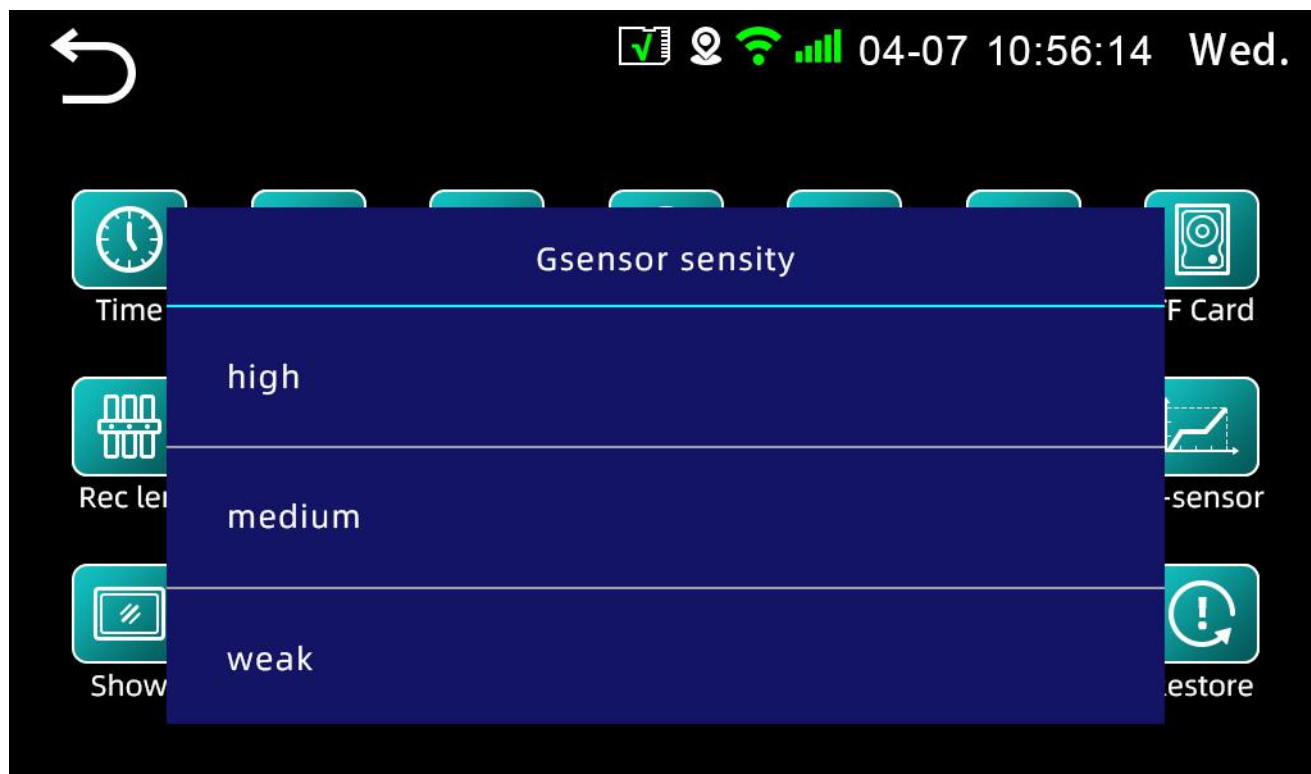


Figure 38 Gsensor

〈Gsensor sensity〉: Supports "high", "medium" and "low" three sensitivities。

### 3.4.15 Display Settings

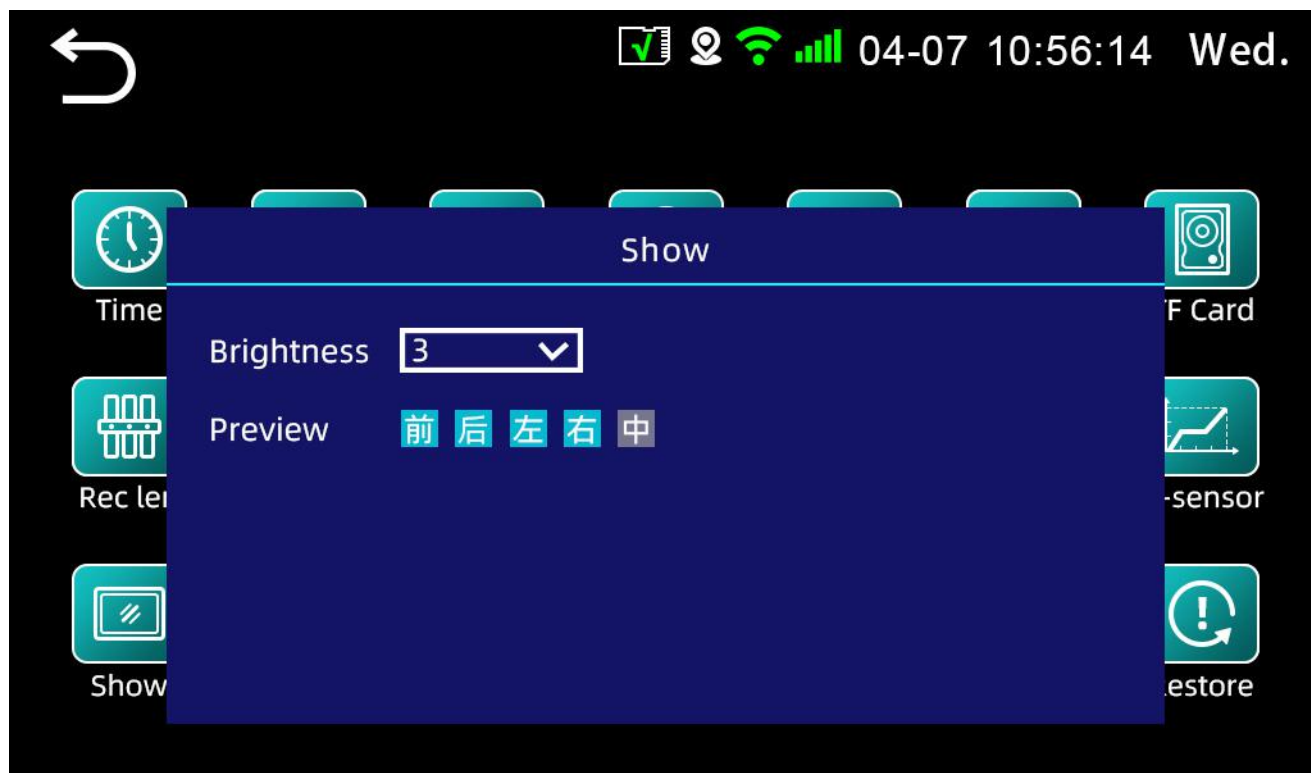


Figure 40 Display settings

〈Brightness setting〉: Set the screen brightness, "1", "2", "3", "4", "5" are available for setting。

〈Preview channel〉: The channel picture displayed on the screen after power-on. Click the channel icon to display or close the corresponding channel screen, when the icon is gray, it means not to display。

### 3.4.16 Sound Settings

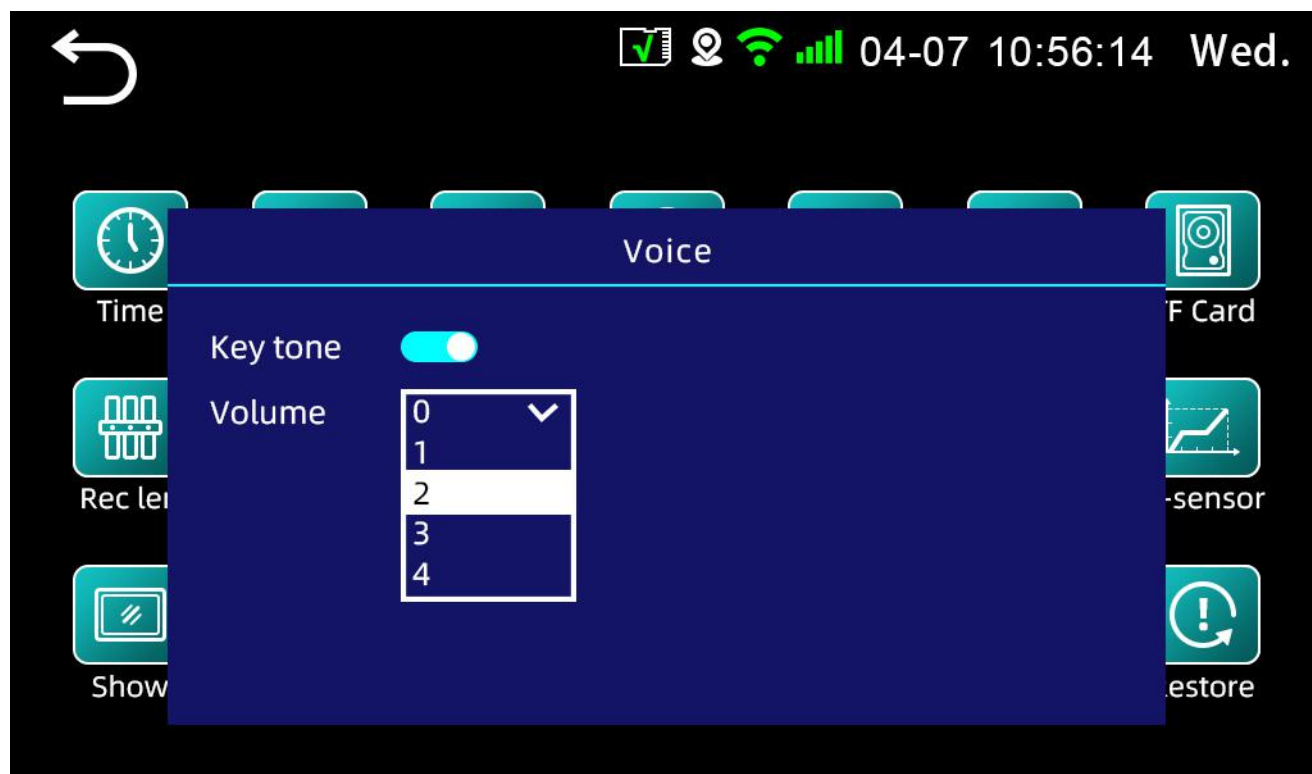


Figure 41 Sound settings

〈Touch-tone〉: Whether to make a sound when tapping the screen, you can turn

the sound on or off。

〈Volume setting〉: The volume can be set, supporting "0", "1", "2", "3", "4" files。

### 3.4.17 Screen Sleep Settings

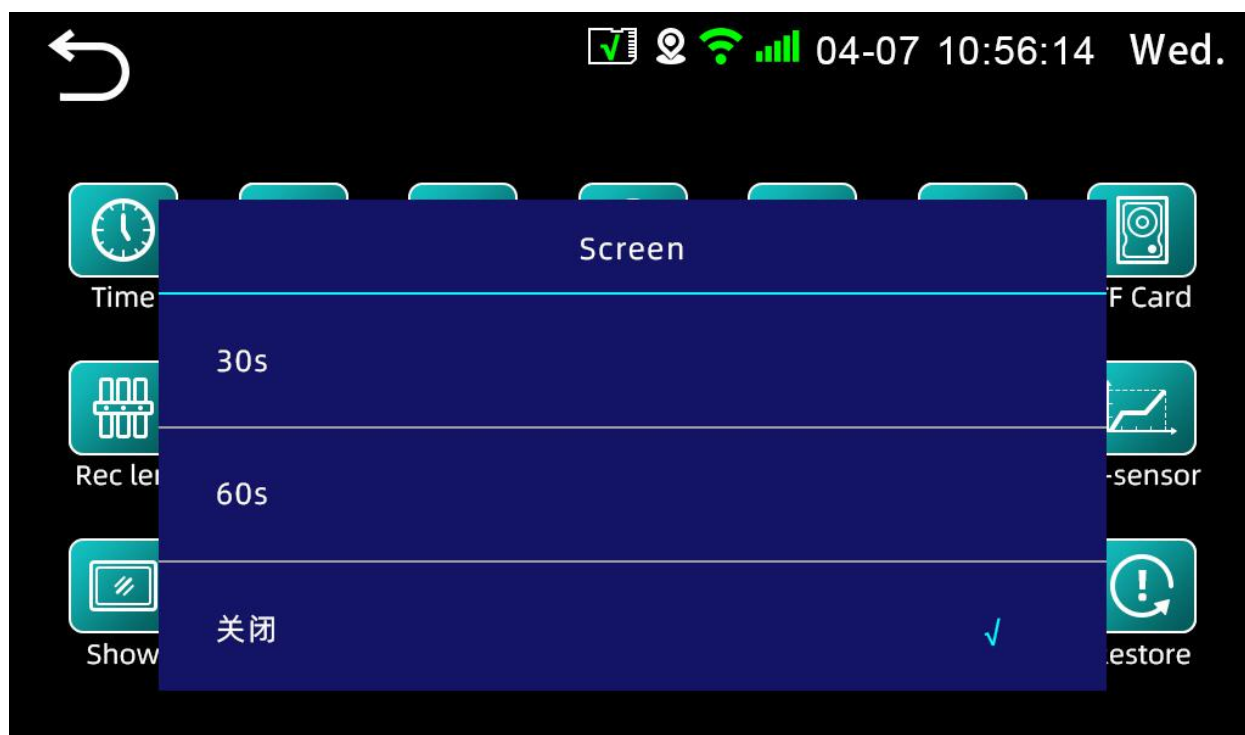


Figure 42 Screen sleep

〈Screen sleep〉: If you don't tap the screen for a certain period of time, the screen will automatically enter the sleep mode. Support "30s", "60s" and "off" three settings。

### 3.4.18 Serial Port Settings

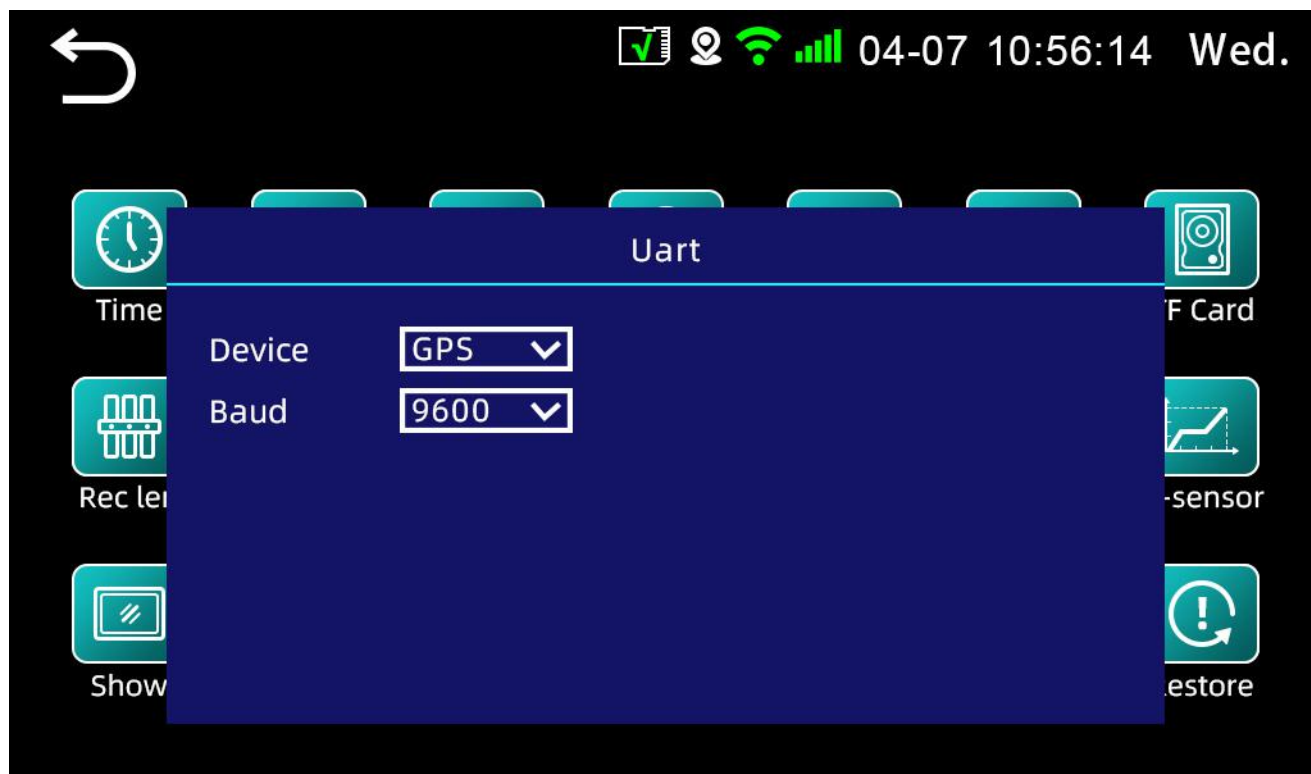


Figure 43 Serial port settings

<Settings>: Support "GPS" and "Oil Feel".

<Baud rate>: "9600", "38400" and "115200" can be selected.

### 3.4.19 Voice Prompt Settings



Figure 44 Voice prompt

〈Voice prompts〉: Including "The vehicle is about to speed, please pay attention to safe driving", "The monitoring platform is connected/The monitoring platform is disconnected", "WiFi network is normal/WiFi network is disconnected", "4G network is normal/4G network is disconnected", " "Successful capture/Failed capture", "GPS positioning/GPS positioning failed", "Recording started/Stopped recording". Each voice can be turned on or off。

### 3.4.20 Version Information Settings

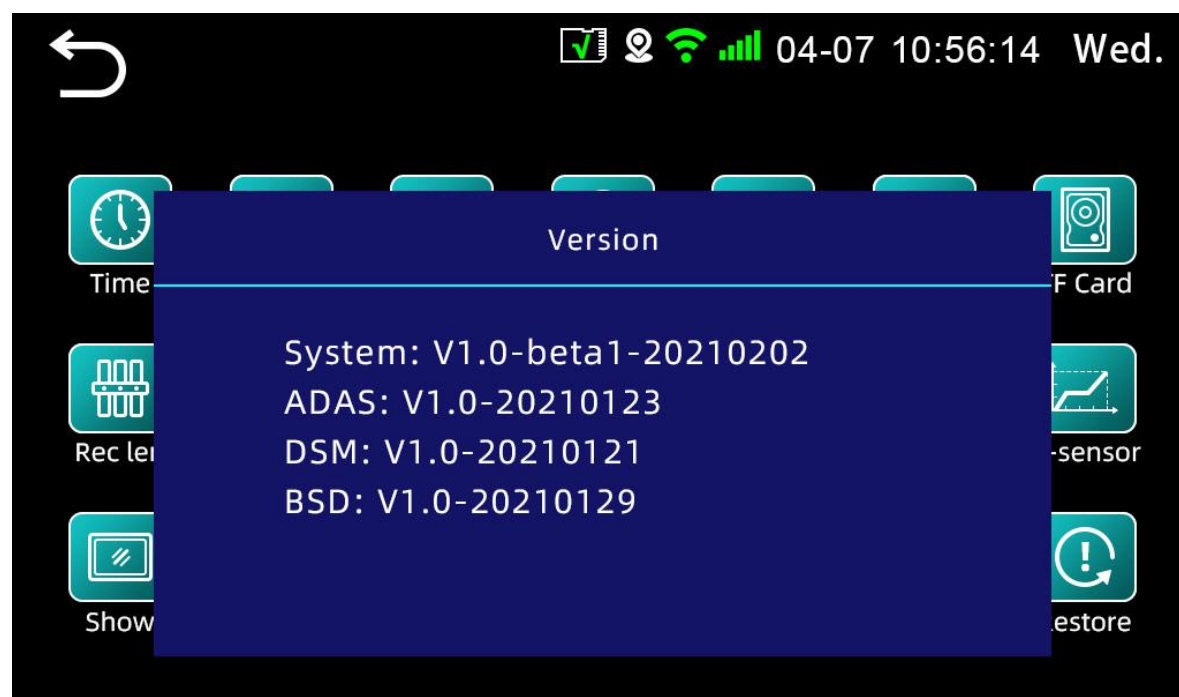


Figure 45 Version information

〈Version Information〉: Contains "system version", "ADAS version", "DMS version" and "BSD version" information。

### 3.4.21 Restore Factory

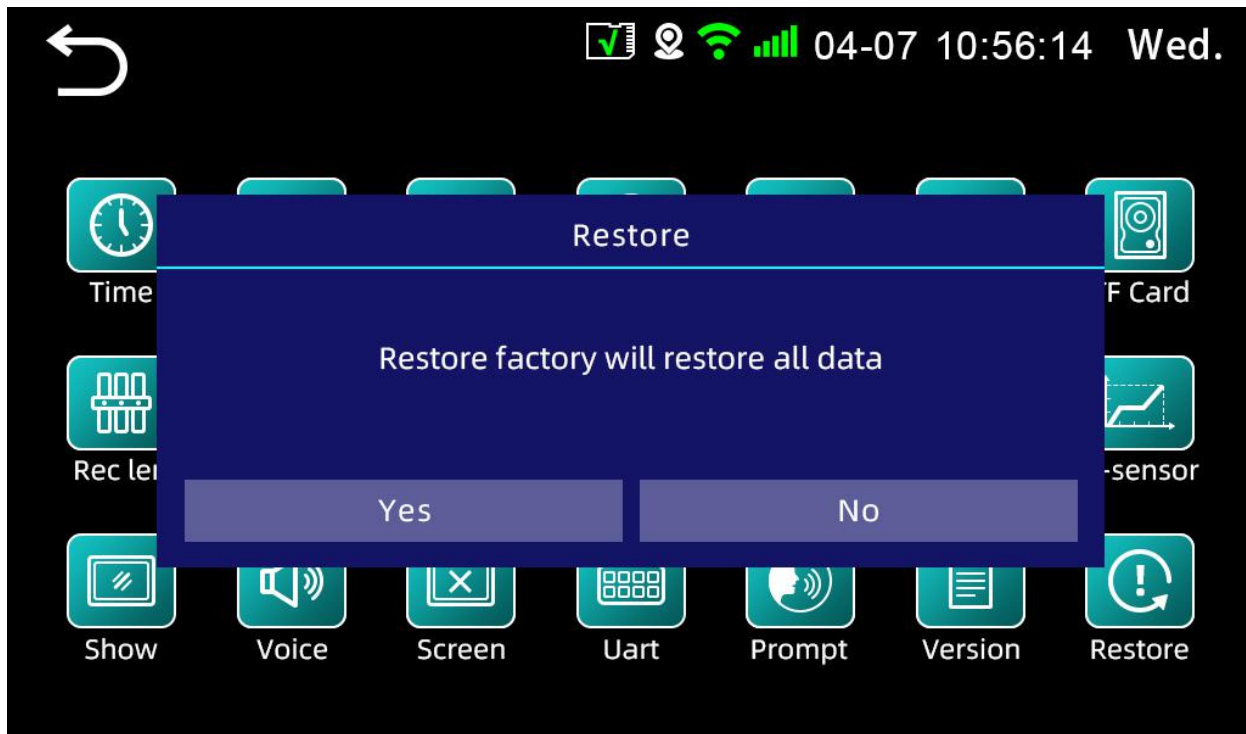


Figure 46 Factory reset

〈Reset〉: Factory reset will reset all data。

## 4 4G Platform installation instructions

### 1) Mobile client installation method:

Apple mobile phone search CMSV6 through the APP Store to install

Android phones are installed by searching CMSV6 in the application marketOr

open via web: <http://113.96.131.200/Download>

### 2) Computer client installation method:

Open via web: <http://113.96.131.200/Download>



图 47 客户端登录界面

The login interface, the user name and password are on the label attached to each device or provided by the supplier。

**FCC Caution.**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**\*RF warning for Mobile device:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.