



Training Courseware of New GLORY 580

Information System



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Introduction and
maintenance of
intelligent
instrument IC

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**Introduction and
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- 01** Overview of integrated instrument system
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Course objectives

- **Tell the function characteristics of the new 580 intelligent instrument**
- **Master the control principles of GLORY 580 intelligent instrument**
- **Master the fault diagnosis and maintenance method of GLORY580 intelligent instrument**

➤ 1、 Overview of integrated instrument system

智能仪表IC

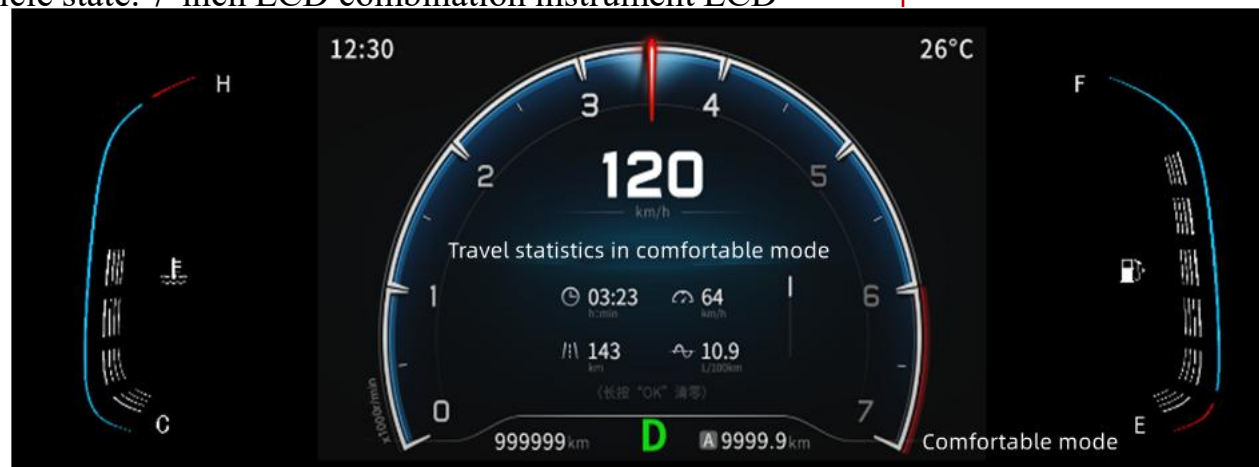


1、 Overview of integrated instrument

The new 580 is equipped with 7+12.3 dual-screen instrument:

The integrated instrument receives signals from other ECUs, sensors and switches through the internal MCU to display various information about the current vehicle state. 7-inch LCD combination instrument LCD simulation

display speedometer, tachometer, driving computer (travel information, range, tire pressure, multimedia, driving information statistics, etc.), settings and other information; Water temperature gauges and fuel gauges are distributed on both sides and lit by LEDS. The vehicle speed receives CAN communication signal from ABS (ESP) -ECU, and the water temperature and speed receive CAN communication signal from engine ECU.



The operation warning display part is equipped with steering operation instructions, light operation instructions, electronic handbrake instructions, tire pressure alarm instructions, anti-theft instructions, safety belt alarm instructions, engine failure instructions, oil pressure alarm and other warning lights.

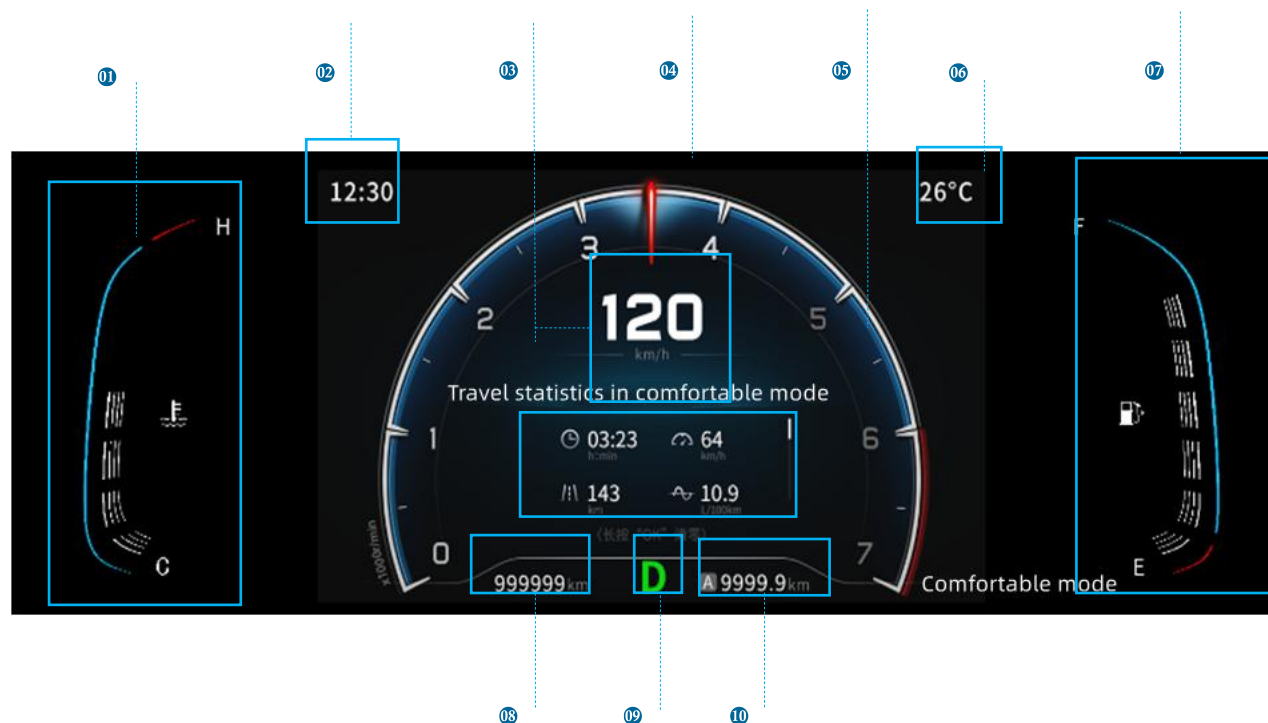
The Settings provide theme switch, mode switch, fatigue driving reminder, overspeed alarm reminder, brightness and other functional Settings.

➤2、Function overview of integrated instrument system

智能仪表IC



1、Function overview of integrated instrument










| No. | Function | No. | Function |
|-----|-------------------|-----|---------------------|
| 1 | Water-thermometer | 6 | Outside temperature |
| 2 | Time | 7 | Fuel meter |
| 3 | Speedometer | 8 | Total distance |
| 4 | Vehicle computer | 9 | Gear display |
| 5 | Tachometer | 10 | Mileage subtotal |









2、Function self-check of warning lights on integrated instrument











3、Warning lights functions of Integrated instrument

| NO. | Name | Sign | Color | Signal Sources |
|-----|--|--|--------|---|
| 1 | Brake system failure indication |  | Red | The light is normal on when brake fluid is too low, lights up when level is low, hard wire connection; EBD failure, indicator light, CAN signal; |
| 2 | Electronic handbrake system failure lamp |  | Yellow | CAN with wrong message or the electronic handbrake itself fails, the light is steady on, CAN signal. |
| 3 | Parking brake |  | Red | Electronic handbrake; When the electronic hand brake is pulled up, the light is on, light is flashing when the position is unknown, and when it's released, the light is off, CAN signal; |
| 4 | ABS indication |  | Yellow | When ABS fails, the indicator is normal on, CAN signal; |
| 5 | Charging indicator |  | Red | When the generator is faulty, the indicator light is normal on, hard wire connection; |
| 6 | Tire pressure indicator |  | Yellow | When the tire pressure system fails, the indicator light is normal on, CAN signal |
| 7 | Left turn indication |  | Green | When turning to the left, or opening the hazard alarm switch, the indicator light is on, CAN signal; |



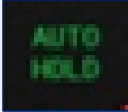




3、Warning lights functions of Integrated instrument

| NO. | Name | Sign | Color | Signal Sources |
|-----|---------------------------------|---|--------|---|
| 8 | Right turn indication |  | Green | When turning to the right, or opening the hazard alarm switch, the indicator light is on, CAN signal; |
| 9 | Seat belt unfastened indication |  | Red | The light is normal on when safety belt is not fastened, CAN signal; |
| 10 | Position light indication |  | Green | The indicator is normal on when position light/lampset turns on, CAN signal; |
| 11 | High beam indication |  | Blue | The indicator is normal on when high beam light turns on, CAN signal; |
| 12 | ESP working/fault indicator |  | Yellow | When ESP is working, the indicator flashes, CAN signal. When the ESP system is faulty, the indicator is normal on, CAN signal. |
| 13 | ESP OFF indicator |  | Yellow | When ESP system is closed, the indicator light is on, CAN signal. |
| 14 | Cruise indicator |  | Green | When cruise opened, the indicator is on, CAN signal; |
| 15 | Gearbox fault indicator |  | Yellow | When the gearbox is faulty, the indicator light is on, CAN signal |

3、Warning lights functions of Integrated instrument

| | | | | |
|----|-----------------------------------|--|--------|--|
| 16 | Airbag fault indication |  | Red | Airbag system malfunction. CAN signal |
| 17 | Rear fog light indication |  | Yellow | The indicator is normal on when the rear fog light turns on, CAN signal; |
| 18 | Power steering failure indication |  | Yellow | When EPS is fault, the indicator is normal on, and flashing when fault diagnosis, CAN signal; |
| 19 | Engine failure indication |  | Yellow | When the engine management system is faulty, it is normal on, CAN signal; |
| 20 | Engine anti-theft indication |  | Red | When the serial number sent by the anti-theft key does not match that sent by the EMS, the anti-theft indicator is on; CAN signal |
| 21 | Oil pressure |  | Red | When the oil pressure is insufficient, the oil indicator is on, hard line signal. |
| 22 | Water temperature alarm |  | Red | When the engine coolant temperature rises to the alarm temperature, the alarm symbol flashes, CAN signal; |
| 23 | Fuel alarm |  | Yellow | When fuel surplus reaches alarm point, alarm symbol flashes. If the indicator is normal on, it indicates that the cable harness is improperly connected. Hard wire connection. |

3、Warning lights functions of Integrated instrument

| | | | | |
|----|--|---|------------|---|
| 24 | HDC indication |  | Yellow | When the HDC is faulty, the yellow indicator is on, CAN signals |
| 25 | Autohold turning on indicator |  | Green | AUTOHOLD function is working, CAN signal; |
| 26 | Autohold activation indicator |  | Green | AUTOHOLD function is actived, CAN signal; |
| 27 | Low beam lights |  | Green | The indicator is on when the low beam lights turn on, CAN signal |
| 28 | Turning off indicator of the backward pre-warning system |  | Yellow | Turning off indication of the backward pre-warning system |
| 29 | Fault indicator of the backward pre-warning system |  | Yellow | Fault indication of the backward pre-warning system CAN signal |
| 30 | GPF indicator |  | Yellow/Red | GPF indicator, state indicator of China VI particle catcher, CAN signal |

➤ 3、 Overview of steering wheel integrated switch

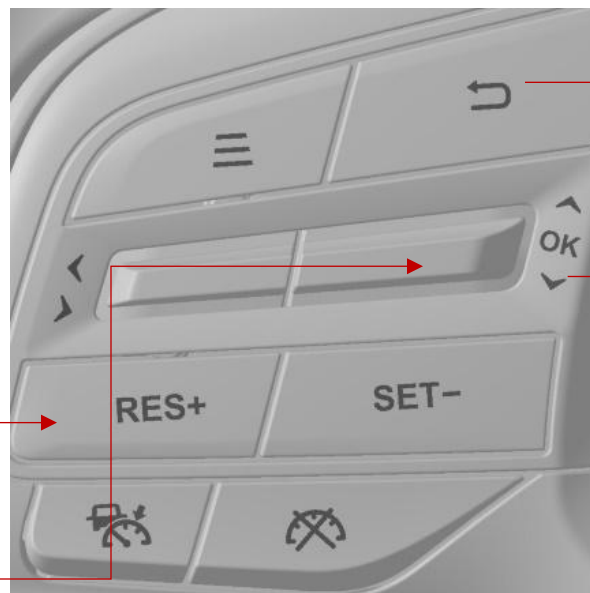
智能仪表IC



1、 Function overview of steering wheel integrated switch

In any interface, the first-level menu can be switched by pressing the screen selection key on the left side of the multi-functional steering wheel up and down. If do not operate in 2 seconds, the current content is selected by default, the menu bar is hidden, and the menu does not switch circularly.

Pressing shortly the steering wheel OK button on the left side of the multi-functional steering wheel to confirm the selection, and pressing long to reset and clear part of the information.



Pressing the back button on the left side of the multi-functional steering wheel to return to the upper level.

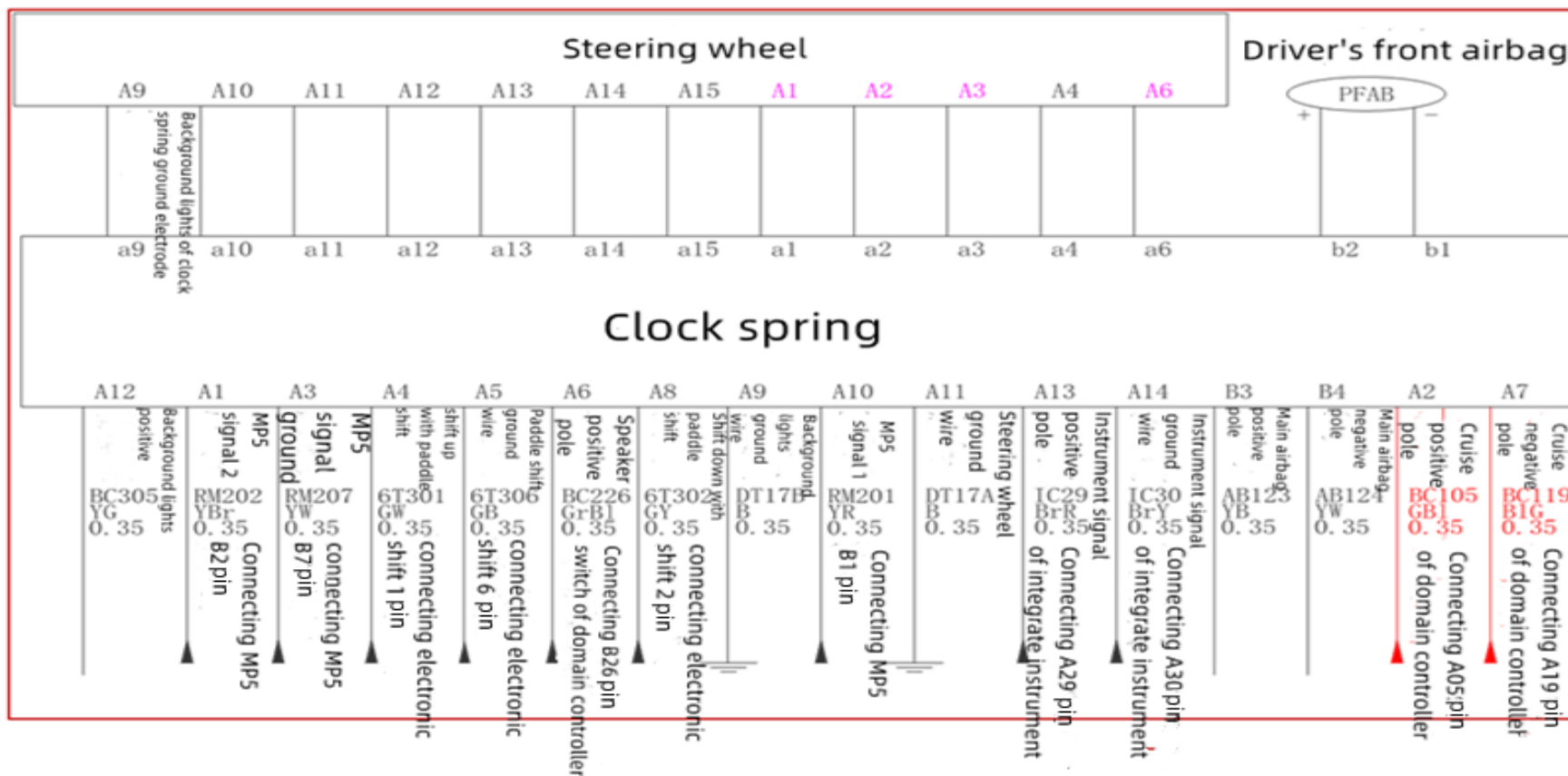
Under a first-level menu, the second-level menu can be switched by pressing the direction keys on the left side of the multi-functional steering wheel up and down. For example, under the driving computer interface, can switch to display travel A statistics, travel B statistics, current travel statistics, mileage, tire pressure, etc

➤ Overview of steering wheel integrated switch

智能仪表IC



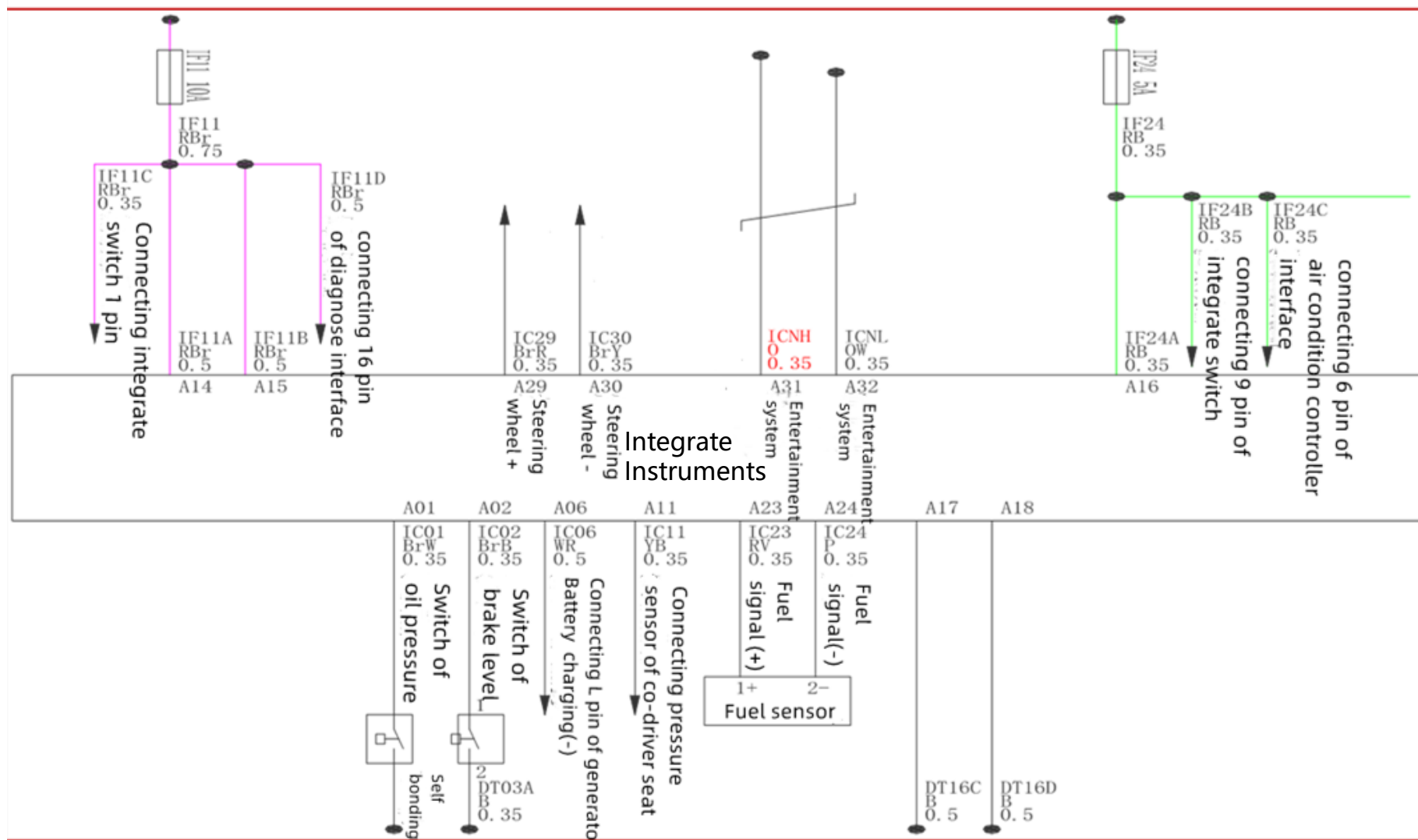
2、Steering wheel circuit diagram





Circuit diagram of integrated instrument system and pin definition

智能仪表IC



4、Circuit diagram of integrated instrument system and pin



智能仪表IC



Composite instrument connector definition

| Pin parameters | | | | | |
|--------------------------------------|---|---|-----|---|---|
| Main connector AMP 2-966658-1(Green) | | | | | |
| Pin | Function | Other requirements/remarks | Pin | Function | Other requirements/remarks |
| A1 | Oil pressure (-) | Signal wire | A17 | Ground (-) | |
| A2 | Brake failure (-) | Signal wire | A18 | Ground (-) | |
| A3 | | | A19 | | |
| A4 | | | A20 | Pressure sensor of rear seat of main driver | Signal line, collecting resistance signal |
| A5 | | | A21 | Pressure sensor of rear middle seat | Signal line, collecting resistance signal |
| A6 | Battery charging (-) | Signal wire | A22 | Pressure sensor of rear seat of co-driver | Signal line, collecting resistance signal |
| A7 | Seat belt in rear seat of main driver (-) | Signal wire | A23 | Fuel signal (+) | Signal wire |
| A8 | Rear middle seat belt (-) | Signal wire | A24 | Fuel signal ground | Signal wire |
| A9 | Seat belt in rear seat of co-driver (-) | Signal wire | A25 | Hard line speed output | Signal wire |
| A10 | | | A26 | | |
| A11 | Pressure sensor of co-driver | Signal line, collecting resistance signal | A27 | | |
| A12 | | | A28 | | |
| A13 | | | A29 | Steering wheel + | Collecting resistance signal |
| A14 | Battery (+) | 1A under normal use | A30 | Steering wheel - | |
| A15 | Battery (+) | | A31 | CAN_H | Signal wire |
| | | | A32 | CAN_L | Signal wire |

➤ 5、Fault code analysis of instrument system

智能仪表IC



DTC list

| NO. | DTC value | DTC meaning | Fault attribute | The possible cause |
|-----|-----------|------------------------------|-----------------|--|
| 1 | C07688 | Controller Bus Off | Network fault | Bus interference |
| 2 | C10087 | Fail to communicate with EMS | Network fault | Poor contact/wire harness interference |
| 3 | C13187 | Fail to communicate with EPS | Network fault | Poor contact/wire harness interference |
| 4 | C10187 | Fail to communicate with TCU | Network fault | Poor contact/wire harness interference |
| 5 | C11D87 | Lost communication with GW | Network fault | Poor contact/wire harness interference |
| 6 | C14087 | Fail to communicate with BCM | Network fault | Poor contact/wire harness interference |
| 7 | C18687 | Fail to communicate with RRM | Network fault | Poor contact/wire harness interference |
| 8 | C15187 | Lost communication with ABM | Network fault | Poor contact/wire harness interference |
| 9 | C12887 | Fail to communicate with EPB | Network fault | Poor contact/wire harness interference |
| 10 | C21287 | Lost communication with ESCL | Network fault | Poor contact/wire harness interference |
| 11 | 911717 | Battery Voltage | Voltage fault | Power interference/wire harness damage |
| 12 | 911716 | Battery Voltage | Voltage fault | Power interference/wire harness damage |
| 13 | DA3087 | Fail to communicate with WCM | Network fault | Poor contact/wire harness interference |

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- 01** System Overview
- 02** Multimedia System Display Function
- 03** Multimedia System Structure and Function
- 04** Multimedia System Circuit Diagram
- 05** Multimedia System Fault Symptom and Fault Code List



Course Objectives

- Understand IVI functions
- Master IVI circuit diagram analysis method
- Master IVI fault diagnosis methods

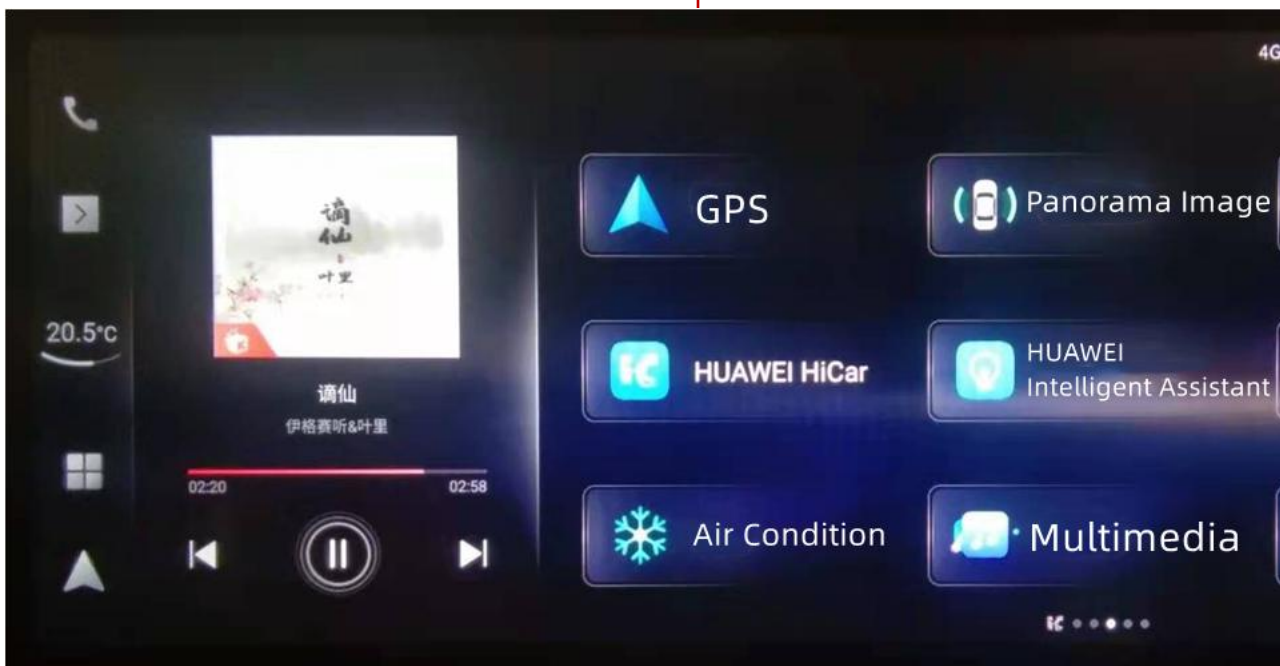
➤ 1、System overview

1. Multimedia system includes display function and function control

Multimedia MCU adopts 32-bit single-chip microcomputer as the main control unit of the system, which is mainly responsible for radio, audio DSP, power management, user input and output, I/O control, etc. The core CPU runs the Android 9 operating system.

The CPU is mainly responsible for functions such as multimedia player, Bluetooth, WiFi, navigation, and display drive.

The main functions of the product include FM/AM, USB multimedia audio and video playback, map navigation, bluetooth phone, Bluetooth music, WIFI function (dual-band), reverse radar, external DVR, built-in AVM, 4G Internet access, voice recognition, etc.



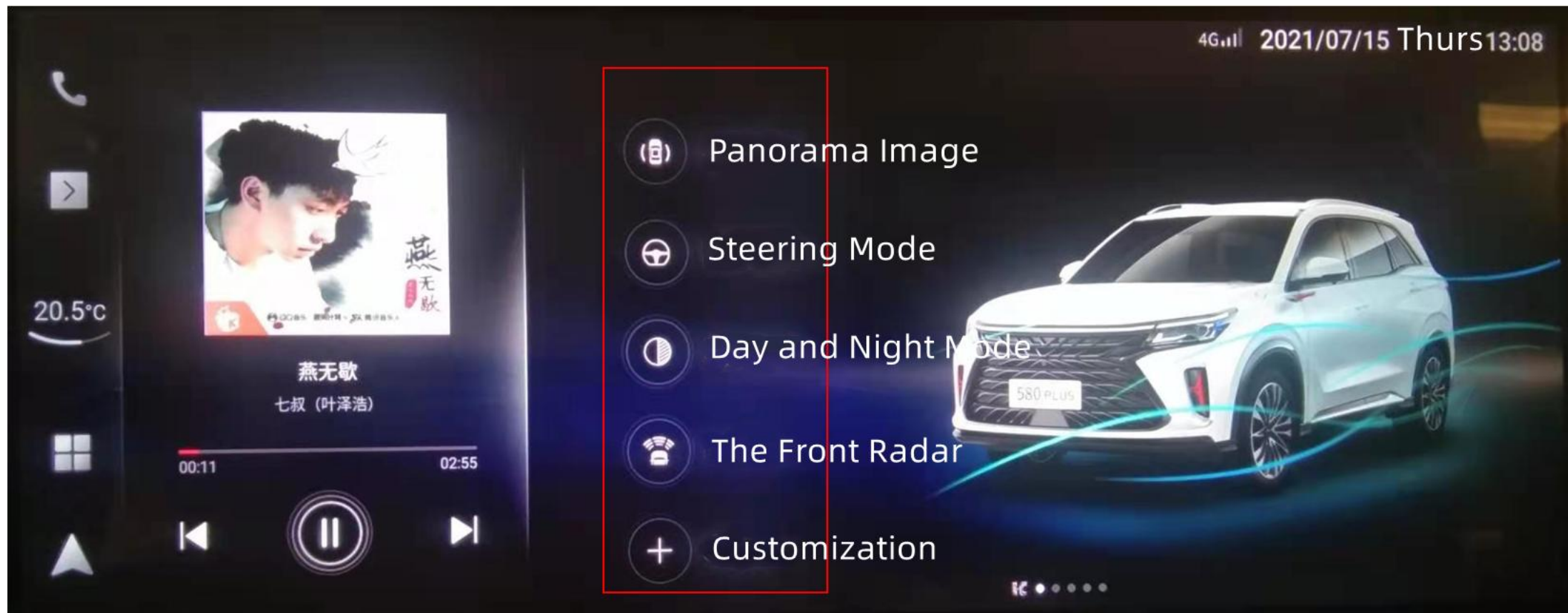
➤ 2、 Functions displayed on multimedia system

中央信息系统IVI



1、 The functions displayed on the main screen of multimedia system.

The content displayed on the first main interface.



➤2、 Functions displayed on multimedia system

中央信息系统IVI



1.1、 The functions displayed on the main screen of multimedia system.

Panoramic parking displayed content



➤ 2、 Functions displayed on multimedia system

中央信息系统IVI



1.2、 The functions displayed on the main screen of multimedia system.

The contents displayed on steering mode setting



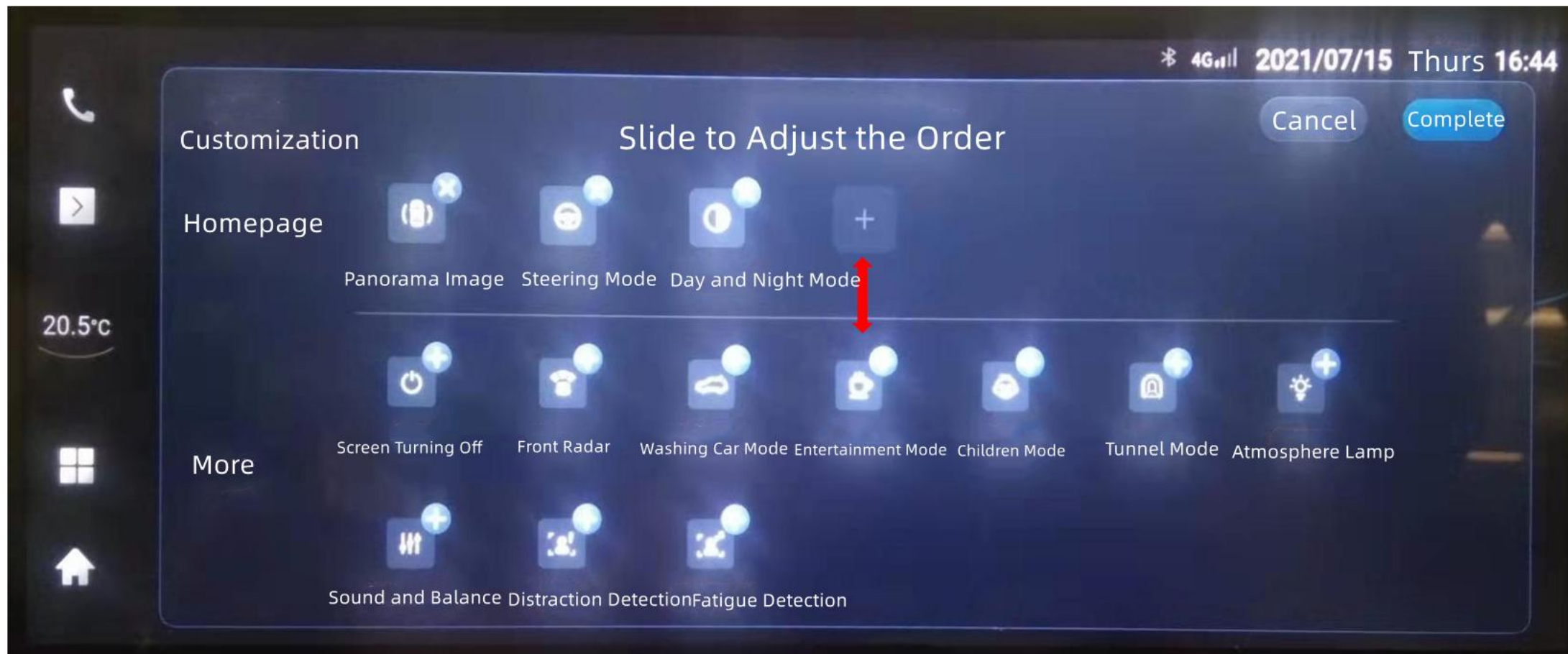
➤ 2、Functions displayed on multimedia system

中央信息系统IVI



1.3、The functions displayed on the main screen of multimedia system.

Customization displayed contents



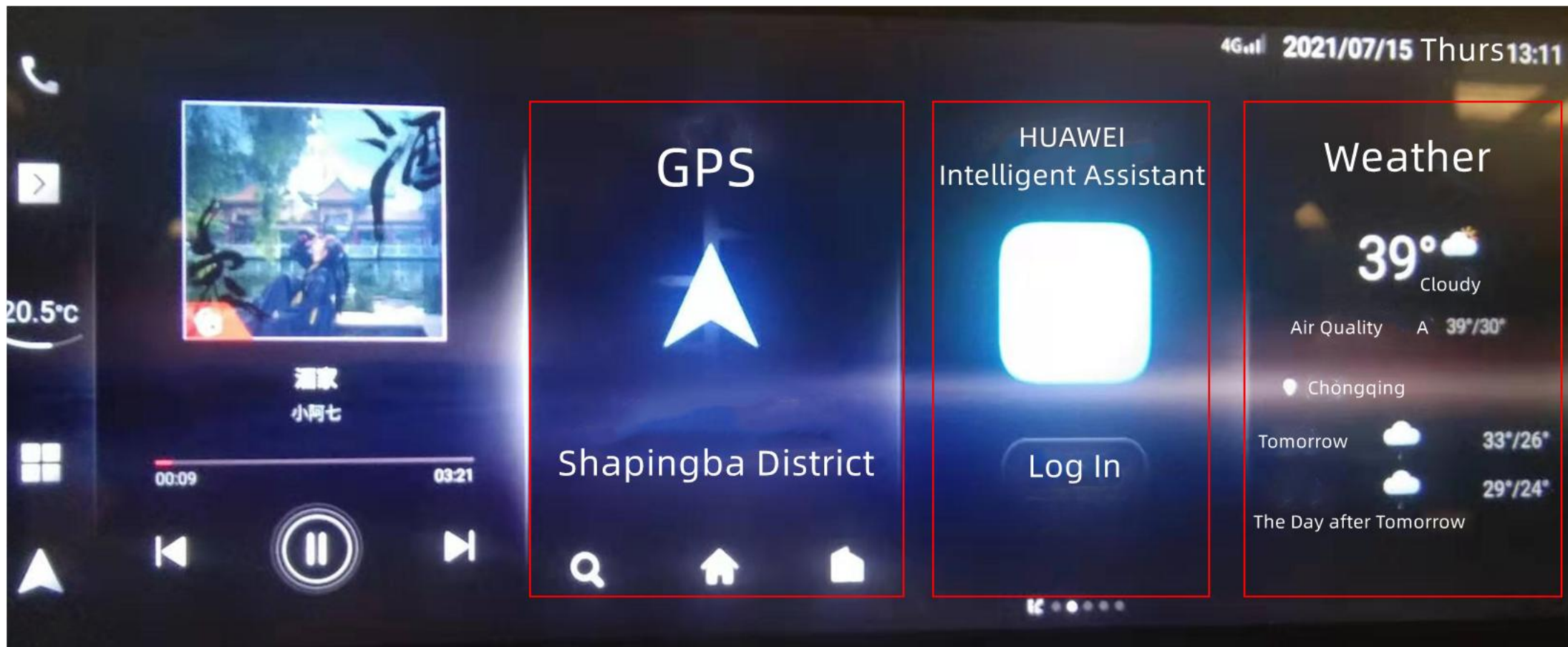
➤ 2、Functions displayed on multimedia system

中央信息系统IVI



2、 The functions displayed on the main screen of multimedia system.

The content displayed on the second main interface



➤ 2、 Functions displayed on multimedia system

中央信息系统IVI



3、 The functions displayed on the main screen of multimedia system.

The contents displayed on the third main interface.



➤ 2、 Functions displayed on multimedia system

中央信息系统IVI



3.1、 The functions displayed on the main screen of multimedia system.

Content displayed on navigation interface



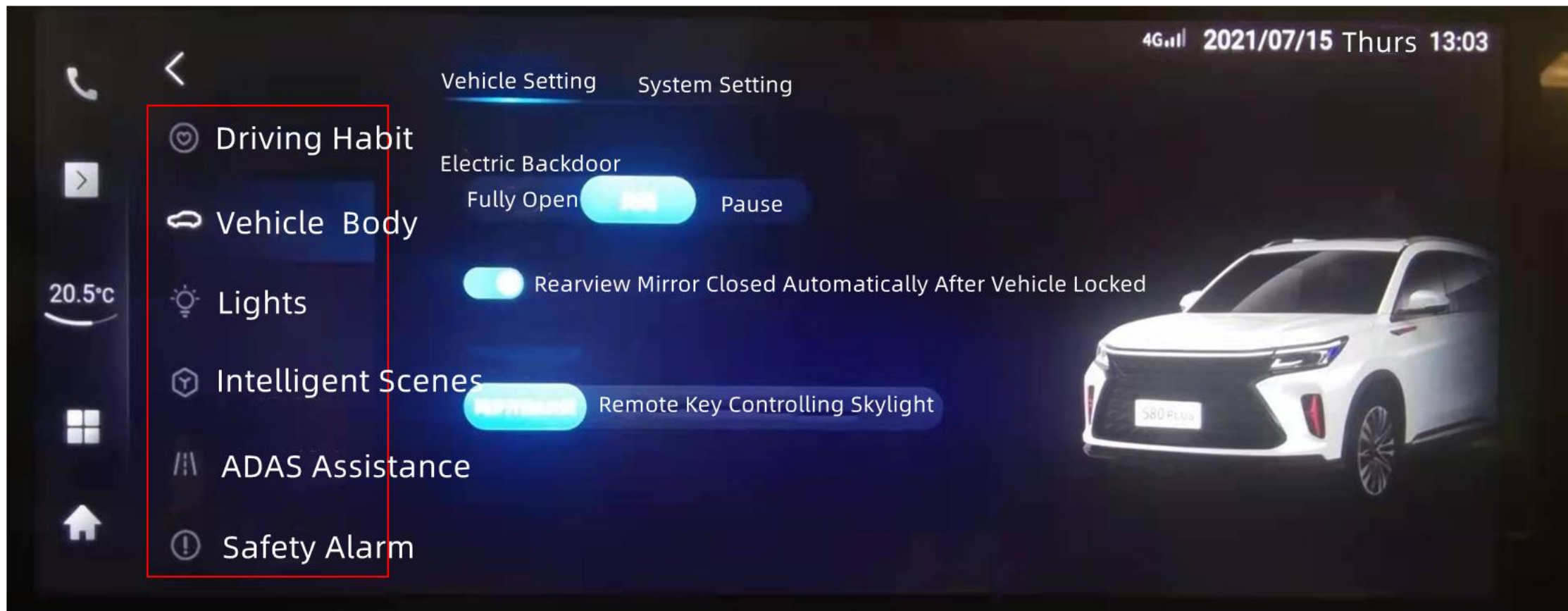
➤ 2、 Functions displayed on multimedia system

中央信息系统IVI



3.2、 The functions displayed on the main screen of multimedia system.

Content displayed on vehicle settings



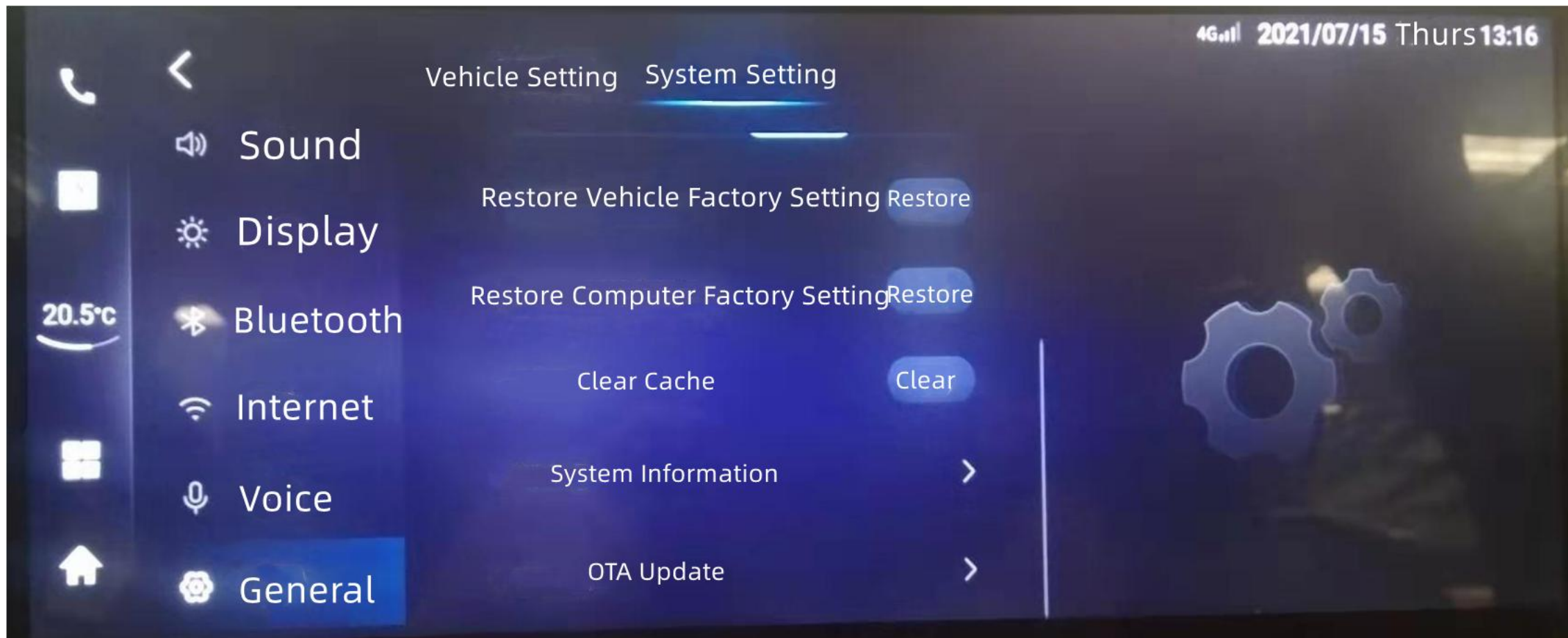
➤ 2、 Functions displayed on multimedia system

中央信息系统IVI



3.3、 The functions displayed on the main screen of multimedia system.

Content displayed on system settings.



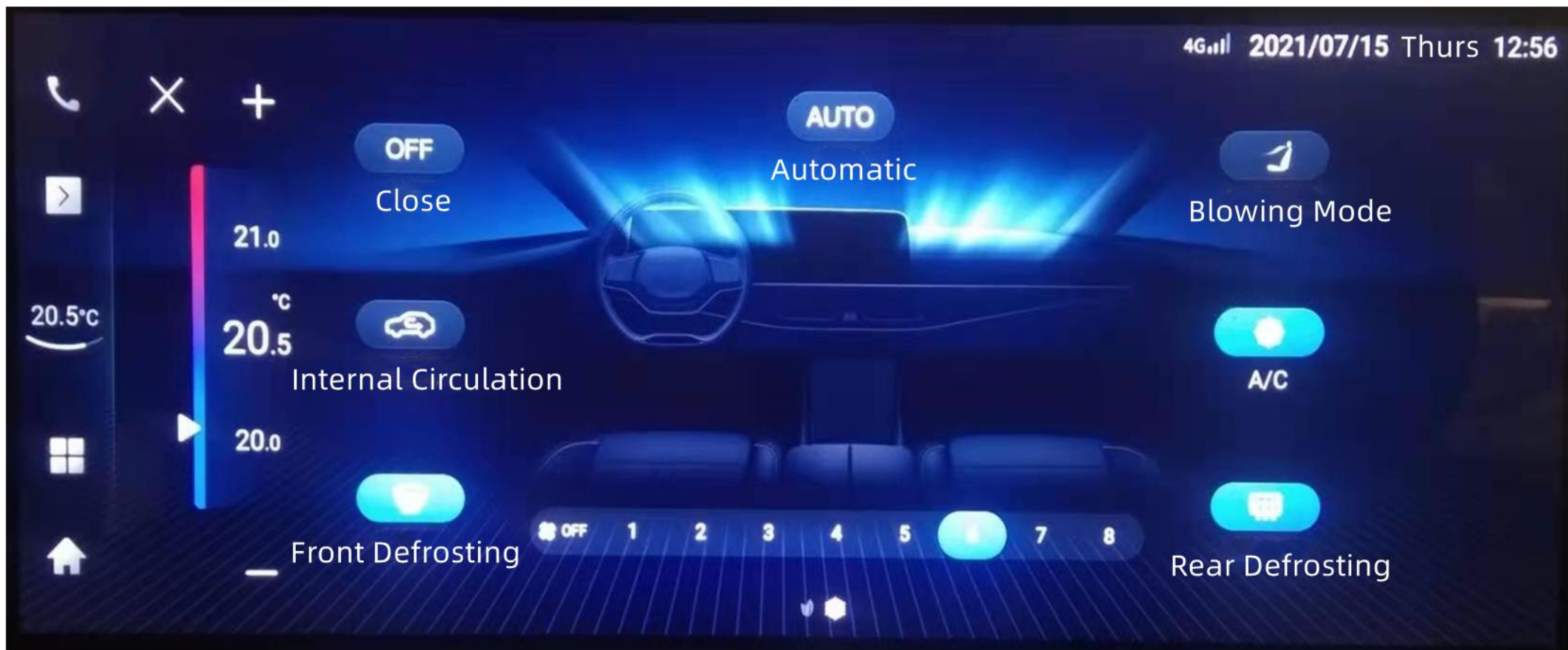
➤ 2、 Functions displayed on multimedia system

中央信息系统IVI



3.4、 The functions displayed on the main screen of multimedia system.

Content displayed on A/C setting



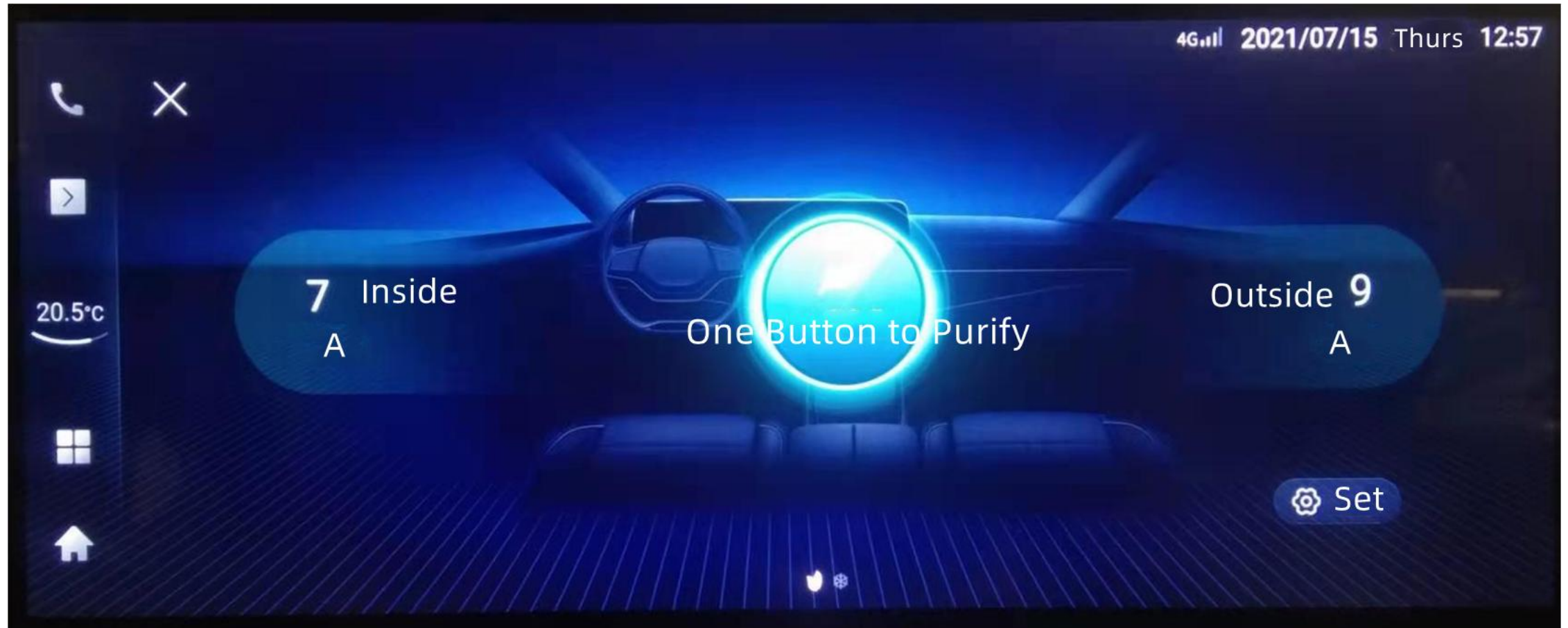
➤ 2、Functions displayed on multimedia system

中央信息系统IVI



3.5、 The functions displayed on the main screen of multimedia system.

The content displayed on ONE BUTTON TO PURIFY setting.



➤ 2、 Functions displayed on multimedia system

中央信息系统IVI



3.6、 The functions displayed on the main screen of multimedia system.

Content displayed on multimedia setting



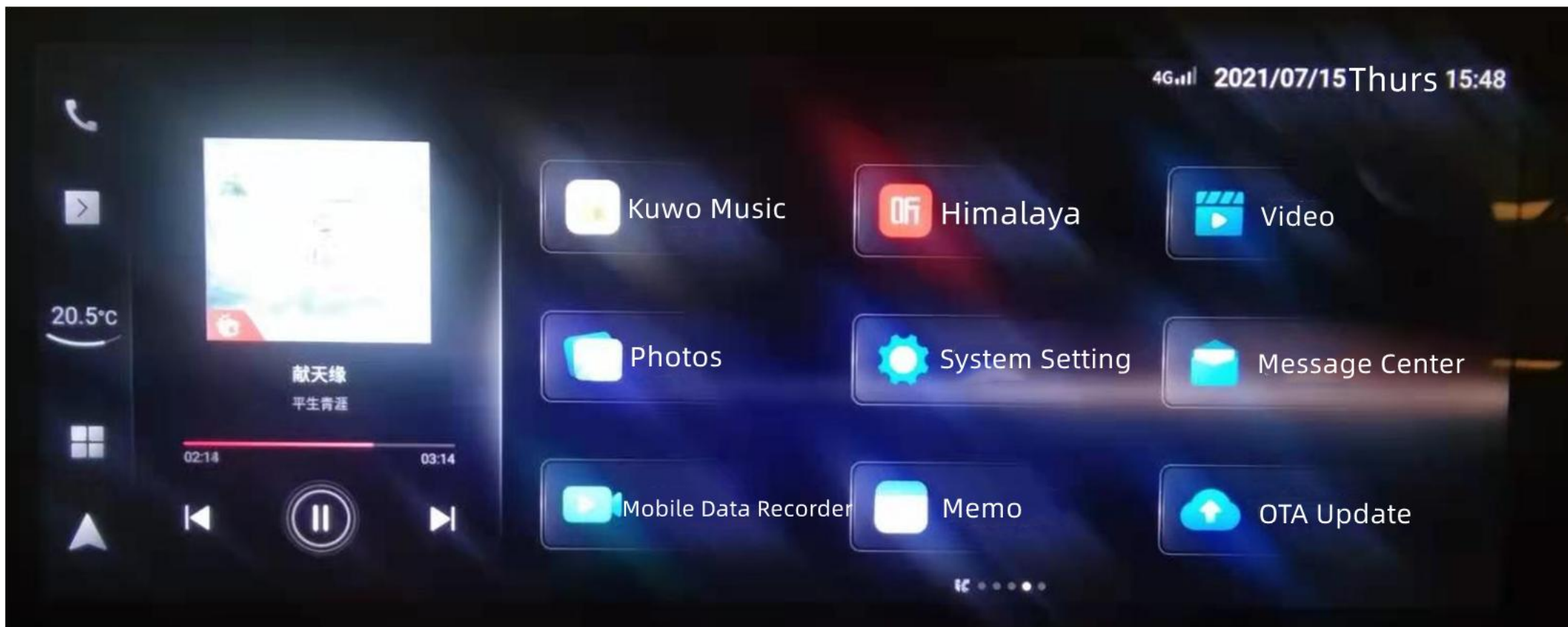
➤ 2、 Functions displayed on multimedia system

中央信息系统IVI



4、 The functions displayed on the main screen of multimedia system.

The content displayed on 4th main interface



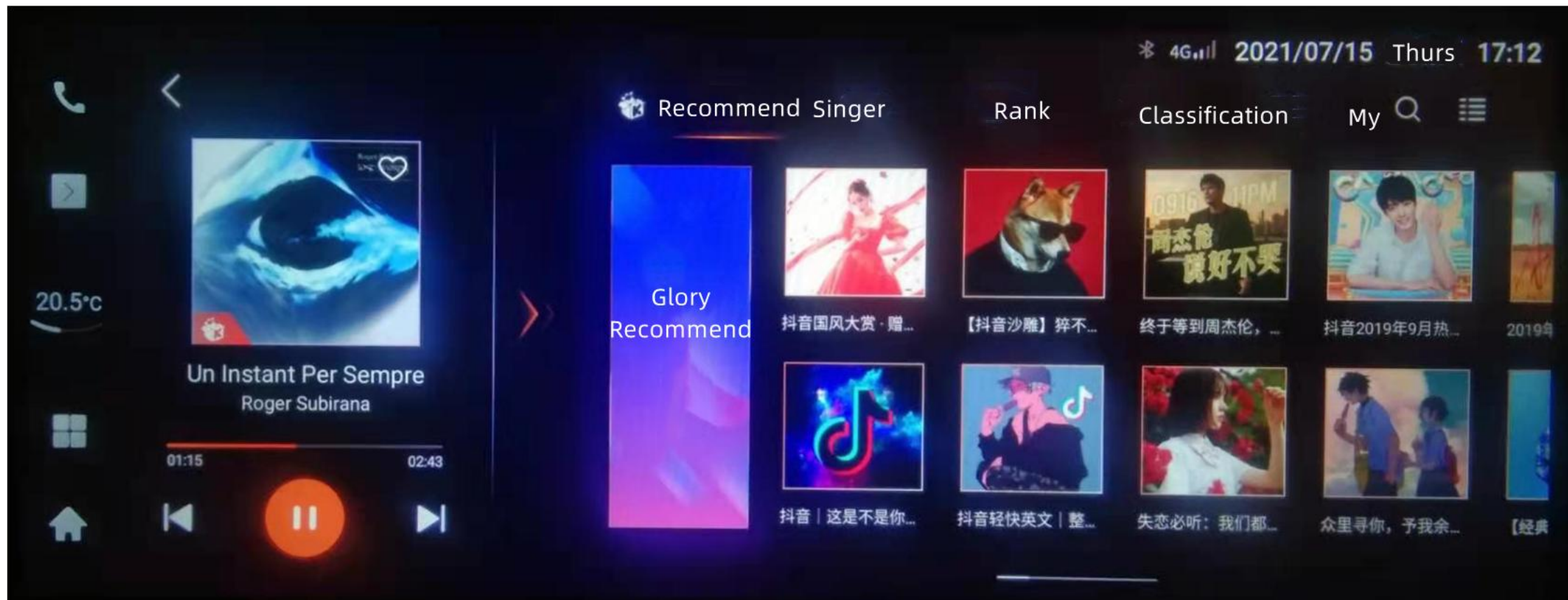
➤ 2、 Functions displayed on multimedia system

中央信息系统IVI



4.1、 The functions displayed on the main screen of multimedia system.

The content displayed on KUWO Music interface



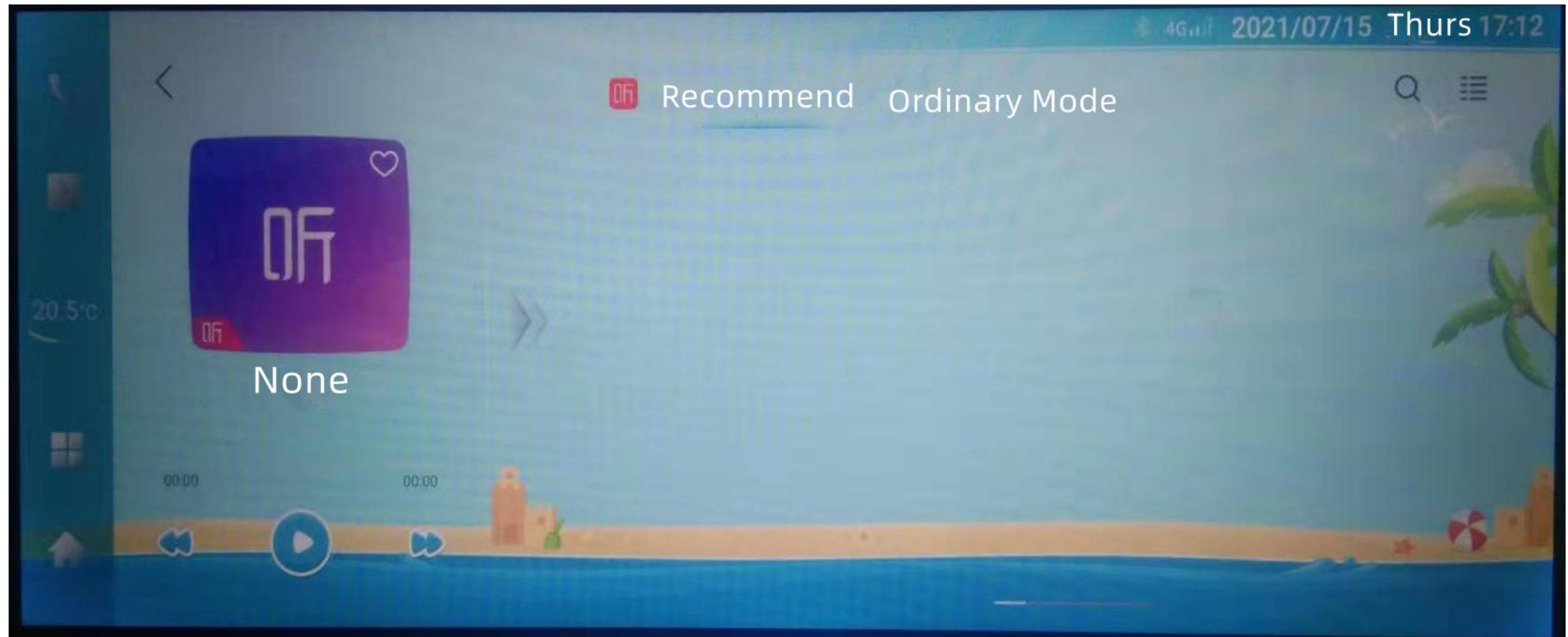
➤ 2、Functions displayed on multimedia system

中央信息系统IVI



4.2、The functions displayed on the main screen of multimedia system.

The content displayed on Himalaya interface



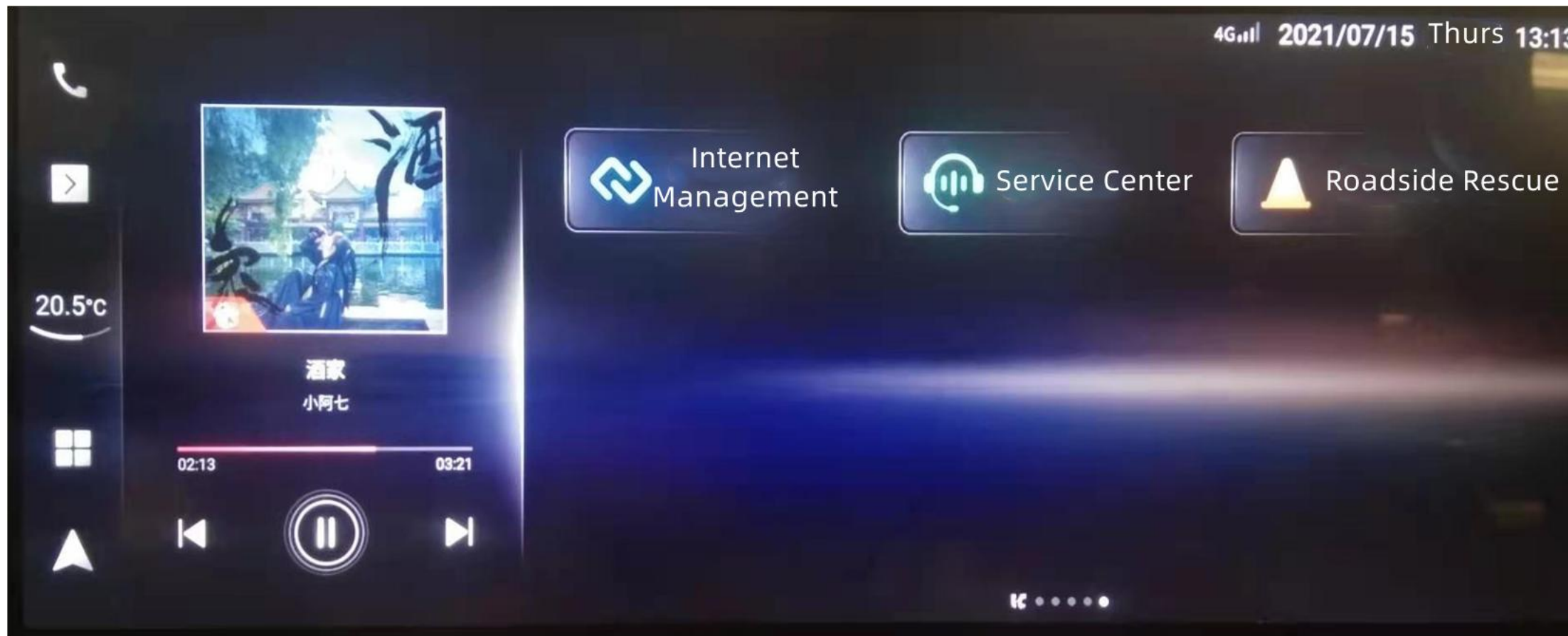
➤ 2、Functions displayed on multimedia system

中央信息系统IVI



5、 The functions displayed on the main screen of multimedia system.

The content displayed on the 5th main interface



➤ 3、Structure and function of multimedia system

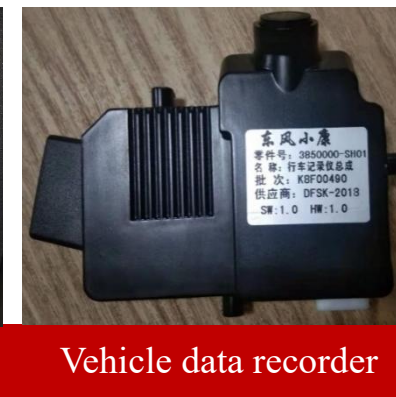
中央信息系统IVI



1、Structure of multimedia system

Multimedia system structure is mainly divided into 9 parts:

- 1) Host part
- 2) Display screen
- 3) Power supply and antenna
- 4) Vehicle data recorder
- 5) Microphone, USB input, face recognition part
- 6) Panoramic parking camera
- 7) Ultrasonic sensor part
- 8) Speaker part
- 9) Face recognition part



2、 Functions of multimedia system components

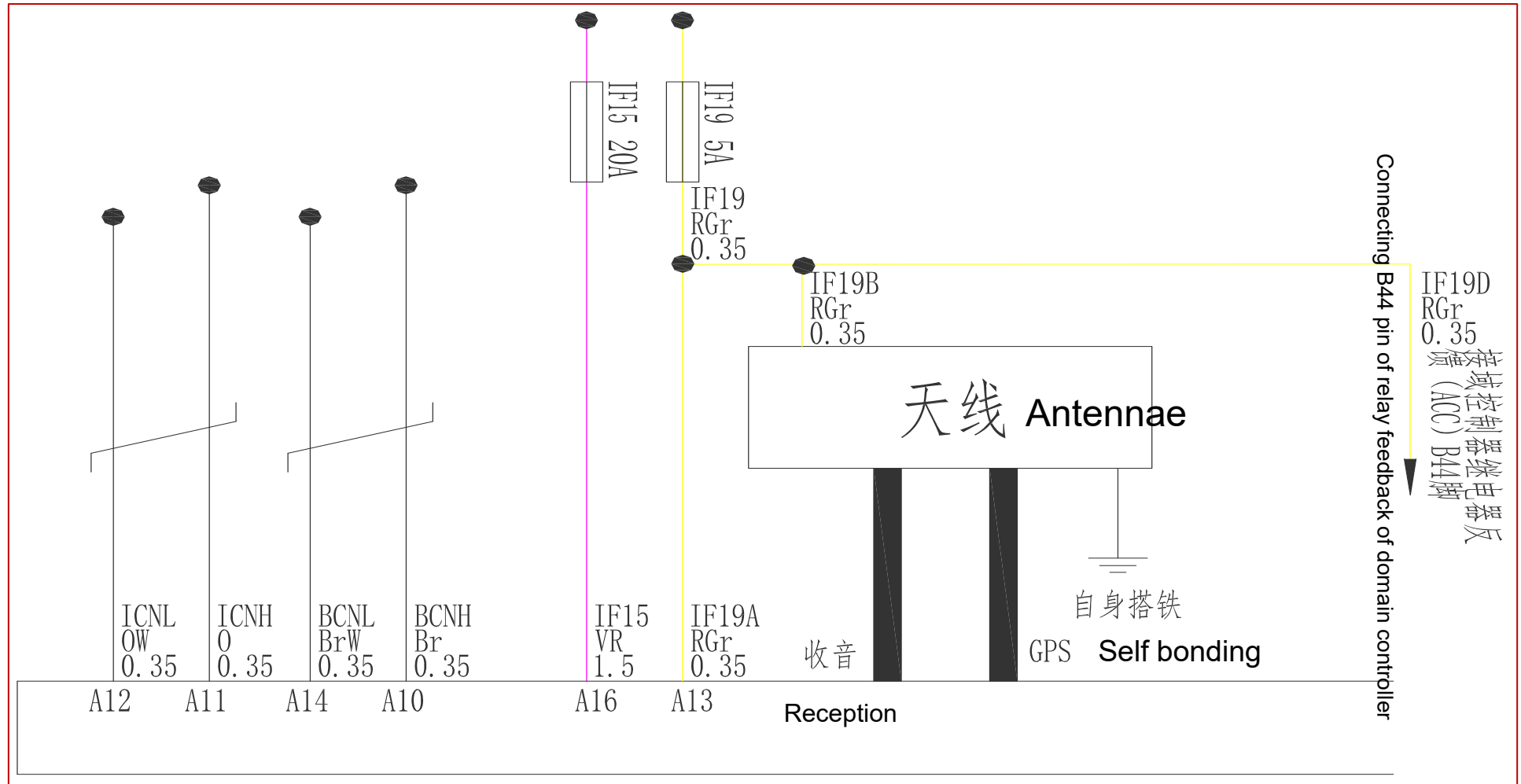
1. Host part: receiving the artificial signal and the signal of each sensor are processed and executed by the actuator.
2. Display screen: the display screen has two functions, one is information display; another is the touch-screen switch function;
3. Power supply and antenna part: provide power to the host part to make the host work, antenna is used to receive external information and signal amplification.
4. The part of vehicle data recorder: record the information in front of the vehicle through the camera and store the information, which can be displayed and played back through the display screen.
5. Microphone and USB input: receive microphone voice information for voice control; The USB port is used to transfer information files.
6. Panoramic parking camera: image acquisition is carried out through the front, rear and right cameras. After processing by the host, image information is displayed on the display screen according to requirements
7. Ultrasonic sensor part: through the ultrasonic sensor to measure the distance of obstacles, the signal is provided to the host, the host controls screen to display alarm information and buzzer alarm.
8. Speaker part: receive host audio voltage signal, and convert the audio voltage signal into audio through the speaker .
9. Face recognition part: face recognition system can collect face information to verify the driver's identity, and operate car entertainment preferences, navigation, atmosphere lights and other configurations. At the same time, it can evaluate the fatigue state of the driver according to blink frequency, yawn, nodding and other head movements, and identify dangerous movements such as phone calls, smoking, and timely warning drivers pay attention to driving safety.

➤ 4、Circuit diagram of multimedia system

中央信息系统IVI



1、Power supply and antenna part circuit diagram

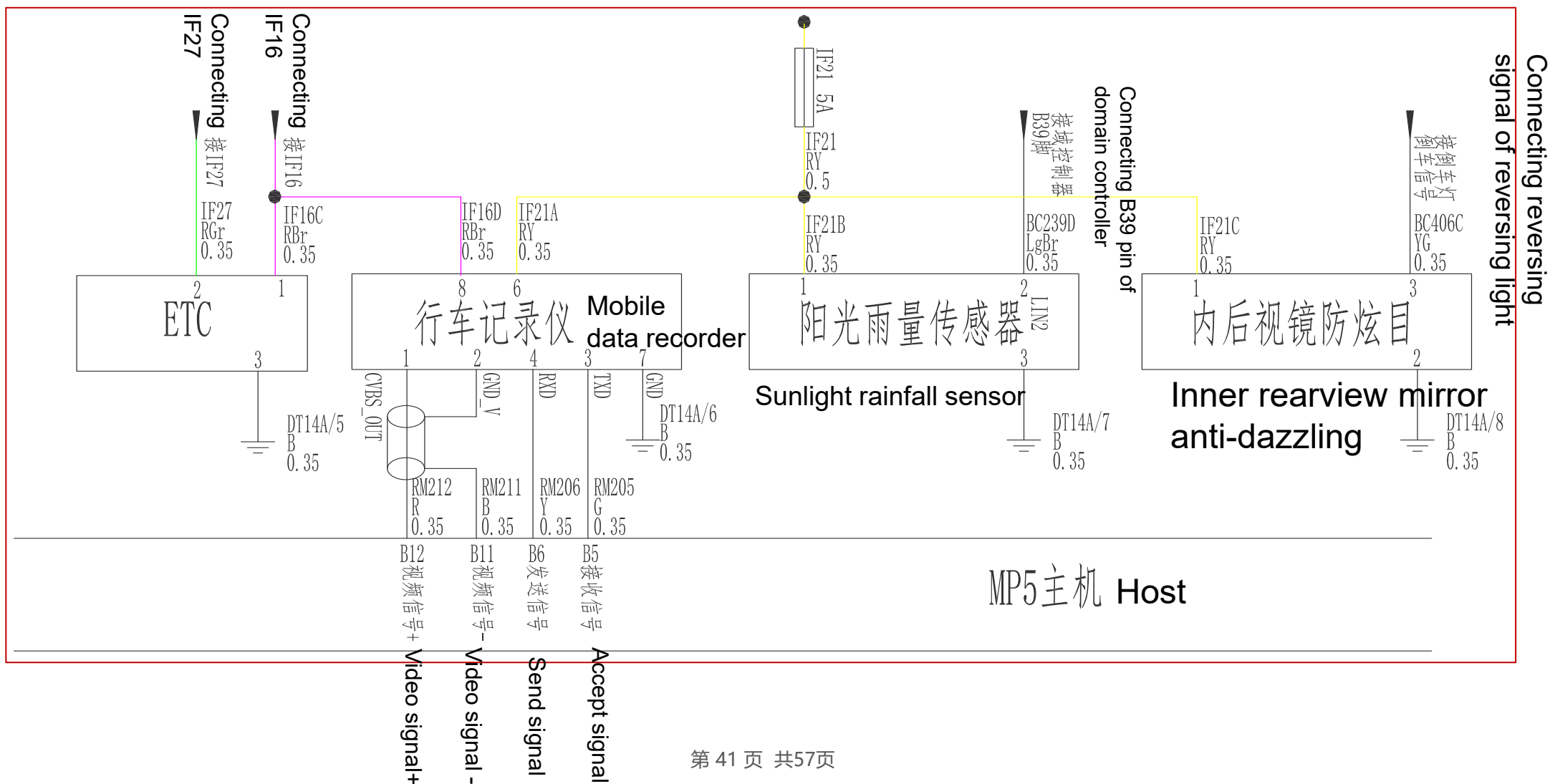


➤ 4、Circuit diagram of multimedia system

中央信息系统IVI



2、Circuit diagram of vehicle data recorder

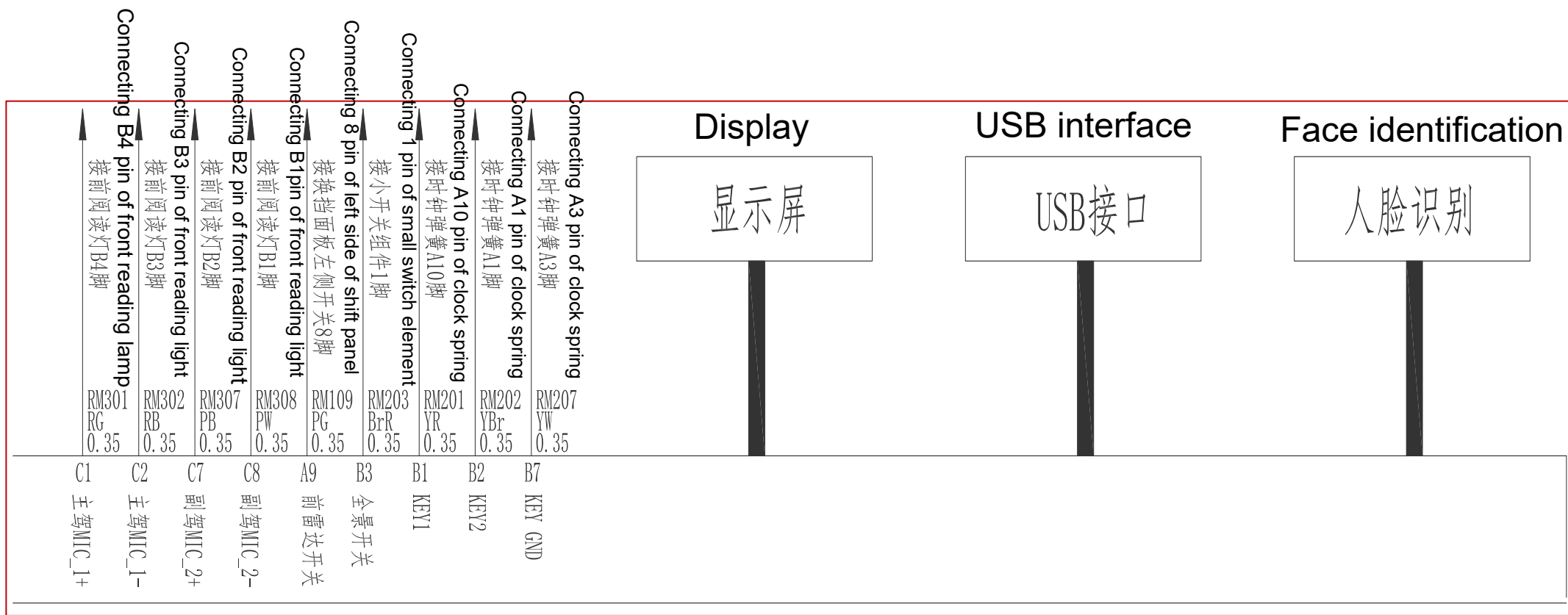


➤ 4、Circuit diagram of multimedia system

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3、Circuit diagram of microphone, display screen, USB, face recognition parts



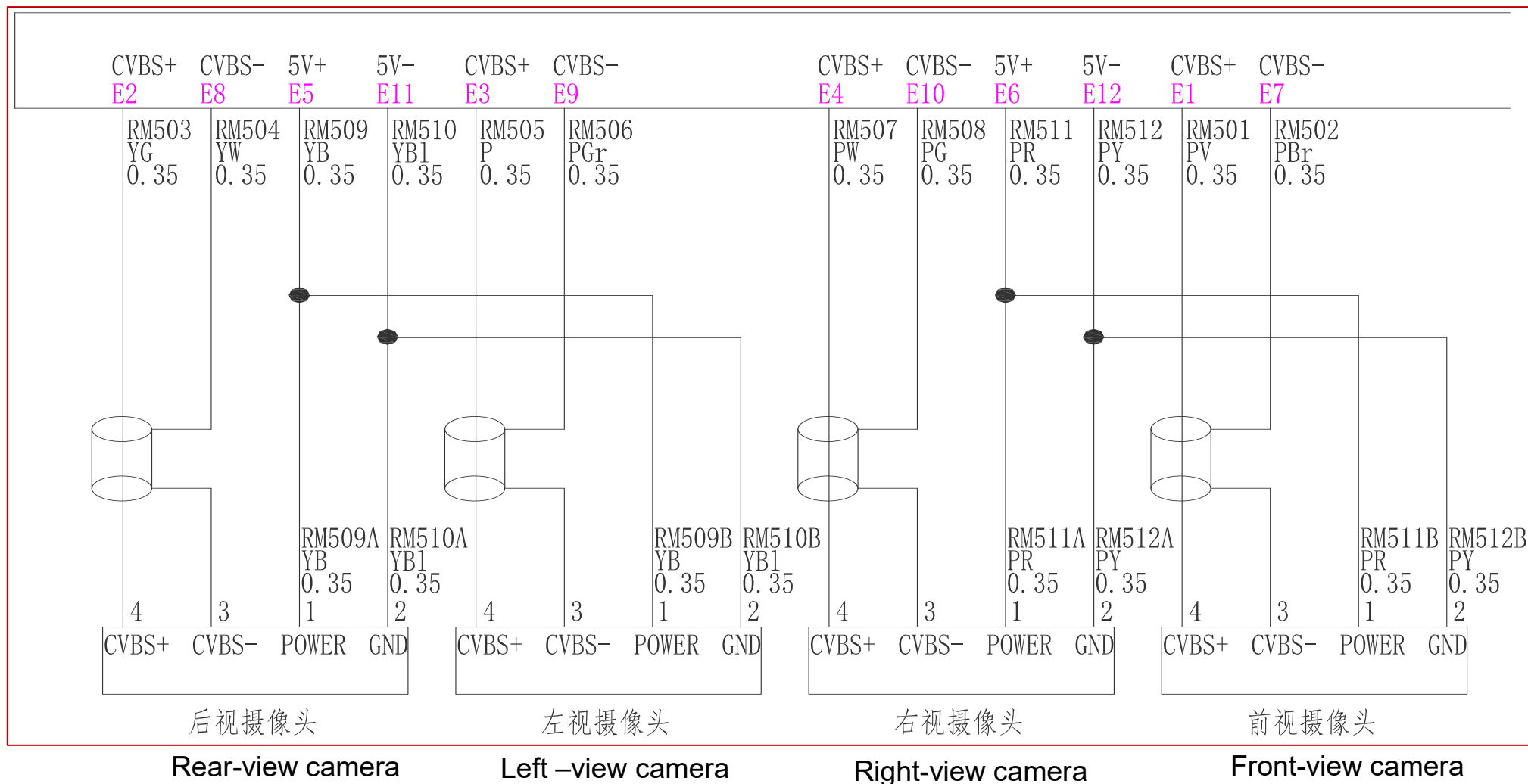
Panoramic switch
Front radar switch
Co-driver's seat MIC-2-
Co-driver's seat MIC-2+
Driver's seat MIC-1-
Driver's seat MIC-1+

➤ 4、Circuit diagram of multimedia system

中央信息系统IVI



4、Circuit diagram of panoramic parking

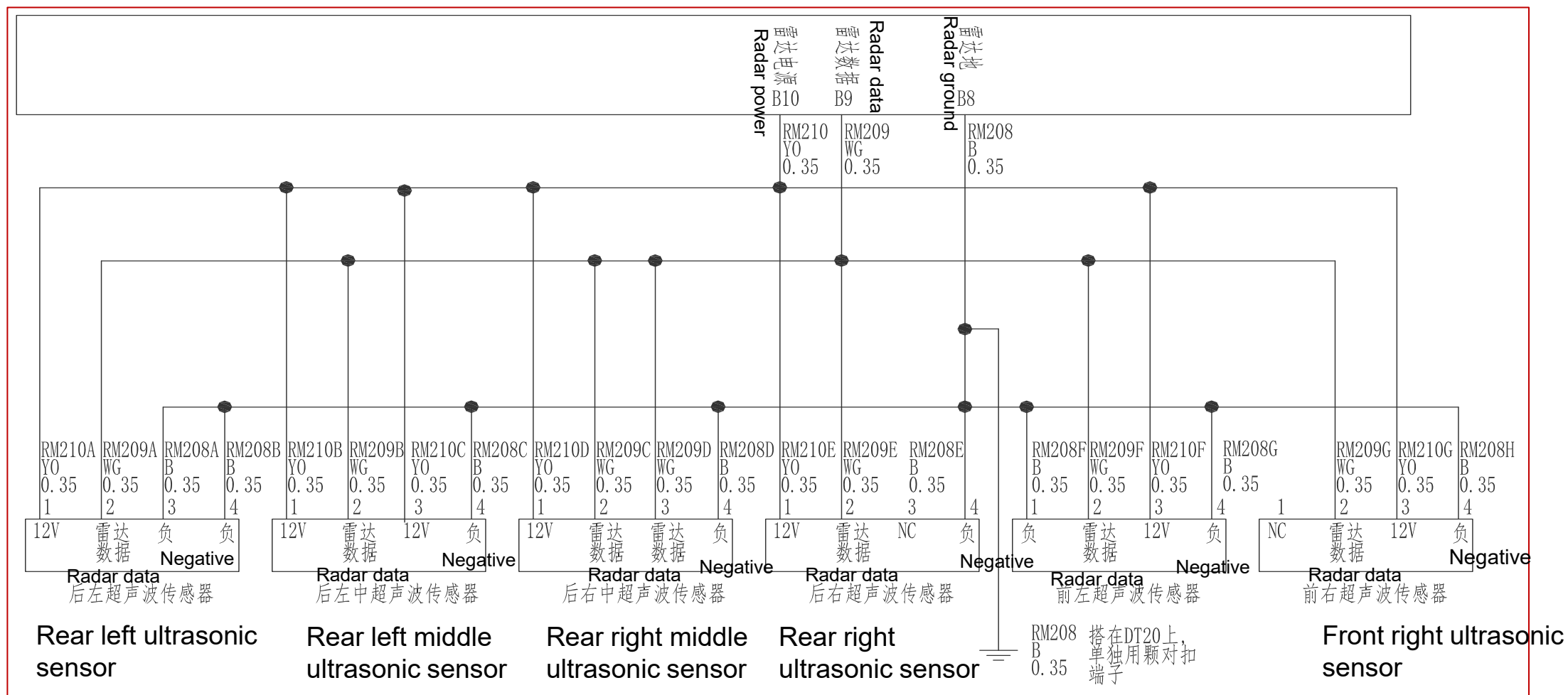


➤ 4、Circuit diagram of multimedia system

中央信息系统IVI



5、Circuit diagram of front and rear ultrasonic radar



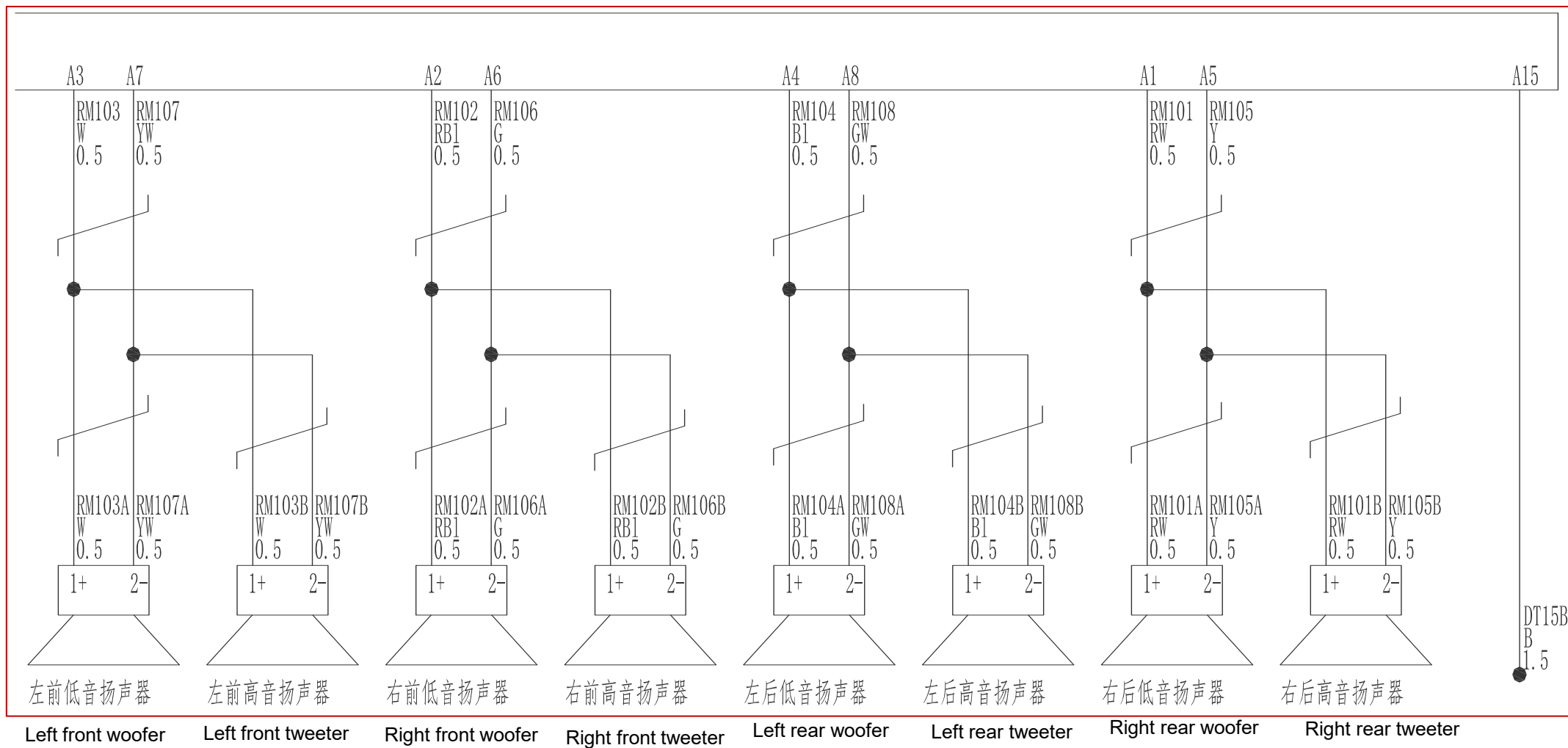
Connecting DT20
Individually use one
buckle terminal

➤ 4、Circuit diagram of multimedia system

中央信息系统IVI



6、Circuit diagram of speaker



➤ 5、Multimedia system fault symptom and fault code list

中央信息系统IVI



| NO. | Fault Symptom | Suspicious Parts | Supplement |
|-----|---|--|--|
| 1 | Multimedia cannot be opened / The screen turns black | Display screen | Judging by substitution |
| | | Multimedia host fuse | Measuring the power supply voltage of the host |
| | | Multimedia host | Judging by substitution |
| | | Wire harness of display screen | Judging by substitution |
| | | Wiring harness of multimedia host | Measure the power plug signal |
| 2 | Display screen crashes | Display screen | Judging by substitution |
| | | Multimedia host | Judging by substitution |
| 3 | The screen blinks, then goes blank | Display screen | Judging by substitution |
| | | Multimedia host | Judging by substitution |
| 4 | The touch fails | Display screen | Judging by substitution |
| | | Multimedia host | Judging by substitution |
| 5 | The speaker has no sound | Audio settings of multimedia host | Restoring factory setting |
| | | Multimedia host | Judging by substitution |
| | | Speaker | Judging by measurement |
| | | Speaker harness | Judging by measurement |
| | | External power amplifier (configuration with external power amplifier) | Judging by measurement |
| 6 | Noise or poor sound quality | Audio settings of multimedia host | Restoring factory setting |
| | | Audio source problem (MP3/ video file problem) | Judging by replacing audio source |
| | | Multimedia host | Judging by substitution |
| | | Speaker | Judging by measurement |
| | | Interference in the car | Comparing with the same model |

➤ 5、Multimedia system fault symptom and fault code list

中央信息系统IVI



| NO. | Fault Symptom | Suspicious Parts | Supplement |
|-----|--|---|--|
| 7 | Steering wheel switch doesn't work | Steering wheel switch | Measure the voltage of the control pin at the power base |
| | | Multimedia host | Judging by substitution |
| | | Wire harness | Judging by measurement |
| 8 | GPS fails to locate | The test position has obstacle | Driving the car into open area |
| | | Multimedia host | Judging by substitution |
| | | GPS antenna and cable | Judging by substitution |
| 9 | The radio can't receive signal or signal is poor | Signal in test position is poor or there is interference signal | Compare with other vehicles |
| | | Multimedia host | Judging by substitution |
| | | Radio antenna | Judging by substitution |
| | | Radio antenna amplifier | Judging by substitution |
| | | Radio antenna cable | Judging by substitution+Judging by measurement |
| | | There is interference in the car | Compare with the same model |
| 10 | The screen turns black when reversing | Multimedia host | Judging by substitution |
| | | Reversing camera | Judging by substitution |
| | | cable | Judging by substitution |
| 11 | Can't enter AVM | Multimedia host | Judging by substitution |
| | | AVM switch | Judging by measurement |
| | | cable | Judging by measurement |

➤ 5、Multimedia system fault symptom and fault code list

中央信息系统IVI



| NO. | Fault Symptom | Suspicious Parts | Supplement |
|-----|--|---|--|
| 12 | AVM has no picture or incomplete display of all four cameras | Multimedia host | Judging by substitution |
| | | Camera | Judging by substitution |
| | | Cable | Judging by substitution |
| 13 | 4G has no signal (or poor) | Signal in test position is poor or there is interference signal | Comparing with the cell phone signal reference |
| | | Multimedia host | Judging by substitution |
| | | There is interference in the car | Compare with the same model |
| 14 | WIFI cannot connect the external hotspot | Signal in test position is poor or there is interference signal | Comparing with the cell phone signal reference |
| | | Multimedia host | Judging by substitution |
| 15 | Bluetooth phones don't work well | Multimedia host | Judging by substitution |
| | | Signal in test position is poor or there is interference signal | Comparing with the cell phone signal reference |
| | | The mobile phone is far from the multimedia host | Testing with the phone in the car |
| | | MIC and cable | Measurement+Judging by substitution |
| 16 | Low speech recognition rate | Multimedia host | Judging by substitution |
| | | MIC and cable | Measurement+ Judging by substitution |
| | | Excessive ambient noise | Testing in another environment |
| 17 | The DVR picture is stuck | DVR box (without card, etc.) | Checking+Judging by substitution |
| | | Multimedia host | Judging by substitution |

➤ 5、Multimedia system fault symptom and fault code list

中央信息系统IVI



| NO. | Fault Symptom | Suspicious Parts | Supplement |
|-----|----------------------------|------------------------|---|
| 18 | USB cannot play | Multimedia host | Judging by substitution |
| | | Usb Disk Compatibility | Change to another brand USB disk |
| | | Cable | Judging by substitution |
| 19 | USB can't charge the phone | Multimedia host | Judging by substitution |
| | | Phone cable | Use the original charging cable of the mobile phone |
| | | Vehicle cable | Judging by substitution |
| 20 | Abnormal radar display | Multimedia host | Judging by substitution |
| | | Radar detector | Judging by substitution |
| | | Cable | Judging by substitution |
| 21 | The DMS works abnormally | Multimedia host | Judging by substitution |
| | | DMS camera | Judging by substitution |
| | | DMS cable | Judging by substitution |

➤ 5、Multimedia system fault symptom and fault code list

中央信息系统IVI



| DTC displayed code | DTC meaning | DTC displayed code | DTC meaning |
|--------------------|-----------------------------------|--------------------|--|
| B111716 | The battery voltage is too low | U023587 | Communication with MRR is lost |
| B111717 | The battery voltage is too high | U1A3087 | Communication with WCM is lost |
| U007688 | CAN BUS OFF | U012287 | Network communication with ESP is lost |
| U014087 | Communication with BCM is lost | U015987 | Network communication with APA is lost |
| U013187 | Communication with EPS is lost | U020887 | Network communication with DSM is lost |
| U010087 | Communication with EMS is lost | U023087 | Network communication with PLG is lost |
| U012887 | Communication with EPB is lost | U010187 | Network communication with TCU is lost |
| U023287 | Communication with SRR_R1 is lost | U028887 | Communication with MSC is lost |
| U015587 | Communication with IC is lost | U015887 | Communication with HUD is lost |
| U018487 | Communication with DVR is lost | U014687 | Communication with GW is lost |

C O N T E N T S

01

Introduction and
maintenance of
intelligent
instrument IC

02

Introduction and
maintenance of
central information
system

03

**Wireless charging
WCM difference and
maintenance**



CONTENTS

- 01** Overview
- 02** System composition and working principle
- 03** Circuit diagram of wireless charging system
- 04** Fault code of wireless charging system



Course objectives

- Can tell the composition and working principle of GLORY 580 WCM

1. What is a wireless charging system

Vehicle-mounted wireless charging system uses electromagnetic induction principle to charge mobile phones and other handheld devices, and transmits energy through the magnetic field coupling of transmitting coil and receiving coil. There is respectively a coil in the sender and receiver end. And the sender coil is hidden in the car, converting 12V power supply into electromagnetic signals; The transmitting coil is attached to the phone. When alternating currents are applied to the transmitting coil, the transmitting coil will generate a changing magnetic field. The magnetic field lines generated by the transmitting coil pass through the nearby transmitting coil, forming mutual inductance and generating voltage on the receiving coil.

2. Significance of vehicle-mounted wireless charging system

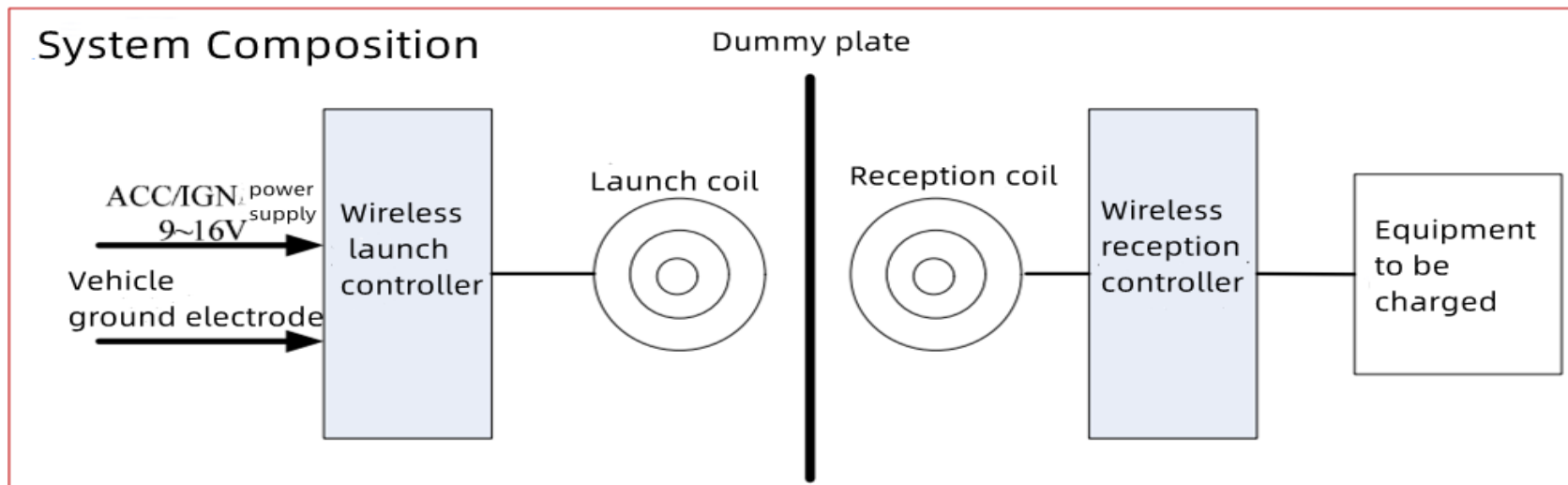
- 1) Get rid of the winding of charging cable harness, making driving safer.
- 2) Stop worrying about finding a charger.
- 3) Intelligently stop charging function. The phone automatically stops charging when it is picked up, making the call safer.
- 4) Intelligently recover charging function. The phone automatically recharges after being placed on it, making it easier to use.

➤ 2、System composition and working principle

无线充电WCM



1. The composition of system



| NO. | The name of system components | unit | Tips |
|-----|------------------------------------|------|---|
| 1 | Wireless charging transmitter (TX) | 1 | Including wireless transmitting circuit board, transmitting coil, 1 shell |
| 2 | Wireless charging receiver (RX) | 1 | Receiving coil |
| 3 | Mat | 1 | |

➤ 2、 System composition and working principle

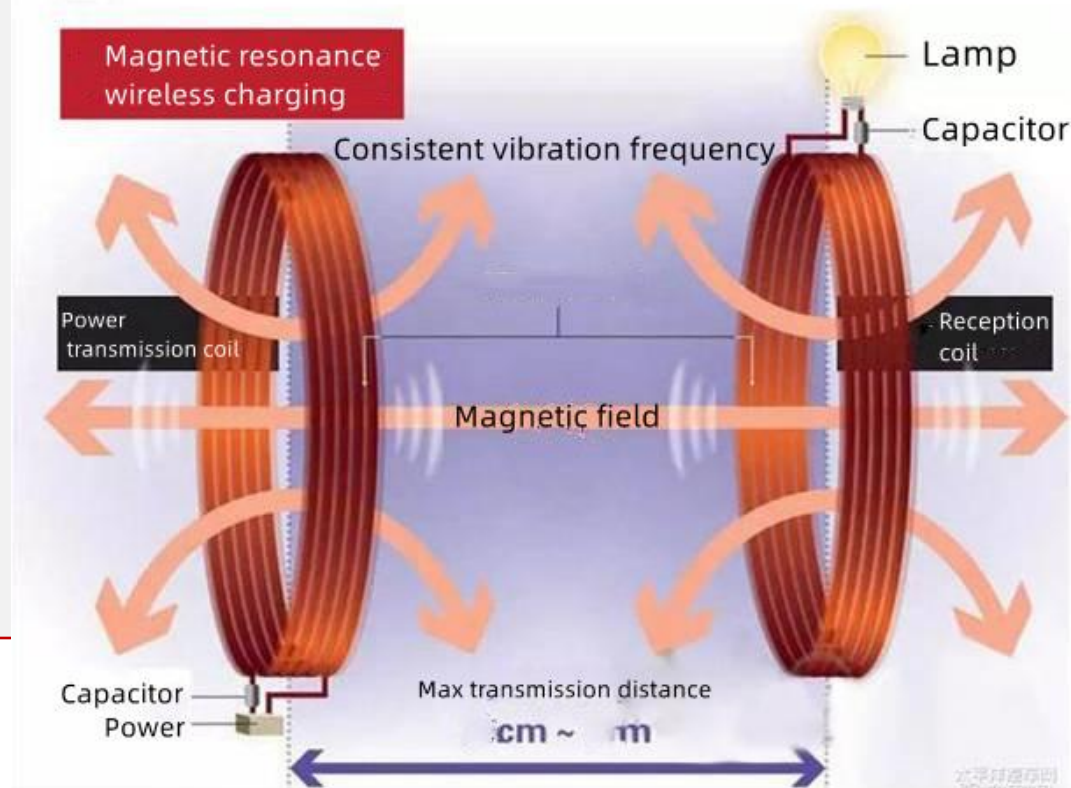
无线充电WCM



2. The principle of magnetic resonance inductive wireless charging technology

Magnetic resonance type also known as the near field resonance type. It consists of energy transmitting device, and the energy receiver. When two devices are adjusted to the same frequency, or on a specific frequency resonance, they can exchange each other's energy, its principle is the same as the resonance principle of the sound. Coils of the same vibration frequency arranged in a magnetic field can supply power from one to the other

The resonance circuit can also bring resonance, one of the live one launches resonance circuit to generate a magnetic field, and another resonant receiving circuit. When the two resonant circuit vibration is the same, transmission of the radio conversion can be realized.

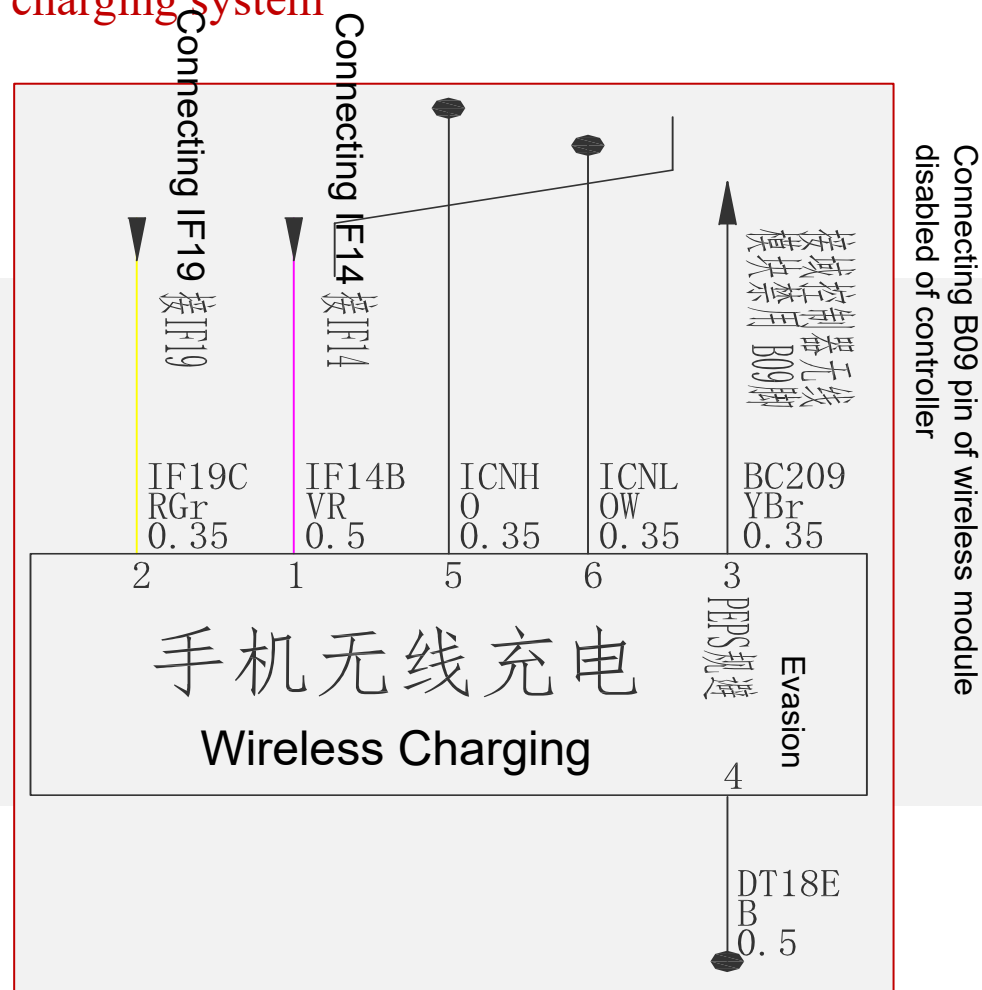


➤ 3、Circuit diagram of wireless charging system

无线充电WCM



Circuit diagram of wireless charging system



➤ 4、Fault codes of wireless charging system 无线充电WCM



Fault codes of wireless charging system

| DTC displayed codes | DTC meaning |
|---------------------|------------------------------------|
| U007688 | CAN bus error |
| B111716 | The voltage of battery is too low |
| B111717 | The voltage of battery is too high |
| B252000 | The temperature is too high |
| B252001 | With unknown objects |
| U014087 | Lost communication with BCM |
| U014687 | Lost communication with gateway |



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