Haloview

User Manual

2.4G Digital 720P LCD Wireless Monitor

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

Contents

● **Storage**

1. Do not expose the monitor to extreme heat, cold, or sudden temperature changes. The storage temperature of this device is -30 to + 80°C or -22 to +176°F . The operating temperature is -20 to +70°C or -4 to 158°F with the humidity under RH90%.
2. Never use this device in environments with excessive moisture, dust or smoke.
3. Avoid dropping or striking this device.
4. Never puncture, scratch or use abrasive cleaning materials on this device.
5. Leave at least a 2" space between the monitor and walls, cabinets or other objects to allow adequate air circulation around the device.
6. The monitor is not designed to be waterproof.

● **Operating Precautions**

1. The device can be powered by a 10 -32 volt automotive battery or vehicle electrical system.
2. 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 rear view camera 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 authorized dealer. The monitor is a complex device. Any disassembly or modification may lead to damage and void the warrantee.

● **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. Never use strong solvents such as thinner or benzine, as they might damage the finish of the device.

● **Declaration of conformity**

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.
(2) This device must accept any interference received, including interference that may cause undesired operation.

FC   RED

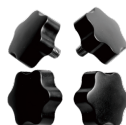|		
U-Support Bracket X 1	**Center Mount Bracket (7'' monitor) X 1**	**User Manual X 1**
Sun Shield X 1	**BMW connector adaptor X1**	**Angle Adjustment Screws (5" : X2 / 7" : X4)**
Cigarette Lighter X1	**Trigger Wires X 1 (Optional)**	**Suction Cup Bracket (5'' monitor) X 1**
Bracket Adapter (5'' monitor) X1 (Optional)	**License plate (5'' monitor) X1 (Optional)**	

⚠ Special Notice

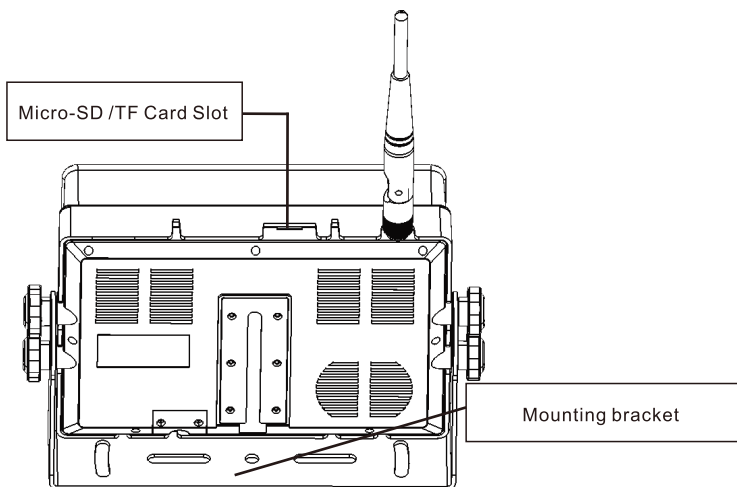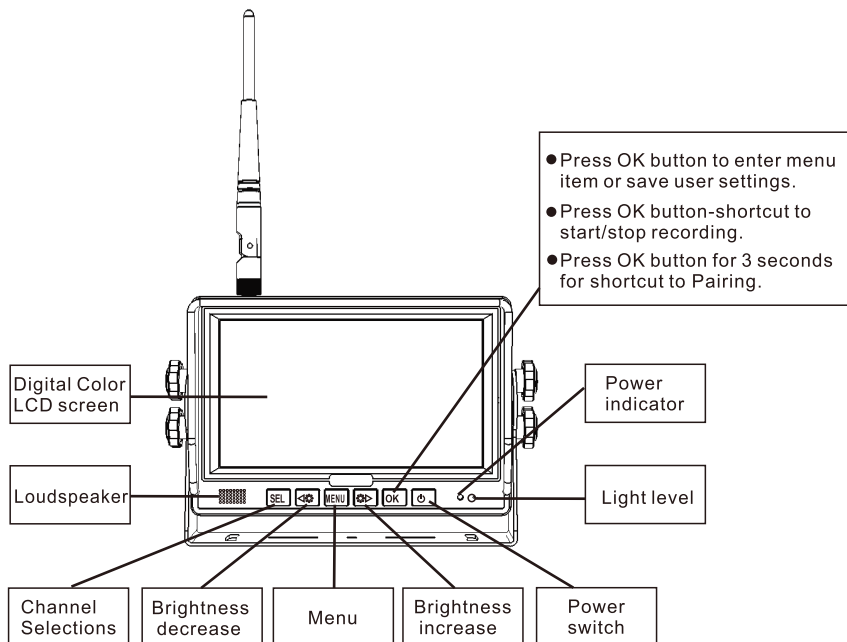Accessories supplied in kit may be different for each application.

❸ Features

1. NORMAL, MIRROR, FLIP and MIR-FLIP viewing available.
2. Split mode, auto-scan mode and single-display mode available.
3. Auto pairing: Auto pairing happens when camera is activated.
4. Support simultaneous video recording for max 4 channel of cameras in AVI format.
5. Auto dim function available.
6. Support up to 4 wireless cameras.
7. HD resolution: 720P.
8. Wide voltage input: 10 - 32V.

❹ Specifications

LCD size	5" 16:9	7" 16:9
Resolution	800 x 3 (RGB) x 480	1024 x 3 (RGB) x 600
Contrast	1000:1	800:1
Brightness	800 cd/m²	900 cd/m²
Viewing Angle	U/D: 80 , R/L: 80	U/D: 85, R/L: 85
Aspect Ratio	16:9	16:9
Channel	4 channels	4 channels
Operating Frequency	2400 - 2483.5 MHz	2400 - 2483.5 MHz
Receiving Sensitivity	-85 dBm	-85 dBm
Video Compression	H.264	H.264
Latency	200ms	200ms
Transmitting Distance	984ft line of sight	984ft line of sight
Micro-SD /TF Card	Max. 128G	Max. 128G
Video Format	AVI	AVI
Power Supply	DC 10-32V	DC 10-32V
Power Consumption	Max. 5.5 W	Max. 8W
Loudspeaker	1W/8Ω	1W/8Ω
Operating temperature	-20~+70ºC,RH90%	-20~+70ºC,RH90%
Storage temperature	-30~+80ºC,RH90%	-30~+80ºC,RH90%

Press OK button to enter menu item or save user settings.

Press OK button-shortcut to start/stop recording.

Press OK button for 3 seconds for shortcut to Pairing.

Digital Color LCD screen

Power indicator

Loudspeaker

Light level

SEL / MENU / OK

Channel Selections

Brightness decrease

Menu

Brightness increase

Power switch

Micro-SD /TF Card Slot

Mounting bracket

❻ Trigger Wire Function

7 PIN Cable Wiring Instruction

Power Wire	
Red Wire	DC IN 10-32V (Positive Wire)
Black Wire	GND (Negative Wire)
Trigger Wire	
Brown Trigger Wire	When it's activated, the monitor automatically switches to CAM1.
Blue Trigger Wire	When it's activated, the monitor automatically switches to CAM2.
Purple Trigger Wire	When it's activated, the monitor automatically switches to CAM3.
Green Trigger Wire	When it's activated, the monitor automatically switches to CAM4.
Yellow Trigger Wire	When it's activated, the monitor automatically switches to quad or split display. Connection depends on the application request. TIPS: All buttons invalid once Trigger Wire triggered.

Trigger Function Introduction

1. When brown/blue/purple/green/yellow wires triggered at the same time by 10-32V, the monitor will display CAM4 as a default priority choice.

2. The proper installation of trigger wires will save battery power. The system will use very little power when monitor is in standby mode. Once any trigger wire is triggered, corresponding channel of CAM will be activated and displayed on the monitor. The system will reenter low power consumption status when triggered wire deactivated.

3. For multi cameras, trigger wires can help switch screen display automatically without pressing SEL button to avoid diverting the driver's attention during driving.

➐ Wiring Instruction

Wiring Without Trigger Wires
This is the most commonly used method for users who have the single camera system. (one monitor and one camera). Connect the monitor with BMW connector adaptor, connect the DC connector of BMW connector adaptor to cigarette lighter. Power the monitor by vehicle 12V through cigarette lighter.

For more cameras, extra cameras can be paired separately to CAM1/CAM2/CAM3/CAM4. Please refer to page 20 PAIRING. If you need parking lines, please pair a camera to CAM4. You can easily switch camera display by pressing SEL button.

Wiring With Trigger Wires
If you are familiar with automobile wiring, you can try wiring with trigger wires.

Red wire connects to automobile positive power supply, 10 - 32VDC.
Black wire connects to automobile negative power supply, GND.

For example :
Blue trigger wire connects to positive wire of left turn signal light. When left turn signal light turned on, the display will automatically switch to CAM2.

Purple trigger wire connects to positive wire of right turn signal light. When right turn signal light turned on, the display will automatically switch to CAM3.

Green trigger wire connects to positive wire of reverse light. When reverse light turned on, the display will automatically switch to CAM4.

Brown trigger wire and Yellow trigger wire connects to other positive wires, which depends on your application requirements.
Note: If power supply is only energized when the ignition is on, then your monitor will not operate unless the automobile is running.
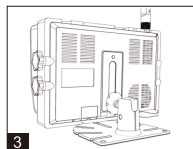
❽ Installation

Install Center Mount Bracket for 7" monitor
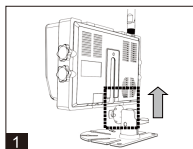
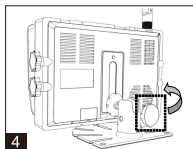**1** Insert the bracket "T" buckle into the slot of the rear housing
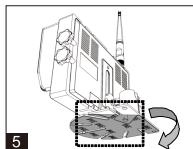

2

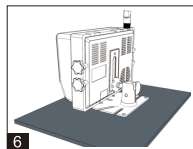**3** Adjust the height and lock the "T" buckle

4 Adjust the angle of the monitor and tighten the knob
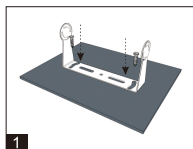
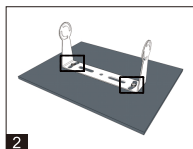

5 Remove the protective film of the 3M tape

6 Adhere the bracket on a flat surface
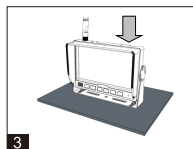
Install U-Support Bracket on 7" monitor

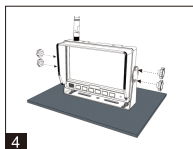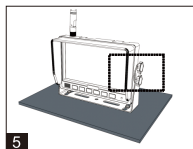**1** Put the U-Support Bracket on a flat surface

2 Screw on the U bracket

3 Fix the monitor on the U bracket

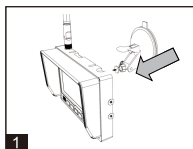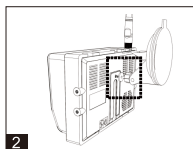**4** Screw on the 4 knobs
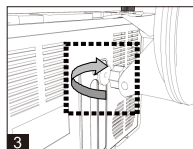

5 Adjust the angle and tighten the knobs

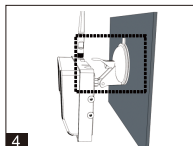# Install Suction Cup Bracket on 5" monitor

1

Align the suction cup bracket
screw at the screw hole of monitor

2

Tighten the screw

3

Adjust the angle of
the monitor

4

Clean the mounting surface
and pushing the suction cup

5
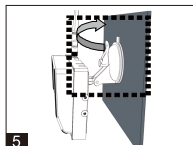
Pressing the buckle

Getting Started

Please find best signal reception position before installation
The metal body of the vehicle can attenuate wireless signal strength sharply.
It is necessary to test the signal strength before installation.

① Please connect monitor and camera as below picture

② Pairing the camera to the monitor, please refer to page 20 PAIRING. 4 cameras
  can be paired separately to CAM1/CAM2/CAM3/CAM4.
③ Put the monitor and the camera at the intended position to test signal strength.
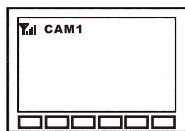
Good signal

Poor signal

If signal strength of the position that you planned to install a camera is under 3 bars, please change to another position, or mount the camera higher to make sure the antenna highest of the top without being blocked. Please refer to below pictures:
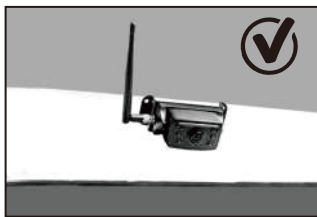
Installation Position 1: Mount the camera higher than your vehicle's roof, keeping the antenna vertical.
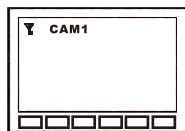**Installation Position 2:** Mount the camera lower but as close as possible to vehicle's roof, and move the antenna outward **15-30 degree**. The antennas proximity to any metal surfaces on the vehicle may affect signal strength.

⚠ **Special Notice**

After position adjustment, you can start installation if your signal strength is still above 3 bars.

Installation

1) Antennas should be vertically lined to the ground. Make sure there is no obstacle around antennas.
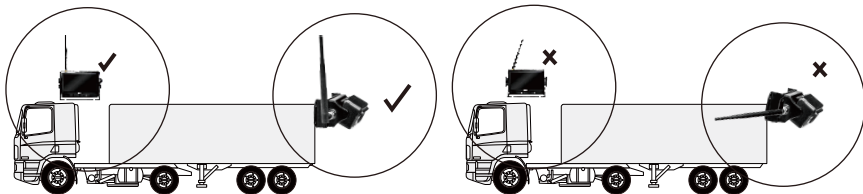
2) Magnet based extension antenna should be attached on the top of the vehicle. Make sure there is no obstacle around.
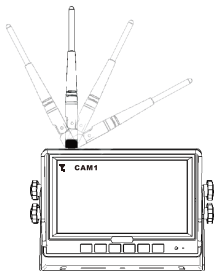
Antenna

If you get poor signal reception, or signal cannot reach at least 3 bars, please adjust the angle of antenna to find best signal reception position.

⑨ Menu

9.1   Button Function

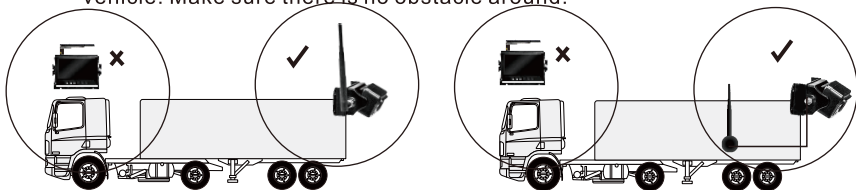| Button	Function
SEL	Switch among cameras
◁☼	Decrease brightness
MENU	Enter menu or return to previous menu
☼▷	Increase brightness
OK	Function① : "Start recording"and"pause recording" Function② : "Start playing"and"pause playing"in video playback interface. Function③ : Press for 3 seconds to enter pairing status Function④ : Press OK button to enter menu item or save user settings.
⏻	Turn on/off monitor and standby

9.2   Menu

1) Press menu button to enter below interface.

Ø CAM1

VOLUME   PICTURE   MIRROR   QMODE   SETTING

AUTOSCAN   PARK-LINE   RECORD   PLAY   PAIRING
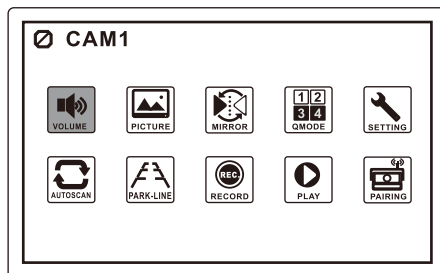
9.3   Volume

MENU is only allowed for operation under single image mode, not quad mode.
Press MENU to display the following options and settings:
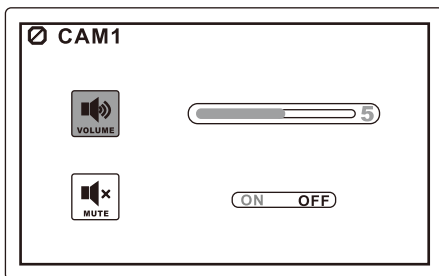
2)Press ◁☼ or ☼▷ to select VOLUME, Press OK to confirm. Press ◁☼ or ☼▷
to adjust settings.
3) Press◁☼ or ☼▷ and OK button to set MUTE or UNMUTE.

9.4   Picture

1) Press MENU button to enter menu interface.
2) Press ◁☼ or ☼▷ to select PICTURE, Press OK to enter.
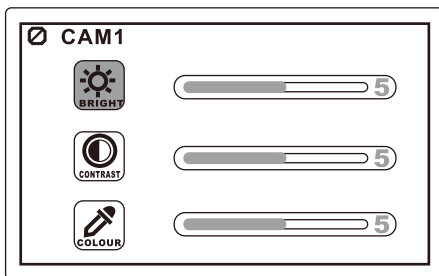
3)Press ◁☼ or ☼▷ to select BRIGHTNESS/CONTRAST/COLOR,
Press OK to confirm. Press ◁☼ or ☼▷ to adjust settings.

9.5   Mirror

1) Press MENU button to switch to enter menu interface. Press ◁☼ or ☼▷
   to select MIRROR. Press OK button to enter MIRROR setting.
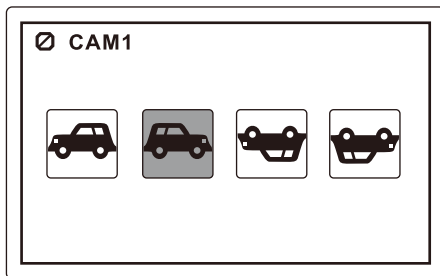
2) Press ◁☼ or ☼▷ to select NORMAL/MIRROR/MIR-FLIP/FLIP.

9.6   Qmode

1) Press MENU button to enter menu interface. Press ◁☼ or ☼▷ and OK button
   to enter QMODE.
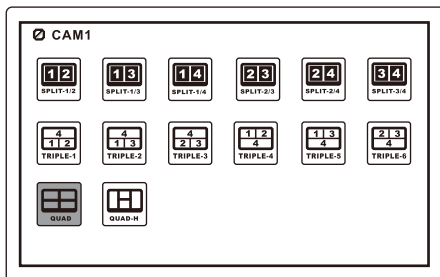
2) Press ◁☼ or ☼▷ to select display mode.

3) After setting, press SEL button to change display mode. For example,
   If you set QUAD mode " [QUAD] "

   Pressing SEL button 4 times, the display will switch CAM1 to QUAD.

CAM1	CAM2
CAM3	CAM4

4) Quad or Split Audio Setting
   When the monitor display Quad or Split picture, you can press ◁☼ or ☼▷ button to play audio of any of the CAM channel.

CAM1 🔊	CAM2
CAM3	CAM4

CAM1	CAM2 🔊
CAM3	CAM4

CAM1	CAM2
CAM3 🔊	CAM4
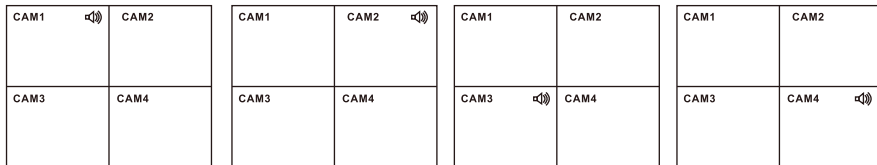
CAM1	CAM2
CAM3	CAM4 🔊

9.7　　Setting

1) Press MENU button to enter menu interface. Press ◁☼ or ☼▷ to select SETTING. Press OK button to enter SETTING.

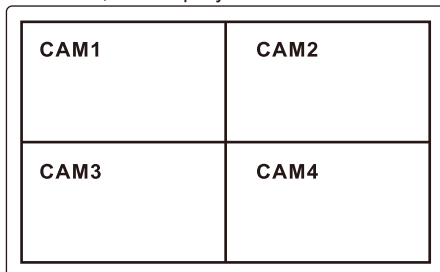2) SEL KEY: User defined CAM switching. For example, if CAM1, CAM2, Q(QUAD MODE) are selected, When pressing SEL key, the display will switch from CAM1 to CAM2, and QUAD MODE, it will skip CAM3, CAM4, and SCAN.

3) Press OK to move selection, press ◁☼ or ☼▷ key to select or cancel. The bottom yellow dot indicates current selection.

Ø CAM1

TIME — 2017/03/24　 00:00:00

SEL KEY — CAM1 CAM2 CAM3 CAM4 Q SCAN

PAL NTSC COLOR-SYS — PAL　NTSC

AUTODIM — ON　OFF
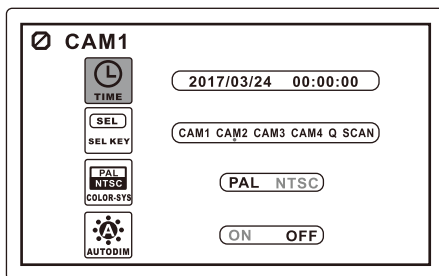
ICON	FUNCTION
TIME	Set current time. Please make sure your setting is correct, otherwise the time display on recorded videos will be incorrect.
PAL NTSC COLOR-SYS	Set video format of the camera. Please refer to below table.
AUTODIM	When the option is turned "ON", monitor will automatically decrease brightness in low light. Or you can turn "OFF" the auto-dim function.

| VIDEO FORMAT	COUNTRY
PAL	Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, China, Cyprus, Czechoslovakia, Denmark, Dubai, Egypt, Finland, France, Germany, Gibraltar, Greece, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Jordan , Kuwait, Luxembourg, Malaysia, Netherlands, New Zealand, Norway, Sultanate of Oman, Poland, Portugal, San Marino, Saudi Arabia, Singapore, Spain, Sweden, Switzerland, Turkey, United Kingdom,
NTSC	Bolivia, Canada, Chile, Colombia, Costa Rica, Ecuador, Japan, South Korea, Mexico, United States

2) Press ◁☼ or ☼▷ and OK button to set TIME/PAL-NTSC/AUTODIM.

9.8   Autoscan

1) Press MENU button to enter menu interface. Press ◁☼ or ☼▷ and OK button to enterAUTOSCAN setting.
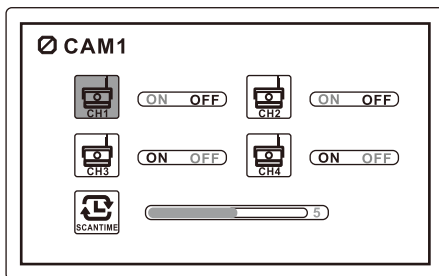
2) Press◁☼ or ☼▷ and OK button to set AUTOSCAN channels and SCANTIME.

3) Press SEL button to switch to SCAN interface. A SCAN icon will appear on the display. Press again to exit SCAN mode.
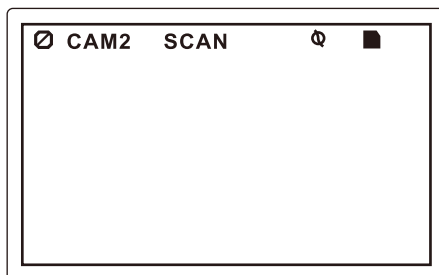
9.9   Park-line

1) Press MENU button to enter menu interface. Press ◁☼ or ☼▷ and OK button
   to enter PARK-LINE.
   Display: To set the park line display in a certain channel of CAM. Press ◁☼ or ☼▷
   button to select, press OK button to confirm.
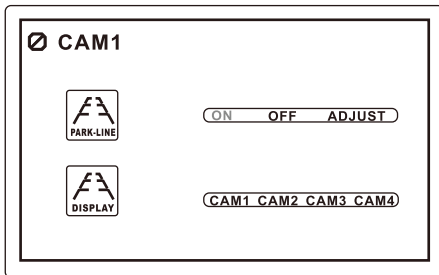
2) Turn on/off parking lines or enter adjust parking lines setting.
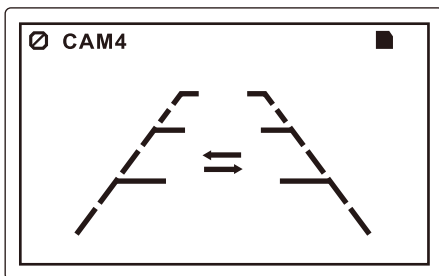
3) Press   ◁☼   or ☼▷   button to adjust the position of parking lines.
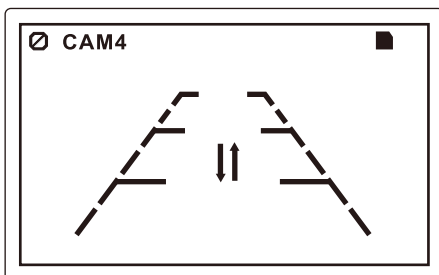
4) Press ◁☼ or ☼▷ button to adjust the position of parking lines
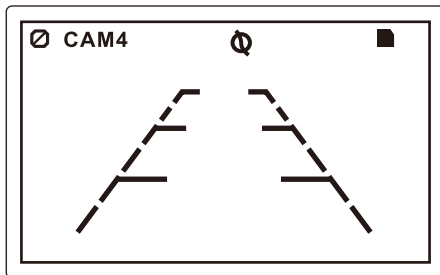
CAM4

5) **Note**: Park line display in CAM4 as default, but it is settable if you want it display in other channels of CAM.

9.10   Record

1) Insert TF Card
Please insert TF card in TF card slot, max 128G Micro-SD/TF Card

Micro-SD /TF Card Slot
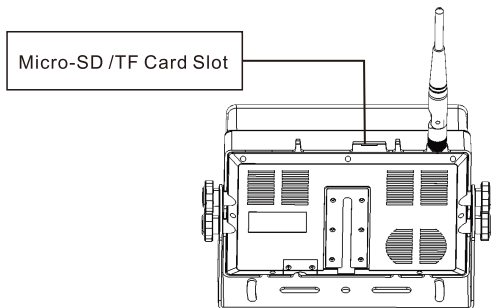
2) Format the TF card.
Note: TF card must be formatted before using.
Press MENU button to enter menu interface, and enter RECORD setting

CAM1

COVER   ON   OFF

FORMAT   ON   OFF

RECORD   ON   OFF
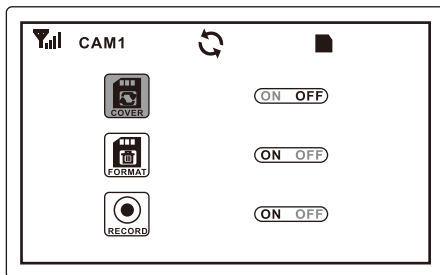
When COVER is turned on, overwrite function will be activated. Previous recorded video files will be overwritten when TF card memory is full.

```
┌─────────────────────────────────┐
│ ▼▎ll  CAM1                      │
│                                 │
│         ▣                ON OFF │
│        COVER                    │
│         ▣   Formating....       │
│        FORMAT            ON OFF │
│         ◉                ON OFF │
│        RECORD                   │
└─────────────────────────────────┘
```
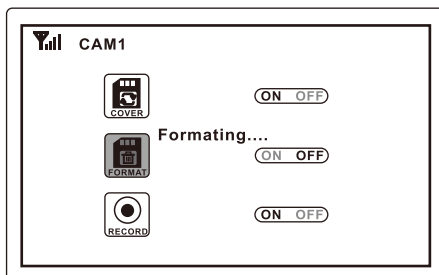
After TF card formatted, a yellow folder icon will be shown on the screen**,** indicating TF card is available now.

```
┌─────────────────────────────────┐
│ ▼▎ll  CAM1      ↻        ◼      │
│                                 │
│         ▣                ON OFF │
│        COVER                    │
│         ▣                ON OFF │
│        FORMAT                   │
│         ◉                ON OFF │
│        RECORD                   │
└─────────────────────────────────┘
```
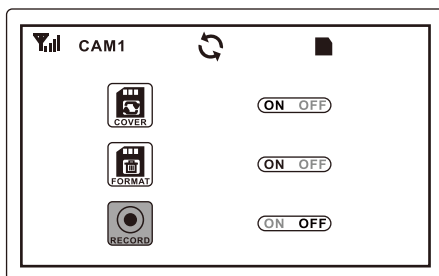
3) After setting, turn on RECORD to start recording or pause recording, or, you can press OK button to start recording or pause recording.

```
┌─────────────────────────────────┐
│ ▼▎ll  CAM1      ↻    ● REC   ◼  │
│                                 │
│                                 │
│                                 │
│                                 │
│                                 │
│                                 │
└─────────────────────────────────┘
```
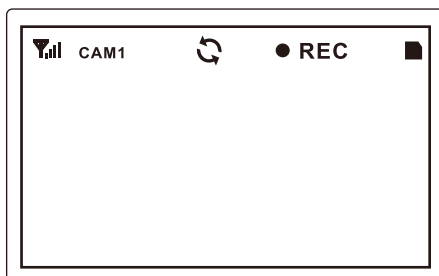
Note: Pressing OK button in QUAD or SPLIT display, the monitor will record all displayed channel of CAM at the same time.

9.11　Play Recorded File

Recorded videos can be played by monitor.

1) Press ◁☼ or ☼▷ and OK button to enter PLAY.

2) Press ◁☼ or ☼▷ and OK button to select a file.

Free: 14.48G Total: 14.48G ▶

..　　　　　 FOLDER
120115　　 FOLDER
　　　　　　　Day
　　　　　　　Month
　　　　　　　Year
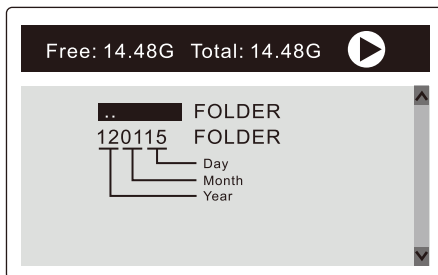
3) Press ◁☼ or ☼▷ to select TIME& CHANNEL, Press OK to enter.

Free: 14.48G Total: 14.48G ▶

..　　　　　 FOLDER
100953_1　 AVI　　3MB
100948_1　 AVI　　64KB
　　　　　　　Channel
　　　　　　　Second
　　　　　　　Minute
　　　　　　　Hour
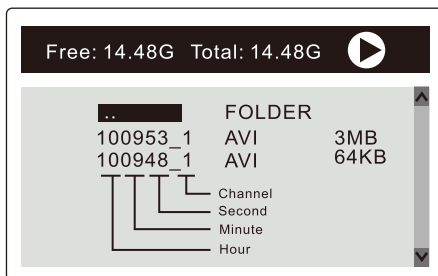
4) Press OK button to PLAY or PAUSE the file.

⏸ PAUSE

▶ PLAY
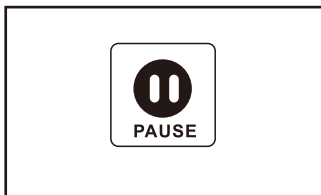
Recording Time

For Micro SD cards with different capacities, please refer to the table below for recording time under 3 different image modes.

This table is for reference only.
Data may vary under different environments.

TF MODE	8G	16G	32G	64G	128G
SINGLE (1280x720x1)	9H	18H	36H	72H	144H
QUAD (512x352x4)	10H	20H	40H	80H	160H
SPLIT (512x592x2)	11H	22H	44H	88H	176H

9.12　Pairing

Camera and monitor are paired at the channel of CAM 4 as factory default setting. When you open the box, power on the monitor and camera, press SEL button to switch to CAM 4, the image will be displayed. Otherwise, please try below methods for pairing.
Please finish pairing before installtion.

1) Press SEL button to select a channel that needs to be paired.
2) Monitor Pairing
   Method 1: Enter menu interface and select PAIRING, press OK to confirm, you will have 20 seconds for pairing.
   Method 2: Press OK button for 3 seconds to enter PAIRING status，you will have 20 seconds for pairing.

```
Ø CAM1

please  press  pair  key
    on camera  side
           20
```
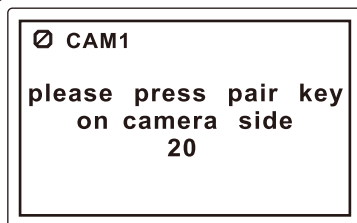
3) Camera Pairing
   Method 1：Press the pairing button on the bottom of the camera.
   Method 2：Power off the camera and power on it again.
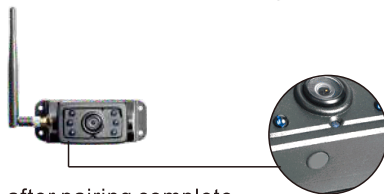
4) Video will be displayed after pairing complete.

⚠ Special Notice
If no picture displayed after pairing, please retry pairing steps and power-on again the camera. The pairing must be completed within 20 seconds, otherwise you need to re-power the camera for pairing.

The symptoms described below do not necessarily mean a failure within the display.
Please check the following items before you initiate request for repair.

FAQ	Problem	Solution
Camera and Monitor won't pair	The positive and negative poles are connected in reverse	Cover the photosensitive sensor of the camera by black object. If the LEDs turn red, the power cord has the correct polarity, otherwise the polarity is wrong, please connect the power correctly.
	Poor contact of power cord	Check the power connector is in good contact.
	Vehicle supply voltage is not enough	Supply power to the camera with another power source, and use a multimeter to measure whether the voltage at the power cord connector is DC10 ~ 32V.
	Incorrect Pairing Operation	Please double check the pairing method.　　Refer to page " 20 " Please finish Pairing within 20 seconds, otherwise, pairing won't succeed. It is recommended to pair the system before installation. Please do remember pair the camera and monitor before installation.
	No signal/Weak signal	Dense objects and metal could be obscuring the signal. Please do remember pair the camera and monitor before installation. After that, choosing a proper installation location according to the signal strength.
	Antenna is Not Plug in	Before pairing, please check if the camera and monitor antennas are fitted and plugged securely correctly.
	Using a Third Party Antenna	The third-party antenna does not match the camera and the monitor, resulting in a weak wireless signal

Weak Signal	Obstructions in the installation location	Dense objects and metal could be obscuring the signal. Please do remember pair the camera and monitor before installation. After that, choosing a proper installation location according to the signal strength.
	Antenna is Not Plug in	please check if the camera and monitor antennas are fitted and plugged securely correctly.
	Antenna placed at incorrect angle	The antenna should not be close or parallel to the metal compartment. It should be at an angle to the metal compartment to reduce the shielding of the antenna.
	Poor power supply to the camera	(1) Supply power to the camera with another power source, and use a multimeter to measure whether the voltage at the power cord connector is DC10 ~ 32V. (2)The vehicle's power supply is not continuous, for example, the power supply of the left and right turn signals is cyclically switched on and off at a certain frequency, resulting in the camera voltage being too low
	Multiple cameras are in dense in the same area	Wireless cameras must be separated by at least 2 meters to avoid mutual signal interference.
	Interference Nearby	Interference from electrical appliances may be affecting the wireless signal, like engine, generator, wireless devices. Turn off the appliances when using the system.
	Using a Third Party Antenna	The third-party antenna does not match the camera and the monitor, resulting in a weak wireless signal. Please use the original antennas in the package.

If above troubleshooting does not solve the problem, please contact us and provide the following information so that we can quickly and accurately analyze the problem.

(1) Pictures of the model/length/overall appearance of the vehicle.

(2) Pictures that clearly show the installation location of the camera

(3) Pictures that clearly show the installation location of the monitor

(4) Measuring the supply voltage to the camera by a multimeter whether it is DC10 ~ 32V.

Haloview

www.haloview.com