Operating Instructions

2.4GHz 7″ Digital Wireless Color LCD Monitor

Please read this manual thoroughly before operating the device,

and keep it for future reference.

V 2.1

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1. Precautions

● Storage and Keeping

1. Do not expose the monitor to excessive heat or cold. The storage temperature of this device is -30~+80℃, and the operating temperature is -20~+70 ℃. The humidity is Rh90%.
2. Never use this device near a bathtub, wash basin, kitchen, damp basement, swimming pool or similar places.
3. Never use this device in environments with excessive moisture, dust or smoke.
4. Avoid dropping or striking this device.
5. Avoid using this device in enclosed spaces, areas with excessive vibration or subject to severe impacts.
6. Never puncture, scratch or use abrasive cleaning materials on this device.
7. Do not place cables where they may be pinched or stepped on.
8. Leave at least a 2" space between the monitor and walls, cabinets or other objects to allow adequate air circulation around the device.
9. The monitor is not designed to be waterproof.

● Operating Precautions

1. The device may be powered by DC power 10V - 32V (eg.12V or 24V ACC).
2. Make sure all cables are connected properly. Observe polarity. 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.

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

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

This symbol is intended to alert the user not to waste electrical and electronic equipment.

CAUTION

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

● Declaration of conformity

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

2. Features

1. TFT LCD monitor with wide angle view and high resolution display.
2. NORMAL, MIRROR, FLIP and MIR-FLIP viewing available.
3. Split mode, auto-scan mode and single-display mode available.
4. Auto pairing: Auto pairing happens when camera is activated.
5. Support 4-channel composite and single-channel recording in AVI signal format.
6. Auto dim function available.
7. Full-function remote control.
8. 4 wireless camera input.
9. Multiple video formats: PAL / NTSC.
10. Wide voltage input: 10 - 32V.
11. On-board speaker.
12. Auto switch to the working channel when trigger is activated.

3. Technical Specifications

LCD size	7"
Resolution	800 x 3 (RGB) x 480
Contrast	500:1
Brightness	400 cd/m²
Viewing Angle	U: 50 / D: 70, R/L: 70
Dot pitch	0.0642(W) x 0.1790(H)
Aspect Ratio	16:9
Channel	4 channels
Operating Frequency	2400 - 2483.5 MHz
Receiving Sensitivity	-89 dBm
Decompression Form	MPEG4
Modulation	2.4G FSK/GFSK
Time Delay	120ms
Transmitting Distance	120 M
Micro SD Card	Max. 128G
System Format	PAL / NTSC
Power Supply	DC 10-32V
Power Consumption	Max. 6W
Loudspeaker	1.5W/8Ω
Operating temperature	-20~+70°C,RH90%
Storage temperature	-30~+80°C,RH90%

⚠ Special Notice

All specification are subject to change without notice.

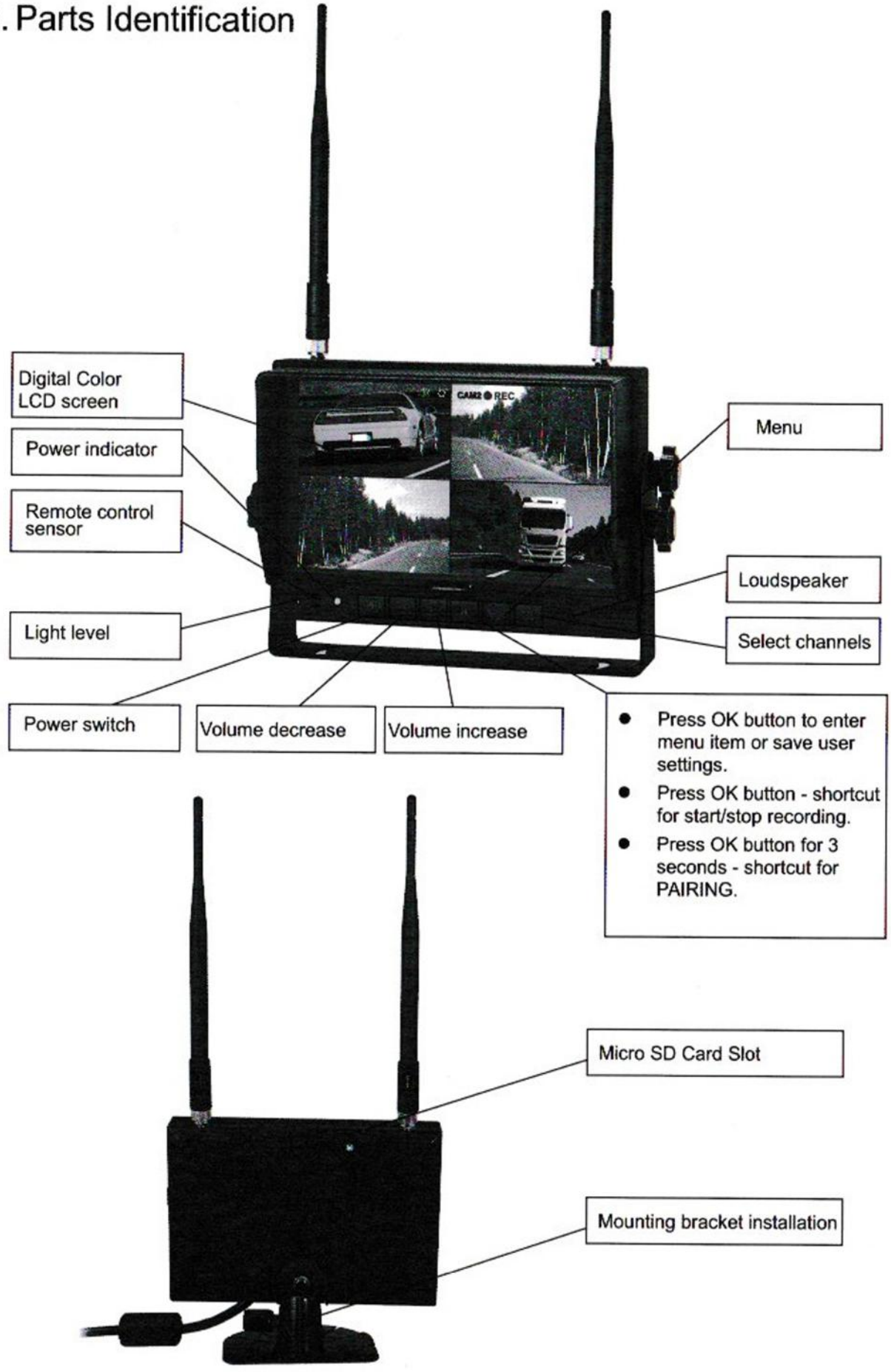
4. Accessories

U-Support Bracket	Center Mount Bracket
Sun Shield	Power cable
Angle Adjustment Screws	IR Remote control

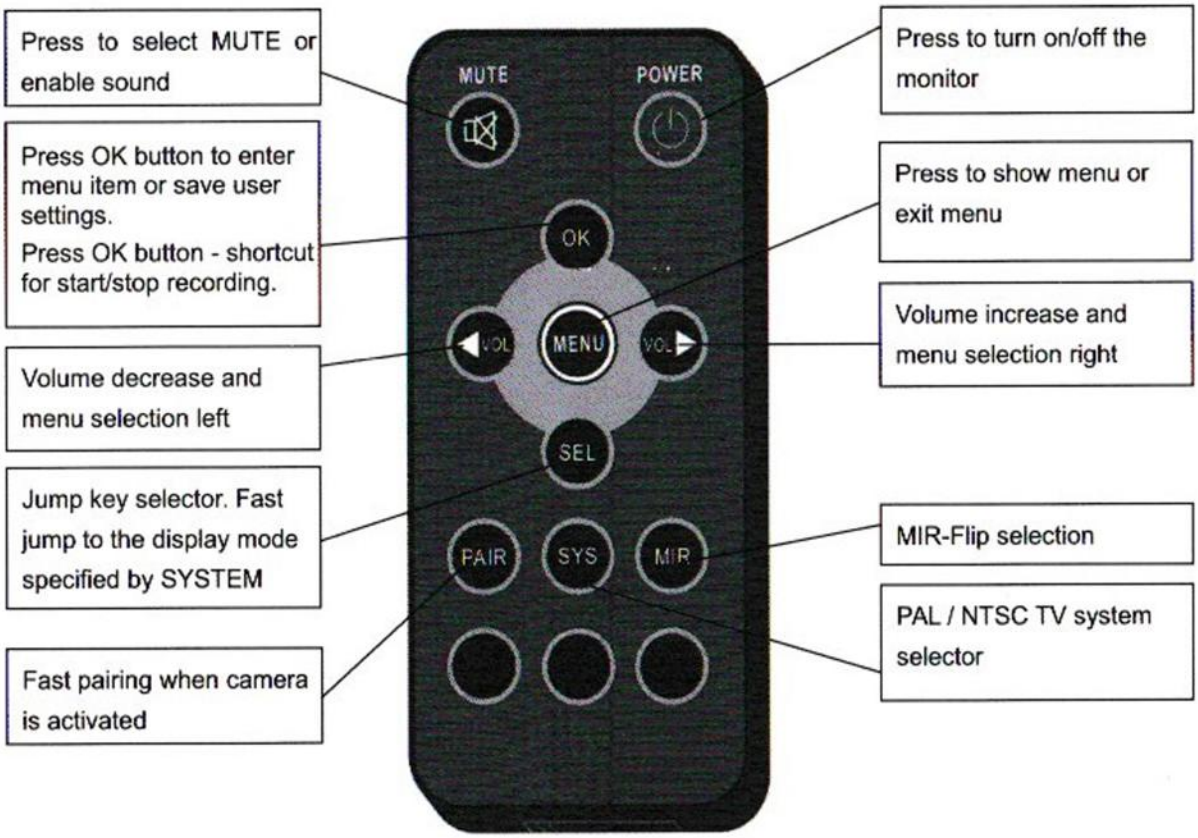
⚠ Special Notice

Accessory supply may be different for different application.

5. Parts Identification



6. Remote Control Operation



- MUTE(Mute)

  Press to select MUTE or enable sound

- POWER(Power switch)

  Press to turn on/off the monitor.

- OK

  Press OK button to enter menu item or save user settings. Press OK button - shortcut for start/stop recording.

- MENU

  Press to show menu or exit menu

- ◁ VOL

  Volume decrease and menu selection left

- ▷ VOL

  Volume increase and menu selection right

- SEL

  Jump key selector. Fast jump to the display mode specified by SYSTEM

  SETUP - JUMP KEY

- PAIR

  Fast pairing when camera is activated

- SYS

  PAL / NTSC TV system selector

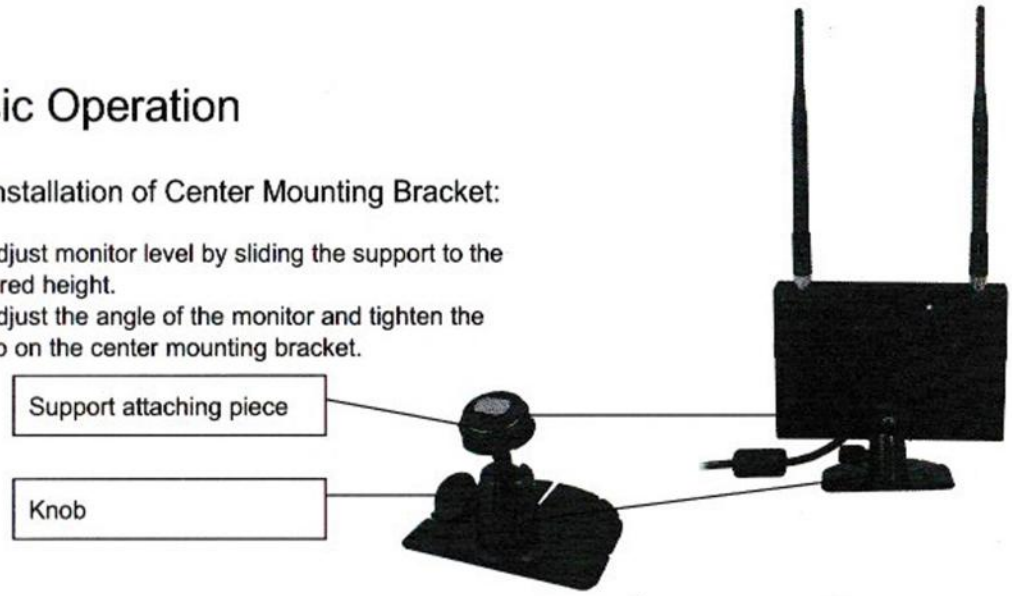
- MIR

  MIR-Flip selection

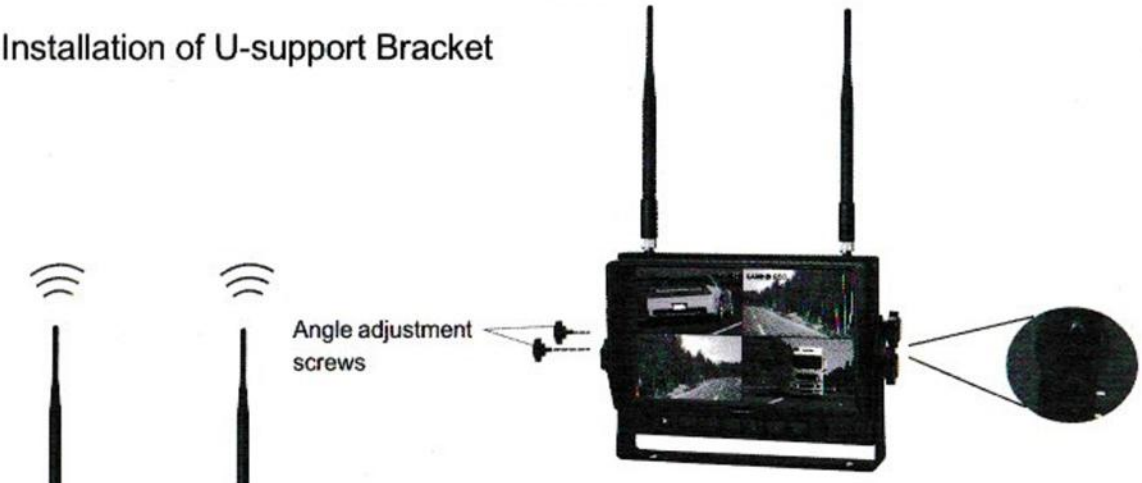
7. Basic Operation

7.1 Installation of Center Mounting Bracket:

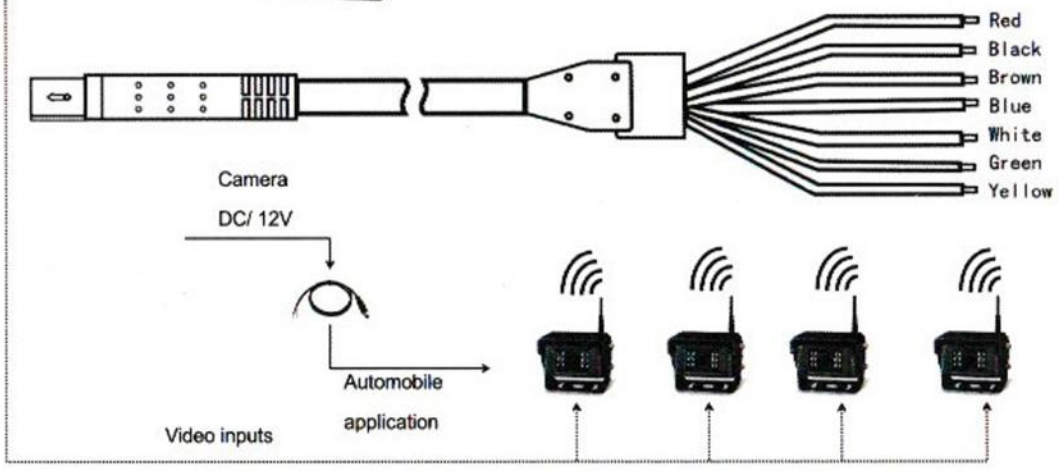
①Adjust monitor level by sliding the support to the desired height.
②Adjust the angle of the monitor and tighten the knob on the center mounting bracket.



7.2.Installation of U-support Bracket

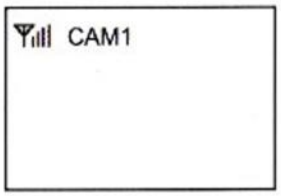


Red wire to positive power supply of DC/10-32V.
Black wire to Ground.
Single brown wire to positive power wire of back-up light.
Single white wire to positive power wire of left light .
Single blue wire to positive power wire of right light .
Green or yellow wire to other positive power wire.

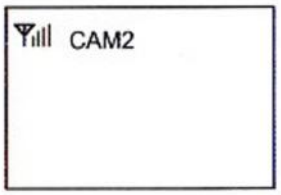


7.3.Reversing Display:

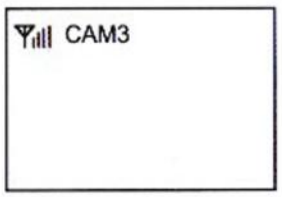
7.3.1. When the green wire is activated, the monitor automatically switches to CAM1.



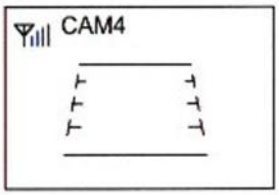
7.3.2. When the white wire is connected to the positive wire of the left turn light , the monitor automatically switches to CAM2(left side camera) when the left light is activated.



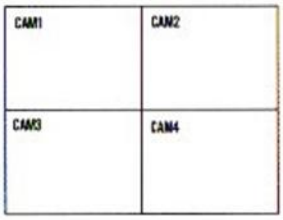
7.3.3. When the blue wire is connected to the positive wire of the right turn light, the monitor automatically switches to CAM3 (right side camera) when the right light is activated.



7.3.4. When the brown wire is connected to the positive wire of back-up light, the monitor automatically switches to CAM4(back-up camera) when the reversing light is activated. The distance label will be displayed.



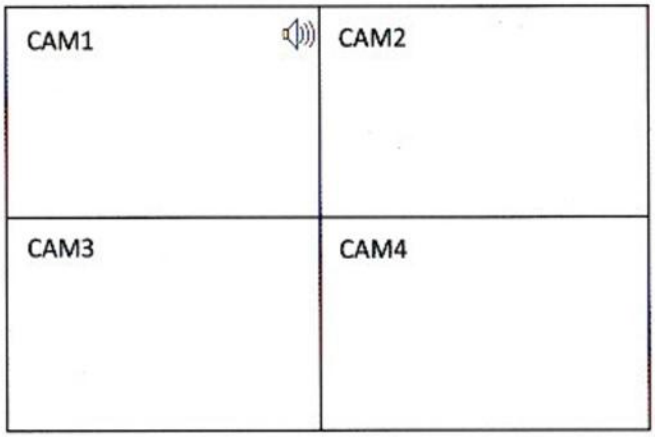
7.3.5. When the yellow wire is connected to the positive wire, the monitor automatically switches to quad or split display. Connection depends on the application request.



7.4. Volume selection under quad view

7.4.1. Check the volume icon on the top right area under single channel mode. It stands for audio out for the selected channel.

7.4.2. Press ◁ or ▷ to select the channel for audio out.

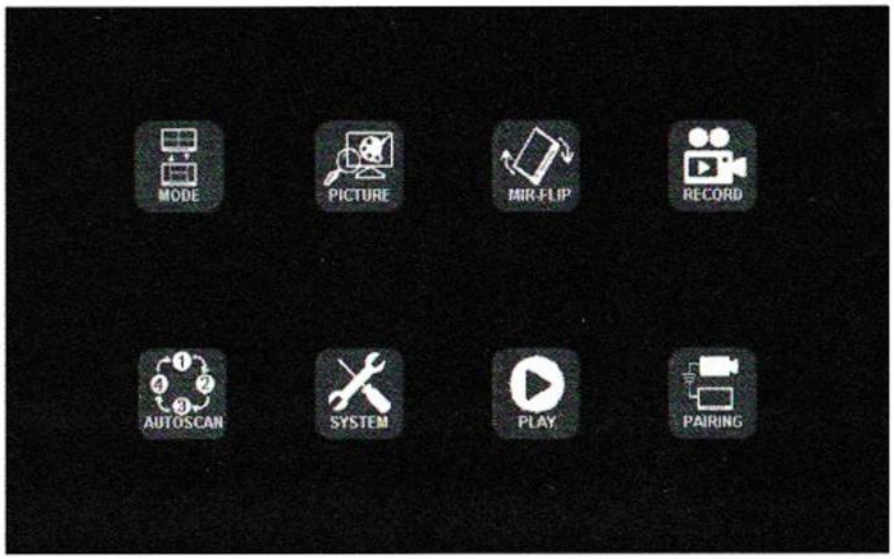


8. Menu

- MENU is only allowed for operation under single image mode, not quad mode.

- Press MENU to display the following options and settings:

1.	MODE	5.	AUTOSCAN
2.	PICTURE	6.	SYSTEM
3.	MIR-FLIP	7.	PLAY
4.	RECORD	8.	PAIRING

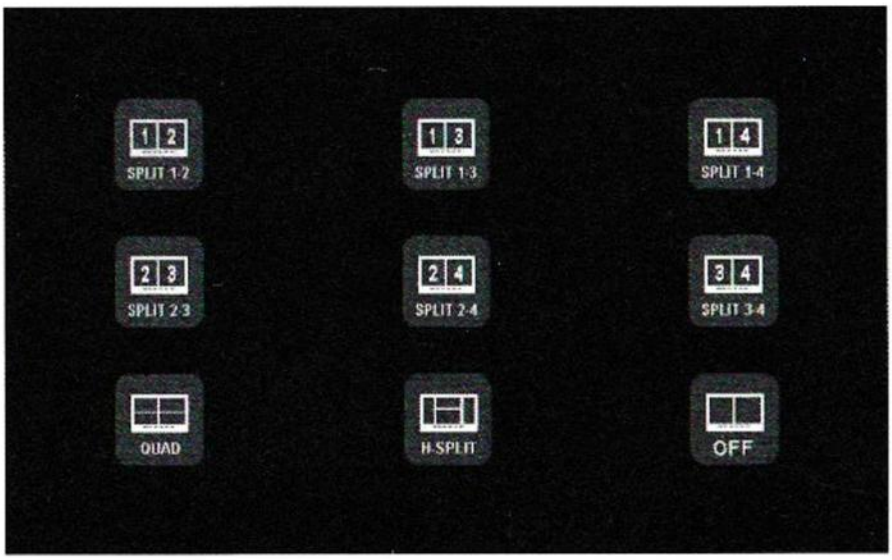


(1) Press ◁ or ▷ to select MODE. Press OK to enter. press◁ or ▷ to select SPLIT/QUAD mode, Select OFF to exit SPLIT/QUAD mode. Press MENU return to main menu.

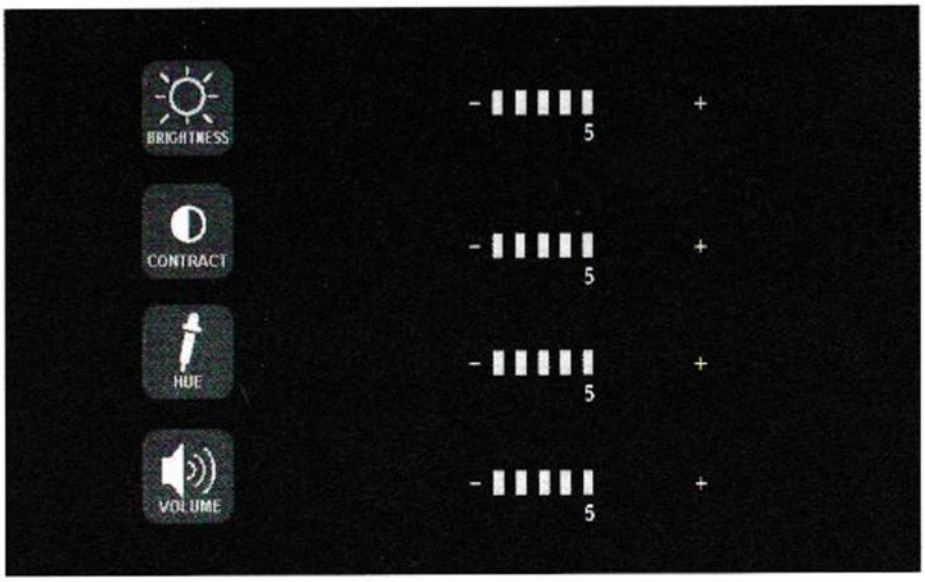
Note:

When select OFF to exit split/quad mode, split/quad trigger display is disabled.

Monitor will switch to single image mode.

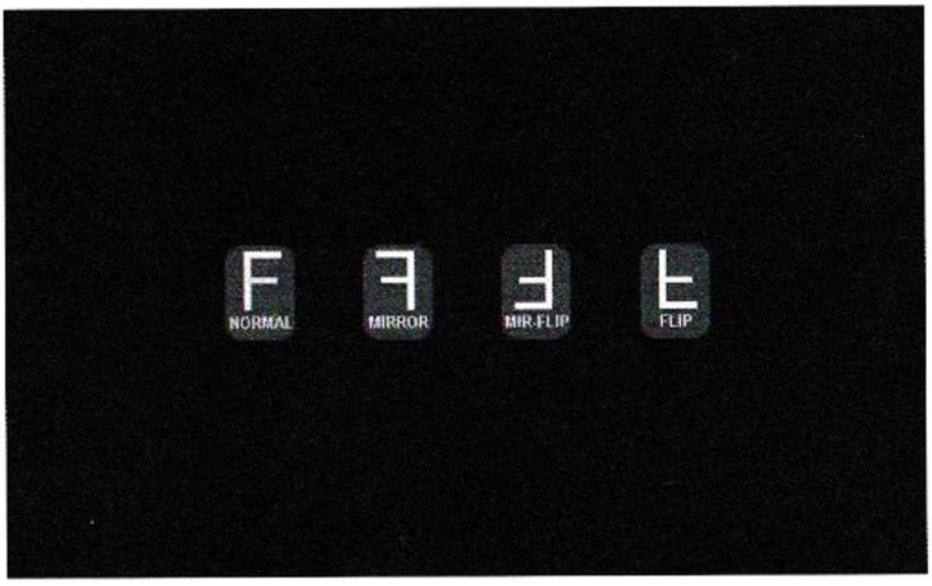


(2) Press ◁ or ▷ to select PICTURE. Press OK to enter .



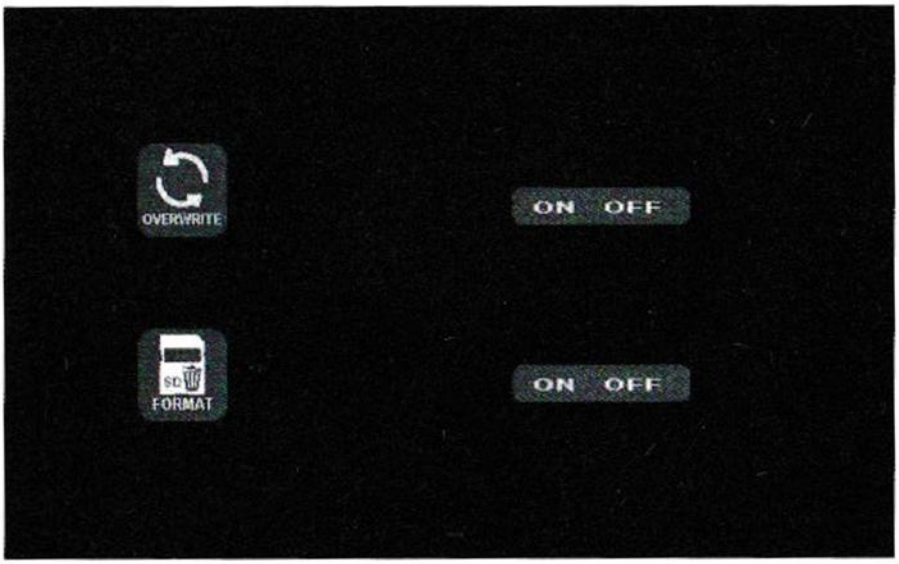
- Press ◁ or ▷ to select BRIGHTNESS / CONTRACT / HUE / VOLUME, press OK to enter. Press ◁ or ▷ to adjust. Press OK to exit. Press MENU return to main menu.

(3) Press◁ or ▷ to select MIR-FLIP. Press OK to select.



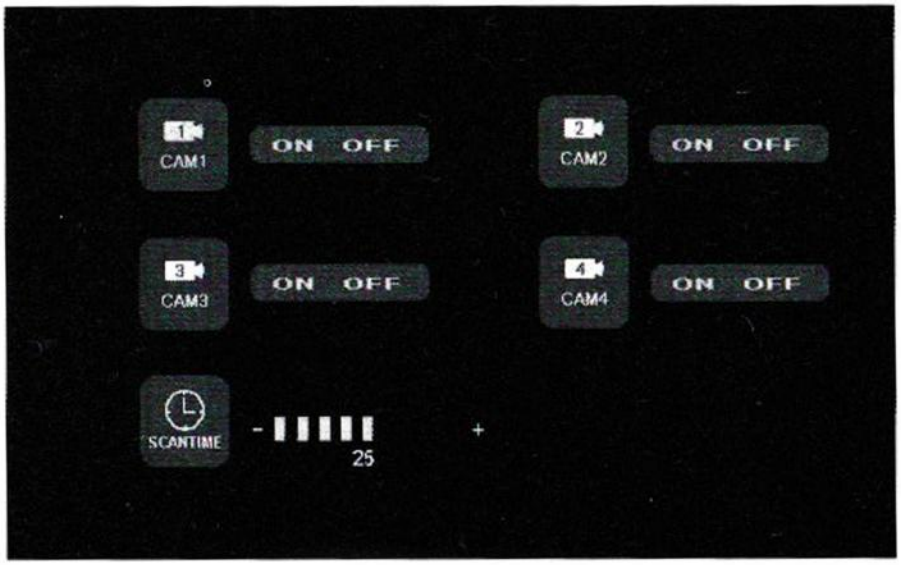
- Press ◁ or▷ to select NORMAL / MIRROR / MIR-FLIP / FLIP. Press MENU return to main menu

(4) Press ◁ or ▷ to select RECORD, Press OK to enter.



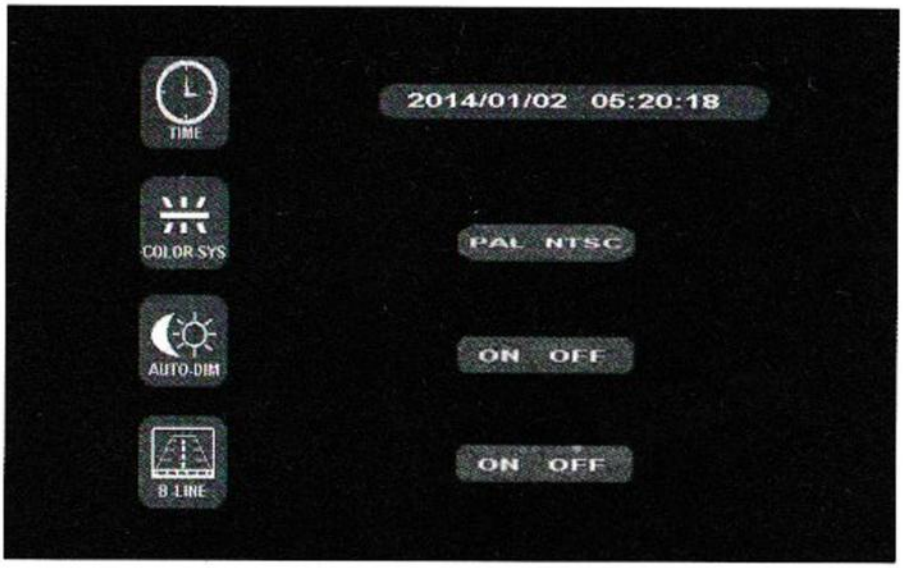
- Press ◁ or ▷ to select OVERWRITE / FORMAT, press OK to enter. When the icon turns yellow, press ◁ or ▷ to select ON or OFF. Press OK to exit. Press MENU return to main menu.
- OVERWRITE: Previous video file will be overwritten when disk is full.
- FORMAT : Micro SD card must be formatted before being used. All files in Micro SD card will be lost once disk is formatted.

(5) Press ◁ or ▷ to select AUTOSCAN, Press OK to enter .



- Press◁ or ▷ to select CAM1/CAM2/CAM3/CAM4/SCANTIME, press OK to enter. When the icon turns yellow, press ◁ or ▷ to select or adjust. Press OK to exit. Press MENU return to main menu.
- No video will be displayed under AUTOSCAN mode if a channel is turned OFF.
- SCANTIME frame is between 5 and 45 seconds, with a step time of 5s.

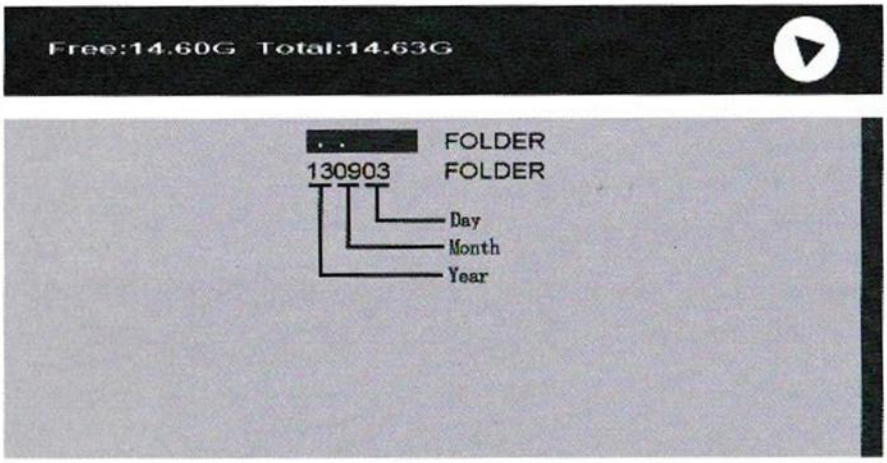
(6) Press◁ or▷ to select SYSTEM, Press OK to enter .



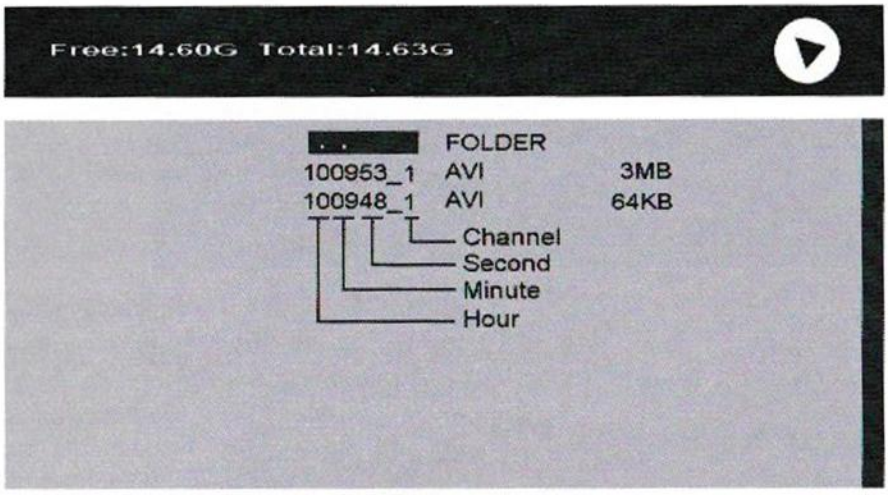
- TIME : Press ◁ or ▷ to select TIME. Press OK to set. Press ◁ or ▷ to adjust. Press OK to continue setting.
- COLOR-SYS: Press ◁ or ▷ to select COLOR-SYS, Press OK to enter, Press◁ or ▷ to select NTSC/PAL.
- AUTO-DIM: Press ◁ or▷ to select AUTO-DIM. Press OK to enter, and then press ◁ or▷ to select ON/OFF.When set as ON, backlighting automatically adjusts in accordance with the outer brightness.
- ELETRONIC DISTANCE LABEL: Press◁ or ▷ to select ELETRONIC DISTANCE LABEL. Press OK to enter, press◁ or▷ to select ON/OFF to open or close the electronic distance label. When it is on, the electronic distance label will be displayed in reversing channel 4.

(7) Press◁ or ▷ to select PLAY, Press OK enter .

- Press ◁ or ▷ to select DATE , Press OK to enter.



- Press ◁ or ▷ to select TIME & CHANNEL, Press OK to enter.



(8) Press ◁ or ▷ to select PAIRING, then press OK to enter.Or Press OK for 3 seconds to enter PAIRING.

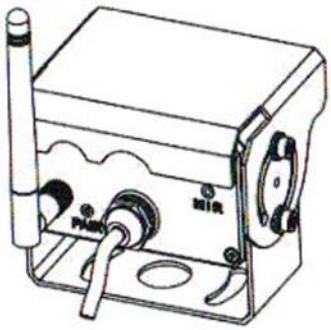
Important: the Cameras must be paired within 30 seconds or they won't pair

- Auto pairing:

1. Choose the channel that needs to be set up, and the monitor display the message "PAIRING START 50" and a counter that counts down 50s.
2. Within the countdown, power the camera.
3. The monitor and cameras will synchronize themselves with each other after the camera is powered for 5s.
4. If pairing is completed, the video will be displayed. If it is failed, a message "No Signal" will be displayed. Repeat the pairing procedure.

- Manual pairing:

1. Choose the channel that needs to be set up, and the monitor display the message "PAIRING START 50" and a counter that counts down 50s.
2. Press the pairing button on the power-on camera.
3. The monitor and cameras will synchronize themselves with each other.
4. If pairing is completed, the video will be displayed. If it is failed, a message "No Signal" will be displayed. Repeat the pairing procedure.



9. Recording Time

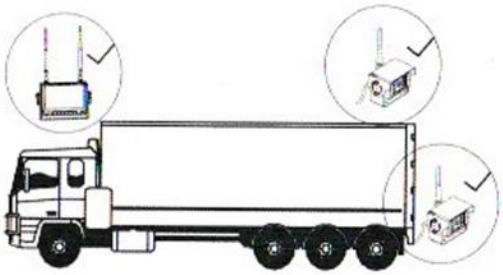
With Micro SD cards in different capacities, please refer to the table below for recording time under 3 different image modes.

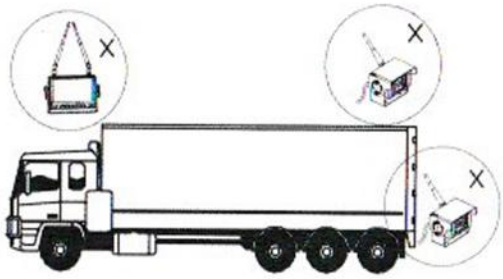
This table is for reference only. Data may vary under different environments.

Micro SD / MODE	8G	16G	32G	64G	128G
SINGLE (640x480x1)	14h	28h	55h	110h	220h
QUAD (320x240x4)	11h	22h	43h	86h	172h
SPLIT (400x480x2)	13h	25h	50h	101h	201h

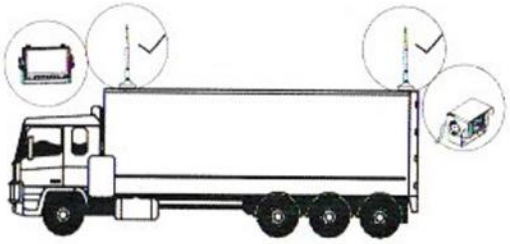
10. Installation Tips

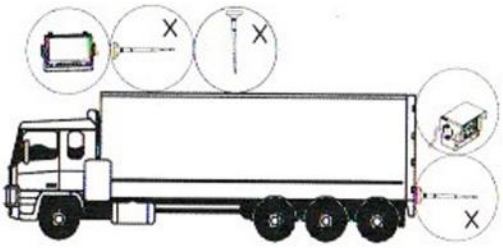
10.1 Antennas should be vertically lined to the ground. Make sure there is no obstacle around antennas.





10.2 Magnet based extension antenna should be attached on the top of the vehicle. Make sure there is no obstacle around or between 2 antennas.





10.3 Wireless system installation instruction.

- Pair the monitor with the camera before installing the wireless system on vehicle:

1. Before pairing, power off the unpaired camera and switch the monitor channel to the one to be paired; enter MENU interface, select PAIRING and then press OK; then the monitor enters the PAIRING countdown of 50 seconds, during which the camera to be paired shall be connected to the power supply; after 5 seconds, the camera will be paired with the monitor and the images of the paired camera will be displayed on the monitor if the pairing succeeds. Otherwise, repeat the above code pairing operation steps.

2. After one channel of the monitor is paired successfully, press SEL to switch to the next channel to be paired; power off the previous paired camera and repeat operation steps above.

3. After pairing all channels, connect all paired cameras with power supply; press SEL button on the monitor to switch channels; check images of each channel; and then install the wireless system on vehicle after confirming that there is image on each channel.

- Low-Power Mode

1. When the camera is powered up, if there is no pairing or the paired display does not receive the image of the camera, it will enter the pairing mode after being powered up for 5 seconds and hold for 30 seconds. Then it will enter the low-power mode after 30 seconds.

2. When the monitor is powered off or standby, the camera paired with it enters low-power mode after 30 seconds. When the monitor is powered up or turned on, the camera in low-power mode will automatically wake up.

- Solutions for Poor Monitor Signal

1. Please confirm the height of the camera from the ground is more than 1 meter, the antennas of the display and camera are perpendicular to the ground, and the antennas are tightened.

2. If there is metal shielding between the monitor and the camera, an extended antenna should be used to bypass the metal shielding to ensure smooth transmission of antenna signal in space.

3. When using the flat extension antenna, the patch antenna of the monitor and camera shall be installed on the same side of the vehicle, which is conducive to the transmission of antenna signal.

11. Troubleshooting

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

Symptoms	Possible Causes/Solutions
No picture, no sound	Improper connection of automobile adapter. Use of un-authorized power supply. Power switch is on OFF position.
No signal	Check whether the camera has power supply. Pair the monitor and the camera again.
No sound	Check whether the sound volume is turned off or set too low.
Dark picture	Check whether brightness and contrast are adjusted correctly.
No color	Adjust the HUE settings.

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