

Operating Instructions



2.4G Digital 9" Wireless Color LCD Monitor

Please read this manual thoroughly before operating the device,
and keep it for future reference.

V 1.3

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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°C, and the operating temperature is -20~+70 °C. 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 a 12 or 24 volt automotive battery or vehicle electrical system.
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 warranty.

● Maintenance

1. Remove all the cable connections from the monitor before cleaning the device.
2. Use a mild household detergent and clean the unit with a slightly damp, soft cloth.
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 warranty and necessitate expensive repairs.

● Declaration of conformity



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

- (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	9"
Resolution	800 x 3 (RGB) x 480
Contrast	500:1
Brightness	400 cd/m ²
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
Transmit Output Power	17 dBm
Modulation	2.4G FSK/GFSK
Time Delay	120ms
Transmitting Distance	30-120 M
Micro-SD /TF 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

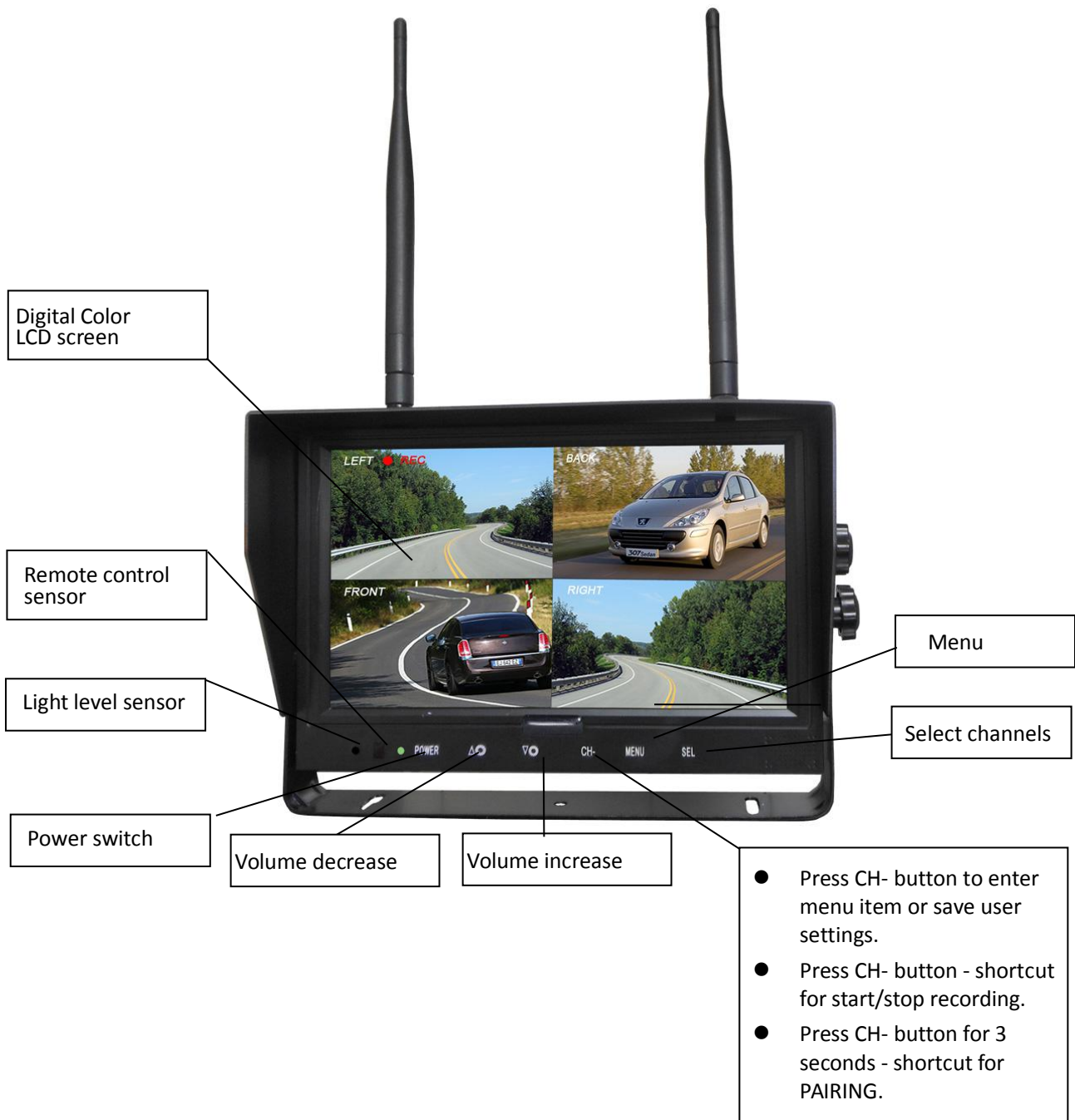
 <p>U-Support Bracket</p>	 <p>Center Mount Bracket</p>
 <p>IR Remote control</p>	 <p>Power cable</p>
 <p>Angle Adjustment Screws</p>	 <p>Sun Shield</p>



Special Notice

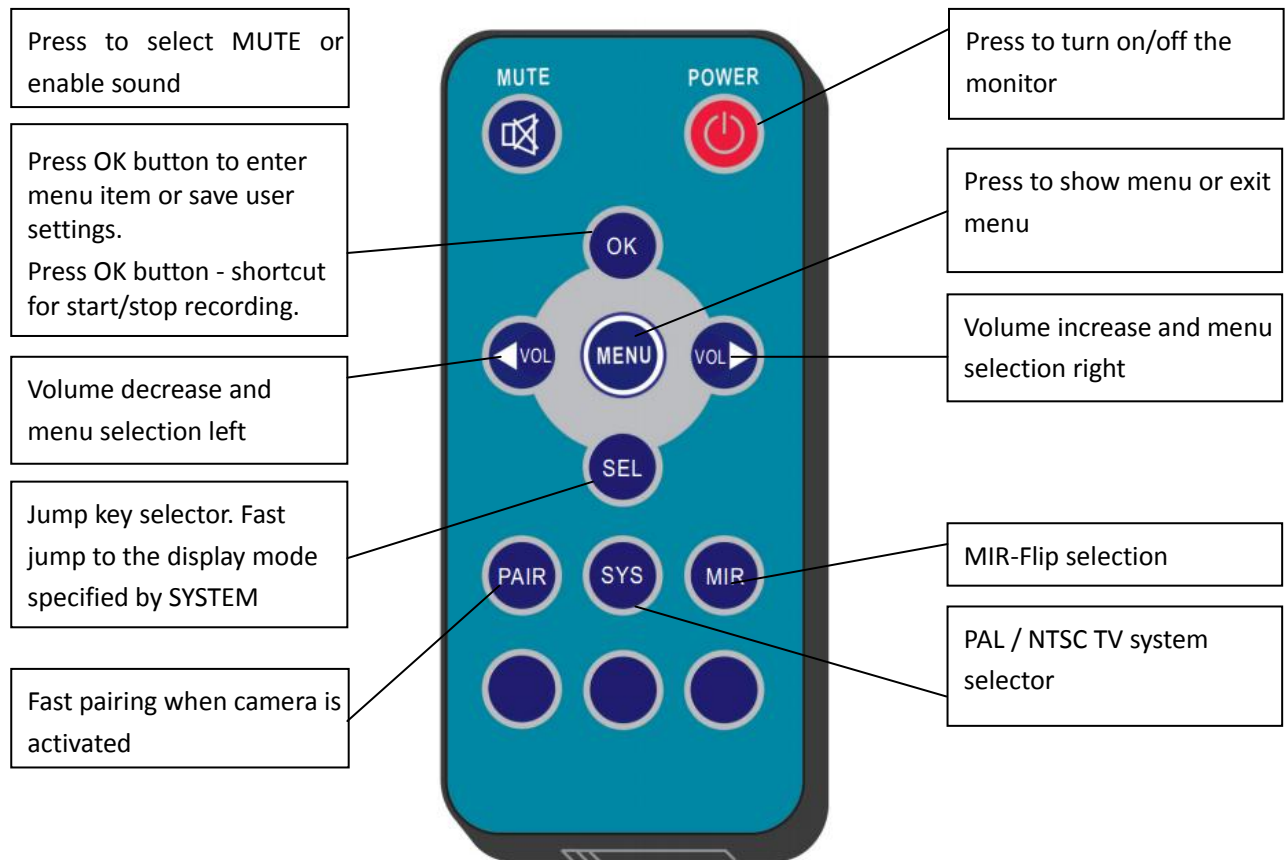
Accessory supply may be different for different application.

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

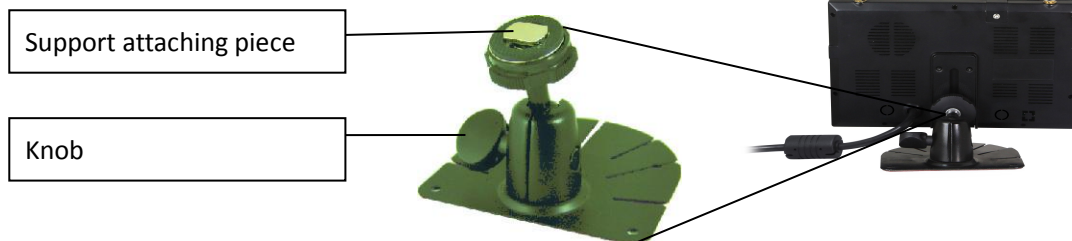
- **MIR**

MIR-Flip selection

7. Basic Operation

7.1 Installation of Center Mounting Bracket:

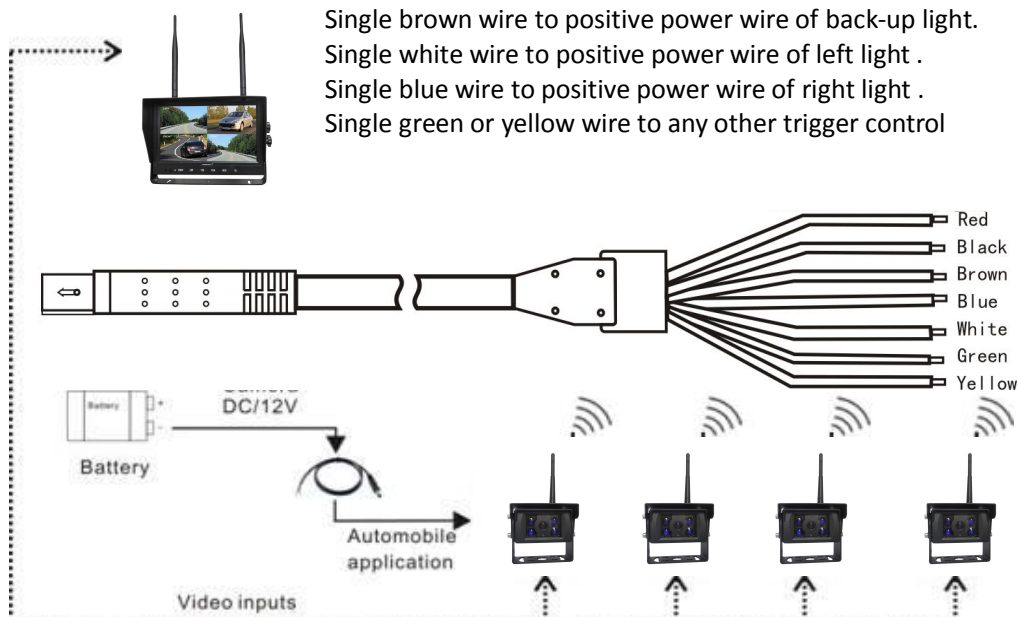
- ① Adjust monitor level by sliding the support to the desired height.
- ② Adjust the angle of the monitor and tighten the knob on the center mounting bracket.



7.2. Installation of U-support Bracket

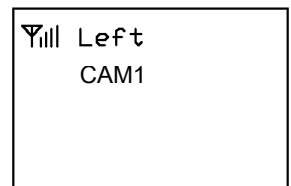


Single red wire to positive power supply of DC/10-32V.
Single black wire to GND.
Single brown wire to positive power wire of back-up light.
Single white wire to positive power wire of left light .
Single blue wire to positive power wire of right light .
Single green or yellow wire to any other trigger control

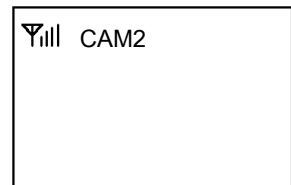


7.3.Reversing Display:

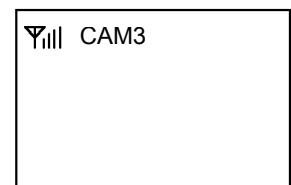
7.3.1. When the green wire is activated, the monitor automatically switches to CAM1.



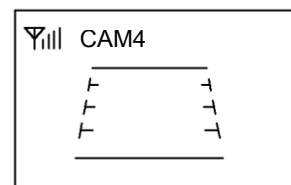
7.3.2. When the white wire is connected to the positive wire of the left turn light , the monitor automatically switches to CAM2(left side camera) when the left turn indicator is activated.



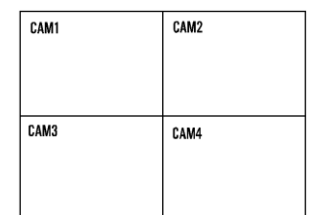
7.3.3. When the blue wire is connected to the positive wire of the right turn light, the monitor automatically switches to CAM3 (right side camera) when the right turn indicator is activated.



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 back-up light is turned on. The distancing grid will also be displayed.



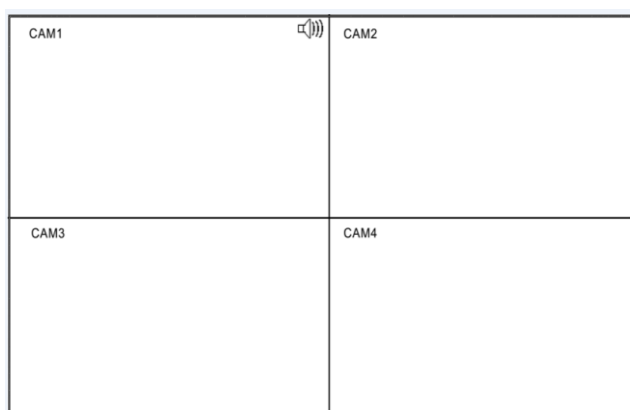
7.3.5. When the yellow wire is connected to the positive wire, the monitor automatically switches to quad or split display. Connection depends on the application request.



7.4. Volume selection under quad view

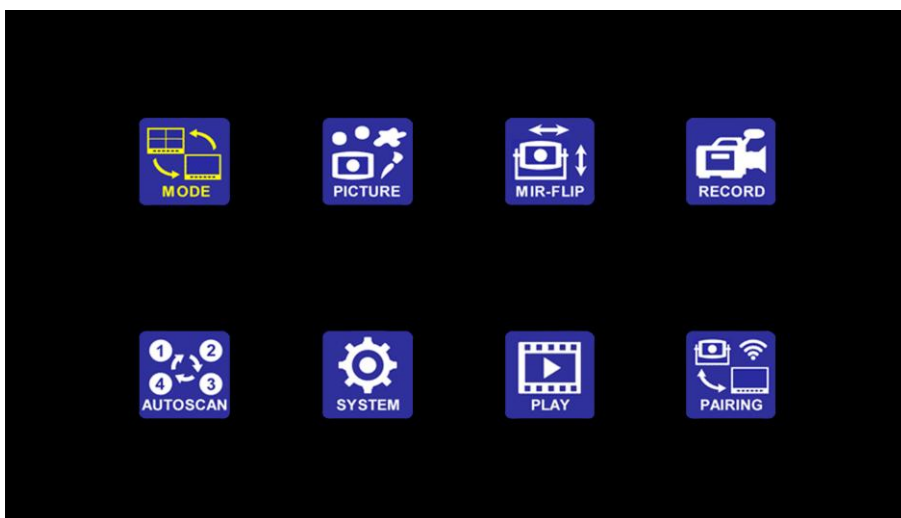
7.4.1. Check the column icon on the top right area on single channel. It stands for audio out for the selected channel.





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

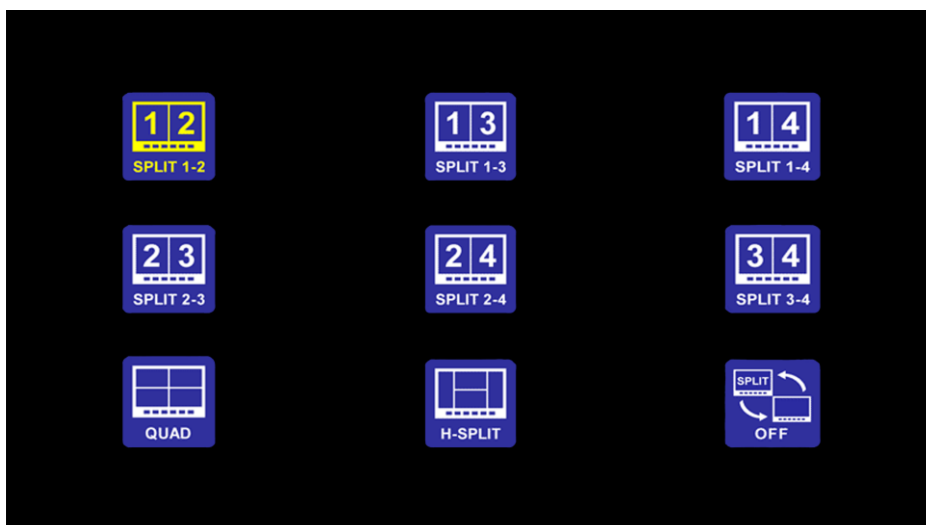


8. Menu

- MENU is allowed for operation under single image mode, not under quad view.
- Press MENU to display the following options and settings:
 1. MODE
 2. PICTURE
 3. MIR-FLIP
 4. RECORD
 5. AUTOSCAN
 6. SYSTEM
 7. PLAY
 8. PAIRING







- (1) Press  or  to select MODE. Press CH- to enter the submenu, and press  or  to select QUAD/H-SPLIT/SPLIT, Press MENU return to main menu

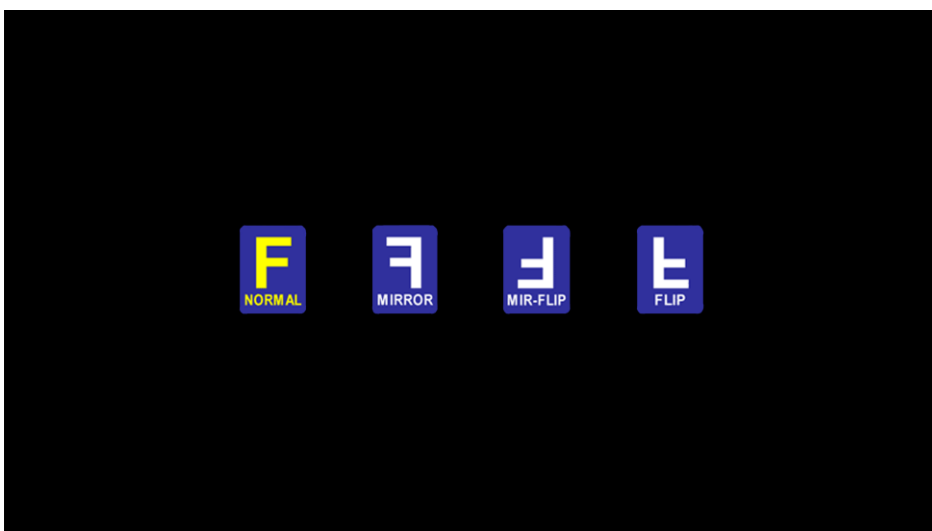


(2) Press  or  to select PICTURE, and press CH- to enter the submenu.



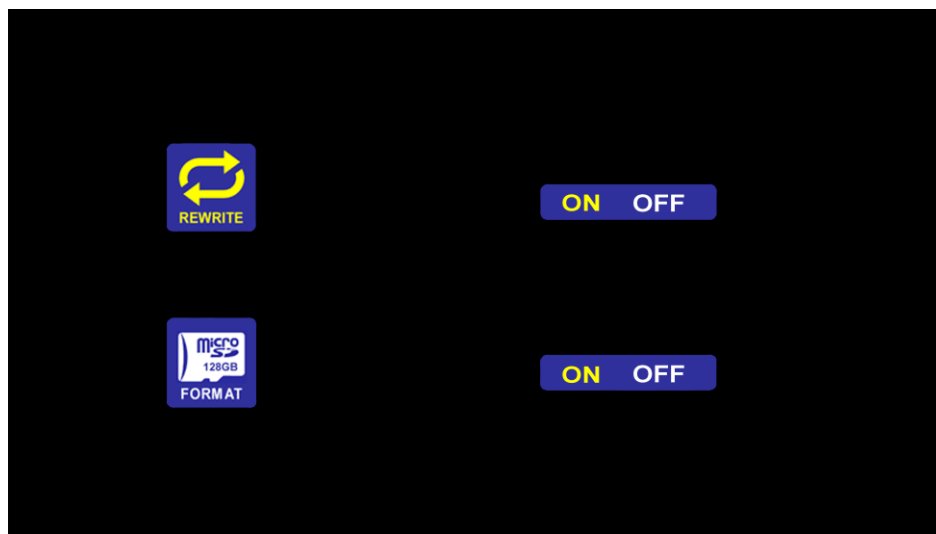
- Press  or  to select BRIGHTNESS / CONTRACT / HUE / VOLUME, and then press CH- to enter the setting accordingly. When the icons turn red, press  or  on menu for selection decreasing or adding. Press CH- to exit the menu. At the submenu, press MENU return to main menu.





(3) Press  or  to select MIR-FLIP, and press CH- to select.



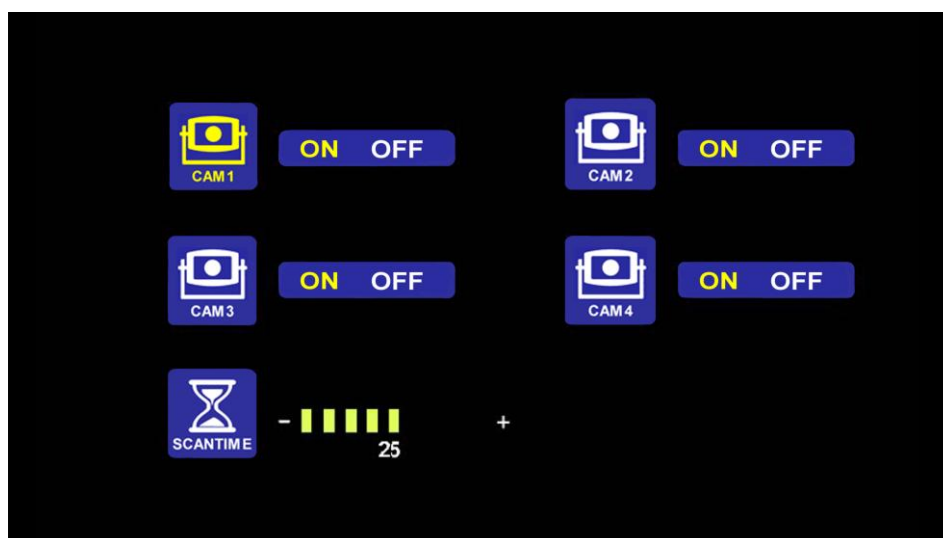
- Press  or  to select NORMAL / MIRROR / MIR-FLIP / FLIP. Press MENU return to main menu





(4) Press  or  to select RECORD, Press CH- to enter.



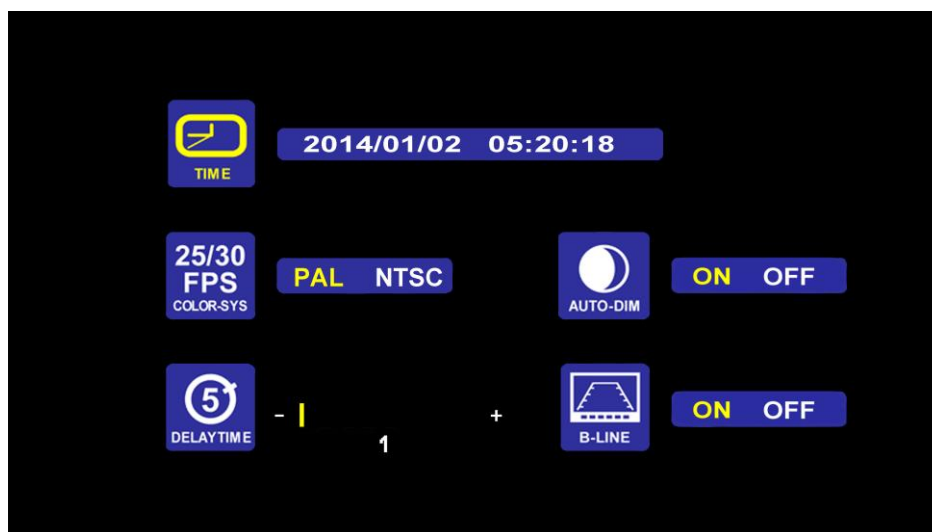
- Press  or  to select REWRITE / FORMAT, and then press CH- to enter the setting accordingly. When the icons turn red, press  or  on menu for selection decreasing or adding. Press CH- to exit the menu. At the submenu, press MENU return to main menu.
- REWRITE: When disk is full, the monitor will delete the earliest manual/timing record file one by one, and keep recording.
- FORMAT :Micro SD card must be formatted before being used. All documents in TF card will be lost once users format the disk.

















(5) Press  or  to select AUTOSCAN, Press CH- to enter.





- Press  or  to select CAM1/CAM2/CAM3/CAM4/SCANTIME, and then press CH- to enter the setting accordingly. When the icons turn red, press  or  on menu for selection decreasing or adding. Press CH- to exit the menu. At the submenu, press MENU return to main menu.
- If the channel is turned OFF, image of the corresponding camera will not be shown in AUTOSCAN display mode.
- Setting scale of SCANTIME is 5-45S, with the step time of 5s.

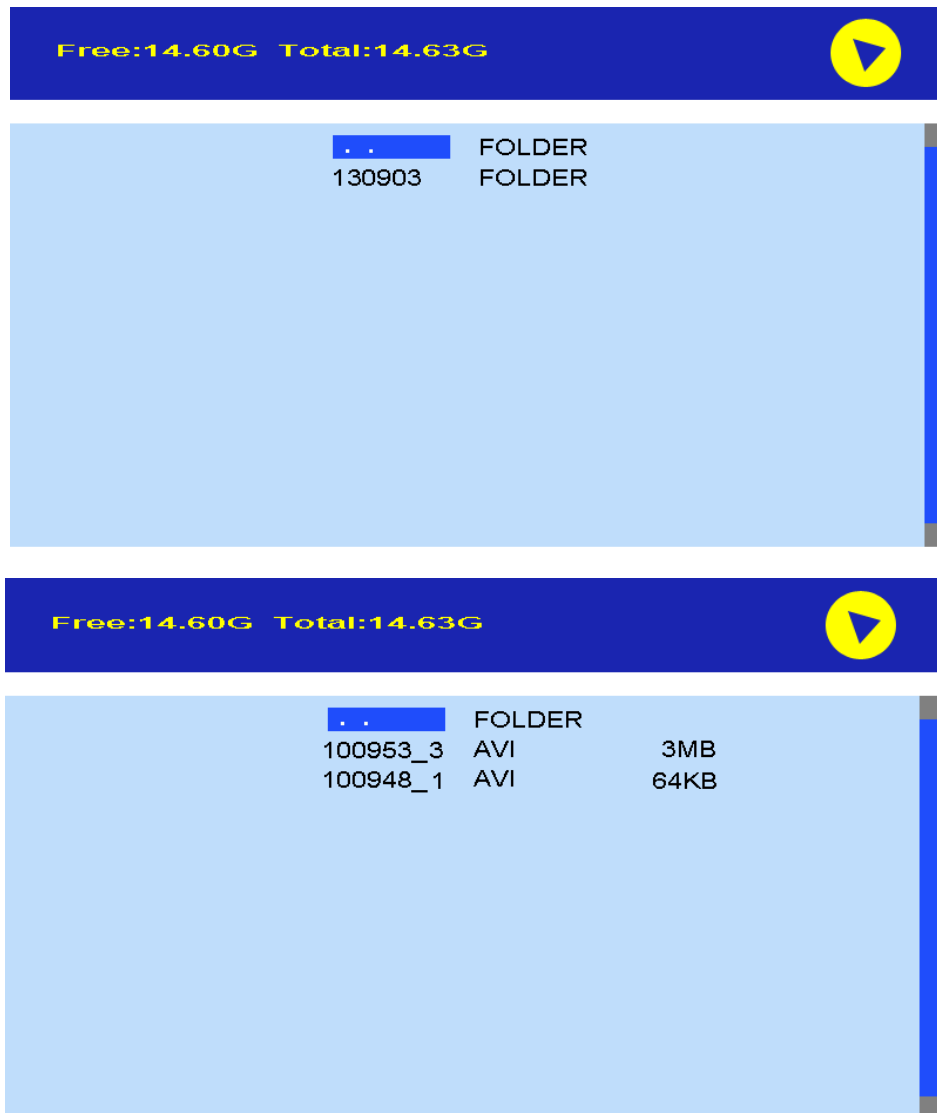
(6) Press  or  to select SYSTEM, Press CH- to enter.







- TIME : Press  or  to select TIME, Press CH- to set. Press  or  for selection decreasing or adding. Press CH- to continue the setting when finishing the previous operation.
- COLOR-SYS: Press  or  to select COLOR-SYS, Press CH- to enter, Press  or  to select NTSC/PAL.
- AUTO-DIM: Press  or  to select AUTO-DIM. Press CH- to enter, and then press  or  to select ON/OFF. When it is on, the monitor will automatically turn darker when it is placed in dark environment for 5s.
- ELETRONIC DISTANCE LABEL: Press  or  to select ELETRONIC DISTANCE LABEL. Press CH- to enter, and 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 Back channel.

- Setting scale of DELAYTIME is 1-20S, with the step time of 1s.

(7) Press  or  to select PLAY, Press CH- enter.



- Press  or  to select recording file, Press CH- to enter playback mode.
- Daily recording file can be searched under file folder named in format of YYMMDD. Each file folder includes the video files which are named in format of HHMMSS_Channel Source(1,2,3,4). For example, 130903 stands for year 2013, September 3rd. 100953_3 stands for 10:09:53 am, Cam3. The recording file format is AVI , maximum recording time for every single file will last for 10 minutes.

(8) Press  or  to select PAIRING, then press CH- to enter. Or Press CH- for 3 seconds to enter PAIRING.

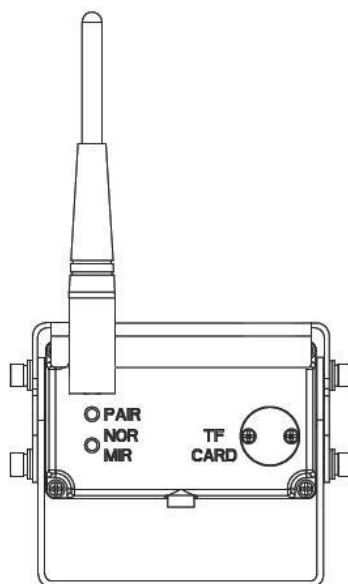


- Auto pairing:

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.
For successful auto pairing, the picture appears. If pairing is unsuccessful, the monitor displays the message "No Signal". Repeat the pairing procedure.

- Manually 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.
For successful auto pairing, the picture appears. If pairing is unsuccessful, the monitor displays the message "No Signal". Repeat the pairing procedure.



9. Recording Time

For the recording time of TF cards with different capacities, please refer to the table below. The actual recording time is subject to the operating environment.

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. 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.