

Operating Instructions



2.4GHz HD 7" Digital Wireless Color LCD Monitor

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

V 1.0

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1. Precautions

● Storage and Keeping

- 1) Do not expose the monitor to excessive heat or coldness. Storage temperature is -30~+80°C; Operating temperature is -20~+70°C; Battery operating temperature is 0~+70°C; 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 the environment with excessive moisture, dust or smoke.
- 4) Avoid dropping or striking.
- 5) Never use 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. Opening monitor case should be done by professionals.
2. Do not watch any video while driving unless you are monitoring rear view camera display.





Special Notice

Occasionally, a few highlights or dark spots may occur on the LCD screen. That is a very common phenomenon in active matrix display technology, and it doesn't necessarily indicate any defects or faults.

Never try to repair this device by yourself. If any problem, 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 invalidate 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.
- 3) Never use strong solvents such as thinner or benzine, as they might damage the finish of the device.

	Caution	
	Risk of electric shock Do not open	
Caution: to reduce the risk of electric shock, Do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.		



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.

2.Features

- TFT LCD monitor with wide angle view and high resolution display.
- 4 wireless camera input.
- Image can be set to horizontally flipped, vertically flipped and normal.
- Support multiple image display modes like single,dual,quad.
- Support 5 x triggers, trigger priority & trigger delay are selectable.
- Support auto scan, scan channel and scan time are selectable.
- Support backlight adjustment manually and automatically.
- Supports parking line, parking line size and position can be adjusted.
- With 1.5W speaker.
- Monitor operated by remote control or keypad.
- Capacitive touch-screen optional.
- Working voltage: 10-32V.
- Compliance with CE/FCC standards.

3. Technical Specifications

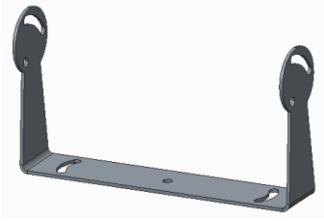




LCD Size	7"
Resolution	1024 x 3(RGB) x 600
Contrast	700:1
Brightness	650cd/m ²
View Angle	U: 85 / D: 85 / R :85 / L: 85
Aspect Ratio	16:9
Camera Channel	4 channels
Operating Frequency	2408 -2478MHz
Receiving Sensitivity	-78 dBm
Decompression Form	H.264
Modulation	FHSS
Time Delay	MIN. 130 ms
Transmitting Distance	MAX. 180 m
Micro SD Card	Max. 128 GB
Power Supply	DC 10-32V
Power Consumption	Max. 10W
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

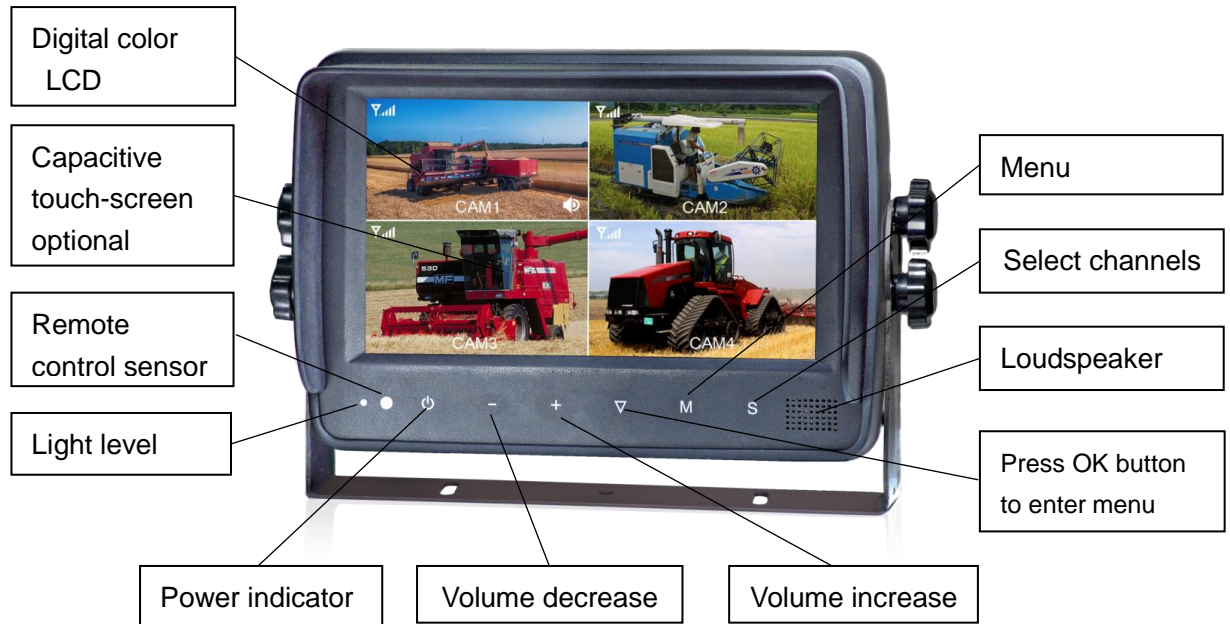
 <p>U-Support Bracket</p>	 <p>Center Mount Bracket</p>
 <p>Sun Shield</p>	 <p>Power Cable</p>
 <p>Angle Adjustment Screws</p>	 <p>IR Remote Control</p>
 <p>Pedal Switch(optional)</p>	 <p>Power supply cable for foot pedal switch</p>



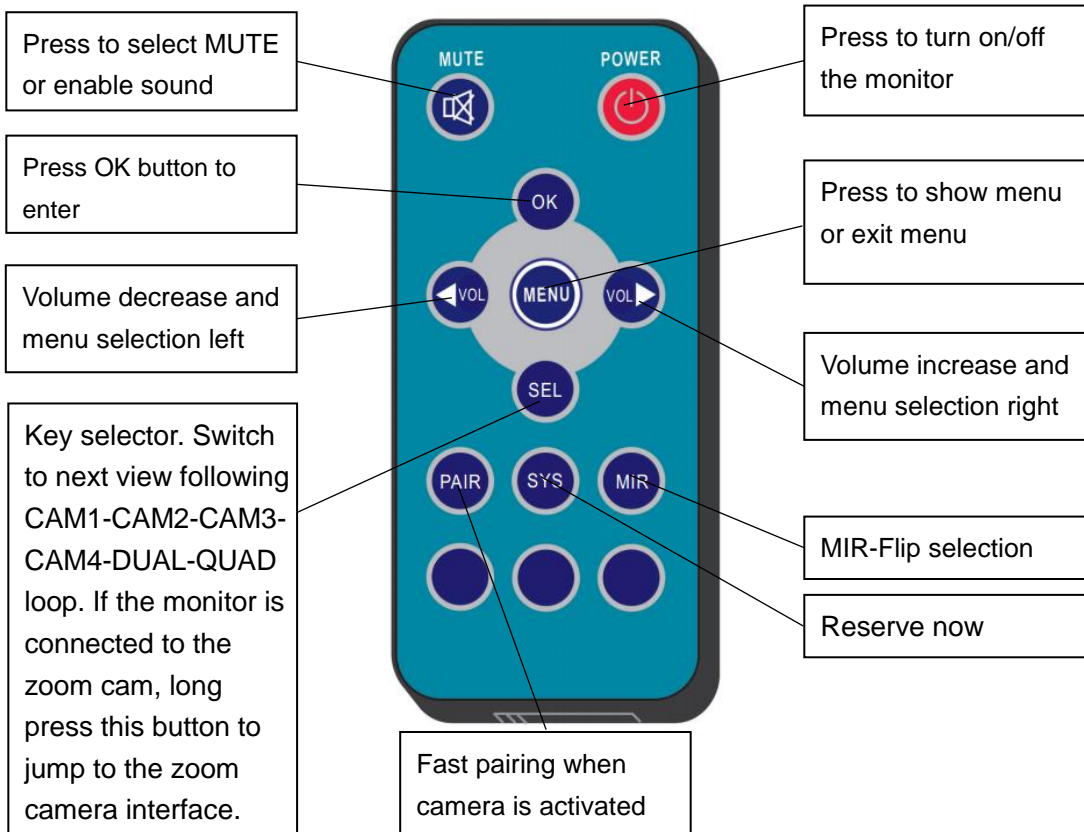
Special Notice

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.

- MENU

Press to show menu or exit menu.

- VOL-

Volume decrease and menu selection left.

- VOL +

Volume increase and menu selection right.

- SEL

Key selector. Switch to next view following CAM1-CAM2-CAM3-CAM4-DUAL-QUAD loop.

If the monitor is connected to the zoom cam, long press this button to jump to the zoom camera interface.

- PAIR

Fast pairing when camera is activated.

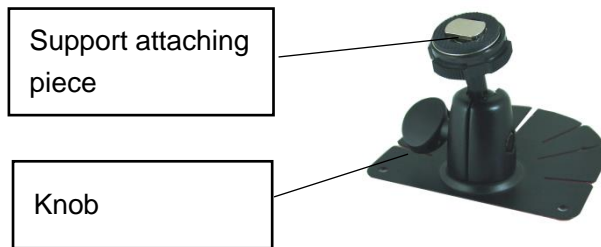
- MIR

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.

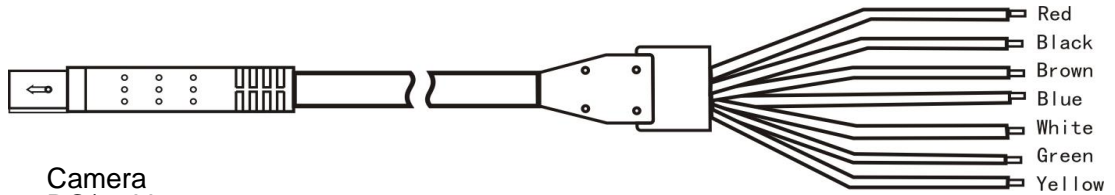


7.2. Installation of U-support Bracket





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.



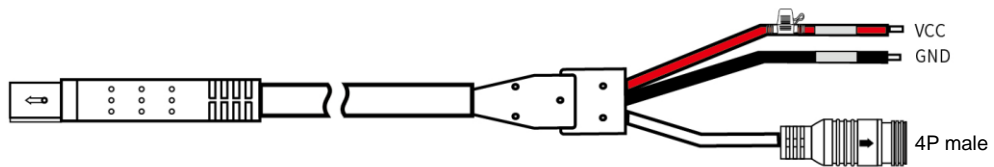
Camera
DC/ 12V



Video inputs



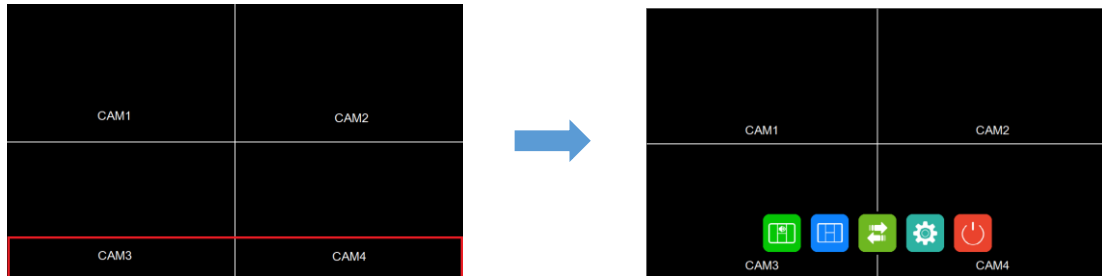
When using pedal switch, the following power supply need to be selected:



VCC(Red wire) to positive power supply of
 DC/10-32V.
 GND(Black) wire to Ground.

8.Menu Instruction

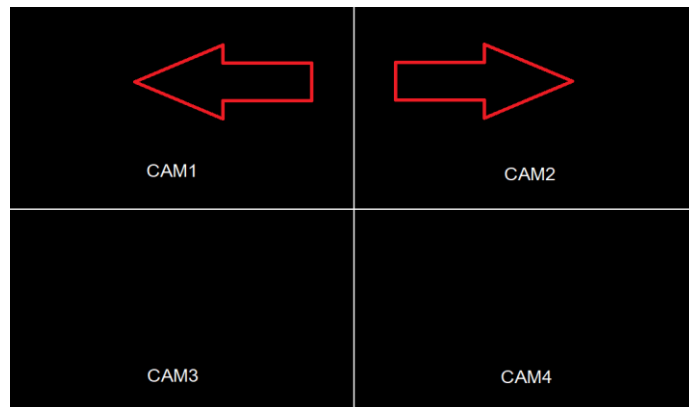
8.1 Preview Interface



Pic.8.1-1

Touch Screen Instructions:

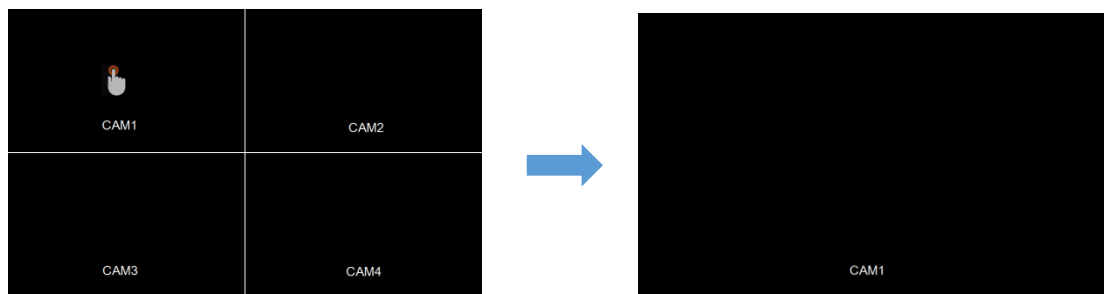
- Touch any area within the red box to bring up the main menu.



Pic.8.1-2

- Swipe left/right on the screen to switch to different views, in the order:
CAM1->CAM2->CAM3->CAM4->DUAL->QUAD

Swipe up/down on the screen to exit/enter standby mode quickly.

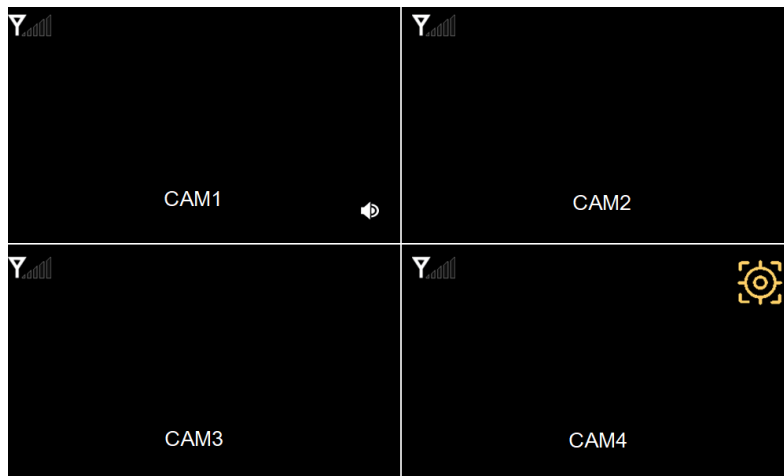


Pic.8.1-3

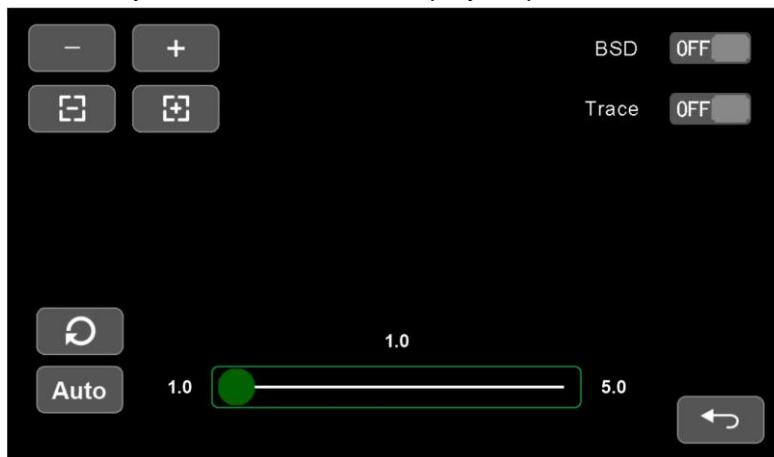
Touch Screen Instructions:


- In the split view, touch the single view channel to zoom it to full screen, and touch it again to return to multi-split view.

Zoom (It will display following image once paired to zoom camera)




After paired successfully, this icon  will display as pic follows.



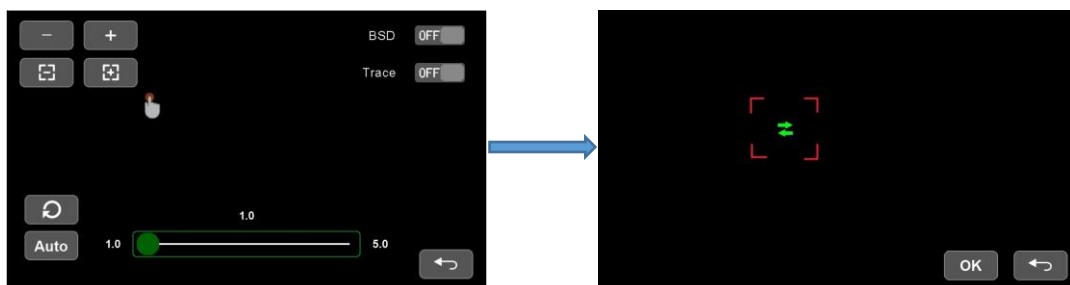
Click this icon , it will switch to zoom camera channel and display above interface (the current version just supports one zoom camera).

- “-”: Zoom out, press it to shorten the focus.
- “+”: Zoom in, press it to increase the focus.
- “[-]”: Near, press it to adjust the focus closer.
- “[+]”: Far, press it to adjust the focus farther.

You could also drag the scroll bar to control digital zoom, ranging from 1.0 to 5.0.

- : To restart the Zoom camera.
- “Auto”: Automatic focus.
- BSD: When turning it ON, BSD is available; when turning it OFF, BSD is unavailable.
- Trace: When set to ON, target trace function is available; When set to OFF, the target trace function is unavailable.

Button operation: when the cursor in the slider area is in green, you can select different icons. To adjust the value, press OK to turn the cursor in red, and then press the left/right button; press OK again and the cursor turns green again.



Long press over 3s on blank area to bring up the tracking target selection frame. Press and drag the edge of the tracking frame to adjust the position and size. Press "OK" to perform target tracking (you need to turn on the tracking function).

If you use remote control, under the zoom operation page, long press the SEL button, you can also enter the tracking target frame modification page. When you use the button to adjust the frame, you need to adjust the frame according to the icon. The following figure shows the meaning of the icon in the middle part of the tracking frame in the tracking frame interface:



: Indicates that the left and right button adjust can move the box to left and right;



: Indicates that the left and right button adjust can adjust the horizontal size of the box;



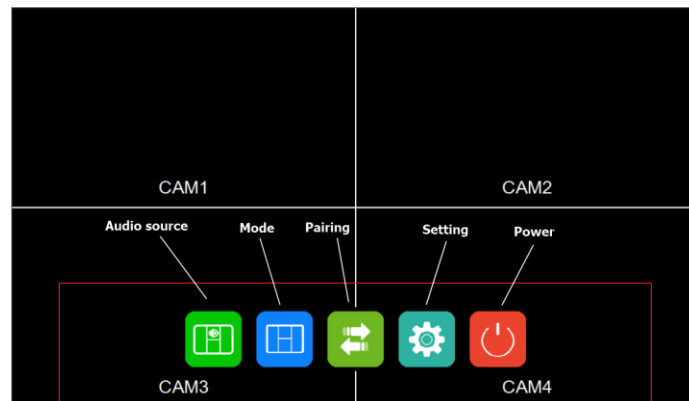
: Indicates that the left and right button adjust can move the box to up and down;



: Indicates that the left and right button adjust can adjust the vertical size of the box.

The OK button is used to switch between different modes and the SEL button confirms the selection of the target frame in the remote control.

8.2 Main Menu



Pic.8.2

Touch Screen Instructions:

- Touch the icons to enter the menu or touch the area outside the red line to exit.

8.2.1 Audio source

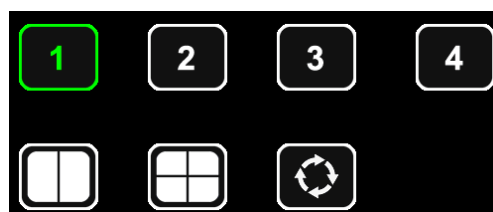


Pic.8.2.1

Feature Instructions:

- Switch audio channels in the multi-split view screen.

8.2.2 Mode

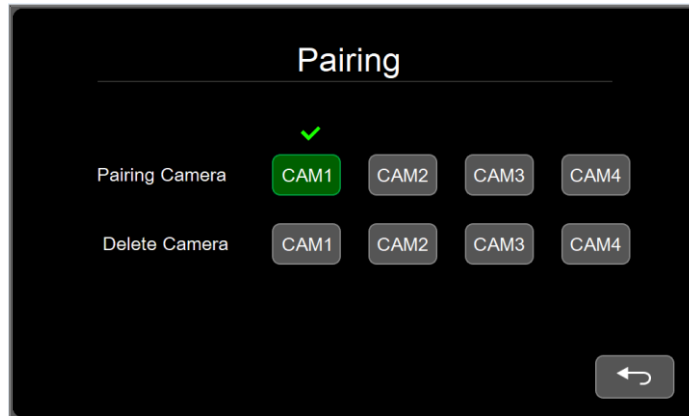


Pic.8.2.2

Feature Instructions:

- Select different icons to switch to the corresponding screen, the last icon is to enable automatic scanning.

8.2.3 Pairing

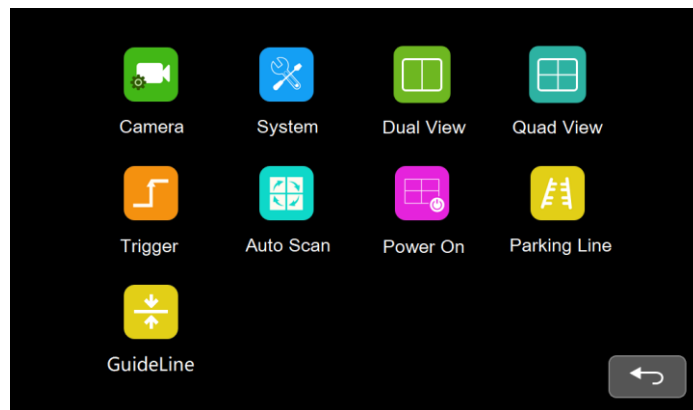


Pic.8.2.3

Feature Instructions:

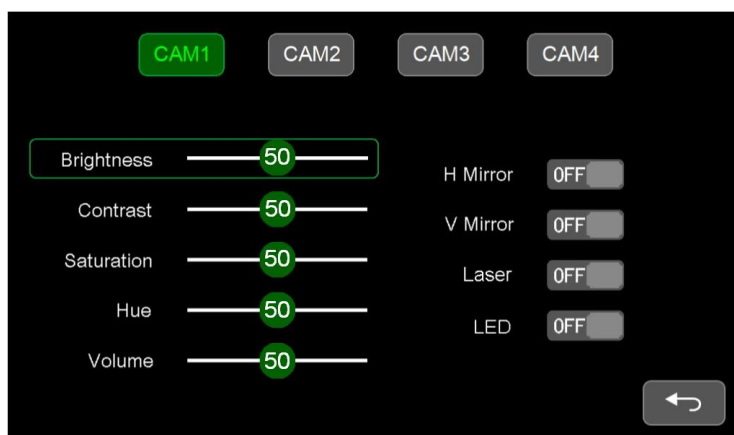
- In Pairing Camera, you can connect the camera to the designated channel (CAMx); In Delete Camera, you can delete the camera of the corresponding channel(CAMx).
- Please refer to 9.3 for detailed introductions on pairing.

8.2.4 Setting



Pic.8.2.4

8.2.4.1 Camera



Pic.8.2.4.1

CAM: Touch or press the left/right button plus the OK button to select and switch to the corresponding channel; when the cursor is not on the channel icon, you need to press the menu button of the remote control to return to the channel selection.

Brightness: drag the corresponding slider bar to adjust the brightness.

Contrast: drag the corresponding slider bar to adjust the contrast.

Saturation: drag the corresponding slider bar to adjust the saturation.

Hue: drag the corresponding slider bar to adjust the hue.

Volume: drag the corresponding slider bar to adjust the volume.

H Mirror: If it is set to ON, the corresponding recording channel is flipped horizontally. If OFF, the corresponding channel is displayed normally without flipping.

V Mirror: If it is set to ON, the corresponding recording channel is flipped vertically, If OFF, the corresponding channel is displayed normally without flipping.

Laser: The current camera operation is only applicable to cameras equipped with a laser. If set to ON, the laser function of the camera will be activated; if set to OFF, the laser will be deactivated.

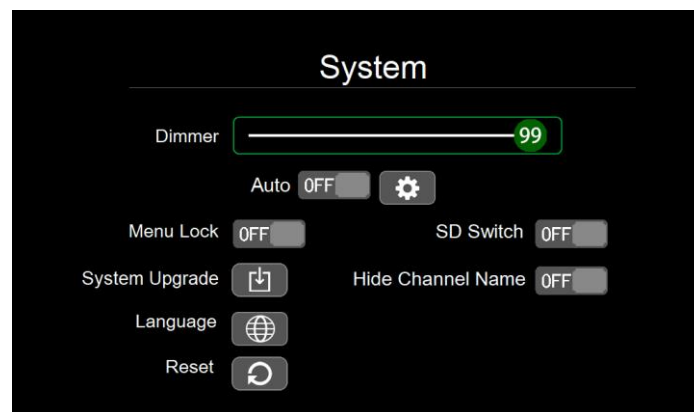
LED: The current camera operation is only applicable to cameras equipped with LED. If

set to ON, the LED function of the camera will be activated; if set to OFF, the LED will be deactivated.

Feature Instructions:

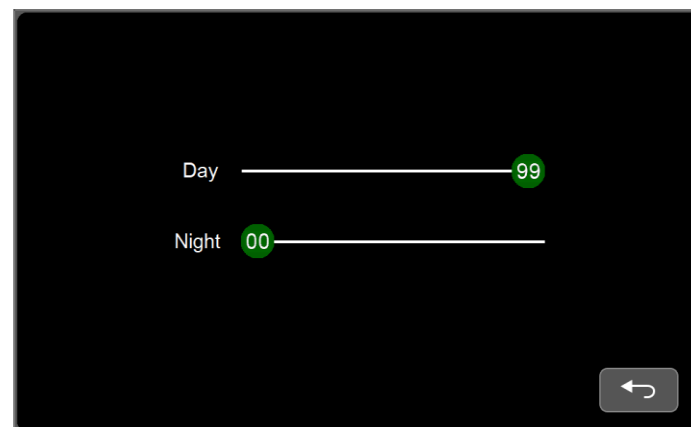
- Touch screen or press left and right keys plus OK key to switch to the corresponding channel.
- Press the Menu key of remote control or button panel to return to the channel selection.
- Drag the corresponding slider bar and mirror setting icon, you can adjust the corresponding color, volume and mirror ON/OFF state.
- For key operation: when the cursor is in the slider area, different icons can be selected when the cursor is green. To adjust the value, press OK to turn the cursor red, and then press left/right to adjust the value. Press OK again and the cursor turns green again.

8.2.4.2 System



Pic.8.2.4.2-1

- When Auto backlight (Auto) is off, drag the slider to adjust the screen brightness; when it is on, dragging the slider is invalid.



Pic.8.2.4.2-2

Day: the screen brightness under high ambient brightness.

Night: the screen brightness under low ambient brightness.

Menu Lock: when it is set to On, touch is invalid; when set to OFF, you can operate by touching.

Language: Click this icon to enter the language selection interface, currently supporting English, German, French, Chinese.

Buzzer: when it is set to On, Touch, remote control and key pad operation will make a "beep".

Reset: reset operation does not change the tx and rx connection status of the system, but only system parameters.

8.2.4.3 Dual View Display Settings



Pic.8.2.4.3

- The text highlighted in green indicates which tx is displayed at that position.
- Touch or press left/right button plus OK button to select any tx in the corresponding position.

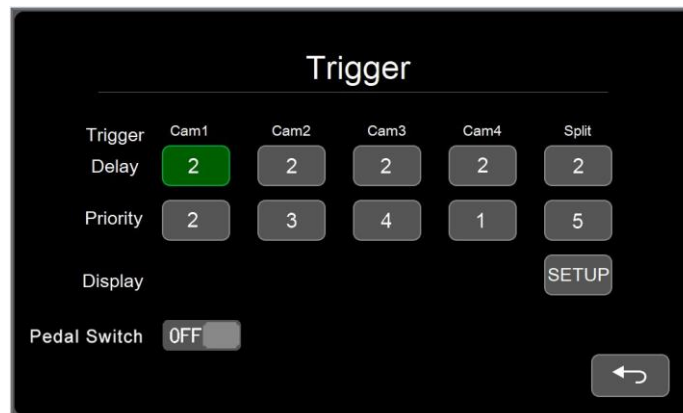
8.2.4.4 Quad View Display Settings



Pic.8.2.4.4

- The text highlighted in green indicates which tx is displayed at that position.
- Touch or press left/right button plus OK button to select any tx in the corresponding position.

8.2.4.5 Trigger



Pic.8.2.4.5

Feature Instructions:

Priority: value can be set from 1 to 5; 1 refers to the highest priority and 5 refers to the lowest priority.

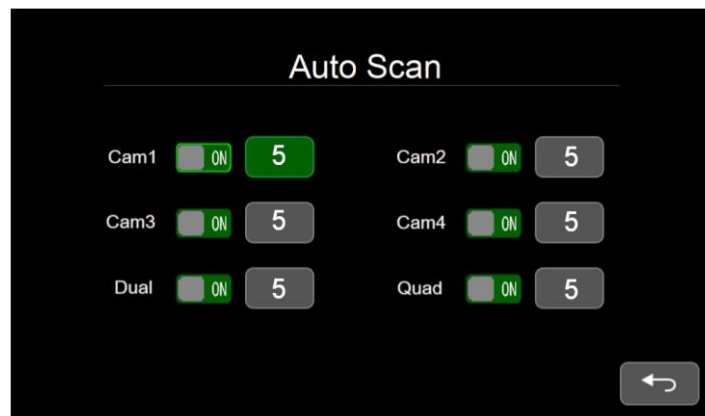
Display: you can select the corresponding channel after triggering, only applicable to the yellow trigger line.

- Trigger function takes precedence over automatic scan function.
- When the trigger signal is detected, the signal source will automatically switch to the corresponding view and returns to the previous view when the delay time runs out;

support standby trigger.

Pedal Switch: When you choose the power supply cable for pedal switch, please turn it on. If turning off, the pedal switch cannot be used.

8.2.4.6 AutoScan

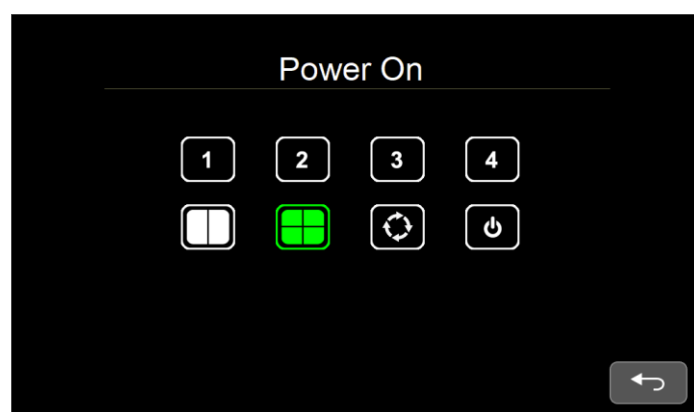


Pic.8.2.4.6

Feature Instructions:

- The duration of automatic scanning ranges from 5 to 60s.
- Each screen can be set to be automatically scanned.

8.2.4.7 Power On



Pic.8.2.4.7

Feature Instructions:

- Touch screen or press the left/right keys to select the corresponding icon, upon startup, the corresponding screen will be displayed or entering automatic scanning or standby state.

- Click on the highlighted icon or press the OK key, the green cursor will disappear, and the last mode is enabled, in which the device will automatically enter the state before shutdown upon power on.

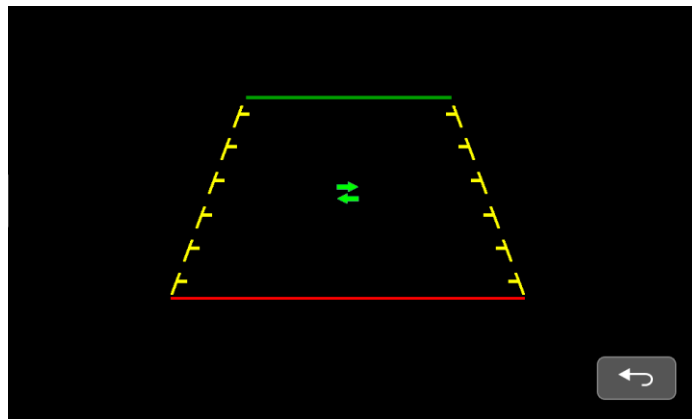
8.2.4.8 Parking Line



Pic.8.2.4.8-1

Feature Instructions:

- When the switch is ON, the single view when it is triggered will display the parking line.



Pic.8.2.4.8-2

Other Instructions:



: The left and right keys enable the cursor to move left and right.



: The left and right keys enable the cursor to move up and down.



: The left and right keys enable the adjustment of cursor size.

Feature Instructions:

- The OK key is used to switch between different modes.
- The cursor can be adjusted by sliding on the screen with one finger, and the cursor size can be adjusted with two fingers. The status of icons in the middle of the cursor does not affect touch adjustment.

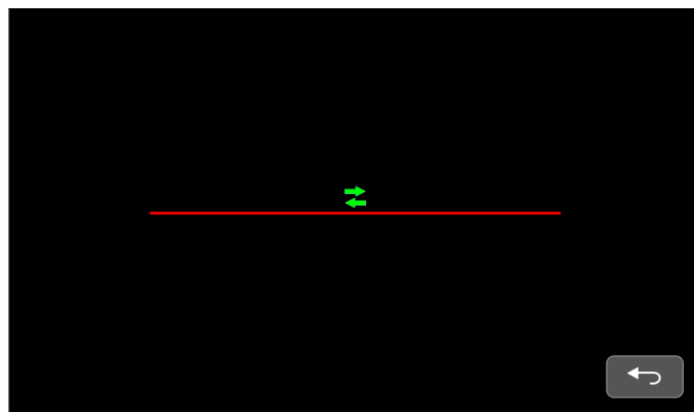
8.2.4.9 Guide Line



Pic.8.2.4.9-1

Feature Instructions:

- When the switch is ON, the single view will display the guide line.



Pic.8.2.4.9-2

Other Instructions:



: The left and right keys enable the cursor to move left and right.



: The left and right keys enable the cursor to move up and down.



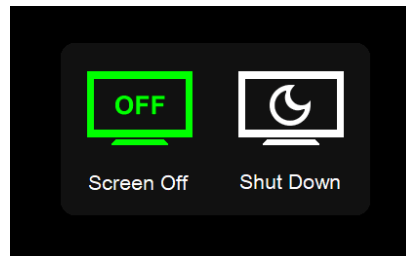
: The left and right keys enable the adjustment of cursor size.

Feature Instructions:

- The OK key is used to switch between different modes.
- The cursor can be adjusted by sliding on the screen with one finger, and the cursor size

can be adjusted with two fingers. The status of icons in the middle of the cursor does not affect touch adjustment.

8.2.5 Power Off



Pic.8.2.5

Feature Instructions:

Screen Off: normal standby mode, the trigger function still works, with only the monitor and camera powered off.

Shut down: similar to Screen Off mode, but does not respond to trigger sign.

9. Installation Tips

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



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



9.3 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 20 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, 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.
- 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.

10. Troubleshooting

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.