Operating Instructions



2.4G HD 10.1" Digital Wireless Monitor

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

V1.3

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1. Precautions

1.1 Storage and Keeping

- Do not expose the monitor to excessive heat or coldness. Storage temperature is -30~+80°C;
 Operating temperature is -20~+70°C; Humidity is Rh90%.
- 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.
- 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 designed to be waterproof. The waterproof rating is IP66.

1.2 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.
- 2. 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.

1.3 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.



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 warrantee and necessitate expensive repairs.

1.4 FCC Warning

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

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

NOTE 2: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2. Features

- 1) TFT LCD monitor with wide angle view and high resolution display.
- 2) Image can be set to horizontally flipped, vertically flipped and normal.
- 3) Support multiple image display modes like single, dual, quad.
- 4) Support 5 x triggers, trigger priority & trigger delay are selectable.
- 5) Support auto scan, scan channel and scan time are selectable.
- 6) Support backlight adjustment manually and automatically.
- 7) Supports parking line, parking line size and position can be adjusted.
- 8) With 1 W speaker.
- 9) Monitor operated by remote control or keypad.
- 10) Working voltage: 10~32V.
- 11) Compliance with CE/FCC standards.
- 12) 4 wireless camera input.
- 13) Capacitive touch-screen.

3. Technical Specifications

LCD Size	10.1"		
Resolution	1024 (RGB) x 600		
Contrast	700:1		
Brightness	600cd/m²		
View Angle	U: 85 / D: 85, R / L: 85		
Aspect Ratio	16:9		
Camera Channel	4 channels		
Operating Frequency	2408 - 2478 MHz		
Receiving Sensitivity	-78dBm		
Decompression Form	H.264		
Modulation	FHSS		
Time Delay	Min. 130ms		
Transmitting Distance	Max. 180 m		
Micro SD Card	Max. 128 GB		
Power Supply	DC 10~32V		
Power Consumption	Max. 10W		
Loudspeaker	1W / 8Ω		
Operating Temperature	-20~+70°C,RH90%		
Storage Temperature	-30~+80°C,RH90%		

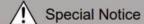
Note: Total video duration.

Capacity	16GB	32GB	64GB	128GB
single	≈15h	≈30h	≈60h	≈120h
dual	≈17h	≈34h	≈68h	≈136h
quad	≈18h	≈36h	≈72h	≈144h

All specification are subject to change without notice.

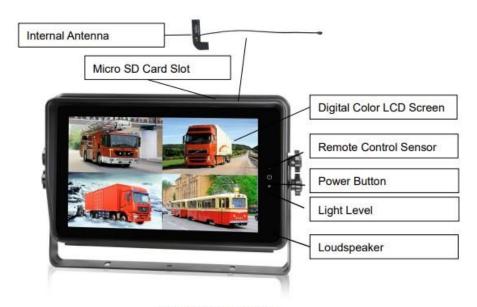
4. Accessories





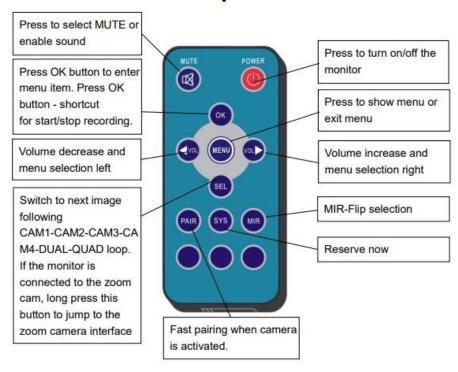
Accessory supply may be different for different application.

5. Parts Identification



Internal Antenna Style

6. Remote Control Operation



• MUTE (Mute)

Press to select MUTE or enable sound.

POWER (Power Switch)

Press to turn on / off the monitor. Long press the power button for 3s will open/close the menu lock, and touch is invalid when the menu lock is enabled.

· 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

Key selector. Switch to next image 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. On the zoom camera interface, press the long button to enter the select track target screen.

• PAIR

Fast pairing when camera is activated.

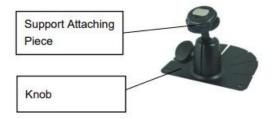
• MIR

MIR-Flip selection.

7. Basic Operation

7.1 Installation of Center Mounting Bracket

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

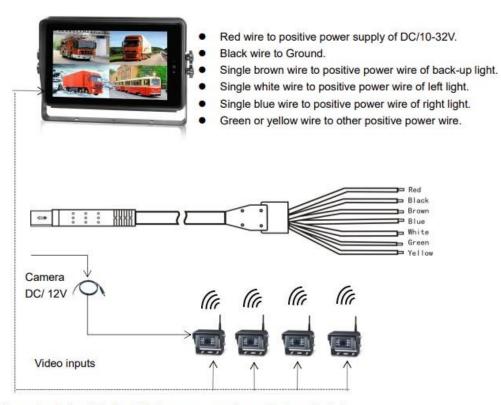


7.2 Installation of U-support Bracket

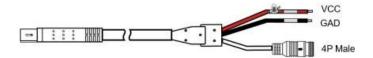
- Align the U-support bracket with the screw holes on both sides of the housing, then screw the star-shaped screws into the screw holes.
- Adjust the angle of the monitor, and tighten the star-shaped screws.



7.3 Wiring Definition



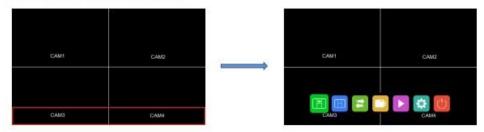
When using foot switch, the following power supply need to be selected:



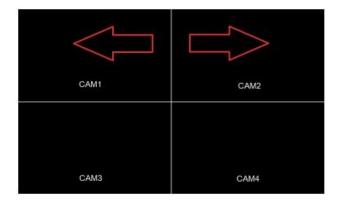
- VCC (Red wire) to positive power supply of DC/10-32V.
- GND (Black) wire to Ground.
- 4P male to foot switch.

8. Menu Instruction

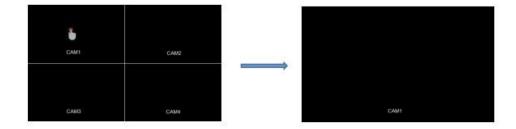
8.1 Preview Interface



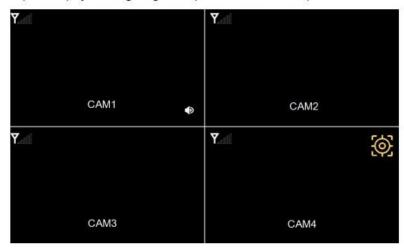
 The main menu can be brought up by touching any position inside the red box area or press the MENU button of the remote control.



- Swipe left or right on the screen can switch between different views, in the order:
 CAM1->CAM2->CAM3->CAM4->DUAL->QUAD->CAM1.
- Slide up/down the screen to exit/enter standby mode quickly.



 In split mode, touch the camera channel to scale to full screen, and touch it again to return to the multi-split mode. Zoom (It will display following image once paired to zoom camera)



After paired successfully, this icon will display as shown in the picture.



- - . "-": 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.

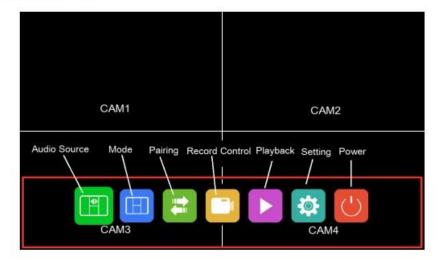
- You could also drag the scroll bar to control digital zoom, ranging from 1.0 to 5.0.
- ": To restart the Zoom camera.
- "Auto": Automatic focus.
- BSD: When turning it ON, BSD is available; when turning it OFF, BSD is unavailable.
- Trace: When set to ON, target trace function is available; When set 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 the 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



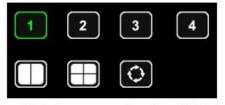
Touch the icon to enter the menu or touch outside the red box to exit, and touch is invalid
when the menu lock is enabled.

8.2.1 Audio Source



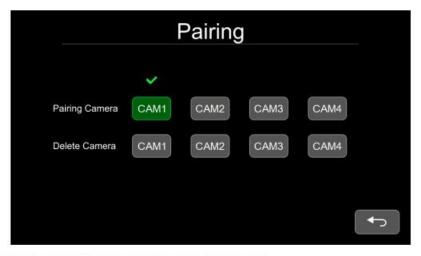
- The audio channel can be switched in the multi-split view mode.
- · Click the area outside the menu to exit.

8.2.2 Mode



- Select different icons to switch to the corresponding view, click the last icon will enable automatic scanning.
- Click the area outside the menu to exit.

8.2.3 Pairing



- Pairing Camera: Connect to tx of the specified channel.
- Delete Camera: Delete the tx of the corresponding channel.
- For details about the pairing process, see 9.2.

8.2.4 Record Control

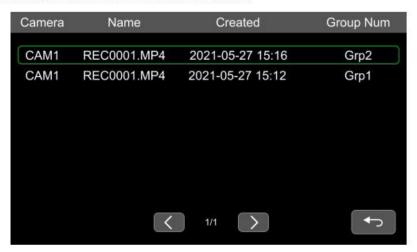
Click the icon to start or stop recording.

8.2.5 Playback

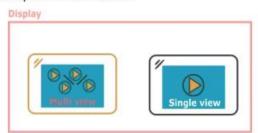


Video: The folder will increase with video files, and a new folder will be created once the files

exceed a maximum of 997 in a folder. The larger the folder number, the newer folder. If the SD card is full, files will be deleted from the oldest folder.



- Camera: The tx that the recording file belongs to.
- Name: Filename.
- Created: Creation date.
- Group Num: The corresponding value will increase by 1 with each recording. The Group
 Num of the video recorded at the same time is the same, that is, the Group Num of the video
 recorded under multi-split mode is the same.



 A window will pop up before playing a file recorded in the multiple split mode to select playing multiple views at the same time or a single view.

Note: A TF card in exFat format with a capacity of 32GB-128GB memory is required.

8.2.6 Setting

Setting mainly contains the following sub-menus: Camera, Record, System, Dual View, Quad
 View, Trigger, Auto Scan, Power on, Parking Line, Guide Line, see 8.3.

8.2.7 Standby



- 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 signals.

8.3 Setting



No operation of the menu within 30 seconds, the monitor will exit from the menu automatically.

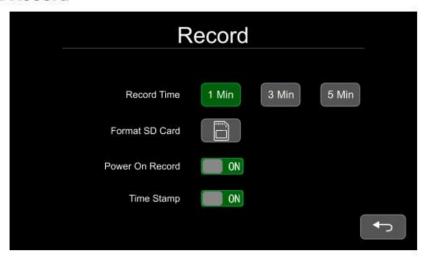
8.3.1 Camera Display Settings



- 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.

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.

8.3.2 Record

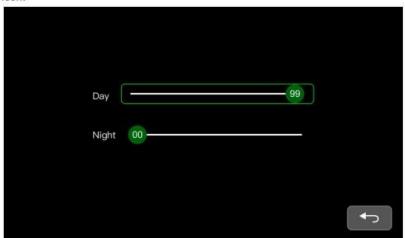


- · Record Time: Choose the duration of the video.
- Format SD Card: "SD Card Format?" will pop up, press Yes to format the SD card. Note: Supports SD cards ranging from 32GB to 128GB, with a requirement of Class 10. Any brand is acceptable. However, please note that cards over 64GB will be formatted to exFAT on the device, while cards between 32GB and 64GB will be formatted to FAT32.
- Power On Record: If set to on, the monitor will start recording video upon startup. This
 function is set on by default
- Time Stamp: If set to ON, then camera's time stamp (if camera has) will also show in the left bottom of the monitor. This function is set on by default.

8.3.3 System



When Auto Backlight (Auto) is off, adjust the slider to adjust the screen brightness; When it is
on, adjusting the slider is invalid. The day/night mode backlight can be adjusted by touching
the icon.



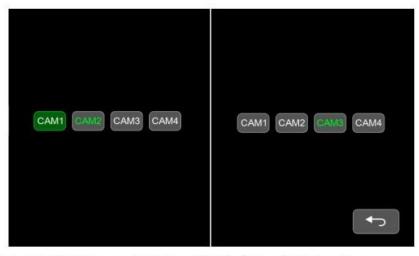
- Day: The screen brightness under high ambient brightness.
- Night: The screen brightness under low ambient brightness.
- Menu Lock: When it is set to On, touch is invalid; when set to OFF, you can operate by touching.
- SD Switch: When it is set to On, you can show standard definition image in the single mode.
- Hide Channel Name: when it is set to On, the channel name is no longer displayed under any display mode.

- Buzzer: when it is set to On, Touch, remote control and key pad operation will make a "beep".
- System Upgrade: If there is a firmware named "SNCC7XFW.bin" in the inserted SD card, click this icon and confirm the upgrade, the device will be upgraded to this firmware.
- Language: Click this icon to enter the language selection interface, currently supporting English, German, French, Chinese.
- Reset: Reset operation does not change the tx and rx connection status of the system, but only system parameters.



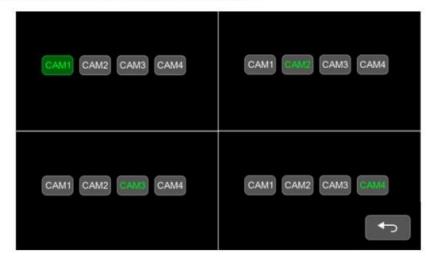
- Date&Time: Touch or press left/right plus OK key of the remote control to enter the value setting interface, and set the date and time through the small keyboard.
- Date: Select the corresponding year, month and day.
- Time: Select the corresponding hour, minute, and second.
- Time Zone: Once the time zone is set and the OK icon is selected, the system will automatically reboot to apply the new time zone settings. The date and time configurations are saved immediately upon pressing the enter key in the corresponding submenu. It is important to note that the time zone settings will only be applied after rebooting by selecting the OK icon; failure to do so will result in the settings not being applied. Note: This functionality requires the SD card to be formatted using the exFAT file system.

8.3.4 Dual View Display Settings



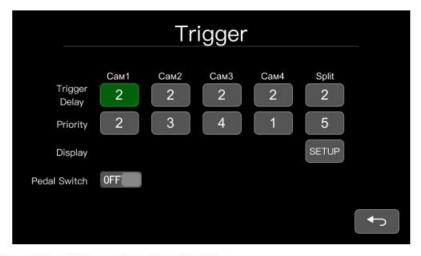
- The text highlighted in green indicates which tx is displayed at that position.
- Touch or press left/right button plus OK button to select any tx in the corresponding position.

8.3.5 Quad View Display Settings



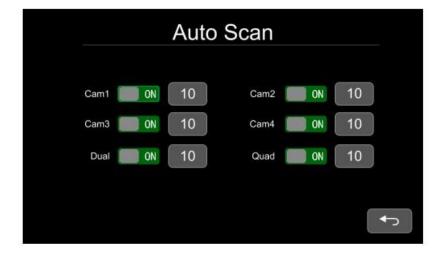
- The text highlighted in green indicates which tx is displayed at that position.
- Touch or press left/right button plus OK button to select any tx in the corresponding position.

8.3.6 Trigger



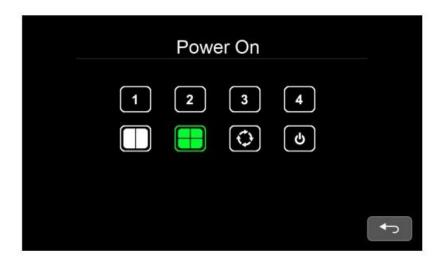
- Trigger Delay: Value can be set from 1 to 60s.
- Priority: Value can be set from 1 to 5; 1 refers to the highest priority and 5 refers to the lowest priority.
- Display: You can select the corresponding channel after triggering, only applicable to the yellow trigger line.
 - Trigger function takes 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.

8.3.7 Auto Scan



 A window will pop up by touching the number box. Press On/Off to turn on/off the automatic scanning function. Each view can be set whether to be automatically scanned. The duration of automatic scanning ranges from 5s to 60s, 10s by default.

8.3.8 Power On



. Touch or press the left/right button to select the corresponding icon, and the corresponding

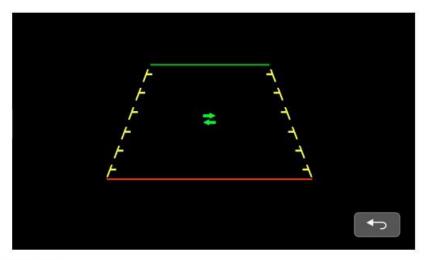
view will be displayed upon startup or automatic scanning or standby.

 Touch the highlighted icon or press OK button, the green cursor will disappear, and enter the Last mode, specifically, automatically enter the state before shutdown upon power-on.

8.3.9 Parking Line



- When it is set to AUTO, only the channels triggered by CAM1, CAM2, CAM3, and CAM4 will display a reversing icon.
- When it is set to ON, the corresponding CAM1, CAM2, CAM3, and CAM4 will display a
 reversing icon.



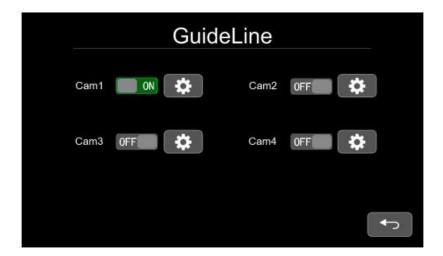
Other Instructions:

- Indicates that currently the cursor can be adjusted left or right by left/right keys.
- Indicates that currently the cursor can be adjusted up and down by left/right keys.
- Indicates that currently the cursor size can be adjusted by left/right keys.

Feature Instructions:

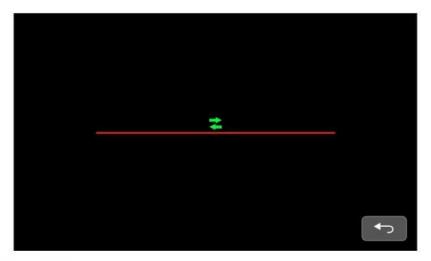
- The OK key is used to switch between different modes.
- The cursor position can be adjusted by sliding with one finger, and the cursor size can be
 adjusted with two fingers. The status of icons in the middle of the cursor does not affect the
 adjustment.

8.3.10 Guide Line



Feature Instructions:

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



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.

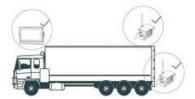
Feature Instructions:

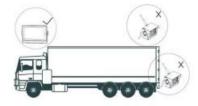
- The OK key is used to switch between different modes.
- The cursor can be adjusted by sliding on the screen with one finger, and the cursor size can
 be adjusted with two fingers. The status of icons in the middle of the cursor does not affect
 touch adjustment.

9. Installation Tips

9.1 Antennas Installation Tips

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





9.2 Monitor and Camera Pairing Tips

- Pair the monitor with the camera before installing the wireless system on vehicle:
- Before pairing, power off the unpaired camera and switch the monitor channel to the one to be paired.
- 2) 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.
- 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.
- 4) 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.

9.3 Solutions for Poor Monitor Signal

- 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.
- 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.
- 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.