Haloview

2.4G Digital 1080P Touch Screen System

User Manual

Byte Tango System

BT7 Solar / BT6 Solar

Please read all instructions carefully before using, and keep the manual for future reference.
The antennas of BT6 Solar is shorter than BT7 Solar, please refer to the actual product received.

1 Precautions

● 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℃ or -22 to +176℉ . The operating temperature is -20 to +70℃ or -4 to 158℉ 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 DC 10-32V or USB Type-C 5V/2A.
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.

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.

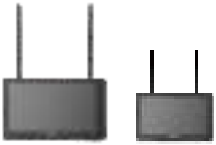
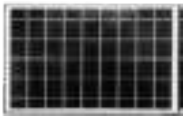
This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

FCC WARNING

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, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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.
To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

❷ Accessories

 7" or 5.5" Monitor	BTC140 Camera	 Solar Panel
3M Mount Bracket	Suction Cup Mount Bracket	Camera Charging Conversion Cable
Solar Panel Extension Cord	Cigarette Lighter	Type-C Cable
Metal Plate with 3M Tape for Camera	Metal Plate with 3M Tape for Solar Panel	Power Adapter

The product is under continuous improvement and the specifications will change without notice. Picture for reference only. Please refer to the actual product and accessories.

The antennas of BT6 solar is shorter than BT7 solar, please refer to the actual product received.

⚠ Special Notice

Accessories supplied in kit may be different for each application.

3 Features

- Upgraded touch screen for easy operation.
- NORMAL, MIRROR, FLIP and MIR-FLIP viewing available.
- Split mode auto-scan mode and single-display mode available.
- Support 4-channel composite and single-channel recording in AVI signal format.
- Auto dim function available.
- 4 wireless camera inputs.
- Video input:1080P.
- Wide voltage input: DC10-32V or USB Type-C 5V.
- Camera night LED can be turned ON/OFF via monitor.
- The monitor turns on and the camera wakes up automatically.
  The camera turns off automatically one minute after the monitor turns off.

4 Specifications

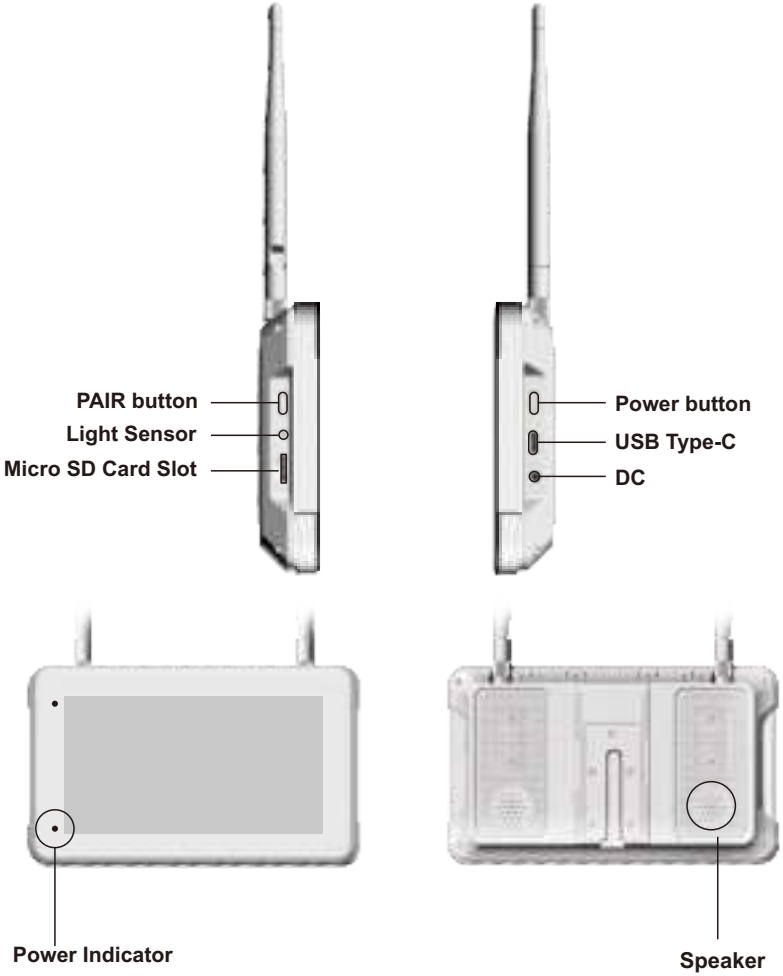
Monitor

LCD size	7" 16:9	5.5" 16:9
Resolution	1024x600	1280x720
Brightness	1000 cd/m²	550 cd/m²
Power Consumption	Max.6W	Max.4.5W
Contrast	800:1	
Viewing Angle	U/D:85,R/L:85	
Aspect Ratio	16:9	
Channel	4 channels	
Operating Frequency	2400-2483 MHZ	
Receiving Sensitivity	-85 dBm	
Video Compression	H.264	
Latency	120ms	
Transmitting Distance	984ft line of sight	
Micro-SD /TF Card	Max.256G	
Video Format	AVI	
Power Supply	DC10-32V or USB Type-C 5V	
Loudspeaker	1W/8Ω	
Operating temperature	-20~+70°C, RH90%	
Storage temperature	-30~+80°C, RH90%	

Camera

Image Device	1/2.9"CMOS
TV System	25 f/s 30 f/s
Effective Pixels	1920x1080 pixels
Pixel Size	2.8umx2.8um
Video Output	8bits YUV
Scanning System	Progressive Scanning
Sync.System	Internal
Gamma Consumption	0.45
AGC	Auto
White Balance	Auto
BLC	Auto
Electronic Shutter	Electronic Rolling Shutter
Operation Frequency	2400-2483MHz
Transmission Distance (barrier free)	300m(984ft)
Transmission Power	18dBm
Video Code	H.264
Spread Spectrum	DSSS
Latency	120ms
RF Bit Rate	12Mbps
Minimum Illumination	0Lux
Power supply	DC5-16V
Night Vision Distance	8~10m(26~32ft)
Viewing Angle	120°
Audio	Yes
Battery Capacity	37Wh
Charging Voltage	DC: 5~16V
Charging Time	5.5H@12V
Discharging Time	14H
Mounting	Magnetic mount
Connection	Camera Charging Conversion Cable
Waterproof Rating	IP67
Charging Temperature	-10~45°C
Discharging Temperature	-10~60°C
Storage Temperature	-20~60°C

❺ Functions of each part

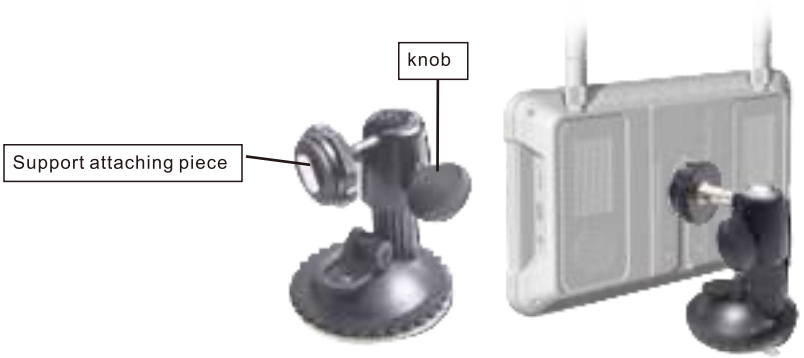


It turns to red when the monitor is powered on.
Indicator is green when the monitor is working normally.

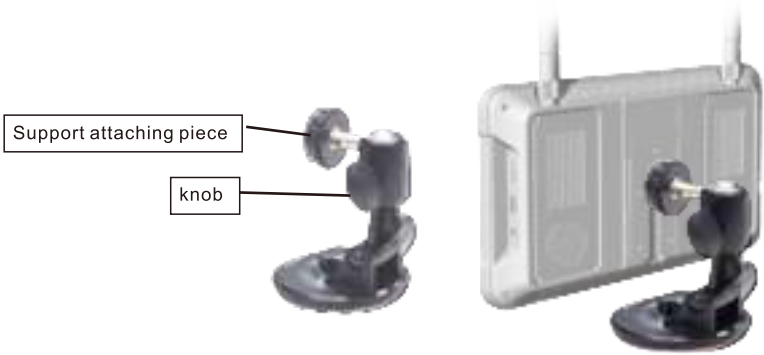
6 Basic Operation

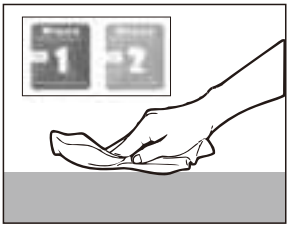
Installation of Suction Cup Mount:

1. Adjust monitor height by sliding monitor up or down in slot, then tighten knob. Adjust monitor angle by loosening lower knob on suction cup mount, tilting monitor to desired angle and re-tighten knob.

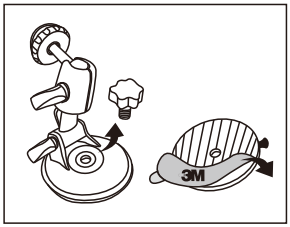


2. Installation of 3M Mount

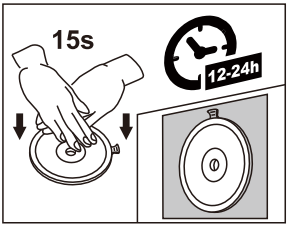




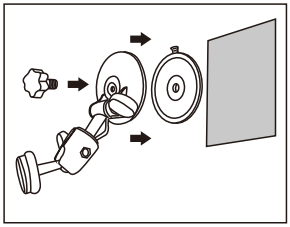
1. Clean the place where you plan to install the mount by provided alcohol wipes.



2. Remove the base from the mount and paste the base on that place.

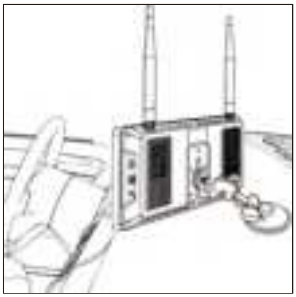


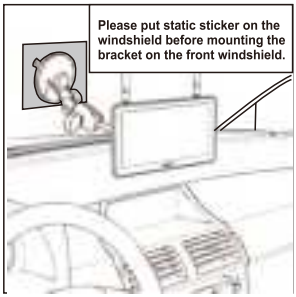
3. Press the adhesive base firmly for 15 seconds when pasting. The base needs to be left to stand for 12-24 hours before hanging the monitor.



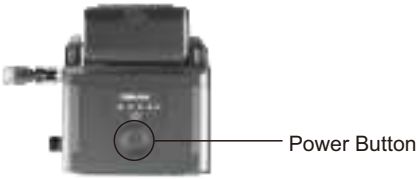
4. Attach the mount to the base.

This multi-purpose multi-angle adjustment display mount can be used like below





❼ Battery-Operated Camera and Solar Panel



Power Button

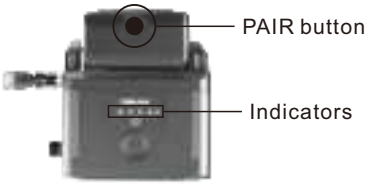
Short Press Power Button	In non-charging status, turn ON/OFF the entire camera (camera itself and battery)
	In charging status, turn ON/OFF the camera itself (the battery will continue charging or discharging)
Press Power Button for 5 Seconds	Pressing power button for 5 seconds when device power on, two indicator lights blinking at the same time, entering remote control pairing mode (the remote control needs to be purchased additionally).
Press Power Button for 20 Seconds	When device power on, pressing power button for 20 seconds until all indicator lights off, the device will enter deep sleep mode. Short press power button again to awaken the camera.

Pairing

Two methods for pairing

Method 1: Press the pair button on the monitor first , and then press the pair button on the camera(The camera is turned on). After successful pairing, the monitor will display the image captured by the camera.

Note: To realize the remote power on/off, the camera must be paired on the channel of CAM4.



Method 2: Press the pair button on the monitor first , and then press the power button on the camera(The camera is turned off). After successful pairing, the monitor will display the image captured by the camera.
Note: To realize the remote power on/off, the camera must be paired on the channel of CAM4.

Automatic Standby

Unplug the charger when charging, the camera will automatically enter standby mode after 5 minutes.
Under normal working condition, turn off the monitor or the camera has signal loss for over 1 minute, the camera will automatically enter standby mode.

Indicators

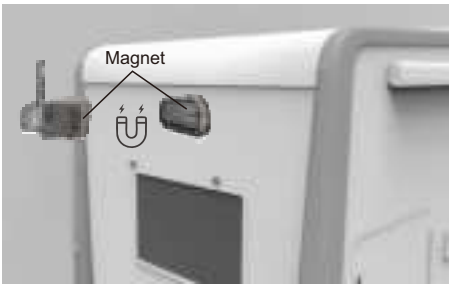
Indicators OFF	The standby current of the camera after manually entering the deep sleep state is 60uA, and the camera can be stored for a long time while the battery is fully charged. Note: If you need to store the camera for a long time, please disconnect the solar panel, otherwise the solar panel will automatically recharge under certain conditions, prompting the camera to exit the deep sleep state.
	Short press the camera power button to enter standby mode, or turn off the camera remotely by monitor, the camera can be woken up by the monitor at any time. If the battery is fully charged, the camera can be placed for 8 months.
Red Indicator ON	Reverse positive and negative polarity.
1st Indicator ON and 4th Indicator Blinking	The battery temperature is greater than 65°C/149°F. The camera will stop charging and working. The camera will resume charging and working automatically when the battery temperature return to normal. **Note:** If the temperature is often too high, please keep the product away from heat sources.
Second and Third Indicators Blinking	Load short-circuit
Second Indicator Blinking and 4th Indicator ON	Charging voltage is higher than 16V (every 10 seconds the second indicator flashes and 4th indicator lights up for 2 seconds).

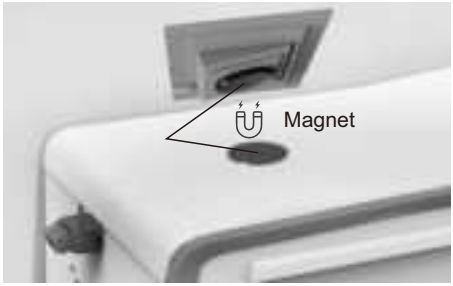
Charging and Discharging

Charging by DC Adaptor	Supports DC 5-16V, battery can be fully charged in 5.5 hours with DC 12V.
Charging by Solar Panel	The 9V 8W solar panel can fully charge the camera battery in 48 hours when there is enough light and the camera is not working.
Discharging when Solar Panel Disconnected	The camera can work for 14 hours with a fully charged battery (at 25°C/77°F with night light turned off).
Discharging when Solar Panel Connected	If the camera works for 4 hours a day, the solar panel can keep the camera working continuously (abundant sunlight and 25°C/77°F).

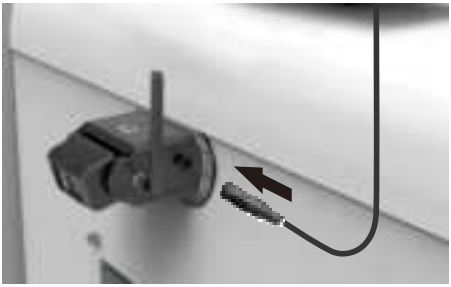
⑧ Wiring Instruction

Camera and Solar Panel Wiring Method:



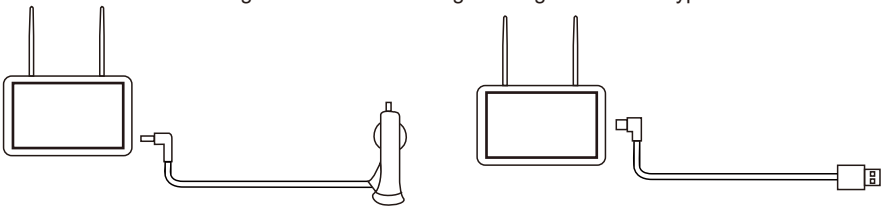


Note: Make sure the magnet part is attached to the metal plate



Monitor Wiring:

Connect the monitor to the cigarette lighter power adapter.
Power the monitor through the vehicle's 12V cigarette lighter or USB Type-C.



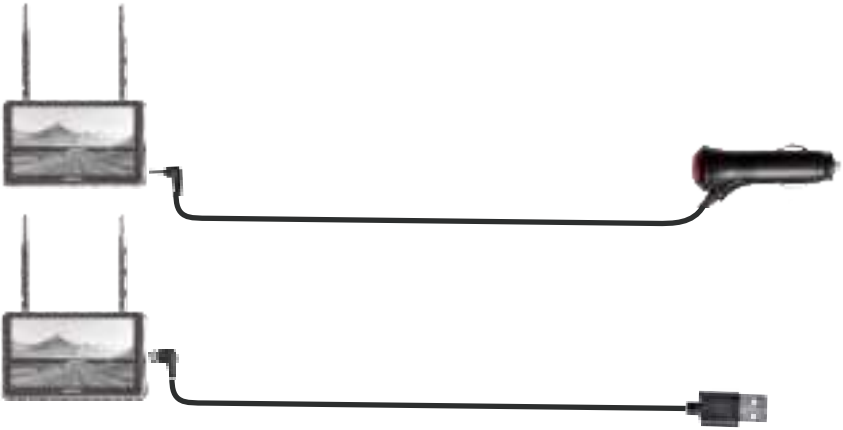
For more cameras, extra cameras can be paired separately to CAM1/CAM2/CAM3/CAM4.
Please refer to page 18 PAIRING.

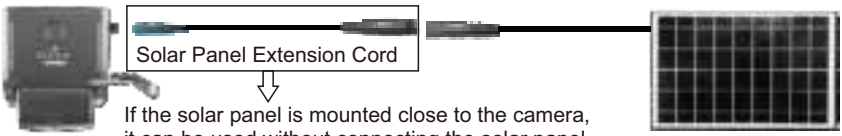
⑨ Installation

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

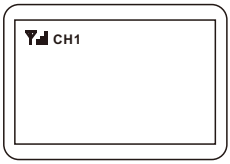




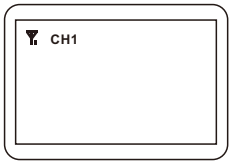
If the solar panel is mounted close to the camera, it can be used without connecting the solar panel extension cord.

② Pairing the camera to the monitor, please refer to page 19 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

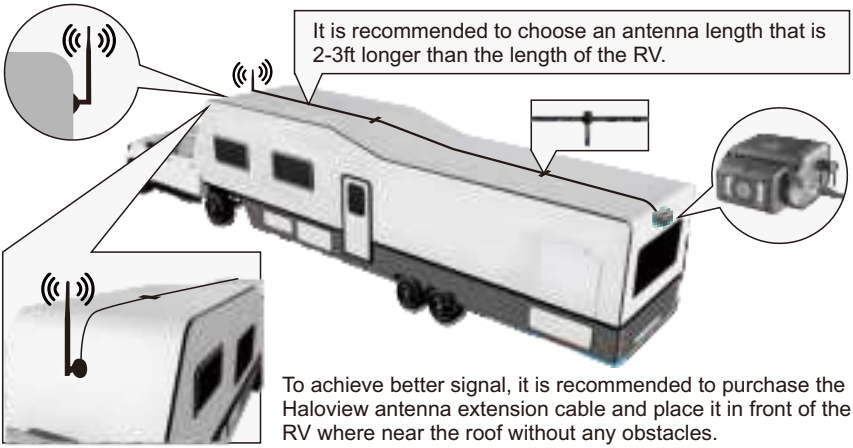
If signal strength of the position that you planned to install a camera is under 2 bars, please change to another position, or mount the camera higher to make sure the antenna highest of the top without being blocked. Please refer to below pictures:

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.

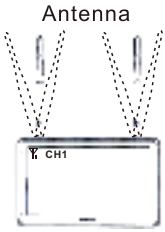
⚠ Special Notice

After position adjustment, you can start installation if your signal strength is still above 2 bars.

Image freezing may occur when the vehicle is **42-65ft** long and the antenna is mounted in a poor location (the antenna is not placed on the roof of the vehicle or there is obstruction around the antenna). In this case, it is recommended to purchase the Haloview **10M** or **12M** antenna extension cable and place it on the roof without any obstacles.



To achieve better signal, it is recommended to purchase the Haloview antenna extension cable and place it in front of the RV where near the roof without any obstacles.



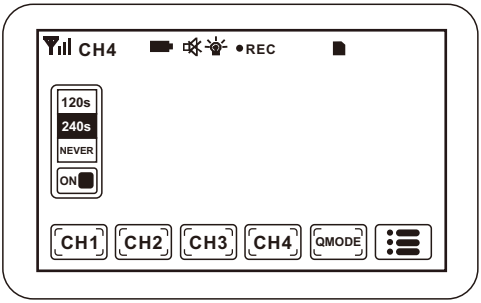
If you get poor signal reception, or signal cannot reach at least 2 bars, please keep the antennas perpendicular and adjust the angle of antenna to find best signal reception position.

10 Menu

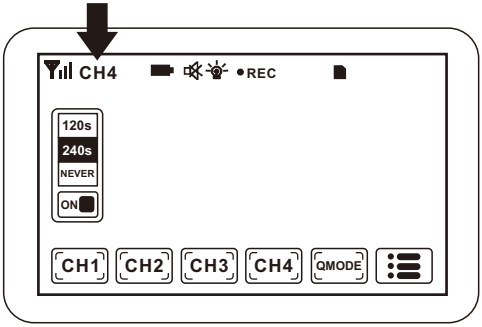
Shortcut Menu

Tap the screen when in single image mode, it pops-up the first group of shortcut MENU. You can easily switch to each of the four channels of cameras or go to Quad Mode.

Tap ☰ to go to Main MENU.



The camera with solar panel must be paired in the **CH4**. After successful pairing, you can see the UI shown as below in the **CH4** channel.



120S: The camera automatically wake up when the monitor is turned on, and the camera will be automatically turned off after 120 seconds.

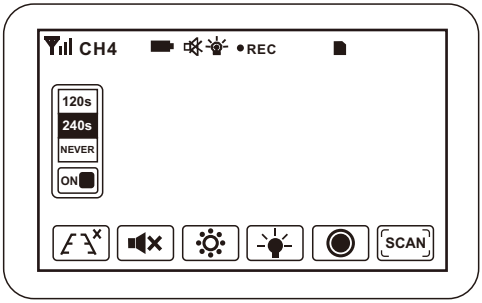
240S: The camera automatically wake up when the monitor is turned on, and the camera will be automatically turned off after 240 seconds.

NEVER: The camera automatically wake up when the monitor is turned on. The camera will continue to work and won't be turned off automatically. If NEVER is selected, the camera won't be turned off even when switching from CH4 to other CH. To turn off camera in CH4, please tap OFF.

ON/OFF: Tap ON/OFF to easily turn ON/OFF the camera manually.

Notice: Even if NEVER is selected, turn off the monitor or the monitor lose signal with the camera for over 1 minute, the camera will automatically turn off.

Tap the screen again, it pops-up the second group of shortcut MENU.



Tap to turn on/off parking line in current channel of camera.
When parking line is turned on, exit the shortcut menu to display the parking line.

Tap to turn on/off voice in current channel of camera.

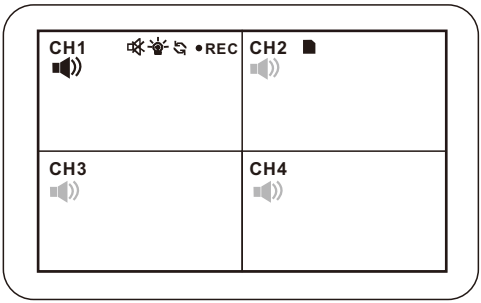
Tap to adjust the screen brightness.

Tap to turn on/off current camera night light. When camera night light is turned on, the indicator will turns from to .

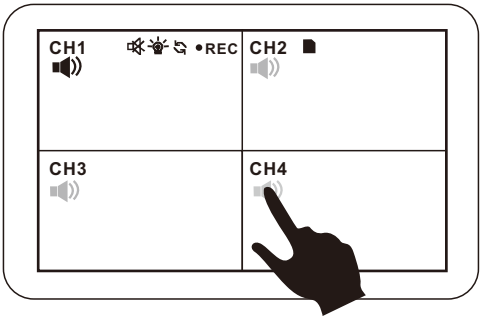
Tap to start recording or pause recording.

Tap SCAN to automatically switch channels of cameras.

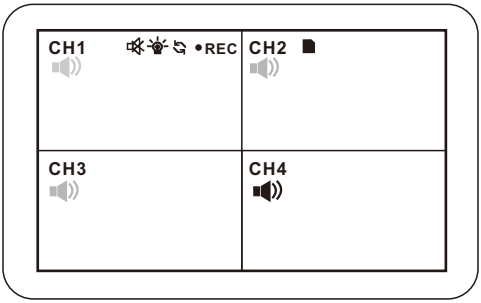
In quad mode (QMODE), an audio icon highlighted in CH1 that has the audio active.



Tap any of the audio icon to hear the audio of any channels of cameras.

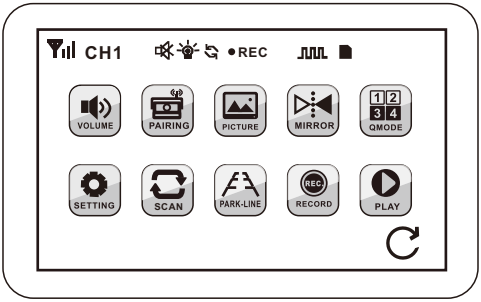


The audio icon is highlighted to indicate that audio is turned on for that channel.



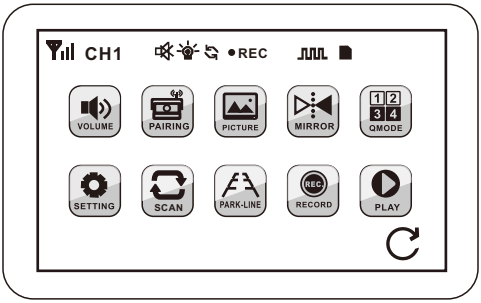
Notice: Please tap the audio icon instead of other areas.
Otherwise the display will switch to the certain channel of camera.

Press ☰ to go to Main Menu

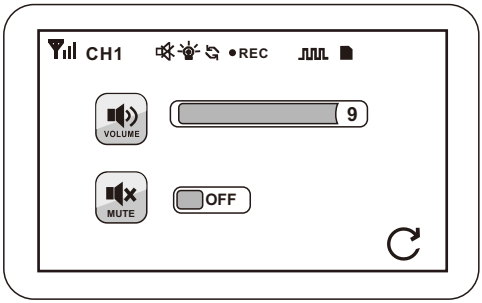


Press ↻ to exit.

10.1 MENU

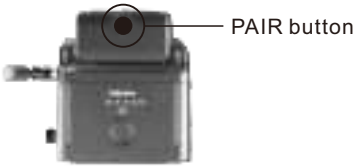


10.2 VOLUME



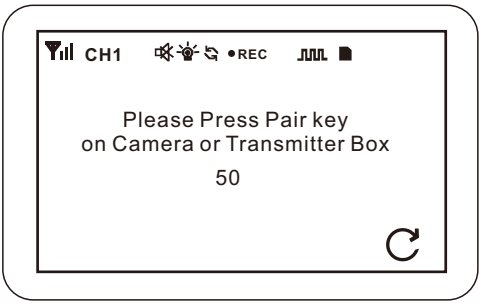
Tap to get access to VOLUNE setting
Tap the bar to adjust volume. Tap ON/OFF to MUTE or UNMUTE the volume.

10.3 PAIRING



Camera and monitor are paired at the channel of CAM4 as factory default setting. When you open the box, power on the monitor and camera, tap the monitor to find the first group of shortcut Menu and tap CH4, the image will be displayed. Otherwise, please try below methods for pairing.

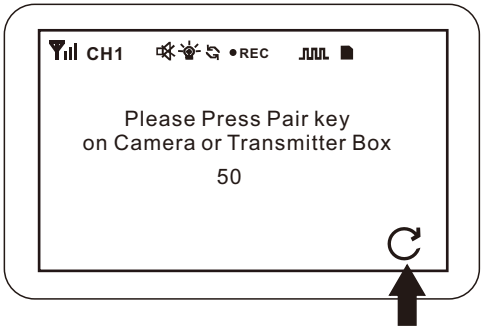
Tap to get access to Main Menu. Tap to enter pairing status, you will have 50 seconds for pairing. Press the pairing button on the bottom of the camera until you hear a "tah". Video will be displayed after pairing complete.



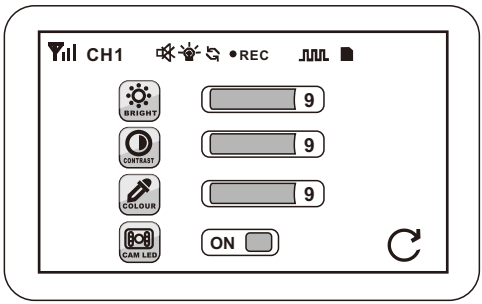
Quick Access to Pairing Status:
Press the PAIR button for 3 seconds to enter pairing status.

PAIR button

If you press the pair button by mistake and the monitor enters the pairing status, you can tap ↻ to exit the pairing status.

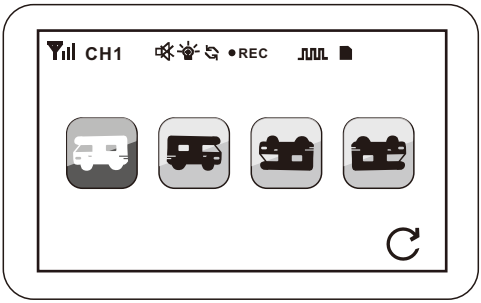


10.4 PICTURE



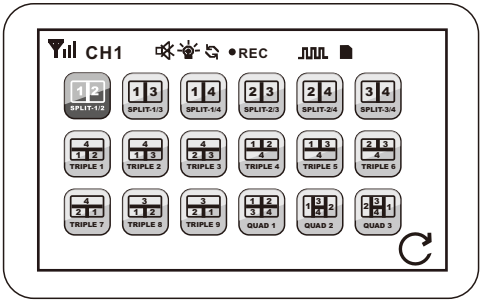
Tap ☰ to get access to Main Menu. Tap PICTURE to enter Picture setting.
Tap the bars to the adjust BRIGHTNESS/CONTRAST/COLOR.
Tap ON/OFF to turn on/off the current camera night led light.

10.5 MIRROR



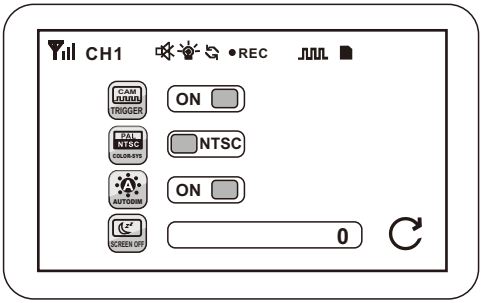
Tap to get access to Main Menu. Tap MIRROR to enter MIRROR setting.
Tap Normal/Mirror/Mir-flip/Flip at your will.

10.6 QMODE



Tap to get access to Main Menu. Tap QMODE to enter QMODE setting.
Tap any of desired display mode.

10.7 SETTING

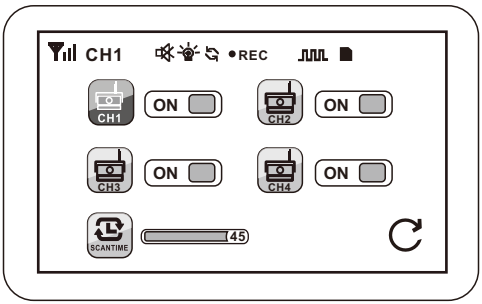


Tap to get access to Main Menu. Tap to enter.
Tap ON/OFF to turn on/off Trigger.
Tap NTSC/PAL to switch video format.

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

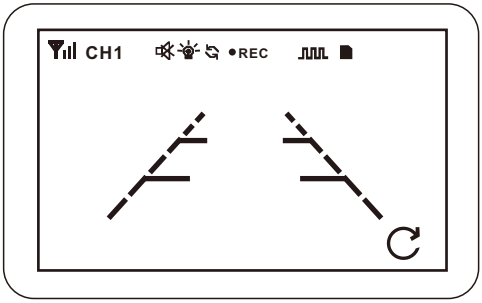
Tap ON/OFF to turn on/off Autodim. When Autodim is turned on, monitor will automatically decrease brightness in low light.
Tap the bar from 0 to 45 to set screen off duration. If 0 is selected, the screen stays on.
If 45 is selected, the display will turn off after 45 seconds of inactivity.

10.8 SCAN

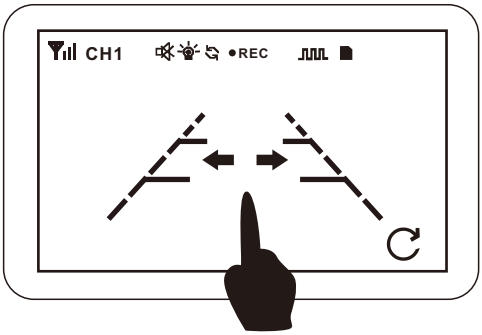


Tap to get access to Main Menu. Tap to enter SCAN setting.
The SCAN function allows the monitor to automatically switch channels of cameras.
In the shortcut menu, you can tap to start Scan or exit Scan. A Scan icon will appear on the display if the display enters scan mode.

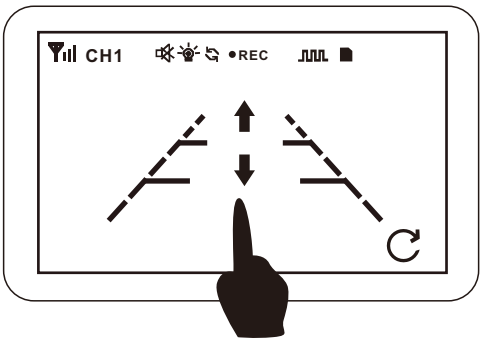
10.9 Park Line Adjustment



Tap ☰ to get access to Main Menu. Tap PARK-LINE to enter parking line setting.
You can slide the screen to adjust the inclination and the width of the parking line.

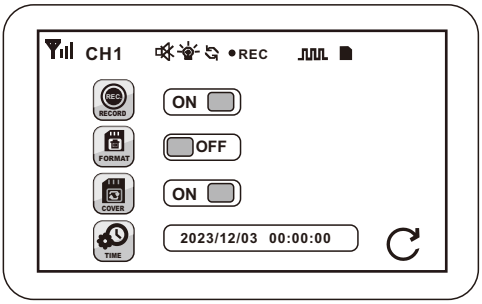


Slide left/right to adjust park lines horizontally

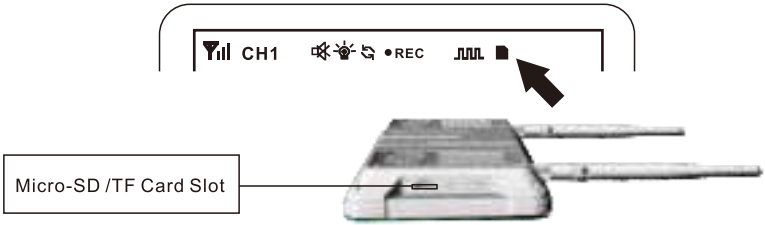


Slide up/down to adjust park lines vertically

10.10 RECORD



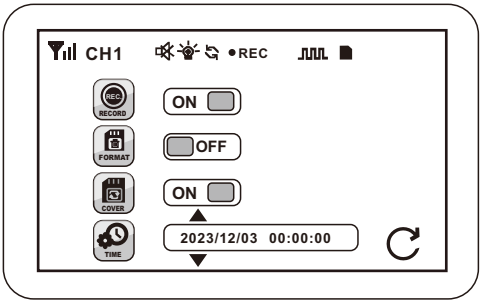
Tap ☰ to get access to Main Menu. Tap RECORD to enter RECORD setting.
Please insert TF card in TF card slot, max 256G Micro SD card.
Note: TF card must be formatted before using. Tap Format ON and Confirm Format.
After TF card is formatted, a yellow folder icon will be shown on the screen,
indicating TF card is available now.



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

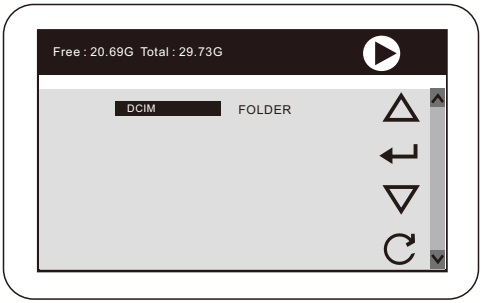
Note: When in QUAD or SPLIT display, the monitor will record all displayed channel of CAM at the same time.

TIME Setting:



Tap Year/Month/Date/Hour/Minute/Second, it will pops-up ▲ and ▼, tap ▲ and ▼ to adjust Year/Month/Date/Hour/Minute/Second.

10.11 PLAY



Tap ☰ to get access to Main Menu. Tap PLAY to enter PLAY setting.

Tap ↵ to select, Tap △ and ▽ to move up or down.

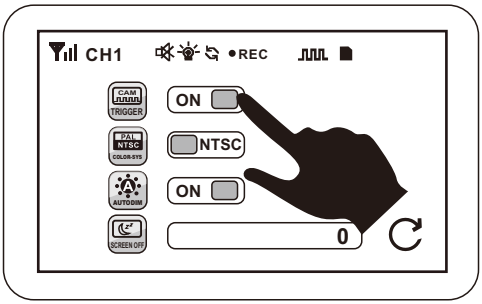
Tap ↵ to play the selected file.

Read the SD card through PC, there will be two formats of files.
It is suggested to play the AVI format file for higher video resolution.

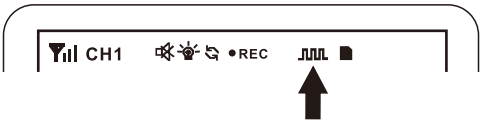
10.12 Trigger Function

Tap to get access to

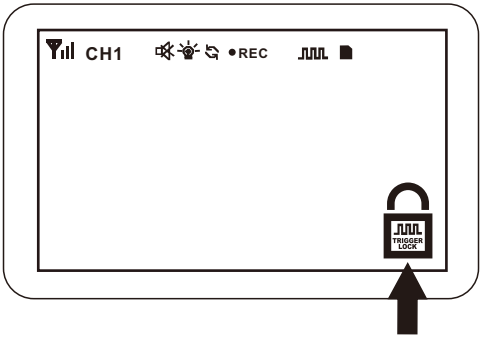
. The Trigger switch off by default.



Tap ON to activate Trigger function. If trigger switch is turned on, the yellow icon
will appear on display. To achieve trigger function, you also need to complete trigger wiring.



In Triggering status, MENU operation invalid, and the screen prompts TRIGGER LOCK.



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 unauthorized power supply. Power switch is OFF. Please re-pairing the system. Refer to page 19 PAIRING.
No signal	Check whether the camera is powered on. Please check whether antennas are plugged on both monitor and camera. Please check the angle of the antenna. Please check whether metal obstacles near the antenna. Please re-pairing the system. Refer to page 19 PAIRING.
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.
Touch screen invalid	Touch screen invalid when trigger wire is activated. Please deactivate trigger wire signal to get the touch screen valid. For example, if you connect the camera to left turn signal light, the camera will automatically displayed on the monitor every time the left turn signal light turned on. Touch screen invalid during triggering. Once triggering released, touch screen be operational again.
Unable to record	Please check whether TF card inserted Please check whether TF card formatted before recording Please check whether TF card storage full