

BOYO®
VISION

VTM7012QFHD
VTM9003QFHD

**4 Channel Vehicle Monitoring System
with Digital Video Recorder
User Manual**



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Warranty

Quality of products is very important to us and BOYO provides a warranty against manufacturer's defects for one year from the date of purchase. For warranty details, please visit <http://visiontechamerica.com/pages/get-warranty>.

Please note that the warranty does not cover:

- 1) Accident or damage caused by misuse such as dropping the monitor, hitting the monitor, scratching the monitor, cutting the wire, exposing the monitor to moisture, etc.;
- 2) Physical damages from cutting wires, scratching, dropping, hitting, etc.;
- 3) Components are opened;
- 4) Beyond the warranty period.

System

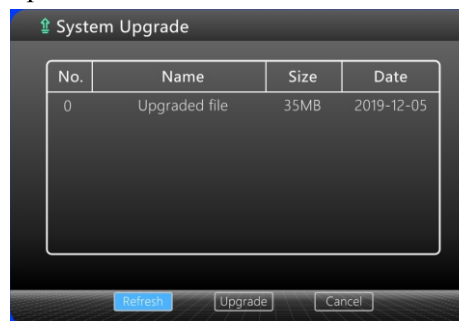
(7) Factory setting

Factory setting can restore the device to factory state:



(8) System upgrade

When the system has a new program, through the "System Upgrade" can be updated to the best state.

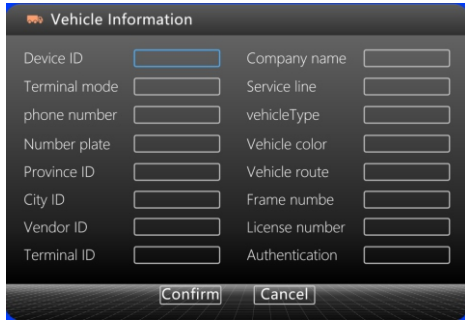


(9) System information

All information related to the current system can be viewed, including the working status information of each module of the system: Hard disk information, GPS status, network information and serial port status.



System



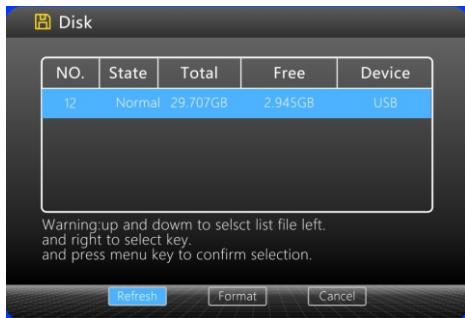
(5) User management

Users can set relevant permissions and login passwords to manage or authorize Default Password of the“admin”is 12345

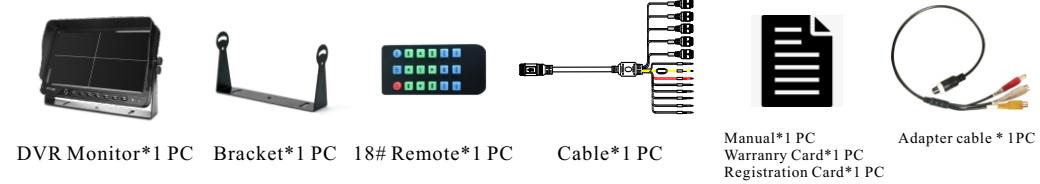


(6) Storage management

After connecting the storage device, the current state and formatting operation of the storage device can be viewed:

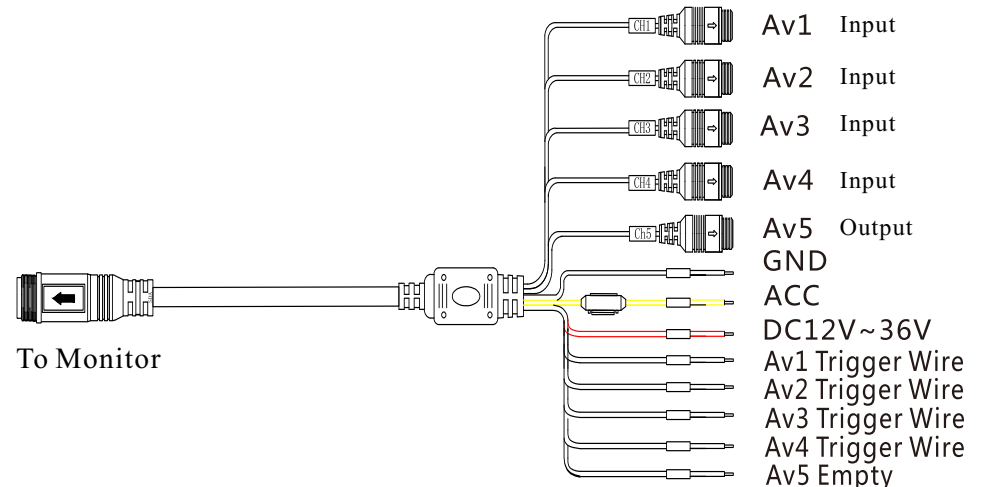
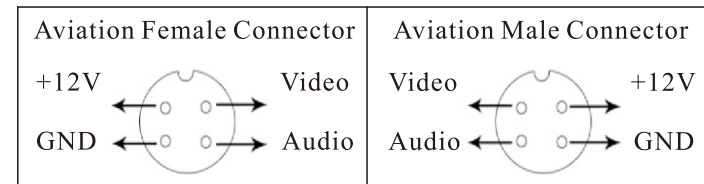


Accessories



Wiring Diagram

- 1) Working Voltage: DC12V~36V
- 2) Make sure all plug and cables connect correct, then power on.
- 3) Standard configuration is aviation connector.
- 4) The definition of aviation connector as below:



Features

Monitor:

- 4 Channel AUDIO and VIDEO inputs.
- Auto detect CVBS, 720P AHD, 960P AHD or 1080P AHD video.
- Auto-switching between NTSC and PAL inputs.
- 1 to 4 Channel video monitoring using 1 to 4 screen display divisions.
- Built-in speaker with selected channel audio monitoring.
- 1 Channel CVBS video out to external monitor.
- 4 trigger inputs to trigger the monitor to display the corresponding camera in the full screen.
- Independent brightness, contrast, saturation, and sharpness adjust for each video channel.
- Independent on-screen display (OSD) for each camera – license plate number, driver name, etc.

DVR:

- Records in 720P or 1080P resolution at 30fps per channel.
- Recording modes: Continuous, Signal input triggered.
- Support SD Storage to 256GB: estimated 384 hours or 16 days of continuous recording.
- On monitor playback or remove SD card and playback on a PC.

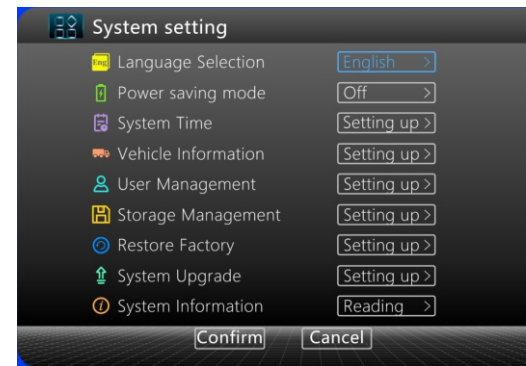
Electrical:

- Circuit protection from under-voltage, over-voltage, overload, short-circuit, and reverse connection auto shutdown.

Environmental:

- Operating temperature: -20C ~ 70C, max. humidity 95%
- Storage temperature: -30C ~ 80C, max. humidity 95%

System



(1) Language selection

Language selection: Simplified Chinese, Traditional Chinese, Korean, English. Default is English.

Press "AV" to select and "MENU" to select.

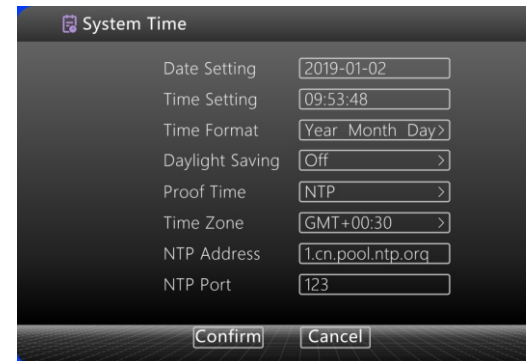
(2) Power saving mode

After setting the power-saving mode, the screen will automatically close without any action,

Can set OFF, 10Min, 30Min, 1h, 2h. Default Off.

(3) System time

System time can be set: date, time, time format, daylight saving time, Press "AV" to select and "MENU" to confirm, MENU as below:



(4) Vehicle information

Vehicle information can be set items: equipment number, terminal model, mobile phone number, license plate number, province ID, city ID, terminal ID, company name, service number, vehicle type, vehicle color, vehicle route, frame number, driver

Driving license number, authentication code information, MENU as below:

Display

(6) Automatic Brightness

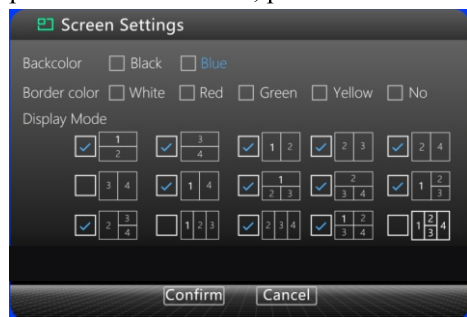
After turned on, the screen brightness can be automatically adjusted according to the ambient brightness. Press "AV" to select on or off. Default "off".

(7) Time Display

When off, the main page will not display the time. Press "AV" to select off or on. Press "MENU" button to confirm that the reboot device is effective. Default "on".

(8) Display Mode

Enter the menu to set: "back color", "border color", "display mode", press "AV" to select, press "MENU" to select it, as shown in the picture below:



① Background color: press "-", "+" key to select black or blue, press "MENU" key to confirm.

When there is no signal input, the background color is the selected color. Default is "blue".

② Border color: press "-", "+" to select white, red, green, yellow, and press "MENU" key to confirm.

When one of the colors is selected, the border line of the preview interface will be that color. Default is "white".

③ Display mode: press "-", "+" key to select the display mode, press "MENU" to confirm, the ticked display mode will be displayed, not checked will not be displayed.

For example, if the 9 partition mode is not checked, the 9 partition screen mode will not appear when the channel is displayed in the preview interface.

Only the checked split mode will be displayed. The default is "select all".

System

Into "System Settings" to set "Language Selection" "Power Saving Mode" "System Time" "Vehicle Information" "User Management" "Storage Management", "Restore Factory", "System Upgrade" "System Information"

Specifications

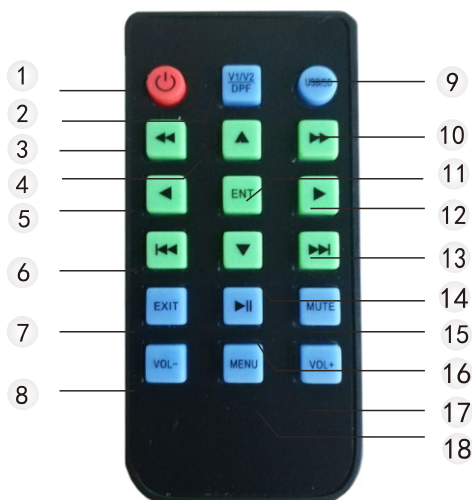
Screen Size	VTM7012QFHD	VTM9003QFHD
		7"
Display	LCD	
Resolution	1920RGB(H)x1080(V)	
Brightness	450cd/m ²	
Contrast	500:1	
System	NTSC/PAL CVBS/AHD	
Voltage	DC12V~36V	
Video Inputs	4 way video inputs/1 way video output, 4 way trigger wires	
Video Support	Support CVBS/AHD720P/960P/1080P/Mix	
Audio	4 way audio inputs with recording	
Storage (SD-not included)	Max.256GB SD Card (Estimated 92 hours of 4CH Recording using)	
Working Temperature	-20° C~+70° C, Maximum humidity 95%	
Storage Temperature	-30° C~+80° C, Maximum humidity 95%	
Operation Mode	18# Remote control/Keystroke	
Dimensions	7inch 177(L)x141(W)x21(T)	
	9inch 228(L)x154(W)x27(T)	

Keystroke



- ① Power Light
- ② Light sensor
- ③ Power
- ④ AV:UP/Down
- ⑤ Analog Decrease
- ⑥ Menu/Intro
- ⑦ Analog Increase
- ⑧ Single
- ⑨ Dual
- ⑩ Quad
- ⑪ IR
- ⑫ SD Card Slot

Remote control



- ① Power on / off
- ② AV Switch
- ③ Fast Backward
- ④ Up
- ⑤ Left /Analog decrease-
- ⑥ Previous
- ⑦ Exit / Turn Back
- ⑧ VOL-
- ⑨ Power on / off
- ⑩ Fast Forward
- ⑪ ENT/Menu
- ⑫ Right /Analog increase+
- ⑬ Next
- ⑭ Down
- ⑮ Mute
- ⑯ Play / Pause
- ⑰ VOL+
- ⑱ Menu

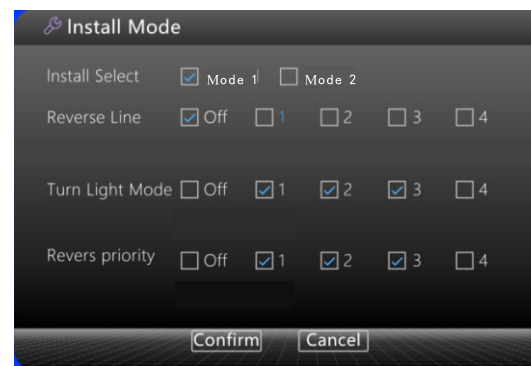
Display

(4) Transparency

Transparency can set the visibility of the menu;
Press "MENU" into, then press "AV" to select 0%, 10%, 20%, 30%, 40%, 50%,
Press "MENU" to confirm the effect, default is "0%".

(5) Installation mode

Enter the menu to set: "Installation", "Reversing Line" "Reversing Priority";
Press "AV" to select, "MENU" to confirm, Menu below:



① Press "-", "+" choose "Mode 1" or "Mode 2", and press "MENU" to confirm the effect. Default "Mode 1".

② Backup line: press "-", "+" to choose off or each CH. After choose, the reverse line of the CH will be opened.
If choose off, there will be no reverse line. Default "OFF".

③ Turn light mode: press "-", "+" to choose each CH, the CH will be displayed when the it is triggered.
For example: Choose CH 1 and CH2, CH1 and CH2 will display on screen when these two channel triggered. Default "off".

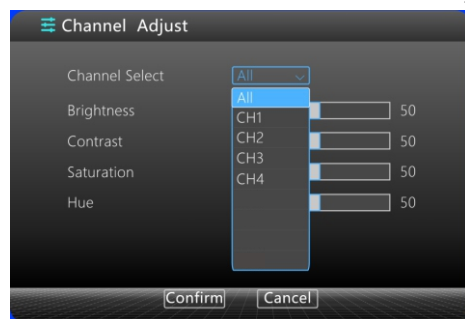
④ Backup priority line: press "-", "+" to choose off or each CH, the CH will be triggered first.
For example, choose CH 1. Whenever CH 1 and other CH are triggered at the same time, CH 1 will be shown preferentially. Default "Off"

Display

③ Channel adjustment

Adjustable Brightness, Contrast, Saturation, Hue of all channels or each channels,

The default channel is "all" and the parameter is "50".

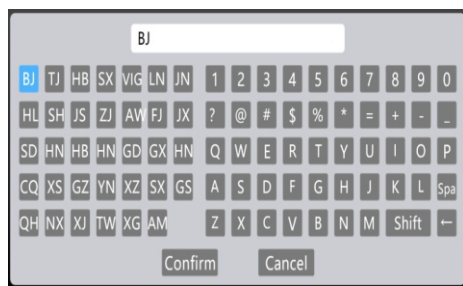


(2) Channel name

You can customize the display characters, press "AV" to select the channel name and press "MENU" to enter the channel name.

Modify the setting interface, press "AV" to select channel CH1 to CH8, press "MENU" to pop up Enter the modified channel name on the soft keyboard and confirm it. Press "MENU" to save the Settings.

Menu below:



(3) Loop preview

After the Loop preview setting, play the images in a loop sequence within the set time;

Press "MENU" into, and then press "AV" to select off or 3S, 5S, 8S, 10S, 15S, and select any of them A time, in the preview interface channel screen will be displayed by the selected time automatically cycle switch. Default "off".

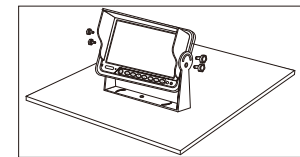
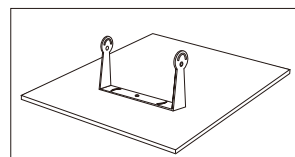
Bracket Installation

Can choose the bracket:

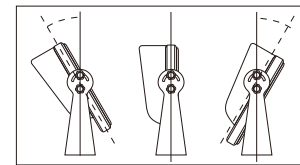
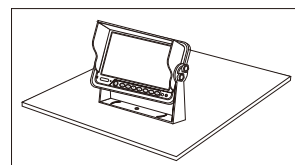
Headrest Frame; Plastic/Metal bracket; U-Bracket

1. B2 Installation

1) Use the screw fixed the U-bracket. Put the monitor into the bracket, adjust angle and locking it.



2) Finished the installation. Adjust the angle forward 30° to backward 30°. User can adjust a suitable angle by oneself.



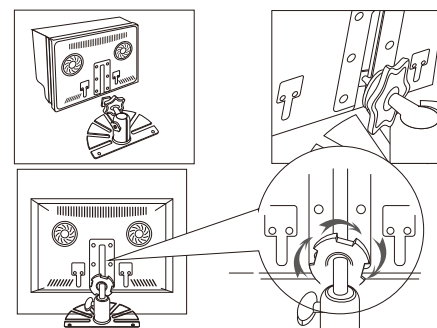
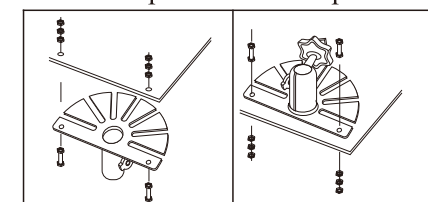
2. B1/B2 Installation

1) Firstly fixed the bracket via the screws, the screws of the top need lock to nut of under.

2) Secondly put the metal buckle piece on the top of the fan-shaped bracket into the notch at the back of the monitor.

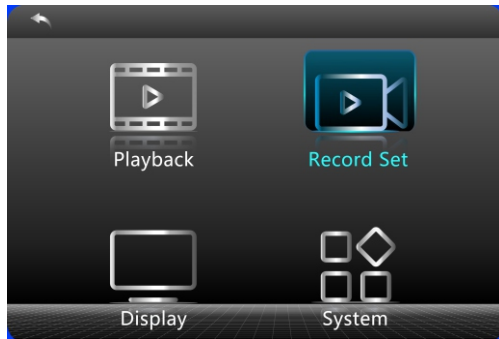
3) Move the bracket to the proper location.

4) Screw down the nut of bracket, until the monitor fastening.



Menu

Remote control press“ENT”button(Monitor press“M”button), screen will show OSD menu as below.
Press “AV” cursor down/up, press “-” cursor left, press “+” cursor right;
Press“MENU”enter the option;



Record Query

Click "Record Query" to select the conditions for playback.
The relevant Settings of: "Channel Selection", "Audio Output"
"Video Type", "Search Date", "Start Time", "Stop Time" and
“Storage Device" are shown in the figure below:



(1) Channel Select

Press “MENU” to enter channel selection, press “AV” to move up and down to select CH1 to CH8, and then press “MENU” to confirm playback.
You can also select CH1 to CH4 for multi-channel playback. The system default channel is CH1-CH4.

Display

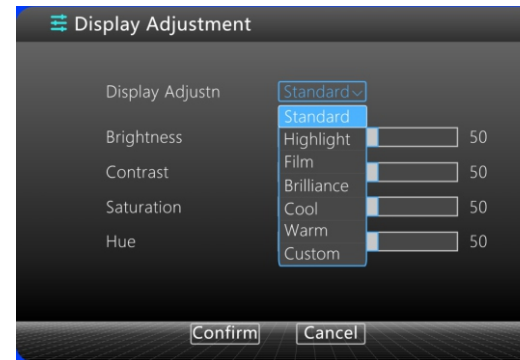
(1) Display Adjustment

Display adjustment includes "Scene Mode", "Screen Margin" and "Channel Adjustment".

Press "AV" key to select, and press "MENU" key to enter:

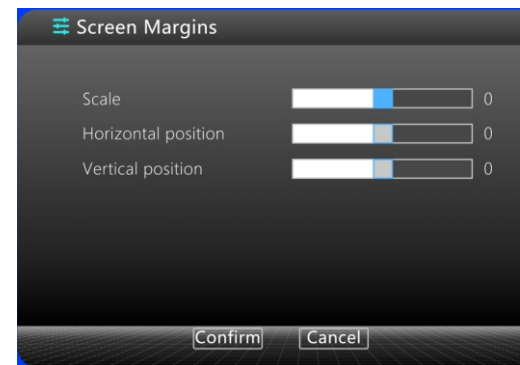
① Scene mode:

In Scene Mode, you can select several default modes: Standard, Highlight, Film, Brilliance, Cool, Warm, Custom, Default is Standard.



② Screen Margin:

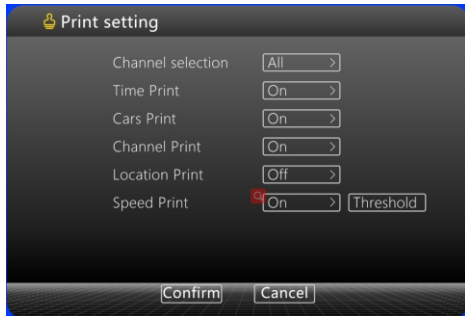
Screen margin can adjust the display screen, the screen zoom, horizontal position, vertical position movement, Default is 0.



Record Set

(7) Print Setting

Press "AV" to select print setting, press "MENU" into, All or CH1 to CH4 single channel watermark can be set, Time watermark on/off, Car license plate watermark on/off, Channel watermark on/off, Location watermark on/off, Speed watermark on/off. Default channel watermark, time watermark, vehicle watermark on, position watermark off, speed watermark off, as shown in the figure below:

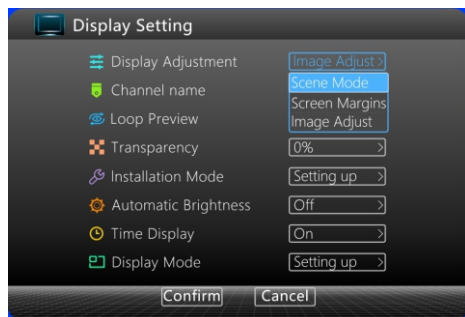


(8) Audio

Press "AV" to select audio, press "MENU" to enter the interface, you can choose to turn on / off audio, the default is " on ".

Display

Display Setting can set: Display Adjustment, Channel Name, Loop Preview, Transparency, Installation Mode, Automatic Brightness, Time Display, Display Mode.



Record Query

(2) Sound Output

Press "AV" to move up/down to select the Sound output , press "MENU" to enter, press "AV" to move up/down to select CH1 to CH4, Press "MENU" to confirm that one of the channels is selected as sound output, and then replay the query selection. The corresponding channel will have a sound output, the system default is CH1.

(3) Video Type

Press "AV" to move up/down to select the Type of video , and press "MENU" to enter, Press "AV" to move up/down to select, then press "MENU" confirm display. The system defaults to playback for all channels simultaneously.

(4) Search Date

Press "AV" to move up/down to select the Search date, and press "MENU" to enter, Press "-", "+" and "AV" keys to select the date, year, month and day that need to be checked, then press "MENU" to confirm . Default is the time of day.

(5) Start Time

Press "AV" to move up/down to select the Start time, and press "MENU" into, press "-", "+" to select the start time Hours, minutes and seconds, then press "MENU" to confirm . Default is 00:00:00.

(6) Stop Time

Press "AV" to move up/down to select the End time, and press "MENU" into, press "-", "+" to select the end time Hours, minutes, and seconds, then press "MENU" to confirm . Default is 23:59:59.

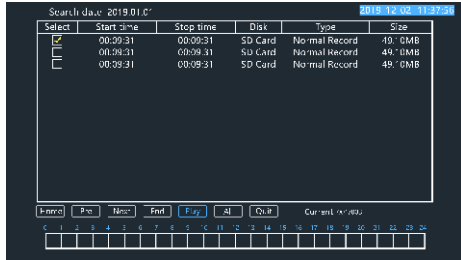
(7) Storage Device

Press "AV" to move up/down to select the Storage device, and press "MENU" into it, press "AV" to select the storage device type, then press "MENU" to confirm . Default is memory card.

Record Query

Video File Selection

After setting the query conditions, click "Query" to enter the list of video files, press "AV" to move up/down for selection, Press "MENU" to confirm the selection files.



Playback preview

After selecting the file to be played, click "Play" to enter the playback preview, as shown below:



Record Set

Click "Video Set" can select video related configuration, as below:



Record Set

(1) Channel Select

Press "MENU" enter, press "AV" to select All or CH1 to CH4 channels, press "MENU" to confirm.

(2) Flamecut Delay

Select the delay recording time after ACC is disconnected.

Press "AV" to select the delay recording of flameout.

You can select off, 5s, 10s, 3min, 10min, 30min, 1 h, 2 h, 6 h, 12 h.

(3) Record Time

Press "AV" to move down to select the recording time, and press "AV" to select 3Min, 5Min, 10Min, 15Min, 20Min, 30Min, the default is 5Min.

(4) Record Mode

Press "AV" button to move down, select recording mode, press "MENU" button to enter, you can choose to Shut down, Automatic, Scheduled, Alarm, Auto+alarm, Plan+alarm. press the "MENU" button to confirm, The default is automatic recording.

(5) Image Flip

Press "AV" to move down, select image flip, press "MENU" to enter, you can choose: normal, Horizontal and vertical, 90 and 270 degrees image flip, default "normal"

(6) Encode Setting

Pressing "AV" to select the video quality, press "MENU" to enter.

Choice of channel, resolution (720P or 1080N), image quality

(poor, average, good, very good), advanced Settings (frame rate, frame interval).

Default resolution: 720P, Image quality: Very good.

Picture as shown below:

