40 Channel Auto Searching

Wireless FPV Monitor with Dual Receiver

LCD Monitor（Built-in DVR）

User Manual

Product Overview

Wireless FPV monitor with dual receiver (built-in DVR) LCD monitor is a new multi-function product; adopts advanced integrated circuits and high-quality new HD LCD monitor. It integrates a high-sensitivity dual 5.8GHZ AV wireless receivers, Aerial receiver, Video recorders, high-definition monitor, not only can conduct on-site wireless receiver, video, but also can seamless video, real-time image snapping and video playback. The monitor build-in battery, if you don't install the battery, you can use the 9~18V power supply for external power supply. The Monitor casing compact, easy to operate, can be used for FPV ground station, car video monitors, security monitoring, baby monitors, photography viewfinder, construction site video surveillance, advertising and other venues.

⚠️ **To insure best use of the unit, please read the user's manual carefully.**

CAUTION

1. Do not use any damaged or leaking battery and please replace the battery immediately if its working life becomes short significantly.
2. Do not expose this product to direct sunlight, heat or humid conditions.
3. Keep away from strong light while using this product so as to obtain the clearest and the most colorful picture. Please use sun shade for the outdoor necessary.
4. Please avoid heavy impact or drop on the ground.
5. Do not use chemical solutions to clean this unit. Please simply wipe with a clean soft cloth to keep the brightness of the surface.
6. Without adjustable component in the unit, please do not take apart or repair the unit by yourself, to avoid damage the product.

Product Feature

● Dual antenna receiver, high-sensitivity, strong anti-interference

● Set DVR, 5.8G wireless receiver, a monitor for the integration of multi-functional combination machine, compact, suitable for a variety of purposes

● Real-time image snap and keep the beautiful memory

● DVR seamless video, save the latest data

● Motion detection recording, save memory space

● 5.8G wireless receiver, 40 Channel Auto Scan, effectively avoid signal interference

● High brightness, contrast, anti-glare screen with a sun shade, sun clearly visible

● With VIDEO input, output, HDMI input, suitable for a variety of sources. Can be used as video, photography Viewfinder, advertising machine

● Color Control Systems support, enter the menu to manually Select the appropriate format, and adaptable

● Front headphone listening to playback of audio effect

● Build-in battery, No power to facilitate use of the site in country

● With VIDEO signal output function, can be used as video Playback DVR host, connecting multiple monitors

● Check Field

● Picture Screen Markers and Centre Markers

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1. Product Description

1.1 Front Panel Features

1. Video Indicator

2. Power Indicator

★ 3～8 DVR operation button

3. **SC.SHOT:** Real-time images snapping

4. **REC/OK:** Recording start, stop/ function confirm

5. **MODE:** Mode key to enter/ exit the playback mode

6. **MENU:** Menu key to enter/ exit the DVR (Video) menu
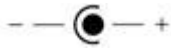
    mode

7. ∧ **:** UP button, up one option

8. ∨ **:** Down button, down one option

★ 9～12 monitor operation button

9. >/CH/Q : Multi button for UP /Channel Selection /Search /
Volume up. Press this button for channel selection, long

pressing for channel auto searching. In OSD is for "UP"

button.

10. </BAND : Multi button for DOWN /Channel Selection

/Volume down. Press this button for channel selection

from "A/B/E/F/R". In OSD is for "DOWN" button.

11. ▦: Menu key, under a signal input mode, pressing

this button to pop up the menu, and the current menu

and sub-menu item to confirm the adjustment

12. ↰/MODE : Input signal selection or exit the menu

13. ∩: Stereo earphone jack

14. LCD screen

1.2 Rear Panel Features
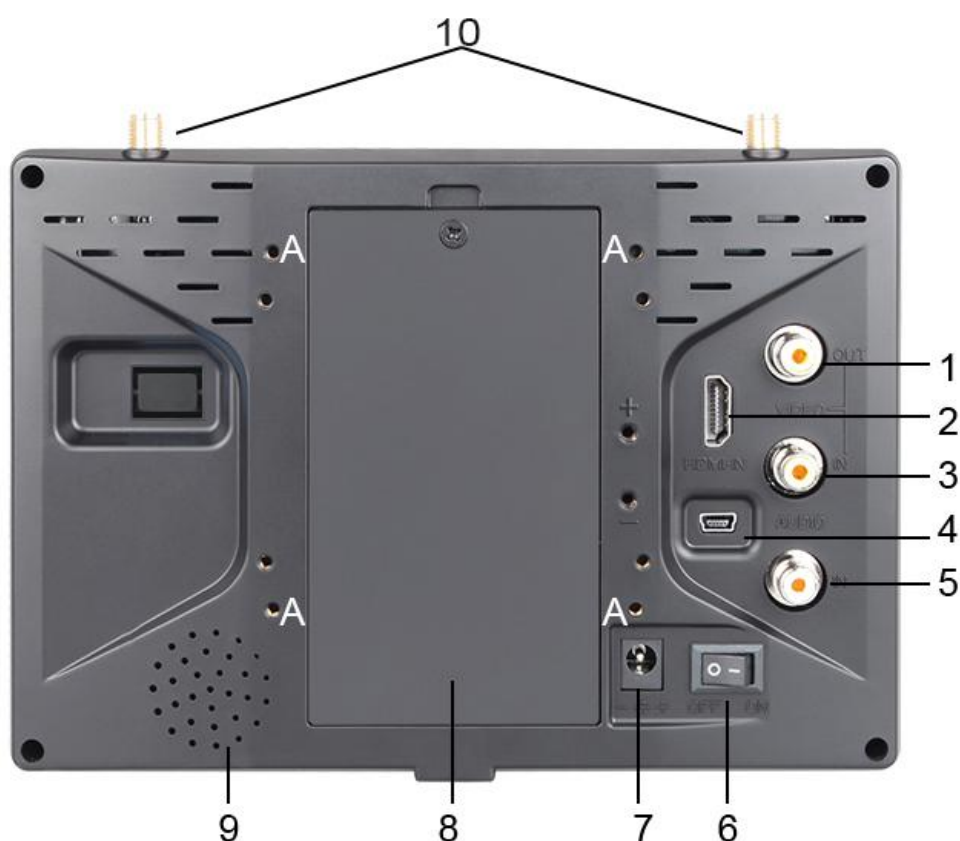
1. **VIDEO OUT:** Composite video signal output

2. **HDMI IN:** HD HDMI signal input

3. **VIDEO IN:** Composite video signal input

4. USB data upgrade port

5. **AUDIO IN:** Audio signal input

6. Power switch "▬" Indicates that the power is turned

   on, "**O**" means disconnect the power

7. Power input jack

8. Battery Pack

9. Speaker

10. Antenna connector

A ～ A: 75×75mm VESA, Screw size: M4×5.0mm

1.3 TF Card Slot

2. DVR (Video) Operation Instruction

When the monitor's "VIDEO-IN" and "AUDIO-IN" has access to the appropriate signals or "RF" wireless receiver transmitter has been reliably received video signal transmitted over and check the TF card has been reliably into the slot (monitor the HDMI input, there is no video function).

After the device is turned on, press " ⏎/MODE " to select "DVR" channel, press "REC/OK", then the monitor will be on "RF" channel, if you would like to "VIDEO", press " ⏎/MODE " again to change to VIDEO.

2.1 DVR (Video) Button Instruction
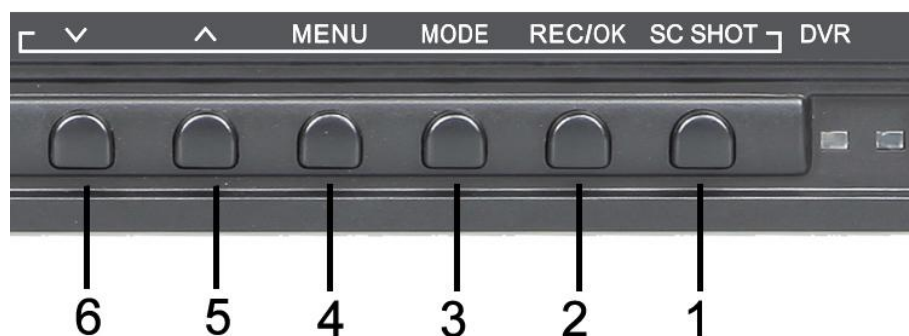
1. **SC.SHOT:** Real-time images snapping

2. **REC/OK:** Recording start, stop/function confirm

3. **MODE:** Mode button to enter/ exit the playback mode

4. **MENU:** Menu key to enter / exit the DVR (Video) menu

   mode

5. **∧ :** UP button, up one option

6. **∨ :** Down button, down one option

2.2 Recording Start

The monitor input signal selection "**DVR**" (video signal) channel, the monitor screen will display the "RF" channel of the screen, press the "**REC / OK**" button will appear when the red flashing ●, meaning that start recording begins, the DVR default to RF channel, if you would like to "VIDEO" channel, press ↰/MODE switch(HDMI input without recording function). You want to stop the video, press "**REC / OK**" button. Recording or recording by time period paragraphs packaged storage.

2.3 Video Playback

When the video for some time, you need to playback video effects observed, press "**MODE**" button at the top left appears 🎞, because the video store is packaged stored by time period, can use "∧ / ∨" keys to go forward or backward to select playback file package, select and press the "**REC / OK**" button to confirm, the device begins to enter the playback mode. Use the "∨" button to select the playback speed; return fast play with "∧" key in order to exit. When fast playback is muted trumpet, playing at normal rate for a voice broadcast.

2.4 Screen Shot（SC.SHOT function）

SC.SHOT means quickly grab its natural, vivid image, one of the most expressive moments of operation process

Under VIDEO or RF, Press the "**SC.SHOT**", then can be store

the real-time images（make sure TF card insert）, if want to review

these images, please press "**MODE**" to enter the ▯▯, then use ∧ /

∨ " to select the ▭ folder to see them.

2.5 DVR Menu Operation

Video setting：

Press "MENU" button to enter the video settings menu
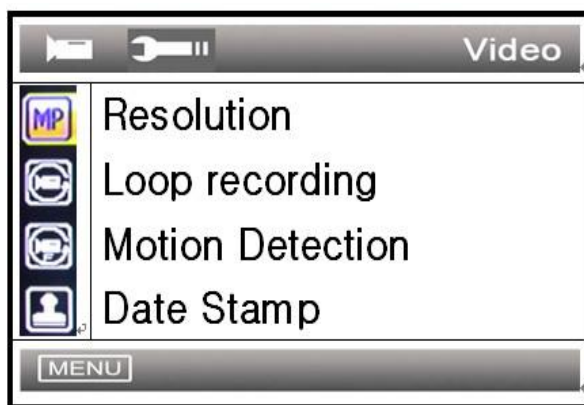
▯▯ **Resolution**

D1(720×576), VGA(640×480)QVGA（320×240), The higher

resolution, the sharper, the larger of the file size.
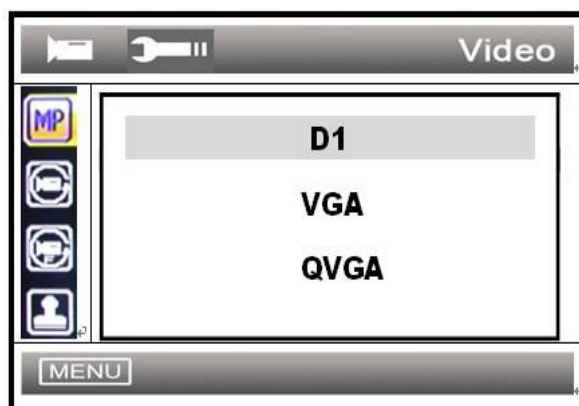
Loop recording

SD card is full, it will overwrite the oldest files cycle, and the system

uses a unique algorithm, SD card DVR longer life than ordinary
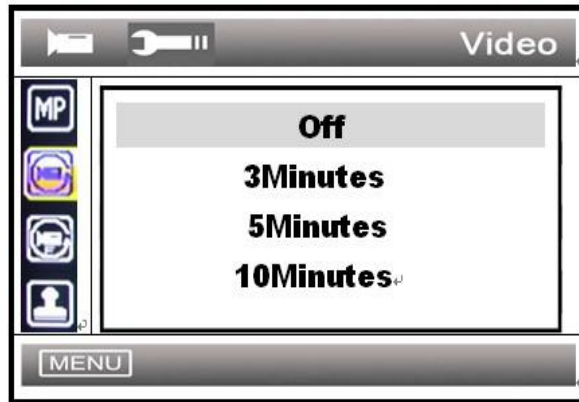
Motion Detection

After opened, the moving object is detected, it will automatically
record.
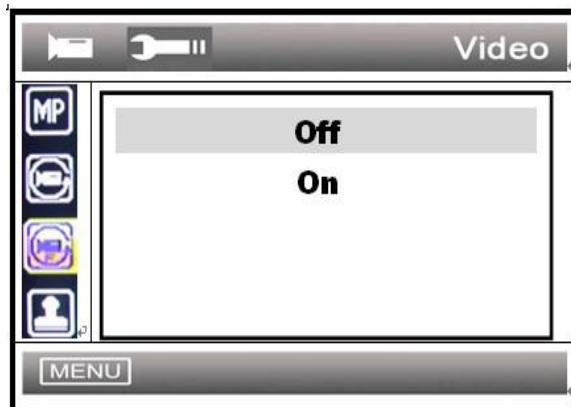
Date Stamp

Date and time can be superimposed onto the video, you also can

not stack.
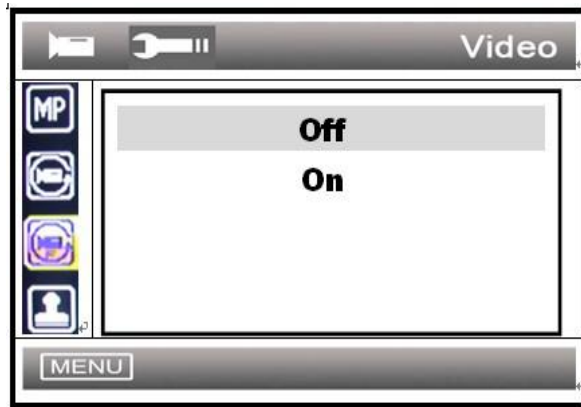
🔊 Record Audio

You can choose to record Audio directly to a file or not record.
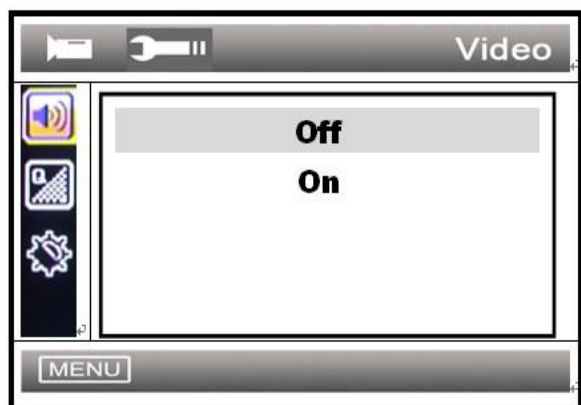
📟 Quality

The higher the image quality, image clearer, the file will be bigger.

⚙ Motion Detection Sensitivity

It can be adjusted according to the actual situation.

▭ Power on auto recording
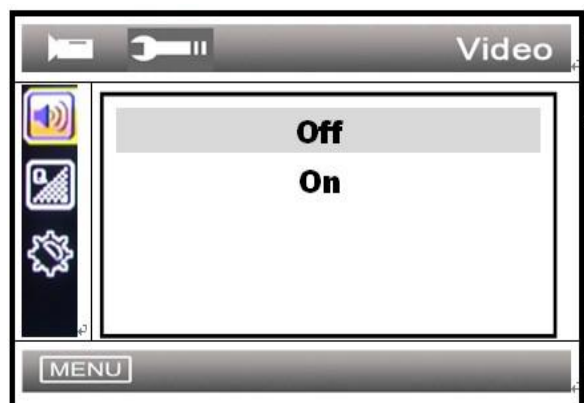
2.6 Advanced Settings

Continuous twice press the **"MENU"** button to enter the MENU in the advanced Settings option
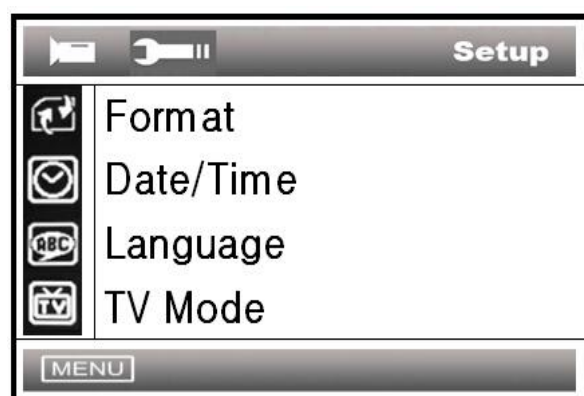
 Format

First use, in order to optimize the file system, VCR will Require customers to format again. Formatted files will be lost.

After entering format mode, press "REC/OK" button to confirm, the menu prompts
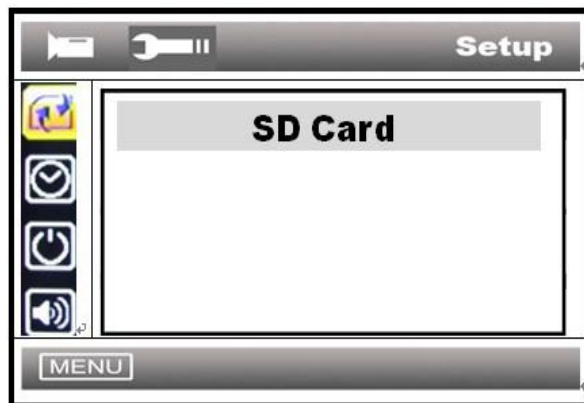
Press the REC/OK "button again, choose cancel or confirm whether the memory card is formatted

⊙ Date/time

"REC / OK" button to confirm selection and adjustment, "∧ / ∨ " keys to change the date or time, "MENU" to exit

```
┌─────────────────────────────────────┐
│ ▭═  ┫▅║           Setup              │
│ ┌──┐┌───────────────────────────┐    │
│ │⟳ ││                           │    │
│ │  ││  2011  /  5  / 1          │    │
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│ │  ││     1 :  35  : 22         │    │
│ │⏻ ││                           │    │
│ │  ││     YY/ MM/DD             │    │
│ │◁))│└───────────────────────────┘    │
│ └──┘                                 │
│ ┌─────┐                              │
│ │MENU │                              │
│ └─────┘                              │
└─────────────────────────────────────┘
```
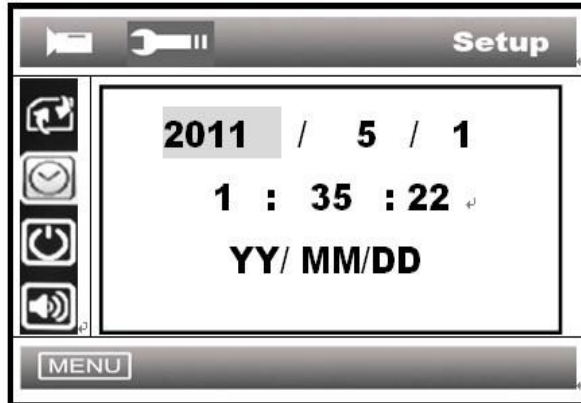
⟨ABC⟩ Language

Press the "REC / OK" button to confirm, with the " ∧ / ∨ " keys to select the desired national language, then press "REC / OK" button to confirm. There are nine national languages choice

English   Deutsch   Français   Espanol   Italiano Portugues   繁體中文   简体中文   日本語

```
┌─────────────────────────────────────┐
│ ▭═  ┫▅║           Setup              │
│ ┌──┐┌───────────────────────────┐    │
│ │ABC││      English              │    │
│ │  ││      Deutsch              │    │
│ │Hz ││      François            │    │
│ │  ││      Español             │    │
│ │TV ││                          │    │
│ │  ││                          │    │
│ │◑ │└───────────────────────────┘    │
│ └──┘                                 │
│ ┌─────┐                              │
│ │MENU │                              │
│ └─────┘                              │
└─────────────────────────────────────┘
```

TV Mode

Output formats PAL / NTSC for option depends on country to set
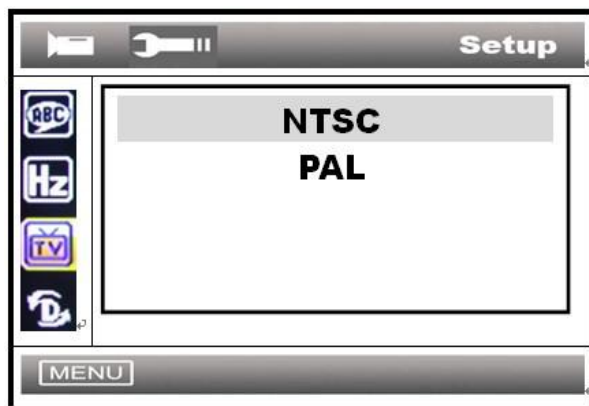
Note: If after set the TV output formats, image cannot be synchronized, or even can't bring up the DVR menu, is the DVR output formats are not synchronized to the monitor format due, if this occurs, you can call up the monitor menu, enter the menu of "function" to set "Format" in the corresponding format option

Default Setting

Restore the factory default Settings

2.7 Playback Menu Settings

Press the "MODE" button, in the top left of the screen will display
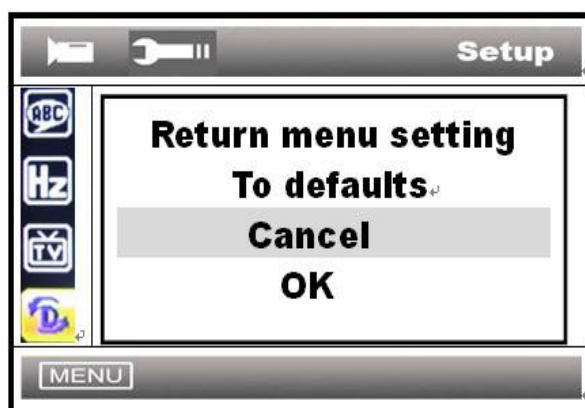[icon], press the DVR menu key "MENU", and enter the playback
menu settings. (At this point if you press the "REC / OK" button to
enter the playback, unable to enter the playback menu settings)

[icon] Delete, delete the unwanted content.

Delete single
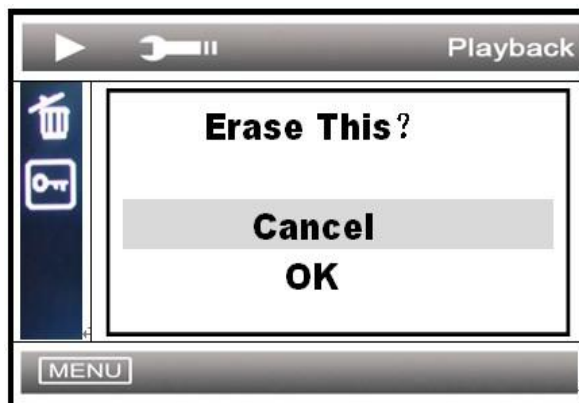
Delete All
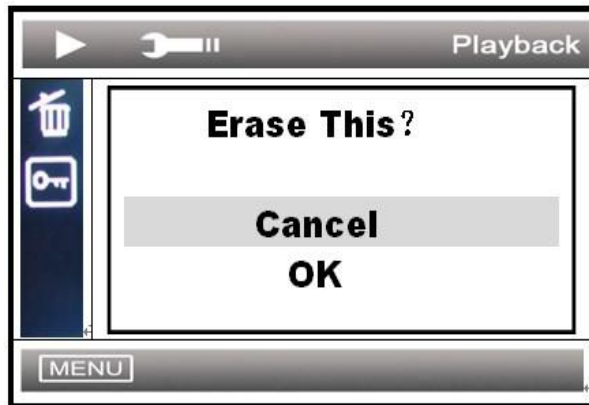
[O-π]   Protection, to save the contents of the lock protection to

prevent misuse deleted and lost

3. Wireless Transmission Receiver Operation

Take the form a complete set of the antenna assemble on the unit's antenna input ports, the assembly should be secured, locked on the buckle.

3.1 Channel Selection

Wireless transmitter channel and receiver channel must be strictly consistent; otherwise it will not receive a transmitter signal.

This unit can auto searching for 40 receiver channels, also can accept simultaneously multi transmitters and receivers together work, to avoid co-channel interference

(Frequency range of each region are different, please check the unit's paste instructions).

Wireless 5.8GHz Diversity Receiver								
BAND	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
A	5865	5845	5825	5805	5785	5765	5745	5725
B	5733	5752	5771	5790	5809	5828	5847	5866
E	5705	5685	5665	5645	5885	5905	5925	5945
F	5740	5760	5780	5800	5820	5840	5860	5880
R	5658	5695	5732	5769	5806	5843	5880	5917

⚠ **Note! During select channels must be supporting the transmitter**

3.2 Auto Searching

Confirm that the transmitter has entered a normal working condition and then turn on the monitor, press "⤺/MODE" and select **"RF"** signal input. Long pressing " >/CH/Q " ,"**Auto Searching**" will display on the top left corner of the screen means the machine start to auto searching .when the screen on the upper left corner shows the "**BAND:X CH:X**", image display means finished searching. now it can receive the signal.

3.3 Manual Searching and Setting

Confirm that the transmitter has entered a normal working condition and then turn on the monitor, press "⤺/MODE" and select "RF" signal input. "**BAND: X CH: X**" will display on the top left

corner of the screen, press " $</BAND$ " to switch channel A/B/E/F/R.

Press " $>/CH/Q$ " to select 1~8 channels. If the time transmitter has

worked, receiver and transmitter frequency in agreement, the

receiver will receive the signal sent from the transmitter and

displayed on the monitor

Note: The effect of receiving the distance has a great

relationship with the reception power of the transmitter and

the receiver venues. If the reception is poor, the antenna can

be replaced with three leaves, four leaf antenna or panel

antenna. Replace the antenna should pay attention to the

antenna and receiving the same frequency.

4. Operation Instructions

This monitor has HDMI, VIDEO, AUDIO input and VIDEO output

port, suitable for a variety of usage environments. From VIDEO,

AUDIO, DVR video input can be entered recording(HDMI without

recording function), VIDEO output signal can be straight-through

video signal , can also be the DVR replay video signal (consistent

with the image displayed on the screen).

4.1 Button Instructions

1. $>$/CH/Q : Multi button for UP /Channel Selection /Search /
   Volume up; Press this button for channel selection, long
   pressing for channel auto searching, In OSD for "UP" button,
   Volume up.

2. $<$/BAND : Multi button for DOWN/Channel selection/Volume
   down: Press this button for channel selection from "A, B, E,
   F, R". In OSD is for "DOWN" button, Volume down.

3. ▦: Press " MENU " button, pop up OSD menu, press this
   button again to enter the sub-menu, then press once adjusted
   for the sub-menu item to confirm, then you can press the
   button " $>$/CH/Q " or " $<$/BAND " to adjust the value
   adjustment or selection, press MENU to confirm.

4. ↩/MODE : The input signal switch button/ menu operation exit
   button. When entering the menu operation for menu exit
   button

5、When Recording start to begin, the indicator will be flash with
   blue color.

Operation

Press button 4 (⤴/MODE)to select **HDMI, video, RF, DVR** input signals

Select **HDMI**, HD multimedia digital signal from the HDMI input port;

Select the **video**, ordinary video signal from the video input port;

Select **RF**, 5.8 G RF input signal directly, image display more clearly.

Select **DVR** to enter into DVR video channel, displayed on the screen at this time is images from the DVR video output, access DVR channel for corresponding functions. When the DVR video recording, video indicator light 5 (blue) flashes. In the first use of TF card or switch to a new TF card, should format TF card in the channel (DVR).

4.2 Menu Instructions

Press ▦ to enter the menu, use the ＞/CH/Q or ＜/BAND button to select "Color", select it and press ▦ button to confirm, enter the "Color" sub-menu Operation, use the ＞/CH/Q or ＜/BAND button select the adjustment item. After selected adjustment item, press ▦ once again to confirm, then use the ＞/CH/Q or ＜/BAND button to select or adjust specific parameters. After adjusting the value or setting, press ▦ to confirm, press ⤴/MODE key to exit the OSD menu.

◑ Color
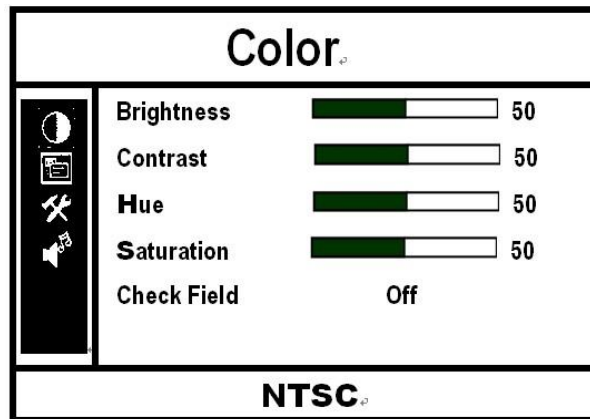
※ **Brightness:** To adjust the image's brightness.

※ **Contrast:** To adjust the brightest and darkest ratio of the

image, please note the sense of picture when adjust,

proportion too large or small, will make the picture lose

the color of showy.

※ **Hue:** On NTSC Video mode, the image color tint

difference is adjustable by tint.

※ **Saturation:** To adjust color concentration

※ **Check Field:** Switch on/off Check Field (Red, Green,

Blue, Mono)

▣ OSD

※ **Language:** Languages for OSD as below:

    English　简体中文　Français　Italiano　Deutsch

    Español　日本語　　한국의　Pycc　　Portugues

※ **H Position:** To adjust the OSD position in horizontal.

※ **V Position:** To adjust the OSD position in vertical.

※ **OSD Timeout:** To adjust the clock.

※ **Transparent:** To adjust the level of transparent.

⚒ Function
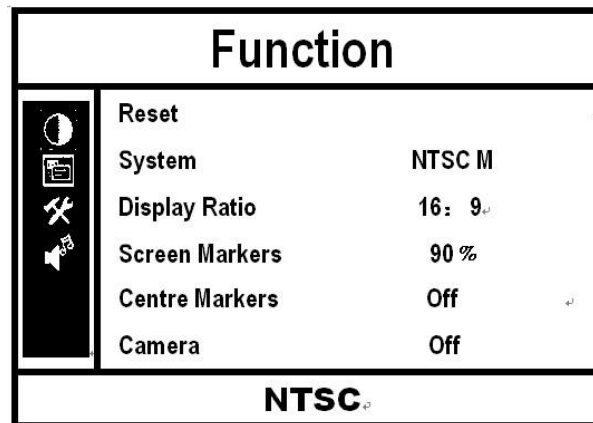
※ **Reset:** Back to original setting.

※ **System:** To adjust color video format.
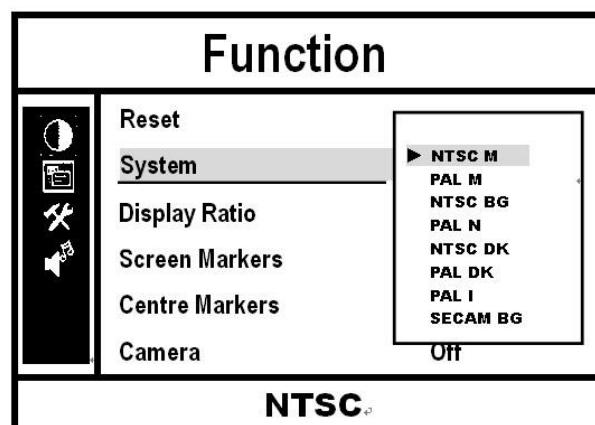
※ **Display Ratio:** To change the display ratio 16:9/4:3.

※ **Screen Markers:** To adjust screen marker (off, 96%, 93%, 90%, 85%, 80%)

※ **Centre Markers:** To set centre mark (cross mark) display

※ **Camera:** Use the Canon 5 d II or similar camera, the monitor video has real-time images. NO black screen, NO delay, perfect without distortion.

🔊 Sound

Sound

Volume		▣▣▣▣▢▢▢	50
Focus		Off	
Ver 1.0			

NTSC
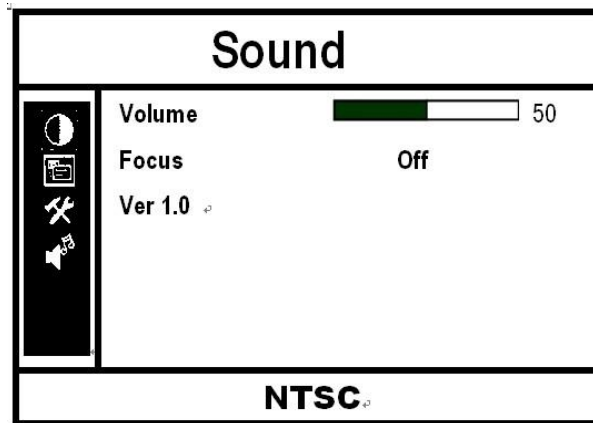
※ **Volume:** To adjust the volume.

※ **Focus:** As an auxiliary functions (in HDMI mode) when
   used as the camera viewfinder.

※ **Ver.1.0:** Software version number

5. Sunshade Installation

5.1 Positive parallel alignment of the sun shade and monitor, the projection of the sun shade hanging claw at the monitor sun shade slot (see the monitor front view).

5.2 The sun shade's hanging claw and the monitor's sun shade slot should be aligned around inserted balanced to slide down.

5.3 Put the corresponding sun shade with paste tape, follow the

image and paste on the fixed frame.

5.4 Assembled monitor with sun shade.

6. Power Supply

There are two versions for power supply:

6.1 Supply by city electricity with power adapter

When the monitor connect the electricity by DC power adapter, red light is illuminated, means is charging, after fully charged, the charging indicators will all be out.

When the power switch is on " ▬ ", the monitor is in operation mode, green light is illuminated. If the built-in battery is not fully charged , it still continue to charge the battery, until the battery is full.

To use power adapter supply , it can choose the power adapter(optional) , which matches to the monitor. If the customer need to use the other power adapter, please use the qualified power supply in DC9-19V, $\geqq$ 1.5A.

6.2 Built-in Battery Power Supply

This model is built-in Li-ion battery capacity: 7.4V-2200mA/h (2 hours), after fully-charged, it lasts to work 2 hours.

6.3 Li-ion Battery

●The working temperature of Li-ion battery is -20~60℃, please don't use battery in the place with temperature too low or to high. The power of battery will be reduce if it is working in low temperature environment. Please don't use the battery in high temperature environment, may cause battery swell then fire.

Please check the temperature of battery when it working in high temperature environment.

●Over-charge and over- discharge, it will cause permanent damage to the positive pole and negative pole of batteries. No need over discharge then rechargeable every time.

●Period of time to do a deep charge and discharge the battery under the protection circuit control to correct the consumption statistics, but it will not improve your battery's actual capacity

●please be placed in a cool place to weaken the perspiration speed of battery, if you don't use the battery for long time.

● Please charge power stored in the battery to prevent self-discharge of excessive lead to excessive discharge damage if you don't use the battery for long time.

7. Parameters

Panel Size	7.0 inch
Panel Type	TFT LCD
Resolution	800x480 pixels
Backlight	LED
Dot Pitch	0.0642(W) x 0.1790(H) mm
Display Ratio	16:9
Brightness	1000cd/㎡
Contrast	500:1

Response Time	T_{ON}=10ms; T_{OFF}=15ms
Viewing Angle	70°/70°(L/R) 50°/70°(U/D)
Input Signal	Video/Audio/RF/HDMI
Output Signal	Video
Video Color System	PAL-4.43 / NTSC-3.58
HDMI support format	480i /480p /576i /576p 720p /1080i /1080p (50/60Hz)
Headphone Output	stereo 3.5mm
Input Voltage	DC:9~19V
Power Consumption	$\leqq$13W
DVR Recording Resolution	D1(720×576)VGA(640×480)QVGA(320×240)
DVR support TF card	maximum 32G
DVR Recorded Video Format	AVI
RF Receiving Frequency	5.8 G broadband FM audio video synchronization receiving (other frequencies optional) 40 channel auto searching (different frequency range for different region, see specific of the machine's paste instructions)
RF Wireless Receiving Sensitivity	typical value -90dBm
Frequency stability	±100 ppm
Unit Size (mm)	188.4L×134H×33.7D (mm)
Unit Weight	540g (with battery)
Installation Method	1/4-20 thread mounting holes in the monitor, easy to install on the tripod 75X75cm VESA
Built-in battery	Li-ion 7.4V/2200 mA/h
Working Temperature	-20～50℃
Storage Temperature	-30～65℃

8. Trouble Shooting

8.1 Only black and white or monochrome picture

①Please check saturation、brightness & contrast adjustment.

②Please check monitor's "color" from the menu "Check Field" is in black and white or other monochrome image condition.

③Check whether it is caused by the discrepancy for the DVR playback of video system and monitor system. If that, please enter into the monitor "Function" menu for "System" option to select the corresponding standard.

8.2 NO picture after put on the power

①Check signal cable contact is in good condition, a monitor is synchronized with the input signal, and can press the ⇆/MODE give it a try. If in the RF channel, please check to see if the transmitter has been work.

②Check signal cable connecting, and make sure use the standard adapter connect the monitor. If power supply by battery, please check the battery whether fully charged.

8.3 Images are not synchronized, DVR can't enter the menu

①The DVR playback system and monitor system are different, format in the "System" option.

②The RF signal is too weak.

8.4 Playback the video without sound

①No open the audio recording in the DVR menu settings

②Volume control did not open, can press the volume button "＞/CH/Q", try increasing the volume.

③Recording under the "VIDEO" input state, but "AUDIO" is not

AUDIO input signal at the same time.

8.5 Open the RF, no signal detected

①Transmitter is working properly or not.

②If transmitter frequency matches with the receiver frequency

band

③If customer change the receiving antenna, please note that must

be matched with the transmitter, otherwise may cause receiving

sensitivity is low, even can't receive signals

■ Remark: If there are still other problems, please contact with our

related deals.

★ **If there are changes without prior notice.**