

SAFE DRIVING GUARD DVR



(Pictures are for reference only)

Instruction Manual

Structure and Buttons



Information of Functions

Specifications of the products

- Connected to PND (Portable Navigation Device) as the monitor for recording and viewing simultaneously
- Camera angle: 120°
- Sensitive chip: 1/4colorCMOS
- Shooting pixels: 640x480 pixels
- Shooting format: video format AVI, photo format jpg. They Can be connected to mobile phones, navigation systems etc. for real-time playback
- Power supply: connected to appliances charger or car charger of 12V / 24V. The internal lithium battery of 3.7V 200 mah supplies power to RTC.
- Automatic cycle recording. Record continuously the latest storing clip according to the memory capacity. The latest video will cover the starting video.
- Automatically start recording when the power is on
- Recording video time is set for 5 minutes.
- Time display: In recording video mode, the time displayed is recorded time, while in pause mode, it is The time left for recording.
- The maximum storage card for recording is 32 GB MMC Card.
- Size of the products: 128mm x 70mm x 114m

The advantages of the product

- Automatically start recording video when the power is on. Photographing and playback can be switched at any time.

- Connected to PND as monitor, larger and clearer video can be seen.
- The maximum storage card is 32 GB
- The removable storage card can be changed when it is full. And the video can be played in other devices such as mobile phones and MP4.
- Time watermark marks essential evidence.
- Colorful high-quality video with sound.

Accessories

- Car charger, stand sucker, USB data cable, instruction manual in Chinese and English, AV-in line

Basic functions

SH-616 save driving guard is the perfect combination of radar and traffic recorder. Combined with PND and navigator, four functions can be realized in one device: flow velocity measurement, fixed velocity measurement, video navigation and driving record.

Driving record

(1) Video

A. Automatically start video and sound recording when the power is on; switched to video recording mode from other modes, automatically start video recording without any operation.

B. Video format is 640x480. Five-minute clip. cycle recording video will continue without a pause.

C. There are time information on video and photos for reference. Internal lithium battery can ensure accurate time.

D. When the storage card is full, cycle cover will keep the latest video.

E. When external power supply suddenly fails, the internal lithium battery can ensure the machine to go on working for about 30 seconds. The machine will finish saving monitoring file and exit the system.

(2)TV_out

TV_out: real-time monitoring video can be displayed on PND, so it's convenient to adjust camera angle for the best monitoring effect.

(3) Indicator: Double-color LED indicator

A. The green light is on in video recording mode and it will flash continuously when video recording is abnormal.

B. The yellow light is on in photographing mode and it will flash continuously when photographing is abnormal.

C. The red light is on in playback mode and it will flash continuously when playback is abnormal.

(4)Buttons

A. MENU: to switch modes. The default mode is video recording. Press this button to switch between video, photograph and playback.

B. Start/ stop: to start stop mode.

In video recording mode: Press this button to display “stop” to stop video recording. Press it again to display “start video recording” to start recording.

In photographing mode: press this button and the sound “kacha” will be heard and one picture will be taken.

In playback mode: press this button to browse pictures or start video. Used with “Next” button, press start / stop

Button for five seconds to enter time setting screen in the mode of stopping recording or photographing

C.NEXT

In playback mode, press this button to browse the next picture or video clip.

In non-video recording mode, press this button for five seconds to formatted TF card.

In time-setting mode, long press increases 10 and short press increases 1.

D. Combined buttons: Press the above three buttons at the same time can save the recording video.

II. Clip radar

(1) Radar early warning function

A. Early warning of flow and fixed velocity measurement can be realized combined with DSA software. The latest VCO sweep-frequency technique is used in flow velocity measurement, which can ensure prompt adjustment of the sampling monitoring frequency.

B. Dynamic satellite-sensing filtering system

(2) Voice switch

This device has a switch of voice switch to realize the switch early warning from clip radar or navigator PND.

Turn to “on” for external broadcast from clip radar.

Turn to “off” for internal broadcast from PND.

(3) Program switch

This device has a program switch which ensure the perfect adaptation to the primary PND programs sold in market.

There are three gears for program switch: H, L and T. Switch to suitable position according to different programs. The line connected to PND is a line of 3 in 1.

Electrical parameters

The parameters of the whole machine

Operating voltage: DC 12V/24V

Operating current: 200 mA

Standby current: <1mA

The parameters of rechargeable battery:

Capacity: 200mAh

Charge current: 120m A

Charge time: 2.5 hours

Speaker: 8 ohm 1.5w runway model

The parameters of camera

items	properties	Remarks
Pixels	30 million	P0A030
Dynamic image resolution	640x480	VGA
Shooting image resolution	640x480	VGA
Number of colors	24 Bits True Color	
Camera structure	4E+1R aspheric lenses	
Focal length	2.9 mm	
F-number	F2.0	
Shooting range	0.2m $\rightarrow\infty$	
Field of view	120.0°	
Distortion	1%	
Relative illumination	63%	
Image transfer rate	15/30	FpsSXGA/SVGA
White balance	Automatic	
Gain	Automatic	
Exposure control	Automatic	
Output signal	RGB 5:6:5	
Encoding Output	analog video	
Output pin	24 pin	
Flash	NC	
Operating voltage	3.3 v	
Light sensitivity	1.0 LUX	
Power dissipation	40 mW/ 30mW	
Outline dimension	43mmx13mmx20.6mm	± 0.2
Operating temperature	10° 60°	

Functions setting

I. Formatting

Long press of the “NEXT” button for five seconds will format TF card in stop recording video or

Photographing mode and the word “formatting” will appear on the screen.

II. Mode switch

Only after stopping recording video, can you switch to another mode when pressing the “MENU” button: video recording→photographing→playback. If video is being recorded, please press START/STOP and then MENU to switch.

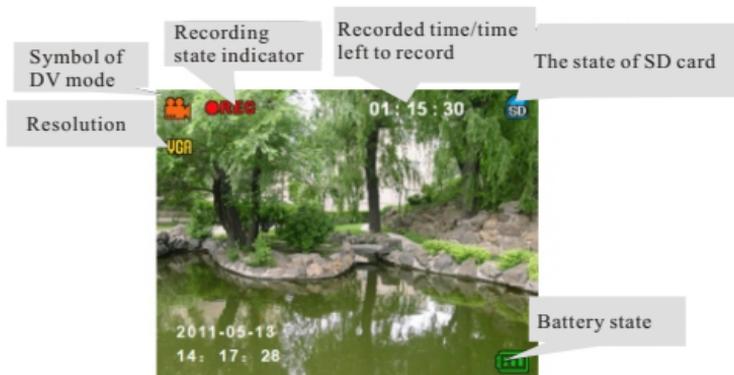
III. Mode description

(1) Video recording mode: the default mode when power is on. When this mode is started, there is voice prompt “video recording”.

Press MENU to switch to other modes.

Press START/STOP to stop or start video recording with voice prompts “Stop video recording” or “start video recording”.

Video recording mode is as follows :



Recorded time / time left to record

In video recording mode, recorded time is displayed, in STOP mode, the time left is displayed.

(2) Photographing mode: Press MENU to switch to this mode with voice prompt “photographing”. Press START/STOP to photograph and “kacha” will be heard.



(3) picture playback: belongs to playback mode
Press MENU to switch to this mode with voice prompt “playback”. Press NEXT to browse the next page.
Pictures playback is as follows:



(4) video playback: belongs to playback mode
Press MENU to switch to this mode with voice prompt “playback”. Press START/STOP to play

video or stop video; Press NEXT to browse the next page.

Video playback is as follows:



(5) Time setting:

- A. Press START/STOP for five minutes to enter time setting interface in the mode of stopping recording video or photographing.
- B. On time setting page, Year, Month, Day, Hour, Minute and Second can be switched by pressing MENU button.
- C. On time setting page, press NEXT to increase number, a long press increases 10 while a short press increases 1.
- D. On time setting page, press START /STOP to confirm changes and then exit and return to the previous state.
- E. In time setting mode, if users do not operate after 10 seconds, it will return to previous state automatically and will not save the time setting. It will start recording video in video recording mode.



Installation Instruction

SH-616 is connected to navigator to make a four-in-one machine.



Installation Instruction

Installation instruction is shown as the following pictures:



Connect SH-616 automobile data recorder navigator with USB cable. (note: make sure the tonavigator is off before inserting the plug into it.)

cigarette lighter



✔ You can turn on navigator after setting as above, and Enter DSA system and make various setting according to the instruction of DSA.

12V power plug



Insert the car charger into the position of cigarette lighter and check if the indicator is on.

Instruction of dial switch is shown on next page.

1) Function description (only SH-616 with voice has the following functions)

a. Combined with navigator, it can realize the functions of 3 in 1: GPS navigation, fixed velocity measurement, flow velocity measurement.

b. Voice switch

2) Turn to ON, automatically choose voice warning from radar or navigator.

1)When the power is on, there will be a voice, “Safety early warning system is being started”.

2)If not connected to navigator, automatically use voice warning from SH-616. When flow velocity measurement is detected, there will be voice prompt, “tick, tick, tick, radar signal is detected, tick... tick...”

Turn to OFF to turn off voice warning from radar and switch to PND warning

1)when power is on, the machine is mute.

Note: before using, please make sure that the model of SH-616 is correspondent to that of navigation host.

3-pin dial switch, three positions are marked as H, L and T.

The configuration of corresponding program is as follows:

Position	Voltage required	Corresponding program
H	PND program requires high electrical level for No. 4p.	Yuanfeng program
L	PND program requires high electrical level for No. 4p.	Jinbai sheng program, shanling 4358T program
T	PND program requires radar signal for No. 4p.	MTK program, Aipeike program, zhangxun program, meisaid a program (5 pin)

> Main specifications

Main specification	Receiving frequency range	Sensitivity value
Satellite frequency	1575.42±1.023MHz	95±2dB
Police car X-band	10.525GHz±100	110±2dB
Tripod K-band	24.125 GHz±175 MHz	124±2dB
Police car Ka-band	13.450GHz±125MHz	110±2dB
Tripod car-band	34.700GHz±1300MHz	110±2dB
Laser gun laser beam	34.300GHz±1300MHz	110±2dB
Anti-detection Vg2	904mn±33MHz	1.Data storage capacity: 360000 2.Distance error: ±10m 3.distance display: 0.999m 4.Electronic compass: east, south,west,north,northeast, southeast,northwest,southwest . 5. power supply: DC 12V 6. 360 ° detection of laser band
Voltage	11.150±MHz	
Car power supply	DC12V	
Current value	2V DC~36DVC	
Requirement	200~300mA	
USB	Mini 2.0	
Memory	32Mbit	
outline size	121x78mm	
Operatin g temperature	-25°C-75°C	

> Present police standard system

1-4. Ku fixed photographing system. Lock the photographing distance at 10m to 30m.

GPS satellite locates the distance for radar receiving signal and gives warning about the distance according to speed limit.



(pictures 1-4)

1-5. Flow Ku-band phot ogr aphing system: Lock the phot ogr aphing distance at 10m to 35m.



(pictures 1-5)

1-6. cross-section X-band system: Lock the phot ogr aphing distance at 300m to 450m .

Radar detector receives signal at a distance e of 3002500 meters.



(pictures 1-6)

> Present police standard system

1-7. Flow Ku-band phot ogr aphing system: Lock the phot ogr aphing distance e at 10m to 35m.

Radar detector receives signal at a distance of 350-1500meters.



(pictures 1-7)

1-8. Flow K-band photographing system: Lock the photographing distance at 10m to 35m.

Radar detector receives signal at a distance of 2501500 meters.



(pictures 1-8)

1-9. Flow K photographing system: Lock the photographing distance at 10m to 30m.

Radar detector receives signal at a distance of 2501500 meters.



(pictures 1-9)

Moving photographing system usually take pictures in a moving invisible way. So it is not easy to be found. In today's market, only the radar detector of our company can detect the moving invisible photographing traces. The detecting distance is decided by the quality of radar detectors. This product can receive signal at a long distance, so it can help avoid being fined.

At present, Ka photographing system in China is mainly used witnessing Ka radar and Ka system made in Germany according to European rules. The frequency of Ka photographing system is so short and its reflecting signal is so weak that traditional radar can only receive signal at a short distance, so if there is Ka-band warning, you have to be especially careful, then you can avoid being photographed.

The toxic and hazardous substances are described as follows according to the requirements of description in The Managing methods to prevent Pollution of Electronic Products and The Managing methods to prevent the pollution of Electronic Information Products:

Parts	Toxic and hazardous substances or chemical elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr6+)	Polybrominated biphenyl (PBB)	polybrominated diphenylethers (PBDE)
Shell	○	○	○	×	○	○
Circuit board	×	○	○	○	○	×
Wire type	×	○	○	○	×	×
Power supply	○	○	×	○	○	○

○ : indicates that the toxic and hazardous substances are not included in all homogeneous materials of that part or the content of them is less than the limited

content required in the standard of SJ/T11363-200.

X : indicates the content of toxic and hazardous substances in one of the homogeneous materials in

this part is more than the limited content required in

The standard of SJ/T11363-200.

Note: Most parts of this product are made of eco-friendly materials which are not toxic or hazardous.