



DH-HWS800A Speed Measuring System

User's Manual

Version 1.2.0

Welcome

Thank you for purchasing our product!

This user's manual is designed to be a reference tool for your system.

Please read the following safeguard and warnings carefully before you use this series product!

Please keep this user's manual well for future reference!

Important Safeguards and Warnings

1 . Electrical safety

All installation and operation here should conform to your local electrical safety codes.

We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

We are not liable for any problems caused by unauthorized modification or attempted repair.

2 . Installation

This series product shall be installed one or three meters away from the lane. The default angle between the radar and the road is 22°(The error value shall be less than or equal to $\pm 1^\circ$). The product shall face the road .The road shall be plain and no turning point.

Changes or modifications not expressly approved by the party responsible for compliance, void the user's authority to operate the equipment.

3 . Environment

It shall be installed away from the large-size metal object or strong magnetic area.

4. Lithium battery

Improper battery use may result in fire, explosion, or personal injury!

When replace the battery, please make sure you are using the same model!

5. FCC INFORMATION

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1)This device not cause harmful interference,

(2)This device accept any interference received, including interference that may cause undesired operation.

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.

6. Accessories

Please open the accessory bag to check the items one by one in accordance with the list below. Contact your local retailer ASAP if something is missing or damaged in the bag.

Content	Quantity
Power adapter	1
Charger	1
User's manual	1
Certificate Card	1
Flash disk	1

Warning!

Please make sure you have removed the USB device before you boot up the system!

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1 General Introduction

1.1 Overview

The DH-HWS800A IR distance measuring system is a full embedded system featuring vehicle speed measurement, image snapshot, video monitor, automatically number plate recognition (ANPR) and etc.

This series product perfectly meets the requirement of the traffic business of the public security and generally integrates the advantages of the domestic and overseas products.

The built-in design is stable and of strong function. It is easy to use and very convenient to install. It can be widely used in many areas.

This series product also integrated the Dahua's technical advantages in the security area. It is a perfect product integrating the security area and the intelligent transportation system together.

1.2 Functions

Vehicle image snapshot	Accurately snapshot the speeding vehicle image according to the speed limit you set. At the same time, it can overlay the vehicle information such as the snapshot position, snapshot time, vehicle real-time speed, road speed limit, measure direction, system serial number.	Vehicle speed measurement	Radar speed measurement can quickly and accurately test the vehicle speed. Support customized speed value (The speed value ranges from 20km/h to 250km/h.).Support the multiple-lane speed measurement and extra low vehicle speed measurement.
ANPR	Real-time record of vehicle image and recognize plate number.	Lane identification	Via radar distance measuring, identify lane where vehicle locates.
Dynamically real-time preview function	Provide dynamically real-time preview function. Support display the lane real-time monitor information via the LCD or Web.	Auto alarm	Customized speed limit. There is an on-site alarm and remote alarm when the vehicle speed is too low or too high.
Data search	Application platform supports the vehicle information search. Various user right levels supported. Fuzzy search and data backup also supported.	Data transmission and remote maintenance	Data transmission, remote access and remote system maintenance are realized via Ethernet, CDMA/GPRS and 3G technology. It is suitable for you to monitor the system internal temperature, and view key component running status.
USB backup	USB 2.0 port is available. Support USB data backup and USB hot swap function. Support backup the images of one or more days to the USB device.	Software upgrade	System supports the host software remote upgrade and local upgrade. System can resume previous working status after upgrade.
User management	User rights are by level and you may add, delete and edit rights. User of different rights	Log search	System can record the device key operations and support log search function.

	can perform different levels of operation. Right verification is required.		
Multiple human and machine alternating ports	The system provides full-touch human and PC alternating interface. It is useful for your operation.	Vehicle classification	Via radar classify vehicles into different types. It supports vehicle size of large, small or large, medium and small.
Auto maintenance function	Support auto maintenance function and customized maintenance period. System can restore previous working status after the reset operation.		

1.3 Features

- **Fully embedded design without PHD, stable and reliable system**

Comparing the speed measuring system consists of the PHD and IP camera, this series product featuring the compact design, stable performance and is very convenient to use. It is free of the PC virus and OS vulnerability.

The DH-HWS800A series product adopts the Dahua's technical advantages in the security area and intelligent traffic system (ITS) area. The host software circuit adopts the mature platform Dahua has already used in the ITS area. The hardware circuit is also be optimized and perfected to use in the industry-level or military level chips, which lowers the system power consumption and can guarantee the long time running period in the harsh environments. The full real-time embedded operating system and unique software specifications enhance the system working efficiency and stability. The dual watch dogs (software and hardware) technology absolutely prevents the system from downing.

- **Integrated design, compact construction, easy to install, use and maintain**

HWS800A series product integrates the high definition camera, host, LCD, touch panel, power, speed measurement radar, special image storage disk and etc together. The compact construction and integrated design allows it to be used in either stationary or mobile environments.

- **Built-in special image storage device, support over 10, 000 offence images**

The built-in special image large capacity disk meets the requirement of data safety and mobile speed measurement device. It supports the short-time local storage and data backup. At the same time, the system can upload the image to the centre server simultaneously to storage, backup and review, which realizes dual storage at the local-end and the centre.

- **Narrow pulse light technology**

This series product integrates the Dahua self-developed adjustable narrow pulse light technology or LED strobe light to compensate light when snapshot at night. The vehicle driver even can not notice the short time pulse light, which can eliminate the strong light effects to the driver's eyes. It can not only clearly snapshot the plate, but distinguish the vehicle type and the face feature of the driver and passengers, which can provide the irrefutable offence evidence.

- **Narrow beam radar speed measurement to enhance the accuracy, effectively hide from the electronic dog (anti-speed radar detector)**

Dahua self-developed high performance narrow wave radar can meet the international speed measurement accuracy. The narrow beam radar is rarely detected by the electric dog. It can effectively monitor the approaching and departing vehicles.

- **Industry-level component and high reliable socket connector**

The hardware circuit design adopts the industry-level components. The system is of low power consumption, high reliability. The built-in Lithium battery can averagely work as long as 8 hours. The imported reliable socket connector such as Lemo connector and air-level connector further guarantees the system reliability.

- **High definition image snapshot**

There is a 8 mega high definition CCD camera to snapshot the offence vehicle. System can overlay information such as the vehicle speed, snapshot time, snapshot position. The built-in watermark function prevents the vicious image modification, which maximally guarantees the authentic image.

- **General management and remote maintenance function**

System supports remote maintenance function. Supports the remote malfunction diagnosis, malfunction alarm and fix remotely, which greatly reduce the maintenance work load.

- **Multiple connection ways, support wireless via CDMA/GPRS/3G**

System supports wire cable connection and wireless connection via CDMA/GPRS/3G at the same time. It can be widely used in various environments.

- **Extra low power consumption, support solar power**

The whole system average power consumption is below 20w, completely support the solar power.

1.4 Specifications

Vehicle capture rate:≥95%
Measure range:(10~250)km/h
Measure accuracy: full speed range. -6km/h ~ 0.
Monitor lane: 1-6 lanes.
Operation method: 8.4 inch touch screen/web
Storage capacity:32GB SD card
Snapshot resolution:8 megapixel, 3296*2472
Video resolution:2 megapixel 1600*1200
Transmission mode: TCP/IP, FTP (Selectable)
Image format: JPEG
Image amount: 1 or 2, optional
Record mode: Image/video
IR_CUT switch: auto mode or manual mode, optional
Data interface: Two RS232 COM, one10/100M Ethernet port ,one USB2.0 port, one SD card port.
Lithium battery port: 14.8V. One 10AH lithium battery port.
Power input port: One 19V DC input port.

Host Spec	Power output port: One 12V DC output port.	
	Flashlight synchronization port: There is one port, optical signal output, support flashlight and IR light compensation.	
	LED flashlight synchronization port: There is on port. Frequency and interval are adjustable.	
	Mean time between failures (MTBF): $\geq 30000\text{h}$	
	Mean time to repair (MTTR): $\leq 30\text{min}$	
	Lithium battery average working time: 8h	
	Working voltage: DC 19V $\pm 10\%$	
	GND resistance: $\leq 4\Omega$	
	Average power consumption: $< 20\text{W}$	
	Working temperature: With lithium battery is $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$, and without lithium battery is $-30^{\circ}\text{C} \sim +70^{\circ}\text{C}$.	
	Relative humidity: 20% \sim 90%, (no condensation)	
	Waterproof level: IP65	
	High definition lens port type :C type	
	Dimensions: 185.6mm \times 160mm \times 132mm (L \times H \times W)	
	Weight: 9kg	
	Color: Iron grey	
	Meet 7 \times 24h industrial environment continuous working requirement	
	Conform to the JJG527-2007 <i>Automatic Monitor System for Vehicle Speeding</i>	
	Conform to JJG528-2004 <i>Vehicles Radar Measuring Speedometers</i>	
	Conform to GB/T21255-2007 <i>Vehicle Measuring Device Requirements</i> .	
	Conform to GA/T832-2009 <i>Technology Specifications of Image Forensics for Road Traffic Offences</i>	
	Radar Spec	Measure accuracy: $\pm 1\text{km/h}$
		Working distance: $> 70\text{m}$
		Vehicle recognition: $\geq 90\%$
		Lane recognition: $\geq 90\%$
		Surge frequency: 24.00GHz \sim 24.25GHz
Transmission power: $\leq 20\text{dBm}$		
Antenna beam width: horizontal 6 degrees (-3dB), vertical 28 degrees (-3dB)		
Reactive time: $\leq 30\text{ms}$		
Power voltage: DC 10.5 \sim 14.5V		
Power consumption: 2.4W		
Working temperature: $(-30 \sim 70)^{\circ}\text{C}$		
Enclosure: High density industrial plastic		

1.5 Chinese National and Industry Criteria

- *Law of the people's republic of China on road traffic safety*
- *Regulation on the implementation of the law of the People's Republic of China on road traffic safety*
- *Specification for design and construction of expressway safety (JTJ 074-2003)*
- *General specifications of intelligent monitoring and record (GA/T497-2004)*
- *General specifications of intelligent monitoring and record (GA/T 497-2009)*
- *Specifications for the construction of public security traffic command system (GA/T651-2006)*
- *General demand for the groundwork of public security traffic management equipments outside (GA/T652-2006)*
- *Specification of the design drawing for the public security traffic command system (GA/T515-2004)*

- *Specification of engineering of security and protection system(GB50348—2004)*
- *Specification of lightning-surge protection for security and protection system(GA/T 670-2006)*
- *Rules of engineering acceptance of TV monitoring system for traffic(GA/T 514-2004)*
- *Vehicle speeding auto-monitor system (JJG527-2007)*
- *Vehicle radar measurement device (JJG528-2004)*
- *Vehicle speed measurement device (GB/T21255-2007)*
- *Technology specifications of image forensics for road traffic offences(GA/T832-2009)*
- *Chinese national and corresponding local regulations.*

2 Structure

2.1 System Structure

HWS800A IR distance measuring system includes power, embedded interactive snapshot host, radar, LCD screen and touch screen.

The host is core of the system and it is mainly responsible for snapshot, flashlight sync, camera control, radar speed measuring and receiving this value, image storage, network transmission, USB downloading and GUI display.

2.2 Appearance

This series product appearance is shown as below. See Figure 2-1 and Figure 2-2.



Figure 2-1



Figure 2-2

2.3 Panel and Ports

2.3.1 Right Panel

Please refer to the following figure for right panel information. See Figure 2-3.

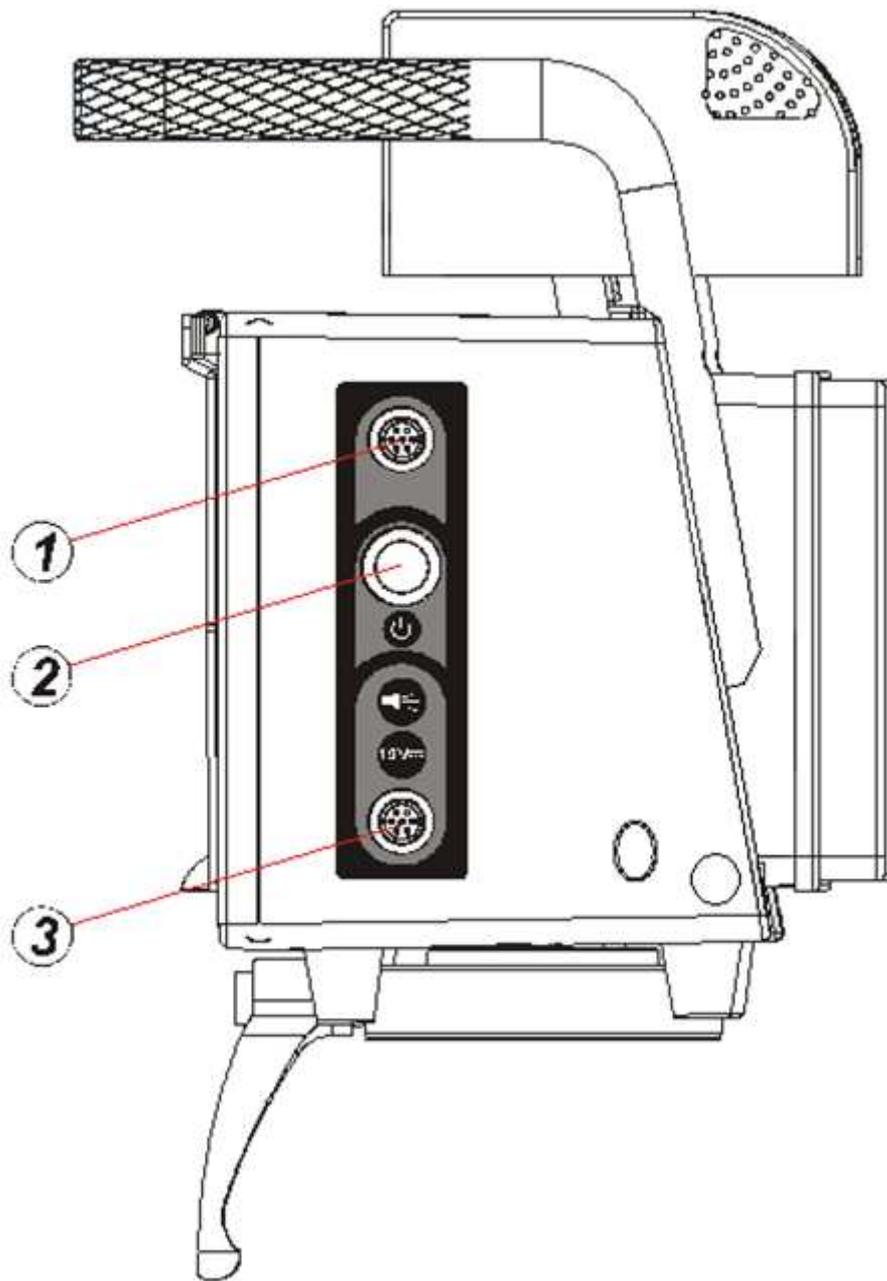


Figure 2-3

Please refer to the following sheet for detailed information.

No.	Line Color	Description
1	 Green	controlled+12V output (reserved)
	 Orange	Flashlight +(F+)
	 Grey	Flashlight -(F-)
	 Black	Strobe light + (S+)
	 Purple	Strobe light - (S-)
	 Red	Controlled+12V output (reserved)
	 Brown	RXD

No.	Line Color	Description
	 Blue	TXD
	 Yellow	GND
2	-	Power switch
3	-	DC19V power input port

2.3.2 Front Panel

The front panel is shown as in Figure 2-4.

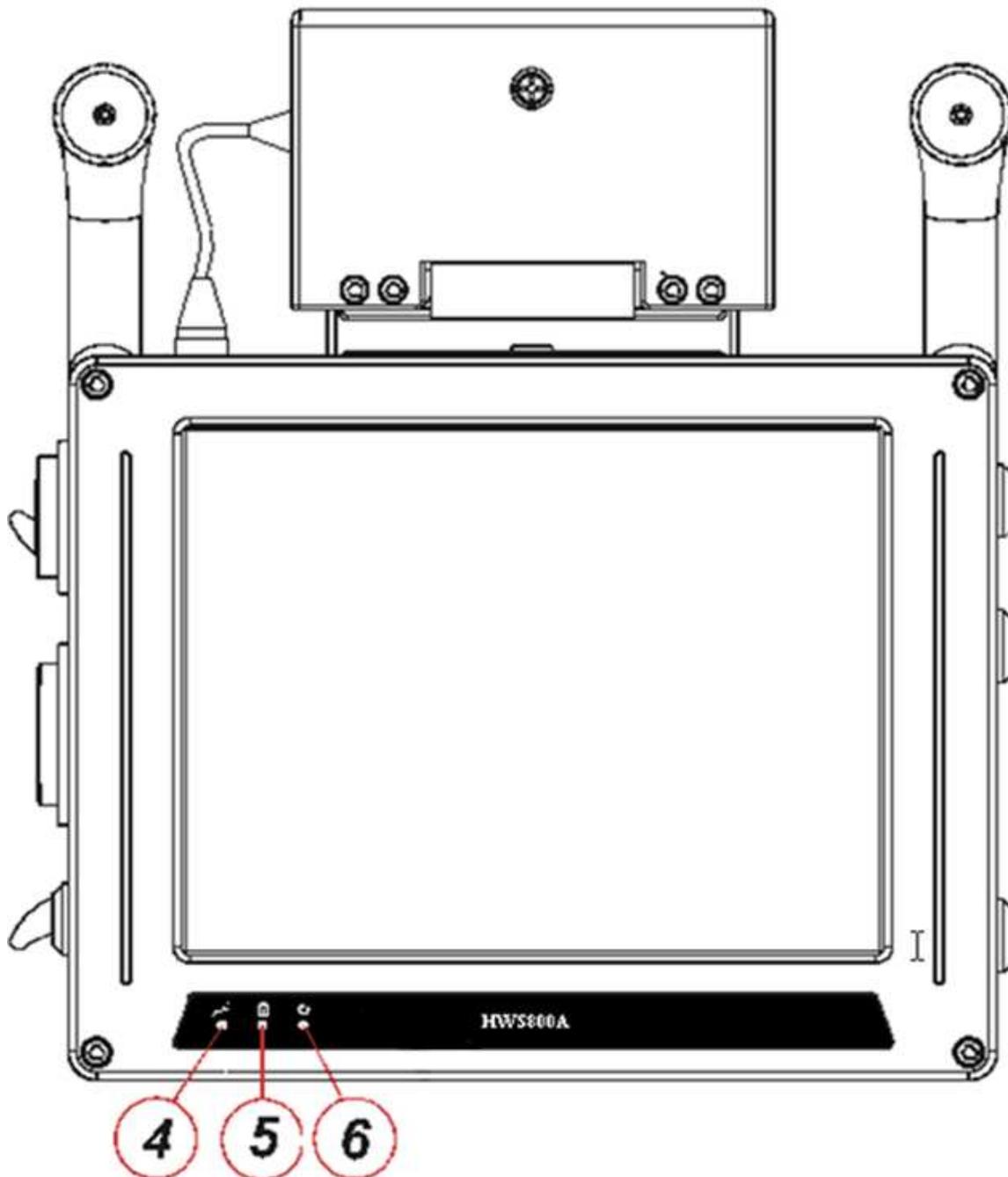


Figure 2-4

Please refer to the following sheet for detailed information.

SN	Icon	Description	Color	Function
4		System running indication light	Green	Flashing: System is working properly. On: System has abnormality. Off: system has stopped working.
5		Lithium battery recharge indication light	Blue	Flashing: Lithium battery is recharging now., Off: The recharge is completed or there is no battery available.
6		Power light	Red	On: System is on. Off: System is off.

2.3.3 Left Panel

The system left panel is shown as below. See Figure 2-5.

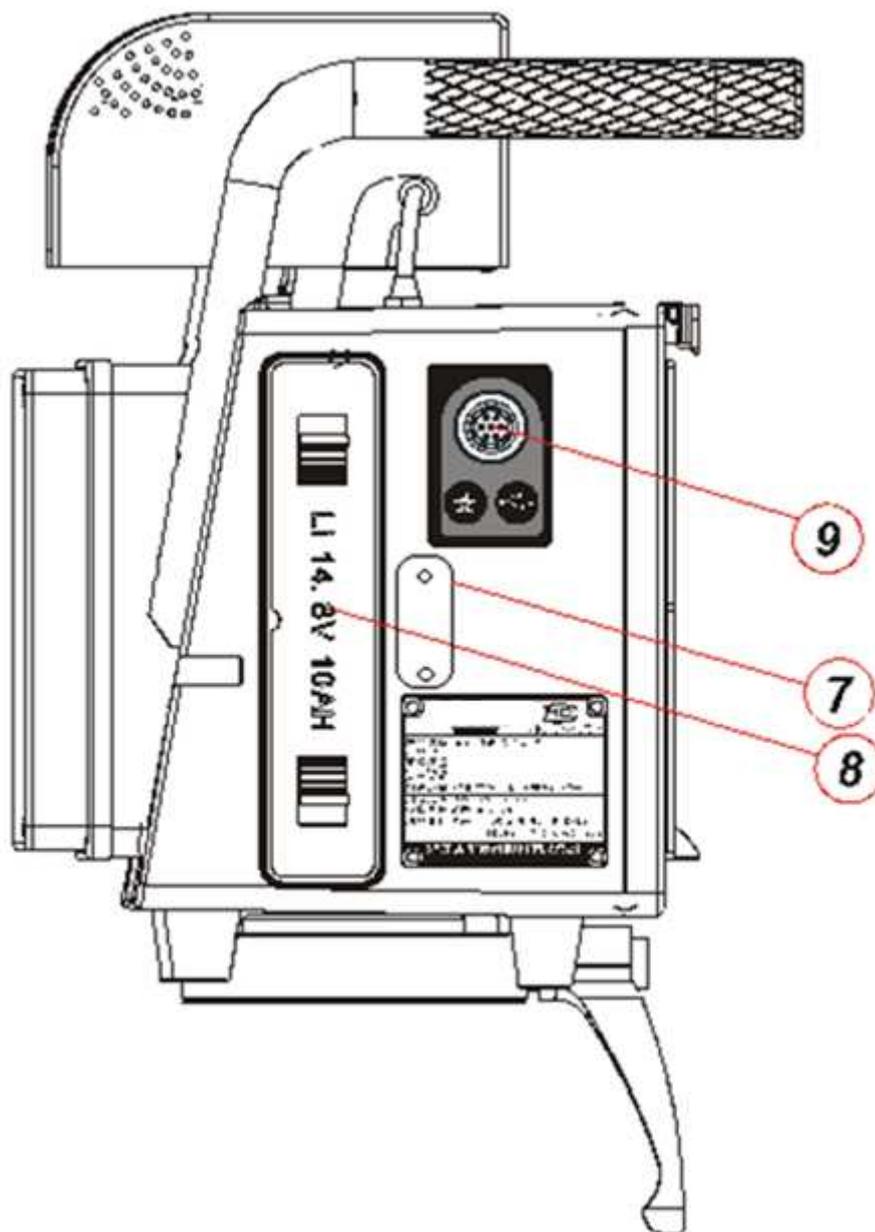


Figure 2-5

Please refer to the following sheet for detailed information.

SN	Port Name
7	SD card slot
8	Lithium battery
9	Network, USB port, RS232 port, DC 12V power output and etc.

3 Operation

Important

- Before your operation, please make sure all cable connections are right and the Lithium battery has inserted in the slot.
- You need to click the Save button in the interface to save your current setup!

3.1 Boot up and Shut down

3.1.1 Boot up

Push the power button in the side panel, you can see the red power indication light becomes on. The system is booting up now.

3.1.2 Shut Down

Push the power button in the side panel; you can see a dialogue box: System is shutting down now... The system shuts down after five seconds.

3.2 Menu Operation

Important

Please click the save button after you completed the setup; otherwise your setup is valid. In the displayed image or the video interface, you can click one point to realize the digital zoom function. Click any point again, you can restore original mode.

3.2.1 Login Interface

After system booted up, it goes to the login interface. See Figure 3-1.

There are three default accounts:

- User name: admin. Password: admin.
- User name: 888888. Password: 888888.
- User name: 666666. Password: 666666.



Figure 3-1

If it is your first time to use the system, please select the user name from the dropdown list and then input the corresponding password in the soft keyboard. You can create your own account to login for the next time. See Figure 3-2.



Figure 3-2

3.2.2 Main Interface

The system main interface is shown as below. See Figure 3-3.

It includes nine items: Traffic Flow, Monitor, Log, Backup, Snapshot, Query, User, Config and Information.

Please click the corresponding item in the touch panel to go to the second menu. In the second

menu interface, you can click the icon  at the right corner of the interface to go back to the main interface.

At the top right corner of each interface, you can see current battery capacity symbol. There are ten levels. The tenth level means the battery is full and the first level means the capacity is insufficient now; you need to stop work and recharge. You can see the corresponding dialogue box to prompt the insufficient battery when it reaches the third level.



Figure 3-3

3.2.3 Snapshot

Please highlight the “Snapshot” item and then click; you can see the following interface. Here you can see the vehicle snapshot image and view saved image information. See Figure 3-4.

In the main pane, you can see the snapshot image. On the right pane, you can view the corresponding information. At the bottom of the interface, you can view four function buttons (from left to the right): previous image, manual snap, next image and return button.

- **Date:** The image snapshot date.
- **Time:** The image snapshot time. The min unit is ms.
- **Speed and Speed limit:** The vehicle real-time speed when snapshot this image and the speed limit in the snapshot region. The unit is km/h.
- **Plate No:** Current snapshot plate number. This item is null if the automatically number plate recognition (ANPR) function is disabled.
- **Over Ratio:** speed of vehicle in snapshot over speed limit, in percentage such as 20%.
- **Previous:** Click it to view the previous image.
- **Next:** Click it to view the next image.
- **Manual snapshot:** Besides automatically snapshot as your set speed limit, system can also enable manual snapshot if you click this button. You can view the snap image in the displayed pane. The auto snapshot image and the manual snapshot image are both saved in the system special storage media.

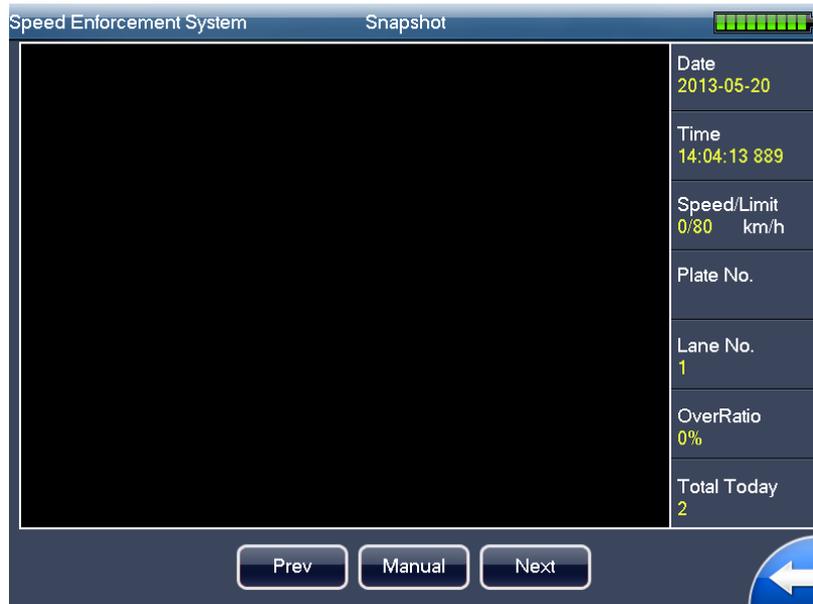


Figure 3-4

3.2.4 Monitor

The preview interface is shown as below. Here you can view vehicle real-time driving status. When you are debugging the system, you can go to the following figure to view the camera effect. See Figure 3-5.

- **Bright:** Please click “-” and “+” button to adjust the brightness. The value ranges from 0 to 100. The default value is 50.
- **Contrast:** Please click “-” and “+” button to adjust the contrast. The value ranges from 0 to 100. The default value is 50.
- **Manual:** Click it to snapshot current video and save it to the special storage media.

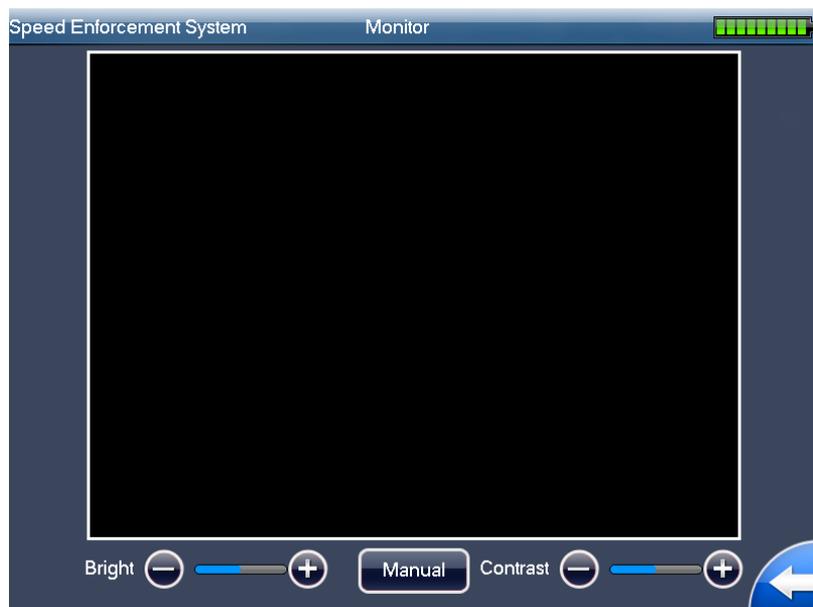


Figure 3-5

3.2.5 Config

3.2.5.1 Radar Setting

The radar setting interface is shown as in Figure 3-6.

- **Low limit:** Set to enable/disable low speed measuring and snapshot. You can set low limit after enabled.
- **Low value:** Set value of low limit. When vehicle in area is slower than this value, snapshot is on.
- **Large or small:** There are two options: disable/enable. There are two trigger speeds for the large and small vehicle respectively if you check the enable button here. The interface is shown as in Figure 3-7.
 - ◇ **Disable:** Only display speed limit and trigger value.
 - ◇ **Enable:** Display truck limit, truck trigger, low limit and low trigger.
- **Truck limit:** You can input the truck limit here.
- **Truck trigger:** You can input the snapshot trigger value for the large vehicle here.
- **Radar angle:** Input speed measuring system installation angle. The angle must match actual angle. Recommended angles are 22°(approaching), 25° (departing) and 25°both).
- **Direction:** It includes three direction modes:
 - ◇ **Approaching:** The system snapshot the vehicle head.
 - ◇ **Departing:** The system snapshot the vehicle rear.
 - ◇ **Both:** System snapshot both the head and rear.
- **Sensitivity:** Here is to set radar sensitivity. There are four levels. The fourth level has the highest sensitivity. The default setup is level 3.



Figure 3-6



Figure 3-7

Note:

Installation distance: Set first lane distance from location where the device locates. This shall be based on actual distance. Recommend 150cm.

Lane width: Set lane width. Based on actual lanes, and do not fill in extra lanes. For example, is lane quantity is e, then leave 4th, 5th and 6th lanes empty. Default is 0 cm.

3.2.5.2 Camera Setting

The camera setting interface is shown as below. See Figure 3-8.

- **Exposure mode:** There are two options: fixed and auto.
- **Video exposure:** Default is level 6 as 4ms.
 - ◇ In the fixed mode, it includes seven options: 100 μ s /250 μ s /500 μ s /1ms/2ms/4ms/8ms/20ms. You can use the “+” and “-” to set the time.
 - ◇ In the auto mode, you can use the small keyboard to set the exposure time. The value ranges from 0 ~120000 μ s. Default is 0~4000 μ s.
- **Preview value:** Brightness threshold. Flashlight is enabled when lower than this value.
- **Flash mode:** There are three modes: doe not flash, always flash and auto flash.
- **Frame interval:** There are three modes: 0, 1 and 2.
- **Snap times:** You can select to snapshot 1 or 2.
- **Day/Night mode:** There are three modes: color, auto and B/W.
- **Auto gain:** There are two modes: auto and fixed.



Figure 3-8



Figure 3-9

3.2.5.3 OSD

The OSD setting interface is shown as in Figure 3-10 and Figure 3-11.

- **Address:** Please input the offence address via the Web or the local keyboard.
- **Lane SN:** Please input the lane serial number here.
- **Direction:** Please select the road direction from the dropdown list. It includes five options: No direction/from the north to the south/from the south to the north/from the east to the west/from the west to the east.
- **Edit:** It includes two operations.
 - ✧ Add address: Please input the address in the edit column and then click the “Add” button, you can add the new address in the dropdown list.

- ◇ Edit address: Please select one item from the dropdown list and then use the keyboard to edit. Please click the “Modify” button to complete the setup..
- **Import:** This series product supports the import operation from the USB storage media. Please insert the USB device and then click the “Import” button to update the address list.
- **Font color:** Set OSD font color: red or white.
- **OSD options:** System supports the OSD function. You can check the box below to overlay the corresponding information in the image. The default setup includes thirteen items: time and date, address, plate, speed, direction, speed limit, radar direction, device SN, vehicle type, offence type, valid time and etc.



Figure 3-10

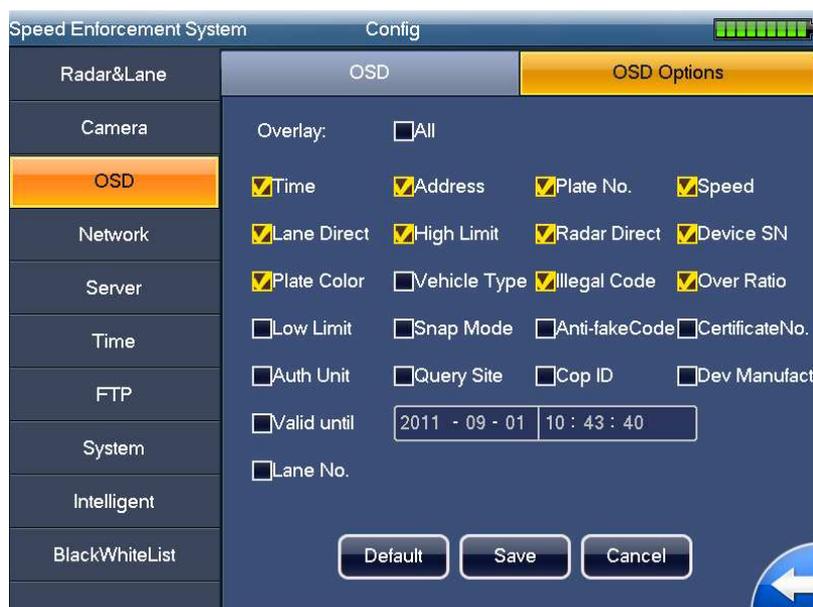


Figure 3-11

3.2.5.4 Network Setting

The network setting interface is shown as in Figure 3-12.

- **Host IP:** Here you can set host IP address.
- **Subnet mask:** Here you can set host subnet mask.
- **Gateway:** Here you can set host gateway.
- **DNS server1:** Here you can set host DNS preferred address.
- **DNS server2:** Here you can set host DNS alternate address.



Figure 3-12

3.2.5.5 Server Setting

The server setting interface is shown as in Figure 3-13.

- **Server enable:** You can check the box here to enable or disable the server connection function.
- **Server IP:** Here you can input server IP address.
- **Name:** Please input the user name to login the server.
- **Password:** Please input the corresponding password here to login the server.
- **Port:** Please input the server port number.



Figure 3-13

3.2.5.6 Time Setting

The time setting interface is shown as in Figure 3-14.

- **Time enable:** You can check the box here to enable or disable the function.
- **Server IP:** Please input NTP server IP address here.
- **Port No.:** Please input NTP server port number here. The default setup is 37.
- **Sync period:** It is the NTP auto synchronization period. The unit is minute and the default setup is 7 minutes.
- **Time zone:** Please time zone from the dropdown list. The default setup is GMT8 Beijing, Chongqing, Hong Kong, Urumqi.
- **Time setup:** You can input manually to set the system time.



Figure 3-14

3.2.5.7 FTP Setting

FTP setting interface is shown as in Figure 3-15.

- **FTP enable:** You can check the box here to enable or disable the function.
- **FTP Server IP:** Here you can input FTP server IP address.
- **Name:** Please input the user name to login the FTP server.
- **Password:** Please input the corresponding password here to login the FTP server.
- **Port No.:** Please input the server port number. The default setup is 21.
- **Storage path:** It is the image storage path saved in the FTP.



Figure 3-15

3.2.5.8 System

The system interface is shown as in Figure 3-16.

- **Maintenance:** It is to set system auto maintenance function and maintenance time. You can select from the dropdown list. The option includes: never/Sunday/Monday/Tuesday/Wednesday/Thursday/Friday/Saturday/everyday. The time ranges from 00:00 to 24:00.
- **Screen save period:** It is to set the screen save period. The value ranges from 0 to 65535 minutes. The screen saver function is disabled if the value is 0.
- **Device name:** Please input device name here.
- **Radar SN:** It is to set the radar serial number.
- **Flow statistics:** You can check the box here to enable or disable the flow statistics function. The system begins the flow statistics for each passing vehicle and displays the results in the flow statistics interface.
- **Font:** Select OSD overlay font from 1x, 2x and 3x. 1x size is 16*16.
- **Image quality:** Set image quality. The range is 1~100 as 100 is best quality. Default value is 75.
- **Auto login:** Set to enable auto login.



Figure 3-16

3.2.5.9 Intelligent

The intelligent interface is shown as in Figure 3-17.

- **Plate recognition:** You can check the box here to enable or disable the plate recognition function. System automatically recognizes the plate number and plate color after snapshot if you enable this function here.
- **Short name:** It is the short name of your local place.
- **Plate recognition area:** There are 12 zones for one 8 megapixel image. Please highlighted the areas for the recognition algorithm to positioning and recognize the plate.



Figure 3-17

3.2.5.10 White/Black List

The white/black list interface is shown in Figure 3-18 and Figure 3-19.

Enter plate no.: Enter plate no. of vehicle to search. Support fuzzy search.

Query: Display search result.

White/Black list enable: Enable this function.

Import trusted/black list: Support USB import of these lists.

Export trusted/black list: Support USB export of these lists.

Add trusted/black list: Enter plate no., vehicle owner name and select vehicle type to add.

Note: White/black list has strict format, and you can refer to format of previous list.



Figure 3-18



Figure 3-19

3.2.6 Query

There are three search modes here: search by time, search by speed range, and search by blacklist.

3.2.6.1 Search by time

The interface is shown as in Figure 3-20.

There are four time periods: last day/last three days/last week/all. It also supports customize setup. Please click the “Custom” button to set.



Figure 3-20

3.2.6.2 Search by speed range

The interface is shown as in Figure 3-21.

There are three items: overspeed <50%, overspeed >50 %(including 50%) and all. It also supports customize setup. Please click the “Custom” button to set.



Figure 3-21

After completed the search, you can see the following interface. See Figure 3-22.



Figure 3-22

3.2.6.3 Search by Blacklist

The interface is shown as in Figure 3-23.

There are four time periods: last day/last three days/last week/all. It also supports customize setup. Or you can click the "Custom" button to customize.



Figure 3-23

You can see the image SN, snapshot time, speed, and vehicle plate and vehicle type. System displays the 8 records in one screen by default. You can use the previous/next button to view more images. After you select one image, the two snapshot images will be displayed in the thumbnail pane from the left to the right at the top pane. Here you can check the one or more images to delete or export. You can check the box before the “No” item to select all 8 images. See Figure 3-24.

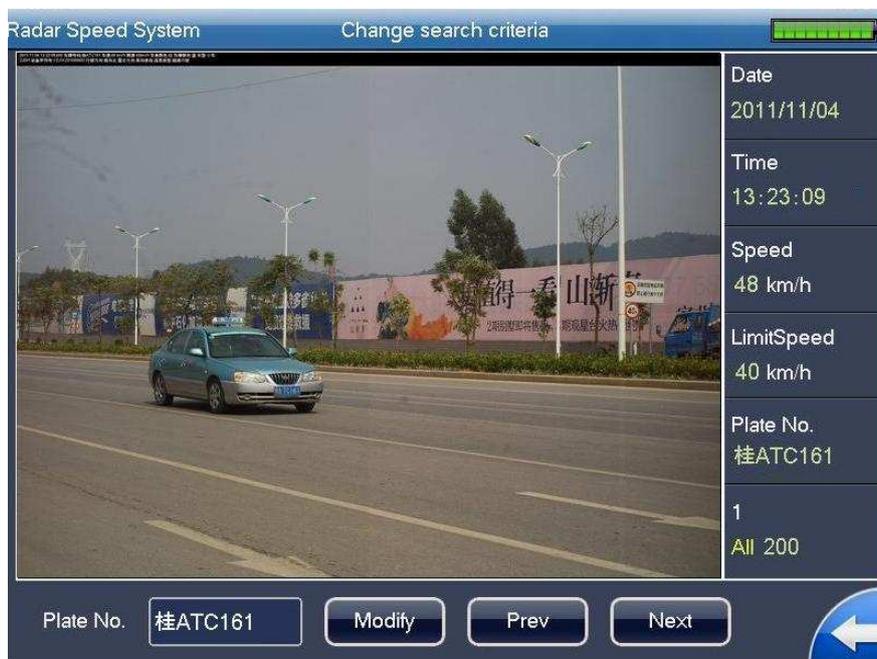


Figure 3-24

3.2.7 Image Backup

The image backup includes three modes: Backup by time (Figure 3-25)/backup by speed (Figure 3-26)/backup by blacklist (Figure 3-27).

Backup by time and backup by speed are USB backup.

During the backup process, you can see the corresponding process bar for your reference.

System pops up the dialogue box when the backup completed.



Figure 3-25



Figure 3-26



Figure 3-27

3.2.8 System Information

3.2.8.1 Version Information

The device status interface is shown as below. See Figure 3-28.

- **Software version:** Here you can view the software main version including the compile date.
- **Hardware version:** Here you can view the hardware main version.
- **GUI version:** Here you can view the GUI module version.
- **Web version:** Here you can view the Web module version.
- **Radar version:** Here you can view radar version. Disconnected radar or abnormal radar will show as offline.
- **Upgrade:** The system supports software upgrade function via the local USB media. Please copy the binary upgrade file to the root of the USB media and rename it as “update.bin”. Insert the storage device to the UBS port of the speed measuring device and then click the “upgrade” button to begin the update process. Please follow the prompt information displayed in the screen to complete.



Figure 3-28

3.2.8.2 Device Information

The device information interface is shown as below. See Figure 3-29.

- **Device type:** The default type is HWS800A.
- **Device SN:** It is the device serial number when it shipped out of the factory. Please note it is read-only.
- **Radar SN:** It is the corresponding radar serial number. It can input in the system setup interface. You can refer to the metal plate at the side panel of the speed measuring system for the device SN and the radar SN information.



Figure 3-29

3.2.8.3 Network Status

Click the “Network status” button; you can see an interface shown as in Figure 3-30.

Here you can view network connection information including the user name, IP port and user type. The user type includes: WEB, network upgrade tool and platform software.

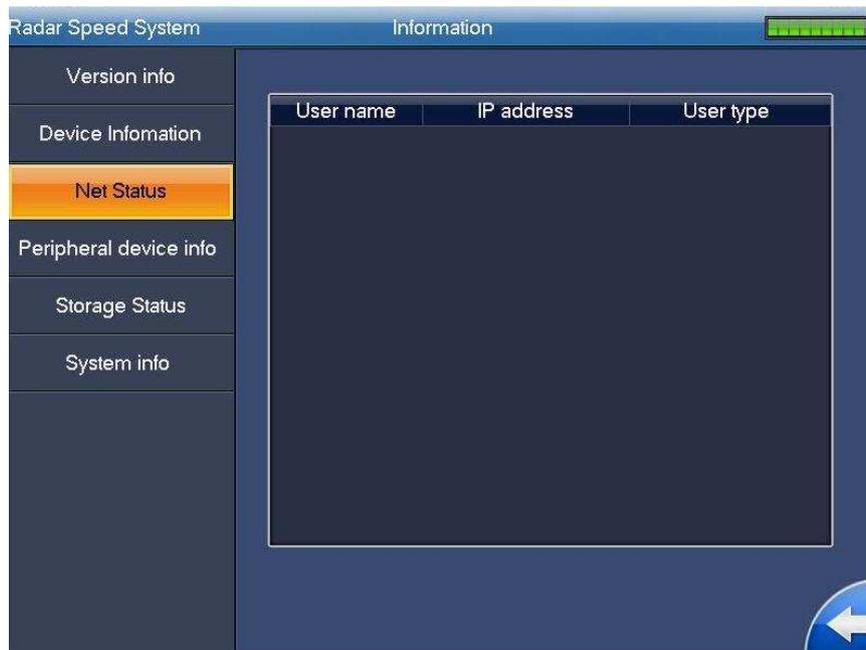


Figure 3-30

3.2.8.4 Peripheral device information

Click "Peripheral device information" button, you can see an interface is shown as in Figure 3-31.

- **Radar:** It is the radar working status of current speed measuring system. It displays as OK when the radar works properly. It is shown as "Offline" when the radar is malfunction or the system can not find the radar.
- **Camera:** It is the camera working status. It displays as OK when the camera works properly. It is shown as "Offline" when the camera is malfunction or there is no bit stream.

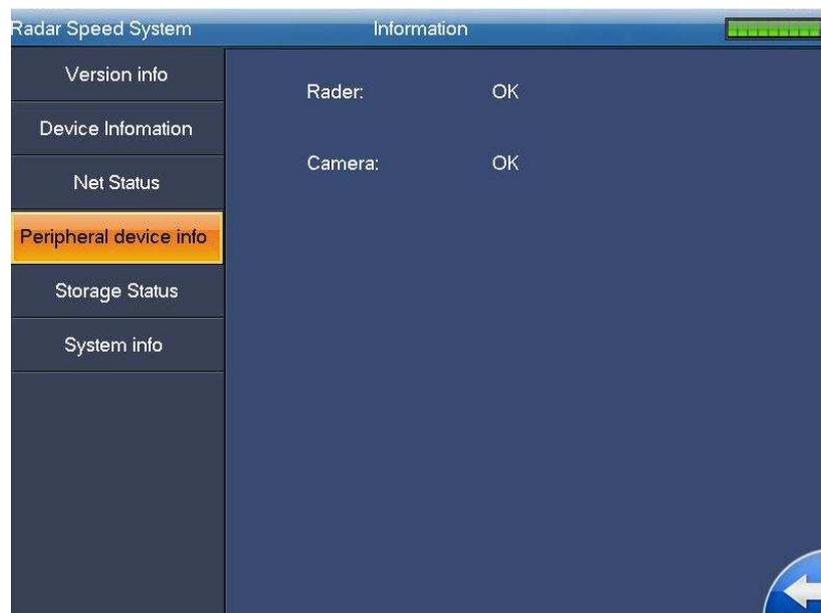


Figure 3-31

3.2.8.5 Storage Status

Click "Storage status", system pops up the following interface. See Figure 3-32.

- **Capacity (M):** It is the capacity of the system special storage media.
- **Usage(%):** The usage percentage of current special storage media. It is shown as XX.XX%.
- **Picture number:** Here you can view system saved picture amount.
- **Format:** Format SD card.
- **Unmount:** uninstal SD card or USB.

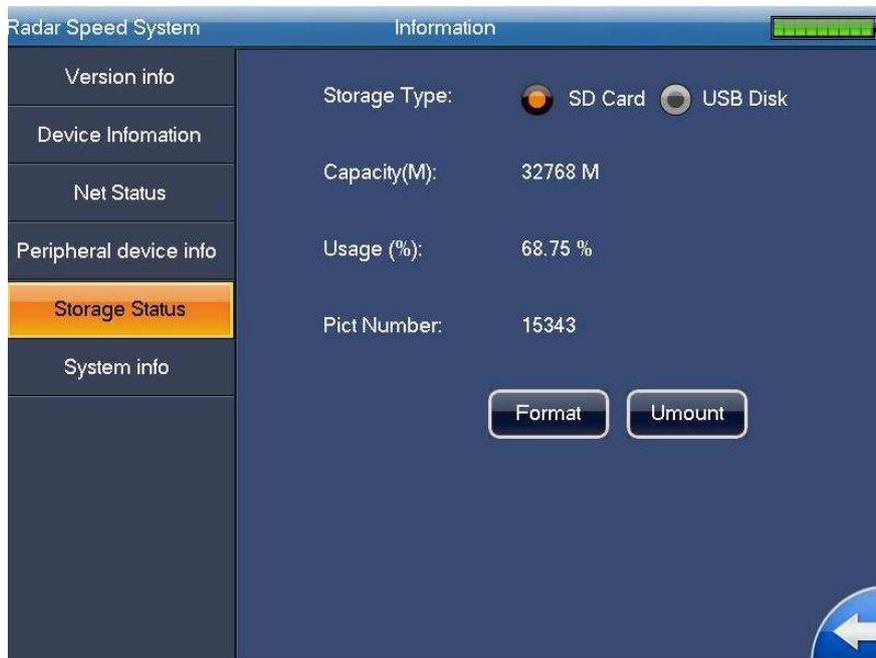


Figure 3-32

3.2.8.6 System Information

The system information interface is shown as in Figure 3-33.

- **CPU usage:** Here you can view current CPU usage status. It is shown as XX.XX%.
- **Memory usage:** Here you can view current memory usage status. It is shown as XX.XX%.
- **Temperature (°C):** Here you can view system current working temperature. It is shown as XX.XX°C.

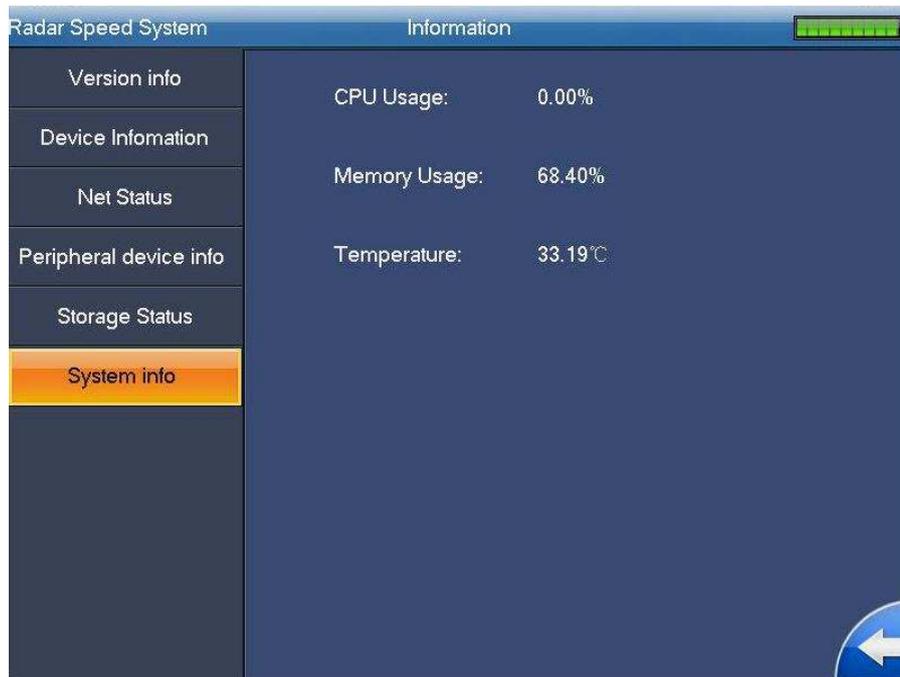


Figure 3-33

3.2.9 Traffic Flow

The traffic flow statistics has two modes: by time (unit: second) and by speed range. See Figure 3-34 and Figure 3-35. You can refer to the Image search interface for detailed information.



Figure 3-34



Figure 3-35

The traffic flow statistics result is shown as in Figure 3-36. It displays in column diagram. System supports export via the USB device. You can insert the flash disk to the USB port and then click the “Export” button to export current statistics results in txt file.



Figure 3-36

3.2.10 Log

System supports two log search modes: search by time period (Figure 3-37) and search by user name (Figure 3-38). In Figure 3-38, you can select the user name from the dropdown list.



Figure 3-37



Figure 3-38

The log search results interface is shown as in Figure 3-39.

The searched results displayed in a sheet. There are total four columns: SN, time, details, and user name. There are 16 items in one screen. You can use the “Previous” and “Next” button to view more logs.

Important

Clear function here is to delete all logs in the system. Before the operation, please make sure you really want to remove all logs!

No.	Time	Log Type	User name
1	2013-05-20 10:51:31	Abort	System
2	2013-05-20 10:51:31	Start up	System
3	2013-05-20 10:51:31	Hot swap	System
4	2013-05-20 11:53:10	Login	admin
5	2013-05-20 11:55:41	Reboot	System
6	2013-05-20 12:05:27	Save Configuration	System
7	2013-05-20 12:05:27	Start up	System
8	2013-05-20 12:05:27	Save Configuration	System
9	2013-05-20 12:05:27	Hot swap	System
10	2013-05-20 12:05:27	Save Configuration	System
11	2013-05-20 12:05:27	Save Configuration	System
12	2013-05-20 12:32:06	Login	admin

1/1 Page First Prev Next End Clear

Figure 3-39

3.2.11 User Management

The user management interface is shown as in Figure 3-40. It includes the following information:

- **Group:** It is the user group name the user belongs to. There are two levels: admin/user.
- **User status:** It includes two types: online/offline. It is shown as online after the user logged in the system. Otherwise it is shown as offline.
- **Note:** Here is some note information when you are adding current user.
- **Function:** There are four functions: edit user, add user, delete user and logout. Logout will make logged in user offline.

NO.	User Name	Group	User Stat	Notes
1	admin	admin	Online	admin 's account
2	888888	admin	Offline	888888 's account
3	666666	user	Offline	666666 's account
4	default	user	Offline	default account

Modify Add User Delete User Locked

Figure 3-40

At the bottom of the interface, there are four buttons: modify/add/delete /lock user.

In Figure 3-40, select one user and then click “Modify” button you can go to the following interface. See Figure 3-41. Here you can change password, modify property of the group, modify note information and modify rights setup.



Figure 3-41

In Figure 3-40, select one user and then click “Add” button you can go to the following interface. See Figure 3-42. Here you can add new user, select the group for newly added user, add note information and select the corresponding rights.



Figure 3-42

4 Applications

Here are some actual snapshot images for your reference.
For privacy reasons, we hide some numbers in the plate.

4.1 Snapshot in the Daytime

The approaching snapshot image in the daytime is shown as in Figure 4-1 and Figure 4-2..



Figure 4-1



Figure 4-2

4.2 Snapshot at Night

The approaching snapshot image at night is shown as in Figure 2-3/ Figure 2-4/ Figure 2-5/ Figure 2-6.



Figure 2-3



Figure 2-4



Figure 2-5



Figure 2-6

5 Installation

5.1 Device Installation

Take the device out of the box.

Insert the Lithium battery.

Put the device on the tripod and adjust to the proper height.

Push the power button to boot up the device.

5.2 Camera Debug

Go to the Road Monitor interface.

Adjust the lens iris according to the actual environment.

Adjust the lens focus distance and definition to the proper effect.

Important

Please adjust the lens focus distance to make the middle lane clear. For example, there are three lanes, and then you can adjust the lens to clearly snapshot the second lane.

5.3 Radar Debug

The device shall be installed from one to three meters away of the road.

The device and the road angle shall be 22°(approach ing), 25°(departing) and 25°(both).

Important

Set angle must match actual angle.

5.4 Mobile Flashlight Installation

Use the accumulator to provide power to the 12V DC flashlight

The device is 5 meters away from the flashlight. The flashlight bracket is 1.5 meters height.

Adjust the flashlight angle to get the proper image (the proper environment brightness, vivid face, clear plate, no over exposure.)

Appendix H Toxic or Hazardous Materials or Elements

Component Name	Toxic or Hazardous Materials or Elements					
	Pb	Hg	Cd	Cr VI	PBB	PBDE
Sheet Metal(Case)	○	○	○	○	○	○
Plastic Parts(Panel)	○	○	○	○	○	○
Lithium Battery	○	○	○	○	○	○
LED	○	○	○	○	○	○
Touch Panel	○	○	○	○	○	○
Solid HDD	○	○	○	○	○	○
Circuit Board	○	○	○	○	○	○
Fastener	○	○	○	○	○	○
Wire and Cable/Ac Adapter	○	○	○	○	○	○
Aluminum Case	○	○	○	○	○	○
Accessories	○	○	○	○	○	○

Note

O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

X: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard. During the environmental-friendly use period (EFUP) period, the toxic or hazardous substance or elements contained in products will not leak or mutate so that the use of these (substances or elements) will not result in any severe environmental pollution, any bodily injury or damage to any assets. The consumer is not authorized to process such kind of substances or elements, please return to the corresponding local authorities to process according to your local government statutes.

Note

- **This user’s manual is for reference only. Slight difference may be found in user interface.**
- **All the designs and software here are subject to change without prior written notice.**
- **If there is any uncertainty or controversy, please refer to the final explanation of ours.**
- **Please visit our website for more information.**