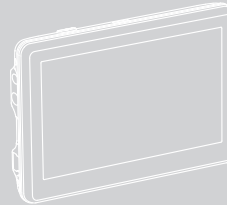


carNAVi **Hardware Manual**

Global Positioning System
In-Car & Portable Navigation

carNAVi S 500



carNAVi S 500

User's Agreement

We greatly appreciate you choose a carNAVi GPS product. To avoid you unnecessary troubles, please read this manual carefully.

Please install this product correctly. Do not block the driver's view or safety airbag.

The manufacturer shall not assume any compensation or responsibility to product failure or other property loss or personal injury due to incorrect installation or usage of this product.

Any use of our hardware, software or maps implies that you agree to the following terms:

1. The carNAVi material is intended to be used as travel aid. It is the user's responsibility to use it in a safe and prudent way, including the visual real-time verification of streets, roads, road-signs and directions as well as traffic conditions. carNAVi rejects any and all liabilities for any loss, injury or damage, be it direct or indirect and regardless if carNAVi was aware of the possibility of any such loss, injury or damage.
2. The map data used in our devices are not endorsed by commercial organizations. We provide no warranty and bear no responsibility for any damage or loss due to any consequence of using of these maps. Use at your own risk!
3. Your use of the carNAVi material is limited to non-commercial activities (e.g., navigation on a leisure hiking). You may also use the material as an aid, indirectly supporting your business activity (e.g., as the driver of a transportation business).
4. Any other commercial use of carNAVi hardware or software including maps for business purposes is explicitly forbidden without the prior written permission of carNAVi. This includes, among others, including it in commercial products or commercially operated Websites.

The navigation system, as a high-quality product, contains operating system and software provided by carNAVi. The manufacturer has spared no efforts in manufacturing the hardware and developing application software to ensure this product runs perfectly. In case of malfunction, the manufacturer shall not assume any compensation or responsibility on property damage or property loss or personal injury except maintenance as specified according to quality assurance regulation.

carNAVi does not assure or guarantee effectiveness, completeness or accuracy of the electronic map used in this navigation system, and shall not assume any compensation or responsibility on personal injury and property loss due to limitation of the electronic map.

The software and partially the maps provided in the navigation systems offered by carNAVi are protected by copyright laws. We reserved all the rights on the software and digital map included in our navigation devices. It is illegal to reproduce, store or transmit in any form or by any means, electronically or otherwise without prior written permission of carNAVi. Partial map layers used in our navigation systems are copyright by openstreetmap.org and distributed under the Open Database License (<http://opendatacommons.org/licenses/odbl/>).

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1 Notice

1 1 Information Instruction

The navigation system adopts the most advanced satellite navigation technology and detailed street map so it can direct you to the destination easily. In order to let you obtain the best capabilities of the new system, please read the instruction before operating.

Illustration



Warning

Users shall comply with the information provided in case of any threat to personal safety.



Caution

Users shall comply with the information provided in case of any damage to this device.



Tips

Additional information provided for user's reference.

Global Positioning System is launched and maintained by USA. This system can receive the satellite signals from Global Positioning System. Using these signals, the system can indicate current location and help you find required destinations.

This navigation system can provide visual map and voice instruction. When you are at the crossing or near the turnoff, the device will remind you of the driving distance and direction.

1 2 Safety Information

1. While driving you must obey all traffic rules and learn how to operate skillfully before using the system.
2. As the system will distract the drivers' attention, in order to keep safety and prevent from accidents, drivers shall not operate the system while driving.
3. Shall not only depend on the voice navigation which is only for reference. Because the roads circls, traffic signs and service information aren't always latest, drivers should update maps timely.
4. There are shortages of system data, for example, roads circls may change frequently;

therefore, you must notice traffic circls before following the system information.

5. This navigation system is only used for assisting drivers to make a judgment, and may not measure any direction, distance, place, or landform precisely.

1 3 Safety Caution

In order to prevent users or others from injury or property loss, please read and follow the cautions in below:

1. Read instruction
2. Keep the instruction properly for later reference
3. Obey all operation instructions
4. Accessories

Don't use the accessories from another manufacturer, otherwise it may cause accidents.

5. Power

Please use the stated power. You must cut off the power and pull off the power plug in rainy days or when you won't use it for a long time.

6. Protect power cord

Make sure the power cord is out of feet touch.

7. Installation and wiring

In order to ensure safety, please consign professionals to carry out the installation and wiring.

8. Maintenance and parts change

Please consign professional technician to maintain and change.

9. Keep away from heat source

Please don't expose the device in sunshine or high temperature. Keep it away from heat, such as heating machine, heater or any other heating objects.

10. Keep away from water or damp place

Please don't expose this device in rainy or damp conditions.

11. Cleanness

Please wipe the device with dry and soft cloth after power-off, the volatile chemicals, such as gas or diluting agent.

12. Please cut off power and contact with technician immediately in the following conditions: Power cord or jack damaged;Liquid or particle enters into the device;The device is damaged due to falling off from a high place or incorrect operation;

13. LCD

Prevent LCD from being crashed or fallen, don't touch the liquid flowing out of the device;don't heat LCD or scratch it.

1 4 Special Tips

1. Whether the positioning and use of GPS can be affected by the weather or anything else?

Yes, lightning, climate (overcast, rainy and cloudy) etc., all may affect the signals and use of GPS.

2. What factors may affect the signals of GPS?

- 1) SA satellite message is from DOD in USA. The precision of GPS signal is directly controlled by DOD in USA, in order to ensure security, the signal precision for civilian use is lower than that for army, so in some sensitive places, military base for example, the signals can be interfered and the precision of positioning may be reduced.
- 2) Weather factors (macula, bad weather may reduce the intensity of signals and result in instable orientation.)
- 3) Electric, electromagnetism, wireless wave and strong magnetic field all has different certain interference.
- 4) Under veils, such as buildings, cars, heat insulation papers, metal veils and trees, they all may reduce the signals of GPS, therefore, place the device close to the windshield.

3. Why does not GPS receive signals in buildings?

The signals can be obstructed easily by buildings and metals, and they can't penetrate through the wall of buildings, so the GPS can't be used in buildings.

4. Does the vehicle tint affect the signals of GPS?

It will have certain effect on GPS when the material of sun membrane contains metal.

5. How long does the GPS take to position after power on?

About 1 minute the GPS begins to positioning if it is located in wide and non-interference places, less than or equal to 5 minutes is in accordance with the standard of GB/T 19392-2003-5.3.

6. What is the maximum navigation time? How long does it take to charge up?

Maximum navigation time: 2.5-3.5hrs with volume and brightness at 50%.
Time for charging: 3-3.5hrs under standby mode, the time will be different in different surroundings, the unit can also be charged when power on, but the time shall be longer, it is normal that the unit heat while charging.

7. What advantages does our GPS solution have?

It supports quick global positioning, stable signals, usage is free of service, has a detailed map for each city, uses voice navigation for the whole trip with intelligent layout of the route, 5-inch TFT touch screen with 65k colors internal GPS and high capacity rechargeable LI-polymer battery.

8. Normally, how many satellites can GPS receiver capture?

Normally, most GPS receivers can capture 8-12 satellites.

9. Will the music be distorted if the volume is too high? Sometimes WMA files can not be played, why?

Please make sure whether the music is obtained legally? If not it must be of big noise. WMA files has copyright protecting, it needs to be decoded by decoding software during operation.

10. How to avoid device crashing at the moment of car starting up?

Users must note that do not connect the GPS with the linker until the car is started up.

2 Brief Introduction

2.1 Function Introduction

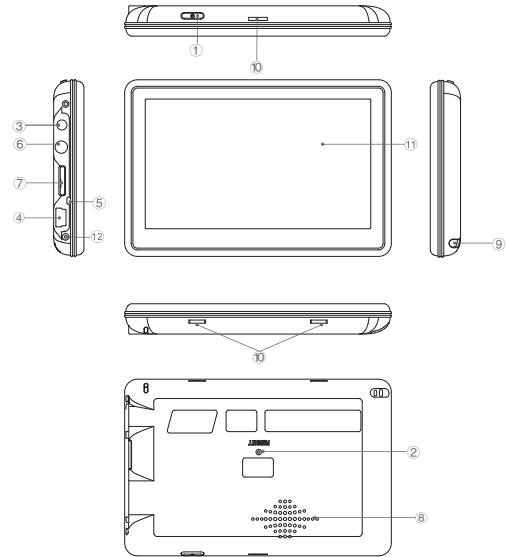
- >GPS Navigation
- >Video format: support AVI, WMV, MP4, 3GP
- >Audio format: support WMA, MP3, WAV
- >Support LRC and synchronized lyric displayed
- >E-book format: support TXT
- >Picture format: support JPEG, BMP, PNG
- >Integrated speaker
- >Support Micro SD card

2.2 Accessories

Before using, please make sure whether the device and accessories are complete, if there is any lack or damage please contact with the local dealer or agent as soon as possible.

- >carNAVi S 500 1pcs
- >Car Charger 1pcs
- >USB Cable 1pcs
- >Car mount 1pcs
- >Hardware Manual 1pcs
- >Software Manual 1pcs

2.3 Illustration




- 1.Power Key
Power on /off /sleep
- 2.Reset
When the device is crashed halt or works abnormally,press this key to reset the system
Connect TMC for receiving module / Connect with outside AVIN wireless receiver module
- 3.TMC Port / AVIN
- 4.MINI USB Port
①Exchange the data with PC by MINI USB cable
②Charge the GPS device by connecting AC adaptor or car charger.
- 5.Power Indicator
The light is red during charging, it will turn green when the battery is fully charged.
- 6.Earphone Jack
- 7.Micro SD slot
- 8.Speaker
- 9.Touch-pen
- 10.Bracket block slot
- 11.Display Screen
- 12.Mic
Hands-free input the voice

3 Basic Operation

3.1 Battery and Charger

3.1.1 Power Supply

In-vehicle/portable GPS navigation has two ways of power supply: battery supply and power supply.

When the device doesn't connect with the adaptor, it is supplied by the lithium battery. The icon  at the top right corner on the main interface of system indicates the current remaining power.

When the device connects with the adaptor, it is supplied by the outer power.



Tips

【Tips】 Under normal condition(volume and backlight at 50%), it can last about 2.5~3.5 hours after the battery is fully charged. Some functions need to consume a lot of battery energy, such as audio/video playing, high backlight and Bluetooth, which may reduce the using time.

3.1.2 Car Charger

1. Connect one end of the car charger with power input jack of device.
2. Connect the other end with the cigarette lighter of the car in order to supply power and charge up the device at the same time.



Caution

【Caution】 Please insert the car charger after car starting up in order to avoid the damage of the device while starting up.

3.2 Basic Use

3.2.1 Power Key

1. Power on:

When the GPS power is full or after connecting the device with outer power supply, press the power key for few seconds to start up.

2. Sleep mode:

When the device turns on, press the power key for several seconds to enter into sleep mode, the GPS will automatically display the last state when next start-up.

3.2.2 Reset Key / Power-saving Key

When the system has no response, Press the reset button and then press Power key to re-start the system, the performances are as below:

1. There are delay and stagnation during switch interface;
2. There is no response when click the icons.
3. Power key is unavailable.



Caution

【Caution】 Please backup the data before resetting the system.

3.2.3 Car Mount

The car mount consists of salver and bracket. While using the device in car the device should be fixed in the proper position of fore-windshield.



Caution

【Attention】 Please choose the proper position to place the car mount. Do not block the driver's view and place the device arbitrarily without fixing; do not fix the device in the area that the airbag

3.2.4 Micro SD Memory Card

Correctly insert Micro SD card into the slot, and do not remove the Micro SD card during operation.

3.3 Connection with Computer

Connect the device with computer by the USB cable. One end connects with PC and the other end connects with the device.

1. Data transmission: There are two new "mobile disk" icons in "my computer" after the device is successfully connected with computer, the first icon stands for the built-in flash memory of the device, the second stands for the Micro SD card storage of the device. (If the Micro SD card is not inserted, the second icon of the disk is unavailable). Then, you can use them as normal USB flash disk.



【Caution】 1. Please do not delete and revise the data in the built-in flash memory of the device, in case some functions of the device are out of work. 2. Based on Windows 98 operation system, please install the driver before operating the device. The operation of communication between GPS and computer are exemplated based on the Windows 98 operation system or above version. 3. When GPS is connecting with computer by USB line, it can not operate the current functions.

2. Safely Remove: Please remove the USB line after finishing the data transmission (just operate it as the USB flash disk).

4 Function Operation

The device supports navigation, audio/video playing, E-book, Photo browsing, and system setting functions. The main interface is as follows:



4.1 Navigation

4.1.1 The Features of Navigation

The device adopts intelligent navigation system, which uses GPS satellite signal receiver to positioning the mobile vehicle precisely and displayed the mobile vehicle's location on the E-map. The system will automatically calculate the best route when users set the destination, it will help the users reach their destinations safely and quickly.

The system also can provide the functions of visual maps, instant cartoon, voice and instruction and so on.

4.2 Music

1. Click "Music" icon to enter audio folder interface. Then you will find an interface shows "SDMMC" or "ResidentFlash" folder, click the related folder to play the related files.

The function of each icon is as below:

- Return Return to the main interface
- Previous Display the previous file
- Next Display the next file
- Upward Return to previous folder



2. Click CMF icon to open the Music player,

The function of each icon is as follows:

- Return Return to the Main Interface
- Play Play songs
- Pause Pause
- Stop Stop playing
- Repeat Repeat all the song
- Random shuffle all the song
- Previous Play previous song
- Next Play next song
- Volume Adjust volume by dragging sliding block
- Play Schedule Adjust play schedule by dragging sliding block
- Folder Return to Audio-Folder interface
- ① Area of Lyric Display Display the information of current LRC lyric and play state of current song
- ② Area of Song's name Display Display the name of the current song
- ③ Time Current Time/Total Time



Tips

【Tips】 Audio player contains the function of lyric synchronization. Please copy both the music and lyric files (LRC format) to the same folder in the Micro SD card, and make sure their names are the same.

4.3 Picture

1. Click the "Picture" icon on the main interface to enter the Picture folder. Then you will find an interface shows "SDMMC" or "ResidentFlash" folder, click the related folder to play the related files. The function of each icon is as follows:

	ESC	Return to main interface
	Previous	Display previous page
	Next	Display next page
	Back	Return to previous folder



2. Click Picture folder icon to open the Picture browser
The function of each icon is as below:

	ESC	Return to main interface
	Zoom Out	Zoom out the current Picture
	Zoom In	Zoom in the current Picture
	Rotate	Rotate the current Picture 90 degree in clockwise
	Slide Play	Display all the Pictures in the folder automatically
	Previous	browse the previous one
	Next	browse the next one
	Upward	Return to previous folder



Tips

【Tips】

- Under the full screen, double click the Picture to return to normal mode;
- Zooming out the Picture, click the touch screen with touch pen to play the next Picture.

4.4 Ebook

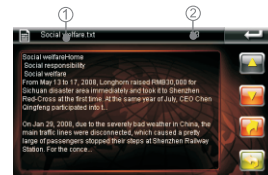
1. Click E-book to enter into E-book folder interface. Then you will find an interface shows "SDMMC" or "ResidentFlash" folder, click the related folder to play the related files.

	ESC	Return to main menu interface
	Previous	Display previous page
	Next	Display next page
	Return	Return to main interface



2. Click Ebook folder to open the reader

	ESC	Return to main interface
	Previous	Display previous page
	Next	Display next page
	Upward	Return to Previous folder
	Skip	Enter into the page selecting interface
①	File Name	Display current file name
②	Page number	Current page number / total page numbers



3. Click icon on E-book read interface to enter into the page selecting interface.

	Number bar	Show the page number
	Backspace	Delete the last inputted number
	Clear	Clear up all the numbers
	Jump	Jump to the number displayed page



4.5 Movie

Click the "Movie" icon to enter the Movie folder interface. Then you will find an interface shows "SDMMC" or "ResidentFlash" folder, click the related folder to play the related files. The function of each icon is as follows:

	ESC	Return to the menu interface of video player
	Play	Play the video file
	Pause	Pause
	Previous	Play previous movie
	Next	Play next movie
	Stop	Stop playing
	Upward	Return to previous folder
①	Volume	Drag the slide block to adjust the volume
②	Rate of Progress	Drag the slide block to adjust the progress
③	Time	Current Time/Total Time
④	Name	Display the name of current file



Tips

【Tips】 On the playing interface, it will display the full screen when double click the playing area; then double click again, it will display as normal.

4.6 System Setting

Click “System” icon on the main interface to set your system, including volume, power, Backlight, Date time, language, system information.





4.6.1 Volume Setting

Click "Volume" icon to enter the volume setting interface







4.6.2 Power Setting

Click “Power” icon to enter the power setting interface. The user can check the status bar to know the power, at the same time, also can click  or  to set the time for automatically power off.



4.6.3 Backlight Setting

Click “Backlight” to enter Backlight setting interface. The user can adjust the backlight by  and , or can click  or  to set the time for automatically screen power off.



4.6.4 Date Time Setting

Click “Date Time” to enter Date Time setting interface. Status bar will show the current separately time, date and time zone.

Separately click “time”, “date”, “time zone” to set up the time, date and time zone.

Through the GPS signals, the time setting refreshes the current time automatically, it means that the time will temporarily return to the factory setting time after the system reset. As soon as the GPS begins to navigate, the time will renew to the standard time. Please note that the time setting should be compatible with the local time.



4.6.5 Language Setting

Click “Language” icon to set the language you need.

Support multi-country languages: English, French, German, Spanish, Italian, Dutch, Russian, Chinese, Korean and so on

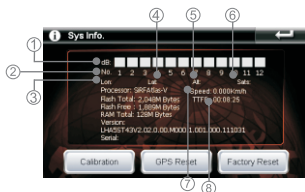


4.6.6 System Information

Click “System” icon to view the detailed system information.

1. Click “Calibration” icon at the left corner of information box to adjust the touch screen. Choose to move the cursor through middle, left, right, up, down steps. Repeat click the middle of cursor until the calibration is successful.
2. Click “Factory Reset” icon at the right corner of information box, the system will automatically return to the factory setting.
3. Click “GPS Reset” icon in the middle of information box, the system will automatically clear up the Signal-to-Noise data received.

- | | |
|------------------------|--------------------|
| ① Signal-to-Noise data | ⑤ Altitude |
| ② Channel | ⑥ Satellite no |
| ③ Longitude | ⑦ Speed |
| ④ Latitude | ⑧ Positioning time |



5 Malfunction Analysis

If the device does not work smoothly, please inspect it according to the following method. If problems still exist, please connect our Service Centre timely.

Problem	Reason	Method
Can not power on	Low power	charge the battery
Power off suddenly	low power	charge the battery
Touch screen deflected	Calibration is not precise.	Refer to 4.6.6 to calibrate your touch screen.
No sound when playing	Tool low volume	turn on the volume
	Poor connection between the earphone and device	insert the earphone properly
Can't connect with PC	Poor connection of the USB cable	Refer to the 3.3 chapter, connect the USB cable well.
Can not charge	AC adapter is not inserted well	Please check the adapter is inserted well, and indicator is red.
Power Key invalid, touch screen and display abnormal	The system crashes	Press the reset key with touch pen to restart.
Can not receive GPS signal	Depending on the intensity of the local signals. It will take about 1 minute to receive the signal.	
Map data missing	Copy the map data into the SD card again. Contact with local retailer or distributor. You need to enter the activated password when you use the device again.	

6 Technical Specification

Dimension	129*84*13mm		
Net Weight	About 188g		
System	OS	Windows CE6.0	
	CPU Frequency	SIRF Atlas V, CPU 500MHz. ARM11: DSP 250MHz.	
	SD RAM	128MB	
	NAND Flash	4GB	
	External Memory	MAX 2G-8G SD/MMC	
Media function	Video	ASF, AVI, MP4, 3GP, WMV	
	Audio	MP3, WMA, WAV	
	Photo	JPEG, BMP, PNG	
	E-book	TXT	
Languages	Support multi-country languages	Chinese, English, Italian, French, Spanish, German, Portuguese, Dutch and so on	
Power	AC Adaptor	INPUT: AC 100-240V. OUTPUT: DC 5V / 2A	
	Car Charger	INPUT: DC 12-24V. OUTPUT: DC 5V /1.5A	
	Battery	3.7V /1600mAH	
	Continuous Operation Time	2.5-3.5 hours(voice and background light can be adjusted to 50%)	
	Power Saving	Automatically standby mode,screen protection(black screen)	
Display	Specification	5.0 TFT-LCD,+5.0 4-line-flat-panel resistance touch	
	Pixel	480*272 (RGB)	
GPS Module	Frequency	1575.42MHz	
	Channels	64 channels	
	Sensitivity	-161dBm	
	Precision	Position: < 10 meters	
	Port	COM7	
	Baud rate	38400	
	Start-up time	Hot start:	≤3 sec, average
		Warm start:	≤38 sec, average
		Cold start:	≤45 sec, average
	Refreshing rate	1/second	
Temperature	Working Temperature	-20℃-70℃	
	Storage Temperature	-25℃-75℃	
USB	USB 2.0 full speed		
Certificate	CE, FCC, ROHS		