



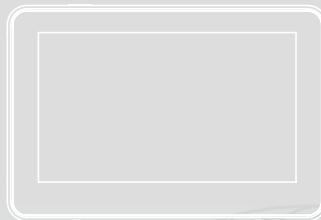
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## carNAVi Hardware Manual

Global Positioning System  
In-Car & Portable Navigation

### carNAVi S 510



## Content

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

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

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 device 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 contains an 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 a 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 the maps provided in this carNAVI GPS navigation system 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 Corporation. Parts of the maps used in our navigation systems are based on material from [openstreetmap.org](http://openstreetmap.org) and made available under the Open Database License. (<http://opendatacommons.org/licenses/odbl/1.0>)

1.Product Introduction	01
1.1 Product feature	01
1.2 Note	02
1.3 GPS common sense	03
1.4 Product appearance	03
1.5 Product package	05
2.Basic Operation	05
2.1 Screen display describe	05
2.2 Battery instructions	06
2.3 Power on / off operating manual	06
3.System Operating	07
3.1 Audio playing function	07
3.2 Video play function	08
3.3 Picture-reading function	09
3.4 Text-reading function	09
3.5 GPS monitor	09
3.6 Setting	10
4.Maintenance and simple troubleshooting	11
4.1 Product specification	11
4.2 Simple troubleshooting	12

# 1.Product Introduction

## 1.1 Product features

Your portable carNAVi GPS navigation systems comes with a 5-inch high-definition TFT true color display with touch function for convenient and easy operation.

It includes support for large-capacity micro SD cards, in addition to storage of electronic navigation maps and also stores videos, songs, pictures, and personal files.

Detailed digital maps provide information of cities and routing with voice navigation and automatic smooth zoom, preloaded in the unit's internal flash memory.

A high sensitive GPS receiver and an integrated antenna performs faster and more accurate signal acquisition and positioning information.

Quick response and warm/cold start; only 1 second to re-capture the satellite signal, less than 10 meters for positioning range, the time accuracy is 1 microsecond.

Characteristics of individual function support, such as: Multi-languages, backlight adjustment, power supply management, touch screen calibration adjustment.

Rechargeable integrated Lithium polymer battery.

High speed USB 2.0 connector.

Bicolor LED indicator: Green while powered on, Red while charging, turn off when full.

Multimedia entertainment: Mp3, Movie, Picture and E-book.

Micro SD card for updating system software and multimedia functions.

## 1.2 Note

Please install the product correctly, do not block the line of driving sight and safety airbag. Manufacturer would take no responsibility for the product faults, other belongings or person lost because of wrong installation.

You are suggested not to wear earphones, operate GPS while driving, please keep away for safety.

Please consult the airline company if you want to use GPS on the airplane. It should be very serious to use electronic products during the process of flight.

Please keep the GPS navigation far from Magnetic field. Because it will do harm to the product. Be careful of falling down, hitting during operation, otherwise the surface of the product would be scratching, the battery would break off, data would be lost and other hardware would be damaged.

You are suggested not to use earphone with high volume for too long. Please adjust the volume to a suitable point and control the using time to avoid listening harm. Because it will result in permanent listening deformity with high volume.

Do not clean the product with chemical reagent or cleaning fluid, it will do harm to the surface and painting of the product.

Do not disconnect suddenly during the process of formatting or uploading, it may result in wrong program.

If the product is for the use of storage, please follow up the correct file management operation, we will take no responsibility for any problem caused by wrong operation.

You are suggested to make a copy of the personal data inside the GPS to your computer.

Do not allow to use overload power supply and stress the power wire with heavy product, so as to avoid fire that caused by heating.

Do not plug the power supplier with wet hands, keep yourself from electric shock.

Do not put the product straightly under the sunshine or high temperature places, so as to keep the battery and product from wrong information or damage.

Please put the product on the table, not on the carpet, pillow or footcloth, keep the product from damage because of heat.

Please do get contact with corresponding repairer asap if there is problem with the product. Please do not detach the product.

Please keep lines clean in order to avoid damage caused by tangled navigator.

Please do not squeeze hard LCD screen, and do not place the product under the dazzling light, please use soft cloth to clear the screen surface.

Please do not cut off the power supply when you are in navigation, music player, video player or showing map operation in order to avoid data loss.

Please do not pull out the memory card directly when the system read the memory card or

storage files operation , avoid damage to the memory card files or any loss of data even the system.

Please do not cut off the power supply suddenly when you are in format ,upload or download operation,orelse ,the application would result in an error.

The GPS can only play a fixed document format,please take a note at the compatibility of multimedia files.

All the TV shows ,music ,movies ,and pictures are subject to copyright protection,any unauthorized applications are considered to be in violation of the relevant law.

Please do not maximum speaker volume for a long time , in order to avoid disortion.

The pictures in the manual are for you reference only ,please take the entity product as final.

### 1.3 GPS common sense

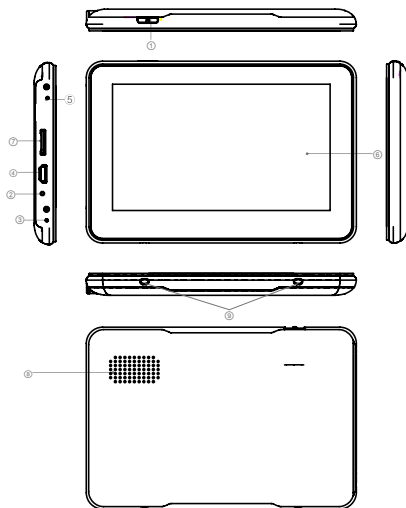
There are something about GPS common sense in using as follow, please read before use and improve GPS navigation equipment working efficiency.

GPS navigation equipment is working for positioning through the synchronous earth satellite signals receiver. It may not receive the signal indoor or building density areas And be weakened under the viaduct .

When the GPS navigation equipment is working ,it will receive different satellite signal in different locations. We call it ephemeris, and usually ephemeris covering at most a scope of 300 KM. If you take A place as ephemeris, and move more than 300KM after power off, then the GPS location will be change to another, and it will re-search by satellite, the whole process will cost a long time. but you can click the "GPS reset " button and emptying the ephemeris under the GPS testing function. It will save much time.

It is difficult to make a positioning when the GPS is in the high-speed moving, you'd better to

### 1.4 Product appearance



1.Power Key

2.Reset

3.Mic

4.USB Port

5.Power Indicator

6.Display Screen

7,Micro SD slot

8.Speaker

Power on /off /sleep

When the device is crashed halt or works abnormally,press this key to reset the system

Hands-free input the voice

①Exchange the data with PC by MINI USB cable

②Charge the GPS device by connecting AC adaptor or car charger.

The light is red during charging, it will turn green when the battery is fully charged.

## 1.5 Product package

GPS Package contains as below, please check:


- 1.PND 1pcs
- 2.User Manual 1pcs
- 3.Car Charger 1pcs
- 4.USB Cable 1pcs
- 5.Car mount 1pcs

Referring to the items listed above, the actual item is the standard, if there is any defect in goods, please contact the dealer or agent in which sell the product to you as soon as possible.

## 2.Basic Operation

### 2.1 Screen display describe

System main menu:

Under the system main menu, click  and scroll to select, it is more convenience for your operation.



Secondary interface system setting:

Under the menu, click on the icon to enter the corresponding functions, under any secondary menu and shortly press the menu button and can be back to main menu.



### 2.2 Battery instructions

The system will display the Battery-Low prompt interface when the battery power is low, when you see this interface, please connect with power supply and continue the normal work.

#### 2.2.1 Battery charging instructions

1.If the battery power is low, please charge the unit as soon as possible for continued normal work.

2.A new battery to the user may not have sufficient power.

3.When you use USB cable for charging, in order to ensure the battery is full of electricity, it needs 3-4 hours.

4.A new battery need several charge and discharge process, then achieve the best performance;

5.If the units do not be used for a long time, we recommended you charging the unit once at interval of 2-3 months, and full of electric storage.

#### 2.2.2 Charger manual

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.



**【Attention】** 1.Please insert the car charger after car starting up in order to avoid the damage of the device while starting up.  
2.Please insert the Car Charger when using TMC function.

### 2.3 Power on / off operating manual

#### 2.3.1 Power on

Shortly press the power button on the top of the unit.



**【attention】** when you put the host unit from one location to another location, we advice you to power on the unit after a adapt to environment period. Because a lot of humidity or moisture fluctuations may result in the host internal short-circuit.

#### 2.3.2 Power off

when you would like to end the unit using, please press the power button on the top of the unit Shortly, then the system will be a sleep and power off interface for your option. Click the sleep icon, the system will be in sleep mode and when you click the power off icon, then the system will be shut down.

### 2.3.3 Reset system

When there is no system answer, you can press the reset button on the left of machine by stylus pen ,those conditions may cause that happen as follows,

- 1.Delays and stagnation in the process of screen switching ,and caused no smooth switching screen.
- 2.Click function execution time is too long to activate.
- 3.Press the power button and switch action can not be implemented.




**【attention】** you can reset the unit when the system has no answer. But you will lose your system data , so please backup your data from time to time.

## 3.System Operating










### 3.1 Audio playing function




This function provides user to play audio files, the audio format contains: MP3, WMA, WAV.

#### 3.1.1 Operating manual


Under the system interface, click  icon, then enter into audio playing function. Screen shows as follows.






-  Play last file
-  play
-  pause
-  Play next file
-  Delete the file
-  Random to play music files
-  sequence to choose to play music files
-  Adding files to audio list
-  Close and exit

 Volume adjustment, adjust volume by drag to scroll bar, click  icon and change to  silence, click again then back.

### 3.1.2 Audio file option

Under the audio player interface select  icon and will automatically into audio list page.

- File list** Showing all files in the current folder.
- playlist** Showing the current playing files.
-  Selected all the music files to add to playlist from file list.
-  Confirm that it has already selected all the music files to add to playlist.
-  Return to previous menu.














### 3.2 Video play function

This function provides user to play video files, and the file format contains: AVI, ASF, WMV, MP4 and 3GP.


#### 3.2.1 Enter into interface function

Under the system interface click  icon, then enter into video play interface.

Button function when playing,

-  play
-  pause
-  Last video
-  Next video
-  Adding choice of files
-  Close and exit
-  Volume adjustment scroll bar, click  then change to  icon, means entering into silence.
-  Showing video time and the total required time,
-  Scroll bar of play speed




**【attention】**  
a) Double-click the screen when playing video and click  enter into full screen.  
b) The toolbar will be hidden when you playing video in full screen, and double-click screen again the toolbar will appear.










### 3.3 Picture-reading function

This function provides user to see pictures in SD card ,the file format contains JPG, BMP, GIF, PNG.

Enter into interface function.

Under the interface click  button,then you will enter into picture-reading function interface .The screen shows the main menu.

Button functions when you scan.


-  Last picture
-  Next picture
-  File option
-  Enlarge the current picture
-  Shorten the current picture
-  90-degree rotation
-  Automatically scan
-  Full screen
-  Close and exit








### 3.4 Text-reading function

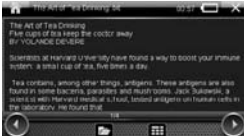
This function provide user to read the e-book files storage in SD card, the file format is txt.

Enter into interface function.


Under the system menu click  button, then you can enter into Text-reading interface.

Button functions when you scan

-  Into the file selection list
-  Last page
-  Next page
-  enter into setting pages for your selection
-  Close and exit E-BOOK pages



### 3.5 GPS monitor

Under the system menu click  button then you will enter into GPS information enquiry interface.



In this interface will display GPS signal strength, current longitude / latitude and satellite-time information. After the signal strength reaches a certain value and will show the location of the column positioning satellite maps, meanwhile will adjust local time to the current satellite time. After click "GPS Reset" button, it will clear the current number of satellites received and re-cold start.



### 3.6 Setting

#### 1 Zone Setting

Click Zone icon to enter Zone setting interface, Status bar will show the current time zone.


click  or  to set the 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 zone setting should be compatible with the local time zone.



#### 2 preferences


Under the system main menu, click  enter into preference interface.



You can select language,backlights (brightness value), power, volume(system volume, key tone volume) style.



-  Click to choose kinds of language.
-  Click to set up backlight (brightness value).
-  Click to set up the time for automatically system sleep.
-  Click to set up system volume and the key tone volume.



### 3 Clock

Click  enter into time setting.

On the left and the top right of interface is time ,month ,year setting up regional. Make any necessary adjustment of time ,month ,year by clicking   button.


You can click  button for exit or  save and exit.



### 4 System


click  enter into system information.

You can see system version, memory capacity.

Click  then unit will automatically return to the factory settings and then display factory reset ok.




### 5 Screen calibration function


This feature is targeted to the stylus pen to correct the deviation coordinates, click  under the setting function menu. Then the screen display as follows:

Under this interface, using stylus pen to click the focal point of cross icon, after that it will change to another place, and please click again. After all clicks calibration. You should click the screen in 10 seconds limit to save the calibration data.



### 6 USB setting

Click the  button under the setting menu, then you will enter into setting interface. Connect the device with computer by the USB cable.

Then the device system will display the "charge" and "online" icon selection prompt interface. Click the  button, then the device enter into "USB DISK MODE" and there will be have two new "mobile disk" icons in my computer after the device is successfully connected with computer in mass storage mode; The first icon stands for the built-in flash memory of the device, and the second stands for the SD card storage of the device. (If the SD card is not inserted, the second icon of the disk is unavailable).





## 4.Maintenance and simple troubleshooting

### 4.1 Product specification

Dimension	133,6*89,9*10,8mm		
Net Weight	About 170g		
System	OS	Windows CE5,0	
	CPU Frequency	Mstar MSB2531 Cortex A7 800MHZ	
	DDR	DDR3 256Mbyte	
	NAND Flash	MLC:4GB	
	External Memory	MAX 16G Micro SD	
Media function	Video	AVI,MPEG,ASF,MOV,MP4,DAT,WMV,3GP,MPE	
	Audio	MP3, WMA, WAV	
	Photo	JPG, BMP, TIF,PNG, GIF	
	E-book	TXT	
	Languages	Simplified Chinese, English, Italian, French, Spanish, German, Portuguese etc.	
Power	Car Charger	INPUT: DC 12-24V. OUTPUT: DC 5V /1,5A	
	Battery	3,7V /950mAh	
	Continuous Operation Time	1,5-2,5 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-resistance touch screen	
	Pixel	480*272	
GPS Module	Frequency	1575,42MHz	
	Port	COM2	
	Baud rate	38400	
	Channels	64 channels	
	Sensitivity	-161dBm	
	Precision	Position: < 10 meters	
	Start-up time	Hot start:	≤3 sec, average
		Warm start:	≤38 sec, average
Cold start:		≤45 sec, average	
Refreshing rate	1/second		
Temperature	Request	-10°C~55°C	
	Operation Temperature	-10°C~55°C	
Temperature/humidity	Storage Temperature	-25°C~75°C short time storage temperature	
		-20°C~25°C Long time storage temperature	
	Maximum humidity 80% RH when the temperature should not exceed 40 °C		
USB	USB 2,0 High speed		

### 4.2 Simple troubleshooting

number	Fault	Reason analysis	Solution
1	Can not power on	1.Battery using up (when press the power button, there is no appear after screen flickers) 2. when the start interface appears,motionless for a long time.	Please read the statement refer to unit charging,using the accessories to recharge the unit.  Using stylus pen click the right reset button to restart the system.
2	Dead screen	No showing, or a show but the same null and void any button operation.	Using stylus pen click the right reset button to restart the system.
3	No recharge	When charging, the device red light is not lit , or the screen does not show charging symbol.	1,charger incorrectly connect with plug or power on. 2,damaged charger. 3,damaged battery or full charger.
4	No gps signal	3 minutes did not receive the signal, receiver, positioning.	Take it out of door , beyond the high building and trees, keep static for a few minutes in order to receiver enough GPS signal.

